25-003683-CZ FILED IN MY OFFICE Cathy M. Garrett WAYNE COUNTY CLERK 4/3/2026 2:09 PM Laverne Chapman

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

LAURENCE WOLF,
individually and d/b/a Wolf Properties,
individually, and as representatives
of a class of similarly situated persons
and entities,

Plaintiff,

v.

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

Defendant.

Case No. 25-003683-CZ
Hon. Kevin J. Cox

Gregory D. Hanley (P51204)
Jamie K. Warrow (P61521)
Edward F. Kickham Jr. (P70332)
Kickham Hanley PLLC
40950 Woodward Ave., Suite 306
Bloomfield Hills, MI 48304
(248) 544-1500
Attorneys for Plaintiff

Christopher S. Frescoln (P63175)
Stephen J. Brown (P82684)
Fausone & Grysko, PLC
41700 West Six Mile Road, Suite 101
Northville, MI 48168
General Counsel
(248) 380-0000
Attorneys for Defendant

A civil action – certified as a class action – between these parties or other parties arising out of the transaction or occurrence alleged in the complaint covering a different period of time has been previously filed in this Court, where it was captioned *General Mill Supply Co v. Great Lakes Water Authority* and given case number 2018-011569-CZ and was assigned to Judge Charles S. Hegarty. The action is no longer pending.

PLAINTIFF'S FIRST AMENDED CLASS ACTION COMPLAINT AND JURY DEMAND

Plaintiff Laurence Wolf, individually and as trustee of Laurence G. Wolf Capital Management Trust Agreement Dated March 7, 1990, Laurence Wolf, d/b/a Laurence Wolf Properties, and Wolf Properties, individually, and as representatives of a class of similarly situated persons and entities ("Plaintiff"), by his counsel, Kickham Hanley PLLC, states the following for his First Amended Class Action Complaint against Defendant the Great Lakes Water Authority ("GLWA" or "Defendant"):

INTRODUCTION

1. This is a putative class action challenging the Industrial Waste Control Charges (the "IWC Charges") that GLWA has collectively imposed on approximately 47,000 owners or occupiers of certain types of non-residential property located in various municipalities in Southeast Michigan since March 4, 2024.

2. Plaintiff and the Class are a subset of the persons and entities who are subject to the Charges (the "Minor Users" and the "Non-Domestic Wastewater Users," as defined below). The persons and entities who are subject to the Charges are collectively referred to herein as the "Users."

3. GLWA imposes the IWC Charge solely to recover the costs of GLWA's Industrial Waste Control Division (the "IWC Division"), which is primarily tasked with administering an Industrial Pretreatment Program ("IPP") that requires GLWA to monitor the discharge of industrial waste by a small set of Significant Industrial Users ("SIUs").

4. There are about 250 SIUs under GLWA's jurisdiction.

5. GLWA inexplicably excludes a large number of similarly situated persons and entities from the IWC Charges. For example, residential wastewater customers do not pay IWC Charges.

6. GLWA also apportions the IWC Charges among the Users in a nonsensical way, based on the size of the water meter serving each User.

7. The size of a particular user's water meter has no rational relationship to the possibility that the user will discharge industrial waste into the wastewater system or into waterways or groundwater.

8. Furthermore, as described below, GLWA concedes that the Minor Users and Non-Domestic Wastewater Users, including Plaintiff and the Class, are not even **possibly** contributing industrial waste to the wastewater system or discharging industrial waste into waterways or groundwater.

9. Finally, Minor Users and Non-Domestic Wastewater Users who pay the IWC Charges will not and cannot ever receive monitoring of their possible discharge of industrial waste.

10. The Minor Users and Non-Domestic Wastewater Users, including Plaintiff and the Class,

thus receive no particularized benefit from their payment of the IWC Charges, making the IWC Charges revenue-raising and not regulatory as to Plaintiff and the Class.

11. A leading industry manual, the Water Environment Federation's Manual 27, *Financing and Charges for Wastewater Systems* ("WEF No. 27") recognizes that a utility should give "special recognition" to the "recovery of costs associated with required pretreatment program monitoring." *Id.* at p. 133. Indeed, the WEF states that "[t]he owning utility usually monitors pretreatment customers' activities and tests their discharges to the utility system for a fee **paid by such customers.**" *Id.*, p. 124 (emphasis added). GLWA's method of imposing IWC Charges does not comply with industry guidance.

12. Section 301(a) of the Clean Water Act prohibits the discharge of pollutants into navigable waters unless in compliance with the Act. Congress directed the Environmental Protection Agency ("EPA") to promulgate regulations setting limits on the pollutant discharges from three general types of "point sources," 33 U.S.C. Sec. 1362(14) (1976), including (1) point sources discharging directly into navigable waters ("direct dischargers"); (2) Publicly Owned treatment Works ("POTWs") treating municipal sewage or industrial wastewater; and (3) point sources discharging pollutants into POTWs rather than directly into navigable waters ("indirect dischargers"). *See Nat'l Ass'n of Metal Finishers v. EPA*, 719 F.2d 624, 633 (3d Cir. 1983), rev'd on other grounds, *Chem Mfr's Ass'n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116 (1985).

13. Direct dischargers and POTWs are regulated through the National Pollutant Discharge Elimination System ("NPDES") permit issued to the discharger under section 402 of the Act. Indirect dischargers are regulated under separate regulatory standards provided for by section 307(b)(1) of the Act, 33 U.S.C. Sec. 1317(b). *Id.*

14. In passing the Clean Water Act, Congress sought to regulate indirect dischargers in recognition that "the pollutants which some indirect dischargers release into POTWs could interfere with the operation of the POTWs, or could pass through the POTWs without adequate treatment." *Nat'l Ass'n of Metal Finishers*, 719 F.2d at 633.

15. The EPA has promulgated two types of national pretreatment standards applicable to indirect dischargers: (1) general pretreatment regulations, and (2) national categorical pretreatment standards.

16. "It is unlawful for any indirect discharger to operate in violation of any 'effluent standard or prohibition or pretreatment standard' promulgated under section 307.'" *Int'l Union et al v. Amerace Corp., Inc.*, 740 F. Supp. 1072, 1079 (D.N.J. 1990) (quoting 33 U.S.C. Secs. 1317(d), 1311(a)).

17. 40 C.F.R. 403 sets forth the permitting requirements for "industrial users" that release pollutants into POTWs. All POTWs discharging over 5 million gallons per day ("GPD") and receiving pollutants from industrial users must develop a pretreatment program. 40 C.F.R. Sec. 403.8.

18. A POTW must issue individual permits to all "Significant Industrial User[s]," which includes those industrial users (1) subject to the categorical pretreatment standards; (2) discharging more than 25,000 GPD; or (3) determined to be significant by the POTW based upon "a reasonable potential for adversely affecting the POTW's operation or for violating any [p]retreatment [s]tandard or requirement." 40 C.F.R. Secs. 403.8(f), 403.3(v)(1)(ii).

19. The permits must establish effluent limits, as well as self-monitoring, sampling, reporting, notification and recordkeeping requirements. 40 C.F.R. Sec. 403.8(f)(1).

20. The IWC Charge has nothing to do with the actual cost of treating industrial waste or sanitary sewage. Instead, the purpose of the IWC Charge is to finance the costs associated with the IWC Division's IPP, including inspections, issuance of notices of violation or noncompliance, and other enforcement activities related to industrial waste generated by SIUs.

21. In addition to the IPP, the IWC Charge also finances other regulatory activities of the IWC Division, such as monitoring septage haulers and regulating a small number of sewer users who discharge sewage containing heavier volumes of "ordinary" pollutants.

22. The IWC Division's regulatory activities, including monitoring the discharge of industrial waste by SIUs, provide a public benefit because they help prevent pollution.

23. However, GLWA does not impose the cost of the IWC Division on the public at large, or even all sewer users.

24. Instead, GLWA imposes the IWC Charges based solely upon the size of the water line serving the approximately 47,000 nonresidential properties that incur the Charges.

25. Plaintiff and the 47,000 class members incur the IWC Charges even though GLWA concedes that Plaintiff and the Class are the type of users who discharge only sanitary sewage and stormwater into the sewer system.

26. GLWA inexplicably exempts from the Charges other types of similarly situated non-residential properties – including schools and government facilities – and **all** residential properties.

27. The exempt users are not distinguishable from Plaintiff and the Class in any relevant way.

28. Like Plaintiff and the Class, the exempt users discharge only sanitary sewage and stormwater into the sewer system.

29. Like Plaintiff and the Class, there is no risk that the exempt users will discharge heavily contaminated industrial waste into the sewer system, waterways, or groundwater.

30. IWC Charges are not proper "user fees" but rather constitute taxes imposed by GWLA in violation of Section 31 of the Headlee Amendment to the Michigan Constitution, which provides:

> Units of Local Government are hereby prohibited from levying any tax not authorized by law or charter when this section is ratified or from increasing the rate of an existing tax above that rate authorized by law or charter when this section is ratified, without the approval of a majority of the qualified electors of that unit of Local Government voting thereon. [Const 1963, art 9, § 31.]

31. In *Bolt v. City of Lansing,* 459 Mich. 152 (1998), the Supreme Court identified "three primary criteria to be considered when distinguishing between a fee and a tax" (459 Mich. at p. 161):

A. "[A] user fee must serve a regulatory purpose rather than a revenue-raising purpose";
B. "[U]ser fees must be proportionate to the necessary costs of the service"; and
C. Payment of the fee is voluntary. [459 Mich. at pp. 161-62]

32. The IWC Charges have a revenue-raising purpose which significantly outweighs any regulatory purpose of the Charges.

The IWC Charges lack a significant element of regulation because, among other things, Plaintiff and the Class are not even subject to the regulatory programs administered by the IWC Division.

33. Further, the IWC Charges are not proportionate to the necessary costs of the service because: (a) the activities of the IWC Division confer a general public benefit and therefore the Charges are disproportionate to any specific benefits received by the payors of the Charges; (b) Plaintiff and the Class do not receive any direct benefit in exchange for their payment of the IWC Charges because they are not even subject to the regulatory programs administered by the IWC Division; (c) even if the activities of the IWC Division confer particularized benefits upon sewer users, those benefits extend to all sewer users, not just the limited subclass of sewer users GLWA has arbitrarily chosen to finance the costs of the IWC Division, and (d) the IWC Charges are nonsensically based upon the size of the water meter servicing each payer's structure.

34. Finally, the Charges are not voluntary because at the very least they are "effectively compulsory" in that "the property owner has no choice whether to use the service and is unable to control the extent to which the service is used." *Bolt,* 459 Mich. at 167-168.

35. Plaintiff seeks a determination that the IWC Charges that GLWA has imposed since March 11, 2024 constitute illegal taxes and not "user fees." Plaintiff also seeks a judgment requiring GLWA to refund all IWC Charges collected since March 11, 2024 and all IWC Charges collected during the pendency of this action.

JURISDICTION AND VENUE

36. Plaintiff is a Minor User or Non-Domestic Wastewater User, is not an SIU, has paid the IWC Charges, and seeks to act as class representative for all similarly situated persons and entities

37. General Mill Supply Co. was a party to *General Mill Supply Co v. Great Lakes Water Authority*, Wayne County Circuit Court Case No. 2018-011569-CZ.

38. General Mill Supply Co. was a member of the certified class in *General Mill Supply Co v. Great Lakes Water Authority*, Wayne County Circuit Court Case No. 2018-011569-CZ.

39. General Mill Supply Co. is an absent member of the putative class in this case. Accordingly, this case is between the same parties who were present in *General Mill Supply Co v. Great Lakes Water Authority*, Wayne County Circuit Court Case No. 2018-011569-CZ.

40. Defendant GLWA is an incorporated municipal water authority formed pursuant to MCL 124.282 with its primary offices in Detroit, Michigan.

41. Venue and jurisdiction are proper in the Wayne County Circuit Court because all parties are present in Wayne County, Michigan, and the actions which give rise to Plaintiff's claims occurred in Wayne County, Michigan.

GENERAL ALLEGATIONS CONCERNING THE IWC CHARGES

A. The Relationship Between GLWA, the City of Detroit, and Plaintiff and the Class With Respect To Water and Sewer Services.

42. GLWA is the regional utility providing water and sewer services in southeast Michigan. GLWA was incorporated by the Counties of Macomb, Oakland and Wayne and the City of Detroit ("the City") on November 26, 2014 pursuant to MCL 124.282.

43. Pursuant to leases that became effective on January 1, 2016, GLWA assumed possession and control of the regional assets of both the water supply and sewage disposal systems owned by the City, which were previously operated by the Detroit Water and Sewerage Department ("DWSD").

44. GLWA's sewer system currently serves an area of 944 square miles with an estimated population of nearly 2.8 million or approximately 28% of Michigan's population.

45. Suburban customers comprise approximately 76% of the population served by GLWA, and sewer customers in the City of Detroit comprise the remainder.

46. Under a Water and Sewer Services Agreement, the City is appointed as agent of GLWA for setting retail rates and for billing, collecting and enforcing the collection of charges from "retail" customers in the City of Detroit. *Id.*

47. Effective January 1, 2016, the IWC Division was transferred to GLWA.

48. Pursuant to certain Leases and the Water and Sewer Services Agreement between GLWA and DWSD, GLWA has a direct supplier/customer relationship with Plaintiff and the Class throughout the GLWA service area.

49. There are two leases between GLWA and DWSD, one for the Water Supply System (the "Water Lease") and one for the Sewage Disposal System (the "Sewer Lease").

50. The Water Lease and the Sewer Lease contain identical provisions giving GLWA broad powers and relegating DWSD to a mere collection agent for the water and sewer charges GLWA imposes on the Detroit customer class.

51. In this regard, Section 3.3 of the Sewer Lease provides:

> In addition, the City and the Authority agree that (i) the Authority shall have the exclusive right to establish rates for sewer service to customers of the Sewage Disposal System, including Retail Sewer Customers; (ii) the Authority may delegate, and through the Water and Sewer Services Agreement is delegating, its right to establish rates for sewer service to customers of the Sewage Disposal System to one or more agents, as it deems necessary or convenient; and (iii) directly or through an agent, **the Authority shall have the exclusive right to charge and bill to and collect from such customers amounts for sewer services constituting the Revenues, including the Retail Revenues**. [emphasis added]

52. The Sewer Lease defines "Retail Sewer Customers" as "those individual customers located within and outside the City that receive sewer service directly from the Detroit Local Sewer Facilities" and further defines "Retail Revenues" as "Revenues collected from Retail Sewer Customers."

53. The Water and Sewer Services Agreement (the "Agreement") makes clear that DWSD is a mere collection agent for charges imposed on Detroit customers by GLWA.

54. In this regard, the Article 3.2 of the Agreement provides the following with respect to sewer services:

> 3.2. Sewer Services. (a) the Authority shall provide Sewer Services in amounts sufficient and in compliance with the technical and other requirements as provided in Exhibit B. The City agrees to remit payment for all Sewer Services provided by the Authority at such rates as the Authority may establish, but only from amounts billed to and collected from Retail Customers. **The City shall act as the agent for the Authority pursuant to Article 2 with respect to the development of rates, and billing and**

collecting and enforcing the collection of fees and charges from Retail Customers for Sewer Services. … [Emphasis added].

55. Article 2.1 of the Agreement further confirms this principal/agency relationship. That provision states in pertinent part:

> 2.1 Appointment and Termination of Agency. (a) The Authority hereby appoints the City as its agent, and the City hereby accepts such appointment as agent, to perform the services and undertake the duties, obligations and administrative functions described in the third sentence of Section 3.1(a), the third sentence of Section 3.2(a), and the second paragraph of Section 4.1. …
>
> (b) **The City shall act in its capacity as agent for the Authority (and not in its own capacity as principal or otherwise) for the purposes described in Sections 3.1(a), 3.2(a) and 4.1**. … [Emphasis added].

56. Collectively, these provisions confirm that GLWA has a direct relationship with the Detroit customer class and all other sewer users in the GLWA service area.

B. The Activities Of The IWC Division

57. GLWA describes the activities of the IWC Division as follows:

> The Great Lakes Water Authority's Industrial Waste Control group implements and enforces an Industrial Pretreatment Program (IPP) to regulate the discharge of commercial and industrial waste and wastewater. The IPP includes the following elements:
>
> **Pretreatment Program** – regulates the discharge of toxic pollutants to the sewer collection system and performs inspection, monitoring, enforcement control and administration of industrial and commercial wastewater discharges. All Users must comply with general requirements and Significant Industrial Users must comply with permit-based requirements.
>
> **Surcharge (High Strength) Program** – is a cost recovery program for commercial and industrial waste discharging conventional pollutants above Domestic Levels and payment of additional treatment costs ($/lb) associated with these Users.
>
> **Special Discharge and General Permit Program** – authorizes the discharge of special wastes and wastewaters including groundwater, construction water, spent products, and other short-term projects through a permit program.
>
> **Hauled in Waste Program** – authorizes the discharge from waste haulers of septic tank and septage, and other domestic wastewater through a permit and ticket/token payment program. [GLWA Industrial Waste Control Website, Exhibit 1 hereto].

C. The IWC Division Is Funded Solely By IWC Charges

58. GLWA admits that the IWC Division is funded **solely** through the IWC Charges.

59. This is the case even though other activities of the IWC Division – i.e., "Surcharge, Hauled-in-Waste" and "Special Discharge and General Permit Program" – generate revenues for GLWA and DWSD.

60. None of the revenues from "Surcharge, Hauled-in-Waste" or "Special Discharge and General Permit Program" are credited toward the revenue requirements of the IWC Division.

D. The IWC Charges Are Imposed On Certain Nonresidential End-Users Of The GLWA and DWSD Sewer Systems, and It Is Those End-Users Who Legally Incur The Charges.

61. The IWC Charges are imposed on certain end-users (i.e., certain types of non-residential properties in Detroit and throughout the suburban service area previously serviced by the City and now serviced by GLWA).

62. Since 2016, GLWA has always directly imposed the IWC Charges on end-users in the GLWA service area.

63. Since 2016, with respect to suburban end-users, the municipalities have acted as mere collection agents on behalf of GLWA.

64. GLWA refers to the municipalities it services as "Member-Partner Communities."

65. GLWA has repeatedly admitted that the Member-Partner Communities have acted as mere collection agents in documents and testimony. For example:

> a) "The IWC Charge **is assessed to any water meter** that is greater than or equal to 5/8" diameter under the following circumstances:
>
> i. **The user** is a commercial or industrial user whose operations are defined by the 1987 SIC Code (or its corresponding designation of the North American Industrial Classification system) being Divisions A, B, C, D, E, F, G, H, I and/or J;
>
> ii. The water meter in question is not strictly used for Fire Protection;
>
> iii. The facility is not a residential or multi-family dwelling."
>
> [December 18, 2018 email from Stephen Kuplicki of GLWA to Tammy Gushard (GLWA000031, emphasis added), Exhibit 2 hereto).

b) In a March 25, 2015 "Industrial Waste Control and Pollutant Surcharge Program Review" (GLWA000042-GLWA000059) (Exhibit 3 hereto), Mark Savitskie and Cheryl Jordan of DWSD:

Define "End-User" as "the business that **ultimately pays** the IWC charges and/or pollutant surcharge." *See id.,* GLWA000044, (emphasis added).

State "Over 47,000 non-residential commercial and industrial **end-users pay IWC charges monthly**, either through a direct billing from DWSD (for Detroit end-user locations) or a billing from their community customer (for suburban end-user locations) with the proceeds forwarded to DWSD." *Id.,* GLWA000045, (emphasis added).

State "Program costs **are passed to the customer** based on their meter size (5/8 inches or greater)" *Id.* (Emphasis added).

Identify that the purpose of IWC charges is to "[r]ecover the cost of the program by establishing charges based on meter size (IPP) and concentration of waste (PS) **for all non-residential customers** (subject to some exclusions)" *Id.,* GLWA000046, (emphasis added).

Note that, with respect to the IWC charge, "many are billed a small amount each." *Id.,* GLWA000051.

c) The IWC Charge "is **assessed against any water meter size greater than 5/8" to all commercial and industrial users of the DWSD system**, whose operations are defined by the 1987 SIC Code Division A, B, C D, E, F, G, H, I and J" *See* DWSD Information Statement regarding the IWC Charge (GLWA000133-GLWA000135, emphasis added) (DWSD Information Statement, Exhibit 4 hereto).

d) "**Any user not specifically exempted by the court's 1981 order or as stated above, is to be assessed the Industrial Waste Control charge**." *See* DWSD Information Statement regarding the IWC Charge. *Id.* (Emphasis added).

e) "**IWC costs are not allocated to individual communities** or separately between Detroit and Suburban Wholesale. Total revenue requirements allocated to IWC are simply divided by the total IWC billing units to determine a set of charges that varies by meter size but that is uniform throughout the customer base." *See* "IWC Observations" (GLWA000384, emphasis added) (IWC Observations, Exhibit 5 hereto).

66. In her deposition in the *General Mill Supply* case, the City's former in-house counsel, Cheryl Jordan, confirmed the "pass through" role of the so-called "Member-Partner Communities" in imposing and collecting the IWC Charges from non-residential sewer users in their respective communities:

Q: And I guess the fourth bullet point down, this what we were just talking about, over 47,000 nonresidential, commercial and industrial end users pay IWC Charges monthly either through direct billing from DWSD (for Detroit end user locations) or a billing from their community customer (for Suburban end user locations) with the proceeds forwarded to DWSD. You see that?

A: Yes.

Q: And that was an accurate recitation of how it worked, correct;

A: I believe so, yes. …

Q: **So would it be fair to characterize the member communities who are passing this on as basically collection agents for DWSD**?

A: **Yes**. [Jordan Dep., p. 12 (Exhibit 6 hereto) (emphasis added).]

67. GLWA's Capital Improvement Plan (Exhibit 7 hereto) for fiscal years 2022-26 went into effect in February 2021.

68. In Appendix D to that Plan (Exhibit 8 hereto, p. D-43), GLWA stated that "Industrial Waste Control charges are **assessed to all commercial and industrial end users** that send wastewater to the GLWA wastewater treatment plant. … There is a delegation Agreement with each community **to collect the industrial waste control charges from the end-users** even though most communities are contracting agency member partners to the wholesale sewer contract member partner." [emphasis added]

69. Certain "Wastewater Discharge Ordinance Delegation Agreements" (the "Delegation Agreements") exist between the City of Detroit and municipalities which send their wastewater to the City's sewage treatment facility. GLWA's General Counsel, Randall Brown, certified to EGLE in the submission that the Delegation Agreements had been assigned to GLWA and thus supported GLWA's statement that it had "adequate authority" to carry out the IPP. *See* IPP Submission, attached in part as Exhibit 9 hereto.

70. Each Delegation Agreement contains the same or virtually the same provision defining the municipality's role in collecting IWC Charges.

71. Paragraph 5 of the Delegation Agreements provides:

> 5. Costs. The DWSD's costs to conduct its activities under this agreement shall be borne by and recovered through charges collected from Industrial Users as defined by appropriate rate formulas and existing or future contracts between the parties. The billings for such services will be billed through the contracting agency for collection from the users. **Payments from the users shall be forwarded to the DWSD by the contracting agency. The County of Wayne, the City, Village or Township and domestic users or other Industrial Users shall not be responsible for payment of**

monthly billings of direct charges properly billed to any Industrial User who does not pay the charges billed to its account. [emphasis added].

72. The Delegation Agreements impose the legal incidence of the IWC Charges on end-users.

73. The Delegation Agreements expressly exculpate the municipal providers of sewer service from any liability for unpaid IWC Charges.

74. This proves beyond any question that the "Member Communities" are not legally responsible for payment of the IWC Charges.

E. THE PUBLIC BENEFITS CONFERRED BY THE ACTIVITIES OF THE IWC DIVISION.

75. GLWA describes the activities of the IWC Division as follows:

> The Great Lakes Water Authority's Industrial Waste Control group implements and enforces an Industrial Pretreatment Program (IPP) to regulate the discharge of commercial and industrial waste and wastewater. The IPP includes the following elements:
>
> **Pretreatment Program** – regulates the discharge of toxic pollutants to the sewer collection system and performs inspection, monitoring, enforcement control and administration of industrial and commercial wastewater discharges. All Users must comply with general requirements and Significant Industrial Users must comply with permit-based requirements.
>
> **Surcharge (High Strength) Program** – is a cost recovery program for commercial and industrial waste discharging conventional pollutants above Domestic Levels and payment of additional treatment costs ($/lb) associated with these Users.
>
> **Special Discharge and General Permit Program** – authorizes the discharge of special wastes and wastewaters including groundwater, construction water, spent products, and other short-term projects through a permit program.
>
> **Hauled in Waste Program** – authorizes the discharge from waste haulers of septic tank and septage, and other domestic wastewater through a permit and ticket/token payment program. [GLWA Industrial Waste Control Website, Exhibit 1 hereto].

76. GLWA concedes that the activities of the IWC Division confer benefits upon the general public and not just those persons and entities who pay the IWC Charges. For example, in its Rules relating to the IPP, GLWA states:

> The GLWA promulgates these rules and regulations for **the protection of the environment, the public health and safety** by abating and preventing pollution through the regulation and control of the quantity and quality of sewage, industrial wastes, and other wastes admitted to or discharged into the sewerage systems, and sewage treatment facilities under the jurisdiction of the GLWA and enabling the GLWA to comply with all applicable state and federal laws required

by the Federal Water Pollution Control Act, being 33 U.S.C. 1251, et. Seq.; the General Pretreatment Regulations for Existing and New Sources of Pollution (40 CFR 403); and the National Categorical Pretreatment Standards at 40 CFR 405 – 471. [GLWA Rules, Exhibit 10 hereto, emphasis added.]

77. In a deposition in the *General Mill Supply* case, Stephen Kuplicki, the head of the IWC Division, confirmed the public benefit of the IWC Division's actions:

Q: Well the users of the sewer system are a subset of the public, right?
A: Right.
Q: All right, and the protection of the environment. Does it benefit more than just the sewer users?
A: I mean, there may be benefits to people who are not part of the system. I mean, the state, generally.
Q: All right. Well, a major goal of the regulations is to keep bad stuff out of the river, right?
A: Correct.
Q: All right, and if bad stuff gets in the river, that's a harm that goes beyond just a harm to sewer users, correct?
A: Right. I mean, it impacts, in our case it impacts state waters, federal waters, international waters. [Kuplicki Dep. II, Exhibit 11 hereto, p. 15.]

78. Moreover, GLWA admits that the activities of the IWC Division at the very least confer benefits on **all** users of the regional sewer system, and not just the non-residential users who incur the IWC Charges. *See* Exhibit 12 hereto, Defendants' Answer to Third Request for Admission No. 9 in the *General Mill Supply* case (admitting that "all sewer users who receive sewage disposal services from DWSD or GLWA benefit from those services, similar to the benefit they may derive from other public utility services").

79. Indeed, Mr. Kuplicki acknowledged this fact in a deposition, stating:

Q: Okay. So, part of the purpose of the rules and regulations [of the IWC Division] is protection of the environment and the public health and safety?
A: Yes.
Q: All right. Is protecting the environment a benefit to the public, generally?
A: **It's benefit to all system users**. [Kuplicki Dep. II, Exhibit 11 hereto, p. 14 (emphasis added).]

F. GLWA Imposes The IWC Charges On Tens Of Thousands Of Users Who Are Not Even Subject To The Regulatory Programs Administered By The IWC Division.

80. There are approximately 47,000 non-residential properties which incur IWC Charges. But

only a small fraction of those users (SIUs primarily) are even subject to the regulatory programs administered by the IWC Division which are financed through the IWC Charges.

81. In an industry presentation, GLWA characterized "today's users" as follows:

> Federal Categorical Users subject to the Industrial Pretreatment Program – 155
> Local Users subject to the Industrial Pretreatment Program – 119
> Surcharge Program – 142
> Septage Waste Haulers – 50
> Groundwater/Special Discharge 16
> Minor Users – 14,622 [*See* Exhibit 13 hereto, p. 4.]

82. Significantly, however, only approximately **600 users** are subject to the regulatory programs administered by the IWC Division because, as described below, so-called "Minor Users" and "Non-Domestic Wastewater Users" must pay the IWC Charges even though they are **not even** subject to those regulatory programs.

1. GLWA Concedes That "Minor Users" Are Not Subject To The Regulatory Programs Administered by GLWA.

83. GLWA's own documents confirm the extremely limited number of users that are actually "regulated" by the IWC Division.

84. In a 2017 memo, GLWA characterized a Minor User as "any Industrial User who does not meet the definition of a Significant Industrial User or qualify for a Wastewater Discharge Permit under the Industrial Pretreatment Program." *See* Exhibit 14 hereto.

85. That critical memo makes clear that any commercial or industrial facility that generates only sanitary sewage or stormwater (and not other types of pollutants) is classified as a Minor User. *Id.*

86. Most importantly, the memo admits that Minor Users are "**not subject to a local regulatory program.**" *Id.* at p. 2 (emphasis added).

87. Mr. Kuplicki, the head of the IWC Division, confirmed these facts in his deposition in the *General Mill Supply* case:

> Q: Okay. **So if you are a plain old minor user, you're not subject to a local regulatory program, you're just subject to the general discharge prohibitions under the GLWA Rules, correct**?

A: Well, you're subject to the general discharge prohibitions and the specific prohibitions apply, too. Those are the specific pollutant limitations.
Q: Right, but when you talk about local regulatory programs, what programs are you talking about?
A: **We were talking the formal Industrial Pretreatment Program, the formal Surcharge Program, the Special Discharge Program, the Hauled-in Waste Program.**
Q: Right. All of which are administered by the Industrial Waste Control Division?
A: Correct [Kuplicki Dep. II, Exhibit 11 hereto, p. 23 (emphasis added).]

See also Id., p. 19 (confirming that "any user that's not an SIU is considered a minor user") and p. 22 (confirming that "if you're just putting sanitary or stormwater in the sewer, you're going to be classified as a minor user").

2. The EPA Does Not Consider "Minor Users," As Characterized By GLWA, To Be "Industrial Users" Subject To The Pretreatment Program Requirements.

88. There was a reason why GLWA concluded that "Minor Users" are "not subject to" the "formal Industrial Pretreatment Program."

89. The reason was that the EPA expressly excludes sewer users who contribute only sanitary sewage or stormwater to a publicly owned treatment works ("POTW") from the scope of its Industrial Pretreatment regulations.

90. The EPA applies that exclusion because the Industrial Pretreatment Regulations only apply to "Industrial Users" as defined by the EPA, and "Minor Users" designated by GLWA do not fall within the definition of "Industrial Users." As discussed below, the EPA regulations and the Clean Water Act itself make this clear.

91. First, as GLWA admits, the Pretreatment Regulations only potentially apply to "Industrial Users." *See* 40 CFR Part 403 et seq; Defendants' Supplemental Brief in Opposition to Plaintiff's Motion for Class Certification in the *General Mill Supply* case, Exhibit 15 hereto, p. 6 (stating that "the federal IPP regulations … apply to Industrial Users only").

92. In particular, the Regulations define "Industrial User" or "User" as "a source of Indirect Discharge" and further define "Indirect Discharge" as "the introduction of pollutants into a POTW from

any non-domestic source regulated under section 307(b), (c) or (d) of the [Clean Water] Act." 40 CFR Part 403.3(i) and (j).

93. Thus, to be an Industrial User, a source of wastewater must be a "nondomestic source regulated under section 307(b), (c) or (d)" of the Clean Water Act.

94. Second, because they discharge only sanitary sewage and stormwater, "Minor Users" are not within the definition of "Industrial Users" because they are not "nondomestic sources."

95. This is because sanitary sewage, even sanitary sewage discharged by non-residential users, is characterized by the EPA as "domestic" sewage. *See, e.g.*, EPA Guidance Manual for POTW Pretreatment Program Development (Exhibit 16 hereto) at pp. 2-5 to 2-9 (stating that the list of Industrial Users compiled by a POTW "should include only those firms that discharge nondomestic industrial wastewater to the POTW"); *Id.* at Table 2.2 (stating that industries that have "domestic discharge[s] only" can be "eliminated").

96. Third, because they discharge only sanitary sewage and stormwater, "Minor Users" are not "regulated under section 307(b), (c) or (d) of the Clean Water Act."

97. That section and subsections apply to sources of "pollutants which are determined not to be susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works." *See* 33 U.S.C. Sec 1317(b).

98. Sanitary sewage and stormwater obviously are "susceptible to treatment" by a treatment plant and those substances do not "interfere with the operation" of the treatment plant.

99. GLWA's own Rules recognize this fact and therefore expressly exclude from its own definition of "Industrial User" the following types of "users": "an industry, commercial establishment, or other entity that discharges wastewater to a publicly-owned treatment works **other than, or in addition to, sanitary sewage**; and is a source of indirect discharge." *See* GLWA Rules, Exhibit 10 hereto, p. 11 (emphasis added).

100. Therefore, all 47,000 Class Members, all of whom GLWA has determined to discharge

only sanitary sewage and stormwater, are excluded from its own definition of "Industrial Users."

3. Regardless Of Whether Minor Users Are "Industrial Users," Plaintiff and the Class Are Not The Type Of "Industrial Users" That Are Subject To The Pretreatment Program Requirements.

101. Even if Minor Users (as defined by GLWA) could properly be characterized as "Industrial Users" under the EPA regulations, those Minor Users still are not subject to the Industrial Pretreatment Program because they are not discharging the types of wastes that would bring them within the regulatory framework.

102. GLWA states that it is "charged with identifying all Industrial Users who **may be subject** to the Industrial Pretreatment Program." *See* Exhibit 14 hereto (emphasis added).

103. Clearly, then, all Industrial Users are not automatically subject to the Pretreatment Program but, instead, are only subject to the Program if their discharges threaten the public treatment works or the environment.

104. Again, that is why GLWA determined that "Minor Users" are not subject to any of the regulatory programs administered by GLWA even though, in GLWA's eyes, "Minor Users" are one type of "Industrial User."

4. GLWA Concedes That There Are Tens Of Thousands Of Sewer Users Who Pay The IWC Charges Who/Which Are Not Characterized As "Minor Users" Or "Industrial Users."

105. Not only are "Minor Users" not subject to the regulatory programs administered and carried out by the IWC Division, but there are tens of thousands of other non-residential "users" who pay the Charges and are not even characterized as "Minor Users."

106. In a deposition in the *General Mill Supply* case, Mr. Kuplicki confirmed that, in addition to "Industrial Users" (which are synonymous with "Minor Users"), there are other "nondomestic wastewater sources" – *i.e.*, commercial properties -- that pay IWC Charges:

> Q: So there are nondomestic wastewater sources that don't necessarily qualify as industrial users, correct?
> A: Yes.

Q: And further down in paragraph eleven [of Mr. Kuplicki's Affidavit], the first sentence says: The IWC chart was established by DWSD and continued by GLWA to recover sufficient revenues to operate the IWC division and is paid by municipalities from industrial and other nondomestic waste water users residing based in a specific municipality who use GLWA's services. Do you see that?
A: Yes, I do.
Q: So the charge, the IWC charge is paid by both industrial and certain nondomestic wastewater users as you stated in your affidavit, correct?
A: That's my understanding, correct. [Kuplicki Dep. I, Exhibit 17 hereto, at pp. 17-18.]

See also Id., p. 36 (confirming that "nonresidential users, which would include both commercial and industrial, are assessed this charge").

107. In his first deposition, Mr. Kuplicki testified that there were 18,453 "minor industrial users" and that "these minor industrial users correspond to the industrial users" that Mr. Kuplicki described in his affidavit. Exhibit 17 hereto, pp. 34-35. *See also* DWSD Presentation 2014, Exhibit 18 hereto (describing a "Program Overview" and identifying 288 SIUs and 18,453 "Minor Users").

108. Significantly, however, there are at least 47,000 properties or "users" who are subject to the IWC Charges.

109. Thus, there are over **28,000 properties or "users"** (i.e., the "Non-Domestic Wastewater Users") who are subject to the IWC Charges, but who by GLWA's own admission are not subject to the regulatory and enforcement activities of the IWC division.

110. Notably, the Class here includes all "Minor Users" and "Non-Domestic Wastewater Users."

G. NOT ONLY DOES GLWA IMPOSE THE IWC CHARGES ON USERS WHO ARE NOT REGULATED BY THE IWC DIVISION, BUT IT ALSO INEXPLICABLY EXEMPTS THOUSANDS OF OTHER, SIMILARLY SITUATED SEWER USERS FROM THE OBLIGATION TO PAY IWC CHARGES.

111. And it gets worse. In order to fund the IWC Division, GLWA has created a nonsensical ratemaking scheme, which requires persons and entities who are not even subject to the regulation of the IWC Division to finance virtually the entire budget of that Division, while at the same time exempting other similarly situated sewer users from payment of the Charges.

112. First and foremost, all residential sewer users are completely exempt from the IWC Charges. This includes all multi-family properties.

113. As a result, there are hundreds of thousands of sewer users in the GLWA service area that are exempt from the Charges. In fact, in the City of Detroit alone, there are at least 211,000 residential sewer users who are exempt from the IWC Charges.

114. In addition, even though GLWA claims that all non-residential properties are subject to the regulation of the IWC Division, GLWA has inexplicably exempted tens of thousands of nonresidential properties from the IWC Charges (the "GLWA Exemptions"). The GLWA Exemptions are granted pursuant to GLWA's Rules, which are applicable to each of the Member Partners, including the City.

115. Indeed, the following types of nonresidential properties do not incur IWC Charges because they are within the scope of the GLWA Exemptions:

> Public and private elementary and secondary schools which are part of a governmental school district; colleges, universities, professional schools, junior colleges and technical institutes; and local, state and federal government facilities.

116. The head of the IWC Division, Stephen Kuplicki, testified that it was a "policy decision" to create the arbitrary exemptions. Kuplicki Dep. II, Exhibit 11 hereto, pp. 39-40.

117. Upon information and belief, DWSD created these arbitrary exemptions even though they were not authorized by the original 1981 federal court order which initially established the IWC Charges.

118. Kuplicki confirmed that, absent the exemption, the exempted entities would be required to pay IWC Charges. *Id.* at p. 40.

119. The magnitude of the GLWA Exemptions is substantial.

120. In Detroit and in the 77 suburban communities serviced by GLWA, there are thousands of public and private elementary and secondary schools, colleges, universities, professional schools, junior colleges and technical institutes, and local, state and federal government facilities.

121. Most or all of those facilities would incur IWC Charges absent the GLWA Exemptions.

122. In addition to the GLWA Exemptions, the City also has arbitrarily and capriciously exempted, and continues to exempt, thousands of nonresidential sewer users from payment of the IWC Charges (the "City Exemptions"). The majority of the City Exemptions are not authorized by GLWA's Rules because thousands of users who receive a City Exemption are not the types of users that GLWA has authorized the City to exempt from payment of the Charges.

123. The City Exemptions are wholly arbitrary and capricious. Records GLWA produced in this case (GLWA-002470) confirm that the City imposes the IWC Charges on 7778 user meters comprising 37,222 "equivalent meters," *i.e.*, an average of 4.78 equivalent meters per exempt user. *See* Exhibit 20 hereto. The problem is there are about 33,646 nonresidential sewer users in the City. *See* Exhibit 21_hereto. The City thus exempts about 25,868 nonresidential sewer users from payment of the IWC Charges. Assuming the meter size distribution of those exempt users is the same or similar to the meter size distribution of the 7778 users who are subject to the Charges (4.78), the estimated number of equivalent meters for the nonresidential sewer users who receive the City Exemptions is **123,649** (25,868 x 4.78).

124. In its cost of service study for the fiscal year beginning July 1, 2025, GLWA determined the amount of the IWC Charges by dividing the IWC revenue requirement of $8,714,100 by 195,322 Equivalent Meters, resulting in a **$3.72** monthly charge per Equivalent Meter. *See* Exhibit 22 hereto. Obviously, holding the IWC revenue requirement constant, the higher the number of equivalent meters, the lower the resulting charges.

125. Based on the above, the users who receive either the GLWA Exemption or the City Exemption comprise at least **132,549** equivalent meters. Although Plaintiff believes that the number of equivalent meters associated with the GLWA Exemptions are much higher (because Plaintiff does not yet have data on equivalent meters from any Member Partners, and many Member Partners have not even provided data concerning the number of nonresidential users who benefit from the GLWA

Exemptions), at a minimum, the number of equivalent meters that should be the denominator in the fraction described above should have been no less than **327,871** (195,322 plus 123,649 plus 8900).

126. Dividing the IWC revenue requirement of $8,714,100 by 327,871 equivalent meters yields an IWC Charge of **$2.21** per equivalent meter per month. Thus, the IWC Charges, on a per equivalent meter basis, should have been 40% lower than they actually were.

127. As a result of the GLWA Exemptions and the City Exemptions, the payers of the IWC Charges must incur and pay higher rates in order to subsidize the favored, exempted, class.

128. The prior action *General Mill Supply Co v. Great Lakes Water Authority*, Wayne County Circuit Court Case No. 2018-011569-CZ addressed substantially the same legal subject matter and much of the same factual subject matter as this case.

129. In *General Mill Supply Co.*, the defendants produced an expert witness named William Stannard.

130. A transcript of Stannard's testimony in *General Mill Supply Co.* is attached hereto as Exhibit 19.

131. Stannard provided testimony as an agent of GLWA.

132. Stannard's testimony is binding on GLWA as a judicial admission.

133. Alternatively, Stannard's testimony constitutes an evidentiary admission to GLWA's detriment.

134. Stannard offered favorable testimony in support of Plaintiff's claims that the IWC Charges are unlawful taxes in their entirety.

135. One of the three *Bolt* factors is that a regulatory fee "must be proportionate to the necessary costs of the service." *Bolt,* 459 Mich. at pp. 161-62].

136. To be lawful user fees and not taxes, the IWC Charges must bear a "close proportional relationship" to the benefits conferred upon Plaintiff and the Class by the activities of the IWC Division. *See County of Jackson*, 302 Mich. App. at 109-110.

137. Stannard's testimony confirmed that the IWC Charges are not proportionate.

138. Stannard confirmed that the IWC Charge rates are the same for all types of users, but the costs GLWA incurs relating to the activity of the IWC Division are not the same for each type of user.

139. First, Stannard agreed that it is "appropriate to recover the cost of the IPP program through rates and charges imposed on the users who are actually subject to the permitting and inspection and regulation," and that the "underlying idea" is that the users "that cause the costs should be the one that pay the costs" (*Id.* at pp. 51-52).

140. Second, Stannard acknowledged that the IWC Charges "for each size meter are the same regardless of the volume and the character of the pollutants of the waster that's actually put into the wastewater system by any user." *Id.* at p. 121.

141. Stannard described an IWC Charge methodology he implemented for the City of St. Louis, which established "tiers" designed to "charge each class of user based upon their relative impact on pretreatment program costs. *Id.*

142. Stannard conceded that the IWC Charge methodology "is **an imprecise method** that has been used to correlate meter size with that impact that it would have on the IWCP program" which "is not as precise as what St. Louis has proceeded with." *Id.* at p. 121-122 (emphasis added).

143. Third, Stannard conceded that there are three types of "users" that incur the IWC Charges – SIUs, "Industrial Users" (synonymous with "Minor Users") and "Nondomestic Wastewater Sources" (*Id.* at pp. 55) – and that the costs the IWC Division incurs are different for each type of "user." *See, e.g., Id.* at pp. 55 (testifying that he would expect the "cost correlation" to Industrial Users would be less than the cost of the SIUs); *id.* at p.48 (conceding that there is "more monitoring, more oversight, more reporting" for SIUs than other types of users); *Id.* at p. 64 (agreeing that an office building "obviously contributes less to the cost of the IWC division than, say, an SIU").

144. Fourth, Stannard agreed that "if there are any other classes of customers that don't require any effort [by the IWC Division] and that are solely domestic nature of waste with no potential or

changing environment that would require ongoing activity, I would agree" that those customers "should not incur the IWC charges." *Id.* at p. 103. This concession is critical because it is undisputed that users who constitute "Nondomestic Wastewater Sources" – a group of over 28,000 users who incur IWC Charges -- are not regulated **at all** by the IWC Division because they are presumed to contribute only "domestic" wastewater to the sewer system.

145. Fifth, Stannard acknowledged that the EPA has dictated that IWC Charges be based upon each user's "relative impact on pretreatment costs." *Id.* at p. 124. Stannard agreed that the "[c]riteria for cost allocation include such things as number and type of sampling, an analysis of events performed and the amount and type of pollutant discharged." *Id.* at pp. 123-124.

146. Finally, based upon the above, Stannard ultimately agreed in his deposition that the IWC Charges at issue here were not proportional.

147. Stannard agreed that the IWC Charges at issue here were not proportional because the three groups of users cause varying amounts of costs to be incurred by the IWC Division:

> Q. Okay. But in any event, you would agree that charging in the way that they do the same IWC charge to each user based upon their meter size does not correlate with the costs that are caused by each of the three groups [SIUs, Industrial Users, and Nondomestic Wastewater Users]?
> A. Yes, that is a correct statement. There's not a direct correlation by meter size and the three groups and the buckets of costs within those three groups.
> Q. And they might all benefit under your view from the IWC program, but the level of benefit varies between the three classes, correct?
> A. Yeah, not only benefit, but impact a need for oversight and regulation, yes.
> Q. **And when you're developing rates, a proportionate charge would be one that more closely approximates each group's either benefit from the IWC program or the cost causation, correct?**
> A. **Yes.** [Stannard Dep., Exhibit 19 hereto, pp. 86-87.]

148. Stannard further supported the disproportionality of the IWC Charges when he conceded that "an SIU serviced by a two-inch meter generally causes more of the IWC-related costs than, say, a commercial office building with the same two-inch meter," but that both users pay the "exact same IWC charge." *Id.* at p. 83.

149. Stannard's testimony also confirmed that the IWC Charges are not proportionate because GLWA inexplicably exempts certain types of nonresidential users from the charges.

150. Stannard acknowledged that basic principles of rate making prohibit discrimination in rates and charges assessed against similarly situated utility customers.

151. This confirms that GLWA's exemption of schools, colleges and governmental users from the Charges, and the City Exemptions, further render the Charges disproportionate to GLWA's costs.

152. Stannard's testimony on this point was as follows:

- Stannard testified that "cost of service" is "the fundamental benchmark for establishing utility rates in the United States" and that the "cost of service concept is a cost-based process of converting revenue requirements into the unit costs" (*Id.* at p. 40);

- "Cost of service" represents the "total annual revenue requirement … to be derived from utility revenues" (*Id.* at p. 40);

- Stannard agreed that "fair" rates "means that the rates "recover revenues from customer classes in relations to the costs incurred in providing utility services to those customer classes and be free from self-interest, prejudice or favoritism" (*Id.* at p. 19);

- "The overarching objective is that classes of customers pay in proportion to the costs that have been allocated to them" (*Id.* at p. 20) with "no subsidies" – i.e., "that one user who benefits from the utility service and/or causes costs to be incurred by the utility should not have those costs subsidized by other systems users" (*Id.* at p. 41);

- Stannard confirmed that any discrimination must be cost-based (*Id.* at pp. 20-21); *Id.* at p. 99 (acknowledging that there must be a "cost-based justification for charging different rates to different users");

- Stannard agreed that if you exempt certain users from payment of rates and charges, it necessarily results in the nonexempt customers paying marginally higher rates and charges (*Id.* at pp. 79-80)

- Finally, Stannard confirmed that there was no "cost-based" justification for exempting schools, colleges and government facilities from payment of the IWC Charges, and that the exemptions could not be justified based on differences in the type or character of the sewage contributed by those facilities. *Id.* at pp. 79-80.

153. In sum, Stannard's testimony in the *General Mill Supply Co.* case confirmed that the "actual use" of the services of the IWC Division by each payer of the IWC Charges simply "is not accounted for

with the requisite level of precision necessary to support a conclusion that the charge is proportionate to the costs of the services provided." *County of Jackson v. City of Jackson*, 302 Mich. App. 90, 111 (2013).

154. Notwithstanding Stannard's testimony in *General Mill Supply Co.*, GLWA has not changed its method of imposing and collecting the IWC Charges since the resolution of *General Mill Supply Co.* and entry of Final Judgment in that case on February 27, 2024.

CLASS ALLEGATIONS

155. Plaintiff brings this action as a class action, pursuant to MCR 3.501, individually and on behalf of a proposed class consisting of all Minor Users and Non-Domestic Wastewater Users who have paid or incurred the IWC Charges to GLWA since March 11, 2024.

156. The members of the Class are so numerous that joinder of all members is impracticable.

157. Plaintiff's claims are typical of the claims of members of the Class.

158. Plaintiff is a member of the Class he seeks to represent.

159. Plaintiff is a member of the class he seeks to represent because Plaintiff was injured by the same wrongful conduct that is common to and injured all other members of the Class.

160. GLWA has acted wrongfully in the same basic manner as to the entire class.

161. There are questions of law and fact common to all Class Members that predominate over any questions which, if they exist, affect only individual Class Members, including:

A. whether the IWC Charge imposed by the GLWA is a tax;

B. whether the IWC Charge imposed by GLWA violates the Headlee Amendment; and

C. whether by imposing the IWC Charge on the Class and not on (1) other persons or entities in the GLWA service area who are within GLWA's definitions of Minor Users or Non-Domestic Wastewater Users and/or (2) persons or entities who own or occupy residential properties in the GLWA service area violates the Michigan Constitution's equal protection guarantees.

162. Plaintiff will fairly and adequately protect the interests of the Class, and Plaintiff has no interests antagonistic to those of the Class.

163. Plaintiff is committed to the vigorous prosecution of this action and has retained competent and experienced counsel to prosecute this action.

164. In particular, Plaintiff's interests align with those of the class with respect to whether the Charges are taxes.

165. Because of the large number of residential wastewater users and exempt non-residential wastewater users who are not paying the IWC Charges, it is unlikely – and perhaps impossible – that any member of the putative Class, which consists of Minor Users and Non-Domestic Wastewater Users, will pay more for wastewater management in the future, even if GLWA's current method of charging is declared to be unconstitutional.

166. More importantly, as a matter of law, the question of whether a class representative adequately represents the interests of the class looks only at the past or retrospective relief the plaintiff seeks, not at any speculative future situation that might be different from the status quo.

167. This is particularly true where continuing the status quo would benefit some class members, but would also violate the law.

168. In other words, if a judgment in favor of the class representative and other putative class members will entitle them to recover money they paid to the defendant in the past, that is sufficient for the class members' interest to align, notwithstanding whether the defendant might seek to impose a different charging scheme in the future that might benefit some class members and injure other class members compared to the charging scheme that was in place before the class action.

169. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy because joinder of all members is impracticable.

170. The prosecution of separate actions would create a risk of inconsistent or varying adjudications.

171. Furthermore, the prosecution of separate actions would substantially impair and impede the ability of individual class members to protect their interests.

172. In addition, since individual refunds may be relatively small for most members of the class, the burden and expense of prosecuting litigation of this nature makes it unlikely that members of the class would prosecute individual actions.

173. On the other hand, it is probable that the amount which may be recovered by individual class members will be large enough in relation to the expense and effort of administering the action to justify a class action. In the 2018 case, which resulted in a settlement distribution to the class members in 2024, the median refund distribution was about $731 and the mean refund distribution was about $1,519. Class counsel and the third party administrator issued refunds to about 4,938 class members. The third party administrator charged the class $126,443.40 to administer the settlement fund, send notices to all known class members, process claims, and send two rounds of refund checks to claiming class members. That resulted in an administrative cost of about $25.60 per class member, which was well below the median refund distribution of $731.

174. Plaintiff anticipates no difficulty in the management of this action as a class action.

COUNT I
VIOLATION OF THE HEADLEE AMENDMENT

175. Plaintiff incorporates each of the preceding paragraphs as if fully set forth herein.

176. GLWA is bound by the Michigan Constitution of 1963, including those portions commonly known as the Headlee Amendment.

177. In particular, GLWA may not disguise a tax as a fee under Article 9, Section 31 of the Michigan Constitution of 1963.

178. The IWC Charge is a disguised tax and intended to avoid the obligations of the Headlee Amendment, including the requirement that the IWC Charge, as a tax, be approved by a majority of the electorate.

179. The IWC Charge has all relevant indicia of a tax:

A. It has no reasonable relationship to any service or benefit actually received by the taxpayer;

B. The IWC Charge is designed to generate revenue and lacks a significant element of regulation, as applied to Plaintiff and the Class;

C. The payers of the IWC Charge benefit in no manner distinct from any other taxpayer or the general public;

D. Payment of the IWC Charge is not discretionary, but effectively mandatory;

E. Various other indicia of a tax described in *Bolt v. City of Lansing* are present.[1]

180. As a direct and proximate result of GLWA's implementation of the IWC Charge, Plaintiff and the Class have been harmed.

181. Plaintiff seeks his attorneys' fees and costs as allowed by Article 9, Section 32 of the Michigan Constitution of 1963 and MCL 600.308a.

182. Plaintiff seeks a refund of all IWC Charges paid by Plaintiff and the Class during the one-year period prior to the commencement of this action and during the pendency of this action.

COUNT II
UNJUST ENRICHMENT – VIOLATION OF MCL 124.293

183. Plaintiff incorporates each of the preceding paragraphs 1 through 174 inclusive, as if fully set forth herein.

184. GLWA is bound by MCL 124.293 which provides that GLWA "shall not have direct taxing power."

185. The IWC Charge is a disguised tax and is intended to avoid the prohibitions of MCL 124.293.

186. The IWC Charge has all relevant indicia of a tax:

---

[1] Pursuant to MCR 2.112(M), Plaintiff identifies subparts (A) through (E) of Paragraph 175 as "factual questions that are anticipated to require resolution by the Court."

A. It has no reasonable relationship to any service or benefit actually received by the taxpayer;

B. The IWC Charge is designed to generate revenue and lacks a significant element of regulation, as applied to Plaintiff and the Class;

C. The payers of the IWC Charge benefit in no manner distinct from any other taxpayer or the general public;

D. Payment of the IWC Charge is not discretionary, but effectively mandatory;

E. Various other indicia of a tax described in *Bolt v. City of Lansing* are present.

187. GLWA has violated MCL 124.293 by imposing a tax even though it lacks "direct taxing power."

188. As a direct and proximate result of GLWA's implementation of the IWC Charge, GLWA has collected millions of dollars to which it is not entitled. By paying the IWC Charges, Plaintiff and the Class have conferred a benefit upon the City. GLWA has been unjustly enriched because it received IWC Charges to which it was not entitled, and it would be unfair for the City to retain the IWC Charges under the circumstances.

189. Plaintiff seeks a refund of all IWC Charges paid by Plaintiff and the Class during the one-year period prior to the commencement of this action and during the pendency of this action.

COUNT III
VIOLATION OF EQUAL PROTECTION GUARANTEES STATED IN THE MICHIGAN CONSTITUTION OF 1963, ARTICLE I, SECTION 2

190. Plaintiff incorporates each of the preceding paragraphs 1 through 174 inclusive, as if fully set forth herein.

191. The Michigan Constitution of 1963 provides in pertinent part that "no person shall be denied the equal protection of the laws…" Mich. Constitution 1963, Article 1, § 2. Plaintiff is not asserting claims under the U.S. Constitution or other federal law.

192. GLWA's practice of imposing the IWC Charges upon Plaintiff and other non-residential property owners who are not SIUs and, through the GLWA Exemptions and the City Exemptions,

exempting other similarly-situated persons and entities from payment of the Charges constitutes a constitutionally improper classification which violates Michigan equal protection guarantees.

193. There is no natural distinguishing characteristic between the persons and entities who paid the IWC Charges, but are not SIUs, and those who did not pay the IWC Charges due to the GLWA Exemptions and the City Exemptions.

194. Thus, Plaintiff and the Class (who paid the IWC Charges but are not SIUs and did not receive a particularized benefit) are irrationally being charged differently than the similarly situated owners of parcels of property that did not pay the IWC Charges.

195. In *Alexander v Detroit*, 392 Mich 30; 219 NW2d 41 (1974), the Michigan Supreme Court enumerated a two-part test to be applied in an equal protection challenge to a legislative enactment. The questions to be considered are:

> (1) Are the enactment's classifications based on natural distinguishing characteristics and do they bear a reasonable relationship to the object of the legislation?
>
> (2) Are all persons of the same class included and affected alike or are immunities or privileges extended to an arbitrary or unreasonable class while denied to others of like kind? [*Id.* at 35-36 (citations omitted.]

196. On the one hand, the Charges are not based upon any natural distinguishing characteristics between Plaintiff and the Class, on the one hand, and the persons and entities who have been exempted. Further, the classifications (i.e., the exemptions) do not bear a reasonable relationship to the object of the IWC Charges. Finally, all persons of the same class are not included and affected alike, but instead, the privilege of not paying IWC Charges is extended to an arbitrary or unreasonable class while denied to others of like kind.

197. Thus, Plaintiff and the Class are irrationally being charged differently than similarly situated persons and entities who/which are being assessed lower Rates.

198. The manner in which the IWC Charges are imposed upon non-residential properties which are not SIUs unduly burdens Plaintiff and the Class, and puts all Class members at a distinct financial disadvantage as compared to the owners of parcels that do not pay the IWC Charges.

199. Thus, Plaintiff and the Class are subsidizing the alleged cost of monitoring SIUs for the similarly-situated persons and entities who do not pay the IWC Charges.

200. GLWA serves no legitimate governmental purpose by charging Plaintiff and the Class the IWC Charges when they are not SIUs, and when other property owners who are also not SIUs are not subject to the IWC Charges.

201. GLWA has violated Mich. Constitution 1963, Article 1, § 2 by imposing the IWC Charges upon Plaintiff and the Class in violation of their constitutional equal protection guarantees.

202. Plaintiff and the Class have been financially harmed as a result of GLWA's violation of their constitutional equal protection guarantees.

203. GLWA should be required to disgorge the revenues attributable to the IWC Charges it has imposed or collected during the three years preceding the filing of this action and refund the improperly assessed IWC Charges to Plaintiff and the Class.

COUNT IV
UNJUST ENRICHMENT – UNREASONABLE UTILITY RATES

204. Plaintiff incorporates each of the preceding paragraphs 1 through 174 as if fully set forth herein.

205. The IWC Charges have been unreasonable in violation of common-law ratemaking principles. Indeed, the IWC Charges "viewed as a whole," have been "excessive." *Youmans v. Bloomfield Township*, 336 Mich. App. 161, 969 N.W.2d 570 (2021).

206. As a direct and proximate result of GLWA's improper conduct, GLWA has collected millions of dollars to which it is not entitled. By paying the IWC Charges, Plaintiff and the Class have conferred a benefit upon GLWA.

207. GLWA has been unjustly enriched because it received IWC Charges to which it was not entitled, and it would be unfair for GLWA to retain the IWC Charges under the circumstances.

208. GLWA should be required to disgorge the amounts by which it has been unjustly enriched.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff requests that the Court grant the following relief:

A. Certify this action to be a proper class action with Plaintiff certified as the Class Representative and Kickham Hanley PLLC designated as Class Counsel;

B. Define the Class to include all persons or entities who/which have paid or incurred the IWC Charge at any time in the one year preceding the filing of this lawsuit or who/which pay or incur the IWC Charge during the pendency of this action;

C. Enter judgment in favor of Plaintiff and the Class and against GLWA, and order and direct GLWA to disgorge and refund all IWC Charges collected during the class period and to pay into a common fund for the benefit of Plaintiff and all other members of the Class the total amount of IWC Charges to which Plaintiff and the Class are entitled;

D. Appoint a Trustee to seize, manage and distribute in an orderly manner the common fund thus established;

E. Find and declare that the IWC Charges violate the Headlee Amendment, MCL 123.293, the Michigan Constitution's equal protection guarantees, including under Mich. Constitution 1963, Article 1, § 2, and the common law, and are therefore unlawful;

F. Award Plaintiff and the Class the costs and expenses incurred in this action, including reasonable attorneys', accountants', and experts' fees; and

G. Grant any other appropriate relief.

JURY DEMAND

Plaintiff, individually and on behalf of the Class, hereby demands a trial by jury on all issues so triable.

KICKHAM HANLEY PLLC

By: */s/ Gregory D. Hanley*
Gregory D. Hanley (P51204)
Jamie K. Warrow (P61521)
Edward F. Kickham Jr. (P70332)
40950 Woodward Ave., Suite 306
Bloomfield Hills, MI 48304
248-544-1500
Attorneys for Plaintiff and the Class

Date: April 3, 2026

CERTIFICATE OF SERVICE

I hereby certify that on April 3, 2026, I electronically served the foregoing document on all counsel of record using the court's electronic filing system.

/s/ Edward F. Kickham Jr.
Edward F. Kickham Jr.

4929-4061-8141 v.1

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

LAURENCE WOLF,
individually and d/b/a Wolf Properties,
individually, and as representatives
of a class of similarly situated persons
and entities,

Plaintiff,

v.

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

Defendant.

Case No. 25-003683-CZ
Hon. Kevin J. Cox

Gregory D. Hanley (P51204)
Jamie K. Warrow (P61521)
Edward F. Kickham Jr. (P70332)
Kickham Hanley PLLC
40950 Woodward Ave., Suite 306
Bloomfield Hills, MI 48304
(248) 544-1500
Attorneys for Plaintiff

Christopher S. Frescoln (P63175)
Stephen J. Brown (P82684)
Fausone & Grysko, PLC
41700 West Six Mile Road, Suite 101
Northville, MI 48168
General Counsel
(248) 380-0000
Attorneys for Defendant

EXHIBITS 1-10 TO PLAINTIFF'S FIRST AMENDED CLASS ACTION COMPLAINT

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 1

Document received by the MI Wayne 3rd Circuit Court.

READ MORE



Industrial Waste Control

The Great Lakes Water Authority's Industrial Waste Control group implements and enforces an Industrial Pretreatment Program (IPP) to regulate the discharge of commercial and industrial waste and wastewater. The IPP includes the following elements:

Pretreatment Program – regulates the discharge of toxic pollutants to the sewer collection system and performs inspection, monitoring, enforcement control and administration of industrial and commercial wastewater discharges. All Users must comply with general requirements and Significant Industrial Users must comply with permit-based requirements.

Surcharge (High Strength) Program – is a cost recovery program for commercial and industrial waste discharging conventional pollutants above Domestic Levels and payment of additional treatment costs ($/lb) associated with these Users.

Special Discharge and General Permit Program – authorizes the discharge of special wastes and wastewaters including groundwater, construction water, spent products, and other short-term projects through a permit program.

Hauled in Waste Program – authorizes the discharge from waste haulers of septic tank and septage, and other domestic wastewater through a permit and ticket/token payment program

CONTACT

Specific questions and information can be obtained by contacting the Industrial Waste Control group .

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 2

Document received by the MI Wayne 3rd Circuit Court.

Lavonda Jackson

From: Stephen Kuplicki <Stephen.Kuplicki@glwater.org>
Sent: Tuesday, December 18, 2018 11:31 AM
To: Tammy Gushard
Subject: IWC Meter Charge

Called to follow-up on a question you received about the IWC Charge. Left a message with your secretary, but in response to the inquiry of how to appeal the IWC charge, I am providing the following:

1. The IWC Charge is assessed to any water meter that is greater than or equal to 5/8" diameter under the following circumstances:
    a. The user is a commercial or industrial user whose operations are defined by the 1987 SIC Code (or its corresponding designation of the North American Industrial Classification System) being Divisions A, B, C, D, E, F, G, H ,I and/or J
    b. The water meter in question is not strictly used for Fire Protection
    c. The facility is not a residential or multi-family dwelling.
2. A user challenging the assessment would need to file an appeal with supporting documentation. This includes but not limited to:
    a. SIC classification – demonstrate that it's SIC classification(s) for use of the facility are not specified by Divisions A, B, C, D, E, F, G, H ,I and/or J of the 1987 SIC Code;
    b. The water meters present at the facility, their size and purposes.
    c. Piping Diagram for their internal water system (This does not have to be an engineering drawing);
    d. How water is used/consumed within the facility and the volume used over a period (6-12 months);
3. The request should be reviewed by Mr Wheatly and myself.
4. Upon submission of the information, we would review and evaluate the request and provide a written determination. If there were questions about the submittal or a meeting or site visit, we would notify the appellant and schedule this.

Please call me to discuss this at the number below.

New address after January 7th is 9300 West Jefferson, Suite 230; Detroit, MI 48209

Stephen J Kuplicki, PE, JD
Manager-Operations - Industrial Waste Control, Laboratories and Environmental Affairs
GREAT LAKES WATER AUTHORITY 303 S. Livernois Detroit MI 48209
P: 313-297-5804
E: Stephen.Kuplicki@glwater.org
General Information: 844 455 GLWA(4592)

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 3

Document received by the MI Wayne 3rd Circuit Court.

INDUSTRIAL WASTE CONTROL AND POLLUTANT SURCHARGE PROGRAM REVIEW

MARK SAVITSKIE ,CPA, DWSD FINANCE
CHERYL JORDAN, ESQ, DWSD OGC

MARCH 25, 2015

Document received by the MI Wayne 3rd Circuit Court.

PRESENTATION GOALS

- Facilitate a collaborative discussion of the review findings, process improvements and recommendations
- Provide an understanding of Industrial Waste Control ("IWC") and the Pollutant Surcharge ("PS")
- Provide quantitative and financial data on both programs

Document received by the MI Wayne 3rd Circuit Court.

QUICK DEFINITIONS

Community Customer

- The suburban community that interfaces with DWSD on both programs

End-User

- The business that ultimately pays the IWC charges and/or Pollutant Surcharge

Document received by the MI Wayne 3rd Circuit Court.

WHAT IS "INDUSTRIAL WASTE CONTROL"?

- Program for enforcement of local pollution controls pursuant to a mandate of the Clean Water Act and subsequent Federal lawsuit in 1977
- Industrial Waste Control is a division within the Waste Water Treatment organization
- IWC regulates discharge of wastewater through a command and control program that includes the Industrial Pretreatment ("IPP") and Pollutant Surcharge programs
- Over 47,000 non-residential commercial and industrial end-users pay IWC charges monthly, either through a direct billing from DWSD (for Detroit end-user locations) or a billing from their community customer (for suburban end-user locations) with the proceeds forwarded to DWSD
- Program costs are passed to the customer based on their meter size (5/8 inches or greater)
- Elements of IWC program include customer database maintenance, water sample selection, lab testing, permit administration and enforcement, along with administrative support costs of other DWSD organizations

Document received by the MI Wayne 3rd Circuit Court.

HISTORY AND LEGAL PRECEDENT FOR IWC

History

- 1972 – Clean Water Act ("CWA") created the National Pollutant Discharge Elimination System ("NPDES")
- 1977 – Environmental Protection Agency ("EPA") filed suit in United States versus City of Detroit ("COD") alleging violations of the CWA involving DWSD's waste water treatment plant
- 1977 to 1981 – Consent judgments entered requiring the COD to develop Sewer Use and Industrial Waste Control Ordinances and establish a user charge program in order to comply with CWA requirements

Elements of IWC

- DWSD and suburban customers ordered to amend existing contracts giving DWSD the right of entry to monitor and inspect.
- Municipalities ordered to adopt IWC ordinances and enter into Delegation Agreements with COD.
- Carry out inspection, surveillance and monitoring procedures as necessary to determine compliance.
- Recover the cost of the program by establishing charges based on meter size (IPP) and concentration of waste (PS) for all non-residential customers (subject to some exclusions).
- Collect only the amount necessary to recover the cost of the IWC program.

Document received by the MI Wayne 3rd Circuit Court.

WHAT IS "POLLUTANT SURCHARGE"?

- A surcharge to certain non-residential end-users (presently 148) who have been deemed to have excessive discharges of pollutants into the DWSD system
- Pollutants classified as:
  - Biochemical Oxygen Demand ("BOD")
  - Total Suspended Solids ("TSS")
  - Phosphorus ("P")
  - Fats, Oils and Grease ("FOG")
- Requires ongoing review of end-user discharges – adding, removing and adjusting surcharge end-users
- Meter readings provide driver for billing based on a pounds-discharged formula administered by IWC

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW SCOPE

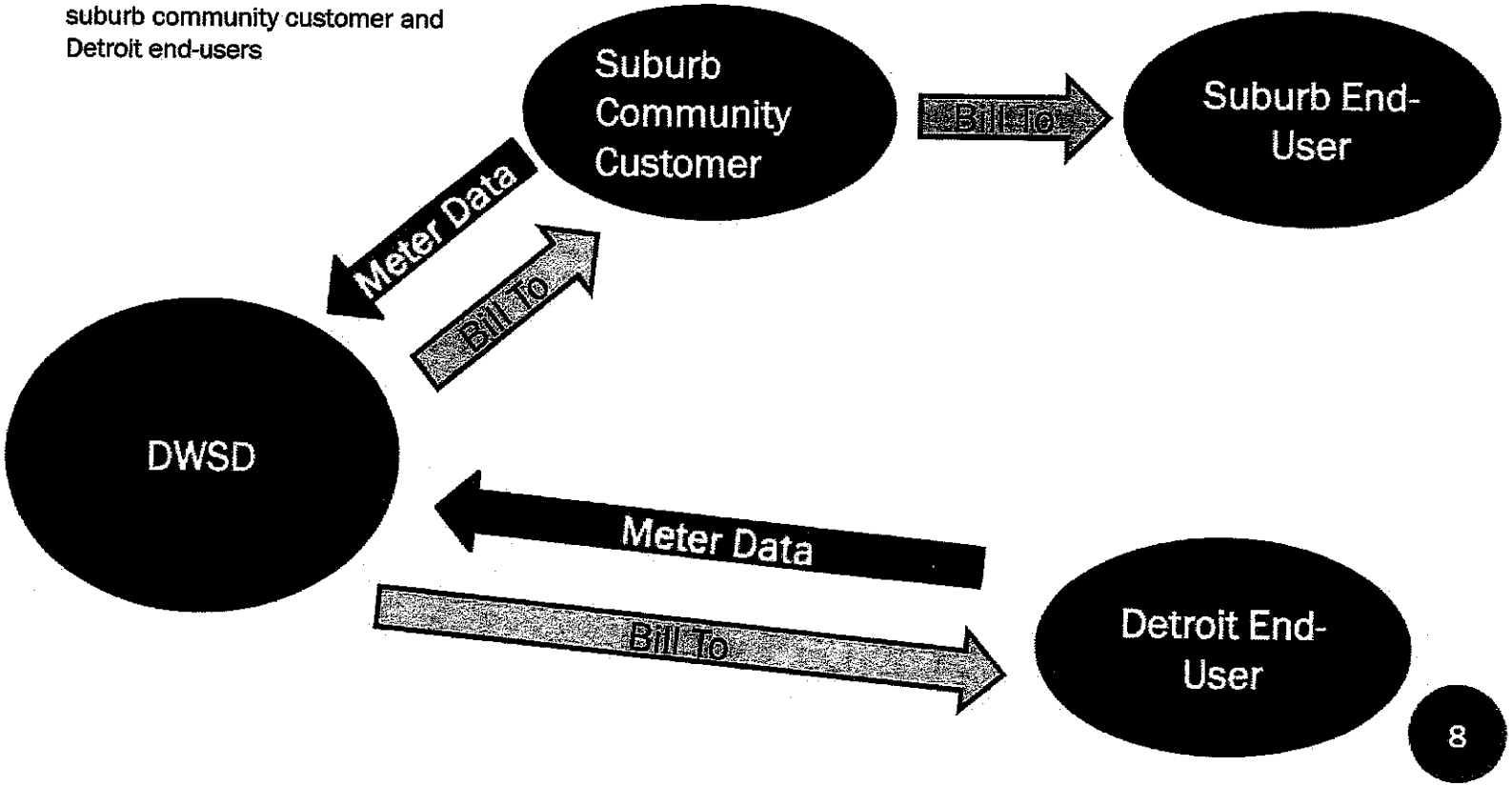
- Understand the elements and processes of the IWC and Pollutant Surcharge programs
- Validate quantitative and financial data related to customers and billing
- Appraise compliance with government programs
- Assist DWSD Finance in FY 2016 rate development
- Address questions and inquiries made by stakeholders and the WW Steering Group

Document received by the MI Wayne 3rd Circuit Court.

BILLING PROCESS FLOW - IWC

Step 1
DWSD receives end-user meter size

Step 2
DWSD prepares and mails bills to suburb community customer and Detroit end-users



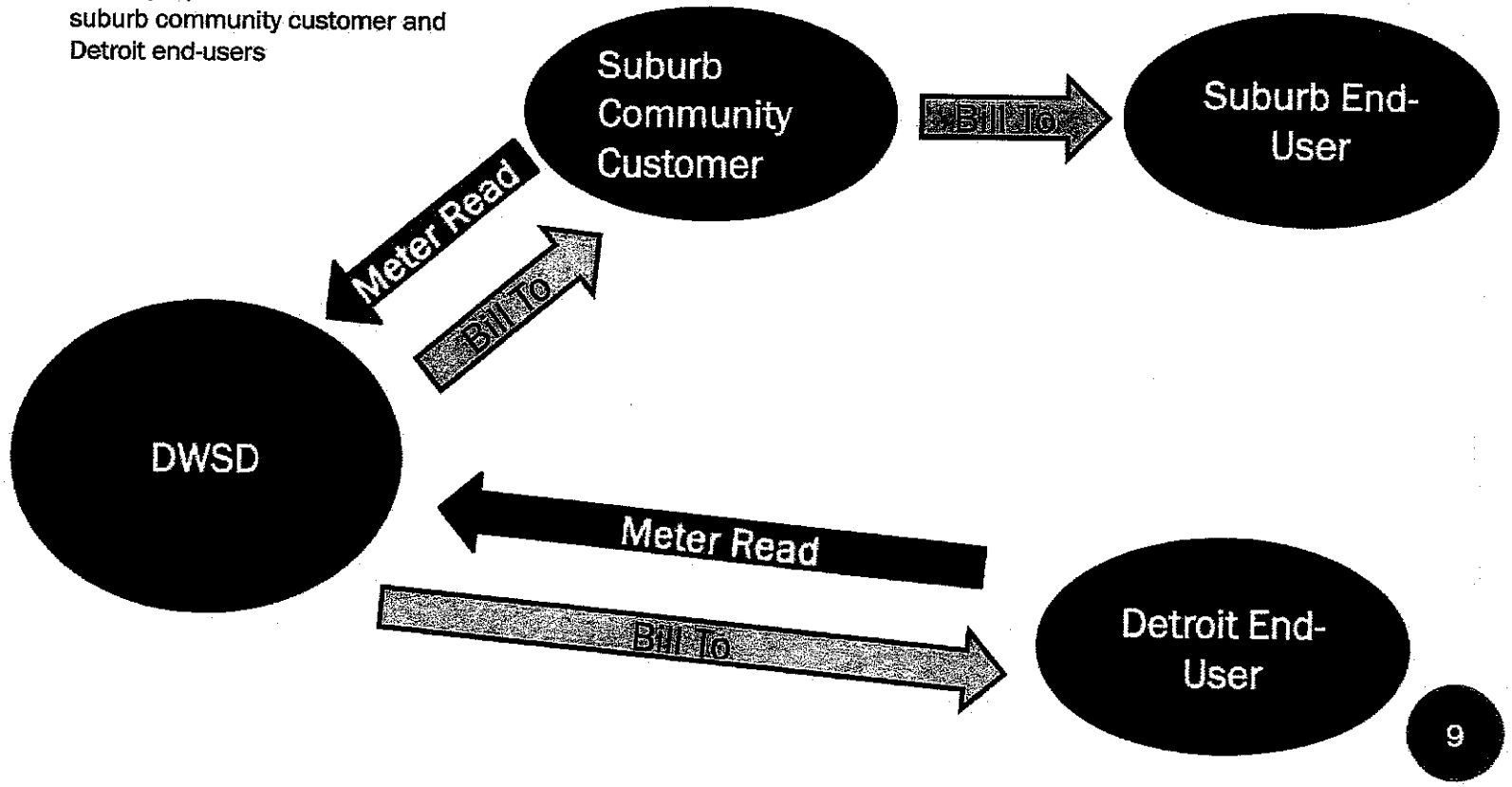
GLWA000049

Document received by the MI Wayne 3rd Circuit Court.

BILLING PROCESS FLOW – POLLUTANT SURCHARGE

Step 1
DWSD receives end-user meter readings

Step 2
DWSD prepares and mails bills to suburb community customer and Detroit end-users



GLWA000050

Document received by the MI Wayne 3rd Circuit Court.

BILLING DATA

FY 2014

	Amount Billed ($ millions)			Average	No. of Customers		
	Suburbs	COD	Total	per Customer	Suburbs	COD	Total
IWC	17.7	4.6	22.3	$ 470	38,802	8,632	47,434
Pollutant Surcharge	2.6	3.9	6.5	$ 37,574	75	73	148
Total	20.3	8.5	28.8				

Program Comparisons

- IWC – Many are billed a small amount each
- Pollutant Surcharge – Few are billed but the amount is larger

Pollutant Surcharge

- Includes $1.1 million for Detroit Metro Airport
- Program Volumes in Pounds:
  - BOD - 60%
  - TSS - 27%
  - P - 1%
  - FOG - 12%

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDING
IWC – REVENUE REQUIREMENTS

- Obtained FY 2014 Revenue Requirement data for $8.85 base IWC charge

- Reconstructed cost buildup from "bottom-up" based on actual for FY 2014

Process Improvement Action Plan

✓ **Use Reconstructed data from FY 2014 to recalibrate FY 2016 rates**

Action Taken

Proposed FY 2016 base rate is $5.50, reflecting reconstructed cost data – approximately 38% reduction in program cost base from FY 2014

IWC PROGRAM COST BUILDUP

Summary of IWC Revenue Requirement / Rate Development

FY 2014

		Rate Calculation	Reconstructed Calculation
Direct IWC Budget		$ 8,000,000	$ 7,610,920
Allocated WW Ops (Lab, etc)		9,489,464	
Reconstructed WW Lab Ops:			
Operating (Budget)	$ 694,592		
Payroll (LDS)	1,743,129		
Fringe:			
-Fixed (27 FTE @ $11,963)	323,001		
-Variable (14.65%)	255,368		
	3,016,090		
IWC Percentage	76%		
	2,292,229		2,292,229
Indirect Admin OH		4,464,136	2,653,100
Capital Revenue Requirements		497,100	497,100
		22,450,700	13,053,349
Equivalent IWC Meters		211,478	211,478
IWC Unit Charge Annually		$ 106.16	$ 61.72
Divided by Months		12	12
		$ 8.85	$ 5.14

GLWA000052

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDING
IWC – REVENUE REQUIREMENTS

Supplemental Data

Number of meters split (approximately)

- 82% Suburbs
- 18% City of Detroit

IWC PROPOSED FY 2016 RATES					
				Memo:	
Meter Size - Inches	Rate / Month	No. of Meters	Total	Meter Conversion	Equivalent Meters
5/8	$ 5.50	9,140	$ 50,270	1	9,140
3/4	8.25	8,410	69,383	1.5	12,615
1	13.75	13,851	190,451	2.5	34,628
1 1/2	30.25	5,905	178,626	5.5	32,478
2	44.00	7,037	309,628	8	56,296
3	79.75	1,745	139,164	14.5	25,303
4	110.00	879	96,690	20	17,580
6	165.00	307	50,655	30	9,210
8	275.00	91	25,025	50	4,550
10	385.00	55	21,175	70	3,850
12	440.00	12	5,280	80	960
14	550.00		-		
16	660.00	1	660	140	140
18	770.00	1	770	160	160
20	880.00		-		
24	990.00		-		
30	1,100.00		-		
36	1,210.00		-		
48	1,320.00		-		
	MONTHLY TOTAL		$ 1,137,777		206,909
	ANNUAL TOTAL		$13,653,321		

FY 2016 $ 5.50

12

GLWA000053

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDINGS
IWC – CUSTOMER REPORTING

- IWC procedures require that suburban community customers obtain and report IWC meter counts by size monthly
- Using this data DWSD Customer Service prepares monthly bills for the community customer
- Actual reporting performance by community customers has been inconsistent – with some communities reporting quarterly (12%) or annually or not at all (39%)

Recommendations to Steering Group

- ✓ **Customer community makes an election to report monthly or quarterly**
- ✓ **All communities should adhere to their schedule**
- ✓ **Late reporting penalties should be considered to ensure equity**
- ✓ **DWSD will perform periodic audits of community customer meter data**

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDINGS
IWC – ANNUAL REPORTS

- An Annual Report of the IWC Division is required to be filed with the Michigan Department of Environmental Quality by April of each year

- Reports contain data that includes lists of IWC customers, Significant Industrial Users, and other waste discharge data

Process Improvement Action Planned

- ✓ **Annual Reports should be posted on the DWSD website to improve transparency and reduce printing and distribution costs**

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDINGS
POLLUTANT SURCHARGE – PROGRAM ADMINISTRATION

- The IWC Division and DWSD Customer Service (CSS) coordinate efforts to administer the program and bill PS customers
- PS candidates identified through IWC survey effort, self reporting, and community information
- PS candidates are notified by IWC and provided a Wastewater Strength Level letter, or are identified by their Standard Industrial Classification (SIC) status
- Billings sent to contracting agency or municipality depending on terms of the delegation agreements. Recourse for non-payment against end-user only, however, there is no contract with the end user

Proposed Pollutant Surcharge Rates for FY 2016	
Pollutant	Rate / lb.
Biochemical Oxygen Demand (BOD)	$ 0.477
Total Suspended Solids (TSS)	0.483
Phosphorous (P)	7.129
Fats. Oil and Grease (FOG)	0.459

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDINGS
POLLUTANT SURCHARGE – PROGRAM ADMINISTRATION

Process Improvement Action Planned

A number of actions are planned to strengthen administration of the PS program:

- IWC and CSS customer data should be reconciled monthly to ensure accurate billing and consistency of records
- A comprehensive program to identify prospective PS candidates should be launched
- Discharge data should be updated for present PS customers
- IWC process documentation should be updated or created
- IWC management should be given inquiry access to the DWSD billing system (enQuesta)

Document received by the MI Wayne 3rd Circuit Court.

PROGRAM REVIEW FINDINGS
POLLUTANT SURCHARGE – LEGAL ISSUES

- Concurrent with this review, the DWSD Office of General Counsel analyzed the programs from a legal perspective
- Generally, the OGC recognized concerns by communities and confusion in understanding
- The OGC identified differences in the method of billing the ultimate customer/discharger

Process Improvement Action Planned

- ✓ **DWSD CSS and OGC collaborate with WW Steering Team to develop strategy to simplify and clarify the billing process**
- ✓ **DWSD establish ongoing audit process to monitor delinquencies**
- ✓ **Determine costs and approval process associated with a proposed strategy**

Document received by the MI Wayne 3rd Circuit Court.

NEXT STEPS

- ✓ Discuss at your tables; provide feedback and questions

Implementation of Process Improvements and Recommendations

Finding and Action Required	Lead	Timing
Validate program costs for Revenue Requirements	Finance - Bart Foster	Annually
Establish and enforce consistent customer reporting	CSS – Mathew Kannanthanam	Quarterly
Publish Annual Report on DWSD website	IWC – Steve Kuplicki	Annually
Improve IWC and Pollutant Surcharge program maintenance and billing	IWC – Steve Kuplicki CSS – Mathew Kannanthanam	Monthly
Establish process to monitor and resolve Pollutant Surcharge delinquencies and legal issues	WW Steering Team IWC – Steve Kuplicki OGC – Cheryl Jordan CSS – Mathew Kannanthanam Finance - TBD	June 2015

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 4

Document received by the MI Wayne 3rd Circuit Court.

DWSD Information Statement
Industrial Waste Control Charge

The Industrial Waste Control Charge is assessed against any water meter size greater than 5/8" Φ, to all commercial and industrial users of the DWSD system, whose operations are defined by the 1987 SIC Code[1] Division A, B, C, D, E, F, G, H, I and J (see attachment 1). Based upon the Eastern District Court's 1981 court order (see attachment 2) this charge is not to be applied to any water meter used strictly for fire protection; or that services a residential or multi-family dwelling. Additionally, DWSD has exempted the following types of facilities:

- Public and Private elementary, and secondary schools which are part of a governmental school district (SIC 8211);
- Colleges, Universities and Professional Schools (SIC 8221);
- Junior Colleges and Technical Institutes (SIC 8222);
- Local and State government offices (SIC 9100 - 9999)

Any user not specifically exempted by the court's 1981 order or as stated above, is to be assessed the Industrial Waste Control charge.

Regulatory activities for the DWSD are funded through a separate Industrial Waste Control meter charge applied to commercial and industrial accounts based upon the size of their water meter. This charge is exclusively for the support of regulatory programs benefiting commercial and industrial users. The origin of this charge was the federal Court Order dated July 27, 1981. Through this order, the Detroit Water and Sewerage Department recovers the cost of the Industrial Waste Control Division budget through the assessment of a meter charge placed on all water meters of 5/8" Φ, or greater than 5/8" Φ in all communities serviced by DWSD's Wastewater System.

The Industrial Waste Control Division is responsible for the implementation and enforcement of regulatory programs that include, but are not limited to, the following:

- Industrial Pretreatment Program (as defined by NPDES Permit MI0022802)
- Surcharge Program
- Hauled in Waste Program
- Special Discharge and Groundwater Program
- Pollution Prevention (Mercury, FOG control)

These programs are in response to state and federal requirements.

For purposes of this information statement, a commercial and industrial user shall mean a person who contributes, causes or permits wastewater to be discharged into the POTW, including, but not limited to, a place of business, endeavor, arts, trade or commerce, whether public or private, commercial or charitable but excludes single family and multi-family residential dwellings with discharges consistent with domestic waste characteristics. [See City of Detroit Ordinance 08-05, Section 56-3-58.1[2]].

[1] The 1987 SIC or corresponding designation of the North American Industrial Classification System (NAICS).
[2] Updated February 2005

Document received by the MI Wayne 3rd Circuit Court.

Attachment 1

Standard Industrial Clasification (SIC) Division Structure
(See http://www.osha.gov/cgi-bin/sic/sicser5 for more information)

A. **Division A: Agriculture, Forestry, And Fishing**
- Major Group 01: Agricultural Production Crops
- Major Group 02: Agricultural Production Livestock And Animal Specialties
- Major Group 07: Agricultural Services
- Major Group 08: Forestry
- Major Group 09: Fishing, Hunting, And Trapping

B. **Division B: Mining**
- Major Group 10: Metal Mining
- Major Group 12: Coal Mining
- Major Group 13: Oil And Gas Extraction
- Major Group 14: Mining And Quarrying Of Nonmetallic Minerals, Except Fuels

C. **Division C: Construction**
- Major Group 15: Building Construction General Contractors And Operative Builders
- Major Group 16: Heavy Construction Other Than Building Construction Contractors
- Major Group 17: Construction Special Trade Contractors

D. **Division D: Manufacturing**
- Major Group 20: - Food And Kindred Products
- Major Group 21: Tobacco Products
- Major Group 22: Textile Mill Products
- Major Group 23: Apparel And Other Finished Products Made From Fabrics And Similar Materials
- Major Group 24: Lumber And Wood Products, Except Furniture
- Major Group 25: Furniture And Fixtures
- Major Group 26: Paper And Allied Products
- Major Group 27: Printing, Publishing, And Allied Industries
- Major Group 28: Chemicals And Allied Products
- Major Group 29: Petroleum Refining And Related Industries
- Major Group 30: Rubber And Miscellaneous Plastics Products
- Major Group 31: Leather And Leather Products
- Major Group 32: Stone, Clay, Glass, And Concrete Products
- Major Group 33: Primary Metal Industries
- Major Group 34: Fabricated Metal Products, Except Machinery And Transportation Equipment
- Major Group 35: Industrial And Commercial Machinery And Computer Equipment
- Major Group 36: Electronic And Other Electrical Equipment And Components, Except Computer Equipment
- Major Group 37: Transportation Equipment
- Major Group 38: Measuring, Analyzing, And Controlling Instruments; Photographic, Medical And Optical Goods; Watches And Clocks
- Major Group 39: Miscellaneous Manufacturing Industries

E. **Division E: Transportation, Communications, Electric, Gas, And Sanitary Services**
- Major Group 40: Railroad Transportation
- Major Group 41: Local And Suburban Transit And Interurban Highway Passenger Transportation
- Major Group 42: Motor Freight Transportation And Warehousing
- Major Group 43: United States Postal Service
- Major Group 44: Water Transportation
- Major Group 45: Transportation By Air
- Major Group 46: Pipelines, Except Natural Gas
- Major Group 47: Transportation Services
- Major Group 48: Communications
- Major Group 49: Electric, Gas, And Sanitary Services

Document received by the MI Wayne 3rd Circuit Court.

F. **Division F: Wholesale Trade**
- Major Group 50: Wholesale Trade-durable Goods
- Major Group 51: Wholesale Trade-non-durable Goods

G. **Division G: Retail Trade**
- Major Group 52: Building Materials, Hardware, Garden Supply, And Mobile Home Dealers
- Major Group 53: General Merchandise Stores
- Major Group 54: Food Stores
- Major Group 55: Automotive Dealers And Gasoline Service Stations
- Major Group 56: Apparel And Accessory Stores
- Major Group 57: Home Furniture, Furnishings, And Equipment Stores
- Major Group 58: Eating And Drinking Places
- Major Group 59: Miscellaneous Retail

H. **Division H: Finance, Insurance, And Real Estate**
- Major Group 60: Depository Institutions
- Major Group 61: Non-depository Credit Institutions
- Major Group 62: Security And Commodity Brokers, Dealers, Exchanges, And Services
- Major Group 63: Insurance Carriers
- Major Group 64: Insurance Agents, Brokers, And Service
- Major Group 65: Real Estate
- Major Group 67: Holding And Other Investment Offices

I. **Division I: Services**
- Major Group 70: Hotels, Rooming Houses, Camps, And Other Lodging Places
- Major Group 72: Personal Services
- Major Group 73: Business Services
- Major Group 75: Automotive Repair, Services, And Parking
- Major Group 76: Miscellaneous Repair Services
- Major Group 78: Motion Pictures
- Major Group 79: Amusement And Recreation Services
- Major Group 80: Health Services
- Major Group 81: Legal Services
- Major Group 82: Educational Services
- Major Group 83: Social Services
- Major Group 84: Museums, Art Galleries, And Botanical And Zoological Gardens
- Major Group 86: Membership Organizations
- Major Group 87: Engineering, Accounting, Research, Management, And Related Services
- Major Group 88: Private Households

J. **Division J: Public Administration**
- Major Group 91: Executive, Legislative, And General Government, Except Finance
- Major Group 92: Justice, Public Order, And Safety
- Major Group 93: Public Finance, Taxation, And Monetary Policy
- Major Group 94: Administration Of Human Resource Programs
- Major Group 95: Administration Of Environmental Quality And Housing Programs
- Major Group 96: Administration Of Economic Programs
- Major Group 97: National Security And International Affairs
- Major Group 99: Non-classifiable Establishments

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 5

Document received by the MI Wayne 3rd Circuit Court.

IWC Observations

4. How are IWC costs allocated, including bad debt?

IWC costs are not allocated to individual communities or separately between Detroit and Suburban Wholesale. Total revenue requirements allocated to IWC are simply divided by the total IWC billing units to determine a set of charges that varies by meter size but that is uniform throughout the customer base.

5. What is the current breakdown of IWC bad debt by community?

As of June 30, 2013 the total allowance for doubtful accounts balance for IWC was ~$865,000, all of which is related to Highland Park. Approximately $132,000 of this amount accrued as bad debt expense during FY 2012-13. ***NONE*** *of this bad debt has been included in* ***ANY*** *rates – because the LB committee decided to waive implementation of the industrial specific portions of the 5-year LBA and DWSD is holding FY 2012-13 bad debt LBA over to implementation after the 5-year LBA is fully implemented at the end of FY 2015-16.*

6. What debt service is allocated to IWC?

Technically there is no longer any "debt service" directly allocated to IWC. Under the Rate Simplification Proposal operating and capital costs are assigned to cost pools based on historical data and budget specifics. The capital costs assigned to IWC are primarily related to the customer data management system that was installed a few years ago.

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 6

Document received by the MI Wayne 3rd Circuit Court.

In The Matter Of:

General Mill Supply Co., et al v.
The Great Lakes Water Authority, et al

Cheryl Jordan
January 25, 2021



Original File JORDAN210125_1.txt
Min-U-Script® with Word Index

Document received by the MI Wayne 3rd Circuit Court.

Page 1

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO.,
Individually and on behalf
of a class of similarly
situated persons and entities,
Plaintiff,
vs. Case No. 18-0011569-CZ
Hon. Kevin Cox
THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,
and
CITY OF DETROIT, a municipal corporation,
by and through its WATER AND SEWERAGE
DEPARTMENT,
Defendants.

The Deposition of CHERYL JORDAN
Taken Via Zoom Videoconference
Commencing at 10:00 a.m.
Monday, January 25, 2021
Before Carolyn Grittini, CSR-3381

Page 2

APPEARANCES:

GREGORY D. HANLEY
Kickham Hanley
32121 Woodward Avenue, Suite 300
Royal Oak, Michigan 48073
248.544.1500
Appearing on behalf of the Plaintiff.

MICHAEL J. WATT
Kopka Pinkus Dolin
32605 W. 12 Mile Road, Suite 300
Farmington Hills, Michigan 48334
248.324.2620
Appearing on behalf of the Defendant.

JAMES M. PELLAND
CHRISTOPHER FRESCOLN
Fausone Bohn
41700 W. 6 Mile Road, Suite 101
Northville, Michigan 48168
248.380.0000
Appearing on behalf of the Defendant.

Page 3

INDEX

WITNESS: CHERYL JORDAN
EXAMINATION BY MR. HANLEY: 4

EXHIBITS

(None Offered).

Page 4

Monday, January 25, 2021
10:00 a.m.

CHERYL JORDAN,
was thereupon called as a witness herein, and after having first been duly sworn to testify to the truth, the whole truth and nothing but the truth, was examined and testified as follows:

MR. HANLEY: Good morning, Miss Jordan.
THE WITNESS: Good morning.
MR. PELLAND: Can I make a quick statement?
MR. HANLEY: Yes.
MR. PELLAND: I just want to make it clear that Miss Jordan is a former employee of both DWSD and Great Lakes Water Authority and is an attorney. By going forward with this deposition today, neither defendant is in any way waiving the attorney-client privilege with regards to any potential testimony of Miss Jordan.
MR. HANLEY: Understood. And it's not my intent to get into any attorney-client communications in any event.

EXAMINATION

BY MR. HANLEY:

Q. Good morning, Miss Jordan, can you hear me?

Document received by the MI Wayne 3rd Circuit Court.

Page 5

A. Yes.
Q. My name is Greg Hanley. I think we may have met a couple times back in the day. I really appreciate you appearing voluntarily for this. We're going to be as brief as we can so you can get back to your real work, but I have a few questions.

Are you generally familiar that there is a case ongoing challenging the industrial waste control charges that have been posed over the years by DWSD and GLWA?
A. I am now since I received your subpoena.
Q. Let's see if we can agree on some terms first. For shorthand purposes, can I refer to the Detroit Water and Sewerage Department as DWSD?
A. Yes.
Q. And can I also refer to the Great Lakes Water Authority as GLWA?
A. Yes.
Q. I don't want to spend a lot of time on your background, but you are a licensed Michigan attorney, correct?
A. Yes.
Q. And you've been licensed since at least 2013, correct?
A. Yes, since 2007.
Q. And you were at one point employed by the DWSD as

Page 6

counsel, inhouse counsel, for lack of a better word?
A. Yes. Associate general counsel I think was the title there.
Q. And my understanding is that you were an associate general counsel at DWSD from around June of 2014 to the end of 2015?
A. Correct.
Q. And then you became an associate general counsel at GLWA for about six months through June of 2016?
A. Correct.
Q. And then you were deputy general counsel of DWSD from June of 2016 to February of 2017; is that correct?
A. Yes.
Q. And after that, you haven't been employed by either DWSD or GLWA?
A. That's correct.
Q. Miss Jordan, did there come a time in 2015 that you became involved in doing sort of a review of the industrial waste control program?
A. Yes, I believe there was.
Q. And I have a document relating to that, which we'll go over in some detail, but can you tell me the high level, how you came to be involved in that?
A. Yeah. When DWSD was preparing to essentially lease a large portion of its assets to Great Lakes Water

Page 7

Authority, and as the Great Lakes Water Authority was being formed in 2015, I believe it was related to new NDPES permits having to be issued because of the split, and because of that, the Industrial Waste Control Program, because they report I think under the licensing rule, it's every year, that was being reviewed; and so initially when I learned of it and began researching it in my capacity as the associate general counsel, I was really more reviewing its history and how it was -- how the charges were sent out, how the program was made, the ordinances that were required to be adopted by each municipality that was serviced.
Q. Prior to that time, had you had any involvement in the Industrial Waste Control Program or evaluations of the Industrial Waste Control Program?
A. No, I don't believe so.
Q. So it would be fair to say that around the time of this review, you kind of familiarized yourself with the aspects of the program and one of which was the charges that were being imposed?
A. Yeah. Generally, I think i looked less at the charges but more at the mechanism by which the charges were issued and the loss of boarding them and how you would go about charging each municipality.

Page 8

Q. I'm going to pull up a document now, hopefully I can do this right. Do you see a document on your screen now?
A. No, I see your folder with a bunch of exhibits in it.
Q. Try it again. How's that?
A. Okay, yes.
Q. So I'm showing you, pulled up what we've previously marked as Exhibit 11 in a deposition we took of Mr. Foster, Bart Foster. You're familiar with Mr. Foster, aren't you?
A. Yes.
Q. And this is an Industrial Waste Control and Pollutant Surcharge Program Review document and it's dated March 25th, 2015 and the authors at least that are started as Mr. Mark Savitskie and yourself, correct?
A. Yes.
Q. And this is something you put together in around March of 2015?
A. Yes.
Q. And who was the audience for this?
A. I believe that we did this presentation, we gave this presentation to a couple different audiences, but most of them were what we would call wastewater steering committee, which is different members of communities. So someone from each municipality or county would

Document received by the MI Wayne 3rd Circuit Court.

Page 9

come. I can't remember exactly -- I can't remember exactly this document, if we only used it once or several times. I think we used it -- I guess we only used it on March 25th, 2015, but I can't for the life of me remember which steering committee or group it was.

Q. Whatever the audience was, you would agree with me that this was an attempt to, in writing, fairly and accurately describe aspects of the program, the IWC and the Pollutant Surcharge Programs?

A. Yes.

Q. Mr. Savitskie is listed, do you know him independent of your work on this?

A. Not really.

Q. And what was the nature -- how did you interface with him on this program review?

A. I believe he was tasked with coming up with the data for rates and revenue requirements for the program that are listed on a few slides, and I participated and contributed again by sort of giving the history of the IWCP program, why it was there and steps moving forward and any changes that were happening. Like I said, I think he was solely the finance guy, the numbers guy and I was more just the legal background and explanation of what the program was.

Page 10

Q. Okay. And you would agree with me that as of March 2015, Mr. Foster had been involved for a long time in determining rates and charges for DWSD?

A. Yeah, I believe he's been a consultant for quite a long time.

Q. Do you know why it was Mr. Savitskie that was involved in the financial aspects of this as opposed to Mr. Foster?

A. I don't know exactly why. I don't really want to guess, other than that there is a finance department within DWSD, or there was, and that they would have been responsible for collecting data for costs and providing those to Mr. Foster.

Q. Were you aware that Mr. Savitskie was an outside consultant as opposed to an employee of DWSD?

A. No.

Q. As far as you knew, he was an employee?

A. I mean, sitting here today, I can't tell you if I knew he was a consultant or he was an employee. I honestly don't think I had very many interactions with him.

Q. Were there any other people involved in preparing this presentation other than you and Mr. Savitskie?

A. Other than my direct supervisor at the time in the General Counsel's Office, which is Bill Wolfson, I don't believe so.

Page 11

Q. I'm going to walk through a few pages of this just to make sure I understand what you were involved in. And page 3, there is a quick definitions section which defines community customer and defines end user. Is this part of the presentation that you put together?

A. Yeah, I believe so.

Q. And the way I understand it worked, at least at this point, was that the communities that DWSD serviced would take an inventory of how many nonresidential or other properties that were subject to the IWC charge and the size of their meter and provide that information to DWSD; is that correct?

A. Yes.

Q. And then they would bill -- DWSD would tell the communities what to bill and they would collect those amounts from the IWC customers in their communities; is that correct?

A. That sounds right. I think so.

Q. And so when you say the end user, that's the business that ultimately pays the IWC charges and the pollutant surcharges, correct?

A. Correct.

Q. And then on the next page of Exhibit 11, there is a slide that says what is industrial waste control. Is this something you would have prepared?

Page 12

A. Yeah, I believe I prepared this one.

Q. And I guess the fourth bullet point down, this is what we were just talking about, over 47,000 nonresidential, commercial and industrial end users pay IWC charges monthly either through a direct billing from DWSD (for Detroit end user locations) or a billing from their community customer (for Suburban end user locations) with the proceeds forwarded to DWSD. You see that?

A. Yes.

Q. And that was an accurate recitation of how it worked, correct?

A. I believe so, yes.

Q. And then program costs are passed -- it says: Program costs are passed to the customer based on their meter size (5/8th's inches or greater). You see that?

A. Yes.

Q. And that was a correct statement of the process at the time, correct?

A. Yes, I believe so.

Q. So would it be fair to characterize the member communities who are passing this on as basically collection agents for DWSD?

A. Yes.

MR. PELLAND: Object to that. That calls

Document received by the MI Wayne 3rd Circuit Court.

Page 13

for a legal conclusion.
BY MR. HANLEY:
Q. And then finally, the elements of the IWC program include customer database maintenance, water sample selection, lab testing, permit administration and enforcement along with administrative support costs of other DWSD organizations. Do you see that?
A. Yes.
Q. Do you know what other DWSD organizations are being referred to here?
A. No, I can't exactly remember. I'm thinking maybe consultants. I don't know if organizations was the right word for that.
Q. All right. Well, I know it was quite a while ago, so we'll see if there's some other pages that maybe refresh your recollection. Let's move on to page 5 of Exhibit 11. This is the history and the legal precedent for IWC, and there's various bullet points. Is this something that you prepared?
A. I believe so, yes.
Q. So from your perspective, you believed it to be true and accurate as of the time in 2015, correct?
A. Correct.
Q. At the very bottom last two bullet points, it says: Recover the cost of the program by establishing

Page 14

charges based on meter size (that's IPP) and concentration of waste, (PS), for all nonresidential customers, subject to some exclusions. You see that?
A. Yes.
Q. Then it says: Collect only the amount necessary to recover the cost of the IWC program. You see that?
A. Yes.
Q. Was it your understanding at the time that the IWC charges were limited to those that would allow DWSD to only recover the cost of the IWC program?
MR. PELLAND: I would object again, calls for a legal conclusion.
A. Yes, that was my understanding at the time.
BY MR. HANLEY:
Q. And do you know whether that goes back to like federal court orders that you were referring to in the earlier parts of page 5?
A. When I wrote this, I don't know that I knew that then; maybe I did. I think it's just in general, everything DWSD did was -- any charge that it issued was really just to recover the cost. I mean, the cost which included administrative, obviously, costs. So yes.
Q. In other words, they weren't supposed to make a profit, for lack of a better word?
A. Right. Correct.

Page 15

Q. A couple pages later on page 7 there's a Program Review Scope. Do you know what this is referring to?
A. I think this is the program, meaning wherever we were presenting this was like the program. So this was what we were planning on doing with the group that we were with, was, we wanted them to understand the elements, validate the quantitative and financial data, apprise compliance, assist with rate development and address questions and inquiries.
Q. Was there a concern at the time about the methodology that was being used to determine the IWC charges?
A. Not that I know of, no.
Q. But when you say validate quantitative and financial data, what are you referring to?
A. If the stakeholders that were at the meeting had a question about what DWSD was using to create its rate, or the rates for the IWC, that's something that would have been explored during these meetings.
Q. Okay. And then one of the bullet points that this program review was intended to assist in, assist in DWSD finance and fiscal year 2016 rate development. You see that?
A. Yes.
Q. And fiscal year 2016 would have been the year beginning July 1st, 2015, correct?

Page 16

A. Correct.
Q. And who in the DWSD finance organization were you assisting or were you intending to assist?
MR. PELLAND: Greg, I just want to object. I'm not sure that we've established on other questions you asked her whether those were parts that she was working on or doing it with. So I don't know if you --
MR. HANLEY: Again, she can tell me that she didn't have any involvement in that if that's true. I'm trying to identify who else in the organization would have been involved in this effort.
A. Yeah, I mean, I could be wrong looking at this, but what I read that bullet point to mean is that the DWSD wanted to involve its stakeholders who were at this meeting to assist in the fiscal year 2016 rate development. So what I think that means is -- and I looked at this document obviously when you sent it to me last Friday -- later on in a slide they talk about how many municipalities weren't reporting at all the amount of customers, end users that they had, and so I think that what they meant was that we want to involve the municipalities in assisting us in developing the rate for fiscal year 2016, and by reporting to us who you have and what their meter sizes are and so on and

Document received by the MI Wayne 3rd Circuit Court.

Page 17

so forth, that can assist us. That's what I think that meant. That wasn't me assisting them, that was saying to the group, you know, we'd like to have your assistance in moving forward with this rate.
Q. Now, a few pages later, there is page 11 of Exhibit 11, Program Review Finding, IWC - Revenue Requirements, and then there's a program cost buildup. Is it your understanding that Mr. Savitskie was primarily responsible for this?
A. Yes.
Q. And was there a discussion about the import or the impact of what's referenced here on page 11?
A. A discussion with the group that it was being presented to?
Q. Yes.
A. I can only assume there was, but again, I can't really remember.
Q. Well, let me walk you through this and see if I can refresh your recollection about some of the stuff. What this is saying -- and by the way, was this -- do you believe that this was an effort to truthfully and accurately convey this information to the group?
A. I believe so, yes.
Q. You're not aware of any numbers that are wrong in this or that were incorrect at the time, correct?

Page 18

A. Correct.
Q. So what somebody did was, first bullet point, obtain fiscal year 2014 year revenue requirement data for $8.85 base IWC charge. Do you see that?
A. Yes.
Q. You understand what a revenue requirement is, correct?
A. Yes.
Q. And would you agree with me that those are the costs and expenses that need to be recovered through rates and charges?
A. Yes.
Q. And then there was a reconstructed cost buildup from bottom up based on actual for fiscal year 2014. You see that?
A. Yes.
Q. But whatever the numbers are and what is the column that says Reconstructed Calculation, those were based upon somebody's analysis of the actual information for fiscal year 2014, correct?
A. Correct.
Q. And then the Process Improvement Action Plan was to use reconstructed data from fiscal year 2014 to recalibrate fiscal year 2016 rates, right?
A. Correct.
Q. So what was done is they looked back at what was our

Page 19

actual in 2014 and that's what we're going to use for our revenue requirement for fiscal year '16, correct?
A. Correct.
Q. So down where it says Action Taken, proposed fiscal year 2016 base rate is $5.50, reflecting reconstructed cost data, approximately 38 percent reduction in program cost base from fiscal year 2014. You see that?
A. Yes.
Q. So the revenue requirement that was being calculated in Exhibit 11 went from 22,450,000 dollars and change to a little bit more than 13 million dollars, correct?
MR. PELLAND: I'll object. Greg, are you asking her if that's what this document says.
MR. HANLEY: Yes.
A. Yes, that's what the document says.
Q. And was there a discussion among the group at the time along the lines of this is a significant reduction?
A. Again, I really don't remember. I can't even picture like faces in the crowd. I can't remember a discussion.
Q. But you may not have done these calculations, but you authored the document and you would have at the time made an attempt to make sure that what you were presenting to the group was accurate, correct?

Page 20

A. Yes, but I was relying on the data from Mr. Savitskie and others that provided him with the financial data to -- I trusted that their representation of the numbers were correct.
Q. But as a result of the reconstructed cost buildup, the allocation of wastewater operations went from 9,489,464 dollars down to about 2.3 million dollars, correct?
A. It looks that way, yes.
Q. And the total wastewater lab operations budget for 2014 as shown by Exhibit 11 is a little bit more than three million dollars, correct?
A. Yes.
Q. So if this reconstructed calculation had actually been used in fiscal year '14, the charges would have been $5.14 per unit as opposed to $8.85 per unit, correct?
MR. PELLAND: I'll object. I don't know what that hypothetical has to do with this. I don't think this witness can answer that question.
BY MR. HANLEY:
Q. You can answer.
A. Yeah, I mean, you can't know the actuals for 2014 until you've gone through 2014. So I think your question seemed to say if we would have used this reconstructed 2014 in 2014, it would have been less.

Document received by the MI Wayne 3rd Circuit Court.

Page 21

Well, you can't do that because you can't look at actuals until after the actual year has gone by.
Q. Well, are you aware of any effort to determine what the assumptions were going into fiscal year 2014 about this?
A. That, I don't know. And I don't recall. I'm sure there's someone that knows that answer but it's not me.
Q. But there would have been, for example, to your knowledge, there would have been a budget for the wastewater lab operations for 2014 at the time, not later on, but at the time, correct?
A. Correct.
Q. And that data would have been available to Mr. Savitskie, to your knowledge?
A. I can't answer that. I don't remember Mr. Savitskie very well, so I don't even remember when he was utilized or what his background was.
Q. Just a couple more questions about page 11. There's an indirect admin overhead allocation that in the rate calculation for fiscal year 2014 was about 4.46 million dollars and the reconstructed calculation was about 2.65 million dollars. Do you see that?
A. Yes.
Q. Do you know what that indirect admin overhead refers

Page 22

to? Is that the other departments that are referenced earlier in the document?
A. It may be, yeah. If I recall correctly, indirect costs would be that there's some percentage of the overall operation maybe of wastewater that are allocated toward certain charges, so those would be called indirects. So yes, maybe other departments, maybe a piece of the finance department gets thrown in there, executive's office or something. I'm guessing.
Q. Well, we don't need you to guess.
A. Yeah.
Q. Couple more questions about this exhibit. On page 18, there's kind of a next step summary, and one of the finding and action required was to validate program costs for revenue requirements, and that was going to be done by Mr. Foster annually. You see that?
A. Yes.
Q. Do you know whether Mr. Foster was involved in the discussions about this document or about the presentation?
A. I have a feeling he may have been present during the presentation, but I can't recall exactly. I think that a lot of -- you already established that Mr. Foster is like the rate consultant, so I do think that Mr. Savitskie and other people at DWSD finance would

Page 23

be working with Bart Foster in coming up with rates which would necessarily involve validating program costs.
Q. But do you know whether before this document, before the exercise that Mr. Savitskie undertook, whether there had been in the past an effort to validate the program costs for the revenue requirements for IWC?
A. No, I don't know whether or not that was done.
Q. I mean, you're not aware one way or the other, you can't say, Mr. Hanley, we've done this all the way back as far as I can remember, but you also can't say I know for sure we haven't done it?
A. Correct. I can't say either way.
MR. HANLEY: Fair enough. I have no further questions. I appreciate your time.
MR. PELLAND: I don't have any questions.
MR. HANLEY: There's an issue of extended discovery and I think everybody agreed that we can extend it.
MR. PELLAND: On the record of this deposition?
MR. HANLEY: What's that?
MR. PELLAND: On the record of this deposition or you mean off the record?
MR. HANLEY: I want -- you guys didn't

Page 24

respond to my e-mail, so I thought maybe we could just have an agreement on the record about going forward with discovery, or you can respond to my e-mail.
MR. PELLAND: I would have to defer that to Chris and Mike at this time.
MR. WATT: I responded, Greg, and I'm fine with keeping it open. And again, I'm going to kick it back over to Jim's group, they're the ones taking care of the nuts and bolts of this case.
MR. HANLEY: My only point is, is that since there's not any operative date before the settlement conference, the court's not going to care if we have an informal agreement to keep discovery open, and I prefer not to have to file a motion and deal with all that. So that was just my suggestion that we just agree to keep it open.
MR. PELLAND: The only thing there was, were we ordered to go to facilitation? Did we end up putting that in the order at all?
MR. HANLEY: No. We got excluded from case eval, and there's no order requiring mediation but there is a settlement conference that's scheduled for May. And as we discussed last week, I'm in the process of putting together kind of a 408 kind of thing for you guys, which I'll definitely get out this

Document received by the MI Wayne 3rd Circuit Court.

Page 25

week, but I guess what I'm saying is, we've got this February 1st operative date, if we're not going to have an agreement, I'm going to have to get a motion on file or see if they'll accept a stipulation. And I'm sure that -- you guys served expert Interrogatories, which aren't even due yet, and obviously the delays associated with getting data have prevented my expert from finalizing his opinion. So I would rather not file a motion that takes all kinds of shots about how I've had to deal with trying to get all this information. So all I'm asking is that we agree that both sides can conduct discovery through April 1st.

MR. FRESCOLN: Greg, what's the February 1 date?

MR. HANLEY: February 1st is the current discovery cutoff and the current order. But there are no other dates in that order, including dispositive motions. And what I think the court contemplates is that we have a settlement conference and then there'll dispositive motions thereafter. And we also have this issue of notice, which has been delayed on both sides really. I'm still waiting for data from you guys and we need to disseminate proposed notices to you guys for approval and then get an order in. So I think

Page 26

everybody wants to have notice to the class occur before there's any substantive results in the case. So the sooner we get that going, the better.

MR. WATT: I'm fine with adjourning, I'll agree to sign a stip or whatever. I do have a question. Did with he get a new judge on this case?

MR. HANLEY: We did.

MR. WATT: Did he come from family court?

MR. HANLEY: He did, but he's a big firm guy he. Was at Bodman for a long time.

MR. WATT: Does he have any clue about this kind of work whatsoever? I've never been a real fan of family court judges taking over civil documents. Then tend to be very dictatorial because of the freedom they're given in family court to be that way.

MR. HANLEY: I've had no interaction whatsoever with him.

MR. WATT: Neither have I.

MR. HANLEY: Either as a judge or a lawyer. We'll find out.

MR. FRESCOLN: Greg, real briefly, nobody has not responded to your e-mails intentionally. As you know, you caught us in sort of a transition period here --

MR. HANLEY: I'm not complaining, Chris.

Page 27

I'm just saying it might be easier.

MR. FRESCOLN: I'm sure I'm not going to have an issue with accommodating your request. I will confirm by e-mail, certainly before the end of the day tomorrow.

MR. HANLEY: Fair enough. I wasn't suggesting you guys were ignoring my e-mails, because I know we just sent it on Friday. I just thought it might be easier to take care of it on the record. So I'll look for your e-mail and we'll go from there.

MR. FRESCOLN: Sounds good. Thanks, Greg.

(Deposition was concluded at 10:37 a.m.)

Page 28

CERTIFICATE OF NOTARY

STATE OF MICHIGAN)
) SS
COUNTY OF MACOMB)

I, CAROLYN GRITTINI, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to, either party nor interested in the event of this cause.

CAROLYN GRITTINI, CSR-3381
Notary Public,
Macomb County, Michigan.
My Commission expires: July 15, 2024

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 7

Document received by the MI Wayne 3rd Circuit Court.



Updated December 15, 2020

Approved February 24, 2021

CIP

CAPITAL IMPROVEMENT PLAN

2022 - 2026







GLWA

Great Lakes Water Authority

Document received by the MI Wayne 3rd Circuit Court.

TABLE OF CONTENTS

CAPITAL IMPROVEMENT PLAN 1

1 INTRODUCTION 3
1.1 Executive Summary 5
1.2 Primary Goals of the CIP 8
1.3 Team Members & Partners 8

2 STRATEGY & PROCESS 9
1.4 CIP Strategy 10
1.5 CIP Development Process 11
1.6 Report Format 12

3 CIP SUMMARY 13
1.7 CIP 5-Year Summary Tables 14
1.8 Project Status 18
1.9 Linear Assets 21
1.10 Projects by Jurisdiction 21
1.11 Specialty Projects 25
1.12 Project Risk 28

4 CIP PROJECTS BY CATEGORY 35
1.13 Largest CIP Projects 36
1.14 Largest Dollar Projects (Greater than $30M) 37
1.15 Largest 2022 Projected Spend (Greater than $5M) 38
1.16 Water Projects by Status 39
1.17 Wastewater Projects by Status 43
1.18 Centralized Services Projects 47
1.19 Integrated Master Schedules 48
1.20 Ten-Year Water Outlook 52
1.21 Ten-Year Wastewater Outlook 57

5 FINANCE 62
5.1. Introduction 63
5.2. Summary CIP Financial Plan Review and Analysis 64

6 PROJECT DESCRIPTIONS 70
1.22 Water Projects One-pagers 71
1.23 Wastewater Project One-pagers 160
1.24 Centralized Services Projects 235

APPENDIX A: WATER BUSINESS CASE EVALUATIONS

APPENDIX B: WASTEWATER BUSINESS CASE EVALUATIONS

APPENDIX C: CENTRALIZED SERVICES BUSINESS CASE EVALUATIONS

APPENDIX D: SYSTEM BACKGROUND INFORMATION

GLWA Water system
GLWA Wastewater System
GLWA Centralized Services
Glossary

Document received by the MI Wayne 3rd Circuit Court.

1 INTRODUCTION

Document received by the MI Wayne 3rd Circuit Court.

December 11, 2020

Board Members, GLWA Team Members, Member Partners, and Service Area Communities,

I take great pleasure in introducing to you the Great Lakes Water Authority (GLWA) Capital Improvement Plan (CIP), a five-year plan that supports the continuation of major capital asset investments in the regional water and wastewater systems. We have a CIP team that coordinates the development, planning and execution of the CIP document and plan. The GLWA FY2022-2026 CIP will provide updates on the work being conducted under this project. I wanted to highlight some of the goals for the CIP, including:

- New levels of transparency
- A single source document for project and program goals, needs and spending plan
- Alignment with GLWA long-term financial plans
- A program wide Integrated Master Schedule of all projects water and wastewater related

This year we have initiated changes to the design and functionality of the CIP to enhance reader engagement, including the addition of two new Appendices:

- Appendix D: GLWA Systems – Moves the system information previously included in the main document to an appendix and shortens the main document.
- Appendix E: CIP Validation – Explains the new CIP Project Validation process and provides details on the methodology and recommendations.

Throughout the CIP process this year, we continue to engage with Member Partners and the vendor community through the CIP Work Group. It is our goal that the FY2022-2026 CIP continues to provide useful and accurate information for all stakeholders, internal and external alike. Preliminary Draft 1 was released in October 2020. Preliminary Draft 2 is scheduled for release in December 2020. Submission for Board Approval of the CIP is anticipated in February 2021.

Questions regarding the CIP may be sent to CIP@glwater.org. To speak to me, please contact me directly at ali.khraizat@glwater.org or (313) 297.8819.

Sincerely,



Ali Khraizat, Director of CIP

Document received by the MI Wayne 3rd Circuit Court.

1.1 EXECUTIVE SUMMARY

We are pleased to submit the Great Lakes Water Authority (GLWA) Capital Improvement Plan (CIP) for fiscal years 2022-2026. This document serves as a guide for the effective and efficient provision of capital assets and infrastructure, outlining timing, and financing for the five-year plan.

GLWA is the largest water system in the United States in production and population served. To collaboratively ensure a One Water system approach to our regional water and wastewater systems GLWA has a dedicated Member Outreach Program that collaborates with its Member Partners. Work groups are used to involve members in technical service and financial discussions that support decision making at GLWA.

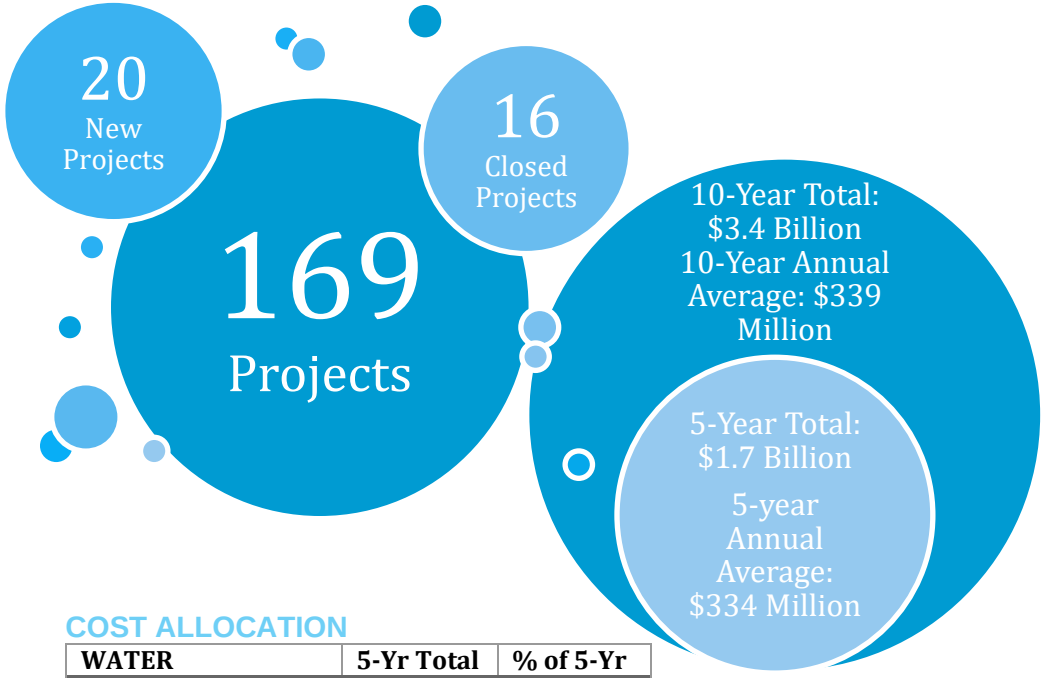
Four committees have been established by GLWA's six-member Board of Directors to provide oversight and policy guidance:

- Audit Committee
- Capital Planning Committee
- Legal Committee
- Operations and Resources Committee

GLWA's commitment to improved performance in the water and wastewater systems, environmental compliance, and Member Partner satisfaction aligns with the goals of the organization to contribute to the economic success and the public health and safety of the region it serves.

CIP AT A GLANCE

GLWA's Capital Improvement Plan (CIP) supports the continuation of major capital asset investments in programs and projects that will upgrade the Authority's aging water and wastewater system infrastructure, as well as the overarching centralized service infrastructure that supports both systems. The CIP is a five-year plan which identifies capital projects and programs and their respective financing options. Annually, this plan is updated to reflect changing system needs, priorities and funding opportunities.



COST ALLOCATION

WATER	5-Yr Total	% of 5-Yr
CTA	911,407	97.7%
Suburban Only	21,048	2.3%
Sub-total	932,455	100.0%

WASTEWATER	5-Yr Total	% of 5-Yr
CTA	645,650	87.4%
83/17	62,778	8.5%
TBD	29,975	4.1%
Sub-total	738,403	100.0%

PLAN SPENDING SUMMARY

5-Year Total:	**$1.7 Billion**	10-Year Total:	**$3.4 Billion**
5-Year Annual Average:	**$334 Million**	10-Year Annual Average:	**$339 Million**

Document received by the MI Wayne 3rd Circuit Court.

5-YEAR TOTAL OF WATER & WASTEWATER CAPITAL PROJECTS MATCHED THE 2021-2025 CIP

Ongoing efforts to stabilize rates and plan realistically for what can be achieved led to the current capital improvement spending plan. Considerations for minimizing capital expenditures without compromising our best-in-class water services were balanced during the CIP development process.

WATER

CIP Document	FY2021	FY2022	FY2023	FY2024	FY 2025	FY 2026	5-Year Total
Approved Water CIP FY 2021-2025	147,567	179,920	201,894	212,849	193,187	167,750	935,417
Draft Water CIP FY 2022-2026		179,210	200,713	199,165	170,936	182,430	**932,455**
Difference ($)		(709)	(1,181)	(13,684)	(22,251)	14,679	(2,962)
Difference (%)		(0%)	(1%)	(6%)	(12%)	9%	-0.3%

(Figures are shown in $1,000's.)

WASTEWATER

CIP Document	FY2021	FY2022	FY2023	FY2024	FY 2025	FY 2026	5-Year Total
Approved Wastewater CIP FY 2021-2025	110,640	112,758	140,841	203,259	171,938	149,267	739,436
Draft Wastewater CIP FY 2022-2026		106,050	123,190	160,940	173,024	175,200	**738,403**
Difference ($)		(6,708)	(17,652)	(42,319)	1,085	25,932	(1,034)
Difference (%)		(6%)	(13%)	(21%)	1%	17%	(0.1%)

(Figures are shown in $1,000's.)

Document received by the MI Wayne 3rd Circuit Court.

THE STRATEGY

Utilizing the capital replacement strategy to increase resiliency of water and wastewater systems, adhere to long-term planning, solicit stakeholder inputs, and to be best-in-class in planning and execution, the CIP identifies capital investments necessary to enhance and maintain system-wide assets. Key sources of identifying capital requirements include GLWA's comprehensive wastewater and water master plans, condition and needs assessments, regulatory, and operational needs.

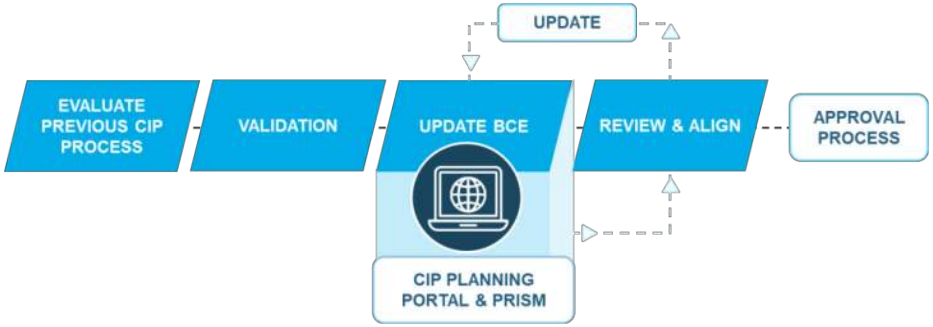
Capital projects may include land acquisitions, new construction, additions, and renovations to existing buildings. Construction and/or the rehabilitation or replacement of existing equipment or infrastructure. Because of the size and magnitude of the projects or programs GLWA has implemented a financing strategy that aligns capital project financing sources that is subject to change based on the system needs and financial resources available at the time. The financing goals of the CIP are identified below:

- Recovering the cost of capital investments over the useful life of those capital assets by:
  - Minimizing the impact of capital programs on water and sewage revenue requirements
  - Protecting and enhancing GLWA's financial position
- Maintaining affordable charges by planning the renewal and revitalization of assets at a minimum of costs while avoiding the far greater costs and disruptions associated with system asset failures.

Recognizing the difference in scope between the CIP and the tactical financial plan, GLWA implemented a "Capital Spend Rate Assumption Policy" adopted in 2018 by the Board of Directors. This policy provides an analytical approach to bridge the total dollar amount of projects in the CIP with what can realistically be spent due to limitations beyond GLWA's control. This rate is assessed annually and presented to the Board of Directors.

THE DEVELOPMENT

The process for creating the Capital Improvement Plan begins with the review of the previous water and wastewater CIP and process, validation of existing and proposed need and new projects, and concludes with the comprehensive proposed CIP ready for rigorous approval as outlined below:



Document received by the MI Wayne 3rd Circuit Court.

1.2 PRIMARY GOALS OF THE CIP

The primary goals of the GLWA's Capital Improvement Plan (CIP) are the following:

- Provide a condensed volume of projects in a central location.
- Demonstrate alignment with the GLWA financial plan.
- Share the GLWA integrated master schedule.
- Provide transparency to the organizational goals.
- Meet regulatory and operational needs.
- Provide an opportunity to member communities to contribute to the plan.

This CIP should be considered a planning document – it is a dynamic and evolving plan that requires continual review and improvement. The estimates indicated in the early years of the report are likely more precise than those in the later years because anticipated projects in the early years are typically better defined by studies or scoped by design than projects conceptual in nature in the out years of the plan. The project descriptions and summaries represent brief synopses of the entire project scope; these descriptions are generally more precise for ongoing active projects than for newly planned projects, where specific project activities may have yet to be determined. Based upon the execution of programs and projects identified in the CIP, existing levels of service currently provided will be met or exceeded. Copies of this CIP and past CIPs are available on GLWA's website at https://www.glwater.org/cip/.

1.3 TEAM MEMBERS & PARTNERS

Our members include GLWA team members, board members, water and wastewater partners, associated stakeholders, elected officials, consultants and regulatory agencies. GLWA has a dedicated Member Outreach Program that collaborates with its members on water and wastewater activities. The Capital Improvement Group at GLWA works to develop and execute the plan. The team members are listed below along with their contact information:

- Ali Khraizat, Director, ali.khraizat@glwater.org;
- Anjanette Custard, anjanette.custard@glwater.org;
- Zi Lang, zi.liang@glwater.org;
- Dana Thurman, dana.thurman@glwater.org.

Document received by the MI Wayne 3rd Circuit Court.

2 STRATEGY & PROCESS

Document received by the MI Wayne 3rd Circuit Court.

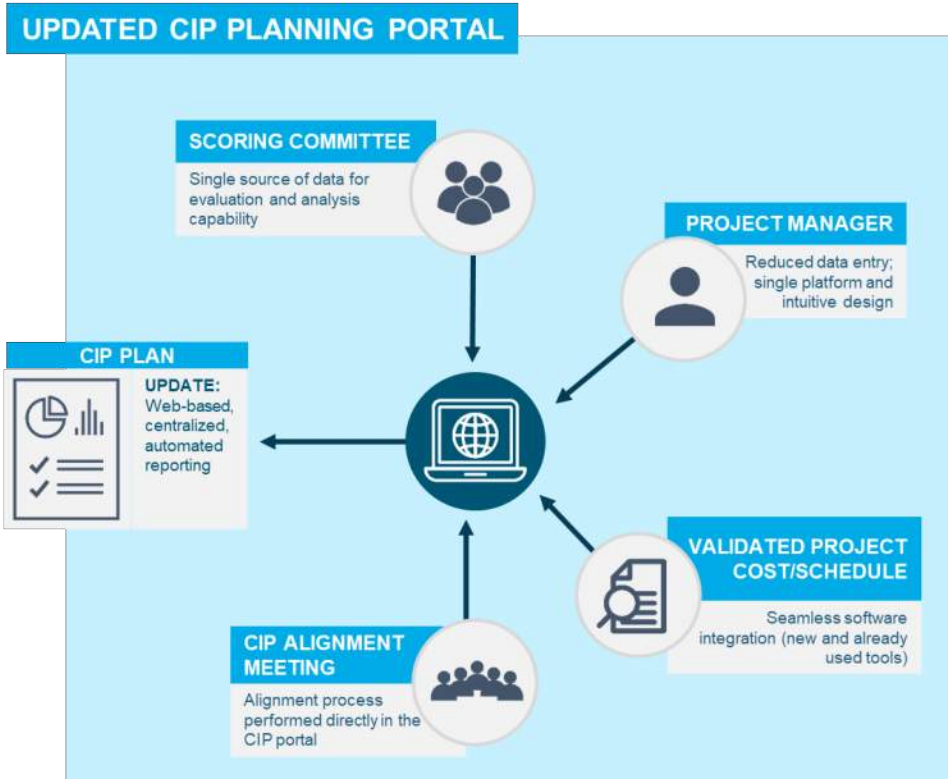
1.4 CIP STRATEGY

GLWA's CIP supports the capital asset investment in programs and projects within the entire organization. The CIP identifies capital projects and programs and their respective funding sources. This plan is updated annually to reflect the changing needs of the organization as it pertains to system needs, priorities, and financing opportunities. The Comprehensive Water Master Plan and the Comprehensive Regional Wastewater Master Plan are long term strategic planning tools that provide regional collaboration and planning to minimize capital expenditures while exceeding levels of service.

This plan spans a five-year period from fiscal year 2022 through fiscal year 2026, inclusive. The CIP review process also includes an extensive review of the total project, or "lifetime" projected costs and spending plan, which reflects historical spending prior to, during, and beyond the current five-year period. The goal of the Authority's capital financing strategy is to align capital project financing sources with multiple goals including: (a) recovering the costs of capital investment over the useful lives of the capital assets; (b) minimizing the impact of the capital programs on water and sewage revenue requirements; and (c) protecting and enhancing the Authority's financial position. The potential funding source identified for each project is subject to change based upon the systems need and financial resources available at the time.

CHANGES & IMPROVEMENTS TO THE CIP

There were five major changes in the CIP process this year. First, the most visible change to the CIP process is the document itself: the order of content is different and has been condensed. Second, a new web-based tool was implemented to take the place of the Access Database used in previous years: the CIP web portal provided all those involved in the development easy access and one source of data inputs for all phases of the CIP update process. Third, the CIP validation process was implemented into the CIP process this year. Fourth, two new Appendices are included in the CIP Plan – Appendix D: Systems Background Information, formerly section 6 of the document; and E: CIP Validation Report, a standalone document from that provides details of the CIP validation process and recommendations. The final change is the creation of a separate quick reference guide on how to navigate the CIP, which provides readers with a quick understanding of the CIP sections on planned spend and schedule. The validation process also includes recommendations to GLWA. The CIP validation process consisted of the review of project scopes, procurement packaging, and cost estimates.



The FY 2021-2025 Board Approved CIP was the benchmark for the analysis for the current FY 2022-2026 CIP Plan.

The CIP validation team reviewed 91 active and future planned projects in total. The breakout per system consisted of (54) Water projects and (37) Wastewater projects which were grouped into four categories:

Document received by the MI Wayne 3rd Circuit Court.

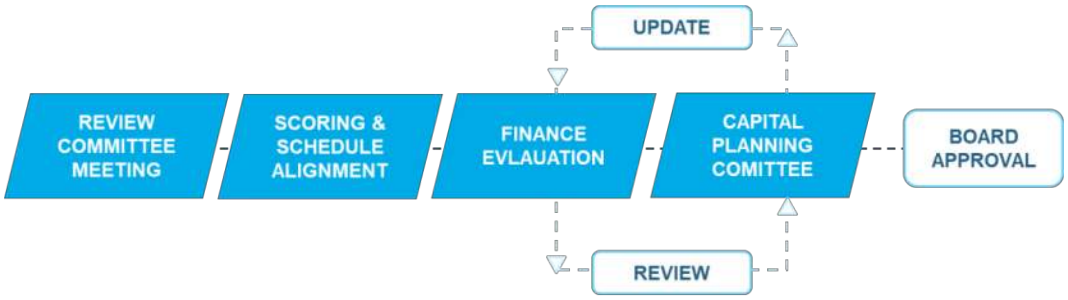
- Construction
- Engineering (Study/Design)
- Procurement
- Future Planned

The validated information was used to update the Integrated Master Schedule, project sequencing, and funding requirements.

The CIP continues to improve and evolve to provide the various stakeholders accurate and timely information.

1.5 CIP DEVELOPMENT PROCESS

The annual CIP development process begins the summer prior to its effective fiscal year. As a part of annual CIP updates, business case evaluations (BCEs) are evaluated, updated, and approved before being scored, prioritized, and scheduled in the GLWA Water and Wastewater groups. The scoring occurs in the Review Committee Meetings, one for Water and one for Wastewater. Subsequently, a scoring and schedule alignment meeting was held to align or explain any schedules out of sync with the prioritization results. The project data received from project managers is then used to update the CIP Document. Once a draft CIP is created, it is reviewed, approved, printed, and distributed for use.



CALENDAR

The following calendar, for planning purposes and subject to change, reflects intended approval dates and coordination with the GLWA Board of Directors necessary for the ultimate approval of the 2022-2026 CIP.

DATE	DESCRIPTION
July 7-8, 2020	Distribute & Train Team Members on Business Case Evaluation Database
August 28, 2020	Team Members BCE's are Due
Sept. 14 & 16, 2020	Water and Wastewater Review Committee Meetings
Sept 24 & 25, 2020	Alignment of scoring & project schedules
Sept 29, 2020	Internal review with Executive Leadership
October 8, 2020	Provide Preliminary Draft #1 Data to Financial Services
October 19, 2020	Upload Preliminary Draft #1 to Legistar & share with Member Outreach (without Chapter 5)
October 27, 2020	Capital Planning Committee Meeting - Review of Preliminary Draft #1
November 10, 2020	First Member Partner Review of CIP – Preliminary Draft #1 at Charges Rollout Meeting #1
November 12, 2020	Provide Preliminary Draft #2 Data to Financial Services
November 19, 2020	Questions/Comments Due
December 11, 2020	Upload Preliminary Draft #2 to Legistar and share with Member Outreach
December 15, 2020	Capital Planning Committee Meeting– Preliminary Draft #2
January 2021	Request Board approval of the 2022-2026 CIP
July 1, 2021	Effective Date of 2022- 2026 CIP

Document received by the MI Wayne 3rd Circuit Court.

1.6 REPORT FORMAT

The 2022-2026 CIP has been reformatted since the 2021-2025 CIP. The document, projects and programs are portrayed in varying degrees of detail that should meet the needs of most readers. Projects can be viewed in the basic line item format that provides general information about the project and the projected expenditures. Within this format, projects have been rolled up by their major category of Water, Wastewater and Centralized Services, and totals are provided. Projects have also been identified separately within each category to provide the reader more information on the type and amount of each project within specific service areas. One-page summaries of each project gives the reader more detail of the project phases, purpose, scope of work and potential challenges. For greater detail on each project, the BCE documents are provided in Appendix A, B and C. Appendix D includes system background information formerly included in the body of the report. Appendix E holds the findings of the CIP validation process this year.

Document received by the MI Wayne 3rd Circuit Court.

3 CIP SUMMARY

Document received by the MI Wayne 3rd Circuit Court.

1.7 CIP 5-YEAR SUMMARY TABLES

The Great Lakes Water Authority 2022-2026 Capital Improvement Plan overall summary tables can be seen below. Please note that projected expenses and project categories shown in the Centralized Services CIP Categories table are also included in the Water CIP Categories and Wastewater CIP Categories tables.

WATER

Financial figures are in thousands of dollars ($1,000's).

CATEGORY	CATEGORY NUMBER	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL	PROJECT TOTAL
WATER											
Treatment Plants & Facilities											
Lake Huron	111	$ 19,868	$ 6,081	$ 10,661	$ 18,803	$ 27,104	$ 23,325	$ 23,403	$ 70,172	$ 103,297	$ 199,417
Northeast	112	1,803	979	2,700	3,237	3,883	4,440	1,721	66,360	15,981	85,123
Southwest	113	5,402	268	5,184	2,244	840	78	42	24,979	8,389	39,038
Springwells	114	116,720	32,393	30,650	34,928	38,462	35,906	34,449	267,934	174,394	591,440
Water Works Park	115	9,797	4,752	7,124	8,472	8,444	7,502	17,974	97,908	49,516	161,973
General Purpose	116	15,411	7,024	8,678	18,926	23,635	18,016	5,372	-	74,627	97,062
TREATMENT PLANTS & FACILITIES TOTAL		**169,002**	**51,497**	**64,997**	**86,609**	**102,368**	**89,267**	**82,962**	**527,352**	**426,203**	**1,174,053**
Field Services											
General Purpose	121	-	-	-	-	-	-	-	-	-	-
Transmission System	122	33,372	46,312	71,317	64,199	61,193	43,350	59,995	244,239	300,054	623,978
FIELD SERVICES TOTAL		**33,372**	**46,312**	**71,317**	**64,199**	**61,193**	**43,350**	**59,995**	**244,239**	**300,054**	**623,978**
Systems Control Center (SCC)											
General Purpose	131	-	-	-	-	-	-	-	-	-	-
Pump Station/Reservoir	132	9,971	9,929	23,582	32,681	23,322	25,793	24,294	162,635	129,672	312,207
SCC TOTAL		**9,971**	**9,929**	**23,582**	**32,681**	**23,322**	**25,793**	**24,294**	**162,635**	**129,672**	**312,207**
Water Quality											
General Purpose	141	-	-	-	-	-	-	-	-	-	-
WATER QUALITY TOTAL		-	-	-	-	-	-	-	-	-	-
Metering											
General Purpose	151	-	-	-	-	-	-	-	-	-	-
METERING TOTAL		-	-	-	-	-	-	-	-	-	-
General Purpose											
General Purpose	161	-	-	-	-	-	-	-	-	-	-
GENERAL PURPOSE TOTAL		-	-	-	-	-	-	-	-	-	-
Programs											
Programs	170	7,030	36,733	18,242	13,912	10,226	11,722	11,129	68,603	65,231	177,597
Programs	171	3,216	654	11	3,090	1,808	369	2,920	14,127	8,199	26,195
PROGRAMS TOTAL		**10,246**	**37,387**	**18,253**	**17,002**	**12,034**	**12,091**	**14,050**	**82,730**	**73,430**	**203,792**
WATER TOTAL		**222,591**	**145,125**	**178,150**	**200,491**	**198,917**	**170,500**	**181,301**	**1,016,956**	**929,358**	**2,314,030**
WATER CENTRAL SERVICES											

Document received by the MI Wayne 3rd Circuit Court.

CATEGORY	CATEGORY NUMBER	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL	PROJECT TOTAL
Information Technology	31X	-	-	-	-	-	-	-	-	-	-
Fleet	32X	-	-	-	-	-	-	-	-	-	-
Facilities	33X	-	-	-	-	-	-	-	25,000	-	25,000
Security	34X	3,944	4,656	567	2	-	-	-	-	569	9,170
Energy Management	35X	7	-	38	221	221	213	-	-	693	700
Engineering	36X	-	-	-	-	-	-	-	-	-	-
General Purpose	371	-	-	-	-	-	-	-	-	-	-
Programs	38XX	771	959	456	-	27	223	1,129	1,245	1,835	4,810
WATER CENTRAL SERVICES TOTAL		**4,722**	**5,616**	**1,061**	**223**	**248**	**436**	**1,129**	**26,245**	**3,097**	**39,679**
GRAND TOTAL		**227,313**	**150,740**	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**1,043,201**	**932,455**	**2,353,709**

WASTEWATER

Financial figures are in thousands of dollars ($1,000's).

CATEGORY	CATEGORY NUMBER	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL	PROJECT TOTAL
WASTEWATER											
Water Resource Recovery Facility (WRRF)											
Primary Treatment	211	$67,197	$23,154	$11,198	$18,728	$31,913	$30,039	$25,200	$163,636	$117,078	$371,065
Secondary Treatment & Disinfection	212	62,252	4,203	2,577	5,516	19,663	19,715	23,263	138,143	70,733	275,331
Residuals Management	213	15,537	4,703	3,137	2,547	2,234	1,518	3,979	1,429	13,415	35,084
Industrial Waste Control	214	10,584	2,067	-	-	-	-	-	-	-	12,651
CSO RTB & SDF	215	-	-	-	-	-	-	-	-	-	-
General Purpose	216	4,784	7,343	4,043	13,261	23,871	19,304	10,610	15,436	71,090	98,654
WRRF TOTAL		**160,355**	**41,470**	**20,955**	**40,052**	**77,682**	**70,577**	**63,051**	**318,644**	**272,317**	**792,785**
Field Services											
General Purpose	221	-	-	-	-	-	-	-	-	-	-
Interceptors	222	20,151	12,117	11,982	10,843	6,475	10,106	20,119	34,380	59,525	126,172
FIELD SERVICES TOTAL		**20,151**	**12,117**	**11,982**	**10,843**	**6,475**	**10,106**	**20,119**	**34,380**	**59,525**	**126,172**
SCC											
General Purpose	231	-	-	-	-	-	-	-	-	-	-
Pumping Stations	232	21,616	19,693	16,138	12,674	17,446	23,446	34,146	124,450	103,850	269,610
In System Devices	233	-	-	-	-	1,026	1,024	1,024	43,243	3,075	46,317
SCC TOTAL		**21,616**	**19,693**	**16,138**	**12,674**	**18,472**	**24,470**	**35,170**	**167,693**	**106,925**	**315,927**
Metering											
General Purpose	241	-	-	-	-	-	-	-	-	-	-
METERING TOTAL		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
General Purpose											

Document received by the MI Wayne 3rd Circuit Court.

CATEGORY	CATEGORY NUMBER	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL	PROJECT TOTAL
General Purpose	251	-	-	-	-	-	-	-	-	-	-
GENERAL PURPOSE TOTAL		**-**	-	-	-	-	-	-	-	-	-
Programs											
Programs	260	37,624	47,820	48,842	52,538	46,975	53,794	44,041	138,540	246,190	470,173
PROGRAMS TOTAL		**37,624**	**47,820**	**48,842**	**52,538**	**46,975**	**53,794**	**44,041**	**138,540**	**246,190**	**470,173**
CSO Facilities											
CSO Facilities	27X	6	4,693	6,134	5,805	10,060	12,801	11,542	13,633	46,342	64,674
CSO FACILITIES TOTAL		**6**	**4,693**	**6,134**	**5,805**	**10,060**	**12,801**	**11,542**	**13,633**	**46,342**	**64,674**
WASTEWATER TOTAL		**239,751**	**125,793**	**104,051**	**121,913**	**159,664**	**171,747**	**173,923**	**672,889**	**731,298**	**1,769,731**
WASTEWATER CENTRAL SERVICES											
Information Technology	31X	-	-	-	-	-	-	-	-	-	-
Fleet	32X	-	-	-	-	-	-	-	-	-	-
Facilities	33X	1,123	148	1,277	1,277	1,276	1,277	1,277	1,234	6,383	8,888
Security	34X	1,015	1,796	722	-	-	-	-	-	722	3,534
Energy Management	35X	-	-	-	-	-	-	-	-	-	-
Engineering	36X	-	-	-	-	-	-	-	-	-	-
General Purpose	37X	-	-	-	-	-	-	-	-	-	-
Programs	38XX										
CENTRAL SERVICES TOTAL		**2,138**	**1,945**	**1,999**	**1,277**	**1,276**	**1,277**	**1,277**	**1,234**	**7,105**	**12,422**
GRAND TOTAL		**241,889**	**127,738**	**106,050**	**123,190**	**160,940**	**173,024**	**175,200**	**674,124**	**738,403**	**1,782,153**

Document received by the MI Wayne 3rd Circuit Court.

CENTRALIZED SERVICES

Please note that these project categories and projected expenses also appear in Water and Wastewater tables above.

Financial figures are in thousands of dollars ($1,000's).

CATEGORY	CATEGORY NUMBER	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL	PROJECT TOTAL
INFORMATION TECHNOLOGY	**31X**										
Water		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wastewater		-	-	-	-	-	-	-	-	-	-
INFORMATION TECHNOLOGY TOTAL		-	-	-	-	-	-	-	-	-	-
FLEET	**32X**										
Water		-	-	-	-	-	-	-	-	-	-
Wastewater		-	-	-	-	-	-	-	-	-	-
FLEET TOTAL		-	-	-	-	-	-	-	-	-	-
FACILITIES	**33X**										
Water		-	-	-	-	-	-	-	25,000	-	25,000
Wastewater		1,123	148	1,277	1,277	1,276	1,277	1,277	1,234	6,383	8,888
FACILITIES TOTAL		**1,123**	**148**	**1,277**	**1,277**	**1,276**	**1,277**	**1,277**	**26,234**	**6,383**	**33,888**
SECURITY	**34X**										
Water		3,944	4,656	567	2	-	-	-	-	569	9,170
Wastewater		1,015	1,796	722	-	-	-	-	-	722	3,534
SECURITY TOTAL		**4,959**	**6,453**	**1,290**	**2**	-	-	-	-	**1,291**	**12,703**
ENERGY MANAGEMENT	**35X**										
Water		7	-	38	221	221	213	-	-	693	700
Wastewater		-	-	-	-	-	-	-	-	-	-
ENERGY MANAGEMENT TOTAL		7	-	38	221	221	213	-	-	693	700
ENGINEERING	**36X**										
Water		-	-	-	-	-	-	-	-	-	-
Wastewater		-	-	-	-	-	-	-	-	-	-
ENGINEERING TOTAL		-	-	-	-	-	-	-	-	-	-
GENERAL PURPOSE	**37X**										
Water		-	-	-	-	-	-	-	-	-	-
Wastewater		-	-	-	-	-	-	-	-	-	-
GENERAL PURPOSE TOTAL		-	-	-	-	-	-	-	-	-	-
PROGRAMS	**38XX**										
Water		771	959	456	-	27	223	1,129	1,245	1,835	4,810
Wastewater		-	-	-	-	-	-	-	-	-	-
GENERAL PURPOSE TOTAL		**771**	**959**	**456**	-	**27**	**223**	**1,129**	**1,245**	**1,835**	**4,810**
Grand Total		**6,860**	**7,560**	**3,059**	**1,499**	**1,524**	**1,713**	**2,405**	**27,479**	**10,202**	**52,101**

Document received by the MI Wayne 3rd Circuit Court.

1.8 PROJECT STATUS

A status is assigned to each project or program within the CIP. The project status designation provides a high-level understanding of the progress of the project or program. Projects are categorized by activity levels within the Work Breakdown Structure multiple activity levels are based on the contract type. As such, each activity level of a project will have its own status and contract number. Descriptions of each status are provided below. Projects that have been newly introduced into the CIP this year have been designed as "New to the CIP" based upon a checkmark within the Business Case Evaluation.

PROJECT STATUS	DESCRIPTION
Future Planned – Within 5 Year Plan	The project is planned to begin within the 5 Year CIP Plan.
Future Planned – Ten-Year CIP	The project is planned to begin within the 10 Year CIP Outlook.
Active – Pre-Procurement – Design	A scope of work or RFP is being developed.
Active – Procurement – Design	Out for Solicitation of Bids.
Active – Procurement – Negotiation Phase – Design	The intended Consultant has been selected and is in negotiations.
Active – Procurement – Board Approved – Design	A project over $1,000,000 requires Board Approval to execute the contract.
Project Execution – Design	The project's contract has been executed.
Active – Pre-Procurement – Construction	A scope of work or RFB is being developed.
Active – Procurement – Construction	Solicitation of Bids is underway.
Active – Procurement – Negotiation Phase – Construction	The intended low bid Contractor has been selected and is in negotiations.
Active – Procurement – Board Approved – Construction	A project over $1,000,000 requires Board Approval to execute the contract.
Project Execution – Construction	The project's contract has been executed.
Pending Close-out	Project that has an assigned BS&A Project Number, a Notice to Start Work has been issued, has projected expenditures for the current fiscal year equal to $100,000 or less - with no future projected expenditures and has reached substantial completion.
Closed	Project that has been officially completed.
Reclassified	Project that has been merged into the scope of work of an existing project.
Cancelled	Project that has been completely cancelled and/or removed from the CIP.

Multiple CIP types are necessary to distinguish the differences in intent of how a CIP item is to be used. This CIP contains two primary CIP types: Projects and Programs. A typical project that has a specific scope and timeframe is considered a Project. Whereas Programs do not have specifically developed scopes and typically extend over many years.

CIP TYPE	DESCRIPTION
Project	A "Project" consists of the replacement and/or rehabilitation of specific capital assets within a finite timeframe and scope.
Program	A "Program" consists of the replacement and/or rehabilitation of specific capital assets on an ongoing or reoccurring basis. The program scope and/or projected expenses may vary from year-to-year depending on the needs identified within the program and as newly established programs develop consistent schedules, requirements, and history over time. Although not typically identified in the CIP future years projected expenses, these programs will typically be funded in perpetuity.

Many projects have changed status since the last CIP update. These projects are shown in the following tables:

Document received by the MI Wayne 3rd Circuit Court.

NEW PROJECTS ADDED TO THE CIP

CIP	TITLE	2022 STATUS
111012	LHWTP-Flocculation Improvements	Active - Pre-Procurement - Design
115007	Water Works Park High Lift Pumping Station Modernization	Future Planned - Within 5 Year Plan
116005	Belle Isle Seawall Rehabilitation	Future Planned - Within 5 Year Plan
116006	Belle Isle Intake System Rehabilitation and Improvements	Future Planned - Within 5 Year Plan
170303[1]	Power Monitoring Installation for Water Treatment Plants	Active - Pre-Procurement - Design
170902[1]	Brownstown Meter Pit	Active - Pre-Procurement - Construction
171501[1]	Roof Replacements at SP, WWP, Orion, Franklin, and Conner Creek	Project Execution - Construction
216011	WRRF Structural Improvements	Active - Pre-Procurement - Design
260205[1]	NWI Rehabilitation	Future Planned - Within 5 Year Plan
260206[1]	Conveyance System Repairs (Sewers)	Active - Pre-Procurement - Design
260508[1]	B-39 Outfall Rehabilitation	Project Execution - Design
260509[1]	B-40 Outfall Rehabilitation	Project Execution - Design
260510[1]	Conveyance System Repairs (Outfalls)	Active - Pre-Procurement - Design
260620[1]	Baby Creek Roof Replacement	Active - Pre-Procurement - Construction
260700	Sewer System Infrastructure Improvements and Pumping Stations	Project Execution – Design
260701	Conveyance System Infrastructure Improvements	Project Execution – Design
260702	Pump Station Asset Updates	Active – Pre-Procurement – Construction
274001[1]	Leib Improvements for Meldrum Diversion	Future Planned - Within 5 Year Plan
278001[1]	Oakwood Improvements for NWI Diversion	Future Planned - Within 5 Year Plan
331003	Masonry Replacement and Rehabilitation	Future Planned - Within 10-Year Outlook

[1]Project created out of a program

PROJECTS PROGRESSED TO ACTIVE STATUS

CIP	TITLE	2021 STATUS	2022 STATUS
111011	Lake Huron WTP Pilot Plant	Future Planned	Active - Procurement - Negotiation Phase - Design
111012	LHWTP-Flocculation Improvements	n/a	Active - Pre-Procurement - Design
113006	Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements	Future Planned	Active - Procurement - Construction
114010	Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements	Future Planned	Active - Pre-Procurement - Design
114016	Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement	Future Planned	Project Execution - Design
114017	Springwells Water Treatment Plant Flocculator Drive Replacements	Future Planned	Active - Procurement - Board Approved - Design
170109	GLWA-CS-187: FK Eng: Raw Water Intake	n/a	Project Execution - Design
170302	SW SCADA System Upgrade	n/a	Project Execution - Design
170303	Power Monitoring Installation for Water Treatment Plants	n/a	Active - Pre-Procurement - Design
170503	Transmission System Valve Replacement	n/a	Project Execution - Construction
170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	n/a	Project Execution - Construction
170902	Brownstown Meter Pit	n/a	Active - Pre-Procurement - Construction
171501	Roof Replacements at SP, WWP, Orion, Franklin, and Conner Creek	n/a	Project Execution - Construction
212008	WRRF Aeration Improvements 1 and 2	Future Planned	Project Execution - Design
213006	WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities	Future Planned	Project Execution - Design
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	Future Planned	Active - Procurement - Negotiation Phase - Design
216010	WRRF Facility Optimization	Future Planned	Active - Pre-Procurement - Design
216011	WRRF Structural Improvements	n/a	Active - Pre-Procurement - Design

Document received by the MI Wayne 3rd Circuit Court.

CIP	TITLE	2021 STATUS	2022 STATUS
222001	Oakwood District Intercommunity Relief Sewer Modification at Oakwood District	Future Planned	Active - Procurement - Design
260201	CON-149, Emergency Sewer Repair	n/a	Project Execution - Construction
260204	Conveyance System Engineering Services-1802575	n/a	Project Execution - Design
260206	Conveyance System Repairs (Sewers)	n/a	Active - Pre-Procurement - Design
260504	Phase 2 Outfalls- 19000796	n/a	Project Execution - Construction
260505	Phase 4 Outfalls	n/a	Project Execution - Construction
260508	B-39 Outfall Rehabilitation	n/a	Project Execution - Design
260509	B-40 Outfall Rehabilitation	n/a	Project Execution - Design
260510	Conveyance System Repairs (Outfalls)	n/a	Active - Pre-Procurement - Design
260603	Conner Creek CSO RTB Automation Improvements	n/a	Project Execution - Construction
260611	Leib SDF- HVAC System Improvements	n/a	Project Execution - Construction
260613	Baby Creek HVAC Improvements	n/a	Project Execution - Construction
260614	Structural Inspection & Structural Improvements	n/a	Active - Procurement - Construction
260615	Puritan Fenkell & Leib Site Improvements	n/a	Project Execution - Construction
260617	St. Aubin Chemical Disinfection Improvements	n/a	Active - Pre-Procurement - Design
260618	Oakwood HVAC Project	n/a	Project Execution - Design
260619	Control System Upgrade - St Aubin, Lieb & Mile	n/a	Project Execution - Design
260620	Baby Creek Roof Replacement	n/a	Active - Pre-Procurement - Construction
270003	Long Term CSO Control Plan	Future Planned	Active – Procurement – Negotiation Phase – Design
381000	Power Quality: Electric Metering Improvement Program	Future Planned	Active - Pre-Procurement - Design

PROJECTS PROGRESSED TO PENDING CLOSEOUT STATUS

CIP	TITLE	2021 STATUS	2022 STATUS
111002	Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements	Active	Pending Closeout
113002	Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement	Active	Pending Closeout
114001	Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements	Active	Pending Closeout
114003	Water Production Flow Metering Improvements at Northeast, Southwest and Springwells Water Treatment Plants	Active	Pending Closeout
115004	Water Works Park Water Treatment Plant Chlorine System Upgrade	Active	Pending Closeout
132003	West Service Center Pumping Station, Isolation Gate Valves for Line Pumps	Active	Pending Closeout
132026	Franklin Pumping Station Valve Replacement	Active	Pending Closeout
212006	WRRF Rouge River Outfall (RRO) Disinfection (Alternative)	Active	Pending Closeout
260601	Oakwood CSO Control Facility Drain Valve Improvements	n/a	Pending Closeout
260609	Seven Mile RTB - Parking Lot Replacement & Misc. Site Work	n/a	Pending Closeout
260610	Baby Creek SDF - HV Units Replacement	n/a	Pending Closeout
260616	Baby Creek Towards Treatment Sewer Improvements	n/a	Pending Closeout

PROJECTS PROGRESSED TO CANCELLED STATUS

This includes projects cancelled and projects removed from the CIP to be funded through other sources.

CIP	TITLE	2021 STATUS	2022 STATUS
170100	Water Treatment Plant /Pump Station Allowance	Active	Cancelled
380600	As-Needed General Engineering Services	Active	Cancelled

PROJECTS PROGRESSED TO CLOSED STATUS

Document received by the MI Wayne 3rd Circuit Court.

CIP	TITLE	2021 STATUS	2022 STATUS
111004	Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation	Active	Closed
112002	Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation	Active	Closed
114012	SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement	Active	Closed
115003	Water Works Park Water Treatment Plant Comprehensive Condition Assessment	Active	Closed
212003	WRRF Aeration System Improvements	Active	Closed
216009	LM Facilities Assessment and Rehabilitation/Replacement	Active	Closed
170108	DWS-063 Adam Roads Water Isolation Gate	n/a	Closed
170117	Instrument Air Compressor	n/a	Closed
170120	Phosphoric Acid SCP-CS-1692	n/a	Closed
170301	Water Treatment Plant Automation	n/a	Closed
260602	CSO Fire Alarm Improvement Project	n/a	Closed
260606	Puritan Fenkell Roof Replacement	n/a	Closed
260607	Leib Electrical Improvements	n/a	Closed
260608	7 Mile CSO Facilities - Roof Replacement	n/a	Closed
122012	36-inch Water Main in Telegraph Road	Pending Closeout	Closed
132008	Various Pumping Stations - Needs Assessment Study	Pending Closeout	Closed

1.9 LINEAR ASSETS

Many projects included in the CIP take place at GLWA facilities and on what GLWA considers to be vertical assets. However, GLWA manages many miles of water transmission mains and sewer interceptors. Projects on these linear assets are listed below. A spatial view and understanding of these project locations, can be found in the CIP Viewer located within the WAMR and GDRSS Member Outreach Portals after the Board Approval and adoption of the yearly CIP Plan.

CIP	TITLE
222002	Detroit River Interceptor (DRI) Evaluation and Rehabilitation
122005	Schoolcraft Road Water Transmission Main
122004	96-inch Water Transmission Main Relocation and Isolation Valve Installations
122011	Park-Merriman Road Water Transmission Main
122006	Wick Road Water Transmission Main
116002	Pennsylvania and Springwells Raw Water Supply Tunnel Improvements
122003	Water Works Park to Northeast Transmission Main
122016	Downriver Transmission Main Loop
122013	14 Mile Transmission Main Loop
260201	CON-149, Emergency Sewer Repair
170400	Water Transmission Improvement Program
122018	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation
122007	Merriman Road Water Transmission Main Loop
122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station
260204	Conveyance System Engineering Services-1802575

1.10 PROJECTS BY JURISDICTION

Projects listed below are under the jurisdiction of the physical location of the project. Projects that are planned for multiple facilities within multiple jurisdictions are identified as “Multiple Counties”. A spatial view and understanding of these project locations, will be able to be found in the CIP Viewer located within the WAMR and GDRSS Member Outreach Portals after the Board Approval and adoption of the yearly CIP Plan.

JURISDICTION	CIP PROJECTS				
City of Detroit					
112002	116006	211008	213007	232002	260617
112003	122003	211009	213008	232004	260618
112005	122017	211010	214001	260205	270001
112006	122018	211011	216004	260206	270002
115001	170117	212003	216006	260508	274001
115003	170301	212004	216007	260510	278001
115004	211001	212006	216008	260601	331002
115005	211002	212007	216009	260602	
115006	211004	212008	216010	260603	
115007	211005	212009	216011	260607	
116002	211006	212010	222002	260611	
116005	211007	213006	232001	260615	
Lapeer County					
132007	132021				
Macomb County					
-					
Oakland County					
122013	132010	132016	132026		

Document received by the MI Wayne 3rd Circuit Court.

JURISDICTION	CIP PROJECTS				
132003	132014	132020	170108		
Saint Clair County					
111001	111004	111007	111009	111011	
111002	111006	111008	111010	111012	
Wayne County - Outside Detroit					
113002	114005	114013	122007	132015	170902
113003	114007	114016	122011	132018	233003
113006	114008	114017	122012	132019	260610
113007	114010	114018	122016	132022	260613
114001	114011	122005	132006	170120	260620

JURISDICTION	CIP PROJECTS				
114002	114012	122006	132012	170302	
Multiple Counties					
114003	170300	170900	260201	260608	331003
122004	170303	170901	260204	260609	341001
132008	170400	171500	260500	260614	341002
170100	170500	171501	260504	260616	351001
170102	170503	222001	260505	260619	380600
170109	170600	222004	260600	270003	380700
170200	170800	260200	260606	277001	381000

Document received by the MI Wayne 3rd Circuit Court.

1.11 SPECIALTY PROJECTS

PROJECTS WITH POTENTIAL TO BE INNOVATIVE

One of the GLWA's main organizational guiding pillars is to provide high quality through innovation. To ensure CIP projects are being considered for new and innovative technologies, during the project review process, projects that may be considered for innovative technologies, practices or procedures were identified by the GLWA Energy, Research & Innovation Group. The following projects will be further evaluated for innovative opportunities during scope development process:

CIP	TITLE
111001	Lake Huron WTP, Low-Lift, High Lift and Filter Backwash Pumping System Improvements
111006	Lake Huron WTP, Filter Instrumentation and Raw Water Flow Metering Improvements
111011	Lake Huron WTP Pilot Plant
111012	LHWTP-Flocculation Improvements
113003	Southwest WTP, Low- and High-Lift Pumping Station, Flocculation and Filtration System Improvements
113007	Southwest WTP Architectural and Building Mechanical Improvements
122018	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation
132007	Energy Management: Freeze Protection Pump Installation at Imlay Pump Station
132021	Imlay Pumping Station Improvements
132022	Joy Road Pumping Station Improvements
170600	Water Transmission Main Asset Assessment Program
211006	WRRF PS No. 1 Improvements
211007	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements
211008	WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines
211009	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System
211011	WRRF PS1 Screening and Grit Improvements
212004	WRRF Chlorination and Dechlorination Process Equipment Improvements
212008	WRRF Aeration Improvements 1 and 2
212009	WRRF Aeration Improvements 3 and 4
212010	WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite
213008	WRRF Rehabilitation of the Ash Handling Systems
216004	Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF
216006	Assessment and Rehabilitation of WRRF yard piping and underground utilities
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station
216010	WRRF Facility Optimization
331002	Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)
351001	LED Lighting and Lighting Control Improvements

WATER MASTER PLAN RIGHT-SIZING PROJECTS

Based upon the completion and acceptance of the 2015 Comprehensive Water Master Plan, many water projects are being considered with reduced capital investment in order to reduce the rated capacity to master plan identified levels based upon current population and water usage. The following projects have capital expenditure avoidance based upon water master planning efforts to right-size the system for current needs:

CIP	TITLE
111001	Lake Huron WTP, Low-Lift, High Lift and Filter Backwash Pumping System Improvements
111010	Filtration Improvements
111011	Lake Huron WTP Pilot Plant
112003	Northeast WTP High-Lift Pumping Station Improvements
113003	Southwest WTP, Low- and High-Lift Pumping Station, Flocculation and Filtration System Improvements
114002	Springwells WTP, Low-Lift and High-Lift Pumping Station Improvements
114013	Springwells WTP, Reservoir Fill Line Improvements
115001	Water Works Park WTP Yard Piping, Valves and Venturi Meters Replacement
122003	Water Works Park to Northeast Transmission Main
122007	Merriman Road Water Transmission Main Loop
122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station
132007	Energy Management: Freeze Protection Pump Installation at Imlay Pump Station
132019	Wick Road Pumping Station Improvements
132021	Imlay Pumping Station Improvements

WASTEWATER MASTER PLAN PROJECTS

Document received by the MI Wayne 3rd Circuit Court.

GLWA has recently completed the first Wastewater Master Plan. The following projects have come about due to recommendations in this Master Plan:

CIP	TITLE
216010	WRRF Facility Optimization
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station
222001	Oakwood District Intercommunity Relief Sewer Modification at Oakwood District
232004	Condition Assessment at Blue Hill Pump Station
233003	Rouge River In-system Storage Devices
270001	Pilot CSO Netting Facility
270002	Meldrum Sewer Diversion and VR-15 Improvements
274001	Leib Improvements for Meldrum Diversion
278001	Oakwood Improvements for NWI Diversion

NORTHEAST WATER TREATMENT PLANT REPURPOSING RELATED PROJECTS

The 2015 Comprehensive Water Master Plan has identified the ability to reduce the number of water treatment facilities in full operation at GLWA. Initially, for long-term capital expenditure avoidance, the plan has identified the repurposing of the Northeast Water Treatment Plant. In order to repurpose this facility into a reservoir and pump station, several capital projects are necessary to achieve the savings identified in the master plan. The following projects are associated with the repurposing of the Northeast Water Treatment Plant:

CIP	TITLE
112003	Northeast WTP High-Lift Pumping Station Improvements
114002	Springwells WTP, Low-Lift and High-Lift Pumping Station Improvements
114013	Springwells WTP, Reservoir Fill Line Improvements
115001	Water Works Park WTP Yard Piping, Valves and Venturi Meters Replacement
122003	Water Works Park to Northeast Transmission Main
122018	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

REDUNDANCY PROJECTS

Projects which will increase the redundancy of GLWA infrastructure are listed below:

CIP	TITLE
111001	Lake Huron WTP, Low-Lift, High Lift and Filter Backwash Pumping System Improvements
111004	Lake Huron WTP, Electrical Tunnel Rehabilitation
111006	Lake Huron WTP, Filter Instrumentation and Raw Water Flow Metering Improvements
111007	Lake Huron WTP, Raw Sludge Clarifier and Raw Sludge Pumping System Improvements
111009	Lake Huron WTP - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements
111010	Filtration Improvements
112003	Northeast WTP High-Lift Pumping Station Improvements
114002	Springwells WTP, Low-Lift and High-Lift Pumping Station Improvements
114003	Water Production Flow Metering Improvements at Northeast, Southwest and Springwells WTPs
114010	Springwells WTP, Yard Piping and High-Lift Header Improvements
114013	Springwells WTP, Reservoir Fill Line Improvements
115001	Water Works Park WTP Yard Piping, Valves and Venturi Meters Replacement
116002	Pennsylvania and Springwells Raw Water Supply Tunnel Improvements
122003	Water Works Park to Northeast Transmission Main
122004	96-inch Water Transmission Main Relocation and Isolation Valve Installations
122005	Schoolcraft Road Water Transmission Main
122006	Wick Road Water Transmission Main
122007	Merriman Road Water Transmission Main Loop
122011	Park-Merriman Road Water Transmission Main
122012	36-inch Water Main in Telegraph Road
122013	14 Mile Transmission Main Loop
122016	Downriver Transmission Main Loop
122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station
122018	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation
132003	West Service Center Pumping Station, Isolation Gate Valves for Line Pumps
132006	Ford Road Pumping Station, Pressure and Control Improvements
132007	Energy Management: Freeze Protection Pump Installation at Imlay Pump Station
132008	Various Pumping Stations - Needs Assessment Study
132010	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades
132012	Ypsilanti Booster Pumping Station Improvements
132015	Newburgh Road Booster Pumping Station Improvements

Document received by the MI Wayne 3rd Circuit Court.

CIP	TITLE
132016	North Service Center Pumping Station Improvements
132018	Schoolcraft Pumping Station Improvements
132019	Wick Road Pumping Station Improvements
132021	Imlay Pumping Station Improvements
132022	Joy Road Pumping Station Improvements
170400	Water Transmission Improvement Program
170500	Transmission System Valve Rehabilitation and Replacement Program
170800	System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation
211001	WRRF Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery
211002	WRRF PS No. 2 Pumping Improvements - Phase 1
211004	WRRF PS #1 Rack & Grit and MPI Sampling Station 1 Improvements
211005	WRRF PS No. 2 Improvements Phase II
211006	WRRF PS No. 1 Improvements
211007	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements
211008	WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines
211009	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System
211010	Rehabilitation of Sludge Processing Complexes A and B
211011	WRRF PS1 Screening and Grit Improvements
212003	WRRF Aeration System Improvements
212004	WRRF Chlorination and Dechlorination Process Equipment Improvements
212006	WRRF Rouge River Outfall (RRO) Disinfection (Alternative)
212007	WRRF Rehabilitation of the Secondary Clarifiers
212008	WRRF Aeration Improvements 1 and 2
212009	WRRF Aeration Improvements 3 and 4
213006	WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities
213007	WRRF Modification to Incinerator Sludge Feed Systems at Complex -II
213008	WRRF Rehabilitation of the Ash Handling Systems

CIP	TITLE
214001	WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations
216004	Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF
216006	Assessment and Rehabilitation of WRRF yard piping and underground utilities
216007	DTE Primary Electric 3rd Feed Supply to WRRF
222001	Oakwood District Intercommunity Relief Sewer Modification at Oakwood District
222002	Detroit River Interceptor (DRI) Evaluation and Rehabilitation
232001	Fairview Pumping Station - Replace Four Sanitary Pumps
232002	Freud & Conner Creek Pump Station Improvements
232004	Condition Assessment at Blue Hill Pump Station
260200	Sewer and Interceptor Rehabilitation Program
260500	CSO Outfall Rehabilitation
260510	Conveyance System Repairs (Outfalls)
260600	CSO FACILITIES IMPROVEMENT PROGRAM
260619	Control System Upgrade - St Aubin, Lieb & Mile
270002	Meldrum Sewer Diversion and VR-15 Improvements
331002	Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)
381000	Power Quality: Electric Metering Improvement Program

Document received by the MI Wayne 3rd Circuit Court.

1.12PROJECT RISK

Project risks are identified specifically related to their Probability of Failure (PoF) and Consequence of Failure (CoF) and portrayed on an overall Risk Matrix. The overall criteria remain unchanged, however, in order to show each project on the risk matrix, the eight criteria used in the project prioritization framework are designated as either a PoF or CoF primary risk driver. The designation of PoF and CoF to each criterion as primary risk driver is shown in Table 1.

After each criterion is scored for each project, the weighted PoF and CoF factors were calculated. This provided a 1 to 5 vertical axis value for probability of failure and a 1 to 5 horizontal axis value for the consequence of failure. This point was plotted with the other projects to show its relative position compared to others within the matrix. A sample of the matrix is shown in Figure 1.

This provides the varying audiences additional information related to the overall project risk as it relates to its consequence and probability of failure.

New water and wastewater projects were prioritized based upon eight criteria. Projects already existing in the CIP were evaluated using scores applied in the previous CIP cycle.

Figure 2 and Figure 3 display the distribution of project risk in terms of Probability and Consequence. For the Probability of Failure coordinate on the plot, an equally weighted average was taken of the scores for the Condition, Performance, and O&M criteria. For the Consequence of Failure coordinate, the Regulatory, Public Health & Safety, Public Benefit, Financial, and Efficiency & Innovation criteria were averaged. These plots provide the reader a better understanding of which function (probability or consequence of failure) of the overall risk is driving the need for the project.

In addition, the following pages provide the detailed prioritization of each project compared to one another along with the individual score by Project Manager and by the Review Committee.

Table 1. Project Prioritization

NO.	WEIGHT	CRITERIA	RISK FACTOR
1	12%	Condition	Probability
2	15%	Performance (Service Level/Reliability)	Probability
3	18%	Regulatory (Environmental/Legal)	Consequence
4	11%	O&M	Probability
5	17%	Public Health & Safety	Consequence
6	8%	Public Benefit	Consequence
7	10%	Financial	Consequence
8	9%	Efficiency & Innovation	Consequence

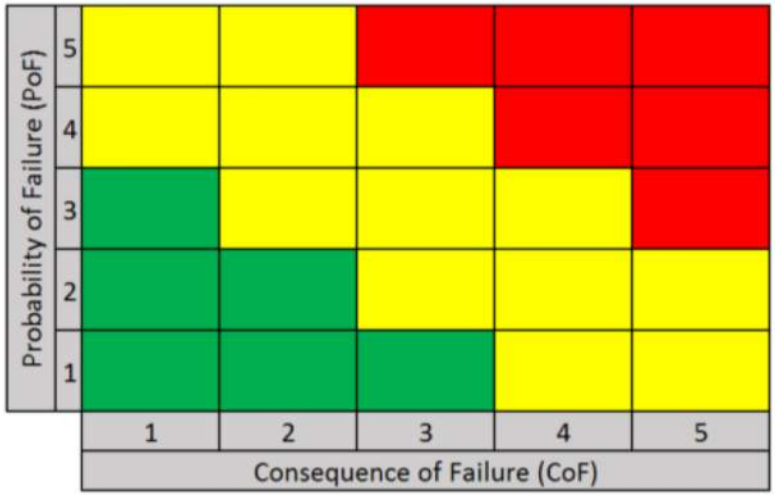


Figure 1. Risk Matrix

Document received by the MI Wayne 3rd Circuit Court.

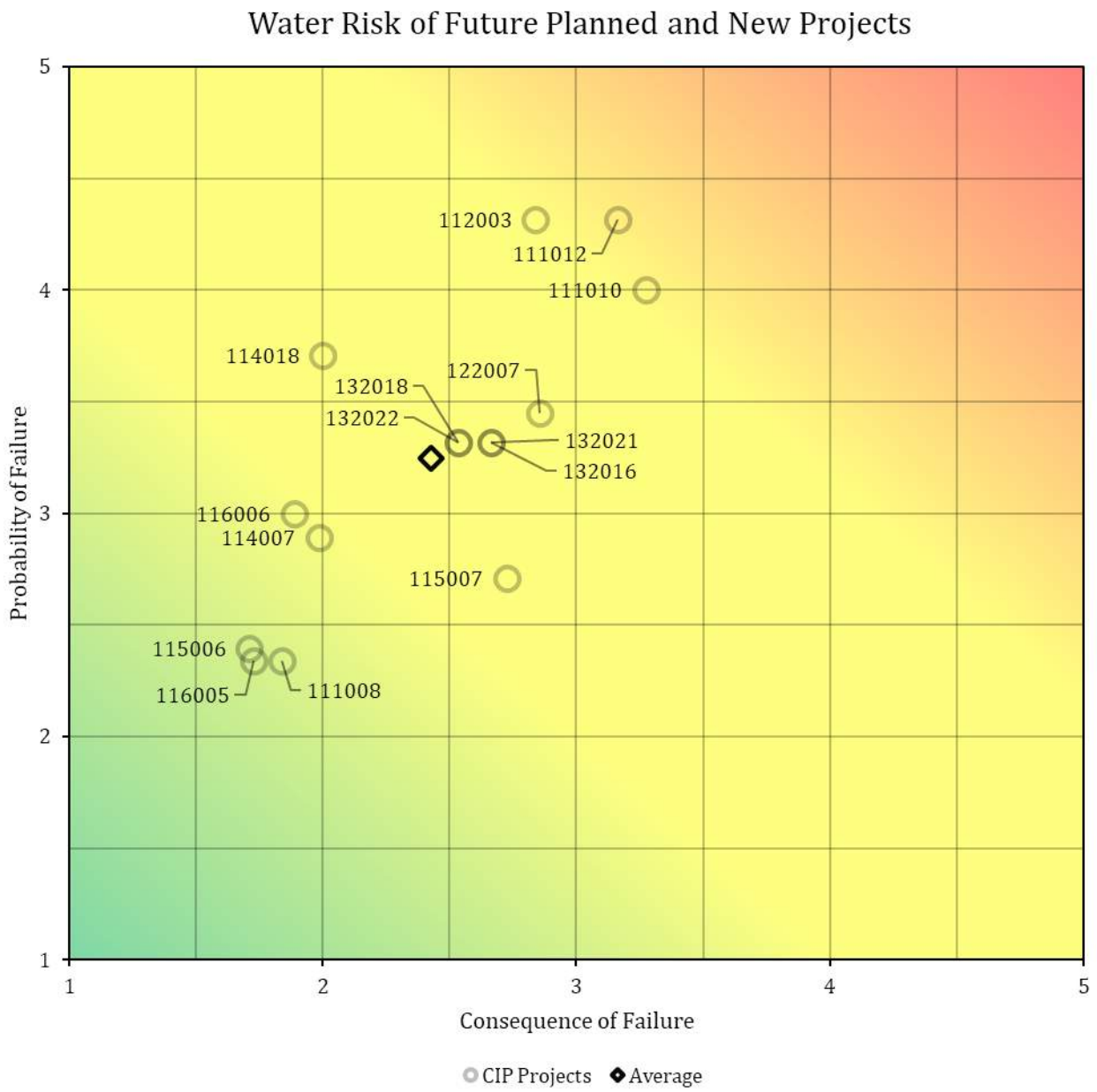


Figure 2. Water Project Risk Matrix

Document received by the MI Wayne 3rd Circuit Court.

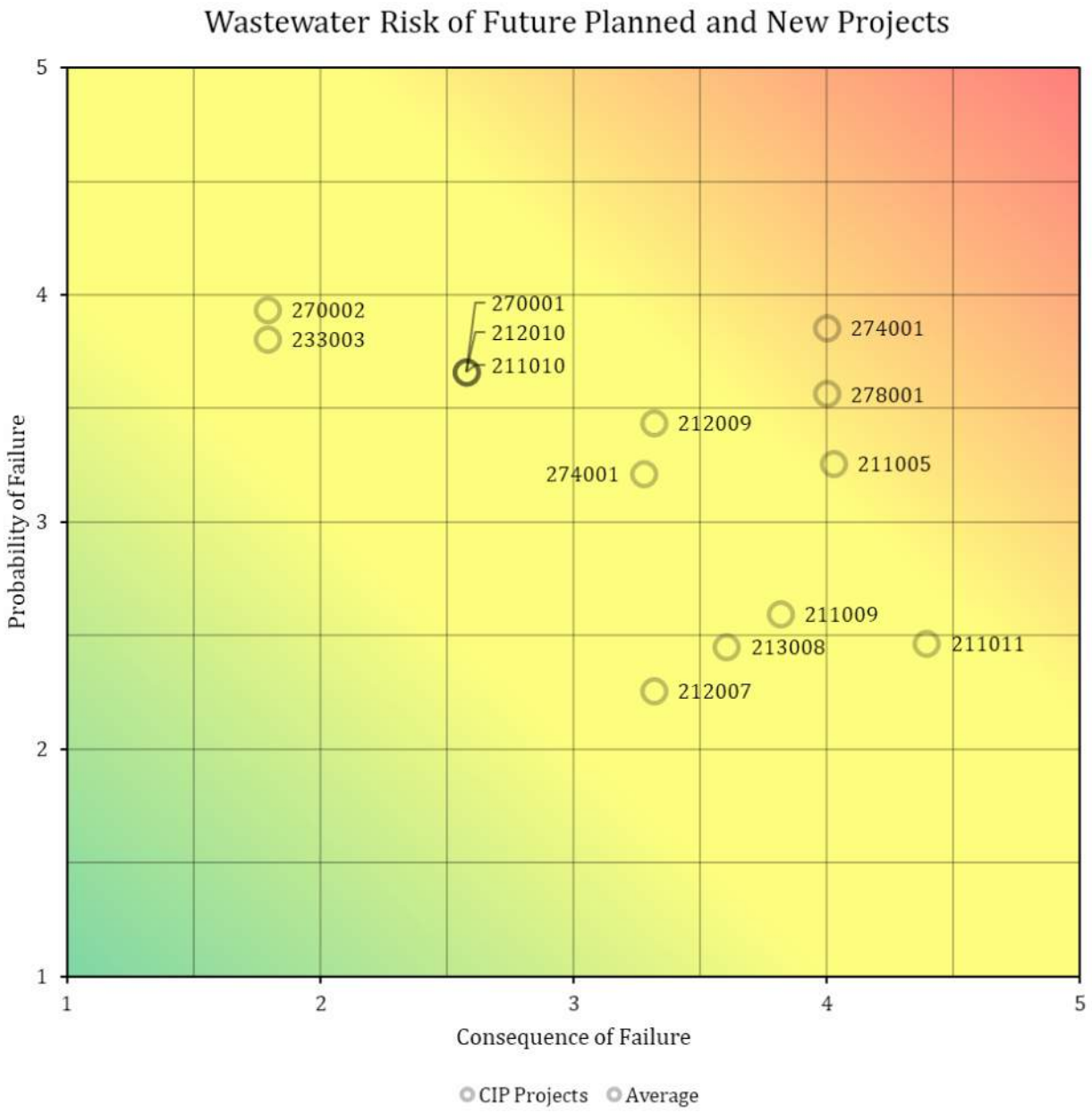
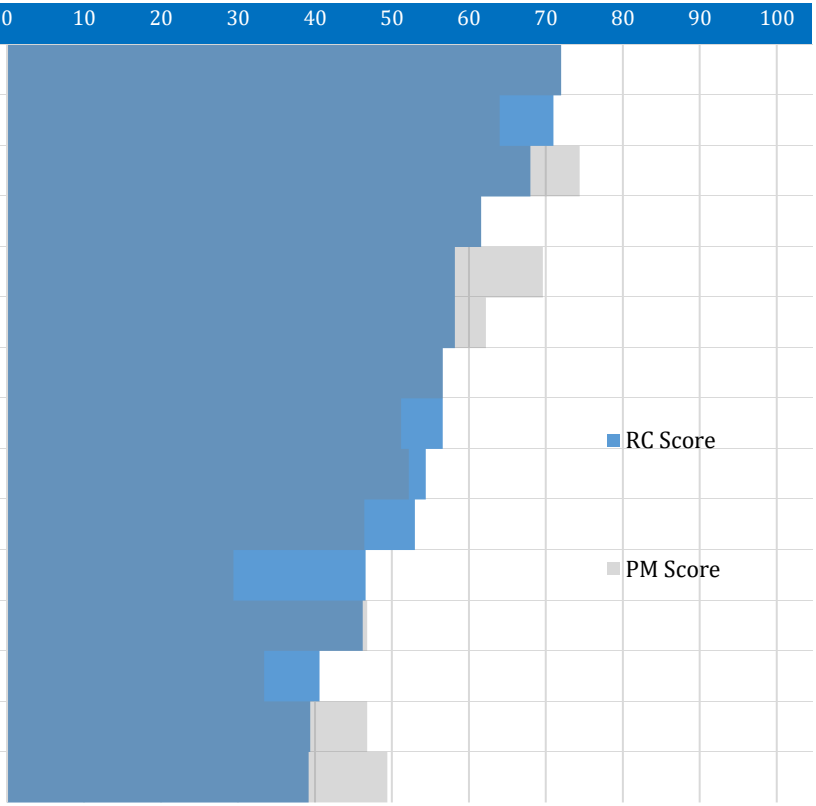


Figure 3. Wastewater Project Risk Matrix

Document received by the MI Wayne 3rd Circuit Court.

Table 2. Project Manager Criteria Scores: Water

RANK	CIP NO.	TITLE
1	111012	LHWTP-Flocculation Improvements
2	111010	Filtration Improvements
3	112003	NEWTP High-Lift Pumping Station Improvements
4	122007	Merriman Road Water Transmission Main Loop
5	132016	North Service Center Pumping Station Improvements
6	132021	Imlay Pumping Station Improvements
7	132022	Joy Road Pumping Station Improvements
8	132018	Schoolcraft Pumping Station Improvements
9	115007	Water Works Park High Lift Pumping Station Modernization
10	114018	SPWTP - Service Bldg Electrical Substation and Misc. Improvements
11	114007	SPWTP Powdered Activated Carbon System Improvements
12	116006	Belle Isle Intake System Rehabilitation and Improvements
13	111008	LHWTP, Arch. Programming for Lab and Admin Bldg Improvements
14	115006	Water Works Park Site/Civil Improvements
15	116005	Belle Isle Seawall Rehabilitation



Document received by the MI Wayne 3rd Circuit Court.

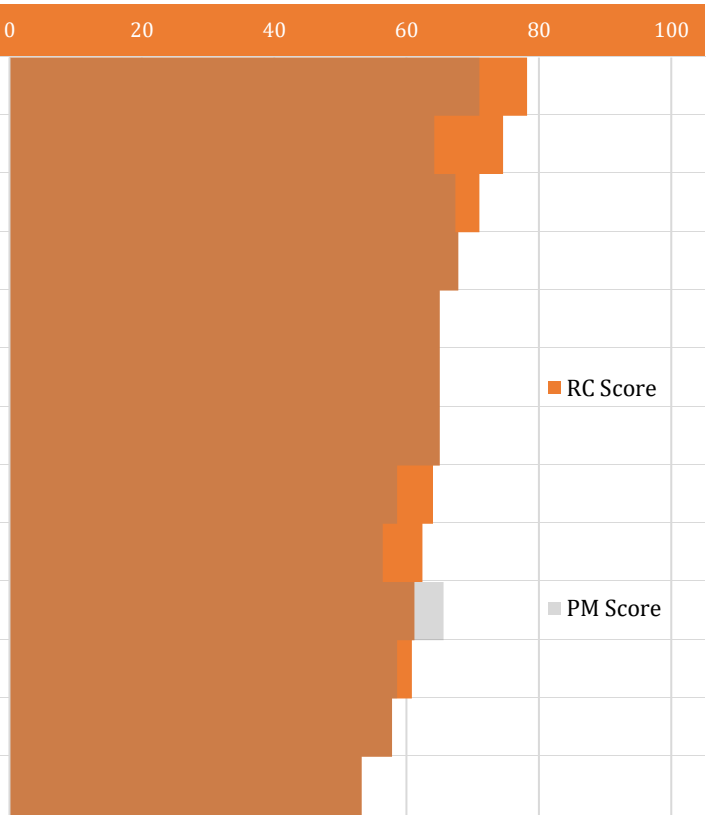
Table 3. Project Manager Criteria Score Breakdown: Water

RANK	CIP NO.	TITLE	1	2	3	4	5	6	7	8	PM SCORE	1	2	3	4	5	6	7	8	RC SCORE
1	111012	LHWTP-Flocculation Improvements	5	4	5	4	2	2	2	4	72.0	5	4	5	4	2	2	2	4	72.0
2	111010	Filtration Improvements	4	4	3	4	3	2	2	3	64.0	4	4	4	4	4	2	2	3	71.0
3	112003	NEWTP High-Lift Pumping Station Improvements	5	5	2	4	5	2	2	4	74.4	5	4	2	4	4	2	2	4	68.0
4	122007	Merriman Road Water Transmission Main Loop	1	5	1	4	3	4	4	4	61.6	1	5	1	4	3	4	4	4	61.6
5	132016	North Service Center Pumping Station Improvements	5	4	2	4	3	4	2	5	69.6	4	3	2	3	3	4	1	4	58.2
6	132021	Imlay Pumping Station Improvements	4	4	1	4	3	3	3	4	62.2	4	3	2	3	3	4	1	4	58.2
7	132022	Joy Road Pumping Station Improvements	4	4	1	3	3	2	3	3	56.6	4	3	2	3	3	3	1	4	56.6
8	132018	Schoolcraft Pumping Station Improvements	3	3	1	4	3	3	2	2	51.2	4	3	2	3	3	3	1	4	56.6
9	115007	Water Works Park High Lift Pumping Station Modernization	3	3	2	2	3	3	2	3	52.2	3	3	2	2	3	2	3	4	54.4
10	114018	SPWTP - Service Bldg Electrical Substation and Misc. Improvements	4	3	1	3	3	1	2	1	46.4	4	4	2	3	3	1	2	1	53.0
11	114007	SPWTP Powdered Activated Carbon System Improvements	3	2	1	1	1	2	1	1	29.4	3	2	3	4	2	2	1	1	46.6
12	116006	Belle Isle Intake System Rehabilitation and Improvements	3	2	3	3	1	1	2	4	46.8	3	3	3	3	1	1	2	2	46.2
13	111008	LHWTP, Arch. Programming for Lab and Admin Bldg Improvements	3	2	1	2	2	1	1	1	33.4	4	2	2	1	2	2	1	2	40.6
14	115006	Water Works Park Site/Civil Improvements	4	3	1	3	2	1	3	2	46.8	2	3	1	2	3	1	2	1	39.4
15	116005	Belle Isle Seawall Rehabilitation	3	2	4	1	3	1	3	1	49.4	4	2	2	1	2	1	2	1	39.2

Document received by the MI Wayne 3rd Circuit Court.

Table 4. Project Manager Criteria Scores: Wastewater

RANK	CIP NO.	TITLE	
1	274001	Leib Improvements for Meldrum Diversion	274001
2	278001	Oakwood Improvements for NWI Diversion	278001
3	211005	WRRF PS No. 2 Improvements Phase II	211005
4	212009	WRRF Aeration Improvements 3 and 4	212009
5	211010	Rehabilitation of Sludge Processing Complexes A and B	211010
6	212010	WRRF Conversion of Disinfection of all Flow to NaOCl and NaHSO4	212010
7	270001	Pilot CSO Netting Facility	270001
8	211011	WRRF PS1 Screening and Grit Improvements	211011
9	270002	Meldrum Sewer Diversion and VR-15 Improvements	270002
10	211009	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System	211009
11	233003	Rouge River In-system Storage Devices	233003
12	213008	WRRF Rehabilitation of the Ash Handling Systems	213008
13	212007	WRRF Rehabilitation of the Secondary Clarifiers	212007



Document received by the MI Wayne 3rd Circuit Court.

Table 5. Project Manager Criteria Score Breakdown: Wastewater

RANK	CIP NO.	TITLE	1	2	3	4	5	6	7	8	PM SCORE	1	2	3	4	5	6	7	8	RC SCORE
1	274001	Leib Improvements for Meldrum Diversion	4	4	3	4	3	5	4	2	71.0	4	4	4	4	3	5	4	4	78.2
2	278001	Oakwood Improvements for NWI Diversion	4	3	4	4	2	5	2	2	64.2	4	4	4	4	3	5	4	2	74.6
3	211005	WRRF PS No. 2 Improvements Phase II	4	3	4	3	4	3	2	3	67.4	5	4	4	3	4	3	2	2	71.0
4	212009	WRRF Aeration Improvements 3 and 4	4	3	4	3	3	3	3	4	67.8	4	3	4	3	3	3	3	4	67.8
5	211010	Rehabilitation of Sludge Processing Complexes A and B	2	2	4	4	5	4	2	2	65.0	2	2	4	4	5	4	2	2	65.0
6	212010	WRRF Conversion of Disinfection of all Flow to NaOCl and NaHSO4	2	2	4	4	5	4	2	2	65.0	2	2	4	4	5	4	2	2	65.0
7	270001	Pilot CSO Netting Facility	1	5	5	1	4	4	1	3	65.0	1	5	5	1	4	4	1	3	65.0
8	211011	WRRF PS1 Screening and Grit Improvements	3	4	2	4	2	2	4	3	58.6	4	5	2	4	2	2	4	3	64.0
9	270002	Meldrum Sewer Diversion and VR-15 Improvements	1	1	5	1	4	5	1	4	56.4	1	3	5	1	4	5	1	4	62.4
10	211009	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System	4	5	3	4	2	2	3	3	65.6	4	5	3	2	2	2	3	3	61.2
11	233003	Rouge River In-system Storage Devices	1	1	5	1	4	4	2	5	58.6	1	3	5	1	4	4	1	4	60.8
12	213008	WRRF Rehabilitation of the Ash Handling Systems	4	3	3	4	3	1	3	1	57.8	4	3	3	4	3	1	3	1	57.8
13	212007	WRRF Rehabilitation of the Secondary Clarifiers	4	3	4	3	1	4	1	1	53.2	4	3	4	3	1	4	1	1	53.2

Document received by the MI Wayne 3rd Circuit Court.

4 CIP PROJECTS BY CATEGORY

Document received by the MI Wayne 3rd Circuit Court.

1.13 LARGEST CIP PROJECTS

The Water and Wastewater projects included in the FY2022-2026 CIP with the largest projected lifetime spend (the top five for each) are listed below.

Table 6. Water Projects with top lifetime planned spend

Financial figures are in thousands of dollars ($1,000's).

CIP #	PROJECT TITLE	LIFETIME PLAN SPEND
114002	Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements	$ 224,222
114010	Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements	200,472
122004	96-inch Water Transmission Main Relocation and Isolation Valve Installations	144,852
122003	Water Works Park to Northeast Transmission Main	143,217
122013	14 Mile Transmission Main Loop	105,180

Table 7. Wastewater Projects with top lifetime planned spend

Financial figures are in thousands of dollars ($1,000's).

CIP #	PROJECT TITLE	LIFETIME PLAN SPEND
232002	Freud & Conner Creek Pump Station Improvements	$ 229,279
260600	CSO Facilities Improvement Program	126,400
211011	WRRF PS1 Screening and Grit Improvements	93,303
212008	WRRF Aeration Improvements 1 and 2	81,931
211007	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements	76,229

Document received by the MI Wayne 3rd Circuit Court.

1.14 LARGEST DOLLAR PROJECTS (GREATER THAN $30M)

The Water and Wastewater projects with the largest projected spend for the FY2022-2026 CIP are listed below. These projects are planned for greater than $30 Million over the FY2022-2026 time period. There are nine (9) projects in the Water category and seven (7) projects in the Wastewater category.

Table 8. Water Projects with 5-Year Total Greater than $30M

Financial figures are in thousands of dollars ($1,000's).

CIP #	PROJECT TITLE	PROJECTED EXPENDITURES									
		LIFETIME ACTUAL THRU FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27+	2022-26 CIP TOTAL	PROJECT TOTAL
111001	Lake Huron WTP, Low-Lift, High Lift and Filter Backwash Pumping System Improvements	$ 212	$ 1,993	$ 1,962	$ 4,581	$ 8,867	$ 10,837	$ 10,837	$ 17,889	$ 37,085	$ 57,178
114002	Springwells WTP, Low-Lift and High-Lift Pumping Station Improvements	5,496	11,812	16,546	18,135	19,954	18,584	18,391	115,303	91,611	224,222
114010	Springwells WTP, Yard Piping and High-Lift Header Improvements	241	$267	1,568	4,614	13,057	16,057	16,057	148,610	51,354	200,472
116002	Pennsylvania and Springwells Raw Water Supply Tunnel Improvements	15,411	7,024	8,360	17,395	23,304	18,016	5,372	-	72,446	94,880
122003	Water Works Park to Northeast Transmission Main	5,190	11,234	14,593	9,214	14,535	13,835	21,695	52,921	73,871	143,217
122004	96-inch Water Transmission Main Relocation and Isolation Valve Installations	1,816	2,077	2,577	7,614	10,625	12,581	12,581	94,980	45,978	144,852
122013	14 Mile Transmission Main Loop	3,759	6,064	37,593	36,390	21,374	-	-	-	95,357	105,180
132010	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades	2,149	5,266	17,149	19,927	$650	-	-	-	37,727	45,142
132015	Newburgh Road Booster Pumping Station Improvements	350	852	733	2,365	8,839	12,524	12,000	7,380	36,462	45,044

Table 9. Wastewater Projects with 5-Year Total Greater than $30M

Financial figures are in thousands of dollars ($1,000's).

CIP #	PROJECT TITLE	PROJECTED EXPENDITURES									
		LIFETIME ACTUAL THRU FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27+	2022-26 CIP TOTAL	PROJECT TOTAL
211006	WRRF PS No. 1 Improvements	$ 1,284	$ 623	$ 3,061	$ 7,987	$ 8,009	$ 7,199	$ 7,559	$ 32,987	$ 33,816	$ 68,709
211007	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements	5	2,323	2,303	6,987	18,173	18,122	15,052	13,263	60,638	76,229
212008	WRRF Aeration Improvements 1 and 2	16	2,264	2,567	5,392	19,423	19,370	18,576	14,323	65,328	81,931
232002	Freud & Conner Creek Pump Station Improvements	7,342	6,445	3,357	12,646	17,446	23,446	34,146	124,450	91,041	229,279
260204	Conveyance System Engineering Services-1802575	913	11,656	11,646	9,476	9,249	9,217	-	-	39,589	52,157
260510	Conveyance System Repairs (Outfalls)	-	557	7,710	7,710	7,728	7,710	9,240	8,210	40,096	48,863
260700	Sewer System Infrastructure Improvements and Pumping Stations	-	1,403	3,661	9,050	9.021	7,234	1,844	3,689	30,810	35,901

Document received by the MI Wayne 3rd Circuit Court.

1.15 LARGEST 2022 PROJECTED SPEND (GREATER THAN $5M)

The Water and Wastewater projects with the largest projected spend for 2022 are listed below. These projects are planned for greater than $5 Million in FY 2022. There are eight (8) projects in the Water category and seven (7) projects in the Wastewater category.

Table 10. Water Projects with 2022 Projected Spend Greater than $5M

Financial figures are in thousands of dollars ($1,000's).

CIP #	PROJECT TITLE	LIFETIME ACTUAL THRU FY20	PROJECTED EXPENDITURES FY21	FY22	FY23	FY24	FY25	FY26	FY27+	2022-26 CIP TOTAL	PROJECT TOTAL
114002	Springwells WTP, Low-Lift and High-Lift Pumping Station Improvements	$ 5,496	$ 11,812	$ 16,546	$ 18,135	$ 19,954	$ 18,584	$ 18,391	$ 115,303	$ 91,611	$ 224,222
115001	Water Works Park WTP Yard Piping, Valves and Venturi Meters Replacement	2,389	4,372	6,322	6,322	6,321	6,322	6,163	16,605	31,449	54,815
116002	Pennsylvania and Springwells Raw Water Supply Tunnel Improvements	15,411	7,024	8,360	17,395	23,304	18,016	5,372	-	72,446	94,880
122003	Water Works Park to Northeast Transmission Main	5,190	11,234	14,593	9,214	14,535	13,835	21,695	52,921	73,871	143,217
122005	Schoolcraft Road Water Transmission Main	1,382	6,338	7,607	-	-	-	-	-	7,607	15,326
122013	14 Mile Transmission Main Loop	3,759	6,064	37,593	36,390	21,374	-	-	-	95,357	105,180
132010	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades	2,149	5,266	17,149	19,927	650	-	-	-	37,727	45,142
170300	WTP Automation Program	-	7,098	6,151	-	-	-	-	-	6,151	13,249

Table 11. Wastewater Projects with 2022 Projected Spend Greater than $5M

Financial figures are in thousands of dollars ($1,000's).

CIP #	PROJECT TITLE	LIFETIME ACTUAL THRU FY20	PROJECTED EXPENDITURES FY21	FY22	FY23	FY24	FY25	FY26	FY27+	2022-26 CIP TOTAL	PROJECT TOTAL
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	$ 14,274	$ 12,990	$ 12,781	$ 28	$ -	$ -	$ -	$ -	$ 12,809	$ 40,073
260204	Conveyance System Engineering Services-1802575	913	11,656	11,646	9,476	9,249	9,217	0	0	39,589	52,157
222002	Detroit River Interceptor (DRI) Evaluation and Rehabilitation	20,151	11,192	11,192	10,057	5,696	5,235	3,645	5,608	35,824	72,775
260510	Conveyance System Repairs (Outfalls)	0	557	7,710	7,710	7,728	7,710	9,240	8,210	40,096	48,863
260206	Conveyance System Repairs (Sewers)	0	523	7,046	7,046	7,046	7,046	8,046	11,069	36,230	47,821
211008	WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines	1,630	3,428	5,358	972	-	-	-	-	6,330	11,388
260205	NWI Rehabilitation	79	1,767	5,046	4,046	-	-	-	-	9,092	10,938

Document received by the MI Wayne 3rd Circuit Court.

1.16 WATER PROJECTS BY STATUS

All financial figures are in thousands of dollars ($1,000's). The Project Status column shows which projects are Active (A), Future Planned (FP), or Pending Closeout (PC). Projects that have been Reclassified to a different number, Closed, or Cancelled are not shown in this list; a list of Closed projects can be found in Chapter 3. For projects in the "Centralized Services" category (CIP number begins with 3), only portions of projects funded by the water planned spend are included in this section. Following these tables is a chart from the Integrated Master Schedule showing the planned sequencing of projects.

Table 12. Water CIP Projects: Active, ranked by 5-Year CIP Total

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
122013	14 Mile Transmission Main Loop	Project Execution - Design	2017	$3,759	$6,064	$37,593	$36,390	$21,374	$ 0	$ 0	$ 0	$95,357	$105,180	4.47%
114002	Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements	Project Execution - Design	2004	5,496	11,812	16,546	18,135	19,954	18,584	18,391	115,303	91,611	224,222	9.53%
122003	Water Works Park to Northeast Transmission Main	Project Execution - Construction	2014	5,190	11,234	14,593	9,214	14,535	13,835	21,695	52,921	73,871	143,217	6.09%
116002	Pennsylvania and Springwells Raw Water Supply Tunnel Improvements	Project Execution - Design	2016	15,411	7,024	8,360	17,395	23,304	18,016	5,372	0	72,446	94,880	4.03%
114010	Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements	Active - Pre-Procurement - Design	2012	241	267	1,568	4,614	13,057	16,057	16,057	148,610	51,354	200,472	8.52%
122004	96-inch Water Transmission Main Relocation and Isolation Valve Installations	Project Execution - Design	2016	1,816	2,077	2,577	7,614	10,625	12,581	12,581	94,980	45,978	144,852	6.16%
132010	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades	Project Execution - Design	2017	2,149	5,266	17,149	19,927	650	0	0	0	37,727	45,142	1.92%
111001	Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements	Project Execution - Design	2010	212	1,993	1,962	4,581	8,867	10,837	10,837	17,889	37,085	57,178	2.43%
132015	Newburgh Road Booster Pumping Station Improvements	Project Execution - Design	2018	350	852	733	2,365	8,839	12,524	12,000	7,380	36,462	45,044	1.92%
122016	Downriver Transmission Main Loop	Project Execution - Design	2017	225	1,683	665	7,482	8,074	8,544	7,470	2,924	32,235	37,067	1.58%
115001	Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement	Project Execution - Construction	2007	2,389	4,372	6,322	6,322	6,321	6,322	6,163	16,605	31,449	54,815	2.33%
111009	Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements	Active - Procurement - Board Approved - Construction	2018	117	640	1,061	7,060	7,582	7,021	7,000	0	29,724	30,481	1.30%
132012	Ypsilanti Booster Pumping Station Improvements	Project Execution - Design	2017	334	615	584	6,718	9,797	9,771	2,574	5,000	29,445	35,393	1.50%
170900	Suburban Water Meter Pit Rehabilitation and Meter Replacement	Project Execution - Construction	2014	0	2,535	1,159	4,112	4,113	4,113	4,113	20,573	17,610	40,719	1.73%
111012	LHWTP-Flocculation Improvements	Active - Pre-Procurement - Design	2021	0	46	538	469	5,564	5,428	5,428	9,065	17,427	26,538	1.13%
111006	Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements	Active - Pre-Procurement - Construction	2014	1,073	215	5,196	5,222	5,082	1	0	0	15,502	16,790	0.71%

Document received by the MI Wayne 3rd Circuit Court.

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
170800	System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation	Project Execution - Design	2016	0	46	322	2,322	3,321	3,317	3,300	11,200	12,581	23,827	1.01%
114017	Springwells Water Treatment Plant Flocculator Drive Replacements	Active - Procurement - Board Approved - Design	2018	1	567	371	6,474	4,943	2	0	0	11,790	12,358	0.53%
112006	Northeast Water Treatment Plant Flocculator Replacements	Project Execution - Design	2018	186	55	2,522	3,022	3,022	2,509	0	0	11,075	11,316	0.48%
171500	Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities	Project Execution - Construction	2018	0	386	11	3,090	1,808	369	2,920	14,127	8,199	22,711	0.97%
114005	Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop	Project Execution - Design	2014	944	376	3,660	3,780	500	0	0	0	7,940	9,260	0.39%
122005	Schoolcraft Road Water Transmission Main	Project Execution - Design	2016	1,382	6,338	7,607	0	0	0	0	0	7,607	15,326	0.65%
170302	SW SCADA System Upgrade	Project Execution - Design	2017	0	1,788	3,606	3,606	0	0	0	0	7,212	9,000	0.38%
113006	Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements	Active - Procurement - Construction	2017	130	245	4,683	1,595	557	78	42	0	6,956	7,331	0.31%
170300	Water Treatment Plant Automation Program	Project Execution - Construction	2017	0	7,098	6,151	0	0	0	0	0	6,151	13,249	0.56%
114011	Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements	Project Execution - Construction	2012	10,084	9,756	5,374	327	0	0	0	0	5,701	25,540	1.09%
170801	0	Project Execution - Design	2020	0	8,420	463	2,075	1,000	1,000	1,000	1,132	5,538	15,090	0.64%
122006	Wick Road Water Transmission Main	Project Execution - Construction	2016	5,903	11,743	4,774	0	0	0	0	0	4,774	22,420	0.95%
115005	WWP WTP Building Ventilation Improvements	Project Execution - Design	2018	1	380	523	1,620	1,592	400	100	307	4,235	4,924	0.21%
132007	Energy Management: Freeze Protection Pump Installation at Imlay Pump Station	Project Execution - Design	2014	168	974	3,962	84	0	0	0	0	4,046	5,187	0.22%
111011	Lake Huron WTP Pilot Plant	Active - Procurement - Negotiation Phase - Design	2019	0	58	1,719	1,471	0	0	0	0	3,190	3,248	0.14%
170901	Suburban Water Meter Pit Rehabilitation and Meter Replacement	Project Execution - Construction	2014	4,530	3,248	2,838	0	0	0	0	0	2,838	10,616	0.45%
114008	Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements	Project Execution - Construction	2014	3,382	7,989	2,485	67	0	0	0	0	2,552	13,923	0.59%
114016	Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement	Project Execution - Design	2018	91	189	566	1,435	0	0	0	0	2,001	2,281	0.10%
381000	Power Quality: Electric Metering Improvement Program	Active - Pre-Procurement - Design	2016	0	0	0	0	27	223	1,129	1,245	1,379	2,624	0.11%
170503	Transition System Valve Replacement	Project Execution - Construction	2017	394	8,373	1,305	0	0	0	0	0	1,305	10,072	0.43%
170500	Transmission System Valve Rehabilitation and Replacement Program	Project Execution - Construction	2017	0	280	232	232	232	232	151	3,990	1,080	5,350	0.23%
351001	LED Lighting and Lighting Control Improvements	Active - Pre-Procurement - Construction	2017	7	0	38	221	221	213	0	0	693	700	0.03%

Document received by the MI Wayne 3rd Circuit Court.

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
170902	Brownstown Meter Pit	Active - Pre-Procurement - Construction	2020	76	570	594	5	0	0	0	0	599	1,245	0.05%
341001	Security Infrastructure Improvements on Water Facilities	Project Execution - Construction	2019	3,944	4,656	567	2	0	0	0	0	569	9,170	0.39%
170303	Power Monitoring Installation for Water Treatment Plants	Active - Pre-Procurement - Design	2020	0	1,186	514	0	0	0	0	0	514	1,700	0.07%
380700	As-Needed Geotechnical and Related Engineering Services	Project Execution - Design	2006	771	904	456	0	0	0	0	0	456	2,131	0.09%
111007	Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	Project Execution - Construction	2016	5,888	3,109	184	0	0	0	0	0	184	9,181	0.39%
122011	Park-Merriman Road Water Transmission Main	Project Execution - Construction	2015	5,222	4,370	8	0	0	0	0	0	8	9,600	0.41%
112005	Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits	Project Execution - Construction	2018	438	645	5	0	0	0	0	0	5	1,089	0.05%
170200	As-Needed Construction Materials, Environmental Media and Special Testing Services, Construction Inspection, and Other Technical Services	Project Execution - Design	2014	0	1,427	0	0	0	0	0	0	0	1,427	0.06%
114013	Springwells Water Treatment Plant, Reservoir Fill Line Improvements	Project Execution - Construction	2016	3,586	1,338	0	0	0	0	0	0	0	4,924	0.21%
132006	Ford Road Pumping Station, Pressure and Control Improvements	Project Execution - Construction	2014	1,884	1,480	0	0	0	0	0	0	0	3,364	0.14%
170109	GLWA-CS-187: FK Eng: Raw Water Intake	Project Execution - Design	2012	1,656	0	0	0	0	0	0	0	0	1,656	0.07%
171501	Roof Replacements at SP, WWP,Orion,Franklin,and Conner Creek	Project Execution - Construction	2020	3,216	269	0	0	0	0	0	0	0	3,484	0.15%
ACTIVE WATER PROJECTS TOTAL				**92,646**	**144,956**	**172,146**	**189,049**	**184,962**	**151,977**	**138,326**	**523,252**	**836,459**	**1,597,313**	**68%**

Table 13. Water CIP Projects: Pending Closeout, Ranked by Total Cost

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
114001	Springwells WTP, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements	Pending Closeout	2002	$ 80,828	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 80,828	3.4%
111002	Lake Huron WTP, Miscellaneous Mechanical HVAC Improvements	Pending Closeout	2014	8,685	20	0	0	0	0	0	0	0	8,705	0.4%
114003	Water Production Flow Metering Improvements at Northeast, Southwest and Springwells WTPs	Pending Closeout	2014	8,156	0	0	0	0	0	0	0	0	8,156	0.3%
115004	Water Works Park WTP Chlorine System Upgrade	Pending Closeout	2017	6,893	0	0	0	0	0	0	0	0	6,893	0.3%
113002	Southwest WTP, High-Lift Pump Discharge Valve Actuators Replacement	Pending Closeout	2014	5,272	23	501	649	283	0	0	0	1,433	6,728	0.3%
132003	West Service Center Pumping Station, Isolation Gate Valves for Line Pumps	Pending Closeout	2014	1,744	218	0	0	0	0	0	0	0	1,962	0.1%
132026	Franklin Pumping Station Valve Replacement	Pending Closeout	2019	821	185	0	0	0	0	0	0	0	1,006	0.0%
PENDING CLOSEOUT WATER PROJECTS TOTAL				**112,399**	**446**	**501**	**649**	**283**	**0**	**0**	**0**	**1,433**	**114,279**	**4.9%**

Document received by the MI Wayne 3rd Circuit Court.

Table 14. Water CIP Projects: Future Planned, Ranked by Prioritization Score

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP	PRIORITIZATION SCORE (RC)
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND				
122018	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation	Future Planned - Within 5 Year Plan	2019	$ 0	$1,578	$1,530	$1,528	$ 1,528	$ 3,995	$ 3,995	$ 39,947	$12,578	$ 54,103	2.3%	89.0
122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station	Future Planned - Within 5 Year Plan	2019	3	1,167	1,944	1,944	4,784	3,505	13,363	33,479	25,539	60,189	2.6%	84.2
111010	Filtration Improvements	Future Planned - Within 5 Year Plan	2019	0	0	0	0	9	38	61	42,099	108	42,207	1.8%	71.0
132019	Wick Road Pumping Station Improvements	Future Planned - Within 5 Year Plan	2018	57	0	0	0	0	0	13	9,288	13	9,358	0.4%	68.4
112003	Northeast WTP High-Lift Pumping Station Improvements	Future Planned - Within 5 Year Plan	2017	6	279	173	215	862	1,931	1,721	66,360	4,901	71,546	3.0%	68.0
132014	Adams Road Pumping Station Improvements	Future Planned - Within 5 Year Plan	2017	83	0	203	1,332	1,158	1,129	1,129	47,830	4,951	52,865	2.2%	64.6
132020	Franklin Pumping Station Improvements	Future Planned - Within 5 Year Plan	2018	93	0	0	0	0	0	0	2,451	0	2,545	0.1%	64.6
122007	Merriman Road Water Transmission Main Loop	Future Planned - Within 5 Year Plan	2016	2	57	27	27	273	890	890	19,988	2,107	22,154	0.9%	61.6
132016	North Service Center Pumping Station Improvements	Future Planned - Within 5 Year Plan	2017	266	282	673	1,726	2,351	2,247	8,503	52,206	15,501	68,255	2.9%	58.2
132021	Imlay Pumping Station Improvements	Future Planned - Within 5 Year Plan	2018	227	0	0	0	0	0	0	522	0	750	0.0%	58.2
132018	Schoolcraft Pumping Station Improvements	Future Planned - Within 5 Year Plan	2018	47	0	0	0	0	0	0	0	0	47	0.0%	56.6
132022	Joy Road Pumping Station Improvements	Future Planned - Within 5 Year Plan	2018	71	57	277	527	527	122	75	37,958	1,527	39,613	1.7%	56.6
115007	Water Works Park High Lift Pumping Station Modernization	Future Planned - Within 5 Year Plan	2021	0	0	280	530	530	780	11,705	75,120	13,826	88,946	3.8%	54.4
114018	Springwells WTP - Service Building Electrical Substation and Miscellaneous Improvements	Future Planned - Within 5 Year Plan	2019	0	100	80	95	7	1,263	0	0	1,445	1,545	0.1%	53.0
114007	Springwells WTP Powdered Activated Carbon System Improvements	Future Planned - Within 5 Year Plan	2014	0	0	0	0	0	0	0	4,021	0	4,021	0.2%	46.6
116006	Belle Isle Intake System Rehabilitation and Improvements	Future Planned - Within 5 Year Plan	2021	0	0	0	300	50	0	0	0	350	350	0.0%	46.2
111008	Lake Huron WTP, Architectural Programming for Laboratory and Admin Building Improvements	Future Planned - Within 5 Year Plan	2017	0	0	0	0	0	0	77	1,119	77	1,196	0.1%	40.6
115006	Water Works Park Site/Civil Improvements	Future Planned - Within 5 Year Plan	2019	0	0	0	0	0	0	6	5,875	6	5,882	0.2%	39.4
116005	Belle Isle Seawall Rehabilitation	Future Planned - Within 5 Year Plan	2020	0	0	319	1,231	281	0	0	0	1,832	1,832	0.1%	39.2
FUTURE PLANNED WATER PROJECTS TOTAL				**857**	**3,521**	**5,506**	**9,456**	**12,361**	**15,900**	**41,539**	**438,263**	**84,761**	**527,402**	**22.4%**	

Table 15. Water CIP Projects: Totals

TITLE	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
Active Water Projects Total	$92,646	$144,956	$172,146	$189,049	$184,962	$151,977	$138,326	$523,252	$836,459	$1,597,313	67.91%
Pending Closeout Water Projects Total	112,399	446	501	649	283	0	0	0	1,433	114,279	4.86%
Future Planned Water Projects Total	856.99209	3,621	6,564	11,016	13,920	18,959	44,104	494,949	94,563	593,991	25.25%
Listed as Cancelled/Closed/Reclassified	21,411	1,716	0	0	0	0	0	25,000	0	48,127	2.05%
WATER PROJECTS TOTAL	**227,313**	**150,740**	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**1,043,201**	**932,455**	**2,353,709**	**100%**

Document received by the MI Wayne 3rd Circuit Court.

1.17 WASTEWATER PROJECTS BY STATUS

All financial figures are in thousands of dollars ($1,000's). The Project Status column shows which projects are Active (A), Future Planned (FP), or Pending Closeout (PC). Projects that have been Reclassified to a different number, Closed, or Cancelled are not shown in this list; a list of Closed projects can be found in Chapter 3. For projects in the "Centralized Services" category (CIP number begins with 3), only portions of projects funded by the wastewater planned spend are included in this section. Following these tables is a chart from the Integrated Master Schedule showing the planned sequencing of projects.

Table 16. Wastewater/Sewer Projects: Active, Ranked by 2022-2026 CIP Total

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	PROJECTED EXPENDITURES						2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
						FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
232002	Freud & Conner Creek Pump Station Improvements	Project Execution - Design	2016	$7,342	$6,445	$3,357	$12,646	$17,446	$23,446	$34,146	$124,450	$91,041	$229,279	12.87%
212008	WRRF Aeration Improvements 1 and 2	Project Execution - Design	2017	16	2,264	2,567	5,392	19,423	19,370	18,576	14,323	65,328	81,931	4.60%
211007	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements	Active - Procurement - Board Approved - Design	2016	5	2,323	2,303	6,987	18,173	18,122	15,052	13,263	60,638	76,229	4.28%
260510	Conveyance System Repairs (Outfalls)	Active - Pre-Procurement - Design	2020	0	557	7,710	7,710	7,728	7,710	9,240	8,210	40,096	48,863	2.74%
260204	Conveyance System Engineering Services-1802575	Project Execution - Design	2013	913	11,656	11,646	9,476	9,249	9,217	0	0	39,589	52,157	2.93%
260200	Sewer and Interceptor Rehabilitation Program	Project Execution - Construction	2013	0	3,138	0	7,214	7,915	10,695	11,547	13,240	37,371	53,749	3.02%
260206	Conveyance System Repairs (Sewers)	Active - Pre-Procurement - Design	2020	0	523	7,046	7,046	7,046	7,046	8,046	11,069	36,230	47,821	2.68%
222002	Detroit River Interceptor (DRI) Evaluation and Rehabilitation	Project Execution - Construction	2016	20,151	11,192	11,192	10,057	5,696	5,235	3,645	5,608	35,824	72,775	4.08%
211006	WRRF PS No. 1 Improvements	Project Execution - Design	2016	1,284	623	3,061	7,987	8,009	7,199	7,559	32,987	33,816	68,709	3.86%
260700	Sewer System Infrastructure Improvements and Pumping Stations	Project Execution - Design	0	0	1,403	3,661	9,050	9,021	7,234	1,844	3,689	30,810	35,901	2.01%
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	Active - Procurement - Negotiation Phase - Design	2018	6	501	906	6,504	6,504	6,504	6,504	13,391	26,923	40,821	2.29%
222001	Oakwood District Intercommunity Relief Sewer Modification at Oakwood District	Active - Procurement - Design	2014	0	925	791	786	779	4,870	16,474	28,772	23,700	53,397	3.00%
216006	Assessment and Rehabilitation of WRRF yard piping and underground utilities	Project Execution - Design	2017	73	580	558	2,858	9,808	9,782	214	0	23,221	23,874	1.34%
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	Project Execution - Construction	2011	14,274	12,990	12,781	28	0	0	0	0	12,809	40,073	2.25%
260614	Structural Inspection & Structural Improvements	Active - Procurement - Construction	2017	304	3,047	4,422	3,872	1,397	752	0	0	10,443	13,794	0.77%
216010	WRRF Facility Optimization	Active - Pre-Procurement - Design	2019	4	25	57	1,853	5,513	972	1,845	0	10,241	10,271	0.58%
216011	WRRF Structural Improvements	Active - Pre-Procurement - Design	2020	0	52	2,052	2,046	2,046	2,046	2,046	2,046	10,235	12,333	0.69%
331002	Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	Project Execution - Construction	2017	1,123	148	1,277	1,277	1,276	1,277	1,277	1,234	6,383	8,888	0.50%
211008	WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines	Active - Pre-Procurement - Construction	2017	1,630	3,428	5,358	972	0	0	0	0	6,330	11,388	0.64%
260617	St. Aubin Chemical Disinfection Improvements	Active - Pre-Procurement - Design	2017	250	443	387	237	1,709	2,808	1,131	0	6,273	6,966	0.39%
270003	Long Term CSO Control Plan	Active - Procurement - Negotiation Phase - Design	2019	4	3,500	3,799	1,749	144	73	0	0	5,764	9,268	0.52%

Document received by the MI Wayne 3rd Circuit Court.

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	FY 2021	PROJECTED EXPENDITURES						2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
						FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
213006	WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities	Project Execution - Design	2016	6	109	342	2,252	1,781	0	0	0	4,375	4,490	0.25%
260500	CSO Outfall Rehabilitation	Active - Procurement - Construction	2017	0	0	833	833	835	833	833	833	4,167	5,000	0.28%
260618	Oakwood HVAC Project	Project Execution - Design	2017	76	639	3,235	17	0	0	0	0	3,252	3,967	0.22%
260701	CONVEYANCE SYSTEM INFRASTRUCTURE IMPROVEMENTS	Project Execution - Design	0	469	1,356	1,356	1,356	48	0	0	0	2,761	4,586	0.26%
213007	WRRF Modification to Incinerator Sludge Feed Systems at Complex -II	Project Execution - Construction	2016	15,420	4,243	2,499	0	0	0	0	0	2,499	22,162	1.24%
260201	CON-149, Emergency Sewer Repair	Project Execution - Construction	2013	19,503	11,301	1,479	0	0	0	0	0	1,479	32,282	1.81%
341002	Security Infrastructure Improvements for Wastewater Facilities	Project Execution - Construction	2019	1,015	1,796	722	0	0	0	0	0	722	3,534	0.20%
260505	Phase 4 Outfalls	Project Execution - Construction	2017	1,586	3,491	641	0	0	0	0	0	641	5,718	0.32%
216007	DTE Primary Electric 3rd Feed Supply to WRRF	Project Execution - Construction	2017	2,898	1,252	394	0	0	0	0	0	394	4,544	0.25%
260508	B-39 Outfall Rehabilitation	Project Execution - Design	2021	0	181	181	181	27	0	0	0	388	569	0.03%
260615	Puritan Fenkell & Leib Site Improvements	Project Execution - Construction	2017	110	492	199	0	0	0	0	0	199	801	0.04%
216004	Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF	Project Execution - Construction	2010	1,638	4,932	76	0	0	0	0	0	76	6,645	0.37%
211001	WRRF Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	Project Execution - Construction	1999	51,185	2,876	0	0	0	0	0	0	0	54,061	3.03%
211002	WRRF PS No. 2 Pumping Improvements - Phase 1	Project Execution - Construction	2003	2,014	1,326	0	0	0	0	0	0	0	3,340	0.19%
211004	WRRF PS #1 Rack & Grit and MPI Sampling Station 1 Improvements	Project Execution - Construction	2008	11,035	12,261	0	0	0	0	0	0	0	23,295	1.31%
212004	WRRF Chlorination and Dechlorination Process Equipment Improvements	Project Execution - Construction	2010	3,803	1,939	0	0	0	0	0	0	0	5,742	0.32%
214001	WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations	Project Execution - Construction	2014	10,584	2,067	0	0	0	0	0	0	0	12,651	0.71%
260504	Phase 2 Outfalls- 19000796	Project Execution - Construction	2017	2,202	2,849	0	0	0	0	0	0	0	5,051	0.28%
260509	B-40 Outfall Rehabilitation	Project Execution - Design	2022	66	22	0	0	0	0	0	0	0	89	0.00%
260603	Conner Creek CSO RTB Automation Improvements	Project Execution - Construction	2017	6,990	908	0	0	0	0	0	0	0	7,898	0.44%
260611	Leib SDF- HVAC System Improvements	Project Execution - Construction	2018	96	300	0	0	0	0	0	0	0	396	0.02%
260613	Baby Creek HVAC Improvements	Project Execution - Construction	2017	51	536	0	0	0	0	0	0	0	588	0.03%
260619	Control System Upgrade - St Aubin, Lieb & Mile	Project Execution - Design	2017	62	55	0	0	0	0	0	0	0	116	0.01%
260620	Baby Creek Roof Replacement	Active - Pre-Procurement - Construction	2021	0	641	0	0	0	0	0	0	0	641	0.04%
260702	Pump Station Assets Updates	Active - Pre-Procurement - Construction	0	0	669	0	0	0	0	0	0	0	669	0.04%
ACTIVE WASTEWATER PROJECTS TOTAL				178,187	122,006	96,887	110,387	141,573	145,191	139,980	273,114	634,018	1,207,325	67.8%

Document received by the MI Wayne 3rd Circuit Court.

Table 17. Wastewater/Sewer CIP Projects: Pending Closeout, Ranked by Total Cost

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES								PROJECT TOTAL	PERCENT OF W/S CIP
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL		
212006	WRRF Rouge River Outfall (RRO) Disinfection (Alternative)	Pending Closeout	2014	$ 43,789	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 43,789	2.5%
260601	Oakwood CSO Control Facility Drain Valve Improvements	Pending Closeout	2017	682	183	0	0	0	0	0	0	0	864	0.0%
260616	Baby Creek Towards Treatment Sewer Improvements	Pending Closeout	2017	666	116	0	0	0	0	0	0	0	783	0.0%
260609	Seven Mile RTB - Parking Lot Replacement & Misc. Site Work	Pending Closeout	2017	370	47	0	0	0	0	0	0	0	417	0.0%
260610	Baby Creek SDF - HV Units Replacement	Pending Closeout	2017	275	0	0	0	0	0	0	0	0	275	0.0%
PENDING CLOSEOUT WASTEWATER PROJECTS TOTAL				45,782	346	0	0	0	0	0	0	0	46,128	2.6%

Table 18. Wastewater/Sewer Projects: Future Planned, Ranked by Prioritization Score

CIP #	TITLE	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES								PROJECT TOTAL	PERCENT OF W/S CIP	PRIORITIZATION (RC) SCORE
					FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND	2022-2026 CIP TOTAL			
274001	Leib Improvements for Meldrum Diversion	Future Planned - Within 5 Year Plan	2020	$ 0	$ 25	$ 254	$1,228	$ 649	$ 2,713	$ 3,396	$ 2,677	$ 8,240	$ 10,942	0.6%	78.2
278001	Oakwood Improvements for NWI Diversion	Future Planned - Within 5 Year Plan	2020	0	25	252	1,205	631	2,545	2,194	3,373	6,828	10,226	0.6%	74.6
277001	Baby Creek Outfall Improvements Project	Future Planned - Within 5 Year Plan	2019	2	1,143	1,807	1,507	6,796	6,796	774	0	17,680	18,826	1.1%	72.8
211005	WRRF PS No. 2 Improvements Phase II	Future Planned - Within 5 Year Plan	2014	0	10	0	0	0	461	461	12,865	922	13,797	0.8%	71.0
212009	WRRF Aeration Improvements 3 and 4	Future Planned - Within 5 Year Plan	2019	0	0	0	0	0	52	1,239	72,297	1,291	73,589	4.1%	67.8
211010	Rehabilitation of Sludge Processing Complexes A and B	Future Planned - Within 5 Year Plan	2019	42	64	0	42	112	287	1,995	11,393	2,436	13,934	0.8%	65.0
212010	WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite	Future Planned - Within 5 Year Plan	2019	0	0	0	0	0	52	132	5,581	184	5,765	0.3%	65.0
270001	Pilot CSO Netting Facility	Future Planned - Within 5 Year Plan	2019	0	0	13	57	1,557	107	3,203	4,635	4,939	9,573	0.5%	65.0
211011	WRRF PS1 Screening and Grit Improvements	Future Planned - Within 5 Year Plan	2019	0	0	0	0	0	42	132	93,129	175	93,303	5.2%	64.0
270002	Meldrum Sewer Diversion and VR-15 Improvements	Future Planned - Within 5 Year Plan	2019	0	0	9	57	283	568	1,975	2,949	2,891	5,840	0.3%	62.4
211009	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System	Future Planned - Within 5 Year Plan	2017	3	243	476	2,740	5,619	3,927	0	0	12,762	13,008	0.7%	61.2
233003	Rouge River In-system Storage Devices	Future Planned - Within 5 Year Plan	2019	0	0	0	0	1,026	1,024	1,024	43,243	3,075	46,317	2.6%	60.8
213008	WRRF Rehabilitation of the Ash Handling Systems	Future Planned - Within 5 Year Plan	2017	111	351	295	295	453	1,518	3,979	1,429	6,540	8,432	0.5%	57.8
212007	WRRF Rehabilitation of the Secondary Clarifiers	Future Planned - Within 5 Year Plan	2017	0	0	10	124	240	240	3,316	45,941	3,930	49,871	2.8%	53.2
FUTURE PLANNED WASTEWATER PROJECTS TOTAL				159	1,861	3,117	7,257	17,367	20,333	23,820	299,510	71,893	373,423	21.0%	

Document received by the MI Wayne 3rd Circuit Court.

Table 19. Wastewater/Sewer CIP Projects: Subtotals

SUBTOTALS	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
		FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
Active Wastewater Projects Total	$178,187	$122,006	$96,887	$110,387	$141,573	$145,191	$139,980	$273,114	$634,018	$1,207,325	67.75%
Pending Closeout Wastewater Projects Total	45,782	345.989	0	0	0	0	0	0	0	46,128	2.59%
Future Planned Wastewater Projects Total	238	5,385	9,163	12,803	19,367	27,833	35,220	401,010	104,385	511,019	28.67%
Listed as Cancelled/Closed/Reclassified	18,083	0	0	0	0	0	0	0	0	18,083	0.77%
TOTAL WASTEWATER PROJECTS	242,290	127,738	106,050	123,190	160,940	173,024	175,200	674,124	738,403	1,782,554	100%

Document received by the MI Wayne 3rd Circuit Court.

1.18 CENTRALIZED SERVICES PROJECTS

All financial figures are in thousands of dollars ($1,000's). The planned spend column denotes whether this item is funded by the Water (W) or Wastewater (S). The Project Status column shows which projects are Active (A), Future Planned (FP), or Pending Closeout (PC). Projects that have been Reclassified to a different number, Closed, or Cancelled are not shown in this list; a list of Closed projects can be found in Chapter 3, Section 1.8. Projects new to the CIP this year are denoted by bolded CIP number and title.

Table 20. Centralized Services Projects

CIP #	TITLE	PLANNED SPEND	PROJECT STATUS	YEAR ADDED	LIFETIME ACTUAL THRU FY 2020 (UNAUDITED)	PROJECTED EXPENDITURES							2022-2026 CIP TOTAL	PROJECT TOTAL	PERCENT OF W/S CIP
						FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027 & BEYOND			
Water Centralized Services															
331003	Masonry Replacement and Rehabilitation	25,000	Future Planned – Ten-Year	2020	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$25,000	$ 0	$25,000	1.1%
341001	Security Infrastructure Improvements on Water Facilities	9,170	Project Execution - Construction	2019	3,944	4,656	567	2	0	0	0	0	569	9,170	0.4%
351001	LED Lighting and Lighting Control Improvements	700	Active - Pre-Procurement - Construction	2017	7	0	38	221	221	213	0	0	693	700	0.0%
380600	As-Needed General Engineering Services	55	DRAFT 2 REVISION	2004	0	55	0	0	0	0	0	0	0	55	0.0%
380700	As-Needed Geotechnical and Related Engineering Services	2,131	Project Execution - Design	2006	771	904	456	0	0	0	0	0	456	2,131	0.1%
381000	Power Quality: Electric Metering Improvement Program	2,624	Active - Pre-Procurement - Design	2016	0	0	0	0	27	223	1,129	1,245	1,379	2,624	0.1%
					4,722	**5,616**	**1,061**	**223**	**248**	**436**	**1,129**	**26,245**	**3,097**	**39,679**	**1.7%**
Wastewater Centralized Services															
331002	Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	8,888	Project Execution - Construction	2017	1,123	148	1,277	1,277	1,276	1,277	1,277	1,234	6,383	8,888	0.5%
341002	Security Infrastructure Improvements for Wastewater Facilities	3,534	Project Execution - Construction	2019	1,015	1,796	722	0	0	0	0	0	722	3,534	0.2%
					2,138	**1,945**	**1,999**	**1,277**	**1,276**	**1,277**	**1,277**	**1,234**	**7,105**	**12,422**	**0.7%**
Total Centralized Services					**6,860**	**7,560**	**3,059**	**1,499**	**1,524**	**1,713**	**2,405**	**27,479**	**10,202**	**52,101**	

Document received by the MI Wayne 3rd Circuit Court.

1.19 INTEGRATED MASTER SCHEDULES

The Integrated master schedules show the intended timing and order of planned CIP projects.

Table 21. Primavera P6 Integrated Master Schedule for Water Projects



Activity ID	Activity Name	Remaining Duration	Actual/ Forecasted Start	Actual/ Forecasted Finish
Water Projects		9584	Sep-21-2015 A	Sep-26-2046
111001	Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements	2553	Aug-15-2018 A	Jun-27-2027
111002	Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements	115	Aug-21-2017 A	Oct-23-2020
111006	Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements	1644	Sep-21-2015 A	Dec-31-2024
111007	Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	519	Jun-12-2019 A	Dec-01-2021
111008	Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building	1826	Jul-01-2025	Jul-01-2030
111009	Lake Huron Water Treatment Plant, Two New High-Lift Pumps, Water Production Flow Meter, and Select Yard	1587	Jan-01-2019 A	Nov-03-2024
111010	Lake Huron Filtration & Pretreat Improv	4472	Apr-01-2024	Jun-28-2036
111011	Lake Huron WTP Pilot Plant	898	Oct-15-2019 A	Dec-15-2022
111012	LHWTP-Flocculation Improvements	2126	Dec-04-2020	Sep-29-2026
112002	Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation	274	May-25-2018 A	Mar-31-2021
112003	Northeast Water Treatment Plant High-Lift Pumping Station Electrical Improvements	3377	Aug-03-2020	Oct-31-2029
112005	NE - Replacement of Covers for Process Water Conduits	454	Feb-01-2019 A	Sep-27-2021
112006	NE Plant Flocculator Replacements	1615	Mar-08-2019 A	Dec-01-2024
113002	Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement	490	Oct-01-2018 A	Nov-02-2021
113003	Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and Filtration System	4475	Apr-01-2027	Jul-01-2039
113006	Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements	2024	Jan-28-2020 A	Jan-14-2026
113007	Southwest Water Treatment Plant Architectural and Building Mechanical Improvements	2387	May-11-2029	Nov-02-2035
114001	Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements	30	Jul-01-2020	Jul-30-2020
114002	Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements	4625	Jan-02-2018 A	Feb-27-2033
114003	Water Production Flow Metering Improvements at Northeast, Southwest and Springwells Water Treatment Plants	31	Jul-21-2017 A	Jul-31-2020
114005	Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop	1098	Feb-24-2018 A	Jul-03-2023
114007	Springwells Water Treatment Plant, Powdered Activated Carbon System Improvements	1380	Oct-08-2024	Jul-16-2028
114008	Springwells Water Treatment Plant, 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements	787	Jun-07-2020 A	Aug-26-2022
114010	Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements	4910	Apr-01-2019 A	Dec-09-2033
114011	Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements	1023	Feb-01-2019 A	Apr-19-2023
114013	Springwells Water Treatment Plant, Reservoir Fill Line Improvements	244	Jan-22-2018 A	Mar-01-2021
114016	Springwells 1958 Settled Water Conduits Concrete Pavement	609	May-01-2019 A	Mar-01-2022
114017	Springwells Floculator Replacement	1494	Jan-28-2020 A	Aug-02-2024
114018	Springwells Substation	725	Sep-30-2021	Sep-24-2023
115001	Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement	2040	Mar-26-2018 A	Jan-30-2026
115004	Water Works Park Water Treatment Plant Chlorine System Upgrade	30	Jul-01-2018 A	Jul-30-2020
115005	WWp Building Ventilation Improv	1185	Jan-01-2019 A	Sep-28-2023
115006	Water Works Park Site Improvments	1339	May-01-2025	Dec-29-2028
116002	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements	1732	Dec-21-2018 A	Mar-28-2025
122003	WWP to NE Transmission Main	3202	Sep-14-2017 A	Apr-06-2029
122004	96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main	2694	Apr-22-2017 A	Nov-15-2027
122005	Schoolcraft Road Water Transmission Main Replacement	696	Oct-21-2019 A	May-27-2022
122006	Wick Road Water Transmission Main Construction	936	Nov-26-2017 A	Jan-22-2023
122007	Newburgh Road Water Transmission Main	3798	Aug-01-2019 A	Nov-23-2030
122011	Park-Merriman Water Transmission Main Construction	498	Mar-11-2019 A	Nov-10-2021
122013	14 Mile Transmission Main Loop	1370	Dec-07-2017 A	Mar-31-2024
122016	Downriver Transmission Main Loop	1949	Apr-05-2019 A	Oct-31-2025
122017	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station	3197	Mar-01-2019 A	Apr-01-2029
122018	Garland Hurlbut Bewick WTM Rehab	3481	Oct-01-2019 A	Dec-21-2029

Study | Construction | Design | Work In Progress

CIP 2022 - Integrated Master Schedule - WTP Projects
June 2020 Update

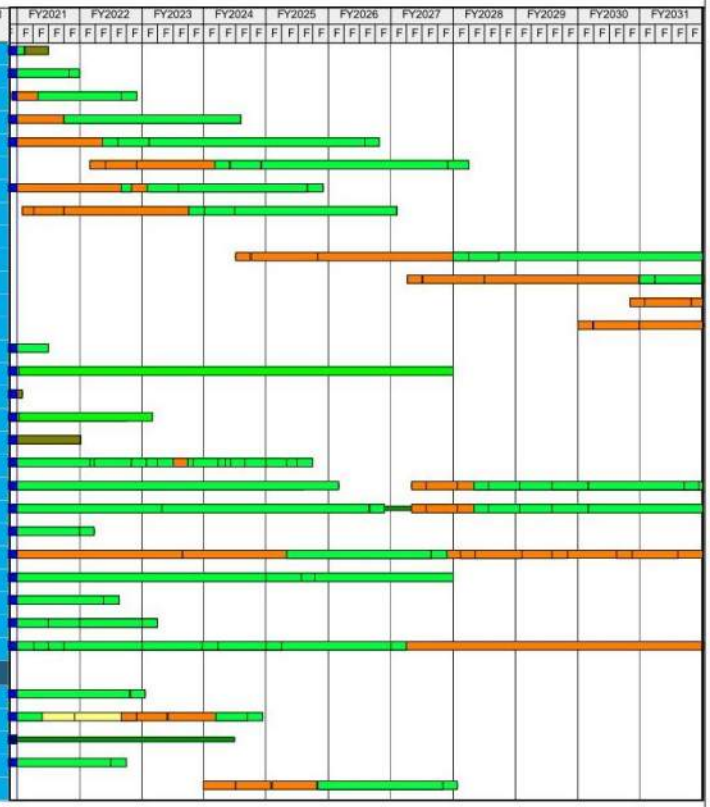
Run Date: Oct-13-2020
Data Date: Jul-01-2020

Page 1 of 2

GLWA

Document received by the MI Wayne 3rd Circuit Court.

Activity ID	Activity Name	Remaining Duration	Actual/ Forecasted Start	Actual/ Forecasted Finish
132003	West Service Center Pumping Station, Isolation Gate Valves for Line Pumps	184	Nov-26-2018 A	Dec-31-2020
132006	Ford Road Pumping Station, Pressure and Control Improvements	365	Aug-23-2019 A	Jun-30-2021
132007	Imlay Pumping Station - Energy Management: Freeze Protection Pump Installation	700	Jun-01-2020 A	May-31-2022
132010	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades	1311	Jul-17-2018 A	Feb-02-2024
132012	Ypsilanti Booster Pumping Station Improvements	2127	Mar-05-2018 A	Apr-27-2026
132014	Adams Road Booster Pumping Station Improvements	2221	Sep-01-2021	Sep-30-2027
132015	Newburgh Road Booster Pumping Station Improvements	1795	Jan-01-2019 A	May-30-2025
132016	North Service Center Pumping Station Improvements	2192	Aug-03-2020	Aug-04-2026
132018	Schoolcraft Booster Pumping Station Improvements	3376	Jun-30-2037	Sep-26-2046
132019	Wick Road Booster Pumping Station - Switchgear, Control Valves and Hydropneumatic Tank Replacement	3926	Jan-01-2024	Sep-30-2034
132020	Franklin Booster Pumping Station - Isolation Gate Valves & Electrical Actuator Improvements	3281	Oct-04-2026	Sep-27-2035
132021	Imlay Booster Pumping Station - Replace Pumps, Motors, VFDs, and HVAC System	4163	May-02-2030	Sep-23-2041
132022	Joy Road Booster Pumping Station, Reservoir Pumping System Improvements	2830	Jul-01-2029	Mar-30-2037
132026	Franklin Pumping Value Replace	183	Nov-01-2019 A	Dec-30-2020
170100	Water Treatment Plant /Pump Station Allowance	2556	Jul-01-2018 A	Jun-30-2027
170102	CS-1656 Flow Measurement	31	Sep-09-2017 A	Jul-31-2020
170109	Water Treatment Plant CS-187	791	Nov-30-2016 A	Aug-30-2022
170200	As Needed Construction Materials, Environmental Media and Special Testing Services, Construction	370	Sep-29-2017 A	Jul-06-2021
170300	Water Treatment Plant Automation Program	1732	May-31-2017 A	Mar-28-2025
170400	Water Transmission Improvement Program	7065	Nov-22-2016 A	Nov-03-2039
170500	Transmission System Valve Rehabilitation and Replacement Program	8174	Jul-01-2018 A	Nov-16-2042
170503	Transmission System Valve Replacement	455	May-01-2020 A	Sep-28-2021
170600	Water Transmission Main Asset Assessment Program	5062	Jul-01-2018 A	May-10-2034
170800	System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation	2556	Oct-15-2019 A	Jun-30-2027
170901	Subu	599	Jan-01-2018 A	Feb-19-2022
170902	Brownstown Meter Pit	822	Feb-24-2018 A	Sep-30-2022
171500	Roof Replacement - Various Water Facilities	4108	Jan-01-2018 A	Sep-29-2031
Water Projects - Central Services		2585	Jul-01-2015 A	Jul-29-2027
341001	Secuity Upgrades Project - Water	752	Apr-15-2019 A	Jul-22-2022
351001	LED Lighting and Lighting Control Improvements	1441	Jun-30-2017 A	Jun-10-2024
380600	As-Needed General Engineering Services	1277	Jul-01-2015 A	Dec-29-2023
380700	As-needed Geotechnical Services	640	Jun-01-2016 A	Apr-01-2022
381000	Energy Management - Water - Electric Metering Improvement Program	1490	Jul-01-2023	Jul-29-2027



Study
Construction
Design
Work In Progress

CIP 2022 - Integrated Master Schedule - WTP Projects
June 2020 Update

Run Date: Oct-13-2020
Data Date: Jul-01-2020

Page 2 of 2

GLWA

Document received by the MI Wayne 3rd Circuit Court.

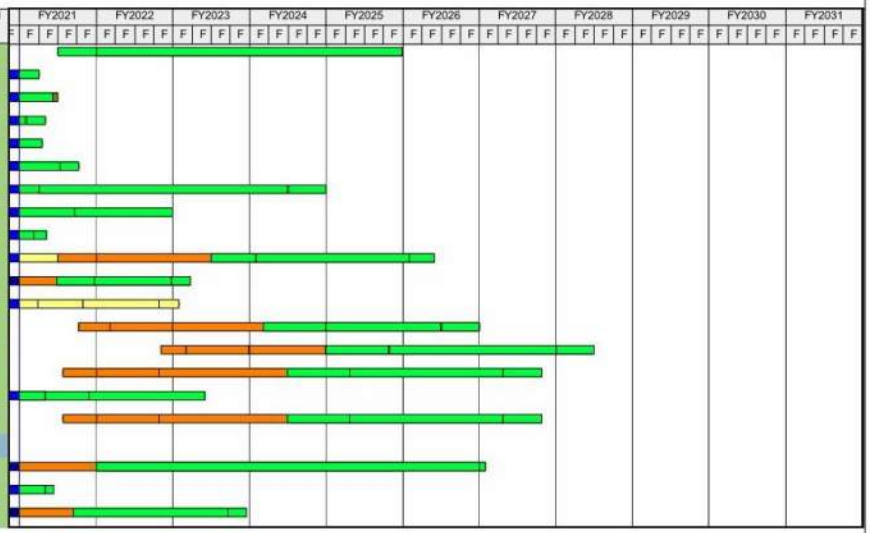
Table 22. Primavera P6 Integrated Master Schedule for Wastewater Projects



Activity ID	Activity Name	Remaining Duration	Actual/ Forecasted Start	Actual/ Forecasted Finish
	Wastewater Projects	3832	Nov-18-2013 A	Dec-27-2030
211001	WRRF Rehabilitation of Primary Clarifiers Rect Tanks, Drain Lines, Elec/Mech Build, Pipe Gal	214	Jul-18-2016 A	Jan-30-2021
211004	WRRF PS #1 Rack & Grit and MPI Sampling Station 1 Improvements	122	Nov-18-2013 A	Oct-30-2020
211005	WRRF PS No. 2 Improvements Phase II	2088	Jul-01-2022	Mar-18-2028
211006	WRRF PS No. 1 Improvements	2556	May-02-2019 A	Jun-30-2027
211007	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements	2286	Sep-02-2019 A	Oct-03-2026
211008	WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines	821	May-23-2019 A	Sep-29-2022
211009	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System	1811	Mar-31-2020 A	Jun-15-2025
211010	Rehabilitation of Sludge Processing Complexes A and B	1982	Dec-13-2022	May-16-2028
211011	WRRF PS1 Screening and Grit Improvements	2159	Oct-04-2023	Aug-31-2029
212004	WRRF Chlorination and Dechlorination Process Equipment Improvements	356	Jun-27-2017 A	Jun-21-2021
212007	WRRF Rehabilitation of the Secondary Clarifiers	2355	Apr-29-2022	Oct-08-2028
212008	WRRF Aeration Improvements 1 & 2	1881	Jun-24-2019 A	Aug-24-2025
212009	WRRF Aeration Improvements 3 & 4	2131	Aug-01-2024	Jun-01-2030
212010	WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite	2131	Aug-01-2024	Jun-01-2030
213006	WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities	1362	Jul-01-2020	Mar-23-2024
213007	WRRF Modification to Incinerator Sludge Feed Systems at Complex -II	580	Oct-30-2017 A	Jan-31-2022
213008	WRRF Rehabilitation of the Ash Handling Systems	2191	Mar-31-2019 A	Jun-30-2026
214001	WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations	365	Oct-12-2016 A	Jun-30-2021
216004	Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF	730	Jan-01-2017 A	Jun-30-2022
216005	Main Plant Maintenance Bldg Rehabiliation	667	May-01-2020 A	Apr-28-2022
216006	Rehabilitation of WRRF yard piping and underground utilities	1834	Apr-01-2019 A	Jul-08-2025
216007	DTE Primary Electric 3rd Feed Supply to WRRF	549	May-02-2020 A	Dec-31-2021
216008	Rehabilitation of Screened Final Effluent (SFE) Pump Station	1628	Jul-01-2019 A	Dec-14-2024
216010	WRRF Facility Optimization	1462	Apr-02-2020 A	Jul-01-2024
216011	WRRF Structural Improvements	2554	Aug-01-2020 A	Jun-28-2027
222001	Oakwood District Intercommunity Relief Sewer Modification at Oakwood District	2191	May-01-2020 A	Jun-30-2026
222002	Detroit River Interceptor (DRI) Evaluation and Rehabilitation	1826	May-21-2018 A	Jun-30-2025
222004A	Conveyance System Infrastructure Improvements	1108	Oct-01-2018 A	Jul-13-2023
222004B	Regulator Expansions	2191	Jul-01-2020	Jun-30-2026
232001	Fairview Pumping Station - Replace Four Sanitary Pumps	735	Jan-01-2019 A	Jul-05-2022
232002A	CON-109 Freud & Conner Creek Pump Station Improvements	366	Feb-01-2019 A	Jul-01-2021
232002B	CS-120 Freud & Conner Creek Pump Station Improvements	2922	Mar-27-2017 A	Jun-30-2028
232004	Condition Assessment at Blue Hill Pump Station	365	Jul-01-2020	Jun-30-2021
233003	Rouge River In-system Storage Devices	3237	Feb-16-2022	Dec-27-2030
260201	CON-149, Emergency Sewer Repair	1149	Jul-14-2017 A	Aug-23-2023
260204	Conveyance System Engineering Services-1802575	1400	Jun-01-2019 A	Apr-30-2024
260205	NWI Rehabilitation	2008	Dec-31-2020	Jun-30-2026
260206	Study and Design of Conveyance System Repairs	2191	Dec-31-2020	Dec-30-2026
260200A	TBD-Sewer and Interceptor Evaluation and Rehabilitation Program	1826	Jul-01-2021	Jun-30-2026
260504	Phase 2 Outfalls- 19000796	1149	Nov-01-2019 A	Aug-23-2023
260505	Phase 4 Outfalls	1149	Jan-01-2020 A	Aug-23-2023
260507	NEW Outfalls Rehabilitation	1149	Jun-01-2020 A	Aug-23-2023
260508	B-39 Outfall Rehabilitation	821	Jun-01-2020 A	Aug-23-2023
260509	B-40 Outfalls Rehabilitation	336	Jun-01-2020 A	Jun-01-2021

Document received by the MI Wayne 3rd Circuit Court.

Activity ID	Activity Name	Remaining Duration	Actual/ Forecasted Start	Actual/ Forecasted Finish
260500B:TBD		1643	Dec-31-2020	Jun-30-2025
260601:	Oakwood CSO Control Facility Drain Valve Improvements	92	Jun-18-2018 A	Sep-30-2020
260603:	Conner Creek CSO RTB Automation Improvements	184	Feb-27-2017 A	Dec-31-2020
260609:	Seven Mile RTB - Parking Lot Replacement & Misc. Site Work	122	May-01-2019 A	Oct-30-2020
260611:	Leib SDF - HVAC System Improvements	109	Feb-01-2019 A	Oct-17-2020
260613:	Baby Creek HVAC Improvements	284	Jul-31-2019 A	Apr-10-2021
260614:	Structural Inspection & Structural Improvements	1461	Nov-01-2018 A	Jun-30-2024
260615:	Puritan Fenkell & Leib Site Improvements	730	Sep-27-2018 A	Jun-30-2022
260616:	Baby Creek Towards Treatment Sewer Improvements	129	Nov-01-2018 A	Nov-06-2020
260617:	St. Aubin Chemical Disinfection Improvements	1979	Oct-09-2019 A	Nov-30-2025
260618:	Oakwood HVAC Project	814	Jan-01-2020 A	Sep-22-2022
260619:	Control System Upgrade - St. Aubin, Leib & 7 Mile	758	Apr-01-2020 A	Jul-28-2022
270001:	Pilot Netting Facility	1910	Apr-07-2021	Jun-29-2026
270002:	Meldrum Diversion & VR-15 Connection (WWMP)	2065	May-07-2022	Dec-31-2027
274001:	Leib Improvements for Meldrum Diversion	2280	Jan-25-2021	Apr-23-2027
277001:	Baby Creek - Outfall Improvements	882	Dec-01-2019 A	Nov-29-2022
278001:	Oakwood Improvements for NWI Diversion	2280	Jan-25-2021	Apr-23-2027
Wastewater Projects - Central Services		2220	Aug-01-2018 A	Jul-29-2026
331002:	Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB)	2220	Aug-01-2018 A	Jul-29-2026
341002:	Security Improvements - WasteWater	164	Mar-11-2020 A	Dec-11-2020
381000:	Energy Management - WasteWater - Electric Metering Improvement Program	1082	Nov-01-2019 A	Jun-17-2023



Study Construction
Design Work In Progress

CIP 2022 - Integrated Master Schedule - WWTP Projects
June 2020 Update

Run Date: Oct-13-2020
Data Date: Jul-01-2020

Page 2 of 2

GLWA

Document received by the MI Wayne 3rd Circuit Court.

1.20 TEN-YEAR WATER OUTLOOK

In this section you will find ten-year outlooks for CIP projects. These ten-year outlooks rely heavily on input from long-term needs assessments, master plans and condition assessment documents. The planning horizon for these outlooks extend from FY2022 through FY2031. Projects within the 2022-2026 CIP that carry over into the FY2027+ are shown within the following tables by the anticipated fiscal year in which projected expenditures are anticipated.

Only project level data will be provided within these outlooks. These are subject to change and are based upon the best available data at the time of compiling this report.

The primary source of longer-term projects used for the 10-Year Water Outlook are from the 2015 Water Master Plan.

In addition, it is anticipated that most programs will continue into the ten-year horizon. The project level data can be seen in Table 23.

In addition, a graphical representation of this summary is shown in Figure 4.

Table 23. Water 10-Year Outlook Projects; All figures are in $1,000's

CIP #	LIFETIME PLANNED SPEND	TITLE	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	2022-2026 TOTAL	2027 – 2031 TOTAL	TOTAL 2022-2031
111001	57,178	Lake Huron WTP, Low-Lift, High Lift and Filter Backwash Pumping System Improvements	1,993	1,962	4,581	8,867	10,837	10,837	11,490	4,329	2,069	0	0	37,085	17,889	54,973
111002	8,705	Lake Huron WTP, Miscellaneous Mechanical HVAC Improvements	20	0	0	0	0	0	0	0	0	0	0	0	0	0
111006	16,790	Lake Huron WTP, Filter Instrumentation and Raw Water Flow Metering Improvements	215	5,196	5,222	5,082	1	0	0	0	0	0	0	15,502	0	15,502
111007	9,181	Lake Huron WTP, Raw Sludge Clarifier and Raw Sludge Pumping System Improvements	3,109	184	0	0	0	0	0	0	0	0	0	184	0	184
111008	1,196	Lake Huron WTP, Architectural Programming for Laboratory and Admin Building Improvements	0	0	0	0	0	77	310	271	270	270	0	77	1,119	1,196
111009	30,481	Lake Huron WTP - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements	640	1,061	7,060	7,582	7,021	7,000	0	0	0	0	0	29,724	0	29,724
111010	42,207	Filtration Improvements	0	0	0	9	38	61	104	104	104	20,894	20,894	108	42,099	42,207
111011	3,248	Lake Huron WTP Pilot Plant	58	1,719	1,471	0	0	0	0	0	0	0	0	3,190	0	3,190
111012	26,538	LHWTP-Flocculation Improvements	46	538	469	5,564	5,428	5,428	5,065	4,000	0	0	0	17,427	9,065	26,492
112003	71,546	Northeast WTP High-Lift Pumping Station Improvements	279	173	215	862	1,931	1,721	4,376	7,251	13,248	19,243	22,242	4,901	66,360	71,261
112005	1,089	Northeast WTP - Replacement of Covers for Process Water Conduits	645	5	0	0	0	0	0	0	0	0	0	5	0	5
112006	11,316	Northeast WTP Flocculator Replacements	55	2,522	3,022	3,022	2,509	0	0	0	0	0	0	11,075	0	11,075
113002	6,728	Southwest WTP, High-Lift Pump Discharge Valve Actuators Replacement	23	501	649	283	0	0	0	0	0	0	0	1,433	0	1,433
113003	21,812	Southwest WTP, Low- and High-Lift Pumping Station, Flocculation and Filtration System Improvements	0	0	0	0	0	0	20	81	7,237	7,237	7,237	0	21,812	21,812
113006	7,331	Southwest WTP Chlorine Scrubber, Raw Water Screens & Related Improvements	245	4,683	1,595	557	78	42	0	0	0	0	0	6,956	0	6,956
113007	3,167	Southwest WTP Architectural and Building Mechanical Improvements	0	0	0	0	0	0	0	0	8	1,491	1,668	0	3,167	3,167
114001	80,828	Springwells WTP, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Document received by the MI Wayne 3rd Circuit Court.

CIP #	LIFETIME PLANNED SPEND	TITLE	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	2022-2026 TOTAL	2027 – 2031 TOTAL	TOTAL 2022-2031
114002	224,222	Springwells WTP, Low-Lift and High-Lift Pumping Station Improvements	11,812	16,546	18,135	19,954	18,584	18,391	21,032	21,033	21,032	22,049	30,157	91,611	115,303	206,914
114003	8,156	Water Production Flow Metering Improvements at Northeast, Southwest and Springwells WTPs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114005	9,260	Springwells WTP, Administration Building Improvements & Underground Fire Protection Loop	376	3,660	3,780	500	0	0	0	0	0	0	0	7,940	0	7,940
114007	4,021	Springwells WTP Powdered Activated Carbon System Improvements	0	0	0	0	0	0	0	42	331	1,173	2,474	0	4,021	4,021
114008	13,923	Springwells WTP 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements	7,989	2,485	67	0	0	0	0	0	0	0	0	2,552	0	2,552
114010	200,472	Springwells WTP, Yard Piping and High-Lift Header Improvements	267	1,568	4,614	13,057	16,057	16,057	22,122	22,123	22,122	22,122	60,122	51,354	148,610	199,964
114011	25,540	Springwells WTP Steam, Condensate Return, and Compressed Air Piping Improvements	9,756	5,374	327	0	0	0	0	0	0	0	0	5,701	0	5,701
114013	4,924	Springwells WTP, Reservoir Fill Line Improvements	1,338	0	0	0	0	0	0	0	0	0	0	0	0	0
114016	2,281	Springwells WTP 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement	189	566	1,435	0	0	0	0	0	0	0	0	2,001	0	2,001
114017	12,358	Springwells WTP Flocculator Drive Replacements	567	371	6,474	4,943	2	0	0	0	0	0	0	11,790	0	11,790
114018	1,545	Springwells WTP - Service Building Electrical Substation and Miscellaneous Improvements	100	80	95	7	1,263	0	0	0	0	0	0	1,445	0	1,445
115001	54,815	Water Works Park WTP Yard Piping, Valves and Venturi Meters Replacement	4,372	6,322	6,322	6,321	6,322	6,163	6,500	10,105	0	0	0	31,449	16,605	48,054
115004	6,893	Water Works Park WTP Chlorine System Upgrade	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115005	4,924	WWP WTP Building Ventilation Improvements	380	523	1,620	1,592	400	100	307	0	0	0	0	4,235	307	4,542
115006	5,882	Water Works Park Site/Civil Improvements	0	0	0	0	0	6	298	805	3,801	971	0	6	5,875	5,882
115007	88,946	Water Works Park High Lift Pumping Station Modernization	0	280	530	530	780	11,705	18,495	18,310	18,187	18,064	2,064	13,826	75,120	88,946
116002	94,880	Pennsylvania and Springwells Raw Water Supply Tunnel Improvements	7,024	8,360	17,395	23,304	18,016	5,372	0	0	0	0	0	72,446	0	72,446
116005	1,832	Belle Isle Seawall Rehabilitation	0	319	1,231	281	0	0	0	0	0	0	0	1,832	0	1,832
116006	350	Belle Isle Intake System Rehabilitation and Improvements	0	0	300	50	0	0	0	0	0	0	0	350	0	350
122003	143,217	Water Works Park to Northeast Transmission Main	11,234	14,593	9,214	14,535	13,835	21,695	27,212	25,685	24	0	0	73,871	52,921	126,793
122004	144,852	96-inch Water Transmission Main Relocation and Isolation Valve Installations	2,077	2,577	7,614	10,625	12,581	12,581	24,606	24,620	26,049	19,706	0	45,978	94,980	140,959
122005	15,326	Schoolcraft Road Water Transmission Main	6,338	7,607	0	0	0	0	0	0	0	0	0	7,607	0	7,607
122006	22,420	Wick Road Water Transmission Main	11,743	4,774	0	0	0	0	0	0	0	0	0	4,774	0	4,774
122007	22,154	Merriman Road Water Transmission Main Loop	57	27	27	273	890	890	4,810	4,823	4,809	4,809	736	2,107	19,988	22,095
122011	9,600	Park-Merriman Road Water Transmission Main	4,370	8	0	0	0	0	0	0	0	0	0	8	0	8
122013	105,180	14 Mile Transmission Main Loop	6,064	37,593	36,390	21,374	0	0	0	0	0	0	0	95,357	0	95,357
122016	37,067	Downriver Transmission Main Loop	1,683	665	7,482	8,074	8,544	7,470	2,924	0	0	0	0	32,235	2,924	35,159
122017	60,189	7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station	1,167	1,944	1,944	4,784	3,505	13,363	13,387	13,387	6,705	0	0	25,539	33,479	59,018
122018	54,103	Garland, Hurlbut, Bewick Water Transmission System Rehabilitation	1,578	1,530	1,528	1,528	3,995	3,995	15,960	15,961	7,995	31	0	12,578	39,947	52,524
132003	1,962	West Service Center Pumping Station, Isolation Gate Valves for Line Pumps	218	0	0	0	0	0	0	0	0	0	0	0	0	0
132006	3,364	Ford Road Pumping Station, Pressure and Control Improvements	1,480	0	0	0	0	0	0	0	0	0	0	0	0	0

Document received by the MI Wayne 3rd Circuit Court.

CIP #	LIFETIME PLANNED SPEND	TITLE	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	2022-2026 TOTAL	2027 – 2031 TOTAL	TOTAL 2022-2031
132007	5,187	Energy Management: Freeze Protection Pump Installation at Imlay Pump Station	974	3,962	84	0	0	0	0	0	0	0	0	4,046	0	4,046
132010	45,142	West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades	5,266	17,149	19,927	650	0	0	0	0	0	0	0	37,727	0	37,727
132012	35,393	Ypsilanti Booster Pumping Station Improvements	615	584	6,718	9,797	9,771	2,574	5,000	0	0	0	0	29,445	5,000	34,445
132014	52,865	Adams Road Pumping Station Improvements	0	203	1,332	1,158	1,129	1,129	1,459	15,918	15,879	14,574	0	4,951	47,830	52,781
132015	45,044	Newburgh Road Booster Pumping Station Improvements	852	733	2,365	8,839	12,524	12,000	7,380	0	0	0	0	36,462	7,380	43,842
132016	68,255	North Service Center Pumping Station Improvements	282	673	1,726	2,351	2,247	8,503	20,803	20,803	10,600	0	0	15,501	52,206	67,706
132018	47	Schoolcraft Pumping Station Improvements	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132019	9,358	Wick Road Pumping Station Improvements	0	0	0	0	0	13	550	553	551	1,663	5,971	13	9,288	9,301
132020	2,545	Franklin Pumping Station Improvements	0	0	0	0	0	0	42	364	682	682	682	0	2,451	2,451
132021	750	Imlay Pumping Station Improvements	0	0	0	0	0	0	0	0	0	9	513	0	522	522
132022	39,613	Joy Road Pumping Station Improvements	57	277	527	527	122	75	1,046	5,034	15,000	15,000	1,877	1,527	37,958	39,485
132026	1,006	Franklin Pumping Station Valve Replacement	185	0	0	0	0	0	0	0	0	0	0	0	0	0
170109	1,656	GLWA-CS-187: FK Eng: Raw Water Intake	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170200	1,427	As-Needed Construction Materials, Environmental Media and Special Testing Services, Construction Inspection, and Other Technical Services	1,427	0	0	0	0	0	0	0	0	0	0	0	0	0
170300	13,249	WTP Automation Program	7,098	6,151	0	0	0	0	0	0	0	0	0	6,151	0	6,151
170301	0	WTP Automation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170302	9,000	SW SCADA System Upgrade	1,788	3,606	3,606	0	0	0	0	0	0	0	0	7,212	0	7,212
170303	1,700	Power Monitoring Installation for WTPs	1,186	514	0	0	0	0	0	0	0	0	0	514	0	514
170400	33,171	Water Transmission Improvement Program	49	1,034	1,034	1,034	1,034	39	72	98	7,685	12,096	8,996	4,175	28,948	33,123
170401	1,661	-	1,661	0	0	0	0	0	0	0	0	0	0	0	0	0
170500	5,350	Transmission System Valve Rehabilitation and Replacement Program	280	232	232	232	232	151	45	378	1,152	1,208	1,208	1,080	3,990	5,070
170503	10,072	Transmission System Valve Replacement	8,373	1,305	0	0	0	0	0	0	0	0	0	1,305	0	1,305
170600	8,438	Water Transmission Main Asset Assessment Program	52	24	526	526	2,026	2,526	2,553	52	51	51	52	5,627	2,760	8,387
170800	23,827	System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation	46	322	2,322	3,321	3,317	3,300	3,600	2,600	2,000	2,000	1,000	12,581	11,200	23,781
170801	15,090	Reservoir Inspection, Design & Construction at Imlay Station; Lake Huron, Springwells, & Southwest WTPs	8,420	463	2,075	1,000	1,000	1,000	1,000	132	0	0	0	5,538	1,132	6,670
170900	40,719	Suburban Water Meter Pit Rehabilitation and Meter Replacement	2,535	1,159	4,112	4,113	4,113	4,113	4,115	4,115	4,115	4,115	4,115	17,610	20,573	38,184
170901	10,616	Suburban Water Meter Pit Rehabilitation and Meter Replacement	3,248	2,838	0	0	0	0	0	0	0	0	0	2,838	0	2,838
170902	1,245	Brownstown Meter Pit	570	594	5	0	0	0	0	0	0	0	0	599	0	599
171500	22,711	Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities	386	11	3,090	1,808	369	2,920	3,961	2,810	2,452	2,452	2,452	8,199	14,127	22,325
171501	3,484	Roof Replacements at SP, WWP, Orion, Franklin, and Conner Creek	269	0	0	0	0	0	0	0	0	0	0	0	0	0
331003	25,000	Masonry Replacement and Rehabilitation	0	0	0	0	0	0	1,000	1,000	2,000	5,000	16,000	0	25,000	25,000
341001	9,170	Security Infrastructure Improvements on Water Facilities	4,656	567	2	0	0	0	0	0	0	0	0	569	0	569
351001	700	LED Lighting and Lighting Control Improvements	0	38	221	221	213	0	0	0	0	0	0	693	0	693
380600	55	As-Needed General Engineering Services	55	0	0	0	0	0	0	0	0	0	0	0	0	0
380700	2,131	As-Needed Geotechnical and Related Engineering Services	904	456	0	0	0	0	0	0	0	0	0	456	0	456
381000	2,624	Power Quality: Electric Metering Improvement Program	0	0	0	27	223	1,129	1,153	92	0	0	0	1,379	1,245	2,624
		TOTALS	150,740	179,210	200,713	199,165	170,936	182,430	232,796	226,878	196,158	196,909	190,461	932,455	1,043,201	1,975,656

Document received by the MI Wayne 3rd Circuit Court.

10-Year Water CIP Outlook

Note: Figures below are in thousands of dollars
Water CS Projects/Programs are included here.
Slight variances in totals may be noted due to showing numbers in thousands of dollars.

2021 Outlook	FY2021	FY2022	FY2023	FY2024	FY 2025	FY 2026	FY2027	FY2028	FY2029	FY2030	FY 2031	Total 2021-2030
Projects	127,426	161,722	183,465	193,765	168,059	130,249	118,228	128,240	102,887	98,319	NA	1,412,360
Programs	20,141	18,198	18,429	19,084	25,128	37,502	57,256	4,007	15,756	19,660	NA	235,160
Not Yet Specified Projects								30,000	20,000	19,348	NA	69,348
Subtotal 2021 Water CIP	**147,567**	**179,920**	**201,894**	**212,849**	**193,187**	**167,750**	**175,485**	**162,246**	**138,642**	**137,327**	**NA**	**1,716,868**

Proposed 2022 Outlook	FY2021	FY2022	FY2023	FY2024	FY 2025	FY 2026	FY2027	FY2028	FY2029	FY2030	FY 2031	Total 2022-2031
Projects	NA	160,502	183,710	187,103	158,623	167,248	216,298	216,602	178,703	174,988	172,637	1,816,419
Programs	NA	18,709	17,002	12,061	12,314	15,178	16,499	10,277	17,455	21,922	17,823	159,239
Not Yet Specified Projects	NA											-
Subtotal 2022 Water CIP	**NA**	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**232,796**	**226,878**	**196,158**	**196,909**	**190,461**	**1,975,656**

Document received by the MI Wayne 3rd Circuit Court.

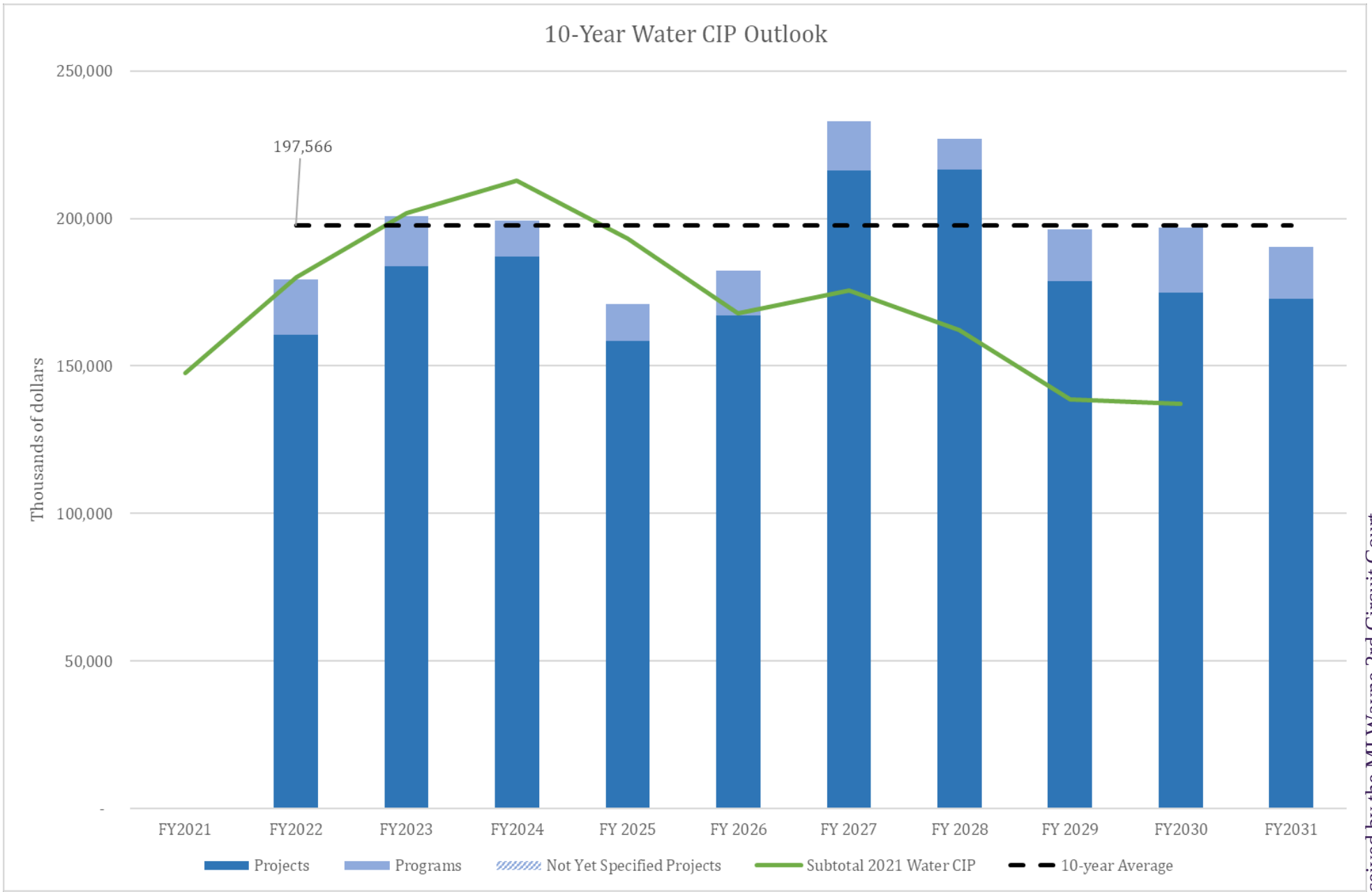


Figure 4. 10-Year Water CIP Outlook Chart

Document received by the MI Wayne 3rd Circuit Court.

1.21 TEN-YEAR WASTEWATER OUTLOOK

In this section you will find ten-year outlooks for CIP projects. These ten-year outlooks rely heavily on input from long-term needs assessments, master plans and condition assessment documents. The planning horizon for these outlooks extend from FY2022 through FY2031. Projects within the 2022-2026 CIP that carry over into the FY2027+ are shown within the following tables by the anticipated fiscal year in which projected expenditures are anticipated.

Only project level data will be provided within these outlooks. These are subject to change and are based upon the best available data at the time of compiling this report.

The primary source of long-term projects used for the 10-Year Wastewater Outlook are from the Regional Wastewater Master Plan Assessment and various condition assessments that have been performed. The project level data used in the development of this outlook can be seen in Table 24.

In addition, a graphical representation of this summary is shown in Figure 5. 10-Year Wastewater CIP Outlook Chart.

.

Table 24. 10-Year Wastewater CIP Outlook Projects; All figures are in $1,000's

CIP #	LIFETIME PLANNED SPEND	TITLE	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	2022-2026 TOTAL	2027 – 2031 TOTAL	TOTAL 2022-2031
211001	54,061	WRRF Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery	2,876	0	0	0	0	0	0	0	0	0	0	0	0	0
211002	3,340	WRRF PS No. 2 Pumping Improvements - Phase 1	1,326	0	0	0	0	0	0	0	0	0	0	0	0	0
211004	23,295	WRRF PS #1 Rack & Grit and MPI Sampling Station 1 Improvements	12,261	0	0	0	0	0	0	0	0	0	0	0	0	0
211005	13,797	WRRF PS No. 2 Improvements Phase II	10	0	0	0	461	461	2,544	2,544	2,537	2,537	2,702	922	12,865	13,787
211006	68,709	WRRF PS No. 1 Improvements	623	3,061	7,987	8,009	7,199	7,559	21,461	11,526	0	0	0	33,816	32,987	66,803
211007	76,229	WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements	2,323	2,303	6,987	18,173	18,122	15,052	13,263	0	0	0	0	60,638	13,263	73,900
211008	11,388	WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines	3,428	5,358	972	0	0	0	0	0	0	0	0	6,330	0	6,330
211009	13,008	WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System	243	476	2,740	5,619	3,927	0	0	0	0	0	0	12,762	0	12,762
211010	13,934	Rehabilitation of Sludge Processing Complexes A and B	64	0	42	112	287	1,995	4,711	4,728	1,415	538	0	2,436	11,393	13,828
211011	93,303	WRRF PS1 Screening and Grit Improvements	0	0	0	0	42	132	3,639	15,446	27,329	27,329	19,385	175	93,129	93,303
212004	5,742	WRRF Chlorination and Dechlorination Process Equipment Improvements	1,939	0	0	0	0	0	0	0	0	0	0	0	0	0
212007	49,871	WRRF Rehabilitation of the Secondary Clarifiers	0	10	124	240	240	3,316	4,032	10,281	10,281	10,281	11,065	3,930	45,941	49,871
212008	81,931	WRRF Aeration Improvements 1 and 2	2,264	2,567	5,392	19,423	19,370	18,576	14,323	0	0	0	0	65,328	14,323	79,651
212009	73,589	WRRF Aeration Improvements 3 and 4	0	0	0	0	52	1,239	2,960	11,861	20,799	20,799	15,878	1,291	72,297	73,589
212010	5,765	WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite	0	0	0	0	52	132	238	940	1,653	1,649	1,102	184	5,581	5,765
213006	4,490	WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities	109	342	2,252	1,781	0	0	0	0	0	0	0	4,375	0	4,375
213007	22,162	WRRF Modification to Incinerator Sludge Feed Systems at Complex -II	4,243	2,499	0	0	0	0	0	0	0	0	0	2,499	0	2,499
213008	8,432	WRRF Rehabilitation of the Ash Handling Systems	351	295	295	453	1,518	3,979	1,429	0	0	0	0	6,540	1,429	7,969

Document received by the MI Wayne 3rd Circuit Court.

CIP #	LIFETIME PLANNED SPEND	TITLE	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	2022-2026 TOTAL	2027 – 2031 TOTAL	TOTAL 2022-2031
214001	12,651	WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations	2,067	0	0	0	0	0	0	0	0	0	0	0	0	0
216004	6,645	Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF	4,932	76	0	0	0	0	0	0	0	0	0	76	0	76
216006	23,874	Assessment and Rehabilitation of WRRF yard piping and underground utilities	580	558	2,858	9,808	9,782	214	0	0	0	0	0	23,221	0	23,221
216007	4,544	DTE Primary Electric 3rd Feed Supply to WRRF	1,252	394	0	0	0	0	0	0	0	0	0	394	0	394
216008	40,821	Rehabilitation of Screened Final Effluent Pump Station	501	906	6,504	6,504	6,504	6,504	13,391	0	0	0	0	26,923	13,391	40,314
216010	10,271	WRRF Facility Optimization	25	57	1,853	5,513	972	1,845	0	0	0	0	0	10,241	0	10,241
216011	12,333	WRRF Structural Improvements	52	2,052	2,046	2,046	2,046	2,046	2,046	0	0	0	0	10,235	2,046	12,281
222001	53,397	Oakwood District Intercommunity Relief Sewer Modification at Oakwood District	925	791	786	779	4,870	16,474	16,431	12,340	0	0	0	23,700	28,772	52,472
222002	72,775	Detroit River Interceptor (DRI) Evaluation & Rehabilitation	11,192	11,192	10,057	5,696	5,235	3,645	5,608	0	0	0	0	35,824	5,608	41,432
222004	0	Sewer System Infrastructure Improvements and Pumping Stations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
232001	40,073	Fairview Pumping Station - Replace Four Sanitary Pumps	12,990	12,781	28	0	0	0	0	0	0	0	0	12,809	0	12,809
232002	229,279	Freud & Conner Creek Pump Station Improvements	6,445	3,357	12,646	17,446	23,446	34,146	41,846	41,846	40,758	0	0	91,041	124,450	215,491
232004	257	Condition Assessment at Blue Hill Pump Station	257	0	0	0	0	0	0	0	0	0	0	0	0	0
233003	46,317	Rouge River In-system Storage Devices	0	0	0	1,026	1,024	1,024	9,477	9,503	9,476	9,476	5,311	3,075	43,243	46,317
260200	53,749	Sewer and Interceptor Rehabilitation Program	3,138	0	7,214	7,915	10,695	11,547	13,240	0	0	0	0	37,371	13,240	50,611
260201	32,282	CON-149, Emergency Sewer Repair	11,301	1,479	0	0	0	0	0	0	0	0	0	1,479	0	1,479
260204	52,157	Conveyance System Engineering Services-1802575	11,656	11,646	9,476	9,249	9,217	0	0	0	0	0	0	39,589	0	39,589
260205	10,938	NWI Rehabilitation	1,767	5,046	4,046	0	0	0	0	0	0	0	0	9,092	0	9,092
260206	47,821	Conveyance System Repairs (Sewers)	523	7,046	7,046	7,046	7,046	8,046	6,046	5,023	0	0	0	36,230	11,069	47,298
260500	5,000	CSO Outfall Rehabilitation	0	833	833	835	833	833	833	0	0	0	0	4,167	833	5,000
260504	5,051	Phase 2 Outfalls- 19000796	2,849	0	0	0	0	0	0	0	0	0	0	0	0	0
260505	5,718	Phase 4 Outfalls	3,491	641	0	0	0	0	0	0	0	0	0	641	0	641
260508	569	B-39 Outfall Rehabilitation	181	181	181	27	0	0	0	0	0	0	0	388	0	388
260509	89	B-40 Outfall Rehabilitation	22	0	0	0	0	0	0	0	0	0	0	0	0	0
260510	48,863	Conveyance System Repairs (Outfalls)	557	7,710	7,710	7,728	7,710	9,240	8,210	0	0	0	0	40,096	8,210	48,306
260600	126,400	CSO Facilities Improvement Program	1,500	1,000	1,500	2,000	7,500	11,400	12,000	12,000	12,000	29,000	36,500	23,400	101,500	124,900
260601	864	Oakwood CSO Control Facility Drain Valve Improvements	183	0	0	0	0	0	0	0	0	0	0	0	0	0
260603	7,898	Conner Creek CSO RTB Automation Improvements	908	0	0	0	0	0	0	0	0	0	0	0	0	0
260608	497	7 Mile CSO Facilities - Roof Replacement	1	0	0	0	0	0	0	0	0	0	0	0	0	0
260609	417	Seven Mile RTB - Parking Lot Replacement & Misc. Site Work	47	0	0	0	0	0	0	0	0	0	0	0	0	0
260611	396	Leib SDF- HVAC System Improvements	300	0	0	0	0	0	0	0	0	0	0	0	0	0
260613	588	Baby Creek HVAC Improvements	536	0	0	0	0	0	0	0	0	0	0	0	0	0
260614	13,794	Structural Inspection & Structural Improvements	3,047	4,422	3,872	1,397	752	0	0	0	0	0	0	10,443	0	10,443
260615	801	Puritan Fenkell & Leib Site Improvements	492	199	0	0	0	0	0	0	0	0	0	199	0	199
260616	783	Baby Creek Towards Treatment Sewer Improvements	116	0	0	0	0	0	0	0	0	0	0	0	0	0
260617	6,966	St. Aubin Chemical Disinfection Improvements	443	387	237	1,709	2,808	1,131	0	0	0	0	0	6,273	0	6,273
260618	3,967	Oakwood HVAC Project	639	3,235	17	0	0	0	0	0	0	0	0	3,252	0	3,252
260619	116	Control System Upgrade - St Aubin, Lieb & Mile	55	0	0	0	0	0	0	0	0	0	0	0	0	0
260620	641	Baby Creek Roof Replacement	641	0	0	0	0	0	0	0	0	0	0	0	0	0
260700	35,901	Sewer System Infrastructure Improvements and Pumping Stations	1,403	3,661	9,050	9,021	7,234	1,844	1,844	1,844	0	0	0	30,810	3,689	34,499
260701	4,586	Conveyance System Infrastructure Improvements	1,356	1,356	1,356	48	0	0	0	0	0	0	0	2,761	0	2,761

Document received by the MI Wayne 3rd Circuit Court.

CIP #	LIFETIME PLANNED SPEND	TITLE	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	2022-2026 TOTAL	2027 – 2031 TOTAL	TOTAL 2022-2031
260702	669	Pump Station Assets Updates	669	0	0	0	0	0	0	0	0	0	0	0	0	0
270001	9,573	Pilot CSO Netting Facility	0	13	57	1,557	107	3,203	3,896	739	0	0	0	4,939	4,635	9,573
270002	5,840	Meldrum Sewer Diversion and VR-15 Improvements	0	9	57	283	568	1,975	2,288	162	499	0	0	2,891	2,949	5,840
270003	9,268	Long Term CSO Control Plan	3,500	3,799	1,749	144	73	0	0	0	0	0	0	5,764	0	5,764
274001	10,942	Leib Improvements for Meldrum Diversion	25	254	1,228	649	2,713	3,396	1,414	1,263	0	0	0	8,240	2,677	10,917
277001	18,826	Baby Creek Outfall Improvements Project	1,143	1,807	1,507	6,796	6,796	774	0	0	0	0	0	17,680	0	17,680
278001	10,226	Oakwood Improvements for NWI Diversion	25	252	1,205	631	2,545	2,194	2,211	1,162	0	0	0	6,828	3,373	10,201
331002	8,888	Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)	148	1,277	1,277	1,276	1,277	1,277	1,234	0	0	0	0	6,383	1,234	7,617
341002	3,534	Security Infrastructure Improvements for Wastewater Facilities	1,796	722	0	0	0	0	0	0	0	0	0	722	0	722
		TOTALS	127,735	106,050	123,187	160,939	173,023	175,199	210,615	143,208	126,747	101,609	91,943	738,403	674,127	1,412,525

Document received by the MI Wayne 3rd Circuit Court.

Table 26. 10-Year Wastewater CIP Outlook Summary

10-Year Wastewater CIP Outlook

Note: Figures below are in thousands of dollars
Water CS Projects/Programs are included here.
Slight variances in totals may be noted due to showing numbers in thousands of dollars.

FY2021 Outlook	FY2021	FY2022	FY2023	FY2024	FY 2025	FY 2026	FY2027	FY2028	FY2029	FY2030	FY2031	2021-2030
Projects	78,021	55,725	92,062	172,003	129,068	101,580	115,656	92,711	90,875	76,308		1,004,008
Programs	32,619	57,033	48,779	31,256	42,870	37,688	12,000	12,000	12,0000	29,000		312,245
Not Yet Specified Masterplan Projects						10,000	23,000	40,000	60,000	70,678		203,678
Subtotal 2021 Wastewater CIP	**116,640**	**112,758**	**140,841**	**203,259**	**171,938**	**149,267**	**150,656**	**144,711**	**162,875**	**175,985**		**1,522,931**

Proposed FY2022 Outlook	FY2021	FY2022	FY2023	FY2024	FY 2025	FY 2026	FY2027	FY2028	FY2029	FY2030	FY 2031	2022-2031
Projects		57,208	70,651	113,965	119,230	131,159	168,442	124,341	114,748	72,611	55,442	1,027,797
Programs		48,842	52,538	46,975	53,794	44,041	42,173	18,867	12,000	29,000	36,500	384,730
Not Yet Specified Masterplan Projects												
Subtotal 2022 Wastewater CIP		**106,050**	**123,190**	**160,940**	**173,024**	**175,200**	**210,615**	**143,208**	**126,748**	**101,611**	**91,942**	**1,412,527**

Document received by the MI Wayne 3rd Circuit Court.

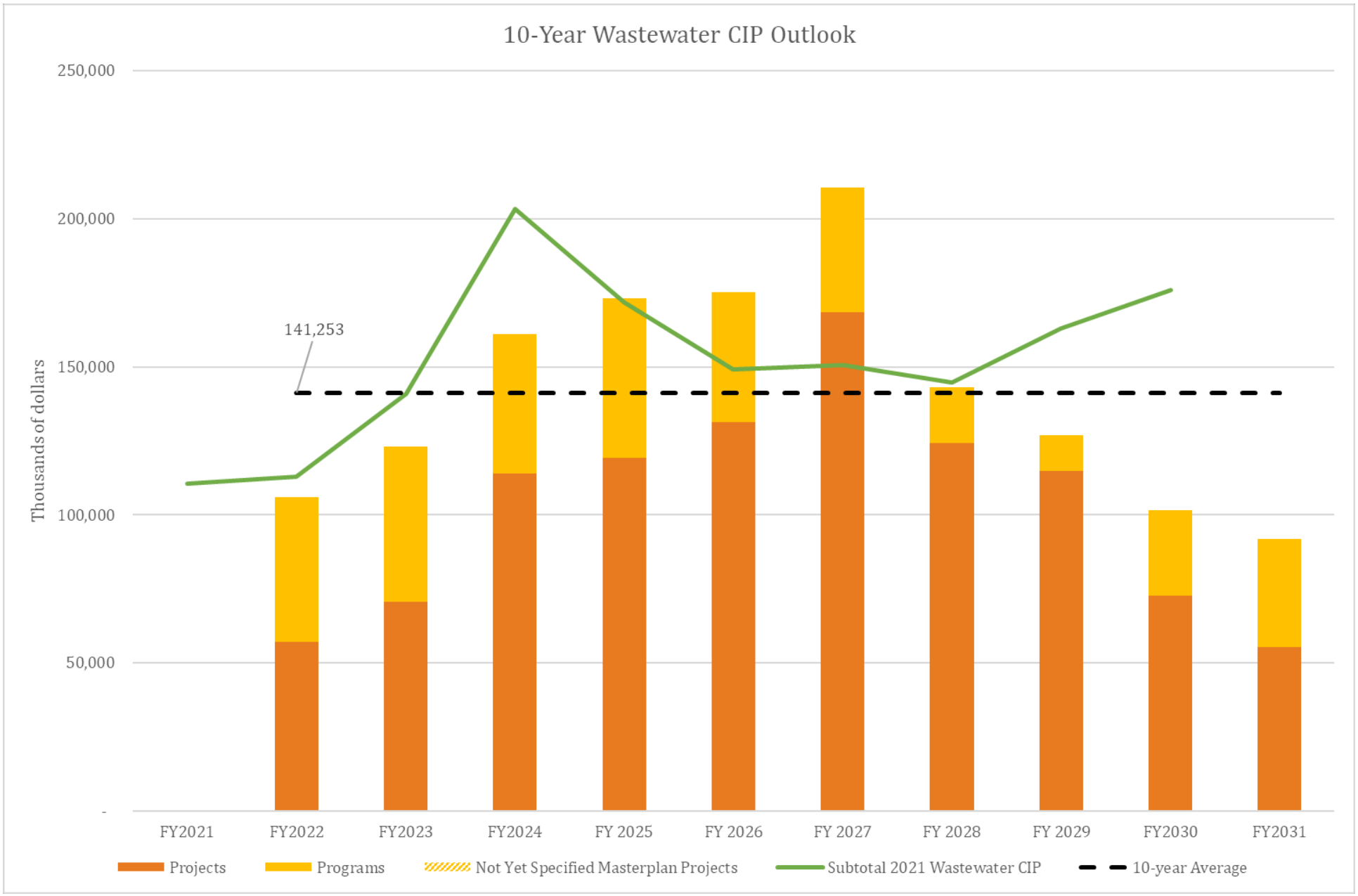


Figure 5. 10-Year Wastewater CIP Outlook Chart.

Document received by the MI Wayne 3rd Circuit Court.

5 FINANCE

Document received by the MI Wayne 3rd Circuit Court.

5.1. INTRODUCTION

The intersection of the CIP and the GLWA's overall financial plan balances several objectives to support the Authority's mission. Those objectives include the following:

- ✓ Transparency in the development of the financial plan
- ✓ Collaboration internally and externally
- ✓ Ensure sustainability
- ✓ Reduce the debt burden
- ✓ Smoothing of annual adjustments to service charges
- ✓ Improve the Authority's financial position

The Authority draws upon five sources of funding for its CIP:

1. **Bond Proceeds**: The Authority uses an incremental method of funding long-lived capital projects through a bond financing program. The Authority issues revenue bonds pursuant to Michigan Public Act 94 of 1933 (the Revenue Bond Act). The Act provides a pledge of "net revenues" for the payment of the bond principal and interest. "Net revenues" is the revenues of the system remaining after deducting the reasonable expenses of administration, operation, and maintenance of the system.
2. **Revenue Financed Capital (Improvement & Extension Fund):** Based upon ongoing expense, capital, and revenue optimization efforts, the Authority is able to build reserves to use pay-as-you go funding for shorter-lived and lower-dollar capital expenditures as well as to reduce the level of borrowing for longer-lived assets. These funds are not budgeted for use until received and recorded in the Improvement & Extension Fund for the water or the sewer system.
3. **Federal Loan Programs:** The Authority's sources of funding include lower cost financing programs including the State Revolving Fund (SRF) Loan Program and the Drinking Water Revolving Fund (DWRF) Loan Program.
4. **Grants:** The Authority utilizes public grants programs such as the State of Michigan's Stormwater, Asset Management, and Wastewater Program (provides both grants and loans) and is pursuing federal and private grants for energy optimization.
5. **Contribution in Aid of Construction:** Periodically, the Authority has the opportunity to partner with other entities for the design and construction or improvement of an asset. Depending on the nature of the shared financing strategy, the Authority may offset the cost of System expansion or improvements with direct or indirect capital from that partner.

To ensure proper accountability of funding sources and uses, the Authority utilizes two funds for its capital program for each system: the Construction Bond Fund and the Improvement & Extension (I&E) Fund.

- ✓ **Construction Bond Fund:** This fund represents the proceeds of bond issuances and related interest earnings for the purposes of financing capital improvements. New with this CIP, GLWA has made a concentrated effort to implement a CIP financial plan strategy where long-lived assets, defined as constructed infrastructure and plant facilities with an estimated useful life greater than 20 years, are eligible for bond funding.
- ✓ **Improvement & Extension (I&E) Fund:** The I&E Fund is defined by the Authority's Master Bond Ordinance (MBO) as the "fund used for improvements, enlargements, extensions or betterment" of the System. Cash receipts of the Authority are transferred into the I&E Fund pursuant to a flow of funds after commitments are met for a monthly allocation of operations and maintenance expense, debt service, pension, WRAP, budget stabilization fund, and extraordinary repair and replacement fund as administered by a trustee. Capital outlay items are funded with I&E Funds. Capital outlay are items that are generally purchased (rather than constructed) and with an estimated useful life of less than 20 years.

The basis of accounting for the capital spending is the accrual basis. Under this basis of accounting, revenues are recognized when earned and measurable regardless of when collected; and expenses are recorded, or accrued, on a matching basis when incurred. Accrued expenses are expected to be paid in a subsequent accounting period. For purposes of this CIP, the terms expenses and expenditures are used interchangeably.

Document received by the MI Wayne 3rd Circuit Court.

5.2. SUMMARY CIP FINANCIAL PLAN REVIEW AND ANALYSIS

The GLWA CIP financial plan document is based on a foundational database of capital projects and programs to support improved analysis and decision-making, provide transparency, balance risk and opportunity, and demonstrate greater clarity in the long-term GLWA financial strategy. With the ultimate performance measure of lowering the cost of capital, a better-executed financial plan optimizes the use of bonds, revenue financial capital, revolving fund loans, and grants. It also contemplates execution risk (actual rate of capital project delivery) versus inherent risk in project cost estimating. Lastly, a sustainable financial plan encompasses flexibility to allow for strategic timing of new debt, pace of cash flow needs, and adequate reserves for system needs.

While the GLWA Board of Directors approves the plan, the authority to spend does not occur until additional project review processes are completed prior to the procurement process. Depending on the scope and dollar amount of the project, final approval to proceed may include customer engagement, Chief Executive Officer review, and GLWA Board CIP Committee review and/or GLWA Board action.

Recognizing the difference scope between the CIP, which has a broader strategic view of system needs versus the tactical financial plan which models use of cash reserves and future borrowing, GLWA is utilizes "capital spend rate assumption policy". This policy, further discussed below, was adopted by the GLWA Board of Directors on November 28, 2018 and was first implemented three years ago with the FY 2020 – 2024 CIP.

CAPITAL PROGRAM SPEND RATE ASSUMPTION POLICY

Purpose: The Spend Rate Assumption (SRA) policy provides an analytical approach to bridge the total dollar amount of projects in the Capital Improvement Plan (CIP) with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for non-budgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established in the CIP. The outcome is a reasoned balance between a desired level of capital investment with financial strategies to manage debt levels and control adjustments to customer charges.

Policy: Annually, a projected spend rate assumption for the financial plan related to the proposed capital improvement plan will be established based upon pertinent factors and data available at that time. Such pertinent factors and data will include the mix of projects and phases in the proposed CIP, interdependency risk, criticality, and other measures provided by the GLWA team members that develop and manage the CIP projects. That spend rate assumption will be presented to the Audit Committee no later than December 31st each year after the GLWA Board, Capital Improvement Planning Committee, and Member Partners have had the opportunity to review the draft capital improvement plan.

The remainder of this chapter provides an analysis of information in the CIP database that will inform the spend rate assumption for future financial plans.

COST POOL RESPONSIBILITY

Revenue requirements are the basis for establishing customer charges. Included in that calculation are operations and maintenance expense, debt service, Master Bond Ordinance (MBO) reserve requirements, system lease requirements, revenue financed capital targets, water residential assistance program commitments, and legacy obligations. The cost of capital improvements is allocated to customers among four general cost pools as described following:

1. ***Common-to-All (CTA)*** represents costs that are allocable to all customers.
2. ***Oakland-Macomb Interceptor Drainage District (OMID)*** represents costs that are allocable to a portion of the sewer system that receives flows from OMID's system.
3. ***Suburban Only*** represents costs that are allocable to wholesale customers outside the City of Detroit.

Document received by the MI Wayne 3rd Circuit Court.

4. ***CSO 83/17*** represents capital costs that are allocated based upon terms of a 1999 rate settlement agreement sanctioned by a federal court. The outcome was an allocation of 83% of "combined sewer overflow control facilities" (CSO) costs to City of Detroit customers and 17% to other customers.

As shown in Table 25 and Table 26 below, the majority of the proposed capital improvements are allocated to the common-to-all cost pool.

Table 25. Water Cost Allocation

Financial figures are in thousands of dollars ($1,000's).

COST ALLOCATION	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
WATER							
Common-To-All	$ 174,619	$ 196,596	$ 195,052	$ 166,823	$ 178,316	$ 911,407	97.7%
Suburban Only	4,591	4,117	4,113	4,113	4,113	21,048	2.3%
Grand Total	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**932,455**	**100.0%**

Table 26. Wastewater Cost Allocation

Financial figures are in thousands of dollars ($1,000's).

COST ALLOCATION	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
SEWER							
Common-To-All	$ 90,730	$ 111,816	$ 144,793	$ 148,184	$ 150,126	$ 645,650	87.4%
CSO 83/17	13,367	8,718	7,514	14,002	19,176	62,778	8.5%
TBD	1,953	2,655	8,633	10,837	5,897	29,975	4.1%
Grand Total	**106,050**	**123,190**	**160,940**	**173,024**	**175,200**	**738,403**	**100.0%**

Document received by the MI Wayne 3rd Circuit Court.

CIP FUNDING BASED ON ESTIMATED USEFUL LIFE

The long-term financial plan differentiates between appropriate uses of long-term debt versus revenue financed capital in the Improvement & Extension (I&E) Fund as defined in the MBO. As a general rule, assets with a life of less than 20 years are funded with I&E Funds. Assets with a life greater than 20 years are funded with a blend of debt and I&E Funds. Building I&E Funds over time allows GLWA to position itself to further reduce reliance on debt. Exceptions to that plan may be to take advantage of lower cost borrowings from the revolving fund loan programs or a revision of the plan to optimize refunding savings. For this reason, the five-year financial plan is regularly reviewed during the fiscal year. Updates may also occur due to grant awards, collaboration opportunities, and changes in budgetary conditions. The financial plan reflects grants and federal and state loans only after approval is received by the grantor or authorizing party.

As shown in Table 27 and Table 28, most of the CIP projects are longer-lived assets, defined as greater than a 20-year estimated useful life. Shorter-lived assets scheduled for acquisition or replacement are identified in the five-year capital outlay plan provided in the GLWA Biennial Budget and Five-Year Plan document.

Table 27. Asset Life and Eligibility for Funding with Long-Term Debt: Water

Financial figures are in thousands of dollars ($1,000's).

ASSET LIFE RANGE	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
WATER							
<20 Years	$ 24,813	$ 20,769	$ 20,583	$ 16,214	$ 19,872	$ 102,251	11.0%
>20 Years	154,398	179,944	178,582	154,722	162,557	830,203	89.0%
Grand Total	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**932,455**	**100.0%**

Table 28. Asset Life and Eligibility for Funding with Long-Term Debt: Wastewater

Financial figures are in thousands of dollars ($1,000's).

ASSET LIFE RANGE	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
SEWER							
<20 Years	$ 5,175	$ 5,640	$ 3,104	$ 4,599	$ 5,019	$ 23,536	3.2%
>20 Years	100,875	117,550	157,836	168,425	170,181	714,866	96.8%
Grand Total	**106,050**	**123,190**	**160,940**	**173,024**	**175,200**	**738,403**	**100.0%**

Document received by the MI Wayne 3rd Circuit Court.

PROJECT STATUS ANALYSIS

As shown in Table 29. and Table 30. below, approximately 10% of the water system projects and 14% of the wastewater system projects are classified as "Future Planned Start". Note that a project designated as "Active" includes all projects where at least one phase is active, including GLWA Salaries phases.

Table 29. Project Status Analysis: Water

Financial figures are in thousands of dollars ($1,000's).

PROJECT STATUS	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
WATER							
Active	$ 164,812	$ 173,098	$ 172,162	$ 144,877	$ 131,283	$ 786,232	84.3%
Under Procurement	7,834	16,600	13,083	7,101	7,042	51,660	5.5%
Future Planned Start	6,564	11,016	13,920	18,959	44,104	94,563	10.1%
Grand Total	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**932,455**	**100.0%**

Table 30. Project Status Analysis: Wastewater

Financial figures are in thousands of dollars ($1,000's).

PROJECT STATUS	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
SEWER							
Active	$ 83,834	$ 89,655	$ 113,741	$ 114,036	$ 101,116	$ 502,382	68.0%
Under Procurement	13,054	20,731	27,832	31,155	38,863	131,636	17.8%
Future Planned Start	9,163	12,803	19,367	27,833	35,220	104,385	14.1%
Grand Total	**106,050**	**123,190**	**160,940**	**173,024**	**175,200**	**738,403**	**100.0%**

Document received by the MI Wayne 3rd Circuit Court.

PHASE CATEGORY ANALYSIS

Often projects are broken up into several phases related to how the project will be delivered and managed. Categories may be grouped to align with work to be performed within each individual phase. Individual categories are identified and named below, however, several categories may exist for each phase. In this case, this implies the same vendor, under one contract, will be performing multiple categories of the overall project. The current project categories are identified in the sidebar to the right.

As shown in Table 31. and Table 32. below, the majority of the dollars are allocated to construction and design build. From a financial standpoint, this increases the validity of the projected CIP spend once a contract is awarded as there are significantly less dollars assigned to pre-construction activities.

PROJECT CATEGORIES

- Study (S)
- Design (D)
- Construction (C)
- Construction Assistance (CA)
- Design and Build (DB)
- Design Build Assistance (DBA)
- Construction Management (CM)
- Project Management (PM)
- To Be Determined (TBD)

Table 31. Phase Category Analysis: Water

Financial figures are in thousands of dollars ($1,000's).

PHASE CATEGORY	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
WATER							
Study	$ 3,118	$ 2,588	$ 2,527	$ 2,527	$ 2,561	$ 13,322	1.4%
Study, Design & Construction Assistance	5,229	3,532	3,010	1,638	1,824	15,232	1.6%
Design	1,114	1,000	1,000	1,000	5	4,120	0.4%
Design & Construction Assistance	7,610	11,747	12,427	8,988	6,770	47,543	5.1%
Design & Construction Management	0	0	0	0	0	0	0.0%
Design-Build	61,739	79,210	65,367	56,375	66,162	328,854	35.3%
Construction	72,150	83,544	95,191	81,610	78,570	411,066	44.1%
Construction Assistance & Management	0	0	0	0	0	0	0.0%
GLWA Salaries	2,247	2,181	1,016	873	751	7,067	0.8%
TBD	26,002	16,911	18,626	17,926	25,787	105,252	11.3%
Grand Total	**179,210**	**200,713**	**199,165**	**170,936**	**182,430**	**932,455**	**100.0%**

Document received by the MI Wayne 3rd Circuit Court.

Table 32. Phase Category Analysis: Wastewater

Financial figures are in thousands of dollars ($1,000's).

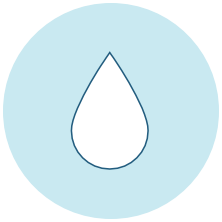
PHASE CATEGORY	PROJECTED CAPITAL EXPENDITURES					TOTAL FY'S 2022-2026	PERCENT OF FIVE-YEAR TOTAL
	FY22	FY23	FY24	FY25	FY26		
SEWER							
Study	$ 604	$ 604	$ 675	$ 1,254	$ 1,254	$ 4,391	0.6%
Study, Design & Construction Assistance	11,933	8,648	9,517	7,764	7,071	44,932	6.1%
Design	3,300	4,200	2,000	3,400	4,100	17,000	2.3%
Design & Construction Assistance	6,324	4,340	2,145	1,619	2,296	16,724	2.3%
Design & Construction Management	501	501	502	501	11	2,016	0.3%
Design-Build	26,219	21,966	14,950	14,355	8,750	86,240	11.7%
Construction	34,749	54,224	100,014	106,915	110,133	406,036	55.0%
Construction Assistance & Management	447	350	175	125	0	1,097	0.1%
GLWA Salaries	1,779	1,448	1,288	1,424	1,226	7,164	1.0%
TBD	20,193	26,908	29,674	35,668	40,360	152,802	20.7%
Grand Total	**106,050**	**123,190**	**160,940**	**173,024**	**175,200**	**738,403**	**100.0%**

Document received by the MI Wayne 3rd Circuit Court.

6 PROJECT DESCRIPTIONS

Document received by the MI Wayne 3rd Circuit Court.

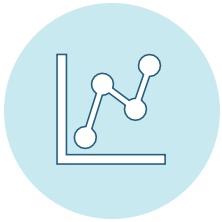
WATER PROJECTS



88 PROJECTS



5-YEAR CIP
$935 Million



10-YEAR OUTLOOK
$2.0 Billion



FOR MORE: APPENDIX A
Find the full Business Case Evaluations for Water Projects in Appendix A.

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111001

Project Title: Lake Huron Water Treatment Plant, Low-Lift, High Lift and Filter Backwash Pumping System Improvements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Representative Switchgear to be Replaced under CIP 111001

Project Engineer/Manager: Eric Kramp

Director: Grant Gartrell

Project Score
71.6

Problem Statement:

Improvements needed to align the existing low lift pumping rate with the Lake Huron WTP production rate per the 2015 Water Master Plan Update.

Currently, constant speed pumping at the low-lift portion of the plant can force it to operate in a semi -batch mode during night-time, low-demand periods. Existing electrical gear for low- and high-lift pumping units and filter backwash pumps are original to plant, beyond useful service life and need to be replaced to improve reliability, serviceabil...

Scope of Work/Project Alternatives:

This CIP will be delivered using a design-bid-build project delivery method. The project's scope of improvements will generally include rehabilitation or replacement of the following systems and equipment:
1. High and medium voltage electrical system at the facility
2. Low-lift pumps, right-sized to current and projected demands.
3. High-lift pumping units, right-sized to current and projected demands.
4. Filter wash water pumps and related equipment.
5. Phosphoric acid storage tanks and f...

Other Important Info:

*Innovation note: Ensure energy efficiency. Coordination between existing pumping unit and motor required during design. Critical speed analysis may show pump improvements needed to operate at reduced speeds. Uncovering an innovative rehabilitation design to minimize maintenance of existing drives.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$268	$48	$48	$57	$27	$26	$21	$22	$22	$117	$45
Design & Construction Assistance # 1	$10,466	$164	$164	$1,935	$1,935	$1,656	$793	$791	$791	$5,966	$2,200
Construction (Build) # 1	$46,444	$0	$0	$0	$0	$2,899	$8,052	$10,025	$10,025	$31,001	$15,443

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111002

Project Title: Lake Huron Water Treatment Plant, Miscellaneous Mechanical HVAC Improvements

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Mechanical Room - New WCHP and Boilers

Project Engineer/Manager: Brian VanHall

Director: Grant Gartrell

Project Score
78.6

Problem Statement:

Existing heating, ventilating and air-conditioning systems Lake Huron are 40 years old and are either not operable or are energy-inefficient. Ventilation is inadequate in the filter areas of the plant. Indoor summer-time temperatures exceed 90F in the administration building and process control laboratory due to no air conditioning in this building. These elevated temperatures make for very uncomfortable working conditions for the chemists stationed in the laboratory full-time and plant team me...

Scope of Work/Project Alternatives:

This CIP project is being delivered using a design-bid-build project delivery model. The scope of work generally includes installing:
1. High-efficiency, natural gas-fired hot-water boilers, hot-water radiators, and hot-water and cold -water return piping throughout the facility.
2. Air-conditioning system for the administration building, including the process control laboratory and control room.
3. Roof-top mounted air handlers to ventilate the filter buliding.
4. Heating and ventilating sy...

Other Important Info:

There are three contracts associated with this CIP, including:
CS-1732 Engineering Design and Construction Administration Contract (active)
CON-182 Backflow Preventer Construction Contract (closed)
CON-212 HVAC Construction Contract (active)

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$146	$126	$126	$20	$0	$0	$0	$0	$0	$0	$0
Study & Design & Construction Assistance # 1	$746	$746	$746	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 2	$7,813	$7,813	$7,813	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111004

Project Title: Lake Huron Water Treatment Plant, Electrical Tunnel Rehabilitation

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**



New staircase well access to Tunnel

Project Engineer/Manager: Jorge Nicolas

Director: Grant Gartrell

Project Score
0

Problem Statement:

Existing electrical tunnel concrete has failed in the past and has seen emergency repairs. This project will provide permanent concrete and structural improvements to this tunnel that carries the primary electrical feed to the entire plant. The existing medium voltage two electrical feeders are old and beyond their 30-years service life. This project will replace the two electrical feeders with new.

Scope of Work/Project Alternatives:

This CIP project is being delivered using a design-bid-build project delivery model. The scope of work generally includes restoring concrete within the medium-voltage feeder electrical tunnel to prevent water intrusion and further damage to concrete, electrical cables, conduits, duct banks, and cable trays. The work also includes replacing the medium-voltage electrical feeders between the site's primary transformers and the low-lift pumping plant.

Other Important Info:

Moved construction start to FY2019, added GLWA costs. JN 2019

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$106	$106	$106	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$159	$159	$159	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$3,627	$3,627	$3,627	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111006

Project Title: Lake Huron Water Treatment Plant, Filter Instrumentation and Raw Water Flow Metering Improvements

Project Status: Active - Pre-Procurement - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Ariadna Risher

Director: Grant Gartrell

Project Score
62.2

Problem Statement:
The filter instrumentation and raw water metering at the Lake Huron WTP is not functioning and is in need of replacement.

Scope of Work/Project Alternatives:
Contract is being redeveloped for full integration with CS-108 guidelines.

Other Important Info:
Contract is being redeveloped for full integration with CS-108 guidelines.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$520	$66	$66	$190	$117	$143	$3	$1	$0	$264	$0
Study & Design & Construction Assistance # 1	$1,007	$1,007	$1,007	$0	$0	$0	$0	$0	$0	$0	$0
Future Design Build	$15,262	$0	$0	$25	$5,079	$5,079	$5,079	$0	$0	$15,237	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111007

Project Title: Lake Huron Water Treatment Plant, Raw Sludge Clarifier and Raw Sludge Pumping System Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Overall progress photo that shows new WWRB, JS1, JS2 and SPS 8/20/20

Project Engineer/Manager: Brian VanHall

Director: Grant Gartrell

Project Score
53.2

Problem Statement:

The existing WWRB and clarifiers have noticeable deteriorating concrete and walls that have permanently deflected. There is also concrete deterioration in the sludge pumping station as well as difficulties with maintenance and operation of the existing pumps. For example, the existing pumps are not equipped with permanent lifting mechanisms. A truck with a crane has to be mobilized to the plant to pull an existing pump when maintenance or repairs are needed. The new sludge pumping units will be...

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. GLWA retained an engineering consultant under GLWA Contract No. CS-171 “Raw Sludge Clarifiers and Raw Sludge Pumping Station Improvements” to conduct a condition assessment and design improvements for LH raw sludge handling. The WWRB, Clarifier Nos. 1 and 2, and the sludge pumping station all require improvement. The scope of construction involves:
1. Demolish existing clarifiers and sludge pumping station
2. Con...

Other Important Info:

This project should be completed prior to cessation of treatment at the Northeast WTP.

Project History: The clarifier/backwash structure is original to the plant. The tank walls appear to have been inadequately designed and/or constructed to withstand the loading of the surround soils.

Challenges: Improvements will require coordination with plant operations (filter backwashing, sedimentation basin cleaning) and requires bypass pumping due to signficant leakage from filter outlet valves.

Current Expenses (All figures are in $1,000’s)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$171	$58	$58	$100	$13	$0	$0	$0	$0	$13	$0
Study & Design & Construction Assistance # 1	$1,556	$1,049	$1,049	$430	$76	$0	$0	$0	$0	$76	$0
Construction (Build) # 1	$7,454	$4,780	$4,780	$2,579	$95	$0	$0	$0	$0	$95	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111008

Project Title: Lake Huron Water Treatment Plant, Architectural Programming for Laboratory and Admin Building Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location:

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: TBD

Director: Grant Gartrell

Project Score
40.6

Problem Statement:

The Lake Huron Water Treatment Plant was constructed in the early 1970s and started operating in 1976. The existing process control laboratory and administration building interiors are original construction, including but not limited to flooring, wall coverings, ceilings, lab cabinetry, control room boards, bathroom fixtures, and lighting fixtures. The original control room board is still located in the laboratory and consumes a large amount of space that is not used and inefficient. The archit...

Scope of Work/Project Alternatives:

This will be a study phase project that will involve architectural programming to determine the most efficient architectural layout that meets current process laboratory control technology and administrative workflow practices; and that can be provided through a construction renovation project within the existing building footprint.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$256	$0	$0	$0	$0	$0	$0	$0	$27	$27	$229
Study # 1	$940	$0	$0	$0	$0	$0	$0	$0	$50	$50	$890

Document received by the MI Wayne 3rd Circuit Court.

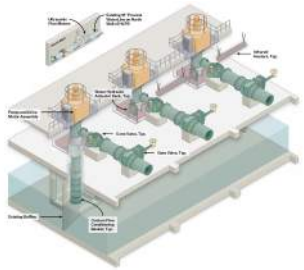
CIP Number: 111009

Project Title: Lake Huron Water Treatment Plant - High Lift Pumping, Water Production Flow Metering and Yard Piping Improvements

Project Status: Active - Procurement - Board Approved - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Conceptual new h/L pump arrangement

Project Engineer/Manager: Brian VanHall

Director: Grant Gartrell

Project Score
62.2

Problem Statement:

Three new, smaller capacity, high-lift pumping units are needed to provide reduced finished water flows out of Lake Huron WTP to accommodate the relocation of the 96-inch transmission main south of Dorsey-Dickenson valve and to accommodate the installation of a new water production flow meter at the Lake Huron WTP. The three, new smaller capacity high-lift pumping units will also serve a longer term need to better match lower diurnal demands seen at the Lake Huron WTP. Installation of the new w...

Scope of Work/Project Alternatives:

This project will be delivered using a design-build project delivery method. The scope of work involves designing and building a new water production flow meter and associated meter vault to more accurately measure finished water production flows from the facility. This work will also entail constructing additional high-lift, finished water header piping, valves and appurtenances to facilitate construction of the new metering infrastructure. The scope also includes installing three new 35 milli...

Other Important Info:

N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$458	$117	$117	$140	$61	$60	$60	$21	$0	$201	$0
Design-Build # 1	$30,023	$0	$0	$500	$1,000	$7,000	$7,523	$7,000	$7,000	$29,523	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111010

Project Title: Filtration Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Eric Kramp

Director: Grant Gartrell

Project Score
71

Problem Statement:

Significant issues exist in the filtration process of the LHWTP:
Filter influent and drain valves do not seal well, creating water loss
Filter underdrains and media have not been evaluated and require confirmation of condition
Isolation valves between the filters, filtered water conduit, filter to drain, and clearwells are known to leak heavily

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work will generally include the following:
2. Construct filtration improvements, including filter media, filter auxiliary scoring equipment, filter wash water troughs,and other filter tank work.
3. Replace the existing filter control valves and valve operators with new.
4. Rehabilitate concrete associated with the filters.

Replace isolation and valves as necessary
Repaint WW Conduit
Replace und...

Other Important Info:

n/a

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$470	$0	$0	$9	$38	$38	$85	$386
Design & Construction Assistance # 1	$4,298	$0	$0	$0	$0	$23	$23	$4,275
Construction (Build) # 1	$37,438	$0	$0	$0	$0	$0	$0	$37,438

Document received by the MI Wayne 3rd Circuit Court.

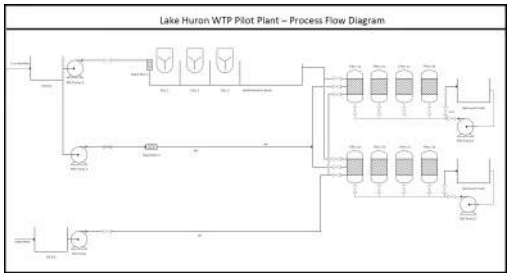
CIP Number: 111011

Project Title: Lake Huron WTP Pilot Plant

Project Status: Active - Procurement - Negotiation Phase - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron WTP

☐ **Project New to CIP:**

- ☑ **Innovation**
- ☐ **WW Master Plan**
- ☑ **Water Master Plan Right Sizing**
- ☐ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**



Lake Huron WTP Pilot Plant - Process Flow Diagram

Project Engineer/Manager: Nichole Sajdak

Director: John Norton

Project Score
0

Problem Statement:
Water Operations staff at Lake Huron would benefit from the ability to test potential changes to existing water treatment practices and investigate new and innovative treatment advances.

Scope of Work/Project Alternatives:
A small scale pilot plant provides opportunity for testing and investigation without disruption to the full scale facility. Skid mounted units mimicking treatment at Lake Huron: Chemical addition, modified direct filtration facilities and data monitoring and recording would be provided for team education and training.

Other Important Info:
Scope of work to include engineering services for planning, construction and training.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY26	5 Year Total	FY27+
GLWA Salaries	$91	$0	$0	$58	$23	$10	$0	$33	$0
Design-Build # 1	$3,157	$0	$0	$0	$1,697	$1,460	$0	$3,157	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 111012

Project Title: LHWTP-Flocculation Improvements

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Lake Huron
Lookup Location: Lake Huron
☑ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**

Project Engineer/Manager: Eric Kramp

Director: Grant Gartrell

Project Score
72

Problem Statement:
The flocculators at the Lake Huron Water Treatment Plant are non-functional. While the plant has been able to maintain water quality, the State of Michigan has flagged this a serious issue. This CIP Project corrects this issue and addresses other issues around the flocculation systems such as any found defects in process and structure.

Scope of Work/Project Alternatives:
The project will be executed on a traditional design/bid/build delivery process. Design/build would be ineffective as the selection of flocculation technology will be the primary driver of overall cost, and is unknown.

Other Important Info:
The contract will also correct a process defect in the plant, where a section of the station conduits can never be taken out of service without loss of the entire station. This will entail the construction of approximately 150 lineal feet of new parallel raw water conduit

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$228	$0	$0	$46	$38	$38	$35	$28	$28	$167	$15
Design & Construction Assistance	$2,212	$0	$0	$0	$500	$431	$431	$400	$400	$2,162	$50
Construction (Build)	$24,097	$0	$0	$0	$0	$0	$5,097	$5,000	$5,000	$15,097	$9,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 112002

Project Title: Northeast Water Treatment Plant, Low-Lift Pumping Plant Caisson Rehabilitation

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Northeast
Lookup Location: Northeast WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Govind Patel

Director: Grant Gartrell

Project Score
0

Problem Statement:
Low Lift Pump Discharge flumes were leaking and had significant concrete deterioration within the Low-Lift Pumping Plant Caisson at the Northeast WTP. Water leaks posed hazards to nearby electrical equipment as well as presented potential slip hazards for employees. Additionally, the glazed tile at the upper elevations of the low-lift motor floor were unstable which presented a safety hazard to those working on the low lift pump motor floor.

Scope of Work/Project Alternatives:
The low lift pump discharge flumes have been lined with stainless steel plates to stop water leakage into the low lift pump station operating floors. The unstable glazed tile blocks were replaced with new.

Other Important Info:
The project is under construction and is substantially complete.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$63	$63	$63	$0	$0	$0	$0	$0	$0	$0	$0
Study & Design & Construction Assistance # 1	$277	$277	$277	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$833	$833	$833	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 112003

Project Title: Northeast Water Treatment Plant High-Lift Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Northeast
Lookup Location: Northeast WTP

☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☑ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☑ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Ariadna Risher

Director: Grant Gartrell

Project Score
68

Problem Statement:

Existing mechanical, electrical, instrumentation, and control system equipment within the high-lift pumping plant at the Northeast Water Treatment Plant is mostly original (i.e. 1956). Both medium-voltage and low-voltage switchgear are beyond their useful service life. Stock replacement parts are no longer available. When repairs are needed to the switchgear, then either un-used redundant gear are used for parts or custom-manufactured gear is obtained at a high cost with long lead times. In som...

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work generally includes:
1) Replace medium voltage switchgear, Unit Substation 1, all motor control centers (MCCs), power panels, transformers, and lighting panels.
2) Replace HL Pumps and size according to projected demands.
3) Replace pump motor controls to accommodate remote operation.
4) Replace primary transformers and test/replace feeders to property lines. Coordinate with DTE to ensure th...

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$701	$6	$6	$279	$173	$215	$5	$3	$3	$398	$18
Design & Construction Assistance # 1	$10,845	$0	$0	$0	$0	$0	$857	$1,928	$1,718	$4,503	$6,342
Construction (Build) # 1	$60,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$60,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 112005

Project Title: Northeast Water Treatment Plant - Replacement of Covers for Process Water Conduits

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Northeast
Lookup Location: Northeast WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
61

Problem Statement:
The existing steel covers that cover the entry openings into filtered water conduits at the plant are significantly deteriorated to the point where the covers are not water-tight and require replacement. Therefore, these covers are unsafe and have been identified by the EGLE in the most recent sanitary survey as requiring replacement. Temporary barricades are in place to prevent injury and further damage.

Scope of Work/Project Alternatives:
Replace steel covers, frames and associated structural support beams over the filtered water conduits.

Other Important Info:
Challenges: Temporary support of sluice gate operators and partial shutdown of certain portions of the plant to facilitate replacement of the existing steel covers, frames,and associated structural supports that are located immediately above the filtered water conduits.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$74	$26	$26	$43	$5	$0	$0	$0	$0	$5	$0
Construction (Build) # 1	$1,015	$413	$413	$602	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 112006

Project Title: Northeast Water Treatment Plant Flocculator Replacements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Northeast
Lookup Location: Northeast WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
67.4

Problem Statement:

Most of the existing flocculators are not operable and are beyond repair, which reduces sedimentation effectiveness and creates a greater load on the filtration process. It should be noted that treatment at the Northeast Water Treatment Plant is planned to be decommissioning, as recommended in the 2015 Water Master Plan Update, in order to align overall system water treatment capacity with current as well as 20-year projected water demands. As such, the scope of improvements to flocculation und...

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-bid-build project delivery method and generally includes the following scope of work:
1. Demolition of all existing flocculators including drives, motors, shafts, and paddles.
2. Installation of all the flocculators including drives, motors, shafts, and paddles.
3. Associated architectural, structural, and electrical upgrades within both of the flocculator buildings.

Other Important Info:

All existing flocculators will be replaced under this CIP because the treatment works at Northeast are slated for decommissioning.

Challenges: Water production during construction.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$316	$186	$186	$55	$22	$22	$22	$9	$0	$75	$0
Construction (Build) # 1	$11,000	$0	$0	$0	$2,500	$3,000	$3,000	$2,500	$0	$11,000	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 113002

Project Title: Southwest Water Treatment Plant, High-Lift Pump Discharge Valve Actuators Replacement

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Southwest
Lookup Location: Southwest WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Shakil Ahmed

Director: Terry Daniel

Project Score
0

Problem Statement:
Existing oil hydraulic high lift valve actuators are leaking oil and at the end of service life. The leaking actuators pose safety concerns and replacement of valve actuators is needed.

Scope of Work/Project Alternatives:
This project involves replacement of the existing oil hydraulic actuators on the high lift pumping units with electric motor operators. A new gas-fired generator is being installed to provide backup power to the electric motor operators. In addition, a section of new high lift header is being installed along with header isolation valves for the high lift pumps.

Other Important Info:
The construction contract, CON-281, for this CIP project was awarded to Weiss Construction and the notice to proceed issued on October 1, 2018. The project is scheduled for completion by November 2021.

Challenges: Sequencing the demolition and replacement of the existing oil hydraulic power system will require shutdown of individual high lift pumping units.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$202	$175	$175	$23	$4	$0	$0	$0	$0	$4	$0
Design & Construction Assistance # 1	$1,074	$584	$584	$0	$124	$366	$0	$0	$0	$491	$0
Construction (Build) # 1	$5,452	$4,514	$4,514	$0	$373	$283	$283	$0	$0	$938	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 113003

Project Title: Southwest Water Treatment Plant, Low- and High-Lift Pumping Station, Flocculation and Filtration System Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Southwest
Lookup Location: Southwest WTP

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Shakil Ahmed

Director: Grant Gartrell

Project Score
0

Problem Statement:
Most of the plant's process mechanical, building mechanical and electrical systems are original to the plant (circa1962) and are nearing or are past end of useful service life. As a result, additional plant maintenance effort is necessary to meet plant operational needs.

Scope of Work/Project Alternatives:
The work includes design and construction services for the replacement of numerous large-diameter butterfly valves and water-control gates throughout the low-lift, high-lift, filtration, and flocculator buildings. The low- and high-lift pumping units, flocculators and filters will all be improved considered the current and 20-year projected demands so that they are all right sized.

Other Important Info:
This work is included in the 2015 water master plan update. The aforementioned water master plan update also recommends that GLWA consider decommissioning treatment at the Southwest Water Treatment Plant if water demand continues to trend in a downward direction, which has been the case.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$342	$0	$0	$0	$0	$0	$0	$0	$0	$0	$342
Design & Construction Assistance # 1	$21,470	$0	$0	$0	$0	$0	$0	$0	$0	$0	$21,470

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 113006

Project Title: Southwest Water Treatment Plant Chlorine Scrubber, Raw Water Screens & Related Improvements

Project Status: Active - Procurement - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Southwest
Lookup Location: Southwest WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
0

Problem Statement:
The existing chlorine gas scrubber is nearing its end of useful service life and its absorption media will be expiring within the next few years; and therefore requires replacement. Similarly, the existing raw water screening system are original to the plant (circa 1962), are not functional, and are beyond repair. As a result, this system also requires replacement. Both the chlorine gas scrubber and raw water screening systems will require ancillary equipment improvements related to electrical,...

Scope of Work/Project Alternatives:
This project will be delivered under a design-build project delivery model. The existing gas chlorine scubber and raw water screens will be replaced with new system equipment meeting current building codes and industry best practices. The new gas chlorine scrubber and raw water screens that will be installed will be designed for current and projected water demans in accordance with the recommendations of the 2015 Water Master Plan Update project; therefore this new equipment will be right-sized...

Other Important Info:
GLWA intends to use the services of AECOM under its CIP program management contract to implement this design-build project.

E. Klun 8/27/20 update as follows:
1. RFP for DB contract delivery underway by AECOM under CS-272 Task 71011A.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total
GLWA Salaries	$702	$130	$130	$245	$115	$34	$57	$78	$42	$327
Study	$629	$0	$0	$0	$568	$61	$0	$0	$0	$629
Design-Build # 1	$6,000	$0	$0	$0	$4,000	$1,500	$500	$0	$0	$6,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 113007

Project Title: Southwest Water Treatment Plant Architectural and Building Mechanical Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Southwest
Lookup Location: Southwest WTP

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Shakil Ahmed

Director: Grant Gartrell

Project Score
0

Problem Statement:

Most of the existing low- and high- lift pumping station and administration buildings' mechanical equipment (HVAC, dehumidification, plumbing) and architectural components such as doors, windows, floors, and furnishings, are over 50 years old; and therefore are beyond their normal useful service life. Additional architectural improvements at Southwest Water Treatment Plant will include renovation of staff locker rooms and bathrooms, including a restroom designed for female staff.

Scope of Work/Project Alternatives:

This project would be delivered using a design-bid-build project delivery method. The scope of work would generally include:
1. Design of the project.
2. Remove existing building mechanical and architectural systems.
3. Install new heating and ventilating systems process and administration areas.
4. Install new air-conditioning systems for administration areas.
5. Install new dehumidification systems for the high -lift header vault.
6. Install new interior and exterior doors and windows.
...

Other Important Info:

CS-1528 water master plan update included these improvements.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY27+
GLWA Salaries	$123	$0	$0	$123
Design & Construction Assistance # 1	$3,044	$0	$0	$3,044

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114001

Project Title: Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
0

Problem Statement:
The existing filtration system equipment (i.e. filter media, surface wash sweeps, filter piping, filter control valves & operators, electrical, lighting, instrumentation and controls) in the 1958 Filter Plant are original to construction and are all well beyond their useful service life. Reconstruction of the 40 filters in the 1958 Filter Plant and 19 filters in the 1930 Filter Plant that have experienced failures to their plastic-block underdrains is required to maintain reliable water product...

Scope of Work/Project Alternatives:
This project includes the study, design (CS-1425) and construction assistance (CS-1425 and CS-200) of improvements to the Springwells WTP that includes the rehabilitation of the 1958 Filters, rehabilitation of failed 1930s Filters, update of Operation and Maintenance Manuals, and replacement of Phosphoric Acid feed system. Provide construction services to furnish and install new filter media, underdrains, filter valves, and rate controllers; replace the existing filter control consoles, hydraul...

Other Important Info:
There are a total of 108 filters at the Springwells Water Treatment Plant. This project has reconstructed 59 of these filters, including all 40 filters at the 1958 filter building and 19 filters at the 1930 filter building. The 19 filters at the 1930 filter building were previously equipped with plastic-block underdrains with porous plates. These underdrains failed and were replaced with low-profile type 316 stainless steel, slotted direct-media retaining underdrains.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$1,192	$1,192	$1,192	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$2,788	$2,788	$2,788	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$76,848	$76,848	$76,848	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114002

Project Title: Springwells Water Treatment Plant, Low-Lift and High-Lift Pumping Station Improvements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☑ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
69.2

Problem Statement:

Existing low- and high-lift pumping system electrical switchgear is original (1930s) and are well beyond their useful service life. This switchgear is unsafe, not reliable and is oversized for current and projected demands. In addition, the existing pumping units are a mix of 1930s and 1950s units and are also in need of either replacement or in the case of the pumps rehabilitation. The exterior windows on the pumping plant building are also original (1930s), are in poor condition and are not w...

Scope of Work/Project Alternatives:

This CIP project will be delivered under a design-bid-build project delivery using a single-prime engineering consultant and multiple prime construction contracts to deliver the entire built project. The scope of work generally includes:
1. Replacement of low- and high-lift pumping units, including pumps, motors, valves, and piping.
2. Replacement of exterior windows in the pump house, turbine house, boiler house, and switch house.
3. Replacement of medium-voltage electrical system.
4. Repl...

Other Important Info:

E. Klun 8/19/20 updates:
1. Scope updates are being added to the design being completed under Contract CS-103 via Amendment No. 2 that is expected to go for approval in September of October 2020. Cashflow and schedule updates herein reflect both the engineering and construction impacts of an approved CS-103 Amendment No. 2.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$2,668	$357	$357	$248	$184	$197	$132	$132	$132	$777	$1,286
Study & Design & Construction Assistance # 1	$18,492	$3,292	$3,292	$2,859	$3,362	$1,938	$1,822	$451	$750	$8,324	$4,917
Design-Build # 1 (Contract A)	$203,062	$1,847	$1,847	$8,706	$13,000	$16,000	$18,000	$18,000	$17,509	$82,509	$110,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114003

Project Title: Water Production Flow Metering Improvements at Northeast, Southwest and Springwells Water Treatment Plants

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells, Northeast and Southwest WTP
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Jorge Nicolas

Director: Grant Gartrell

Project Score
0

Problem Statement:
Existing water production flow meters need to be rehabilitated to place back into reliable and accurate service.

Scope of Work/Project Alternatives:
Northeast Water Plant: rehabilitate 4 venturi meters, associated vaults, and replace 4 isolation gate valves.
Springwells Water Plant: rehabilitate 7 venturi meters and associated vaults.
Southwest Water Plant replace 4 venturi meters with new, including rehabilitation of the existing vaults.

Other Important Info:
Challenges: Removing and replacing existing meters in original piping requires isolation using existing yard piping and valving.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$169	$169	$169	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$1,141	$1,141	$1,141	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$6,846	$6,846	$6,846	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114005

Project Title: Springwells Water Treatment Plant, Administration Building Improvements & Underground Fire Protection Loop

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
67.4

Problem Statement:

Existing administration building is nearly 90 years old with many of its facilities being original. The building needs architectural, plumbing and electrical improvements. Improvements will provide reliable fire protection to all plant facilities, replace non-functioning isolation valves and hydrants, provide fire system backflow protection, and bring the fire system into conformance with the requirements of the Dearborn Fire Marshal.

Scope of Work/Project Alternatives:

The work includes, but not necessarily limited to, removal and replacement of the existing plumbing piping, fittings, valves, plumbing fixtures, and any other necessary accessories. The existing underground fire protection line loops the Pump, Switch, Boiler and Turbine houses and is supplied water off the high lift headers in the Pump House Header Vault. The supply does not currently have backflow prevention and several branches off the loop used to feed an irrigation system serving the grassy...

Other Important Info:

The project was first identified in the November 2002 Needs Assessment completed by Hazen & Sawyer under CS-1304. The opinion of probable construction at that time for just replacing the existing piping was $1,076,400.

Project History: The fire loop and appurtenances are original to the existing plant commissioned around 1930. The loop crosses the construction staging area (blue tarps shown in the Project Map from Contract SP-563) in the northeast corner of the site and has been exposed to ...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$367	$68	$68	$154	$66	$79	$0	$0	$0	$145	$0
Study & Design & Construction Assistance # 1	$1,893	$876	$876	$222	$344	$451	$0	$0	$0	$795	$0
Construction (Build) # 1	$7,000	$0	$0	$0	$3,250	$3,250	$500	$0	$0	$7,000	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114007

Project Title: Springwells Water Treatment Plant Powdered Activated Carbon System Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Picture

Project Engineer/Manager: Justin Kietur

Director: Grant Gartrell

Project Score
46.6

Problem Statement:

Powdered activated carbon (PAC) is added to the treatment process to control taste and odor issues in the raw water supply. Taste and odor issues are infrequent, but the existing PAC system is difficult to operate and maintain when called upon for use. A more operator friendly and easier to maintain system is needed. The plant is only able to feed PAC through extraordinary measures due to deficiencies in the system. These extraordinary measures create additional operations and maintenance expen...

Scope of Work/Project Alternatives:

Replacement of the existing powdered activated carbon system with a new system of a design that provides improved operations and maintainability when PAC dosing is needed.
The scope of work will generally include the following:
1)Repair of concrete and piping at the dry carbon delivery station and replacement of dust collectors.
2)Inspection of underground carbon slurry tanks and repair of damage to concrete and fiberglass lining.
3)Replacement of PAC transfer pumps and associated piping, ...

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$201	$0	$0	$0	$0	$0	$201
Study & Design & Construction Assistance # 1	$820	$0	$0	$0	$0	$0	$820
Construction (Build) # 1	$3,000	$0	$0	$0	$0	$0	$3,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114008

Project Title: Springwells Water Treatment Plant 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Updated project photo

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
52.8

Problem Statement:
Existing sedimentation basin gates, guides and hoists are early 1930s and are in need of replacement. Also, operation of the sluice gates in their existing condition and design does not meet current best practices for safe maintenance and operation.

Scope of Work/Project Alternatives:
This CIP project is being delivered under a design-build project delivery method and generally includes the following scope of work:
1. Demolition of the existing eight (8) 1930 sedimentation basins gates, guides, and hoist.
2. Installation of the new eight (8) 1930 sedimentation basins gates, guides, and actuators.
3. Concrete restoration within the four (4) 1930 sedimentation basins.
4. Concrete repairs to the air vents, access ramp, access hatches on top of the 1930 sedimentation basin...

Other Important Info:
Challenges: Work will require the 1930's plant to be shutdown during three low demand seasons to complete the work. This contractor will need to coordination with CON-170: Sludge Removal and Disposal for cleaning the sedimentation basins, SP-563, CON-253, and other construction projects to ensure that the system can handle the long duration shutdown.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$387	$112	$112	$138	$70	$67	$0	$0	$0	$137	$0
Design # 1	$11	$0	$0	$11	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1	$13,526	$3,270	$3,270	$7,841	$2,415	$0	$0	$0	$0	$2,415	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114010

Project Title: Springwells Water Treatment Plant, Yard Piping and High-Lift Header Improvements

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
72.2

Problem Statement:

Six (6) of the seven (7) 72-inch mains leaving the site are original to the 1930 plant construction and consist of riveted steel pipe material. Main No. 7 is a prestressed concrete cylinder pipe material installed in 1958. The steel mains are known to be leaking and are in need of replacement to maintain system reliability. Additionally, isolation valves associated with the 72-inch mains need to be replaced because several are known to leak to the point where they are unable to isolate flow. It...

Scope of Work/Project Alternatives:

"This project consists of removal and replacement of the HPZ and IPZ discharge header piping and yard piping with additional replacement occurring outside the Springwell's Property to locations that minimize the number of isolation points required for work to be completed. The scope will be divided between IPZ and HPZ to maintain operations during construction. This project also includes misc. site infrastructure improvements such as the 12" Fire Loop, new guardhouse, secondary entrance off o...

Other Important Info:

E. Klun 8/28/20 update based on the outcome of AECOM's effort on CS-272 Task 71013A, Phase I is as follows:

The project will be delivered by multiple projects comprised of equipment procurement, DB construction, consultant services, and DBB construction contracts as follows:

1.Contract A, Procurement Contract for Header Sectional/Isolation Butterfly Valves – includes the procurement of large diameter, high-performance butterfly valves to be installed under Contract D.
2.Contract B, Pro...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$1,472	$241	$241	$267	$68	$114	$57	$57	$57	$354	$610
Design & Construction Assistance # 1	$18,000	$0	$0	$0	$500	$2,500	$3,000	$1,000	$1,000	$8,000	$10,000
Construction (Build) # 1	$181,000	$0	$0	$0	$1,000	$2,000	$10,000	$15,000	$15,000	$43,000	$138,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114011

Project Title: Springwells Water Treatment Plant Steam, Condensate Return, and Compressed Air Piping Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Maintenance building photo 1 of finished section of piping

Project Engineer/Manager: Brian VanHall

Director: Grant Gartrell

Project Score
0

Problem Statement:

The steam, condensate return, compressed air, and natural gas piping systems at the Springwells Water Treatment Plant need to be replaced to ensure overall reliability of the plant. These systems are original to the plant (i.e. from 1930s or 1950s) and are beyond their useful life. These existing steam and condensate systems are in poor condition and require multiple repairs each heating season due to frequent failures. These repairs often require taking the entire steam system out of service w...

Scope of Work/Project Alternatives:

This project is being delivered using a design-bid-build project delivery method. This engineering services contract involves designing a new, more energy-efficient steam heating system for the entire Springwells Water Treatment Plant, including all steam unit heaters, steam piping, condensate return piping, condensate return pumping stations, steam pressure reducing valves, and appurtenances. This project also involves replacing the compressed air piping in the plant used for service air. Once...

Other Important Info:

Many components of the existing system are original to the existing heating system, are not functioning and need to be demolished/removed. Seasonal work and sequencing with the heating season is required.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$526	$115	$115	$206	$101	$105	$0	$0	$0	$206	$0
Study & Design & Construction Assistance # 1	$1,385	$765	$765	$258	$289	$73	$0	$0	$0	$362	$0
Construction (Build) # 1	$23,629	$9,204	$9,204	$9,292	$4,983	$150	$0	$0	$0	$5,133	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114012

Project Title: SPW WTP Water Treatment Plant 1930 Filter Building-Roof Replacement

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Paula Anderson

Project Score
0

Problem Statement:
The existing roof over the 1930 filters is leaking in places and poses water quality concerns due to roof leaks.

Scope of Work/Project Alternatives:
This project encompasses replacement of the existing 1930 Filter Building roofing system, including the built-up roofing material, flashing, roof drains/conductors and sealing cap stones to prevent water from penetrating the building envelop and causing water damage. Construction activity under Contract SP-563 in 2014-2015 revealed that water damage has been on-going and is causing clerestory window lintel deterioration. Additionally, construction traffic under Contract SP-563 has shown the bu...

Other Important Info:
Challenges: Seasonal construction work, and construction will require working around new rooftop equipment installed under SP-563.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs
GLWA Salaries	$11	$11	$11
Design-Build # 1	$3,900	$3,900	$3,900

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114013

Project Title: Springwells Water Treatment Plant, Reservoir Fill Line Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: SPW WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☑ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
77.2

Problem Statement:

A new reservoir fill line to the Springwells Water Treatment Plant is needed to provide finished water to the Springwells high service area from the GLWA Southwest and Waterworks Park treatment plants while the Springwells raw water tunnel is rehabilitated under a separate contract. The new reservoir fill line will allow the Springwells high-lift pumping facility to operate and feed its high-pressure district while the treament works at Springwells are temporairly out of service. For example, t...

Scope of Work/Project Alternatives:

This project is being delivered under a design-bid-build project delivery method. The scope of work generally includes:
1. Designing the project.
2. Constructing the new reservoir fill piping, flow control energy disappaiting valves, valve vault, and appurtenances.
3. Connecting new piping to existing 72-inch diameter steel water transmission main.
4. Commissioning and testing the new reservoir filling facility.
5. Restoring the site.

E. Klun 8/20/20 updates as follows:
1. Add system w...

Other Important Info:

Potential delays due to isolation of 1926 main and coordination with CON-133 (WTP metering) requiring expercising and using old valves. Control of the reservoir filling operation by SCC with significant roles played by SWP, WWP, NEP and SPP operators.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$295	$233	$233	$62	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$359	$335	$335	$24	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$4,271	$3,018	$3,018	$1,252	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114016

Project Title: Springwells Water Treatment Plant 1958 Settled Water Conduits and Loading Dock Concrete Pavement Replacement

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
52

Problem Statement:

The existing concrete pavement that covers the 1958 settled water conduits has failed with significant concrete deterioration and corrosion of the reinforcement embedded steel. The condition of the concrete pavement has become much worse over the past 12 months. The condition of the concrete is poor and is crumbling in many major areas. The conditions in certain areas are such that there are now potential safety hazards to those who have to walk on the pavement. The plant chemists have to walk ...

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-bid-build project delivery method and generally includes the following scope of work:
1. Demolition of the existing concrete pavement that covers the 1958 settled water conduit and the loading dock.
2. Placement of new concrete pavement that covers the 1958 settled water conduit and the loading dock.
3. Demolition and installation of handrail around the 1958 settled water conduit.
4. Demolition of the existing concrete loading dock.
5....

Other Important Info:

Challenge: Equipment limitations on the settled water conduit and not damaging the structure concrete of the settled water conduit.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$411	$91	$91	$189	$66	$65	$0	$0	$0	$131	$0
Construction (Build) # 1	$1,870	$0	$0	$0	$500	$1,370	$0	$0	$0	$1,870	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114017

Project Title: Springwells Water Treatment Plant Flocculator Drive Replacements

Project Status: Active - Procurement - Board Approved - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Springwells WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
47

Problem Statement:
The existing flocculator drives, motors, and control panels are beyond useful service life.

Scope of Work/Project Alternatives:
This CIP will be delivered under a design-bid-build project delivery model. The scope of work will generally include the following:
1. Replacement of the existing flocculator drives, motors, and control panels.
2. Replacement of all drive shaft bearings and associated grease lines.
3. Replacement of access doors between the flocculator chambers
4. Replacement of ladder rungs into all flocculators.
5. Improvement of flocculation system related instrumentation and controls.

Other Important Info:
Implementation of this CIP project is being sequenced and coordinated with another Springwells WTP CIP project, namely the 1930 Sedimentation Basins Sluice Gate Improvements Project.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	5 Year Total
GLWA Salaries	$340	$1	$1	$154	$77	$85	$20	$2	$185
Design & Construction Assistance # 1	$1,893	$0	$0	$413	$244	$618	$618	$0	$1,480
Construction (Build) # 1	$10,125	$0	$0	$0	$50	$5,771	$4,304	$0	$10,125

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 114018

Project Title: Springwells Water Treatment Plant - Service Building Electrical Substation and Miscellaneous Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Springwells
Lookup Location: Water Treatment Plants
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Picture

Project Engineer/Manager: Justin Kietur

Director: Terry Daniel

Project Score
53

Problem Statement:
The electrical substation located inside the Service Building provides electrical service to the entire service building including the filter wash water pumping units. The existing electrical substation is a double-ended unit that has experienced corrosion to its interior components and electrical cables. As a result the substation does not automatically switch-over during power trips and requires manual switch-over, which defeats the purpose of the automatic switch-over feature of the substati...

Scope of Work/Project Alternatives:
Project will be delivered using a design-build project delivery. The scope of improvements will generally include:
1. Replacement of the electrical substation in the 1958 Service Building
2. Connection of replacement electrical substation to Ovation for status monitoring
3. Replacement of electrical panel in 1930 plant and new conduit and cable runs to the associated equipment
4. Rehab of masonry on exterior of phosphoric acid fill station
5. Insulation of piping and pipe chase behind phos...

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	5 Year Total
GLWA Salaries	$282	$0	$0	$100	$80	$95	$7	$0	$182
Design-Build # 1	$1,263	$0	$0	$0	$0	$0	$0	$1,263	$1,263

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 115001

Project Title: Water Works Park Water Treatment Plant Yard Piping, Valves and Venturi Meters Replacement

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Waterworks Park WTP
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☑ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Timothy Kuhns

Director: Grant Gartrell

Project Score
65.4

Problem Statement:
The existing yard piping is 80-140 years old and requires replacement with new piping installed in a more efficient configuration.

Scope of Work/Project Alternatives:
This project is being delivered using a design-bid-build project delivery method. The scope of work generally includes:
1. Designing the project.
2. Removing existing yard piping, valves and buried venturi meters and related vaults.
3. Constructing new yard piping, valves, water production flow meters, buried valve and meter vaults, and related system equipment.
4. Connecting to existing transmission main piping.
5. Testing and commissioning the new main, valves and water production flow m...

Other Important Info:
This project is being coordinated with the new Waterworks Park to Northeast Transmission Main.

Challenges: Complicated sequence of construction, and demands of DWSD must be maintained along with coordination transmission system between Water Works Park and Northeast WTPs. Condition of existing valves required to complete the work is unknown. Complex construction staging is accounted for in the design to avoid loss of service and delays to the construction contract. Multiple line stops are in...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$206	$57	$57	$51	$22	$22	$21	$22	$13	$99	$0
Study & Design & Construction Assistance # 1	$5,041	$2,333	$2,333	$321	$300	$300	$300	$300	$150	$1,350	$1,037
Construction (Build) # 1	$49,568	$0	$0	$4,000	$6,000	$6,000	$6,000	$6,000	$6,000	$30,000	$15,568

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 115003

Project Title: Water Works Park Water Treatment Plant Comprehensive Condition Assessment

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Waterworks Park WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Michael Dunne

Director: Grant Gartrell

Project Score
0

Problem Statement:
A condition assessment of Waterworks Park Water Treatment Plant has not been completed since the 2004 reconstruction. Condition assessment is needed to identify critical assets in need of repair or replacement.

Scope of Work/Project Alternatives:
A condition assessment of Waterworks Park Water Treatment Plant has not been completed since the 2004 reconstruction. Continued and periodic inspection of the Water Treatment Plant is needed to maintain a reliable production system, especially given the reliance on Waterworks Park to provide finish water to the Northeast Service Area.

Other Important Info:
Contract No. 147 with Hubbell, Roth & Clark is underway.

Challenges: Coordinating shutdowns required for condition assessment inspections.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$19	$19	$19	$0	$0	$0	$0	$0	$0	$0	$0
Study # 1	$495	$495	$495	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 115004

Project Title: Water Works Park Water Treatment Plant Chlorine System Upgrade

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Waterworks Park WTP

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Michael Dunne

Director: Grant Gartrell

Project Score
0

Problem Statement:
The existing gas chlorine feed system has experienced numerous leaks and has compromised the safety of plant personnel. In addition, the chlorine gas leaks caused significant damage to all equipment inside the chlorine storage room. Secondary damage also occurred to equipment in adjacent rooms.

Scope of Work/Project Alternatives:
This project is being delivered under a design-bid-build project delivery method. The scope of work generally includes the following:
1. Removal of existing chlorine feed system, including evaporators, feeders and associated electrical, instrumentation and control equipment.
2. Installation of new chlorine evaporators, feeders, and associated electrical, instrumentation and control equipment.
3. Installation of new heating, ventilating and air-conditioning system equipment in the chlorine st...

Other Important Info:
Project History: The WWP facility began serving customers with finished water in 2003. More recently, the chlorine system has had one major leak and several minor leaks on a recurring and more frequent basis. Since chlorine is a highly toxic material, yet integral for providing finished water in accordance with the Safe Drinking Water Act, a study and design project was initiated under the CIP allowance as project CS-1721. This construction project will be based on the study and design conducte...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$61	$61	$61	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$924	$924	$924	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$5,908	$5,908	$5,908	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 115005

Project Title: WWP WTP Building Ventilation Improvements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Waterworks Park WTP
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Michael Dunne

Director: Terry Daniel

Project Score
76

Problem Statement:
The existing ventilation systems are not adequate for the chemical storage rooms, the ozone generator room, ozone destruct room, laboratory rooms, pilot plant rooms, flocculation and sedimentation rooms, and filter galleries at the Water Works Park Water Treatment Plant. Inadequate ventilation poses safety hazards to employees and visitors alike.

Scope of Work/Project Alternatives:
This project will be delivered using a design-bid-build project delivery method. The scope of work will generally include the following:
1) Design of the improved, new ventilation systems for the facility.
2) Selective removal of existing ventilation system equipment.
3) Construction of new mechanical ventilation systems.
4) Installation of electrical feeders for new mechanical ventilation equipment.
5) Installation of new instrumentation equipment for monitoring and alarms, including nec...

Other Important Info:
Operational components may be identified to reduce staff exposure and reduce complexity of ventilation system.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$155	$1	$1	$80	$36	$30	$7	$0	$0	$73	$0
Design & Construction Assistance # 1	$926	$0	$0	$300	$449	$92	$86	$0	$0	$626	$0
Construction (Build) # 1	$3,843	$0	$0	$0	$38	$1,499	$1,499	$400	$100	$3,536	$307

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 115006

Project Title: Water Works Park Site/Civil Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Waterworks Park WTP
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Michael Dunne

Director: Grant Gartrell

Project Score
39.4

Problem Statement:
Many of the existing roadways and pedestrian sidewalks have substantial cracking, crumbling concrete and un-even surfaces whose condition becomes worse every year. The concrete bases for several portions of the site perimeter security fencing are also heavily deteriorated with crumbling concrete. Additionally, there is not sufficient employee and visitor parking space for the facility and new parking areas are needed to meet the needs of employees and visitors alike. Furthermore, there is no tr...

Scope of Work/Project Alternatives:
This project will be delivered using a design-build project delivery. The schedule is predicated on using AECOM's design build assistance services under its CIP Program Management Contract CS-272. The scope of work for this project generally includes the following:
1. Construct 30 car parking lot adjacent to plant employee lot.
2. Construct 20 car parking lot across from maintenance garage to serve as GLWA vehicle parking.
3. Construct 10 car parking lot across from engineering building to s...

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY26	5 Year Total	FY27+
GLWA Salaries	$239	$0	$0	$6	$6	$233
Design & Construction Assistance # 1	$1,321	$0	$0	$0	$0	$1,321
Construction (Build) # 1	$4,322	$0	$0	$0	$0	$4,322

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 115007

Project Title: Water Works Park High Lift Pumping Station Modernization

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Waterworks Park WTP
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


High Lift Photo

Project Engineer/Manager: Michael Dunne

Director: Grant Gartrell

Project Score
54.4

Problem Statement:
In accordance with GLWA's Master Plan, the Northeast Water Treatment Plant is scheduled to be repurposed. Most of the water production and pumping burdens will be shifted to the Water Works Park Water Treatment Plant. There is an apparent need to identify opportunities and improve configurations, capacity, redundancy, electrical efficiency, instrumentation, monitoring and controls of the High Lift pumping system at Water Works Park.

Scope of Work/Project Alternatives:
This project will be delivered under a design-bid-build delivery method. In general, the scope will contain the following items:
1. Replace or re-engineer pumps and motors based on an evaluation of contemporary and future flow, pressure, and energy needs.
2. Replace or improve the current high-pressure water system to create a more robust process.
3. Improve ventilation in the pump room to allow pumping units to operate at proper working temperatures.
4. Replace or repair isolation gates i...

Other Important Info:
The current pumping system in the High Lift building at Water Works Park was constructed in the early 1960s. Now, 60 years later, it is necessary to realign Water Works Park's pumping system with contemporary and future flow, pressure, and energy requirements.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$502	$0	$0	$30	$30	$30	$30	$60	$181	$321
Design-Build	$88,444	$0	$0	$250	$500	$500	$750	$11,645	$13,645	$74,799

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 116002

Project Title: Pennsylvania and Springwells Raw Water Supply Tunnel Improvements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: General Purpose
Lookup Location: Springwells, Northeast, & Pennsylvania raw water tunnels
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Nick Hoffman

Director: Grant Gartrell

Project Score
0

Problem Statement:

Significant structural distress in the form of cracking and ovality have been detected in the Pennsylvania, Northeast and Springwells raw water tunnels that deliver raw water to the Northeast and Springwells Water Treatment Plants. The extent and magnitude of the distress requires that these segments of tunnel be rehabilitated and restored to provide renewed structural integrity and consequently reliability.

Scope of Work/Project Alternatives:

This project is being delivered using a progressive design-build project delivery method. The scope of work generally includes supplemental remove operated vehicle (ROV) and personnel diver underwater, detailed investigations to determine the nature, magnitude and extent of total tunnel rehabilitation required. The detailed investigations are also used to collect sufficient information and data to determine the preferred design and construction approach best suited to the conditions identified ...

Other Important Info:

The tunnels are approximately 80 to 100 feet below ground surface. Dewatering the tunnels to repair them will create extensive stresses that must be considered prior to performing the work. Maintaining a supply of raw water to Springwells, Northeast and Water Works Park throughout construction to meet finished water production requirements/demands of the system. Specialized/complicated construction.

Project History: Portions of the Raw Water Tunnel system are approaching 100 years of servi...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$202	$76	$76	$46	$22	$22	$21	$16	$0	$81	$0
Design-Build # 1	$94,678	$15,335	$15,335	$6,978	$8,338	$17,373	$23,282	$18,000	$5,372	$72,365	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 116005

Project Title: Belle Isle Seawall Rehabilitation

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Belle Isle Intake
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Aerial image of Belle Isle intake structure and lagoon.

Project Engineer/Manager: Michael Dunne

Director: Terry Daniel

Project Score
39.2

Problem Statement:
The Belle Isle intake system is the source water entry point for three of the five GLWA water treatment plants. The intake is surrounded by a man-made dike system that creates a large lagoon on the northeast tip of Belle Isle. The dike system is showing signs of substantial erosion on the tip of the southern dike. Other areas on the southern dike are showing signs of erosion to a lesser degree. On the northern dike, vegetation is prominent that is likely to cause premature failures, if not ...

Scope of Work/Project Alternatives:
This design/build project will evaluate and recommend solutions to permanently correct ongoing erosion issues and current deficiencies that may result in future dike erosion and/or failure. The general scope will include.
1. Installing sheet piling, tie backs, and rip rap at the tip of the lagoon.
2. Removal of vegetation on north dike to prevent future damage.
3. Install armor stone where erosion is beginning, but not yet significant.
4. Grade and dress lagoon access road.

Other Important Info:
The Belle Isle lagoon, formed by the man-made dikes, was designed to prevent frazil ice from impeding water flow into the raw water tunnels. Continued erosion of the dike system will lead to short circuiting of the intake lagoon. The design intent of the lagoon, and its benefits, will be compromised and leave the raw water intake for three water treatment plants vulnerable.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	5 Year Total
GLWA Salaries	$92	$0	$0	$29	$31	$31	$92
Design-Build	$1,740	$0	$0	$290	$1,200	$250	$1,740

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 116006

Project Title: Belle Isle Intake System Rehabilitation and Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Treatment Plants and Facilities
Class Lvl 3: Water Works Park
Lookup Location: Belle Isle
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Belle Isle Photo

Project Engineer/Manager: Michael Dunne

Director: Terry Daniel

Project Score
46.2

Problem Statement:
The Belle Isle Intake structure and man-made lagoon were constructed in the 1930s. Periodic maintenance and improvements have taken place over the years to keep the building and lagoon in operating condition. As a result of recommendations from the State and CS-187 - Raw Water Condition Assessment, another such project is needed. The intake system has experienced a buildup of sediment in critical areas that needs to be removed, miscellaneous vegetation has grown on the dike system and needs ...

Scope of Work/Project Alternatives:
This CIP project will be delivered under a design-bid-build project delivery method and will generally include the following:
1. Removal of accumulated sediment in the intake building, emergency intake system, and tunnel system.
2. Electrical modernization on the intake grounds.
3. Architectural repairs to the intake building superstructure including, painting, masonry tuck-pointing, roofing, and stonework.
4. A code compliant emergency eyewash and shower station.
5. Roof structure to pro...

Other Important Info:
The intake system is the very first step in the water treatment process. A fully reliable and modern intake system is crucial in maintaining superior drinking water.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY23	FY24	5 Year Total
Design & Construction Assistance	$350	$0	$0	$300	$50	$350

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122003

Project Title: Water Works Park to Northeast Transmission Main

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: WWP to NE WTP
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☑ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Timothy Kuhns

Director: Grant Gartrell

Project Score
62.4

Problem Statement:
The 2015 GLWA Water Master Plan update indicated that the regional system has significant excess capacity for water treatment compared to projected water demands. The analysis contained in the Water Mater Plan update indicated that for average day demand conditions, the five WTPs typically operate between 23 percent to 35 percent of the rated treatment capacity and for maximum day demand conditions, the five WTPs typically operate between 38 percent to 67 percent of the treatment rated capacity...

Scope of Work/Project Alternatives:
This project includes three separate construction phases for the completion of the overall water transmission system from Water Works Park to Northeast:
(1) Phase 1 - Construction of 84-inch yard piping and a Flow Control Facility at the Northeast site.
(2) Phase 2 - Construction of 4 miles of 81-inch water transmission main (WTM) from the Northeast site to I-94.
(3) Phase 3 - Construction of 6,000 feet of 60-inch/69-inch WTM along Hurlbut from I-94 to the intersection of Hurlbut/Sylvester.

Other Important Info:
Challenges: Construction of large diameter WTM in the road ROW north of I-94 and along Hurlbut south of I-94.
This project was recommended as part of the 2015 Water Master Plan Update to align treatment capacity with decreasing water demands.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$438	$158	$158	$57	$22	$22	$21	$22	$22	$108	$116
Phase #1	$26,078	$2,121	$2,121	$9,982	$11,978	$1,996	$0	$0	$0	$13,975	$0
Phase #2	$88,284	$0	$0	$558	$1,500	$4,308	$12,348	$11,648	$16,648	$46,450	$41,875
Phase #3	$28,418	$2,911	$2,911	$638	$1,093	$2,888	$2,166	$2,166	$5,026	$13,339	$11,530

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122004

Project Title: 96-inch Water Transmission Main Relocation and Isolation Valve Installations

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Imlay Station to North Service Center
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Khader Hamad

Director: Grant Gartrell

Project Score
65.2

Problem Statement:
Project critical to providing isolation and redundancy to Lake Huron WTP supply, while protecting the water supply from potential contamination at the G&H Landfill. Project includes relocation around existing superfund landfill addition of isolation valves along the 96-inch water transmission main.

Scope of Work/Project Alternatives:
Relocate 2.5 miles of 96-inch transmission main currently located in an EPA NPL landfill, a portion of which is submerged in landfill leachate. Relocation includes crossing the Clinton River, coordination with many various authorities having jurisdiction and easement acquisition. Isolation valve installation portion of the project provides the ability to isolate segments of the 96-inch main between Imlay Station and North Service Center for maintenance while maintaining customer expected level ...

Other Important Info:
Challenges: Shutdown, continued customer service, isolation valve installations while maintaining the Lake Huron WTP supply to Rochester Station. Property acquisition will be required for the chesterfield temporary booster station and East Pond Creek discharge facility for relocation around the landfill.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$363	$129	$129	$57	$27	$22	$21	$22	$22	$114	$62
Study # 1	$28,321	$1,687	$1,687	$2,020	$2,550	$2,511	$2,511	$2,511	$2,511	$12,593	$12,022
Construction (Build) # 1	$116,168	$0	$0	$0	$0	$5,080	$8,093	$10,049	$10,049	$33,271	$82,897

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122005

Project Title: Schoolcraft Road Water Transmission Main

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Schoolcraft water main
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☑ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Nick Hoffman

Director: Grant Gartrell

Project Score
42

Problem Statement:
We currently operate an existing 48-inch water transmission main on West Bound Schoolcraft Road. This existing PCCP transmission main was manufactured by Interpace Corporation which has a long-documented history of PCCP failures due to manufacturing means and methods of the pre-stressed wires. Due to excessive breaks over the years and the downstream effect on customers, we are improving the transmission system reliability and redundancy by installing a new 48-inch water transmission main on Ea...

Scope of Work/Project Alternatives:
Design and Construction of approximately 12,000 linear feet of new PCCP or Carbon Steel 48-inch water transmission main along Eastbound Schoolcraft service drive between Middlebelt and Beech Daly. Including isolation valves, blowoff's, valve vaults, manhole entrances and related appurtenances. Upon completion and tie-in of the new Eastbound Schoolcraft transmission main the existing will be abandoned in place.

Other Important Info:
Designed under CS-1488 by Somat Engineering

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$124	$52	$52	$57	$14	$0	$0	$0	$0	$14	$0
Design & Construction Assistance # 1	$711	$189	$189	$330	$192	$0	$0	$0	$0	$192	$0
Construction (Build) # 1	$14,491	$1,141	$1,141	$5,950	$7,400	$0	$0	$0	$0	$7,400	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122006

Project Title: Wick Road Water Transmission Main

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Romulus
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Nick Hoffman

Director: Grant Gartrell

Project Score
54.2

Problem Statement:
Existing water main from Wick Station to Ypsilanti station has history of excessive breaks. Additionally, the main is the only primary connection between the two facilities with multiple community Master Meters along its alignment. A break in this line is disruptive to several communities dependent upon the failure location. The intent is to improve the transmission system reliability/redundancy by means of constructing a parallel 48-inch water main along Wick Road.

Scope of Work/Project Alternatives:
Design and Construction of the new 48-inch transmission main along Westbound Wick Road in Romulus, MI including isolation valves and interconnects that will tie-in with the existing main along the alignment. Completion of this project will alleviate pressures and potential transients between the two mains, as well as increase reliability/redundancies in the general area.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$184	$129	$129	$46	$9	$0	$0	$0	$0	$9	$0
Design # 1	$1,274	$595	$595	$564	$114	$0	$0	$0	$0	$114	$0
Construction (Build) # 1	$20,962	$5,179	$5,179	$11,133	$4,651	$0	$0	$0	$0	$4,651	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122007

Project Title: Merriman Road Water Transmission Main Loop

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Merriman Rd, Marquette Rd to Lower Rouge River
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Jacob Mangum

Director: Grant Gartrell

Project Score
61.6

Problem Statement:
Currently, several member partners (served by master meters WL-08, WL-03, WL-01, WL-12, WY-01, RS-01, GC-03) are fed by a single 36-inch water transmission main along Michigan Avenue. Construction of this proposed Merriman Road transmission main will provide a second feed to these member partners and therefore provide redundancy. Additionally, construction of this proposed Merriman Road transmission main improves and reinforces water service delivery to the point where the Michigan Avenue Boost...

Scope of Work/Project Alternatives:
This project involves design and construction services associated with the installation of 2 miles of new 30-inch transmission main along Merriman Road between Lower Rouge River and Marquette Road. Alternatives evaluated included new main on either:
1. Hannon Road (rejected because of its poor route relative to other options)
2. Newburgh Road (rejected because it is not technically feasible as it will not meet contract pressures.
3. Merriman Road (accepted because it is superior in its trans...

Other Important Info:
None

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$396	$2	$2	$57	$27	$27	$27	$27	$27	$134	$202
Design & Construction Assistance # 1	$3,770	$0	$0	$0	$0	$0	$246	$863	$863	$1,973	$1,797
Construction (Build) # 1	$17,989	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,989

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122011

Project Title: Park-Merriman Road Water Transmission Main

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Venoy Road to Merriman Road to Michigan Ave. Booster Station.

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Updated photo

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
30.2

Problem Statement:

Currently, most of the wholesale master meters serving the cities of Wayne and Westland are fed off a single, "dead-end" transmission main, which provides no redundancy in service aside from customer lateral distribution opportunities. Additionally, Wayne, Westland and Inkster have deduct wholesale meters that are fed off the single, "dead-end" transmission main. Construction of this new 24-inch water main will create a loop for these member partners and thereby eliminate the single, "dead-end"...

Scope of Work/Project Alternatives:

This CIP project is being delivered under a design-bid-build project delivery method and generally includes the following scope of work:
1. Construction of 7,000 linear feet of 24-inch diameter ductile iron water transmission main, which includes 2 directional drills to install this main under the lower Rouge River, and 1 jack-and-bore to install this main under Michigan Avenue.
2. Constructing two new wholesale master meters and associated vaults for the city of Wayne.
3. Associated park im...

Other Important Info:

Challenges: Shutdowns to connect the two new meters with the City of Wayne. The water pressure during these two shutdowns will be reducers and coordination will need to take place with the City of Wayne, their residents and local businesses.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$188	$134	$134	$46	$8	$0	$0	$0	$0	$8	$0
Design & Construction Assistance # 1	$522	$458	$458	$63	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$8,891	$4,630	$4,630	$4,261	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122012

Project Title: 36-inch Water Main in Telegraph Road

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Telegraph Rd, Cherry Hill to Warren Ave
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
0

Problem Statement:
Excessive joint leaks warrant replacement; new water line to be placed in greenbelt

Scope of Work/Project Alternatives:
This project includes installation of approximately 10,530 feet of 36-inch dia. water main in Telegraph Road from Cherry Hill to Warren Ave.

Other Important Info:
Challenges: N/A - Active

E. Klun 8/20/20 updates as follows:
1. None. Project closed out.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs
GLWA Salaries	$0	$0	$0
Design & Construction Assistance # 1	$567	$567	$567
Construction (Build) # 1	$9,304	$9,304	$9,304

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122013

Project Title: 14 Mile Transmission Main Loop

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: 8 Mile Rd/ I-275 to 14 Mile Rd/ Haggerty PS
☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**



14 Mile Loop Project Location

Project Engineer/Manager: Sara Mille

Director: Grant Gartrell

Project Score
58.4

Problem Statement:

The 14 Mile Transmission Main that currently serves West Bloomfield Township, Farmington Hills, Commerce Township, Novi, Walled Lake, and Wixom is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. This project would provide a transmission main loop to the 14 Mile system to increase redundancy on this branch of the system.

Scope of Work/Project Alternatives:

Install approximately 8 Miles of 54-inch transmission main from 8 Mile Road to 14 Mile Road. It also includes construction of approximately 1 mile of new 24-inch parallel transmission main along 14 Mile from M-5 to west of Decker Road to reinforce the 14 Mile Transmission System.

The work will also include connections to the yard piping and reservoir fill line at the Haggerty Booster Station as well as control valves to regulate flows to and from the 14 Mile transmission main.

Other Important Info:

Project History: The 2015 Water Master Plan Update included a recommendation to evaluate options along this branch of the system to increase redundancy. Since that recommendation, GLWA Water Supply Operations Engineering performed a hydraulic analysis of redundancy alternatives for the 14 Mile Transmission System. The results of the hydraulic analysis was presented at the May 15, 2017 and September 19, 2017 Analytical Work Group Meetings and based on the discussion at these meetings, the Hagger...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$289	$182	$182	$47	$22	$22	$16	$0	$0	$59	$0
Design & Construction Assistance # 1	$7,970	$3,576	$3,576	$1,242	$1,242	$1,242	$667	$0	$0	$3,151	$0
Construction (Build) # 1	$5,978	$0	$0	$4,775	$1,203	$0	$0	$0	$0	$1,203	$0
Construction (Build) # 2	$90,943	$0	$0	$0	$35,126	$35,126	$20,691	$0	$0	$90,943	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122016

Project Title: Downriver Transmission Main Loop

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Will be located on Inkster between Wick and Pennsylvania Road; on Allen Road/Dixie Highway between Pennsylvania Rd. and Ready Rd; and also at Electric Avenue.

- ☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Vittoria Hogue

Director: Grant Gartrell

Project Score
58.4

Problem Statement:
The Downriver Transmission Main that currently serves Brownstown, Riverview, Woodhaven, Trenton, Flat Rock, Gibraltar, Rockwood, South Rockwood, Berlin Township, and Grosse Isle is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. The number of users that would experience pressure loss would depend on the location of the break. This project would provide ...

Scope of Work/Project Alternatives:
This project will be delivered using a design-bid-build project delivery method. The scope of work generally includes: installing approximately 9 miles of 16-inch transmission main and 1 mile of 24-inch transmission main paralleling the existing Allen Road/Dixie Highway transmission main and install 4 miles of 30-inch transmission main along Inkster road between Wick and Pennsylvania road. This will provide redundancy to the Downriver communities of Brownstown, Riverview, Woodhaven, Trenton, Fl...

Other Important Info:
Completion of the Downriver Transmission main loop is predicated on acquiring ownership of a portion of 24-inch transmission main owned but not used by the City of Trenton. As of this CIP update, the acquisition of this Trenton main has been completed.

Project History: The 2015 Water Master Plan Update included a recommendation to evaluate options along this branch of the system to increase redundancy. Since that recommendation, GLWA Water Supply Operations Engineering performed a hydraulic...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$198	$42	$42	$57	$26	$22	$21	$22	$7	$98	$0
Design & Construction Assistance # 1	$4,645	$183	$183	$1,625	$638	$570	$569	$1,059	$0	$2,836	$0
Construction (Build) # 1	$32,224	$0	$0	$0	$0	$6,891	$7,484	$7,463	$7,463	$29,301	$2,924

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122017

Project Title: 7 Mile/Nevada Transmission Main Rehab and Carrie/Nevada Flow Control Station

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Timothy Kuhns

Director: Grant Gartrell

Project Score
84.2

Problem Statement:
The primary driver of this project is to provide back up water service from Springwells WTP to the Water Works and Northeast Service Areas in case of loss of service to the Water Works Park WTP or Northeast WTP.
The secondary driver to this project is to support Northeast WTP repurposing by providing a second finished water supply main to the Northeast site to support maximum day demands for the Northeast service area, which can be as high as 190 MGD. With the upcoming decommissioning of treatm...

Scope of Work/Project Alternatives:
Project includes inspection and rehab of the 7 Mile/Nevada Transmission Main and construction of a new flow control station at Carrie/Nevada.

Other Important Info:
This project highlights the need to reinforce the transmission system in order to reliably provide service during existing conditions and after treatment is decommissioned at the Northeast WTP. This project would be completed regardless of whether the Northeast WTP treatment is decommissioned.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$288	$3	$3	$51	$22	$22	$21	$22	$22	$108	$126
Design-Build # 1	$59,901	$0	$0	$1,116	$1,922	$1,922	$4,763	$3,483	$13,341	$25,431	$33,353

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 122018

Project Title: Garland, Hurlbut, Bewick Water Transmission System Rehabilitation

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Field Services
Class Lvl 3: Transmission System
Lookup Location: Transmission Mains
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☑ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Timothy Kuhns

Director: Grant Gartrell

Project Score
89

Problem Statement:
A large proportion of the water transmission mains (WTM) within the City of Detroit were constructed between the decades of 1870 and 1930. Mains constructed during this period have exceeded their service life and will require replacement in the near term. Several WTM within this age of construction have strategic importance as they can be used to transmit flows between the Water Works Park WTP and the Northeast WTP.

Scope of Work/Project Alternatives:
This project involves rehab of WTM along Garland Street, Hurlbut Street, and Bewick Street between Jefferson Avenue and I-94 within the east side of the City of Detroit. This project will include a detailed condition assessment of these WTM to evaluate the appropriate rehabilitation method.

Other Important Info:
This project will be implemented concurrently with Phase 3 of CIP:122003 WWP to NE Transmision Main Project.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$456	$0	$0	$80	$32	$30	$30	$30	$30	$152	$224
Design-Build # 1	$53,646	$0	$0	$1,498	$1,498	$1,498	$1,498	$3,965	$3,965	$12,425	$39,223

Document received by 3rd MI Wayne 3rd Circuit Court.

CIP Number: 132003

Project Title: West Service Center Pumping Station, Isolation Gate Valves for Line Pumps

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: West Service Center

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Andrew Juergens

Director: Grant Gartrell

Project Score
0

Problem Statement:

There are six line pumping units in the main pump house at the West Service Center Booster Pumping Station. There are butterfly valves located on the suction side all six line pumps, and resilient seated gate valves on the discharge side of three of the six line pumps. Three of the line pumps do not have a valve on their discharge side and therefore no immediate means of isolation. The existing butterfly and resilient seated gate valves are all leaking and not reliable for isolating pumps. More...

Scope of Work/Project Alternatives:

This project is being delivered using a design-bid-build project delivery. The scope of work generally includes removing 6 existing butterfly valves from the pump suction piping and 3 existing gate valves from the high-pressure pumping system discharge piping; and providing 6 new double-disc gate valves on the pump suction piping and 6 new double disc gate valves on the pump discharge piping.

Other Important Info:

Challenges: Sequence of construction and meeting system demands will need to be coordinated with operations.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$56	$50	$50	$6	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$317	$212	$212	$106	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$1,589	$1,483	$1,483	$106	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132006

Project Title: Ford Road Pumping Station, Pressure and Control Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Water Booster Pumping Stations
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**

Project Engineer/Manager: Eric Kramp

Director: Grant Gartrell

Project Score
43.4

Problem Statement:
Design of isolation, pressure and flow control equipment for efficient delivery of consistent pressures to wholesale customers at Ford Road water booster pumping station

Scope of Work/Project Alternatives:
The project generally consists of:
Replacing all pump suction butterfly valves with new triple offset high performance butterfly valves (10)
Replacing all control butterfly valves with new metal seated ball valves (10)
Replacement of the existing 16-inch cone valve-driven reservoir fill line a new 20-inch plunger valve controlled fill line
New 75 KW generator and appurtenances and related work.

Other Important Info:
The project is currently under construction, and is predecessor to any work along the Newburgh water main and Michigan Avenue Station. The two major observed challenges (isolation and procurement) have been overcome successfully. The next major element of the work is the installation of the control valves expected to begin in September 2020.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$122	$76	$76	$46	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$500	$441	$441	$59	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$2,742	$1,367	$1,367	$1,375	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132007

Project Title: Energy Management: Freeze Protection Pump Installation at Imlay Pump Station

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Imlay Pumping Station
☐ **Project New to CIP:**

- ☑ **Innovation**
- ☐ **WW Master Plan**
- ☑ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Vittoria Hogue

Director: Grant Gartrell

Project Score
37.6

Problem Statement:
This CIP project will address two principle needs. The first is the need to replace an existing large pumping units with a smaller pumping unit for the purpose of recirculating finished water inside the station's reservoir. Recirculation of reservoir water is required during the low-demand season to maintain water quality. Recirculation of reservoir water using a smaller suitability sized pumping unit will reduce operating complexity and the possibility for damage to the larger pump units. The ...

Scope of Work/Project Alternatives:
This project is being delivered using a design-build project delivery method. The scope of work generally includes replacing one of Imlay Sation's 75 MGD pump's and 6,000 HP motor's with a smaller 22.5 MGD pump with 1,500 HP motor. The associated VFD, valves, piping and appurtenences will also be removed and replaced to accommodate the new smaller pump.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$187	$121	$121	$46	$20	$0	$0	$0	$0	$20	$0
Design-Build # 1	$5,001	$47	$47	$928	$3,943	$84	$0	$0	$0	$4,026	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132008

Project Title: Various Pumping Stations - Needs Assessment Study

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Booster Pumping Stations
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
0

Problem Statement:
Existing pumping stations were constructed in the 1960s and 1970s and most of the pumping units were sized to meet maximum hydraulic condition and perceived to be inefficient.

Scope of Work/Project Alternatives:
This project includes a comprehensive condition and needs assessment study of all water booster stations, exclusive of reservoirs. System wide modelling will confirm station decommissioning as recommended by the 2015 Water Master Plan Update. The condition assessments will include all engineering disciplines, with a focus on variable speed pumping applications to meet changing station demands, DTE rate incentive identification, station metering, valve and yard piping improvements and station by...

Other Important Info:
Challenges: Shutdown, operation and manpower required to cover the condition assessment inspections to complete the work.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs
GLWA Salaries	$100	$100	$100
Study # 1	$1,575	$1,575	$1,575

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132010

Project Title: West Service Center Pumping Station - Reservoir, Reservoir Pumping, and Division Valve Upgrades

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: West Service Center
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Andrew Juergens

Director: Grant Gartrell

Project Score
54

Problem Statement:

Construction of West Service Center Division Valves is needed to convey flows originating from the Lake Huron Water Treatment Plant through the West Service Center to the Springwells high-pressure service area while the Springwells raw water tunnel is out of service for repairs. The existing reservoirs at the West Service Center are in poor condition and continue to require periodic structural repairs despite numerous past repairs. Additionally, half of the existing reservoir pumps experience s...

Scope of Work/Project Alternatives:

This project is being delivered using a design-build project delivery method. The scope of work generally involves:
1. Rehabilitating Valve Vaults #1, #4, and #7.
2. Demolishing existing Valve Vault #3.
3. Constructing a new Valve Vault #3 containing a new 30-inch cone valve.
4. Demolishing two existing 10 MG reservoirs and the associated Reservoir Pump Houses #1 and #2, and the associated yard piping.
5. Constructing two new 5 MG reservoirs.
6. Constructing a new Reservoir Pump House, i...

Other Important Info:

Challenges: Water storage capacity and reservoir pumping capacity need to be maintained during construction. Sequence of construction and meeting system demands will need to be coordinated with operations. Construction of the new reservoirs is subject to the city of Southfield's zoning ordinances especially related to the height of the reservoirs.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$242	$111	$111	$48	$32	$32	$19	$0	$0	$84	$0
Design-Build # 1	$44,900	$2,038	$2,038	$5,219	$17,117	$19,895	$631	$0	$0	$37,643	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132012

Project Title: Ypsilanti Booster Pumping Station Improvements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Water Plants & Booster Pump Stations
☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**


Existing Ypsi station

Project Engineer/Manager: Jorge Nicolas

Director: Grant Gartrell

Project Score
61.2

Problem Statement:
The Ypsilanti Booster Pumping Station does not have backup power generation and needs one in the event of a power loss to the site so that system pressure loss is avoided during these conditions. The entire station and its pumping and electrical system equipment are are original to the facility and are past their useful service life. The existing electrical system requires substantial maintenance to keep it in service. The existing pumps and motors are in poor condition and also require cumbers...

Scope of Work/Project Alternatives:
This project is being delivered using a design-bid-build project delivery method. The scope of work generally includes building a new booster pumping station that meets current water system demands, current building and electrical codes, and best industry practices for water pumping station design, operation and maintenance needs. The new station will be equipped with all new pumps, motors, drives, electrical switchgear, power distribution system, building mechanical, station passive bypass, an...

Other Important Info:
Impact to member partners

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$204	$36	$36	$57	$27	$22	$21	$22	$18	$110	$0
Study & Design & Construction Assistance # 1	$3,680	$297	$297	$557	$557	$470	$588	$586	$624	$2,825	$0
Construction (Build) # 1	$31,510	$0	$0	$0	$0	$6,226	$9,188	$9,163	$1,933	$26,510	$5,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132014

Project Title: Adams Road Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Adams Road BPS
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Timothy Kuhns

Director: Grant Gartrell

Project Score
64.6

Problem Statement:

The Adams Road booster pumping station was constructed in 1971 and is nearing the end of its service life. Recent condition assessment of the station indicates that there are several needs at the site that need to be addressed due to aging infrastructure. Improvements required at the site include site drive improvements, site valve replacements, building sump replacement, site drain PS replacement, structural improvements, pumping system improvements, flow metering improvements, bypass upgrades...

Scope of Work/Project Alternatives:

This project will be delivered using a design-bid-build project delivery method. The scope of work generally includes reconstructing a new pumping station next to the existing station on the current site. The new station will be designed to bring it up to current building and electrical codes, industry standards, and best practices for operation and maintenance of pumping stations.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$176	$0	$0	$22	$27	$26	$22	$22	$119	$58
Design & Construction Assistance # 1	$7,840	$83	$83	$181	$1,305	$1,131	$1,108	$1,108	$4,832	$2,925
Construction (Build) # 1	$44,848	$0	$0	$0	$0	$0	$0	$0	$0	$44,848

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132015

Project Title: Newburgh Road Booster Pumping Station Improvements

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Newburgh Road Booster Pumping Station
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Andrew Juergens

Director: Grant Gartrell

Project Score
56.6

Problem Statement:
Existing pumps, motors and electrical gear are beyond useful service life. The existing pump manufacturer has discontinued maintenance support of the pumps, increasing the difficulty and cost of maintenance. Additionally, a new transmission main will be designed to allow the Newburgh Station to pump flows to the Haggerty Station reservoir. The Haggerty reservoir fill operation may require additional pumps at the Newburgh Station that are rated to higher discharge pressures.

Scope of Work/Project Alternatives:
Construct a new Newburgh Road Booster Pumping Station, including new pumps, motors, VFDs, electrical gear, building mechanical equipment, and backup power generation. Alternatives include constructing a new Newburgh Road Booster Pumping Station on the existing site, expanding the existing site to accommodate a new station, or construction of the new station on a new site.

Other Important Info:
Challenges: The existing site is not large enough to construct the new Newburgh Station. Coordination with the 14-Mile Road Transmission Main Loop Contract will be required.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$161	$10	$10	$57	$27	$25	$21	$20	$0	$93	$0
Design & Construction Assistance # 1	$3,503	$340	$340	$794	$706	$341	$818	$505	$0	$2,369	$0
Construction (Build) # 1	$41,380	$0	$0	$0	$0	$2,000	$8,000	$12,000	$12,000	$34,000	$7,380

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132016

Project Title: North Service Center Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: North Service Center
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Ariadna Risher

Director: Grant Gartrell

Project Score
58.2

Problem Statement:
The North Service Center was constructed in 1962 and is nearing the end of its service life.

Recent condition assessment of the station indicates that there are several needs at the site that need to be addressed due to aging infrastructure. Improvements required at the site include site drive improvements, site valve replacements, valve operator replacement, abandonment of pitot tube well, belt drain replacement, septic tank and well field replacement, electric room improvements, station w...

Scope of Work/Project Alternatives:
This project includes complete reconstruction of the North Service Center Pumping Station, and replacement of two ten million gallon reservoirs.

Other Important Info:
Proposed changes focus on optimization of energy efficiency in the system by removing waste and conserving energy already put into the system.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$689	$9	$9	$282	$173	$215	$4	$3	$3	$397	$1
Design & Construction Assistance # 1	$8,150	$257	$257	$0	$500	$1,512	$2,347	$1,234	$500	$6,093	$1,800
Construction (Build) # 1	$59,415	$0	$0	$0	$0	$0	$0	$1,010	$8,000	$9,010	$50,405

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132018

Project Title: Schoolcraft Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Booster Pumping Stations
☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Eric Kramp

Director: Grant Gartrell

Project Score
56.6

Problem Statement:
Following the Pump Station Condition Survey and Needs Assesment, significant issues were observed in the Schoolcraft Pumping Station. This needs assesment has found several significant areas of necessary improvement to the station as described in the project scope fo work:

Scope of Work/Project Alternatives:
This project will be delivered using a design-bid-build project delivery method. The scope of work will generally include replacing existing pumps, motors, drives, electrical switchgear, motor control centers, valves, valve operators, yard piping, and yard valves with new infrastructure. Additionally, the underdrain system that serves the finished water reservoirs will either be rehabilitated in place or replaced with new.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs
GLWA Salaries	$0	$0	$0
Design	$47	$47	$47

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132019

Project Title: Wick Road Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Romulus
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Vittoria Hogue

Director: Grant Gartrell

Project Score
68.4

Problem Statement:
Wick Pump Station is currently oversized based on the demands it experiences, has poor valve isolation capabilities and much of its equipment was installed in 1981 and is passed its useful service life. This project's intent is to right size the station and replace valves and other aging equipment.

Scope of Work/Project Alternatives:
This project will be delivered under a design-bid-build delivery method. This project's scope of work will be rightsizing the station's pumping capacity, improving valve control and isolation, and replacing and/or upgrading equipment that is at the end of its useful life. The improvements intended to right size the station include replacing reservoir pumping units and installing another small line pump (jockey pump) to accommodate low flow conditions. Valve control and isolation work will invol...

Other Important Info:
Refer to CS-052A Condition Assessment for additional details on the scope of project.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$286	$0	$0	$0	$13	$13	$273
Design & Construction Assistance # 1	$2,459	$57	$57	$0	$0	$0	$2,402
Construction (Build) # 1	$6,613	$0	$0	$0	$0	$0	$6,613

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132020

Project Title: Franklin Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Grant Gartrell

Director: Grant Gartrell

Project Score
64.6

Problem Statement:
The Franklin Booster Pumping Station was constructed in 1968 and is nearing the end of its service life.

Recent condition assessment of the station indicates that there are several needs at the site that need to be addressed due to aging infrastructure. Improvements required at the site include site drive improvements, sanitary holding tank improvements, site valve replacements, mezzanine valve access improvements, electrical room upgrades, building structure improvements, pumping improveme...

Scope of Work/Project Alternatives:
This project includes complete reconstruction of the Franklin Booster Station.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY27+
GLWA Salaries	$272	$0	$0	$272
Design	$2,273	$93	$93	$2,179

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132021

Project Title: Imlay Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Imlay Pumping Station
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☑ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Eric Kramp

Director: Grant Gartrell

Project Score
58.2

Problem Statement:

Following completion of the 2018 Booster Station Condition Assessment, several significant issues have been documented at the Imlay Booster Station. In addition to the updates to the VFD systems identified in the FY 2020 CIP. Site/civil, mechanical, and electrical improvements have been identified far in excess of the initial 2020 CIP, including the complete replacement of all outdated electrical switchgear.

It was recently documented that approximatly half of the reservoir fill system is w...

Scope of Work/Project Alternatives:

Significant improvementst to the site/civil, mechanical, and electrical systems at the Imlay Booster Station. Highlights in each discipline are indentified as follows:
Site/Civil -- Replace crumbling retaining walls. Roofing rehabilitation
Pumping -- "Right size" remaining pump and motor units based on 2015 WMPU. Rehabilitate any pumping units that are determined to be correctly sized.
Mechanical -- Improvements to HVAC. Replacement or reinforcement of all station isolation gate and butterf...

Other Important Info:

VFD size is unusual in the marketplace and cooling systems are complex for the VFDs.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY27+
GLWA Salaries	$67	$0	$0	$67
Design	$683	$227	$227	$456

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132022

Project Title: Joy Road Pumping Station Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Joy Rd Water Pumping Station
☐ **Project New to CIP:**

- ☑ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Jacob Mangum

Director: Grant Gartrell

Project Score
56.6

Problem Statement:
The station is undersized with limited space for maintenance and personnel access. The main walkway inside the station is built on top of the discharge header and six stairways connected to it are non-code compliant. There is not enough room to install normal stairs. The electrical room addition was partially built on top of the pump station top slab and blocks access to the reservoir fill line valves. The pump station roof hatches leak and drip onto equipment below. The discharge header is hea...

Scope of Work/Project Alternatives:
Design contract will consider life-cycle costs of rehabilitating the current station versus building a new station on available land located to the south of the current station. A listing of the type of station improvements by discipline is provided below.
Site Drive Improvements - The existing site drive geometry needs to be improved to allow for a mobile crane or semi-trailer truck.
Site Drain Lift Station - Installation of a new site drain pump station next to existing with removal of the ...

Other Important Info:
There is space on the site for building a new pump station to the south of the existing.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$261	$0	$0	$57	$27	$27	$27	$22	$21	$124	$80
Design & Construction Assistance # 1	$3,352	$71	$71	$0	$250	$500	$500	$100	$53	$1,403	$1,877
Construction (Build) # 1	$36,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$36,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 132026

Project Title: Franklin Pumping Station Valve Replacement

Project Status: Pending Closeout
Class Lvl 1: Water
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Station/Reservoir
Lookup Location: Booster Pumping Stations
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
The existing gate valves and butterfly (suction) valves that service the four (4) line pumps and two (2) reservoir pumps in the Franklin Pumping Station have exceeded their useful life and are in need of replacement.

Scope of Work/Project Alternatives:
Scope of work is demolition and replacement of six (6) 24” manually operated gate valves, demolition and replacement of three (3) 24” and three (3) 30” manually operated butterfly (suction) valves, demolition and replacement of two (2) 30” electrically actuated butterfly (suction) valves and rebuild of the existing gate valves.

Other Important Info:
Just in kind replacement of valves. There is another CIP for the complete rebuild of the station. CIP 132020

Current Expenses (All figures are in $1,000’s)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$43	$11	$11	$32	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$963	$810	$810	$153	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170100

Project Title: Water Treatment Plant /Pump Station Allowance

Project Status: Cancelled
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: WTPs and Boosters
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Grant Gartrell

Director: Grant Gartrell

Project Score
0

Problem Statement:
This allowance is reserved for unplanned, emergency and critical project needs that need to be addressed quickly.

Scope of Work/Project Alternatives:
This project is an allowance for unplanned, critical projects that may occur at the Water Treatment Plants and Booster Pump Stations throughout the system. These projects may include repair, replacement or rehabilitation of key assets as required to allow the Authority to provide sufficient water quality, quantity and pressure to meet customer demands in accordance with federal and state requirements under the Safe Drinking Water Act.

Other Important Info:
Challenges: Close coordination with operations and ability to jump on needs.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs
GLWA Salaries	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170102

Project Title: CS-1656: Flow Measurement

Project Status: Reclassified
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Jorge Nicolas

Director: Grant Gartrell

Project Score
20

Problem Statement:
Design and Oversee construction of water production flow meters at Northeast, Southwest, and Springwells Water Treatment Plants.

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$40	$40	$40	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$332	$332	$332	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170108

Project Title: DWS-063 Adam Roads Water Isolation Gate

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Booster Pumping Stations
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
20

Problem Statement:
Renovation and Upgrade Suction and Discharge Valves for Adams Road Water Booster Station.

Scope of Work/Project Alternatives:
None

Other Important Info:
Completed under an as-needed maintenance contract

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170109

Project Title: GLWA-CS-187: FK Eng: Raw Water Intake

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: WTPs and Boosters

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Nick Hoffman

Director: Grant Gartrell

Project Score
0

Problem Statement:
This allowance is reserved for unplanned, emergency and critical project needs that need to be addressed quickly.

Scope of Work/Project Alternatives:
This project is an allowance for unplanned, critical projects that may occur at the Water Treatment Plants and Booster Pump Stations throughout the system. These projects may include repair, replacement or rehabilitation of key assets as required to allow the Authority to provide sufficient water quality, quantity and pressure to meet customer demands in accordance with federal and state requirements under the Safe Drinking Water Act.

Other Important Info:
Challenges: Close coordination with operations and ability to jump on needs.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$50	$50	$50	$0	$0	$0	$0	$0	$0	$0	$0
Study # 1	$1,606	$1,606	$1,606	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170117

Project Title: Instrument Air Compressor

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Grant Gartrell

Director: Grant Gartrell

Project Score
20

Problem Statement:
Installation of new instrument air compressor system at Northeast Water Treatment Plant.

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170120

Project Title: Phosphoric Acid SCP-CS-1692

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Shakil Ahmed

Director: Grant Gartrell

Project Score
20

Problem Statement:
Engineering Design and Construction Phase Services for the replacement of the existing phosphoric acid feed system equipment, replacement of chlorine feed system valves, and concrete restoration for the phosphoric acid secondary containment area.

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs
GLWA Salaries	$2	$2	$2

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170200

Project Title: As-Needed Construction Materials, Environmental Media and Special Testing Services, Construction Inspection, and Other Technical Services

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: System-wide

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
0

Problem Statement:
GLWA engineering and operations need a contract mechanism to obtain professional engineering services in a timely manner to investigate environmental, geotechnical and specialized engineering problems that occur on a regular basis throughout the system.

Scope of Work/Project Alternatives:
This engineering/technical services contract involves as-needed engineering and technical services related to geotechnical investigations and related geotechnical engineering, construction materials sampling and testing, environmental media sampling and testing, soils sampling and testing, land surveying, corrosion testing and inspection, computer-aided design, and construction inspection.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$27	$0	$0	$27	$0	$0	$0	$0	$0	$0	$0
Study & Design & Construction Assistance # 1	$1,400	$0	$0	$1,400	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170300

Project Title: Water Treatment Plant Automation Program

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Water Treatment Plants
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Jeffrey Dorsey

Director: Terry Daniel

Project Score
0

Problem Statement:
The automation design and construction project comes from recommendations that identified existing station process data conditions, station needs, GLWA mission critical assets, alternative improvement options to address identified needs, recommended improvements to address the needs, prioritized projects based on the GLWA CIP scoring tool, and scheduling for making the improvements along with associated capital improvement budgets associated with each project established under CS-108.

Scope of Work/Project Alternatives:
The purpose of this project is to implement the recommendations from CS-108 that are prioritized in five (5) year increments with an estimated cost of $1 million dollars per year over a twenty (20) year span.

Other Important Info:
Challenge: Standardization of multiple different data process equipment already installed throughout the 5 plants could be a problem.

Project History: The GLWA Water Operations division is comprised of five water treatment plants. Each plant has process areas ranging from intake, sedimentation, chlorination, filtration and distribution systems. One of the directives from the organizational objectives is to provide the treatment plants with automation. This automation would be one of the mai...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	5 Year Total
TBD / Future Allocation / General Holding TBD	$13,249	$0	$0	$7,098	$6,151	$6,151

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170301

Project Title: Water Treatment Plant Automation

Project Status: Closed
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Jeffrey Dorsey

Director: Terry Daniel

Project Score
20

Problem Statement:

Project was formerly 170113. This project will provide auditing and a condition assessment of process data networks at each water plant. Additionally, it will provide recommendations on the conductivity of each process area within those plants using the model of Ovation as supervisory monitoring and or control and PLC's for process control where applicable.

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	5 Year Total
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design	$0	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170302

Project Title: SW SCADA System Upgrade

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


SW SCADA System Upgrade

Project Engineer/Manager: Jeffrey Dorsey

Director: Terry Daniel

Project Score
20

Problem Statement:
This project will upgrade SW WTP SCADA system.

Scope of Work/Project Alternatives:
The upgrade of network devices and removable of device net to the SCADA system.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	5 Year Total
TBD / Future Allocation / General Holding	$9,000	$0	$0	$1,788	$3,606	$3,606	$7,212

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170303

Project Title: Power Monitoring Installation for Water Treatment Plants

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Jeffrey Dorsey

Director: Terry Daniel

Project Score
0

Problem Statement:
Looking to achieve efficiency of our power usage at our water treatment plants.

Scope of Work/Project Alternatives:
This project will install power monitoring meters on electrical switch gear for critical pumping units at Water Works Park, Northeast, and Soutwest.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	5 Year Total
TBD / Future Allocation / General Holding	$1,700	$0	$0	$1,186	$514	$514

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170400

Project Title: Water Transmission Improvement Program

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Transmission System
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☑ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Todd King

Director: Todd King

Project Score
0

Problem Statement:
Assessing, rehabilitating or replacing aging transmission mains in the water system

Scope of Work/Project Alternatives:
This project is a yearly funding allocation for the design and/or construction work for the rehabilitation or replacement/construction of aging water transmission lines and all appurtenances, connections and related structures.

Other Important Info:
O&M manuals, GIS, Section Maps and Gate Books are available for reference.

Project History: There are many critical assets that are required to be operated in the transmission system and this yearly allowance is needed to meet the critical needs of these assets.

Challenges: May require shut down of large pumps, isolation or shutdown of large mains etc.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$580	$0	$0	$49	$34	$34	$34	$34	$34	$170	$362
Design # 2	$96	$0	$0	$0	$0	$0	$0	$0	$0	$0	$96
Design # 3	$4,005	$0	$0	$0	$1,000	$1,000	$1,000	$1,000	$5	$4,005	$0
Construction (Build) # 2	$10,900	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,900
Construction (Build) # 6	$17,590	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,590

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170500

Project Title: Transmission System Valve Rehabilitation and Replacement Program

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Transmission System Gate Valves
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**

Project Engineer/Manager: Todd King

Director: Todd King

Project Score
0

Problem Statement:
Replacement/Rehabilitation of GLWA Transmission System Gate Valves will aid in implementing a regular valve exercising program as recommended by AWWA as well as increase the reliability of the transmission system.

Scope of Work/Project Alternatives:
Evaluate the existing conditions, provide the necessary replacement/ rehabilitation option, design and implement them.

Other Important Info:
GIS, Section Maps and Gate Books are available for reference.

Project History: There are critical valves that are required to be closed during a main break or an emergency situation. There has not been a regular valve exercising program in past 15 years in the DWSD/GLWA System.

Challenges: May require shutdown of large transmission mains.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$510	$0	$0	$91	$42	$42	$42	$42	$26	$196	$223
Design # 1	$1,332	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,332
Design-Build # 1	$1,073	$0	$0	$190	$190	$190	$190	$190	$125	$884	$0
Construction (Build) # 3	$2,435	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,435

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170503

Project Title: TRANSMISSION SYSTEM VALVE REPLACEMENT

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Transmission System Gate Valves
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Todd King

Director: Todd King

Project Score
0

Problem Statement:
Replacement/Rehabilitation of GLWA Transmission System Gate Valves will aid in implementing a regular valve exercising program as recommended by AWWA as well as increase the reliability of the transmission system.

Scope of Work/Project Alternatives:
Evaluate the existing conditions, provide the necessary replacement/ rehabilitation option, design and implement them.

Other Important Info:
GIS, Section Maps and Gate Books are available for reference.

Project History: There are critical valves that are required to be closed during a main break or an emergency situation. There has not been a regular valve exercising program in past 15 years in the DWSD/GLWA System.

Challenges: May require shutdown of large transmission mains.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	5 Year Total
GLWA Salaries	$72	$0	$0	$64	$7	$7
Construction (Build)	$10,000	$394	$394	$8,309	$1,298	$1,298

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170600

Project Title: Water Transmission Main Asset Assessment Program

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Transmission Mains
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Todd King

Director: Todd King

Project Score
0

Problem Statement:
Many of the water mains serving the GLWA service area were installed in the early part of the 20th century or the later part of the 19th century, and are now reaching the end of their useful life span. This project will pilot and utilize new technologies to accurately identify the condition of these buried assets by constructing access ways for inspection and the installation of sensors and fiber optic cables for real-time monitoring of condition. It's essential for cost-efficient repair and r...

Scope of Work/Project Alternatives:
Construct access structures and utilize new technology to evaluate the existing conditions of the transmission system. Construction of in place sensors and cables may be necessary to adequately access condition. Provide the necessary recommendation for replacement and rehabilitation.

Other Important Info:
*Innovation Note: Consider new techniques for water main assessment.
GIS, Section Maps and Gate Books are available for reference.
Challenges: Gaining access to inspect buried pipes is difficult, disruptive and costly. However, there are ways to monitor and test the condition of the piping and methods of performing condition assessment.
Project History: There are many critical assets that are required to be operated in the transmission main, but the authority doesn't know the existing condi...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$431	$0	$0	$52	$24	$24	$24	$24	$24	$121	$258
Design-Build # 1	$8,007	$0	$0	$0	$0	$501	$501	$2,001	$2,501	$5,506	$2,501

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170800

Project Title: System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: LHP, SPP, SWP and IMC
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
0

Problem Statement:
This project merges all CIPs associated with Reservoir Rehabilitation into a single, compreshensive CIP Project. This new project is being managed against a overall repair schedule to mitigate conflicts in the transmission system so as to minimize the impact for MDEQ Mandated inspections and repairs to GLWA Reservoirs at Booster Stations and Water Treatment Plants. ECK 7/2018

Adjust the cost of this CIP this fiscal year to account for the contract award amount for engineering services relate...

Scope of Work/Project Alternatives:
The project will provide inspection, rehabilitation, and maintenance for all 33 finished (potable) reservoirs in the GLWA system on a MDEQ mandated 5 year revolving inspection cycle.

Other Important Info:
Scope applies to the Lake Huron WTP (LHP), Springwells WTP (SPP), Southwest WTP (SWP) and the Imlay Pumping Station (IMC) reservoirs.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$127	$0	$0	$46	$22	$22	$21	$17	$0	$81	$0
Study & Design & Construction Assistance # 1	$2,700	$0	$0	$0	$300	$300	$300	$300	$300	$1,500	$1,200
Construction (Build) # 1	$21,000	$0	$0	$0	$0	$2,000	$3,000	$3,000	$3,000	$11,000	$10,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170801

Project Title:

Project Status: Project Execution - Design
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Erich Klun

Director: Grant Gartrell

Project Score
0

Problem Statement:
CIP#170801 is the first in a series of facility improvements related to reservoirs at the water treatment plants and booster stations assigned to the System-Wide Finished Water Reservoir Inspection, Design and Rehabilitation Program under CIP#170800.

Scope of Work/Project Alternatives:
CIP#170801 is specifically related to inspection, design and construction of improvements to the reservoirs at the Springwells WTP, Southwest WTP, Lake Huron WTP and Imlay Station. CIP#170801 is currently being executed and is expected to be completed mid-FY25.

Other Important Info:
Inspection and design of improvements is being executed under Contract CS-151A held by Hazen.

Construction of improvements is being executed under Contract 1900744 held by Pullman SST, Inc.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Design/Engineering & Construction	$15,090	$0	$0	$8,420	$463	$2,075	$1,000	$1,000	$1,000	$5,538	$1,132

Document received by the 3rd Wayne Circuit Court.

CIP Number: 170900

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Various meter locations in Transmission System
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Chandan Sood

Director: Chandan Sood

Project Score
0

Problem Statement:
Improving meter data reliability, ensuring accurate billing, improving customer service and allow high quality analysis of the system

Scope of Work/Project Alternatives:
The Proposed improvements should include the following; The replacements of meters that have surpassed their life expectancy, and or the current flow rates exceed the mechanical limits of the meter. Installing entrance hatches that allow safer ingress, and egress, and that can be locked for security. Sand blasting and painting of piping and walls. Waterproofing meter vaults to keep the ground water out. Provide a proper floor slope in meter chambers that allow water to settle in puddles. Repair...

Other Important Info:
Challenges: Requires temporary shutdown of the water supply through the meter.

Project History: Currently GLWA provides water service to 126 communities, and measures flows and volumes by the utilization of 290 wholesale water meters now in service; 17 of these meters are venturi-orifice type meters, 26 of these are dual venturi type meters, 48 of these single venturi type meters, 97 of these are magnetic flow type meters, and 102 of these are turbine or mechanical type meters. Meters were ...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
TBD / Future Allocation / General Holding TBD	$40,719	$0	$0	$2,535	$1,159	$4,112	$4,113	$4,113	$4,113	$17,610	$20,573

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170901

Project Title: Suburban Water Meter Pit Rehabilitation and Meter Replacement

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Various meter locations in Transmission System
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Chandan Sood

Director: Chandan Sood

Project Score
0

Problem Statement:
Improving meter data reliability, ensuring accurate billing, improving customer service and allow high quality analysis of the system

Scope of Work/Project Alternatives:
The Proposed improvements should include the following; The replacements of meters that have surpassed their life expectancy, and or the current flow rates exceed the mechanical limits of the meter. Installing entrance hatches that allow safer ingress, and egress, and that can be locked for security. Sand blasting and painting of piping and walls. Waterproofing meter vaults to keep the ground water out. Provide a proper floor slope in meter chambers that allow water to settle in puddles. Repair...

Other Important Info:
Challenges: Requires temporary shutdown of the water supply through the meter.

Project History: Currently GLWA provides water service to 126 communities, and measures flows and volumes by the utilization of 290 wholesale water meters now in service; 17 of these meters are venturi-orifice type meters, 26 of these are dual venturi type meters, 48 of these single venturi type meters, 97 of these are magnetic flow type meters, and 102 of these are turbine or mechanical type meters. Meters were ...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$157	$1	$1	$121	$36	$0	$0	$0	$0	$36	$0
Construction (Build) TBD	$10,459	$4,529	$4,529	$3,128	$2,802	$0	$0	$0	$0	$2,802	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 170902

Project Title: Brownstown Meter Pit

Project Status: Active - Pre-Procurement - Construction
Class Lvl 1: Water
Class Lvl 2: Metering
Class Lvl 3: General Purpose
Lookup Location: Brownstown Township
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Chandan Sood

Project Score
0

Problem Statement:
BR-01 is a deduct meter pit that serves Brownstown Charter Township. Deduct meter pits are more difficult to track water usage. BR-01 will be abandon and BR-08 will be installed has a direct meter pit to Brownstown Charter Township.

Scope of Work/Project Alternatives:
Abandoning the existing BR-01 deduct meter pit with building a new direct meter pit BR-08 for serving Brownstown Charter Township. The new direct meter pit (BR-08) will have a new magnetic flow meter, 12-inch gate valves, and 8-inch check valve. There will be installation of 6-inch, 8-inch, and 12-inch piping for the new meter pit. There will be a new water pressure reducing valve vault for Brownstown Charter Township with only installing the piping in the vault.

Other Important Info:
None at this time.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	5 Year Total
GLWA Salaries	$365	$5	$5	$334	$21	$5	$26
Design & Construction Assistance	$456	$71	$71	$236	$148	$0	$148
Construction (Build)	$425	$0	$0	$0	$425	$0	$425

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 171500

Project Title: Roof Replacement at WWP, SP, LH, NE, SW, NSC, Orion, Franklin, and Conner Creek Facilities

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Nick Hoffman

Director: Grant Gartrell

Project Score
0

Problem Statement:
This design build project will replace roofing systems on GLWA water plants, water booster pumping stations and sewage pumping stations that were determined to need replacement over the next 5 to 7 years based on the CS-1674 Roofing Assesment Contract. Replacement is needed to protect the facilities interigty with regards to interiors, sensitive electrical equipment and process mechanical equipment vital to operations.

Scope of Work/Project Alternatives:
Tear off of existing roofing systems and replace with new roofing systems as follows:
Water Works Park- High Lift Building, standing metal seam roof, Raw Water Booster Pump Station, built-up roof
Springwells - Turbine House, built-up roof, 1930 Machine Room
Conner Sewage Lift Station, built-up roof
Franklin Water Booster Pump Station, built-up roof
Orion Water Booster Pump Station, standing metal seam roof

Other Important Info:
The total estimated replacement value (2016 dollars) of the 1,682,727 square feet of roofing at the water treatment plants, sewage pumping stations and water booster pumping stations is $33,142,054.

Project History: A condition assessment was performed and completed under Contract No. CS -1674 in 2016 that included all roofs located at GLWA's 5 water treatment plants, 19 water booster pumping stations and 11 sewage pumping stations. There were 268 separate roof sections totaling 1,682,727 s...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$253	$0	$0	$84	$11	$11	$11	$11	$11	$54	$115
Design & Bid Assistance	$2,092	$0	$0	$0	$0	$314	$314	$0	$314	$942	$1,151
Design-Build # 1	$33	$0	$0	$33	$0	$0	$0	$0	$0	$0	$0
Design-Build # 2	$20,333	$0	$0	$269	$0	$2,766	$1,483	$359	$2,596	$7,203	$12,861

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 171501

Project Title: Roof Replacements at SP, WWP,Orion,Franklin,and Conner Creek

Project Status: Project Execution - Construction
Class Lvl 1: Water
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Nick Hoffman

Director: Grant Gartrell

Project Score
0

Problem Statement:
This design build project will replace roofing systems on GLWA water plants, water booster pumping stations and sewage pumping stations that were determined to need replacement over the next 5 to 7 years based on the CS-1674 Roofing Assessment Contract. Replacement is needed to protect the facilities integrity with regards to interiors, sensitive electrical equipment and process mechanical equipment vital to operations.

Scope of Work/Project Alternatives:
Tear off of existing roofing systems and replace with new roofing systems as follows:
Water Works Park- High Lift Building, standing metal seam roof, Raw Water Booster Pump Station, built-up roof Springwells - Turbine House, built-up roof, 1930 Machine Room
Conner Sewage Lift Station, built-up roof
Franklin Water Booster Pump Station, built-up roof
Orion Water Booster Pump Station, standing metal seam roof

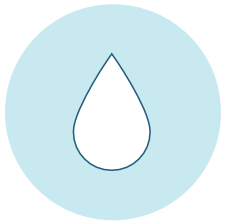
Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
GLWA Salaries	$32	$32	$32	$0
Design-Build	$3,452	$3,184	$3,184	$269

Document received by the MI Wayne 3rd Circuit Court.

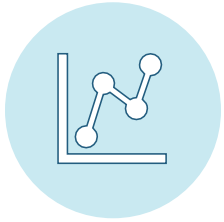
WASTEWATER PROJECTS



70 PROJECTS



5-YEAR CIP
$738 Million



10-YEAR OUTLOOK
$1.4 Billion



FOR MORE: APPENDIX B

Find the full Business Case Evaluations for Wastewater Projects in Appendix B.

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211001

Project Title: WRRF Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Rehabilitation for meeting NPDES Permit and NEC requirements

Scope of Work/Project Alternatives:
The work to be completed under this project will include installing ventilation and atmospheric control for the pipe gallery, providing new lights and installing new fire alarm system. Rehabilitation of the twelve rectangular primary clarifiers and rehabilitation of circular primary clarifiers 15 and 16 are also part of the scope of this project.

Other Important Info:
Challenges: N/A - Active

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$767	$740	$740	$27	$0	$0	$0	$0	$0	$0	$0
Construction Assistance # 1	$1,790	$741	$741	$1,049	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$51,504	$49,704	$49,704	$1,800	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211002

Project Title: WRRF PS No. 2 Pumping Improvements - Phase 1

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Correct drifting issues of pumps and meet long term wet weather capacity needs

Scope of Work/Project Alternatives:
This project involves evaluating and recommending alternatives for providing more reliable pumping capacity at Pump Station No. 2 for Pumps Nos. 11 and 14.

Other Important Info:
Challenges: Unable to improve the drift issues experienced at pump station 2.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$174	$174	$174	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$241	$241	$241	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$2,925	$1,599	$1,599	$1,326	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211004

Project Title: WRRF PS #1 Rack & Grit and MPI Sampling Station 1 Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF

☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Rehabilitate aging rack and grit system for efficient removal of grit to reduce loading on downstream process areas

Scope of Work/Project Alternatives:
The scope of work includes modifications and improvements of the existing grit and screening handling system at Pump Station 1 and MPI Sampling Station 1.

Other Important Info:
Challenges: N/A - Active

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$813	$798	$798	$15	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$22,180	$9,935	$9,935	$12,245	$0	$0	$0	$0	$0	$0	$0
TBD / Future Allocation / General Holding TBD	$302	$302	$302	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211005

Project Title: WRRF PS No. 2 Improvements Phase II

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**



Main Raw Sewage Pumps at Pump Station 2

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
71

Problem Statement:

This project will improve the pump reliability of PS-2 to meet the NPDES permit flow capacity requirements.

Scope of Work/Project Alternatives:

The preliminary scope of this project is to provide basis of design (study) report for rehabilitation/rebuilding plan for existing pump and its control and any associated equipment. The study will look into the addition of VFD to the three constant speed pumps. The study will not be limited to increasing the capacity of existing pumps to meet the long-term goal for wet weather capacity. The Scope also include: Provide engineering design for rehabilitation/rebuilding of the pumps, replacement...

Other Important Info:

Challenges: Shutdowns of the pumps to be rehabilitated will require co-ordination with operations and careful planning to meet NPDES permit requirements for the flow capacity during the construction phase.

Project History: Pump Station No. 2 was built in 1994. Seven out of eight pumps were running since 1994. These pumps never attained the design capacity due to an unidentified drifting problem. The eighth pump (Pump No. 10) was installed under PC-740 with a modified suction elbow that prov...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$348	$0	$0	$10	$0	$0	$0	$57	$57	$115	$223
Study # 1	$3,449	$0	$0	$0	$0	$0	$0	$404	$404	$808	$2,641
Construction (Build) # 1	$10,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211006

Project Title: WRRF PS No. 1 Improvements

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Pump Station 1

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
75

Problem Statement:
Condition assessment and rehabiliation of all pumps at Pump Station No. 1 to increase efficiency and reliability.

Scope of Work/Project Alternatives:
The study/design work will identify all major parts including impellers and wear rings to be refurbished for each pump and all related appurtenances. The construction services will provide rehabilitation and/or replacement as determined in the study and design along with the sequencing of pump shutdown throughout the rehabilitation period.
Investigation and evaluation of all the inlet gates, outlet gates and associated actuators, Motor Control Centers (MCCs) and other related equipment, HVAC s...

Other Important Info:
Challenges: Maintaining the adequate pumping capacity during construction.

Project History: GLWA operate two raw sewage pumping stations: PS-1 and PS-2, at the Water Resources Recovery Facility. Raw wastewater (influent) from the collection system flows to the Influent Pumping Station through the Detroit River Interceptor (16 feet in diameter), Oakwood Interceptor (12.5 feet in diameter) and North Interceptor East Arm (NIEA). The main Influent Pumping Station No. 1 (PS-1) was constructed in...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$321	$30	$30	$90	$45	$26	$26	$26	$26	$149	$142
Study & Design & Construction Assistance # 1	$4,986	$1,254	$1,254	$533	$533	$533	$534	$533	$533	$2,666	$1,333
Construction (Build) # 1	$63,402	$0	$0	$0	$2,483	$7,428	$7,449	$6,640	$7,000	$31,000	$32,402

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211007

Project Title: WRRF PS #2 Bar Racks Replacements and Grit Collection System Improvements

Project Status: Active - Procurement - Board Approved - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Pump Station 2, Grit channels

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
65.2

Problem Statement:

Replacement of all bar racks and associated equipment and addition of fine screens (1/4 inch) for more reliable and efficient screenings removal. Addition of screenings washing and compaction to reduce truck traffic and cost of disposal. Improvement of grit collection system with more efficient, state-of-the-art, grit collection and pumping system, and grit washing and classification to reduce truck traffic and cost of disposal. Improvements to the grit screenings and grit removal and handling ...

Scope of Work/Project Alternatives:

The work consists of evaluation, design and construction of the replacement of the existing bar racks and ancillary equipment and gates, addition of new fine screens (1/4 inch) downstream of the bar racks, addition of screenings washing and compaction, inclusion of stacked tray grit removal or other technology within the aerated grit tank and grit washing and/or classification. Work also includes the upgrade and expansion as necessary of the existing building that houses the screens and the scr...

Other Important Info:

*Innovation note: Include new grit removal equipment rather than replacement in kind (cyclonic).
The CIP Project Proposal – CIP 1314 – "Replacement of Bar Racks at Pump Station No. 2" and CIP Project Proposal – CIP 1223 – "Rehabilitation of Grit and Screening System at PS-2 and Rehabilitation of Sampling Sites at WWTP" are combined into one project under CIP 1314. That combined new budget for CIP 1314 (CIP 1223 and 1314) has a total amount of $11,617,000. The design of "Rehabilitation of Sampl...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$329	$5	$5	$57	$57	$57	$47	$46	$46	$254	$12
Study & Design & Construction Assistance # 1	$15,501	$0	$0	$2,266	$2,246	$2,246	$2,252	$2,246	$1,864	$10,853	$2,382
Construction (Build) # 1	$60,399	$0	$0	$0	$0	$4,684	$15,874	$15,831	$13,142	$49,530	$10,869

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211008

Project Title: WRRF Rehabilitation of Ferric Chloride Feed System in PS-1 and Complex B Sludge Lines

Project Status: Active - Pre-Procurement - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**



Ferric Chloride Storage and Containment Area

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
74.2

Problem Statement:
The Ferric Chloride Systems at PS-1 is used to reduce phosphorus to the required permit levels. The system, which includes chemical storage tanks, secondary containment, valves, and piping is in need of rehabilitation. The Complex B sludge lines are clogged due to Struvite and need rehabilitation/replacement.

Scope of Work/Project Alternatives:
The scope of work will include study design and construction for the ferric chloride feed system at PS-1. Specifically it will include: a study to evaluate alternative locations for application of ferric chloride, a pilot study to test alternative application points, and inspection of the existing chemical feed systems, a study to provide recommendations for system modifications and improvements, design of recommended system improvements, and construction of chemical feed system improvements. ...

Other Important Info:
*Innovation note: Align sizing & design with U of M phosphorus & enhanced carbon capture studies, as well as improved mixing of the ferric with primary influent.

Challenges: Maintaining capacity of the existing feed system during construction will be a challenge. Also, determining the simplest system that will meet current and future phosphorous limits for both primary and secondary effluent will be a challenge.

Project History: There are phosphorous effluent permit limits for both prim...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$397	$136	$136	$204	$46	$11	$0	$0	$0	$57	$0
Study & Design & Construction Assistance # 1	$2,357	$1,494	$1,494	$396	$396	$72	$0	$0	$0	$467	$0
Construction (Build) # 1	$8,634	$0	$0	$2,829	$4,916	$889	$0	$0	$0	$5,805	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211009

Project Title: WRRF Rehabilitation of the Circular Primary Clarifier Scum Removal System

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Primary Circular Scum House, Inside

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
61.2

Problem Statement:
The circular clarifiers scum removal system is over 10 years old and need to be rehabilitated. They will help protect the secondary treatment process by preventing scum from entering the aeration tanks.

Scope of Work/Project Alternatives:
This project will provide for the study, design, and construction of new scum equipment in the Scum Buildings for the circular clarifiers. The study will consist of an evaluation of the existing process and simplified alternative systems for scum removal including the scum removal from the buildings. Future alternatives for scum disposal, such as addition to an anaerobic digestion process, will be considered. All alternatives will be evaluated for energy efficiency (reduction of electrical u...

Other Important Info:
*Innovation note: See project write-up -- evaluate alternatives for energy efficiency.

Project History: There are 12 rectangular PCs (1-12) and 6 circular PCs (13-18) clarifiers at the WRRF. PCs remove TSS, BOD, and phosphorous through a chemically enhanced settling process. The clarifiers also remove fats, oils, and grease (FOG or scum) by skimming the surface of the clarifiers and transporting the scum to a SB where it can be concentrated and pumped again to be hauled off site. The SBs fo...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	5 Year Total
GLWA Salaries	$258	$3	$3	$62	$52	$51	$46	$44	$193
Study & Design & Construction Assistance # 1	$1,750	$0	$0	$181	$424	$424	$425	$296	$1,569
Construction (Build) # 1	$11,000	$0	$0	$0	$0	$2,265	$5,148	$3,587	$11,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211010

Project Title: Rehabilitation of Sludge Processing Complexes A and B

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Complex B, Basement

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
65

Problem Statement:
Both Complex A and Complex B have reached the end of their design life. The majority of the equipment for the two processes are located below grade in areas prone to flooding. Tanks are located above grade and have little to no access around the perimeter, this limits and reduces cleaning effectiveness. Both the valves and the pumps used to transfer sludge to the BDF are past their design life. Equipment breakage affects the plant ability to process sludge.

Scope of Work/Project Alternatives:
The work consists of evaluation, design and rehabilitation of both Complex A and Complex B. Scope to include tank repair to improving tank access and increase life, building and process repair to including structural, mechanical, process, electrical, and instrumentation replacement. Scope should focused on relocating the sludge pumps from below grade to above grade which could include new above grade structures and cross connecting pumps to allow for additional flexibility in feeding the BDF ...

Other Important Info:
Maintaining the MDEQ-NPDES required capacity during the construction phase of the project.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$446	$42	$42	$64	$42	$42	$42	$42	$167	$173
Study # 1	$1,370	$0	$0	$0	$0	$70	$245	$245	$560	$810
Construction (Build) # 1	$12,118	$0	$0	$0	$0	$0	$0	$1,709	$1,709	$10,409

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 211011

Project Title: WRRF PS1 Screening and Grit Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Primary Treatment
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
64

Problem Statement:
Addition of fine screens (1/4 inch) for more reliable and efficient screenings removal. Addition of screenings washing and compaction to reduce truck traffic and cost of disposal. Improvement of grit collection system with more efficient, state-of-the-art, grit collection and pumping system, and grit washing and classification to reduce truck traffic and cost of disposal. Improvements to the grit screenings and grit removal and handling systems will improve the performance of all downstream pro...

Scope of Work/Project Alternatives:
The work consists of evaluation, design and construction of the addition of new fine screens (1/4 inch) downstream of the bar racks, addition of screenings washing and compaction, inclusion of stacked tray grit removal within the aerated grit tank and grit washing and/or classification. Work also includes the upgrade and expansion as necessary of the existing building that houses the screens and the screenings and grit handling and load out, including all lighting, HVAC, plumbing, electrical, a...

Other Important Info:
Maintaining the MDEQ-NPDES required capacity during the construction phase of the project. Coordination with the CIP Number 211006

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$303	$0	$0	$42	$57	$100	$203
Design & Construction Assistance # 1	$18,000	$0	$0	$0	$75	$75	$17,925
Construction (Build) # 1	$75,000	$0	$0	$0	$0	$0	$75,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212003

Project Title: WRRF Aeration System Improvements

Project Status: Closed
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Improve aeration system and provide necessary inter-connections

Scope of Work/Project Alternatives:
The scope of work includes study, design, and construction assistance for the oxygen baffle on Bay 10 of A1 & A2 decks, replacement of influent, Return Activated Sludge (RAS) piping, isolation gate and valves for decks Nos. 3 & 4, replace RAS and influent magmeters for Intermediate Lift Pumps (ILP) Nos. 3, 4 & 7. The work also includes replacement of influent gates and operators on Aeration Deck No. 1 & 2.

Other Important Info:
Challenges: N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$355	$355	$355	$0	$0	$0	$0	$0	$0	$0	$0
Study & Design & Construction Assistance # 1	$405	$405	$405	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$13,883	$13,883	$13,883	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212004

Project Title: WRRF Chlorination and Dechlorination Process Equipment Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: WRRF

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:

The disinfection complex equipment condition has deteriorated because of the corrosive characteristics of the chemicals utilized in the operations of the area. This project is needed to restore equipment performance to OEM levels.

Scope of Work/Project Alternatives:

Scope of Work is to refurbish evaporators, chlorinators/sulfonators, replace regulating check valves, ejectors, process water valves, gas safety panels, compressors, gas flow meters, and all accessories and appurtenances. This proposed CIP budget is for construction only. The design and construction assistance services are budgeted through "As Needed Engineering Services Contract CS-1481, Task #23".

Other Important Info:

*Innovation note: Align with considerations of alternative disinfection.
The maintenance of the equipment hasn't been performed at the recommended intervals. Rebuilding the equipment and maintaining them according to OEM specifications would provide reliable performance.

Challenges: Chlorine and sulfur dioxide are both extremely hazardous toxic chemicals that can impact staff and the public if an uncontrolled gas release occurs. Maintaining staff safety, regulatory compliance, and meeting p...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$109	$64	$64	$45	$0	$0	$0	$0	$0	$0	$0
Construction Assistance # 1	$351	$238	$238	$113	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$5,282	$3,501	$3,501	$1,782	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212006

Project Title: WRRF Rouge River Outfall (RRO) Disinfection (Alternative)

Project Status: Pending Closeout
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: Rouge River Outfall

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Provide project oversight and design build services for alternative disinfection services to meet NPDES Permit requirements at existing Rouge River Outfall

Scope of Work/Project Alternatives:
The consultant shall provide comprehensive professional services for project oversight and Owner's representation for the PC-797 RRO Disinfection Progressive Design-Build Contract. The scope of work consists of completing basis of design, design and construction services to develop and implement a solution that will result in 100% disinfection of wet weather flow discharged from WRRF to Detroit River outfall and Rouge River Outfall in order to meet NPDES Permit requirements.

Other Important Info:
Challenges: N/A - Under Procurement.

Project History: The DR0-2 Outfall was originally designed in 1998 under CS-1150, and construction began in 1999 under PC-709. Some surface construction work and substantial underground work were performed, including construction of the entrance shaft, two access shafts, six diffuser riser shafts in the Detroit River, and about half of the length of the tunnel. On April 23, 2003, uncontrollable high rates of ground water mixed with Hydrogen Sulfide (H2S)...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$594	$594	$594	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$40,702	$40,702	$40,702	$0	$0	$0	$0	$0	$0	$0	$0
Construction Management # 1	$2,493	$2,493	$2,493	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212007

Project Title: WRRF Rehabilitation of the Secondary Clarifiers

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Secondary Clarifier

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
53.2

Problem Statement:
The secondary clarifiers need to be inspected and rehabilitated for certain components such as the rake arms.

Scope of Work/Project Alternatives:
This project will provide for inspection, study, design, and construction for refurbishing the secondary clarifiers. A key component will be the inspection of the concrete and the rake arms. Once the condition of these components is determined, alternatives will be evaluated, and the selected alternative will be designed and constructed. The scope will also include evaluating and designing isolation gates for the individual clarifiers. The B Houses have energy intensive HVAC units. These w...

Other Important Info:
Challenges: This will be a long-term project because only one or two clarifiers can be taken out of service at a time. Also, there may be different levels of rehabilitation for each clarifier depending upon the results of the inspection.

Project History: There are 25 secondary clarifiers at the GLWA WRRF. They have been rehabilitated in the past for other components such as RAS pumps, troughs and weirs, and center drives. It is time to refurbish some of the other key components.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$402	$0	$0	$10	$47	$47	$47	$50	$201	$200
Study & Design & Construction Assistance # 1	$1,974	$0	$0	$0	$77	$193	$193	$193	$655	$1,319
Construction (Build) # 1	$47,495	$0	$0	$0	$0	$0	$0	$3,073	$3,073	$44,422

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212008

Project Title: WRRF Aeration Improvements 1 and 2

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: WRRF

☐ **Project New to CIP:**

- ☑ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**


Aeration Basin 1 and ILP's 1 and 2

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
67.8

Problem Statement:
The ILPs convey primary effluent to the secondary bioreactors (aeration decks). These pumps have reached their useful life and are in need of replacement. The pump selection is integrally connected to improvements in the aeration decks related to the conversion to biological phosphorus removal, implementation of step feed and overall improved hydraulic control in the aeration decks and flow control through the secondary system. Implementation of biological phosphorus removal will reduce oxygen ...

Scope of Work/Project Alternatives:
The work consists of evaluation, design and construction of the replacement of ILPs 1 & 2, conversion of aeration decks 1 & 2 to incorporate biological phosphorus removal, including replacement of mixers in Bays 1, 2 and 3, relocation of the oxygen feed, and a new purge blower. Incorporation of step feed includes modification of the influent conditions to allow primary effluent to be directed to Bay 1, as well as two other locations down the length of the tank. Weir length will be increased to ...

Other Important Info:
Opportunity for a common header system to allow for any ILP to supply any bioreactor. If feasible provide ILPs that can meet the regulatory and dry weather needs without the need for speed control.

Challenges: Maintaining the required wet weather secondary capacity of 930 MGD while operating efficiently during dry weather flows.

Project History: ILP Station No. 1 houses ILP Nos. 1 and 2. The pumps are vertical turbine type each with a maximum capacity of 365 MGD and a motor size of 2,5...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$1,163	$16	$16	$828	$82	$47	$47	$47	$47	$272	$47
Study & Design & Construction Assistance # 1	$16,467	$0	$0	$1,436	$2,484	$2,484	$2,491	$2,484	$2,382	$12,326	$2,705
Construction (Build) # 1	$64,301	$0	$0	$0	$0	$2,860	$16,885	$16,839	$16,147	$52,730	$11,571

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212009

Project Title: WRRF Aeration Improvements 3 and 4

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: WRRF

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**



Aeration Basin 4, and ILP's 3, 4, and 7

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
67.8

Problem Statement:

The ILPs convey primary effluent to the secondary bioreactors (aeration decks). These pumps have reached their useful life and are in need of replacement. The pump selection is integrally connected to improvements in the aeration decks related to the conversion to biological phosphorus removal, implementation of step feed and overall improved hydraulic control in the aeration decks and flow control through the secondary system. Implementation of biological phosphorus removal will reduce oxygen ...

Scope of Work/Project Alternatives:

The work consists of evaluation, design and construction of the replacement of ILPs 3, 4 & 7, conversion of aeration decks 3 & 4 to incorporate biological phosphorus removal, including replacement of mixers in Bays 1 and 2, relocation of the oxygen feed, and a new purge blower. Incorporation of step feed includes modification of the influent conditions to allow primary effluent to be directed to Bay 1, as well as two other locations down the length of the tank. An assessment of reconfiguring de...

Other Important Info:

Maintaining the MDEQ-NPDES required capacity during the construction phase of the project.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$356	$0	$0	$52	$57	$110	$246
Design & Construction Assistance # 1	$15,250	$0	$0	$0	$1,181	$1,181	$14,069
Construction (Build) # 1	$57,983	$0	$0	$0	$0	$0	$57,983

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 212010

Project Title: WRRF Conversion of Disinfection of all Flow to Sodium Hypochlorite and Sodium Bisulfite

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Secondary Treatment and Disinfection
Lookup Location: WRRF

☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Chlorination Building, Inside

Project Engineer/Manager: TBD

Director: Dan Alford

Project Score
65

Problem Statement:
With the completion of the RRO Disinfection Project (CIP 212006), storage and feed of sodium hypochlorite to the primary effluent bypass with sodium bisulfite for dechlorination has been enabled. Elimination of the use of gaseous chlorine for disinfection of the secondary effluent and replacement with sodium hypochlorite will increase operator and public safety in and around the plant site.

Scope of Work/Project Alternatives:
The work consists of evaluation of sodium hypochlorite and sodium bisulfite usage over the first three years of operation of the new system to assess actual dosage required to achieve permit compliance and storage available with the existing system. The assessment will include preliminary design of modifications required to enable sodium hypochlorite feed to the secondary treatment effluent and an assessment of the storage requirements at varying sodium hypochlorite concentrations. The assessme...

Other Important Info:
None

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$309	$0	$0	$52	$57	$110	$200
Design & Construction Assistance # 1	$947	$0	$0	$0	$75	$75	$872
Construction (Build) # 1	$4,509	$0	$0	$0	$0	$0	$4,509

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 213006

Project Title: WRRF Improvements to Sludge Feed Pumps at Dewatering Facilities

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Residuals Management
Lookup Location: WRRF
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Sludge Feed pump in Complex A

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
69.2

Problem Statement:
Improved sludge feed pumping system will provide wide range of operating conditions. Variable Frequency drive and Hydraulic drive units for SFP 1 and 2 are located below grade and the area has flooded. A single recycle valve for SFP 3 and 4 puts the plant at a higher risk for system outages.

Scope of Work/Project Alternatives:
The scope of work includes study, design, and construction for the replacement of sludge feed pumps SFP 1, 2, 3, 4, 5 and 6 and other modifications to the pumping system at the WRRF.

Other Important Info:
Challenges: Maintaining Plant Operational Capacity during construction.

Project History: Water Resource Recovery Facility (WRRF) has six (6) Sludge Storage Tanks (SST-1, 2, 3, 4, 5 &6), which feed sludge to the dewatering facilities (i.e. belt filter presses complexes and complex II centrifuges.) Typically, sludge from Storage Tanks 1 & 2 supplies the centrifuges on dewatering complex II upper level; sludge from Storage Tanks 3 & 4 supplies the centrifuges on the lower level of Dewatering...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$211	$6	$6	$67	$57	$47	$33	$0	$0	$138	$0
Study & Design & Construction Assistance # 1	$820	$0	$0	$41	$285	$285	$209	$0	$0	$779	$0
Construction (Build) # 1	$3,459	$0	$0	$0	$0	$1,920	$1,539	$0	$0	$3,459	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 213007

Project Title: WRRF Modification to Incinerator Sludge Feed Systems at Complex -II

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Residuals Management
Lookup Location: WRRF
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
GLWA have an ongoing study and design of sludge cake conveyance system improvements project after the March 4, 2016 fire incident in Complex –II Incinerators building. The construction of this project will provide a cleaner, fire resistant, reliable and safe sludge feed to the incinerators.

Scope of Work/Project Alternatives:
The restoration of sludge conveying capacity, which was lost due to the fire damage and to provide improved sludge conveyance from each dewatering facility to the incinerators. Replacement of 19 MCCs and Replacement of the Unit Substation EB-26 in Incineration Complex II.

Other Important Info:
Challenges: Maintaining the sludge conveyance capacity to meet permit requirements during the construction of these improvements, will be the most significant challenge on this project.

Project History: The C-II Incineration complex is over 40 years old. Major rehabilitation had been deferred over the years in anticipation of an alternative Biosolids disposal solution to handle all the solids. The Complex-II have many major pieces of equipment that are nearing the end of their useful life a...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$539	$391	$391	$93	$55	$0	$0	$0	$0	$55	$0
Study & Design & Construction Assistance # 1	$2,086	$797	$797	$811	$478	$0	$0	$0	$0	$478	$0
Construction (Build) # 1	$19,537	$14,231	$14,231	$3,339	$1,967	$0	$0	$0	$0	$1,967	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 213008

Project Title: WRRF Rehabilitation of the Ash Handling Systems

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Residuals Management
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Incineration Complex II, Ash System

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
57.8

Problem Statement:
The ash systems convey and store ash for ultimate disposal. The incinerators cannot be used if both the systems are not working.

Scope of Work/Project Alternatives:
The scope of work will include study, design, and construction for the rehabilitation of the wet and dry ash systems. The scope will also include the piping, valves, isolation gates, vacuum pumps, air filters, HVAC, boilers, miscellaneous silo repairs (concrete, access, etc.) site work and drainage, and miscellaneous structural repairs (foot bridge, spalling concrete, etc.) at the dry ash handling system. It will also include the pumps, piping, and sluicing system at the wet ash system.

Other Important Info:
*Innovation note: Due to only 10-15 years remaining useful life on Complex I, reconsider recommissioning wet ash. Recom.

Project History: The C-I and C-II Incinerators have been the primary source for processing Biosolids at the GLWA WRF since the plant was first built. The original ash handling system was a wet ash/sluicing process. The dry ash system was constructed in the 1960s and expanded with the construction of the C-II Incinerators in the 1970s. The wet ash system has not been in us...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$272	$17	$17	$40	$40	$40	$33	$33	$33	$181	$33
Study # 1	$1,960	$94	$94	$311	$255	$255	$256	$255	$255	$1,275	$280
Construction (Build) # 1	$6,200	$0	$0	$0	$0	$0	$164	$1,230	$3,690	$5,084	$1,116

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 214001

Project Title: WRRF Relocation of Industrial Waste Control Division and Analytical Laboratory Operations

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: Industrial Waste Control
Lookup Location: System Wide
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Laboratory Optimization, Continued operation of IWC and Lab, lease termination for analytical laboratory, and utilization of available space in WRRF NAB

Scope of Work/Project Alternatives:
Relocate Industrial Waste Control Division and Analytical Lab to New Administration Building at WRRF. Consolidate the existing Operations Lab with Analytical Lab.

Other Important Info:
Challenges: Maintaining the laboratory operations during relocation.

Project History: In accordance with the NPDES Permit, GLWA implements and enforces an Industrial Pretreatment Program (IPP), and regulates the discharge of wastewater from commercial and industrial sources throughout the service area. A key component of the IPP includes the performance of analytical testing on wastewater samples collected from industrial and commercial sources, in-system samples from the sewer system and...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$202	$133	$133	$69	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$950	$950	$950	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 2	$11,499	$9,501	$9,501	$1,998	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216004

Project Title: Rehabilitation of Various Sampling Sites and PS#2 Ferric Chloride System at WRRF

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
Rehabilitation of the sampling facilities will improve system reliability and allow for consistent and accurate sampling. This will help to submit an accurate report to MDEQ. The rehabilitation of Ferric Chloride system will improve the phosphorous removal to comply with the Permit.

Scope of Work/Project Alternatives:
The scope of work includes:
Replacement of existing sampling equipment, installing new samplers, pumps, piping, housing and support equipment such as I&C, HVAC, etc. at the various sampling sites.
The scope also include:
Replacement of existing two steel Ferric Chloride tanks at PS#2 with four (4) smaller tanks.
Provide new piping layout, gravity feed, and self-cleaning strainer.
Rehabilitate Ferric Chloride Unloading station, associat...

Other Important Info:
*Innovation note: Rehab may include alternative online/real-time sampling & analysis, as well as improved mixing of the ferric with primary influent.
The original CIP Project Proposal CIP-1223, “Rehabilitation of Grit and Screening System at PS-2 and Rehabilitation of Sampling Sites at WWTP” included two major scope items; Rehabilitation of Grit & Bar Screening System and Sampling Stations. That construction budget for CIP-1223 amount $11 M was set aside in CIP. The design for Grit & Screenin...

Current Expenses (All figures are in $1,000’s)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$162	$105	$105	$29	$29	$0	$0	$0	$0	$29	$0
Construction Assistance # 1	$921	$778	$778	$96	$47	$0	$0	$0	$0	$47	$0
Construction (Build) # 1	$5,562	$755	$755	$4,807	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216006

Project Title: Assessment and Rehabilitation of WRRF yard piping and underground utilities

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Secondary Area

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
76.4

Problem Statement:
Yard piping and underground utilities are vital to the operations of the WRRF. The integrity of these systems will be maintained with this project. The Secondary Water system needs to be relocated or completely refurbished to provide uninterrupted water for fire protection and process applications such as seal water to the pumps. Some of the yard piping is original to the plant and requires a condition assessment.

Scope of Work/Project Alternatives:
This project will include the study, design, and construction for the needed improvements to yard piping and underground utilities. This includes right sizing, as-built confirmation and condition assessment of our yard piping and underground utilities. It is possible that the secondary water system may need to be relocated. The distribution models for the water systems will also be updated. A redundant potable water feed to the WRRF will also be evaluated.

Other Important Info:
Reliable utility is a critical aspect of O&M for the facility and to avoid outages.

Project History: Some of the pipe lines at the WRRF have been inexistence since the plant was built and have been found on record dating back to 1938. As the plant has grown, so have the systems. In general, the majority of the changes to the multiple systems occurred when the specific buildings or components to the plant were built or renovated. Therefore, an evaluation and necessary replacement of these p...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$467	$44	$44	$218	$57	$55	$46	$46	$1	$205	$0
Design & Construction Management # 1	$2,408	$29	$29	$362	$501	$501	$502	$501	$11	$2,016	$0
Construction (Build) # 1	$21,000	$0	$0	$0	$0	$2,302	$9,260	$9,235	$202	$21,000	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216007

Project Title: DTE Primary Electric 3rd Feed Supply to WRRF

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Phillip Kora

Director: Philip Kora

Project Score
0

Problem Statement:
The scope of this project includes design and construction of 3rd 120 KV primary electric supply transmission line (design, build and maintain by DTE) tapping into the 120 kv waterman-Zug line in the vicinity of Dearborn St. and Copland St right of way at Tower 1368 per the agreement between DTE and GLWA dated May 2, 2019. GLWA is responsible to secure the property right-of-way from the property owners as well as environmental remediation and cleanup including hauling and disposal of any soil.

Scope of Work/Project Alternatives:
GLWA also is responsible to provide the connection from the service point (last steel pole installed by DTE) to GLWA's equipment on GLWA's property. This primary transmission power line will energize the already installed new 120-13.8 industrial substation owned by GLWA near EB-1.

Other Important Info:
Challenges: Negotiation with private property owners and testing of the automatic switch over will require co-ordination with operations. Keep everything in this section except the last sentence 'In order to speed design and construction GLWA is proposing a design-build project'. Delete that last sentence and replace with 'GLWA and DTE has renegotiated the agreement and executed the new agreement on May 2, 2019'.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	5 Year Total
GLWA Salaries	$77	$31	$31	$31	$15	$15
Design & Construction Assistance # 1	$40	$40	$40	$0	$0	$0
Construction (Build) # 1	$4,427	$2,827	$2,827	$1,222	$378	$378

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216008

Project Title: Rehabilitation of Screened Final Effluent (SFE) Pump Station

Project Status: Active - Procurement - Negotiation Phase - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF
☐ **Project New to CIP:**

- ☑ **Innovation**
- ☐ **WW Master Plan**
- ☑ **Water Master Plan Right Sizing**
- ☐ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**


SFE Building, Basement

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
55.8

Problem Statement:
The SFE Pump Station provides SFE water to many of the GLWA WRRF treatment processes and needs to be completely rehabilitated to maintain uninterrupted supply of SFE water to these processes.

Scope of Work/Project Alternatives:
This project will include the study, design, and construction for the needed improvements to the SFE pump station. This includes required capacity, pumps, strainers, piping, controls, building improvements, and electrical supply. This will also include a study to evaluate the potential for replacing the secondary water utilization with SFE utilization where feasible and an alternative analysis to the existing carrier water at chlorination/dechlorination facility, seal water, recovery needs wh...

Other Important Info:
*Innovation note: optimize of a valuable resource recovered for facility needs. Project History: The SFE pump station has eight pumps with a total capacity of approximately 135 MGD. Pumps 1,2,4, and 6 were installed in 1973, pumps 3 and 5 in 1980, and pumps 7 and 8 in 1998. The older pumps were rebuilt in 1998. Strainers have been reconditioned as necessary over time. Due to the critical nature of the SFE pump station and the elapsed time since a major rehabilitation (over 15 years), a signifi...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$327	$6	$6	$57	$57	$41	$41	$41	$41	$222	$41
Study # 1	$2,540	$0	$0	$443	$349	$349	$349	$349	$349	$1,747	$349
Construction (Build) # 1	$37,954	$0	$0	$0	$500	$6,114	$6,114	$6,114	$6,114	$24,954	$13,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216009

Project Title: LM Facilities Assessment and Rehabilitation/Replacement

Project Status: Closed
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
0

Problem Statement:
The warehouse buildings that stores equipment and supplies for GLWA are located at different facilities. The physical condition of the existing buildings, specifically the McKinstry warehouse (SSS), seems to be in poor condition with extensive roof leaking and other issues. There is an assessment of the L&M Facilities going on to determine whether it makes economic sense to continue to operate these facilities at the existing sites or if these facilities can be downsized into one central site.

Scope of Work/Project Alternatives:
Evaluate the existing conditions of the warehouse facilities throughout GLWA. Provide recommendations to improve the facility environment to store the assets safely and efficiently. The various building systems, including heating, ventilation, electrical, and lighting shall be evaluated to be in compliance with applicable building codes and regulations.
Design and Construction of the suggested modifications, based on the evaluation, shall follow.

Other Important Info:
None

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	5 Year Total
GLWA Salaries	$162	$162	$162	$0	$0	$0	$0
Study & Design & Construction Assistance # 1	$3	$3	$3	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216010

Project Title: WRRF Facility Optimization

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☑ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Beena Chackunkal

Director: Dan Alford

Project Score
63.6

Problem Statement:
The existing WRRF is a product of countless construction projects over nearly 90 years and consists of numerous process and non-process buildings with varying levels of use and practicality. As WRRF across the nation come out of the shadows and into the light of the public and elected officials it is critical to convey an image that reflects the pride and importance of the work that is done every day at this facility. As such, this project will work on the softer side of the facility, create a...

Scope of Work/Project Alternatives:
The work consists of extending the evaluation performed as a part of Master Planning to design and construct site modifications including but not limited to a new visitor center, demolition or repurposing of existing structures that are no longer used, consolidation and or reconfiguration of administration, operations and maintenence staff and spaces, vehicle and equipment storage spaces, shops, etc. The project also includes site modifications to include improved site circulation, parking and ...

Other Important Info:
None

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total
GLWA Salaries	$271	$4	$4	$25	$57	$46	$46	$46	$46	$241
Design & Construction Assistance # 1	$1,000	$0	$0	$0	$0	$181	$547	$93	$180	$1,000
Construction (Build) # 1	$9,000	$0	$0	$0	$0	$1,627	$4,920	$833	$1,620	$9,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 216011

Project Title: WRRF Structural Improvements

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Wastewater
Class Lvl 2: WRRF
Class Lvl 3: General Purpose
Lookup Location: WRRF
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Incineration Building

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
0

Problem Statement:
The WRRF facilities are some of the oldest facilities within the GLWA infrastructure and are outside the initial design lives. In order to assure the safety of GLWA personnel working at the WRRF and to increase operational reliability, GLWA is initiating a long-term structural maintenance program. The program will start with a full structural needs assessment, inclusive of a four-year program of implementing the highest priority repairs in successive order.

Scope of Work/Project Alternatives:
The program will include a complete field assessment and structural condition report, classification of recommended repairs into levels of urgency, estimating quantities and the costs of repairs, developing a three-year repair program to address high priority repairs, design and implementation of repairs, preparation of as-built's and final project report, in connection with the Work. The Work includes improvements to be designed, administered, and constructed by the D/B Contractor, inclusive o...

Other Important Info:
None

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$333	$0	$0	$52	$52	$46	$46	$46	$46	$235	$46
TBD / Future Allocation / General Holding	$12,000	$0	$0	$0	$2,000	$2,000	$2,000	$2,000	$2,000	$10,000	$2,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 222001

Project Title: Oakwood District Intercommunity Relief Sewer Modification at Oakwood District

Project Status: Active - Procurement - Design
Class Lvl 1: Wastewater
Class Lvl 2: Field Services
Class Lvl 3: Interceptor
Lookup Location: Oakwood District
☐ **Project New to CIP:**

- ☐ **Innovation**
- ☑ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**



Overall Plan for NWI Diversion to Oakwood Facilities

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
53.6

Problem Statement:

Improvements to the Oakwood District Sanitary Sewer system and implementation of various projects as recommended in report by Applied Sciences, Inc. Dated 2/26/16. Projects to include: 1) Clean & Inspect Trunk Sewers, 2) Analysis and improvement of Oakwood PS/RTB operations, 3) Second influent sewer to Oakwood PS, and 4) NWI Diversion for CSO Control. Projects to be prioritized and validated as part of Wastewater Master Plan Project (GLWA CS-036).

Scope of Work/Project Alternatives:

The work includes basis of design (study) report on alternative solution to proposed Oakwood District Intercommunity Relief Sewer, diversion of storm water flow, and construction assistance during construction phase of emerging projects. Coordinate with DWSD projects including catch basin restrictions and green spaces.

Other Important Info:

Refer to linked aerial photo of Oakwood District with overlay of proposed new sewers, as built drawings of recent construction in the District for PCS-79, PCS-80 and PC-755; map of Intercommunity Collection System including portion of Oakwood District shown above—and other select resources linked below.

Challenges: Maintaining the wet weather contract capacities and adequate CSO treatment during extreme storm events and mitigate basement and street flooding in the District and intercommunity...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$397	$0	$0	$57	$57	$53	$46	$46	$46	$248	$92
Study & Design & Construction Assistance # 1	$6,000	$0	$0	$868	$733	$733	$733	$733	$733	$3,666	$1,466
Construction (Build) # 1	$47,000	$0	$0	$0	$0	$0	$0	$4,091	$15,695	$19,786	$27,214

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 222002

Project Title: Detroit River Interceptor (DRI) Evaluation and Rehabilitation

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Field Services
Class Lvl 3: Interceptor
Lookup Location: Detroit River Interceptor
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


DRI Shaft Construction

Project Engineer/Manager: Mini Panicker

Director: Todd King

Project Score
65.4

Problem Statement:
Evaluation of the existing condition of the Detroit River interceptor (DRI), and rehabilitation/replacement of portions based on the evaluation results are essential to optimize the transportation capacity of the GLWA collection system and to increase its service life.

Scope of Work/Project Alternatives:
Preliminary Scope of Work of the Project is as follows: Review the existing records, investigate the existing conditions , provide the necessary cleaning/rehabilitation/replacement to optimize the design capacity of the collection system and to minimize the inflow and infiltration into the collection system.

Other Important Info:
Challenges: DRI may have flow control challenges for both inspection and rehabilitation. Recommendations from these inspections may reveal further need for cleaning, rehabilitation or replacement.

Project History: The installation of some of the GLWA interceptors and sewers are dated back to 1912 under various contracts.
Detroit River Interceptor inspection was completed in 5 different phases and there were portions deteriorated with visible surface aggregates, attached encrustation and i...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$373	$56	$56	$46	$46	$41	$46	$46	$46	$225	$46
Design-Build # 2	$52,402	$20,095	$20,095	$11,146	$11,146	$10,016	$0	$0	$0	$21,162	$0
TBD / Future Allocation / General Holding # 1	$20,000	$0	$0	$0	$0	$0	$5,650	$5,189	$3,599	$14,438	$5,562

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 222004

Project Title: SEWER SYSTEM INFRASTRUCTURE IMPROVEMENTS and Pumping Stations

Project Status: Reclassified
Class Lvl 1: Wastewater
Class Lvl 2: Field Services
Class Lvl 3: Interceptor
Lookup Location: VRs, ISDs, Access Hatches, Backwater Gates
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Todd King

Project Score
68.2

Problem Statement:
VR-Gates, ISDs, and backwater gates are operational elements in the collection system that help in minimizing the untreated overflows and maximizing the flows to the WRRF and CSO control facilities. They have reached their life expectancy and needs rehabilitation.

Scope of Work/Project Alternatives:
Evaluate the existing conditions of the VR-Gates, ISDs, Backwater Gates and Access Hatches, provide the necessary design and the Construction Assistance for their replacement/rehabilitation.

Other Important Info:
Google map of VR-3 and VR-9 are included. VR-4, 5, 6, 10, 11 &13 are also part of the project.

Project History: GLWA interceptors and sewers were constructed in the early 1900s. The hatches and access covers secure operations and maintenance access points throughout the system for items such as the backwater gates, ISD, and VR. The backwater gates, ISD, and VR are all critical elements that control and divert flows throughout the system. Most of them have reached their life expectancy an...

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 222004

Project Title: SEWER SYSTEM INFRASTRUCTURE IMPROVEMENTS and Pumping Stations

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Study & Design & Construction Assistance # 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Unallocated)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Study/Design/C.A./Construction (Unallocated)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 232001

Project Title: Fairview Pumping Station - Replace Four Sanitary Pumps

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Stations
Lookup Location: Fairview Pumping Station
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mike Graham

Director: Grant Gartrell

Project Score
0

Problem Statement:
Replacement and upgrade of pumping equipment's to improve transportation of waste water to the treatment plant

Scope of Work/Project Alternatives:
The scope of work consists of the study, design, and construction for four new pumping systems including inlet and discharge valves and wet well hydraulics. This will also include enlarging doorways, revamping roadways, and upgrading electrical and control systems.

Other Important Info:
Schedule delay due to Abnormally and excessively high dry weather flows exceed the planned design capacity of the temporary sewage by-pass pumping station. Delaying the installation of the new pumping units at Fairview Station while waiting for dry weather flows to subside to normal flows poses the risk of not being able to pump dry weather flows in the event that another sewage pump permanently fails at Fairview Station. Increasing the capacity of the temporary by-pass sewage pumping station, ...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$250	$159	$159	$46	$45	$0	$0	$0	$0	$45	$0
Design & Construction Assistance # 1	$7,278	$3,107	$3,107	$2,071	$2,071	$28	$0	$0	$0	$2,100	$0
Construction (Build) # 1	$32,546	$11,007	$11,007	$10,873	$10,665	$0	$0	$0	$0	$10,665	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 232002

Project Title: Freud & Conner Creek Pump Station Improvements

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Stations
Lookup Location: Conner Creek & Freud Pump Stations
☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**



Both PSs pictures

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
79.6

Problem Statement:
The primary objective of this project is to study the overall performance of Connor Creek and Freud sewage pumping stations and develop design, and build an operational strategy to optimize the utilization of interconnected piping and operation between both pumping stations and the Connor Creek Retention and Treatment Basin.

Scope of Work/Project Alternatives:
Provide basis of design, and final design for an operational strategy to optimize the utilization of interconnected piping and operation between Connor Creek and Freud pumping stations and the Connor Creek Retention and Treatment Basin. Provide construction of the emerging project and construction assistance during construction of the emerging project.

Other Important Info:
Challenges: Meeting the collection system transport capacity during the construction.

Project History: The Connor Creek Pump Station (CCPS) was originally built in 1928 with four storm water pumps, each with a rated capacity of 500 cubic feet per second (cfs). The CCPS was expanded in 1940 adding four more pumps of the same capacity. The pump station currently has a total capacity of 4,000 cfs and a firm capacity of 3,500 cfs. The pumps are primed using a vacuum system that relies on the f...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$521	$84	$84	$57	$57	$46	$46	$46	$46	$241	$138
Design # 1	$34,122	$2,422	$2,422	$6,388	$3,300	$4,200	$2,000	$3,400	$4,100	$17,000	$8,312
Construction (Build) # 1	$194,636	$4,836	$4,836	$0	$0	$8,400	$15,400	$20,000	$30,000	$73,800	$116,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 232004

Project Title: CONDITION ASSESSMENT AT BLUE HILL PUMP STATION

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: Systems Control Center
Class Lvl 3: Pump Stations
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☑ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Todd King

Director: Todd King

Project Score
0

Problem Statement:
The condition of the Blue Hill PS has not been accurately established to the metrics being established for other GLWA pumping stations. A new condition assessment is required.

Scope of Work/Project Alternatives:
Perform station inspection by a multi-discipline team of specialists in pumps, valves, electrical, HVAC, structural, building envelope I&C, security, and building mechanical systems. Perform wire to water efficiency tests

Other Important Info:
Performance of this pumping station is related with flood control objectives for Conner and Freud Pumping Stations.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
GLWA Salaries	$57	$0	$0	$57
Study # 1	$200	$0	$0	$200

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 233003

Project Title: Rouge River In-system Storage Devices

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: Systems Control Center
Class Lvl 3: In System Devices (Dams, ISD's)
Lookup Location: Rouge Riiver

☐ **Project New to CIP:**

☐ **Innovation**
☑ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
60.8

Problem Statement:

The Rouge River receives untreated CSO discharges from GLWA CSO outfalls and outfalls from other Member combined sewer systems during wet weather. CSO control strategies that deal with first flush capture from small storms is typically a cost-effective implementation step in a CSO control program. Studies for the Wastewater Master Plan have shown the effectiveness of controlling first flush for small storms with receiving water modeling. 9 locations on DWSD trunk sewers east of the Rouge R...

Scope of Work/Project Alternatives:

Perform sewer inspections, utility survey, and flow metering to establish and prioritize the siting of 9 new In-System Storage Devices (ISD)

Perform preliminary and final design of the ISDs, including upstream and downstream access points, power supply and instrumentation.

Construct 9 new inflatable dam in-system storage devices (ISD). Modify existing manholes or construct new access points upstream and downstream of each ISD. Provide electrical power, above ground structures for pneum...

Other Important Info:

The new ISD devices would be installed in trunk sewers owned and operated by DWSD. These are not GLWA leased sewers. A legal agreement may need to be prepared for GLWA to construct, operate, and maintain.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$378	$0	$0	$0	$0	$57	$57	$57	$172	$206
Study & Design & Construction Assistance # 1	$8,839	$0	$0	$0	$0	$969	$967	$967	$2,903	$5,936
Construction (Build) # 1	$37,100	$0	$0	$0	$0	$0	$0	$0	$0	$37,100

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260200

Project Title: Sewer and Interceptor Rehabilitation Program

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Sewers and Interceptors
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Todd King

Project Score
0

Problem Statement:
Rehabilitation and replacement program of the existing sewers and interceptors is identified after the conditiio assessment. This replacement, rehabilitation and cleaning program is essential to optimize the transportation capacity of the GLWA collection system and to increase its life expectancy.

Scope of Work/Project Alternatives:
Provide CCTV and/or sonar inspection of the GLWA Collection System Interceptors and Trunk Sewers to reveal the existing conditions as per the National Association of Sewer Service Companies' (NASSCO) Pipeline Assessment Certification Program (PACP) standards, evaluate the existing conditions, and provide the necessary cleaning/rehabilitation/replace to optimize the design capacity of the collection system and to minimize the inflow and infiltration into the collection system.

Other Important Info:
Challegers: Large sewers and interceptors may have flow control challenges for both inspection and rehabilitation.

Project History: The installation of some of these interceptors and sewers are dated back to 1912 under various contracts. Detroit River Interceptor inspection was recently completed in 5 different phases and there were portions deteriorated with visible surface aggregates, attached encrustation and infiltration. Some trunk sewer inspection revealed sludge deposition with red...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TBD / Future Allocation / General Holding	$53,749	$0	$0	$3,138	$0	$7,214	$7,915	$10,695	$11,547	$37,371	$13,240

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260201

Project Title: CON-149, Emergency Sewer Repair

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Sewers and Interceptors
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Todd King

Project Score
0

Problem Statement:
Rehabilitation and replacement program of the existing sewers and interceptors is identified after the conditiio assessment. This replacement, rehabilitation and cleaning program is essential to optimize the transportation capacity of the GLWA collection system and to increase its life expectancy.

Scope of Work/Project Alternatives:
Provide CCTV and/or sonar inspection of the GLWA Collection System Interceptors and Trunk Sewers to reveal the existing conditions as per the National Association of Sewer Service Companies' (NASSCO) Pipeline Assessment Certification Program (PACP) standards, evaluate the existing conditions, and provide the necessary cleaning/rehabilitation/replace to optimize the design capacity of the collection system and to minimize the inflow and infiltration into the collection system.

Other Important Info:
Challegers: Large sewers and interceptors may have flow control challenges for both inspection and rehabilitation.

Project History: The installation of some of these interceptors and sewers are dated back to 1912 under various contracts. Detroit River Interceptor inspection was recently completed in 5 different phases and there were portions deteriorated with visible surface aggregates, attached encrustation and infiltration. Some trunk sewer inspection revealed sludge deposition with red...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$347	$296	$296	$46	$6	$0	$0	$0	$0	$6	$0
Design-Build # 1	$31,935	$19,207	$19,207	$11,255	$1,473	$0	$0	$0	$0	$1,473	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260204

Project Title: Conveyance System Engineering Services-1802575

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Sewers and Interceptors
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Woodward Sewer System

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
Rehabilitation and replacement program of the existing sewers and interceptors is identified after the conditiio assessment. This replacement, rehabilitation and cleaning program is essential to optimize the transportation capacity of the GLWA collection system and to increase its life expectancy.

Scope of Work/Project Alternatives:
Provide CCTV and/or sonar inspection of the GLWA Collection System Interceptors and Trunk Sewers to reveal the existing conditions as per the National Association of Sewer Service Companies' (NASSCO) Pipeline Assessment Certification Program (PACP) standards, evaluate the existing conditions, and provide the necessary cleaning/rehabilitation/replace to optimize the design capacity of the collection system and to minimize the inflow and infiltration into the collection system.

Other Important Info:
Challegers: Large sewers and interceptors may have flow control challenges for both inspection and rehabilitation.

Project History: The installation of some of these interceptors and sewers are dated back to 1912 under various contracts. Detroit River Interceptor inspection was recently completed in 5 different phases and there were portions deteriorated with visible surface aggregates, attached encrustation and infiltration. Some trunk sewer inspection revealed sludge deposition with red...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$240	$9	$9	$56	$46	$46	$46	$38	$0	$176	$0
Study & Design & Construction Assistance # 1	$6,000	$904	$904	$2,422	$2,422	$252	$0	$0	$0	$2,674	$0
Construction (Build) # 1	$45,917	$0	$0	$9,178	$9,178	$9,178	$9,204	$9,178	$0	$36,739	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260205

Project Title: NWI Rehabilitation

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	5 Year Total
GLWA Salaries	$115	$0	$0	$23	$46	$46	$92
TBD / Future Allocation / General Holding	$10,823	$79	$79	$1,744	$5,000	$4,000	$9,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260206

Project Title: Conveyance System Repairs (Sewers)

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Sewers and Interceptors
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
Rehabilitation program of the existing sewers and interceptors is identified after the condition assessment. This rehabilitation and cleaning program is essential to optimize the transportation capacity of the GLWA collection system and to increase its life expectancy.

Scope of Work/Project Alternatives:
Evaluate the existing conditions of Brush, Joy Road, &Seven Mile Sewers. Provide the necessary cleaning/rehabilitation/replacement to optimize the design capacity of the collection system and to minimize the inflow and infiltration into the collection system.

Other Important Info:
This Engineering Services contract also includes the remaining CSO outfalls which is being funded by the Outfall Program, 260500

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$321	$0	$0	$23	$46	$46	$46	$46	$46	$230	$69
Design & Construction	$47,500	$0	$0	$500	$7,000	$7,000	$7,000	$7,000	$8,000	$36,000	$11,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260500

Project Title: CSO Outfall Rehabilitation

Project Status: Active - Procurement - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: CSO Outfalls
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
PROJECTS 222006 AND 233001 HAVE BEEN INCORPORATED INTO THIS PROJECT. Rehabilitation of the CSO outfalls is essential to properly discharge the uncontrollable combined sewer overflows to the receiving waters and to prevent sewer back up into the Conveyance System. Recent inspections of the outfalls revealed structural deficiencies like fractures, missing mortar from bricks etc. There are sediment and debris deposits in many of them.

Scope of Work/Project Alternatives:
Preliminary Scope of Work of the project is construction. Contract CS-168 will review the existing records, evaluate the existing conditions, and provide the necessary design to rehabilitate the outfalls. Another Engineering Services contract will be initiated after the CS-168 contract.

Other Important Info:
PROJECTS 222006 AND 233001 HAVE BEEN INCORPORATED INTO THIS PROJECT.

Project History: The construction of these outfalls are dated back to the early 1900s under various contracts.

Challenges: Some outfalls are below the river elevation; rehabilitation may be challenging.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TBD / Future Allocation / General Holding # 1	$5,000	$0	$0	$0	$833	$833	$835	$833	$833	$4,167	$833

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260504

Project Title: Phase 2 Outfalls- 19000796

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: CSO Outfalls

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
PROJECTS 222006 AND 233001 HAVE BEEN INCORPORATED INTO THIS PROJECT. Rehabilitation of the CSO outfalls is essential to properly discharge the uncontrollable combined sewer overflows to the receiving waters and to prevent sewer back up into the Conveyance System. Recent inspections of the outfalls revealed structural deficiencies like fractures, missing mortar from bricks etc. There are sediment and debris deposits in many of them.

Scope of Work/Project Alternatives:
Preliminary Scope of Work of the project is construction. Contract CS-168 will review the existing records, evaluate the existing conditions, and provide the necessary design to rehabilitate the outfalls. Another Engineering Services contract will be initiated after the CS-168 contract.

Other Important Info:
PROJECTS 222006 AND 233001 HAVE BEEN INCORPORATED INTO THIS PROJECT.

Project History: The construction of these outfalls are dated back to the early 1900s under various contracts.

Challenges: Some outfalls are below the river elevation; rehabilitation may be challenging.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
GLWA Salaries	$33	$6	$6	$26
Construction (Build) # 1	$5,018	$2,196	$2,196	$2,823

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260505

Project Title: Phase 4 Outfalls

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: CSO Outfalls

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Phase IV construction at Outfall B-19

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
PROJECTS 222006 AND 233001 HAVE BEEN INCORPORATED INTO THIS PROJECT. Rehabilitation of the CSO outfalls is essential to properly discharge the uncontrollable combined sewer overflows to the receiving waters and to prevent sewer back up into the Conveyance System. Recent inspections of the outfalls revealed structural deficiencies like fractures, missing mortar from bricks etc. There are sediment and debris deposits in many of them.

Scope of Work/Project Alternatives:
Preliminary Scope of Work of the project is construction. Contract CS-168 will review the existing records, evaluate the existing conditions, and provide the necessary design to rehabilitate the outfalls. Another Engineering Services contract will be initiated after the CS-168 contract.

Other Important Info:
PROJECTS 222006 AND 233001 HAVE BEEN INCORPORATED INTO THIS PROJECT.

Project History: The construction of these outfalls are dated back to the early 1900s under various contracts.

Challenges: Some outfalls are below the river elevation; rehabilitation may be challenging.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	5 Year Total
GLWA Salaries	$98	$6	$6	$46	$46	$0	$46
Construction (Build) # 1	$5,620	$1,580	$1,580	$3,445	$595	$0	$595

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260508

Project Title: B-39 Outfall Rehabilitation

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	5 Year Total
GLWA Salaries	$181	$0	$0	$57	$57	$57	$8	$123
TBD / Future Allocation / General Holding	$388	$0	$0	$123	$123	$123	$18	$264

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260509

Project Title: B-40 Outfall Rehabilitation

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:

Scope of Work/Project Alternatives:

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
GLWA Salaries	$6	$0	$0	$6
TBD / Future Allocation / General Holding	$83	$66	$66	$16

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260510

Project Title: Conveyance System Repairs (Outfalls)

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: CSO Outfalls
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
Rehabilitation program of the existing CSO outfalls, sewers and interceptors is identified after the condition assessment. This rehabilitation and cleaning program is essential to optimize the transportation capacity of the GLWA collection system and to increase its life expectancy

Scope of Work/Project Alternatives:
Evaluate the existing conditions of the remaining CSO outfalls, provide the necessary cleaning/rehabilitation to optimize the design capacity of the collection system and to minimize the uncontrolled CSO discharges to the rivers

Other Important Info:
This Engineering Services contract also includes Joy Rd, Seven Mile, and Bates sewers which is being funded by the Sewer and Interceptor Rehabilitation Program, 260200

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$333	$0	$0	$57	$46	$46	$46	$46	$46	$230	$46
TBD / Future Allocation / General Holding TBD	$48,530	$0	$0	$500	$7,664	$7,664	$7,682	$7,664	$9,194	$39,866	$8,164

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260600

Project Title: CSO FACILITIES IMPROVEMENT PROGRAM

Project Status: Future Planned - Ten-Year CIP
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Conner Creek, Seven Mile, Puritan-Fenkell, Hubble-Southfield, Belle Isle, Oakwood CSO Basins, Baby Creek, Leib and St. Aubin Screening and Disinfection Facilities

☐ **Project New to CIP:**

- ☐ **Innovation**
- ☐ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☑ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☐ **Predecessor Project(s)**



Conner Creek CSO Facility

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
0

Problem Statement:
This program is being established to facilitate the study, design, construction administration, and construction of improvements necessary to maintain the facilities which contribute to the CSO Control Program and compliance herewith.

Scope of Work/Project Alternatives:
This program is established to fund projects which may pop up in the near term of each fiscal year that were not budgeted for previously. Scope of work will vary from roof replacement, to equipment replacement, to various other facility improvements.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
TBD / Future Allocation / General Holding # 1	$126,400	$0	$0	$1,500	$1,000	$1,500	$2,000	$7,500	$11,400	$23,400	$101,500

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260601

Project Title: Oakwood CSO Control Facility Drain Valve Improvements

Project Status: Pending Closeout
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Oakwood CSO

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Leaking Conduit in Drain Vault

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
20

Problem Statement:
Water infiltration through electrical conduits has caused cascading failures of vault valves, electrical and controls equipment. This has resulted in manual operation which creates difficulties operating and safety issues for continual access to this space (it's a deep vault).

Scope of Work/Project Alternatives:
This project will replace all electrical conduits that are compromised, valves, actuators, controls, sump pumps, and other items damaged from the vault flooding.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$118	$103	$103	$15	$0	$0	$0	$0	$0	$0	$0
Design # 1	$21	$21	$21	$0	$0	$0	$0	$0	$0	$0	$0
Construction Assistance # 1	$10	$0	$0	$10	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$715	$557	$557	$158	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260602

Project Title: CSO Fire Alarm Improvement Project

Project Status: Closed
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: ALL CSO Facilities

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Seven Mile Failed and Outdated Fire Panel

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
20

Problem Statement:
Project is to upgrade or replace the fire alarm panels at all CSO Facilities except Oakwood RTB. Oakwood is just receiving some repairs to get the system functional and to meet the standards set forth with the current system.

Scope of Work/Project Alternatives:
This project includes replacement/upgrading all CSO Fire Alarms to a standardized Johnson Controls (Simplex) Fire Alarm System. Eight of the CSO Facilities include replacement. The one facility in which the panel is not being replaced and only minor system repairs are occurring is Oakwood. The Oakwood panel is already the latest fire control panel system.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$53	$53	$53	$0	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1	$944	$944	$944	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260603

Project Title: Conner Creek CSO RTB Automation Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Conner Creek

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Effluent Relief Gate Repair

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
20

Problem Statement:
Effluent gates were leaking with river water in the basin. Based on CS-116 study, seals and seats of some of Effluent Relief gates found to be damaged. A data network style connection was used (versus hardwired) between the gates and the SCADA system. This network has been unreliable and difficult to maintain. Electrical and control cables were compromised due to their installation on the top of the concrete slab of RTB roof.

Scope of Work/Project Alternatives:
Scope work includes but not limited to replacement of existing seals and seats of effluent relief gates (ERGs) and effluent launder gates (ELGs), replacement and alignment of stems for ELGs, assessment and replacement of ERGs stems (based on assessment), existing pull boxes and cover replacement on top of RTB roof, existing fiber optic cable and conduit replacement, hard-wiring ELGs and ERGs actuators for reliable operation, secondary power feed for effluent gates, replacement of RIO5 and RIO6,...

Other Important Info:
CS-172 has been closed out as of 09/23/19. Influent flowmeters replacement work is added as part of CCD-A and CO No. 2 of this contract.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$222	$202	$202	$20	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 1	$302	$302	$302	$0	$0	$0	$0	$0	$0	$0	$0
Design & Construction Assistance # 2	$108	$0	$0	$108	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$7,267	$6,487	$6,487	$780	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260606

Project Title: Puritan Fenkell Roof Replacement

Project Status: Closed
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Puritan-Fenkell

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


New Metal Roof

Project Engineer/Manager: Matthew Krieger

Director: Chris Nastally

Project Score
20

Problem Statement:
The facility roof leaks when it rains, the wood roof deck was fully exposed to the elements and allowed water to infiltrate the facility interior.

Scope of Work/Project Alternatives:
The Puritan Fenkell CSO roof was replaced with a metal roof with an estimated service life of >20 years. Repairs and upgrades were also made to the wood deck of the roof and the brick exterior near the roof interface to ensure the new roof remained watertight. Awnings and snow gems were included for personnel safety.

Other Important Info:
None

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$3	$3	$3	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$344	$344	$344	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260607

Project Title: Leib Electrical Improvements

Project Status: Closed
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Leib CSO Facility
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Leib Electrical Improvements

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
20

Problem Statement:
The Leib CSO Facility electrical conduits have water intrusion which is causing failure of the end devices. Furthermore, the electrical conduit support system is regular steel and is severely corroded (risking possible catastrophic failure to all conduits if the support system fails).

Scope of Work/Project Alternatives:
Replacing conduits and equipment compromised by water infiltration into conduits. Replacing conduit support system which is severely corroded.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$57	$57	$57	$0	$0	$0	$0	$0	$0	$0	$0
Design # 1	$5	$5	$5	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$971	$971	$971	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260608

Project Title: 7 Mile CSO Facilities - Roof Replacement

Project Status: Closed
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: 7 Mile CSO
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


New metal roof

Project Engineer/Manager: Matthew Krieger

Director: Chris Nastally

Project Score
20

Problem Statement:
The 7 Mile roof was inspected in 2018 and determined to be at the at the end of it's service life. Water damage was occurring from leakage to the building's interior.

Scope of Work/Project Alternatives:
This project replaced the existing shingle roof with a longer lasting metal roof.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$1	$1	$1	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$496	$496	$496	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260609

Project Title: Seven Mile RTB - Parking Lot Replacement & Misc. Site Work

Project Status: Pending Closeout
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: 7 Mile CSO
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


New Parking Lot and Hatch Work

Project Engineer/Manager: Matthew Krieger

Director: Chris Nastally

Project Score
20

Problem Statement:
The 7 Mile Parking Lot is failing in many locations, traps water in many locations, and slopes towards the building directing water towards the building during rain. See scope of work for additional problems addressed by this project.

Scope of Work/Project Alternatives:
In addition to the problem statement, the grading in the front and side of the site slopes towards the building with no catch basins also creating water infiltration issues inside of the building. The sidewalk has completely failed and the hatch at the front entrance has damage to it leaving a hole to trip or injure someone. This project will fix the parking lot, grading issues, sidewalk, and hatch, This project will also address landscaping (because of regrading) and provide landscaping which...

Other Important Info:
Rain Water is pooling near the back up generator and presents a safety hazard.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$39	$24	$24	$15	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$377	$346	$346	$32	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260610

Project Title: Baby Creek SDF - HV Units Replacement

Project Status: Pending Closeout
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Baby Creek CSO Facility
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


New Air Handling Unit

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
20

Problem Statement:
Replace Make Up Air Units at Baby Creek as they are past their life and non-efficient due to their installation orientation.

Scope of Work/Project Alternatives:
Replacing existing make up air units with a newly designed unit to increase air flow to the space as well as increase temperature control in the screening area.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$12	$12	$12	$0	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$263	$263	$263	$0	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260611

Project Title: Leib SDF- HVAC System Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Leib CSO Facility

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Leib HVAC - Frozen Dampers

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
0

Problem Statement:
Many components of the Leib HVAC system have failed. These are causing ventilation issues, air quality issues, and likely are also a source of increased/accelerated corrosion of equipment in the facility. Two relief dampers on each end of the facility have been frozen and not in operation.

Scope of Work/Project Alternatives:
The scope of work includes but not limited to replacement of 60" damper with access door in thee basin, replacement of relief air dampers and actuators on existing louvers at both end of the facility, provide new HVAC DDC system, etc.

Other Important Info:
CO No.1 was issued in 03/2020 due to GLWA's denial of Decima as their subcontractor. Additional amount of $100,962 and time extension was added to this project as part of CO No. 1.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$50	$37	$37	$14	$0	$0	$0	$0	$0	$0	$0
Construction (Build) # 1	$345	$59	$59	$286	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260613

Project Title: Baby Creek HVAC Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Baby Creek CSO Facility
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Existing Dampers

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
20

Problem Statement:
This project expands on the MAU replacement project by addressing other HVAC issues through out the facility, such as control building, screening building, etc.

Scope of Work/Project Alternatives:
The scope of work includes but not limited to modifications to ventilation system in the Electrical room, replacement of dampers and actuators in the screening building, replacement of actuators for dampers in chem room, installation of temp sensors throughout control buildings, installation of new DDC system.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
GLWA Salaries	$37	$13	$13	$24
Construction (Build) # 1	$551	$39	$39	$512

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260614

Project Title: Structural Inspection & Structural Improvements

Project Status: Active - Procurement - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Conner Creek, Seven Mile, Puritan-Fenkell, Hubble-Southfield, Belle Isle, Oakwood CSO Basins, Baby Creek, Leib and St. Aubin Screening and Disinfection Facilities

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Existing Structural Condition

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
20

Problem Statement:
A partial structural condition assessment has been performed and structural improvement (types) identified and prioritized. This project will provide Design-Build service to completely inspect all CSO Facilities (above and below ground) and prioritize to be carried out over a 3-5 year period.

Scope of Work/Project Alternatives:
The scope of work includes at each of nine CSO facilities such as a complete field assessment and structural condition report, classification of recommended repairs into levels of urgency, estimating quantities and the costs of repairs, developing a three-year repair program to address high priority repairs, design and implementation of agreed upon repairs, preparation of as-built drawings and final project report, etc. The Work includes improvements to be designed, administered, and constructe...

Other Important Info:
Consideration of Shared Service Agreement with DWSD regarding the costing for Belle Isle facility.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$130	$20	$20	$22	$22	$22	$22	$22	$0	$88	$0
Construction Assistance	$1,325	$0	$0	$275	$400	$350	$175	$125	$0	$1,050	$0
Design-Build # 1	$12,339	$283	$283	$2,750	$4,000	$3,500	$1,200	$605	$0	$9,305	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260615

Project Title: Puritan Fenkell & Leib Site Improvements

Project Status: Project Execution - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Puritan-Fenkell and Leib CSO Facilities
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Poor Drainage at Leib

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
0

Problem Statement:
There is an existing site drainage at both of these facilities creating standing water on top of basin. There is no lighting at the outfall at PF, which is needed for operation at nighttime during an event. The existing sidewalks at both of these facilities are damaged and need replacement. The perimeter fencing at PF is damaged at various spots and there is no fence at the outfall area to secure the facility from outsiders. At Leib, the existing ornamental fence at the entrance is damaged ...

Scope of Work/Project Alternatives:
The scope of work includes but not limited to creating positive drainage, installation of trench drains as well as replacement of existing side walks at both facilities. Additionally, at PF, the scope includes installation of pathway and lighting at outfall, perimeter fence replacement, etc. At Leib, the scope also includes the replacement of ornamental fence, and brick pavers, etc.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$97	$12	$12	$42	$42	$0	$0	$0	$0	$42	$0
Design-Build # 1	$704	$97	$97	$450	$157	$0	$0	$0	$0	$157	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260616

Project Title: Baby Creek Towards Treatment Sewer Improvements

Project Status: Pending Closeout
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Baby Creek
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Installed Bracket

Project Engineer/Manager: Matthew Krieger

Director: Chris Nastally

Project Score
20

Problem Statement:
The West End Sewer inside the Baby Creek CSO Effluent Channel is supported by concrete anchors and support wedges.

Scope of Work/Project Alternatives:
These supports have become dislodged or eroded and need repair and replacement with improved anchoring devices. Without repair the sewer pipe will have inadequate support and may fail. The improved anchor devices are expected to extend the life of the sewer beyond 20 years. The project seeks to refurbish pipe support anchors and wedges.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$38	$22	$22	$16	$0	$0	$0	$0	$0	$0	$0
Design-Build # 1	$745	$645	$645	$100	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260617

Project Title: St. Aubin Chemical Disinfection Improvements

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: St. Aubin CSO Facility

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Existing Screens

Project Engineer/Manager: Kashmira Patel

Director: Chris Nastally

Project Score
20

Problem Statement:
The St. Aubin CSO facility is nearly 20 years old. A study was conducted on the disinfection system and the screens were assessed by the manufacturer through a separate contract, and recommendations resulted in needed upgrade of these systems to restore operational control, flexibility, and reliability. The current pumping system for NaOCl is oversize (dose of 38 mg/L) when only 10 mg/l is required based on sampling study. The over-sized system makes it difficult to dial the pumps down on the...

Scope of Work/Project Alternatives:
The scope of work includes but not limited to replacement of existing chem feed pumps with better pump technology to meet the need for this facility, modification on chem feed piping system and control, installation of overhead trolley for maintenance, relining the chem storage tanks to extend the life of existing tanks, replacing evaluating different screening technologies if applicable, if not, replacing control system and hydraulic power-pack of existing screens, installing new screen flush...

Other Important Info:
Previous study was performed by Hazen and Sawyer. AECOM/DLZ is working to provide a study BOD and 20% Design documents.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total
GLWA Salaries	$576	$201	$201	$148	$57	$57	$47	$46	$19	$227
Study & Design & Construction Assistance # 1	$1,391	$50	$50	$295	$330	$180	$162	$262	$112	$1,046
Construction (Build) # 1	$5,000	$0	$0	$0	$0	$0	$1,500	$2,500	$1,000	$5,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260618

Project Title: Oakwood HVAC Project

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Oakwood CSO Facility
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Coroded building crane from failed HVAC system

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
20

Problem Statement:
Heavy corrosion and the gas detection system in the sanitary pump room is constantly going off causing operators to leave the overhead door open to keep the space ventilated and safe to enter. As a result of this, the door is left open nearly year round. HVAC system pulls gases from the sewer as currently operated. The wet-well supply fans have failed functionally and this is also resulting in heavy corrosion in the sanitary pump room.

Scope of Work/Project Alternatives:
The Odor Control unit intake will be reconfigured, various supply and exhaust fans will be replaced, access for the odor control units will be made for all three units to facilitate proper maintenance. The crane and building structural steel will be assessed and re-coated to ensure proper life.

Other Important Info:
This project design is under way by Hazen.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	5 Year Total
GLWA Salaries	$338	$76	$76	$162	$90	$11	$100
Study & Design & Construction Assistance # 1	$729	$0	$0	$478	$246	$6	$252
Construction (Build) # 1	$2,900	$0	$0	$0	$2,900	$0	$2,900

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260619

Project Title: Control System Upgrade - St Aubin, Lieb & Mile

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: Conner Creek, Seven Mile, Puritan-Fenkell, Hubble-Southfield, Belle Isle, Oakwood CSO Basins, Baby Creek, Leib and St. Aubin Screening and Disinfection Facilities

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Christopher Vanpoppelen

Director: Chris Nastally

Project Score
0

Problem Statement:
This program is being established to facilitate the study, design, construction administration, and construction of improvements necessary to maintain the facilities which contribute to the CSO Control Program and compliance herewith.

Scope of Work/Project Alternatives:
This program is intended to include studies, design, construction administration, and construction projects which serve to improve process areas or functions of the CSO Facilities. The overall scope of this program is to complete the following: The CS-299 (Facilities Assessment Project) will have projects that need to be programmed into the CIP over time, Replacement of CSO Facilities Fire Alarm Systems; Structural Condition Assessment Design/Build project; and flushing improvements to Baby Cr...

Other Important Info:
(Replaces CIP1313).

Project History: The GLWA CSO Control Program consists of the operations of 6 CSO RTB's, and 3 Screening & Disinfection Facilities (SDF). The fundamental difference between the SDF's and the RTB's is the presence of a bonafied basin versus a large diameter, long effluent pipe/ outfall. The long outfall (SDF) functionally serves a purpose similar to the basin (RTB) in terms of storage of combined sewer overflow during a rain event. As a result, the SDF's are fundamenta...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	5 Year Total
GLWA Salaries	$81	$62	$62	$19	$0	$0
Study & Design & Construction Assistance	$35	$0	$0	$35	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260620

Project Title: Baby Creek Roof Replacement

Project Status: Active - Pre-Procurement - Construction
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Baby Creek
Lookup Location: Baby Creek
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



- The previous installment on roof area 2 also failed to follow the required "step-down" installation method. As seen in the picture above, the shingle seams fall >4" from each other. This is a very common mistake found on

Improper shingle installation.

Project Engineer/Manager: Chris Nastally

Director: Navid Mehram

Project Score
0

Problem Statement:
The Baby Creek roof leaks on electrical equipment when it rains. The laps in the shingles are sometimes as little as 2". The leaking roof over time has caused the substrate to rot and require replacement. Approximately 1/3 of the roof was previously replaced in 2017. The new portion of roof is sufficient. The remaining 2/3's of the roof is exhibiting failure per a roof inspection conducted by GLWA roofing contractor.

Scope of Work/Project Alternatives:
Replace the 2/3's of Baby Creek roof with matching asphalt shingles.

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
TBD / Future Allocation / General Holding	$641	$0	$0	$641

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260700

Project Title: Sewer System Infrastructure Improvements and Pumping Stations

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Field Services
Class Lvl 3: Interceptor
Lookup Location:
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Infrastructure

Project Engineer/Manager: Mini Panicker

Director: Todd King

Project Score
68.2

Problem Statement:
VR-Gates, ISDs, and backwater gates are operational elements in the collection system that help in minimizing the untreated overflows and maximizing the flows to the WRRF and CSO control facilities. They have reached their life expectancy and needs rehabilitation.

Scope of Work/Project Alternatives:
Evaluate the existing conditions of the VR-Gates, ISDs, Backwater Gates and Access Hatches, provide the necessary design and the Construction Assistance for their replacement/rehabilitation.

Other Important Info:
Google map of VR-3 and VR-9 are included. VR-4, 5, 6, 10, 11 &13 are also part of the project.

Project History: GLWA interceptors and sewers were constructed in the early 1900s. The hatches and access covers secure operations and maintenance access points throughout the system for items such as the backwater gates, ISD, and VR. The backwater gates, ISD, and VR are all critical elements that control and divert flows throughout the system. Most of them have reached their life expectancy an...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$532	$0	$0	$72	$87	$87	$57	$57	$57	$346	$115
SEWER SYSTEM INFRASTRUCTURE IMPROVEMENTS AND PUMPING STATIONS	$17,869	$0	$0	$1,331	$3,574	$8,963	$8,963	$7,177	$1,787	$30,464	$3,574

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260701

Project Title: Conveyance System Infrastructure Improvements

Project Status: Project Execution - Design
Class Lvl 1: Wastewater
Class Lvl 2: Field Services
Class Lvl 3: Interceptor
Lookup Location: City of Detroit, Southfield, and others
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Infrastructure

Project Engineer/Manager: Mini Panicker

Director: Todd King

Project Score
0

Problem Statement:
VR-Gates, ISDs, and backwater gates are operational elements in the collection system that help in minimizing the untreated overflows and maximizing the flows to the WRRF and CSO control facilities. They have reached their life expectancy and needs rehabilitation.

Scope of Work/Project Alternatives:
Assess the structure and functionality of
1) Outfalls with Regulator Gates
2) Outfalls with Diversion Dams/Backwater Gates
3) Valve Remote Gates
4) In-System Storage Devices
Evaluate the existing conditions of the VR-Gates, ISDs, Backwater Gates and Access Hatches, provide the necessary design and the Construction Assistance for their replacement/rehabilitation.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	5 Year Total
GLWA Salaries	$10	$10	$10	$0	$0	$0	$0	$0
CONVEYANCE SYSTEM INFRASTRUCTURE IMPROVEMENTS	$4,576	$459	$459	$1,356	$1,356	$1,356	$48	$2,761

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 260702

Project Title: Pump Station Assets Updates

Project Status: Active - Pre-Procurement - Construction
Class Lvl 1: Wastewater
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
0

Problem Statement:
Evaluation and upgrade of the Pumping Station elements are needed to improve the transportation of the wastewater to the WRRF.

Scope of Work/Project Alternatives:
On an as needed basis evaluate/upgrade/replace the Sewer Pump Station elements to keep up the collection system transport capacity.

Other Important Info:

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21
PUMP STATION ASSETS UPDATES	$669	$0	$0	$669

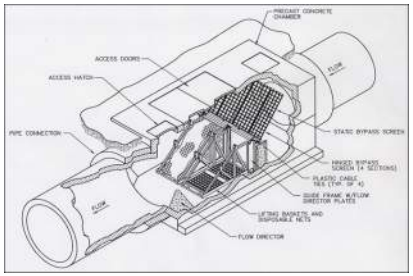
Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 270001

Project Title: Pilot CSO Netting Facility

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Multiple CSO Facilities
Lookup Location: Detroit River - East Side Downtown east of Ralph C. Wilson Park.
☐ **Project New to CIP:**

☐ **Innovation**
☑ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Netting Facility

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
65

Problem Statement:
The First Street CSO Outfall (B-023) has been identified in the NPDES Permit for the Priority Non-Core Compliance schedule. It is also the nearest and most frequently discharging outfall upstream of the proposed Ralph C Wilson waterfront park on the Detroit River. A pilot facility to demonstrate the application of CSO outfall nets is proposed at this location to keep the sanitary trash from discharging close to this beach, and also to help minimize impacts from fecal coliform bacteria contai...

Scope of Work/Project Alternatives:
Inspect the two 10-ft by 10-foot box culverts that comprise this outfall and establish a location for installing the CSO nets, considering outfall structural condition, ease of access for net removal and replacement, and maintenance vehicle parking. Construct in-line netting facility under Convention Center Drive to the west of Cobo Convention Center. Construct access point for future Total Chlorine Residual monitoring to be installed in a second phase of this project. Provide electrical and ...

Other Important Info:
GLWA staff conducted a field inspection in 2019 of CSO outfall netting facilities constructed in Cleveland in 2004. There are different types of CSO net installations, and GLWA believes that in-line nets provide for the most efficient operation and maintenance.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$323	$0	$0	$0	$13	$57	$57	$57	$46	$231	$92
Study & Design & Construction Assistance # 1	$2,250	$0	$0	$0	$0	$0	$1,500	$50	$287	$1,837	$413
Construction (Build) # 1	$7,000	$0	$0	$0	$0	$0	$0	$0	$2,870	$2,870	$4,130

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 270002

Project Title: Meldrum Sewer Diversion and VR-15 Improvements

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Multiple CSO Facilities
Lookup Location: Sewers and Interceptors
☐ **Project New to CIP:**

☐ **Innovation**
☑ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Mini Panicker

Director: Biren Saparia

Project Score
62.4

Problem Statement:
The Meldrum Sewer is an uncontrolled CSO that discharges through outfall B-07. Currently, this is an untreated CSO discharge. Untreated CSO discahrges let debris from the sewer and bacteria make their way into fresh water bodies and are not good for public health or the environment. The NPDES permit requires control of this outfall to Michigan water quality standards. The Leib Screening and Disinfection Facility was designed with capacity to screen and disinfect the Meldrum Sewer CSO flow...

Scope of Work/Project Alternatives:
The scope of work involves connecting the Meldrum sewer to the Conant-Mt. Elliot Sewer with a diversion pipe that is 5 feet in diameter. New gates would be installed in the Meldrum sewer which direct flow through this diversion and into the Conant-Mt. Elliot sewer, which would then be processed through the Leib Screening and Disinfection Facility. These gates would allow dry weather flow to take it's normal route through the Meldrum sewer to the DRI, and would divert wet-weather to Leib SDF. ...

Other Important Info:
Recommended in DWSD LTCSO Plan of 2008.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$340	$0	$0	$9	$57	$57	$55	$46	$225	$115
Design & Construction Assistance # 1	$1,000	$0	$0	$0	$0	$225	$212	$243	$680	$320
Construction (Build) # 1	$4,500	$0	$0	$0	$0	$0	$300	$1,686	$1,986	$2,514

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 270003

Project Title: Long Term CSO Control Plan

Project Status: Active - Procurement - Negotiation Phase - Design
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Multiple CSO Facilities
Lookup Location: City of Detroit
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
0

Problem Statement:
The NPDES permit which governs CSO Discharges for GLWA requires GLWA to provide for prohibition, elimination, or adequate treatment of combined sewer discharges containing raw sewage. The current plans of 2008 and 2010 were approved by the EGLE (formerly MDEQ) and are the current plans of record. The new NPDES permit issued in July of 2019 opened the door for GLWA to refresh the Long Term Plan and submit to EGLE for review and approval by 11/15/2022. There are 56 total untreated outfalls ope...

Scope of Work/Project Alternatives:
This project will be a predecessor project to executing a long term CSO control plan, as required by the NPDES permit. This project will include evaluation of the requirements and work done under the 2008 and 2010 current plans of record, evaluation of elements within the Wastewater Masterplan aimed at CSO Control, evaluation of affordability, evaluation and siting of specific projects to be executed, and evaluation and programming of recommended projects to address affordability. The RFP for...

Other Important Info:
The wastewater masterplan, currently in draft format, has identified in it elements that are a part of the Long Term Plan, including a new storage conduit on the west-side for first flush capture, in-system storage dams, system diversions, and some netting facilities locations strategically selected. These will need to be evaluated and further fleshed out under this project and also evaluated against current system requirements, and former Long Term requirements and plans set forth in 2008 and...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	5 Year Total
GLWA Salaries	$4	$4	$4	$0	$0	$0	$0	$0	$0
Design & Construction Assistance	$9,264	$0	$0	$3,500	$3,799	$1,749	$144	$73	$5,764

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 274001

Project Title: Leib Improvements for Meldrum Diversion

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Leib
Lookup Location: Leib CSO Facility
☑ **Project New to CIP:**

☐ **Innovation**
☑ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☑ **Predecessor Project(s)**


Leib Screen

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
78.2

Problem Statement:
The Leib CSO Facility has been under utilized for the last 20 years. The WWMP is recommending a diversion to the facility which will increase utilization and close an untreated CSO outfall. To be prepared for this increased utilization, improvements to the facility are required. The chemical system is functionally failed and the screening system presents operational and maintenance difficulties (pilot facility with different types of screens requiring different maintenance and having differe...

Scope of Work/Project Alternatives:
To be ready for the Meldrum Diversion project, the following will be improved. Replacement of fine screens, replacement of the chemical feed system, improved automation for chemical dosing, improved access and maintenance of equipment, miscelaneous electrical/hvac and I&C improvements, a new site access drive to improve safety, as well as various safety improvements to facility hatches.

Other Important Info:
This is a predecessor project to the Meldrum diversion project and ideally should be constructed prior to completion of the Meldrum Diversion to allow use of that and testing of equipment installed as a part of that project.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$376	$0	$0	$25	$57	$57	$57	$50	$46	$268	$83
Design & Construction Assistance # 1	$2,960	$0	$0	$0	$197	$1,171	$592	$586	$234	$2,780	$180
Construction # 1	$7,606	$0	$0	$0	$0	$0	$0	$2,077	$3,116	$5,193	$2,413

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 277001

Project Title: Baby Creek Outfall Improvements Project

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Baby Creek
Lookup Location: Baby Creek CSO Facility
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Example of Proposed Facility

Project Engineer/Manager: Matthew Krieger

Director: Chris Nastally

Project Score
72.8

Problem Statement:
A facility is required to be constructed in order to ensure continued access to the Baby Creek Outfall. In addition to facility construction, system improvements which address sediment accumulation are needed to ensure the CSO can meet NPDES requirements. This system improvement will likely be a flushing system installed inside the outfall, but the best solution is not known at this time. The triple barrel Baby Creek Outfall consists of (3) 14'-6" wide by 17'-6" tall concrete box culverts which...

Scope of Work/Project Alternatives:
This project consists of a study and design. Construction is anticipated from the design, but since the flushing system solution cannot be known at this time this phase is not included in the project due to the variability in alternatives and their associated costs. The study and design will assess the proper ways to clean the pipes, facilitate future maintenace, flushing of the pipes after rain events, and perform assessments of the backwater gates and ensure proper instrumentation is instal...

Other Important Info:
The current outfall is not capable of being flushed and the solids level will build up after each rain event. Furthermore, the rising river level continues to impact this facility and the outfalls capacity. Having a build up of sludge does not favor Baby Creek in passing the necessary flows because the headloss through the pipes is small and the capacity of the pipes are reduced to to the reduction in cross-sectional area.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total
GLWA Salaries	$1,376	$2	$2	$1,143	$57	$57	$46	$46	$24	$230
Design-Build # 1	$17,450	$0	$0	$0	$1,750	$1,450	$6,750	$6,750	$750	$17,450

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 278001

Project Title: Oakwood Improvements for NWI Diversion

Project Status: Future Planned - Within 5 Year Plan
Class Lvl 1: Wastewater
Class Lvl 2: CSO Facilities
Class Lvl 3: Oakwood
Lookup Location: Oakwood CSO Facility
☑ **Project New to CIP:**

- ☐ **Innovation**
- ☑ **WW Master Plan**
- ☐ **Water Master Plan Right Sizing**
- ☐ **Redundancy**
- ☐ **NE WTP Repurposing**
- ☐ **Linear Assets Outside of Facilities**
- ☑ **Predecessor Project(s)**


Oakwood Aerial

Project Engineer/Manager: Chris Nastally

Director: Chris Nastally

Project Score
74.6

Problem Statement:
The Oakwood Facility Construction was completed in 2012. Over the last 8 years, the facility has been under utilized. Proposed plans for the Oakwood-Northwest diversion to Oakwood coupled with a facility assessment require improvements to ensure the facility is prepared to handle flows over those historically observed over the last 8+ years.

Scope of Work/Project Alternatives:
The scope of work is currently being refined under CS-299 (CSO Facilities Assessment Project). At this time, the following improvements will be planned for: The manual screening in the pump station will be replaced with a mechanically raked bar screen to reduce pump failures (currently the manual screens blind and build up head in the storm well until they are manually cleaned, causing issues with bearing submersion of the storm pumps when they are not in operation). The disinfection system w...

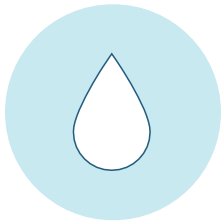
Other Important Info:
This project is intended to be completed plus/minus 12 months from the completion of the NWI diversion project. Given anticipated difficulties of that project, it is likely that this project will be completed much earlier than the NWI diversion. Ideally this project is to be completed before the NWI diversion to allow for proper testing/etc. needed when the NWI diversion is completed.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$376	$0	$0	$25	$57	$57	$57	$50	$46	$268	$83
Design & Construction Assistance # 1	$2,977	$0	$0	$0	$194	$1,148	$574	$593	$246	$2,755	$222
Construction # 1	$6,873	$0	$0	$0	$0	$0	$0	$1,903	$1,903	$3,805	$3,068

Document received by the MI Wayne 3rd Circuit Court.

CENTRALIZED SERVICES PROJECTS



7 PROJECTS



Centralized Services Projects are funded by the Water or the Wastewater spend plans, or in the past could be split between the two.



FOR MORE: APPENDIX C

Find the full Business Case Evaluations for Centralized Services Projects in Appendix C.

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 331002

Project Title: Roofing Systems Replacement at GLWA WRRF, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF)

Project Status: Project Execution - Construction
Class Lvl 1: Centralized Services
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: WRRF
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Chris Wilson

Director: Dan Alford

Project Score
0

Problem Statement:
Some of the roofs at GLWA WRRF facilities are near its end of useful life. The roofs help to protect the expensive equipment by preventing rain water entering through roofs into the facilities.

Scope of Work/Project Alternatives:
Inspect the roofing system conditions and assess drainage conditions on all the GLWA wastewater related facility buildings. Document the roofing systems inspections by taking and submitting high-quality photographs, scaled drawings, sketches, and inspection notes to adequately describe the conditions and deficiencies of the roofing systems and their drainage facilities. Recommend the extent of the roofing repairs and replacements required. Document the roof for each building inspected on the pr...

Other Important Info:
*Innovation note: Use cool roofs.
Complex – II Incinerator ($1.8M) and Complex – II Dewatering ($1.0 M) replacement are under consideration to be part of fire remediation project.

Challenges: Roof material testing for asbestos before demolition and flashing will be challenge to manage as low levels of asbestos are very common in the GLWA's old roof type systems.

Project History: Majority of GLWA WRRF facilities have Built-Up-Roof (BUR) membranes systems commonly referred as "tar and gr...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$298	$8	$8	$57	$46	$46	$46	$46	$46	$230	$4
Design & Construction Assistance # 1	$469	$0	$0	$91	$63	$63	$63	$63	$63	$315	$63
Construction (Build) # 1	$8,121	$1,115	$1,115	$0	$1,168	$1,168	$1,168	$1,168	$1,168	$5,838	$1,168

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 331003

Project Title: Masonry Replacement and Rehabilitation

Project Status: Future Planned - Ten-Year CIP
Class Lvl 1: Water
Class Lvl 2: General Purpose
Class Lvl 3: General Purpose
Lookup Location:
☑ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Northeast Facility

Project Engineer/Manager: Douglas Atkinson

Director: Paula Anderson

Project Score
0

Problem Statement:
Cracks and deterioration in masonry walls,exterior concrete, retaining walls, concrete decks and floors needing repair or replacement causing concern for safety due to poor conditions.

Scope of Work/Project Alternatives:
For NE WTP: Assess, solve the movement and moisture penetration problem, rebuild portions of masonry and concrete walls, floors, roof parapets and deck elements.
For SW WTP: Assess the panels and support structure, replace panels, repair/restore rusted steel members.
For Imlay City: Remove or rebuild retaining walls to withstand soils pressure.

Other Important Info:
3 sites have been identified for this project all have some failing concrete.
1)Northeast WTP
2)Southwest WTP
3) Imlay City Pumping Station

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
TBD / Future Allocation / General Holding	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$25,000

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 341001

Project Title: Security Infrastructure Improvements on Water Facilities

Project Status: Project Execution - Construction
Class Lvl 1: Centralized Services
Class Lvl 2: Security
Class Lvl 3: General Purpose
Lookup Location: System Wide

☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Project Photo

Project Engineer/Manager: Michael Lewis

Director: W. Barnett Jones

Project Score
0

Problem Statement:
GLWA facilities have been designated as "Critical Infrastructure" by the United States Department of Homeland Security (OHS). Critical Infrastructure is under constant threat by malicious people intent on disruption and destruction. GLWA staff is engag.ed in a continual process of threat and vulnerability assessment to our facilities, operations, and staff. Using several assessment tools including, OHS Site Assessments, incorporating AWWA security recommendations, and utilizing GLWA's historic...

Scope of Work/Project Alternatives:
Water Works Park: Additional coverage where boats dock and by the screening house. Video assessment wherever there are alarm points. Primary Building needs to be secured. Need video coverage. Switchgear room needs to be secured. Exterior video coverage of oxygen tanks and entrance lo chlorine room. Secure transformer enclosures -Raw water Booster Station. Interior intrusion detection devices need to be installed at high lift building- glass break, motion sensors, etc. Install Card reade...

Other Important Info:
GLWA has a responsibility in the layered approach to critical infrastructure security; partnering with Federal, State, and Local law enforcement entities to minimize and respond to threats. This partnership required GLWA to maintain a minimum security posture equating to the Critical Infrastructure designation. Implementation of the security protocols were none existent, and improving the GLWA security foot print can reduce our vulnerabilities and enhance our response to known threats.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$696	$334	$334	$330	$30	$2	$0	$0	$0	$32	$0
Design-Build # 1	$8,474	$3,610	$3,610	$4,326	$537	$0	$0	$0	$0	$537	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 341002

Project Title: Security Infrastructure Improvements for Wastewater Facilities

Project Status: Project Execution - Construction
Class Lvl 1: Centralized Services
Class Lvl 2: Security
Class Lvl 3: General Purpose
Lookup Location: System Wide
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


Project Photo

Project Engineer/Manager: Michael Lewis

Director: W. Barnett Jones

Project Score
0

Problem Statement:
GLWA facilities have been designated as "Critical Infrastructure" by the United States Department of Homeland Security (OHS). Critical Infrastructure is under constant threat by malicious people intent on disruption and destruction. GLWA staff is engag.ed in a continual process of threat and vulnerability assessment to our facilities, operations, and staff. Using several assessment tools including, OHS Site Assessments, incorporating AWWA security recommendations, and utilizing GLWA's historic...

Scope of Work/Project Alternatives:
Water Works Park: Additional coverage where boats dock and by the screening house. Video assessment wherever there are alarm points. Primary Building needs to be secured. Need video coverage. Switchgear room needs to be secured. Exterior video coverage of oxygen tanks and entrance lo chlorine room. Secure transformer enclosures -Raw water Booster Station. Interior intrusion detection devices need to be installed at high lift building- glass break, motion sensors, etc. Install Card reade...

Other Important Info:
GLWA has a responsibility in the layered approach to critical infrastructure security; partnering with Federal, State, and Local law enforcement entities to minimize and respond to threats. This partnership required GLWA to maintain a minimum security posture equating to the Critical Infrastructure designation. Implementation of the security protocols were none existent, and improving the GLWA security foot print can reduce our vulnerabilities and enhance our response to known threats.

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$58	$0	$0	$29	$29	$0	$0	$0	$0	$29	$0
Design-Build # 1	$3,476	$1,015	$1,015	$1,768	$693	$0	$0	$0	$0	$693	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 351001

Project Title: LED Lighting and Lighting Control Improvements

Project Status: Active - Pre-Procurement - Construction
Class Lvl 1: Centralized Services
Class Lvl 2: Energy Management
Class Lvl 3: General Purpose
Lookup Location: System Wide
☐ **Project New to CIP:**

☑ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**


LED Light

Project Engineer/Manager: Eric Griffin

Director: John Norton

Project Score
0

Problem Statement:
Energy savings, demand reduction improved visibility, safety, operational efficiency and worker productivity. Budget was cut to $500,000.00 we plan on reducing scope to 4 Booster stations only under this CIP.MFG 7/25/2019

Scope of Work/Project Alternatives:
Remove identified old fixtures and replace with new LED lamps and advanced control systems.

Other Important Info:
Challenges: Some outfalls are below the river elevation; installation may be challenging.

Project History: An audit was completed in 2010/2011 but little action was taken. Advancement in lighting technology since this audit has rendered it obsolete as to recent innovations, technology and cost. Across the system, equipment is in poor condition and exceeds its end of life. Some existing fixtures are antiques and compared to today's lighting, cannot meet minimum lighting standards.

A well...

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	5 Year Total
GLWA Salaries	$150	$7	$7	$0	$38	$38	$38	$30	$143
Study # 1	$50	$0	$0	$0	$0	$17	$17	$17	$50
Design-Build # 1	$500	$0	$0	$0	$0	$167	$167	$167	$500

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 380600

Project Title: As-Needed General Engineering Services

Project Status: Cancelled
Class Lvl 1: Centralized Services
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: System-wide
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Grant Gartrell

Director: Grant Gartrell

Project Score
0

Problem Statement:
Allowance for the study and design of critical projects throughout the system prior to bidding and construction.

Scope of Work/Project Alternatives:
As-needed engineering services for water and wastewater engineering.

Other Important Info:
Challenges: N/A - Active

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TBD / Future Allocation / General Holding TBD	$55	$0	$0	$55	$0	$0	$0	$0	$0	$0	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 380700

Project Title: As-Needed Geotechnical and Related Engineering Services

Project Status: Project Execution - Design
Class Lvl 1: Centralized Services
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: System-wide
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☐ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**

Project Engineer/Manager: Peter Fromm

Director: Grant Gartrell

Project Score
0

Problem Statement:
GLWA engineering and operations need a contract mechanism to obtain professional engineering services in a timely manner to investigate environmental, geotechnical and specialized engineering problems that occur on a regular basis throughout the system.

Scope of Work/Project Alternatives:
This engineering/technical services contract involves as-needed engineering and technical services related to geotechnical investigations and related geotechnical engineering, construction materials sampling and testing, environmental media sampling and testing, soils sampling and testing, land surveying, corrosion testing and inspection, computer-aided design, and construction inspection. This contract includes design, construction services, and resident project representation for the follow...

Other Important Info:
N/A

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY21	FY22	FY23	FY24	FY25	FY26	5 Year Total	FY27+
Construction (Build) # 1	$2,131	$771	$771	$904	$456	$0	$0	$0	$0	$456	$0

Document received by the MI Wayne 3rd Circuit Court.

CIP Number: 381000

Project Title: Power Quality: Electric Metering Improvement Program

Project Status: Active - Pre-Procurement - Design
Class Lvl 1: Centralized Services
Class Lvl 2: Programs
Class Lvl 3: Programs
Lookup Location: System-wide
☐ **Project New to CIP:**

☐ **Innovation**
☐ **WW Master Plan**
☐ **Water Master Plan Right Sizing**
☑ **Redundancy**
☐ **NE WTP Repurposing**
☐ **Linear Assets Outside of Facilities**
☐ **Predecessor Project(s)**



Power Quality Meters

Project Engineer/Manager: Eric Griffin

Director: John Norton

Project Score
0

Problem Statement:
Advanced meters for measuring power usage in real-time to reduce the electrical demands and further optimize load management practices, GLWA is experiencing a lot of power outages at our facilities. The installation of the New Power Monitors will give us real wave form data to determine why we are having outages and the time period of sagging or swelling voltage which effects the integrity of our equipment. MFG 7/25/2019

Scope of Work/Project Alternatives:
This program will increase the number of electric meters at pumping stations and treatment facilities to allow for active demand management to reduce electricity rates. The meters can be tied to the existing data management system for data archiving and use.
The installation of the New Power Monitors will give us real wave form data to determine why we are having outages and the time period of sagging or swelling voltage which effects the integrity of our equipment.MFG 07/25/2019

Other Important Info:
Project History: Project is in the works targeting high demand (kW) sites - all the water treatment plants (Phase 1)
We would like to change the project to design build and move up on the CIP. The outages we are having are affecting our preassuers that are causing water main breaks and boil water advisories, We need this to better communicate DTE problems that we are faced with and come up with solutions to improve the process or equipment.MFG 7/25/2019

Current Expenses (All figures are in $1,000's)

Activity Name	Total Costs	Actual Costs	Prior FYs	FY24	FY25	FY26	5 Year Total	FY27+
GLWA Salaries # 1	$124	$0	$0	$27	$26	$22	$74	$50
Design-Build # 1	$2,500	$0	$0	$0	$197	$1,107	$1,305	$1,195

Document received by the MI Wayne 3rd Circuit Court.

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 8

Document received by the MI Wayne 3rd Circuit Court.

APPENDIX D: SYSTEM BACKGROUND INFORMATION

Document received by the MI Wayne 3rd Circuit Court.

1.1. GLWA WATER SYSTEM

The regional water system draws its water from the largest fresh water source in North America, the Great Lakes, with Lake Huron to the north, the Detroit River to the south and Lake St. Clair to the east. With access to nearly 2 billion gallons of high quality source water and with three separate intakes, the Authority has highly reliable and more than sufficient source water for current and projected demands.

The major components of the regional water system include three intake facilities, five treatment plants, an extensive conveyance system consisting of 816 miles of transmission mains throughout the service area, 19 booster pumping stations and 32 water storage reservoirs (14 at the water treatment plants and 18 at booster stations). Water flow and pressure throughout the Water System are monitored and controlled by a Systems Control Center located in the Central Services Facility.

PHYSICAL FACILITIES

Intake Facilities

The Water System's three intake facilities are listed below and are generally in adequate to good working order and repair.

- The **Lake Huron intake**, located in Lake Huron, approximately 5 miles north of Port Huron and 5 miles into the lake, was placed in operation in 1974. This intake supplies raw water through a tunnel to the Lake Huron Water Treatment Plant.
- The **Belle Isle intake**, located at the eastern end of Belle Isle where Lake St. Clair flows into the Detroit River, was placed in operation in 1931. This intake supplies raw water to the Water Works Park, Springwells and Northeast Water Treatment Plants.
- The **Fighting Island intake** and tunnel, located under the Detroit River on the Canadian side just west of the northern end of Fighting Island, was placed in operation in 1964. This intake supplies raw water to the Southwest Water Treatment Plant.

Water Treatment Plants

Raw water from the intake facilities is treated at the regional water system's water treatment plants, which includes screening, filtering, bacteria control, and taste and odor control. Each of the five water treatment plants in the regional water system was constructed with the capability to treat the water in accordance with federal requirements under the Safe Drinking Water Act. In the opinion of the Authority, based upon physical evaluations conducted by its consultants, no significant improvements to the water treatment plants are presently required to meet such requirements. In addition, each treatment plant is equipped with its own laboratory facilities for the examination of drinking water which are recertified periodically (every three years) by the Michigan Department of Public Health. The treatment plants are more particularly described in the following table. A summary of the treatment plants is shown in Table 1.

Table 1. Treatment plant history and rated capacity

PLANT	PLACED IN OPERATION	MAXIMUM RATED CAPACITY (MGD)
Lake Huron	1974	400
Southwest	1964	240
Northeast	1956	300
Springwells	1931/1958	540
Water Works Park	2003	240

Water Delivery System

The Authority operates and maintains a regional water system consisting of 816 miles of main including most of the transmission mains within the City limits and certain transmission mains throughout the wholesale service area. The regional water system connects with the transmission and distribution mains owned and operated by the wholesale municipal member partners including the City of Detroit.

The transmission system is laid out to provide adequate pressures that are reinforced by use of booster stations and reservoirs, where necessary. Much of the transmission system is interconnected and flow of water can be controlled, particularly in emergency conditions, to flow in either

Document received by the MI Wayne 3rd Circuit Court.

direction by opening or closing valves. Water pressures can be boosted to overcome typical losses due to an emergency situation.

Monitoring Facilities

The Water System Control Center controls and monitors the transmission of water throughout the regional water system. Operators in the Systems Control Center can remotely control the pump stations at the treatment plants and the 19 booster stations to adjust flows and pressures to meet the changing demands of member partner communities.

REGIONAL WATER SYSTEM MASTER PLAN

The Water Master Plan Update was accepted by the GLWA Board on August 24, 2016. This plan was materially completed in 2015 (the "2015 Water Master Plan Update" or the "Update") with final closeout in 2016. Member Partner communities were engaged in the preparation of the 2015 Water Master Plan Update. This provided a broader perspective utilizing the region's entire infrastructure for public benefit to leverage existing infrastructure before investing in new infrastructure. The 2015 Water Master Plan Update has been utilized to develop the Regional Water System CIP.

The 2015 Water Master Plan Update, which covers a period of 20 years, instead of the 50 years of prior master plans, recognizes the national trend of declining demand. A key focus was to establish a strategic infrastructure and operating plan associated with this reality. The update recommended right-sizing the capacity of the regional water system based on the current lower projections of population and water volumes.

The 2015 Water Master Plan Update found that the Authority's combined water treatment plant design capacity was estimated to be over 60 percent greater than the forecasted 20-year water demands. The total rated capacity of the existing five water treatment plants is 1.7 billion gallons per day. The 2015 Master Plan Update identified likely maximum demands in the range of up to 1.0 billion gallons per day during the 20-year planning period. This provided the rationale to evaluate the possibility of repurposing one or more water treatment plants to strategically align capacity and service requirements and planning for structural de-rating of capacity as warranted at the remaining four water treatment plants. The 2015 Master Plan Update recommended converting the existing Northeast Water Treatment Plant into a storage and pumping facility, thereby eliminating the need to invest in improvements that would otherwise be required to maintain rated capacity, and investing in the four remaining water treatment plants.

The 2015 Water Master Plan Update is designed to provide the System with flexibility to meet multiple growth scenarios and regulatory changes in the future, furthering GLWA's sustainability goals. Realigning water treatment plant capacity with forecasted demands will require additions and modifications to the existing water transmission system. The first five years of the 2015 Water Master Plan Update contain several capital projects related to the additions and modifications to the existing water transmission system, a number of which are in the GLWA 2022-2026 CIP. An example of the update's financial benefits is an estimated $400 million of capital cost avoidance. In August 2016, the 2015 Water Master Plan Update was further updated to decommission and repurpose the Northeast Water Treatment Plant, provide a new transmission system serving the Authority's northeast service area and add enhanced water System redundancy and long- term serviceability to a large (96 inch) water main through completion of a repair, relocation and isolation valve installation project for that water main.

SERVICE AREA AND MEMBER PARTNERS

The Authority currently provides wholesale water services in a service area encompassing 981 square miles and serves all or a portion of eight Michigan counties in southeast Michigan, including Oakland, Macomb, Wayne, Lapeer, Genesee, Washtenaw, St. Clair and Monroe Counties. Figure 1 displays GLWA's service area. Approximately 4 million people, or nearly 40 percent of the total population of the State of Michigan, live in the Authority's water service area. Suburban member partners comprise approximately 82 percent of the population served by the Authority, and the City of Detroit comprise the remainder served by the Authority. Under certain circumstances, subject to the Authority's System optimization guidelines, the Authority's water service area may be expanded to include additional communities. The Authority's member partner communities are served via wholesale service contracts and the City retail customer class is served via the terms of the Water and Sewer Services Agreement.

Document received by the MI Wayne 3rd Circuit Court.

WHOLESALE WATER MEMBER PARTNERS

The member partners of the regional water system include 127 communities served through various forms of contracts. The City of Detroit is served pursuant to the Water and Sewer Services Agreement. To date, model contracts for 78 of the 88 wholesale member partners have been negotiated, approved, and are in effect. Of the other 10 wholesale member partners, 7 are served under older contract structures, the Genesee County Drain Commissioner is served via a 30-year Reciprocal Backup Water Service Contract and 2 members receive water services on a non-contract basis.

The 78 member partners served by the new model contracts comprise over 92% of total billed revenues from regional water system wholesale member partners (exclusive of Detroit).

The model water service contracts generally provide for (i) delivery of water by the Authority to the wholesale member partner at designated metered points at specified rates of flow and pressure and (ii) payment by the wholesale member partner for all water supplied at reasonable charges established by the Authority. The Authority is responsible for meeting all water quality requirements at the designated metered points. The wholesale member partner is solely responsible for distributing water from the points of delivery to its retail customers, for local billing, collection and rate setting.

The model contracts have a 30-year initial term and automatically renew for an additional 10-year term unless a party to the contract provides written prior notice of intent to terminate at least five years prior to the end of the then-current contract term. In the event of an early termination, the model contract provides that wholesale member partners are liable to GLWA for the payment of any costs incurred by the Authority related to the provision of services to the member partner community, unless the termination is for cause, in which case GLWA has cure rights. The model contract provides that GLWA has no responsibility for distributing, operating, repairing, replacing or maintaining any portion of the member partner community's retail water or wastewater system, that GLWA shall be the sole supplier of service to the member partner's service area and that the member partner is prohibited from commingling Authority water with water from any other source without the prior approval of GLWA.

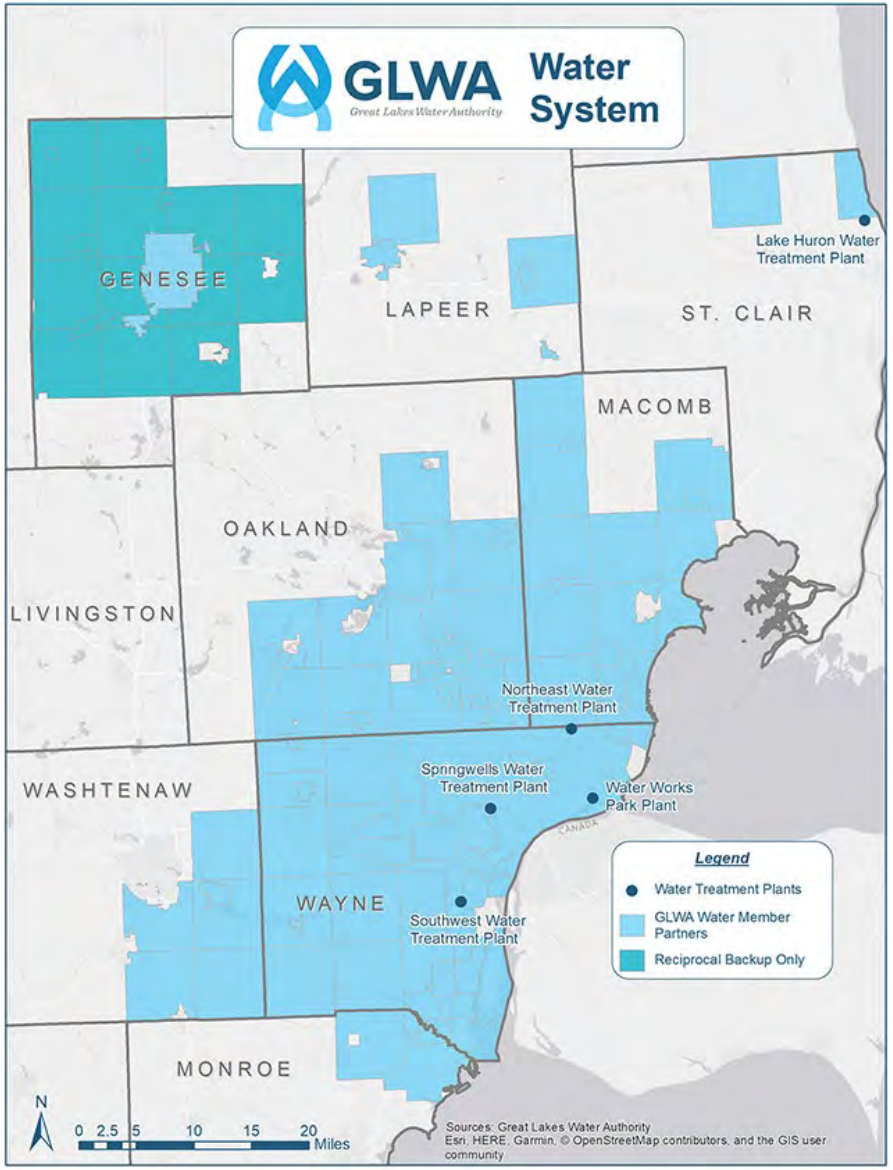


Figure 1. GLWA Water Service Area

Document received by the MI Wayne 3rd Circuit Court.

The model contracts also provide that the Water Technical Advisory Committee (the "TAC"), established to facilitate a cooperative working relationship between GLWA and its member partner communities, will remain in place for the contract term. In addition, the model contracts include other provisions required for the orderly operation of an integrated water supply and distribution system such as the following: (i) restrictions on redistribution outside the limits of the particular municipality or other public entity without the consent of the Authority; (ii) measurement of water furnished by meters; (iii) the metered flow of water is the basis for billing; (iv) prohibition against combining of regional water system supplied water with water from any other source without prior written approval of the Authority to ensure a uniform quality of water throughout the area; (v) municipal acceptance of the Authority's standards for construction of distribution mains and Authority approval of construction plans therefor to ensure a uniform standard throughout the area; (vi) Authority commitments regarding notification of rate changes; (vii) payment and late payment terms; (viii) delineation of maintenance responsibilities; (ix) specific water pressure commitments by the Authority; and (x) maximum day, peak hour and annual volume commitments by the wholesale member partner.

1.1. WATER TREATMENT PLANTS & FACILITIES

GLWA operates and maintains five water treatment facilities that provide water to GLWA member partner communities in Southeast Michigan. The Springwells, Northeast, Southwest, Lake Huron, and Water Works Park Water Treatment Plants have a maximum rated treatment capacity of 1,720 million gallons per day and firm high service pumping capacity of 2,400 million gallons per day. The high service pumping capacity exceeds the rated treatment capacity to assist in meeting peak hourly demands from finished water storage. Applicable treatment and pumping capacities and other data can be seen in Table 2 on the following page.

Four of the five plants (Northeast, Springwells, Southwest and Water Works Park) are conventional treatment facilities with the following process trains: rapid mix, coagulation, flocculation, sedimentation, granular media filtration, and disinfection. Lake Huron is the only facility operated as a "modified direct filtration" plant, which means the sedimentation basins do not require a minimum detention time of 4 hours. In addition, Water Works Park is the only plant that employs intermediate ozonation for primary disinfection control. All five plants use the same chemical systems including alum for coagulation, chlorine for pre-oxidation and primary disinfection (excluding Water Works Park), powdered activated carbon (PAC) for taste and odor (T&O) control, phosphoric acid for corrosion control, and fluoride for dental health protection. Polymers are also added at several facilities to enhance coagulation and filtration as well as for thickening and dewatering of alum residuals. Two of the five plants, Southwest and Water Works Park, employ automated residuals removal from the sedimentations basins. The residuals are thickened and dewatered on site along with backwash wastewater, and disposed of at landfills. Lake Huron's basins are cleaned manually on an annual basis and the sludge is discharged to the sludge drying lagoons. The lagoons also receive thickened solids from the waste wash water treatment facility, which processes filter backwash wastewater. The Springwells and Northeast plants do not have automated alum residuals collection in the sedimentation basins or a thickening treatment process on site for alum residuals or backwash wastewater. At both facilities, the basins have been manually cleaned on an annual or biannual basis and the solids discharged to the wastewater collection system; backwash wastewater is also discharged to the wastewater collection system.

Document received by the MI Wayne 3rd Circuit Court.

Table 2. Water Treatment Plant Capacity, Finished Water Storage and Areas Served Summary

FACILITY	YEAR PLACED IN SERVICE	RATED MAXIMUM TREATMENT CAPACITY (MGD)	FIRM HIGH SERVICE PUMPING CAPACITY (MGD)	TOTAL FINISHED WATER STORAGE VOLUME (MG)	AREAS SERVED
Springwells WTP	1931 First Train; 1958 Second Train	540(1)	260, IPD* 450, HPD*	60	Detroit, Northern Wayne County, Eastern Washtenaw County, Oakland County, Southeastern Macomb County, Western Wayne County
Northeast WTP	1956	300	400	30	Northeast Detroit/Wayne County, Southern Macomb County, Southeast Oakland County
Southwest WTP	1964	240	310	30	Southern Wayne County, Northern Monroe County, Eastern Washtenaw County
Lake Huron WTP	1974	400	420	44	Genesee County, Lapeer County, St. Clair County, Macomb County, Oakland County
Water Works Park WTP	2003	240	560	28	Eastside of Detroit, Eastern Wayne County
SYSTEM TOTALS:		**1,720**	**2,400**	**192**	***IPD = INTERMEDIATE PRESSURE DISTRICT, HPD = HIGH PRESSURE DISTRICT***

Document received by the MI Wayne 3rd Circuit Court.

1.1.1. Lake Huron Water Treatment Plant

The Lake Huron Water Treatment Plant began full-scale operations in 1974. The plant is located at 3993 Metcalf Road in Fort Gratiot, Michigan. The Lake Huron plant was designed to be easily expandable to meet the needs of growing populations in the communities it serves to the north of Detroit. In 2004, after completion of a pilot study along with various upgrades to the process trains, the MDEQ rated the maximum capacity of Lake Huron at 400 MGD. Lake Huron is the only GLWA facility that is operated in "modified" direct filtration mode. The sedimentation basins do not meet 10-State standards and thus are not considered to be true settling basins by the MDEQ. The raw water source for the plant is Lake Huron. The raw water tunnel is designed for a maximum capacity of 1200 MGD and 800 MGD during cold weather. The plant was constructed with provisions to increase the capacity by adding additional process trains and pumping units to obtain the maximum production capacity of 1200 MGD. In the early 2000's a variety of process treatment improvements were constructed at the Lake Huron Water Treatment Plant. These improvements included new high lift and backwash water pumps (including discharge piping and valves), rehabilitation of two clear wells and the high service suction well, filtration capacity improvements, pretreatment improvements and filter control modification, and a new treatment facility for filter backwash wastewater.

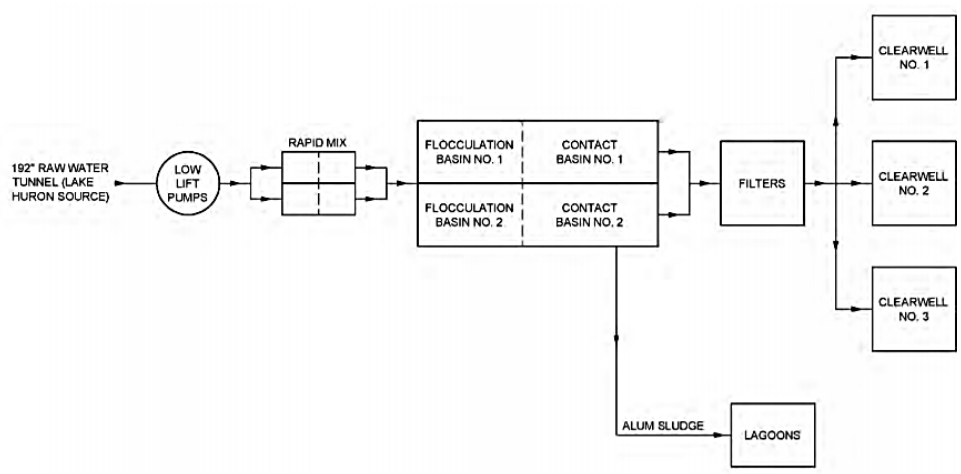


Figure 2. Lake Huron WTP process diagram



Figure 3. Lake Huron WTP

Document received by the MI Wayne 3rd Circuit Court.

1.1.2. Northeast Water Treatment Plant

The Northeast Water Treatment Plant at 11000 E. Eight Mile Road in Detroit became the former Detroit Water System's third water treatment plant. Dedicated in 1956, the plant was built to meet the needs of suburban communities located east and north of the city. The source of raw water is the Belle Isle intake, located in the Detroit River, which also serves Springwells and Water Works Park. The raw water is chlorinated, fluoridated and screened at Water Works Park before it flows to Northeast by gravity. Low lift pumps lift the raw water to the process trains, which operate in parallel. With a maximum rated capacity of 300 MGD, the plant process trains consist of rapid mix, flocculation, sedimentation, and dual-media gravity filtration.

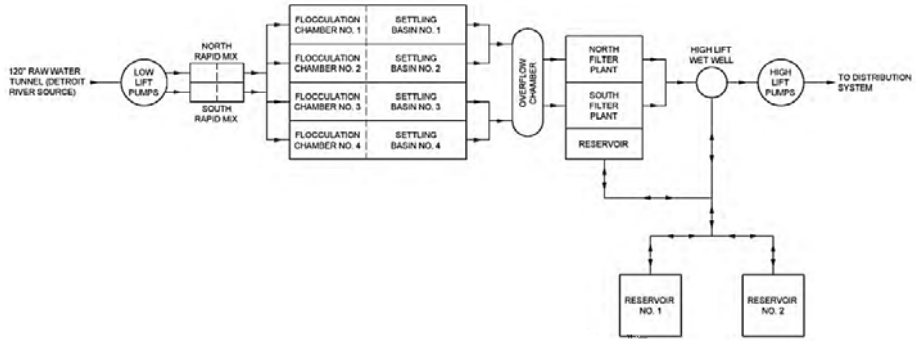


Figure 4. Northeast WTP process diagram



Figure 5. Northeast WTP

Document received by the MI Wayne 3rd Circuit Court.

1.1.3. Southwest Water Treatment Plant

Detroit's fourth water treatment plant, Southwest, located at 14700 Moran Road in Allen Park, became operational in 1964. The Southwest Water Treatment Plant was constructed in 1963, at which time it was owned and operated by Wayne County. Through an agreement with Wayne County, the City of Detroit purchased this plant to regionalize water services in Southeast Michigan. Raw water for Southwest flows by gravity from the Detroit River through an intake at Fighting Island. The plant has a rated capacity of 240 MGD. The original plant was designed with the ability to be upgraded to 320 MGD via equipment replacement. There are also spare raw water conduits that can accommodate an expansion up to 480 MGD. The low lift pumps lift the raw water for treatment through the process trains, which operate in parallel. The Southwest Water Treatment Plant also has a Residuals Handling Facility to treat filter backwash wastewater and alum sludge residuals.



Figure 6. Southwest WTP

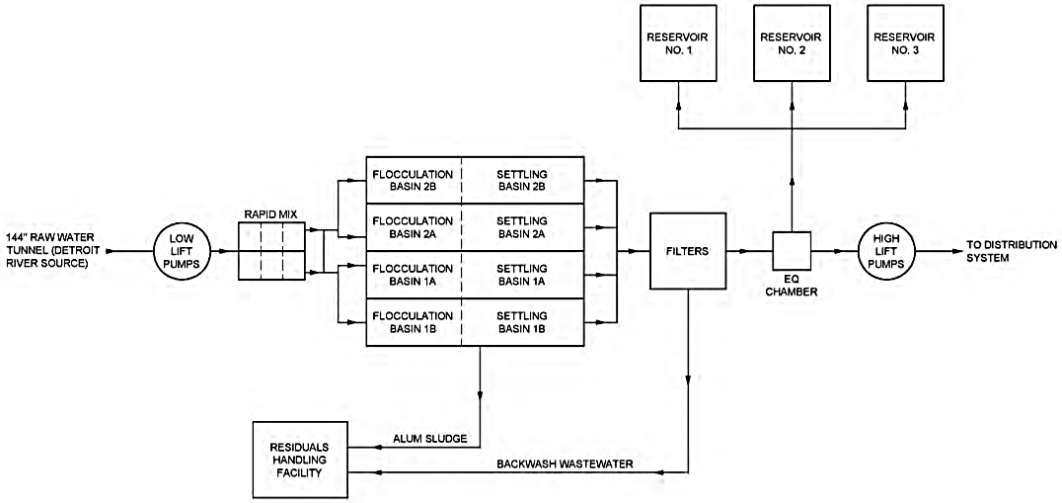


Figure 7. Southwest WTP process diagram

Document received by the MI Wayne 3rd Circuit Court.

1.1.4. Springwells Water Treatment Plant

The Springwells Water Treatment Plant at 8300 W. Warren Avenue in Dearborn is the oldest of the GLWA water treatment facilities. At the time of its dedication in 1935, it was the largest water treatment facility in the world. The first train was constructed in 1930 and has a maximum rated capacity of 340 MGD and the second train constructed in 1958 has a maximum rated capacity of 200 MGD, for a total capacity of 540 MGD. Like Northeast, the Springwells plant receives its raw water from the Belle Isle Intake. The raw water influent is screened, chlorinated and fluoridated at Water Works Park before it is conveyed to Springwells. The low lift pumps lift the raw water for treatment through the process trains, which operate independently. The 1930 train provides hydraulic mixing through a baffled chamber for rapid mixing while the 1958 train has mechanical rapid mixers. Both trains have flocculation, sedimentation and filtration treatment units. A major project to upgrade the Springwells plant, SP-563, is currently underway and should be closed out in 2020. This project includes a complete replacement of the 1958 filters and a limited replacement of some of the 1930 filters. A laboratory upgrade, yard piping and other site improvements, and electrical improvements are also included in this project.



Figure 8. Springwells WTP

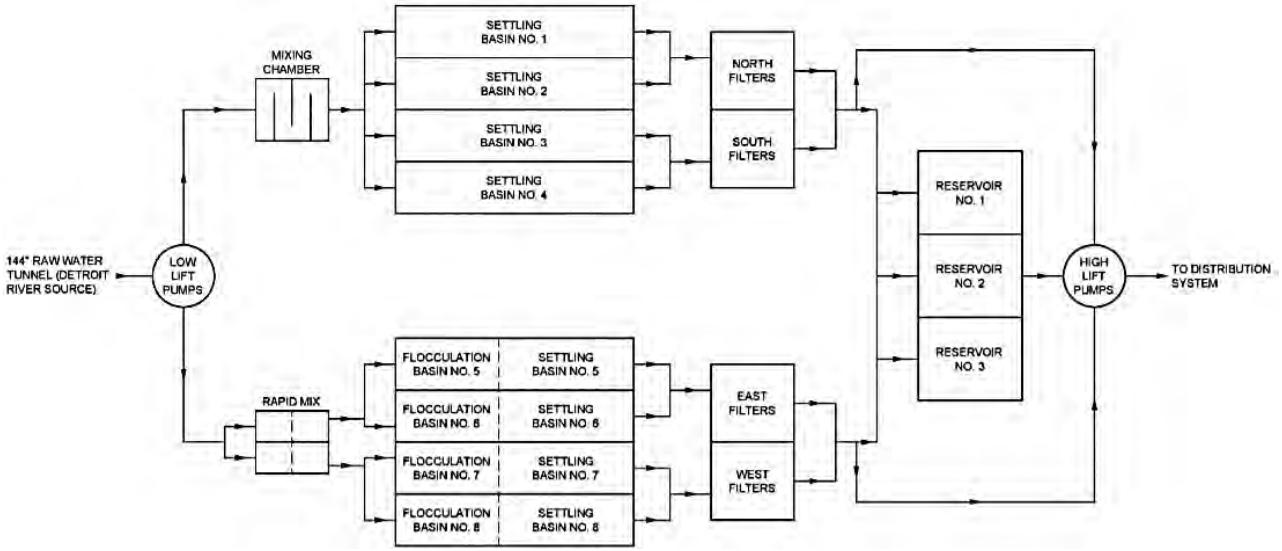


Figure 9. Springwells WTP process diagram

Document received by the MI Wayne 3rd Circuit Court.

1.1.5. Water Works Park Water Treatment Plant

Water Works Park Water Treatment Plant can produce up to 240 million gallons of superior quality drinking water per day (MGD) with room for expansion to 320 MGD. The end result of the city's $275 million investment in this state-of-the-art facility is water the way it is meant to be: colorless, odorless, and great tasting; even better tasting than the water for which DWSD has been justifiably lauded for more than 150 years.

GLWA's newest water treatment plant is located at 10100 E. Jefferson Avenue in Detroit. Water Works Park II began operating in 2003 as a conventional surface water treatment plant. The original Water Works Park water treatment plant was razed and a new facility was constructed on the same site. The raw water source for the plant is the Belle Isle intake on the Detroit River. The plant has a maximum rated capacity of 240 MGD and is GLWA's first facility with ozone disinfection facilities, as well as a Residuals Handling Facility to treat filter backwash wastewater and alum sludge residuals. Water Works Park is the largest plant in Michigan to use ozone as a disinfectant. The plant was designed to use independent process trains - a minimum of two process units are provided for each treatment process. In addition, all conveyance facilities such as pipelines, junction chambers, channels, and wet wells are configured to provide a minimum of two treatment pathways.



Figure 10. Water Works Park WTP

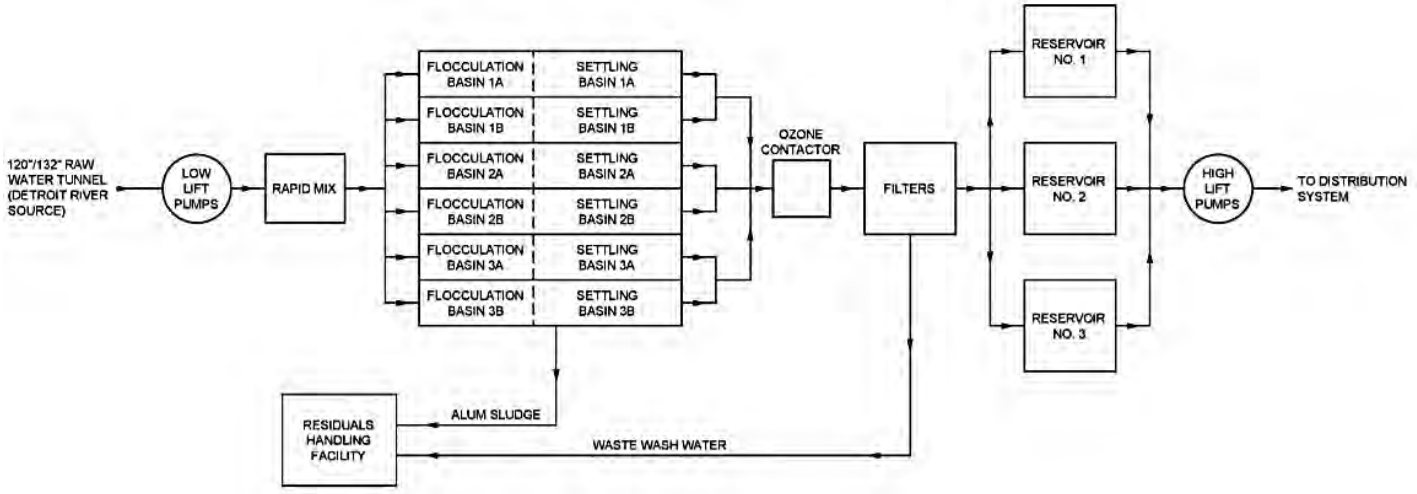


Figure 11. Water Works Park process diagram

Document received by the MI Wayne 3rd Circuit Court.

1.1.6. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

1.2. FIELD SERVICES

1.2.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

1.2.2. Transmission System

The Regional Water Transmission System (RWTS) consists of approximately 803 miles of water main typically 24-inch and greater with the responsibility for the transport of potable water from the five water treatment facilities to the regional wholesale water member partner communities and the City of Detroit.

Figure 12, Figure 13, and Figure 14 depict the potable transmission main inventory by material, diameter, and decade installed/age, respectively. The RWTS ranges from 4 to 120 inch in diameter with an average age of 69 years. Additionally, there are approximately 23 miles of raw water transmission main ranging from 120 to 186 inch in diameter supplying the five water treatment plants from the three raw water intakes.

Most of RTWS is Prestressed Concrete Cylinder Pipe (54%), Cast Iron Pipe (19%), and Steel Pipe (17%). The majority of RTWS are typically 24 inches and larger, of which 24 inch (20%), 42 inch (15%), and 48 inch (13%) are the most common diameters; however, some smaller diameter pipe exists on site at the treatment and pumping facilities and limited areas of the system to maintain needed connectivity. Detroit and the region went through several growth periods of time evidenced by the greatest periods of water main installation of the 1960s (32%), 1920s (19%) and 1950s (11%).

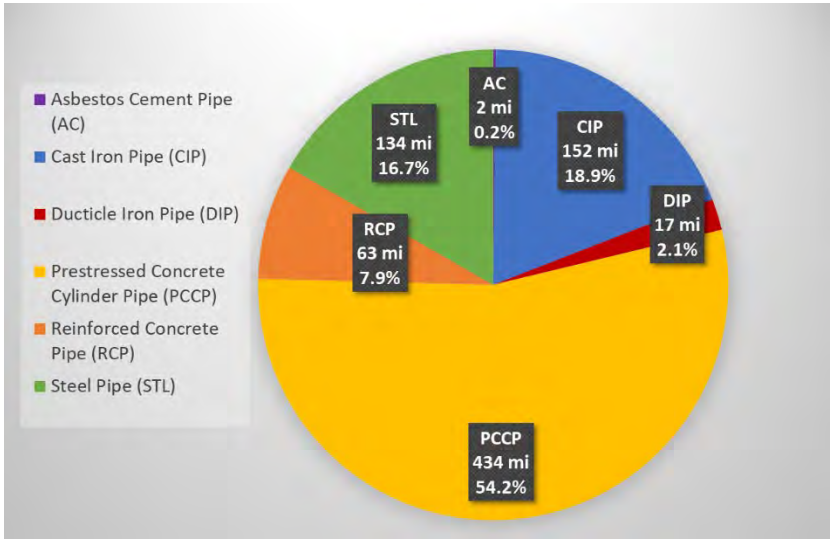


Figure 12. Transmission system inventory by material

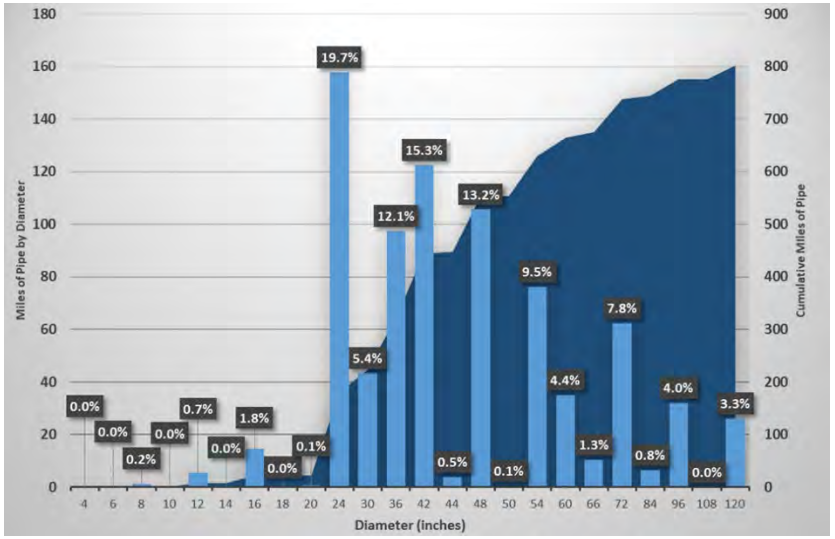


Figure 13. Transmission system inventory by diameter

Document received by the MI Wayne 3rd Circuit Court.

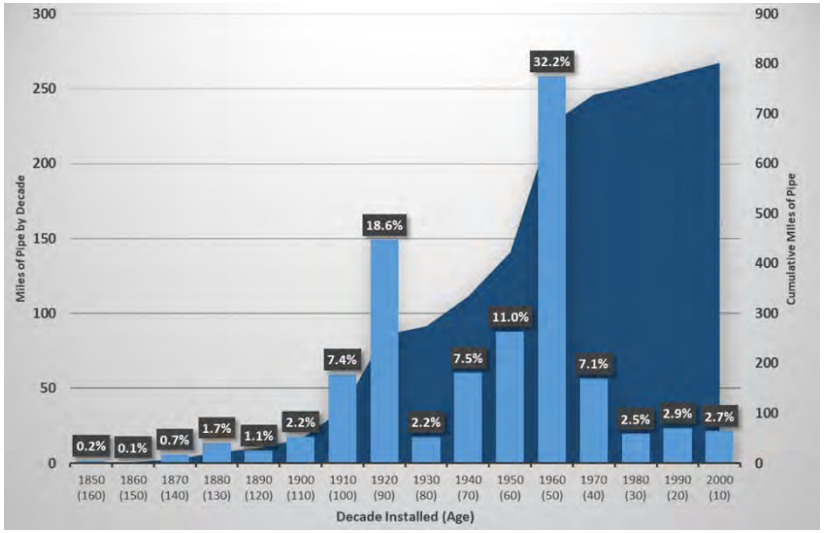


Figure 14. Transmission system inventory by decade installed / age

Water Transmission Main Pipe Integrity Program

Given the large transmission main size (24-inch and greater) and the significant population served, pipeline failures have a significant consequence. Previously, a traditional approach to manage deteriorating pipes has been to perform large-scale capital improvement projects to replace the mains. However, this strategy has been shown to be resource-consuming and often ends with the replacement of pipes that may still have significant remaining useful life. GLWA has chosen a more fiscally responsible asset management strategy to implement a pipeline integrity program, which consists of condition assessment and targeted repair, replace or renewal of pipelines to mitigate the risk of pipe failure.

In this predictive approach, refer to Figure 15, GLWA's implementation of the pipe integrity program will minimize both the probability and consequence of pipeline failures. The program includes a pipeline risk assessment of each transmission main to determine the priority, as well as recommendations on implementation and execution of a condition assessment and renewal program. This baseline risk assessment of GLWA's transmission system was accomplished by calculating the consequence and probability of failure for each pipeline operated by GLWA, then prioritizing the pipelines based on the total risk.

It is anticipated that GLWA's holistic pipeline integrity program will minimize transmission failures overall, however due to the nature of buried pressure pipe, some pipe breaks may not be preventable, regardless of the intensity of the program. As such and like most utility owners, GLWA will continue to be exposed to the risk of pipeline failure. Operational practices that minimize the consequences of a pipe break, such as a valve exercising program or maintaining a minimum inventory of replacement pipes, continue to be in place.

Each segment of transmission main planned for assessment has both capital and O&M related projected expenses. The capital expenses related to actual repairs of the pipe resulting from the assessment or from the installation of monitoring equipment are accounted for within the CIP. O&M budget related items consist of projected expenses related to the planning of the condition assessment itself, development of a detailed inspection plan, contingency and communication plan for each segment, performing the actual condition assessment and any annual monitoring fees for the installed assessment equipment. A significant effort is required within each pipe assessment to communicate and coordinate activities with member partners to ensure continuity of service to the extent possible during the assessment. In addition, it is critical to evaluate appropriate technologies and approaches to successfully perform the condition assessment that provides an appropriate level of information while maintaining the highest water quality and levels of service.

Figure 18 depicts only those water transmission mains operated/maintained (leased) by GLWA within the City of Detroit. Figure 19 depicts the water transmission mains operated/maintained (leased) by GLWA over the entire service area. The suburban communities own, operate, and maintain all of their transmission and distribution systems from the points of connection to the RWTS.

Document received by the MI Wayne 3rd Circuit Court.

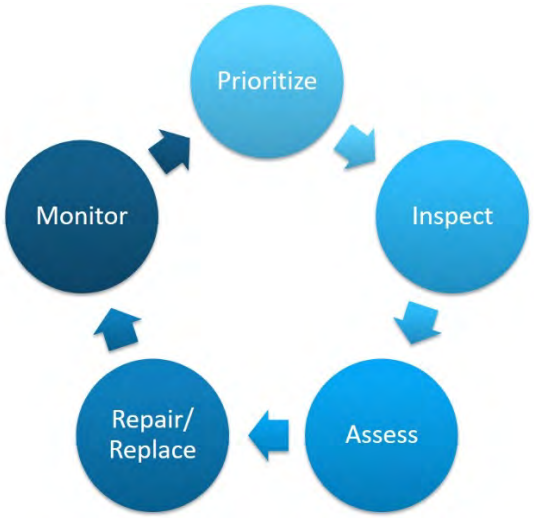


Figure 15. Proposed transmission system program cycle

1.3. SYSTEMS CONTROL CENTER

1.3.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

Pressure Reducing Valve (PRV)

Pressure Reducing Valves (PRV) regulate water pressure at critical locations throughout the Regional Water Transmission System. Pressure reduction is needed to protect portions of the Water System from being impacted by above normal operating pressures. Downstream of the PRVs, pressure is maintained at a relatively consistent lower pressure.

Pressure Monitoring Site

Fifty-three Pressure Monitoring Sites in the transmission system provide suction/upstream and discharge/downstream pressure readings to aid in system operation.

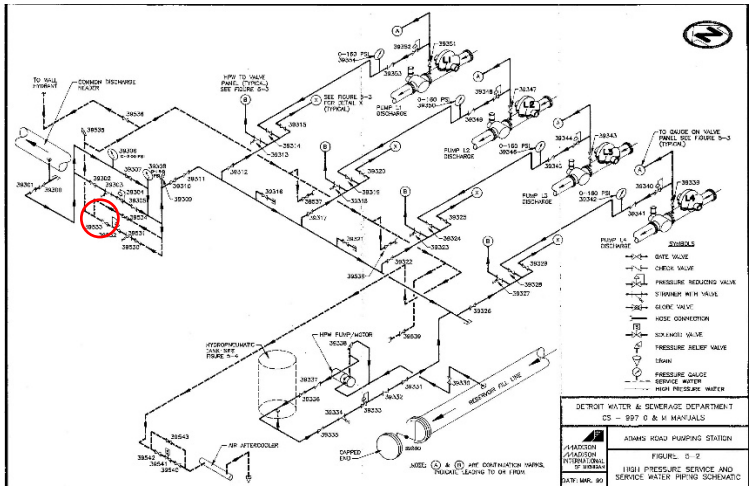


Figure 16. Adams Road Pumping Station: PRVs can be seen throughout drawing. The one circled for example reduces pressure before feeding to service water line.

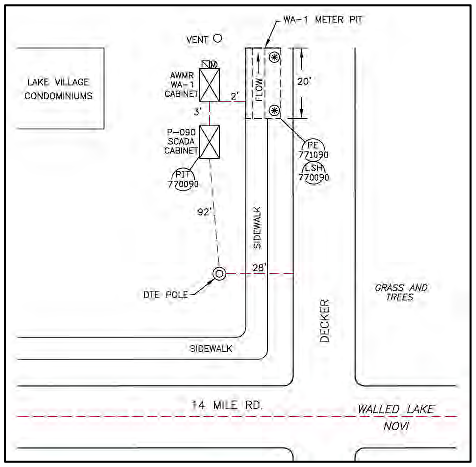


Figure 17. Pressure Monitoring Site at 14 Mile and Decker.

Document received by the MI Wayne 3rd Circuit Court.

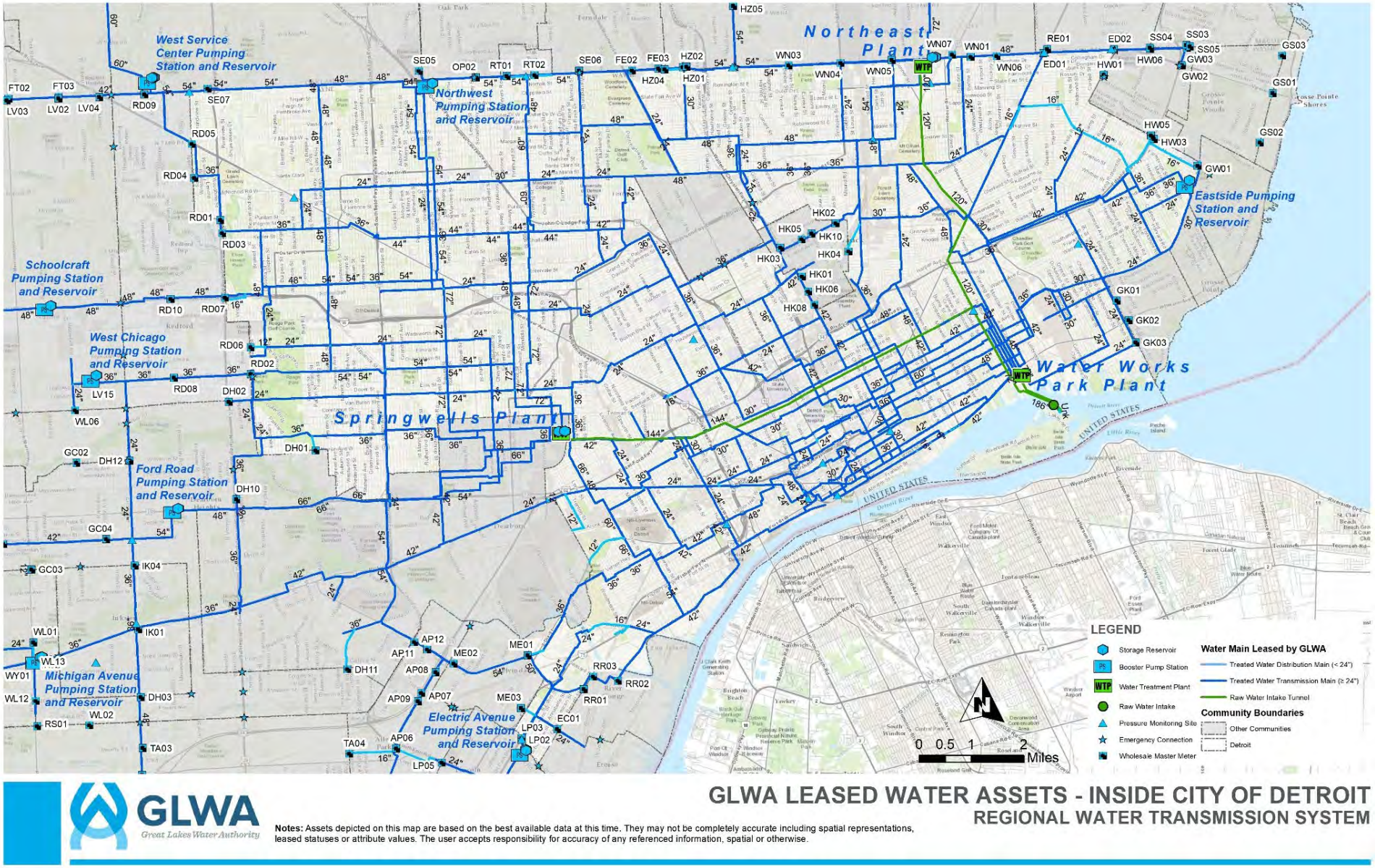


Figure 18. GLWA Leased Water Assets inside the City of Detroit

Document received by the MI Wayne 3rd Circuit Court.

Document received by the MI Wayne 3rd Circuit Court.

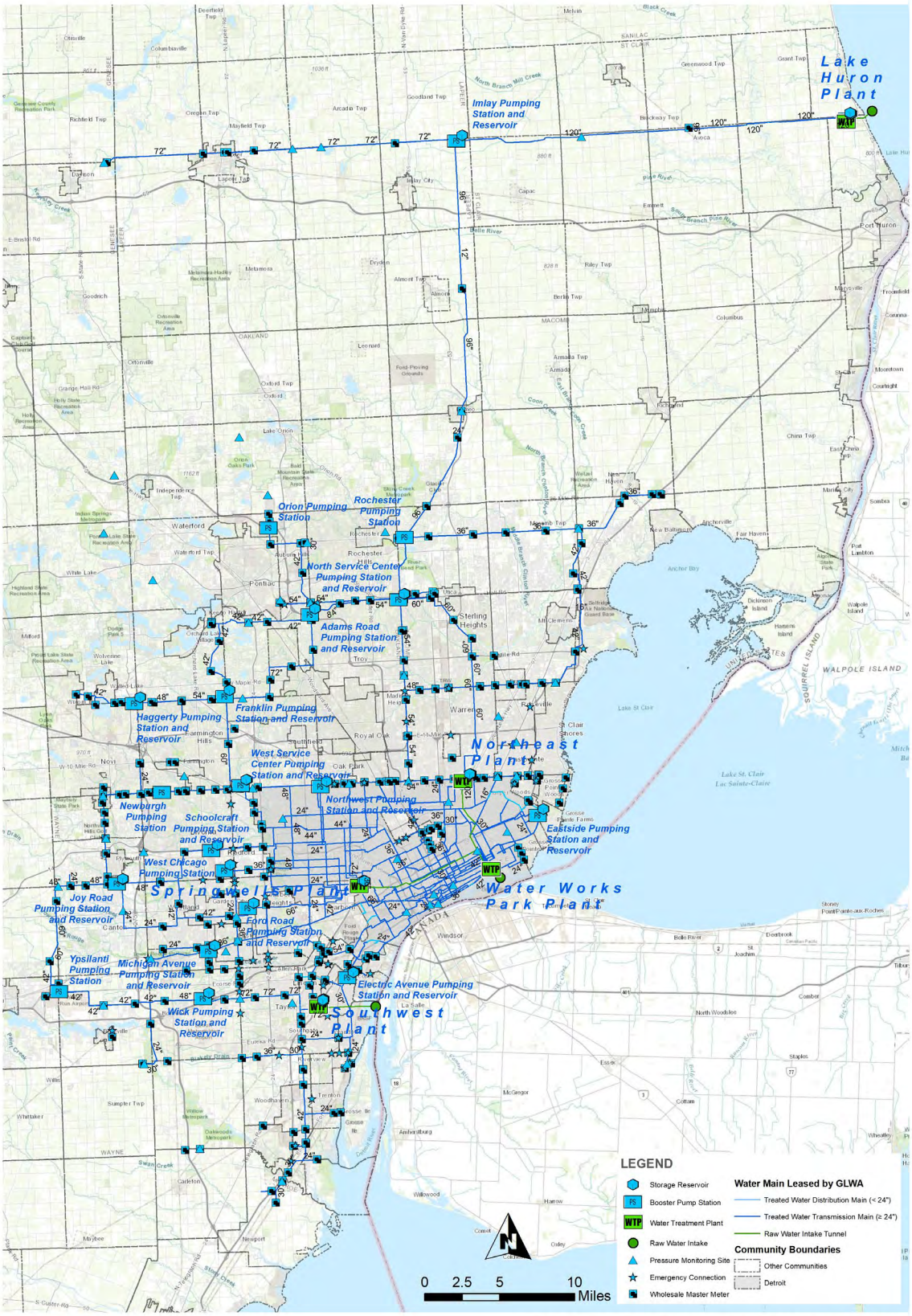


Figure 19 . GLWA Leased Regional Water Assets

1.3.2. Pump Stations & Reservoirs

Water Booster Station

Booster stations are located within the regional System and distribute water received from the Water Treatment Facilities to communities and other stations to meet pressure and demand requirements. Some water is diverted to reservoirs at the station until needed during times of high demand. Pumping stations re-pump the water in transmission mains and reservoirs to maintain these pressures. There are 19 water booster stations in the GLWA transmission system.

Adams Road Pump Station



Figure 20. Adams Road Pump Station

The Adams Road Station consists of a pump house and a primary unit substation. The station's purpose is to increase the pressure in the 42-inch water main running along Adams Road. The station is fed by the North Service Center Station, which receives its water from the Lake Huron Water Treatment Plant through the Imlay Station. The discharged water from the station flows north through the 42-inch water main along Adams Road. The station serves the member partner communities of Rochester Hills, Auburn Hills, Pontiac, as well as Bloomfield Hills and West Bloomfield, during high demand periods.

ELEVATION	881.50
SUCTION PRESSURE	40 - 55 PSI
DISCHARGE PRESSURE	120 -150 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1 - 1500 HP, 10 MGD, 350 TDH R2 - 1500 HP, 10 MGD, 350 TDH
LINE PUMPS	L1 - 750 HP, 18.2 MGD, 191 TDH, VFD L2 - 750 HP, 18.2 MGD, 191 TDH L3 - 750 HP, 18.2 MGD, 191 TDH L4 - 750 HP, 14 MGD, 191 TDH
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Eastside Pump Station



Figure 21. Eastside Pump Station

The Eastside Pump Station consists of a pump house and a reservoir. The purpose of the station is to store water during the off-peak hours and use the stored water to supplement the supply during the hours of high demand. The discharged water from the station flows through the 36-inch water main along Canyon Avenue. The station serves the communities of East Detroit and Grosse Pointe.

ELEVATION	579.26
SUCTION PRESSURE	
DISCHARGE PRESSURE	55 - 70 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1- 350 HP, 10 MGD, 350 TDH R2- 350 HP, 10 MGD, 350 TDH R3- 350 HP, 10 MGD, 350 TDH
ELECTRIC FEEDS	1

Electric Avenue Pump Station



Figure 22. Electric Avenue Pump Station

The Electric Avenue Pumping Station increases the water pressure in the 36-inch water main running along Electric Avenue. The station receives its water from the intermediate pressure district of the Southwest Water Treatment Plant. Water from Electric Avenue Pump Station serves the communities of Lincoln Park, Southgate, Riverview, and Trenton.

ELEVATION	577.71
SUCTION PRESSURE	55 - 70 PSI
DISCHARGE PRESSURE	55 - 80 PSI
RESERVOIR CAPACITY	2 X 3.3 MG
RESERVOIR PUMPS	R3 - 200 HP, 5.56 MGD, 150 TDH R4 - 300 HP, 5.56 MGD, 150 TDH
LINE PUMPS	L1 - 100 HP, 5.04 MGD, 75 TDH L2 - 100 HP, 5.04 MGD, 75 TDH
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Haggerty Pump Station



Figure 23. Haggerty Pump Station

The Haggerty Pumping Station consists of a pump building, 10-million gallon aboveground reservoir, and exterior primary power area. The primary purpose of the station is to boost water pressure and increase flow to the existing water main. The station also has the capacity to provide an emergency supply of water of up to 28 MGD emergency demand in the event of a water main break between Haggerty and Franklin pumping stations. When operating at full capacity during periods of high demand, the Haggerty Pumping Station will boost the transmission system pressure in the existing 42-inch water main serving City of Novi, Commerce Township, City of Walled Lake, City of Wixom, West Bloomfield, and Wolverine Lake.

ELEVATION	880.00
SUCTION PRESSURE	55 - 100 PSI
DISCHARGE PRESSURE	80 - 105 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1 - 700 HP, 14 MGD, 200 TDH R2 - 700 HP, 14 MGD, 200 TDH
LINE PUMPS	L1 - 700 HP, 21 MGD, 100 TDH, VFD L2 - 700 HP, 21 MGD, 100 TDH, VFD L/R3 - 700 HP, 21 MGD, 100 TDH, VFD
ELECTRIC FEEDS	2

Ford Road Pump Station



Figure 24. Ford Road Pump Station

The Ford Road Station consists of a pump house and a reservoir that stores water to supplement the normal water supply during high demand periods. The station receives water from the intermediate district of the Springwells Water Treatment Plant. The station increases the pressure in the 48-inch water main running along Ford Road. Dearborn Heights, Garden City, Westland, Inkster, and parts of Canton Township are serviced by Ford Road Pump Station.

ELEVATION	618.26
SUCTION PRESSURE	35 - 50 PSI
DISCHARGE PRESSURE	75 - 95 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R6 - 450 HP, 10.08 MGD, 210 TDH R7 - 450 HP, 10.08 MGD, 210 TDH R8 - 450 HP, 10.08 MGD, 210 TDH R9 - 450 HP, 10.08 MGD, 210 TDH R10 - 450 HP, 10.08 MGD, 210 TDH
LINE PUMPS	L1 - 250 HP, 18.14 MGD, 60 TDH L2 - 250 HP, 10.08 MGD, 120 TDH L3 - 250 HP, 10.08 MGD, 120 TDH L4 - 250 HP, 10.08 MGD, 120 TDH L5 - 250 HP, 10.08 MGD, 120 TDH
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Franklin Pump Station



Figure 25. Franklin Pump Station

The Franklin Pumping Station consists of a pump house and reservoir. The station increases pressure in the 42-inch water main running north and the 54-inch water main running south along Inkster Road. The 60-inch main comes from the high pressure district of the West Service Center that, in turn, is fed by the Northeast and Springwells Water Treatment Plants. The station also stores water to supplement normal supply during the peak demand periods. The station serves Farmington Hills, Franklin Township, Bloomfield, and West Bloomfield.

ELEVATION	832.58
SUCTION PRESSURE	35 - 60 PSI
DISCHARGE PRESSURE	135 - 155 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1 - 1570 HP, 22 MGD, 320 TDH R2 - 1570 HP, 22 MGD, 320 TDH
LINE PUMPS	L1 - 2000 HP, 30 MGD, 250 TDH L2 - 2000 HP, 30 MGD, 250 TDH L3 - 2000 HP, 30 MGD, 250 TDH L4 - 2000 HP, 30 MGD, 250 TDH
ELECTRIC FEEDS	2

Michigan Avenue Pump Station



Figure 26. Michigan Avenue Pump Station

The Michigan Avenue Pumping Station increases the water pressure in the 36-inch water main running along Michigan Avenue. The 36-inch water main is supplied by the intermediate pressure district of the Springwells Water Treatment Plant and when demand requires it, by the Southwest Water Treatment Plant intermediate pressure district. The station also stores water to supplement the normal water supply during peak demand periods. Water from Michigan Avenue Station serves the communities of Canton and Wayne.

ELEVATION	638.10
SUCTION PRESSURE	40 - 60 PSI
DISCHARGE PRESSURE	55 - 75 PSI
RESERVOIR CAPACITY	1X 3.5 MG
RESERVOIR PUMPS	R4 - 350 HP, 8.64 MGD, 150 TDH R5 - 350 HP, 8.64 MGD, 150 TDH
LINE PUMPS	L1 - 75 HP, 3.60 MGD, 90 TDH L2 - 75 HP, 3.60 MGD, 90 TDH L3 - 125 HP, 4.32 MGD, 110 TDH
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Joy Road Pump Station



Figure 27. Joy Road Pump Station

The Joy Road Pumping Station consists of one pump house, two reservoirs, and one primary unit substation. The purpose of the station is to increase the pressure in the 48-inch water main running along Joy Road. The station is fed by the Ford Road and Schoolcraft stations, which are fed by the Springwells Water Treatment Plant. The discharged water from the station flows west through the 48-inch water main along Joy Road to Sheldon Road. Then, the water main runs north along Sheldon Road to Eight Mile in Northville. The station serves the member partner communities of Plymouth and Northville and the townships of Plymouth, Northville, and Canton.

ELEVATION	686.00
SUCTION PRESSURE	35 - 55 PSI
DISCHARGE PRESSURE	130 - 150 PSI
RESERVOIR CAPACITY	2 X 5 MG
RESERVOIR PUMPS	R1 - 1200 HP, 16.13 MGD, 332 TDH R2 - 1200 HP, 16.13 MGD, 332 TDH R3 - 1250 HP, 14.8 MGD, 332 TDH
LINE PUMPS	L1 - 1050 HP, 15.84 MGD, 288 TDH, VFD L2 - 1050 HP, 15.84 MGD, 288 TDH L3 - 1000 HP, 14.8 MGD, 288 TDH
ELECTRIC FEEDS	2

Imlay Pump Station



Figure 28. Imlay Pump Station

The Imlay Pumping Station consists of a pump house and reservoir. The station maintains the required water pressure in the 72-inch supply line to the Flint area and the 96-inch supply line to North Service Center Pumping Station. The station receives water through a 120-inch water main from the Lake Huron Water Treatment Plant. It also stores water to supplement the water supply during the high demand period. The supply water can bypass the station and go directly from the 120-inch main to the 96- and 72- inch water mains.

ELEVATION	787.87
SUCTION PRESSURE	65 - 95 PSI
DISCHARGE PRESSURE	85-W/-75-170-S PSI
RESERVOIR CAPACITY	18 MG
RESERVOIR PUMPS	R1 - 5250 HP, 75 MGD, 335 TDH R2 - 5250 HP, 75 MGD, 335 TDH
LINE PUMPS	LR3 - 6000 HP, 75 MGD, 335 TDH, VFD LR4 - 6000 HP, 70 MGD, 390 TDH LR5 - 6000 HP, 70 MGD, 390 TDH LR6 - 6000 HP, 70 MGD, 390 TDH, VFD LR7 - 6000 HP, 70 MGD, 390 TDH, VFD LR8 - 6000 HP, 70 MGD, 390 TDH, VFD
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Newburgh Pump Station



Figure 29. Newburgh Pump Station

The Newburgh Pumping Station increases the pressure in the 42-inch water main that runs along Eight Mile from West Service Center intermediate pressure line. This main is fed by the high pressure district of the Northeast and Springwells Water Treatment Plants. Discharged water from the station flows west through the 42-inch water main and serves Livonia, Northville, Novi, and Farmington Hills.

ELEVATION	737.00
SUCTION PRESSURE	30 - 60 PSI
DISCHARGE PRESSURE	110 - 130 PSI
LINE PUMPS	L1 - 450 HP, 8 MGD, 200 TDH L2 - 450 HP, 8 MGD, 200 TDH L3 - 515 HP, 12 MGD, 200 TDH L4 - 515 HP, 12 MGD, 200 TDH L5 - 515 HP, 12 MGD, 200 TDH
ELECTRIC FEEDS	2

Northwest Pump Station



Figure 30. Northwest Pump Station

The Northwest Pumping Station consists of a pump house and a reservoir. The station stores water during the off-peak hours and uses the stored water to supplement the water supply during the hours of high demand. The discharged water from the station flows north, through the 42-inch discharge header along Greenfield Road, to the Southeastern Oakland County Water Association Pump Station. A 24-inch branch line, running south along Greenfield Road, supplies water to the Springwells high pressure district. A 54-inch branch line, running west along Eight Mile, supplies water to the West Service Center. The station serves the communities of northwest Detroit.

ELEVATION	657.00
SUCTION PRESSURE	
DISCHARGE PRESSURE	40-55 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1 - 350 HP, 10.08 MGD, 150 TDH R2 - 350 HP, 10.08 MGD, 150 TDH R3 - 350 HP, 10.08 MGD, 150 TDH R4 - 350 HP, 10.08 MGD, 150 TDH R5 - 350 HP, 10.08 MGD, 150 TDH
ELECTRIC FEEDS	1

Document received by the MI Wayne 3rd Circuit Court.

North Service Center



Figure 31. North Service Center

The North Service Center receives its water from Lake Huron Water Treatment Plant through the Imlay Station. North Service Center maintains adequate pressure in the 84-inch water main supplying Pontiac and Utica, supplies water to the service are of Northeast Water Treatment Plant and to Eight Mile water main, and stores water during low demand periods to be used to supplement normal water supply during peak periods. North Service Center serves Pontiac, Adams Pumping Station, Utica, Northeast Water Treatment Plant service area, and supplies water to the Eight Mile water main.

ELEVATION	697.70
SUCTION PRESSURE	30 - 50 PSI
DISCHARGE PRESSURE	135 - 150 PSI
RESERVOIR CAPACITY	2 X 10 MG
RESERVOIR PUMPS	R1 - 250 HP, 15 MGD, 75 TDH R2 - 250 HP, 15 MGD, 75 TDH R3 - 350 HP, 20 MGD, 76 TDH R4 - 350 HP, 20 MGD, 76 TDH
LINE PUMPS	L2 – 2500/1250 HP, 23-30 MGD, 240-370 TDH L3 – 2500/1250 HP, 19.3-25.5 MGD, 260-400 TDH L4 – 2500/1250 HP, 23-30 MGD, 240-370 TDH L5 – 2500/1250 HP, 19.3-25.5 MGD, 260-400 TDH L6 - 2500/1250 HP, 19.3-25.5 MGD, 260-400 TDH L7 - 2500 HP, 30 MGD, 370 TDH, VFD L8 - 2500 HP, 30 MGD, 370 TDH, VFD L9 - 2500 HP, 30 MGD, 370 TDH, VFD L10 - 2500 HP, 30 MGD, 370 TDH, VFD
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Orion Pump Station



Figure 32. Orion Pump Station

The Orion Station supplies water at an adequate pressure to Orion's distribution mains. The water comes though the northbound 42-inch water main from Adams Station or North Service Center's 54-inch main, which, in turn, is fed by the Lake Huron Water Treatment Plant through the Imlay Pumping Station. The discharge from the station flows though the 30-inch water main running long Giddings Road and serves the Orion area.

ELEVATION	946.25
SUCTION PRESSURE	75 - 95 PSI
DISCHARGE PRESSURE	105 - 130 PSI
LINE PUMPS	L1 – 75 HP, 2 MGD, 85 TDH L2 – 75 HP, 4 MGD, 85 TDH L3 – 75 HP, 4 MGD, 85 TDH L4 – 75 HP, 4 MGD, 85 TDH
ELECTRIC FEEDS	2

Rochester Pump Station

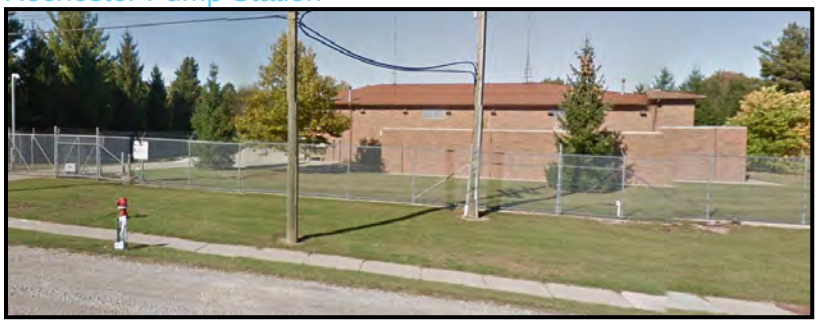


Figure 33. Rochester Pump Station

The Rochester Pump Station consists of a pump house and a transformer yard. The station supplies water at an adequate pressure to the City of Rochester Hills and Shelby Township distribution mains. The station replaced a temporary station at the site. It is fed by the Imlay Station, which receives its water from the Lake Huron Water Treatment Plant. Discharged water will boost pressures in communities currently being served by a 36-inch main running east-west along 24 Mile. The station serves City of Rochester Hills, Shelby Township, City of Rochester, Lennox Township, Macomb Township, and Chesterfield Township.

ELEVATION	687.00
SUCTION PRESSURE	65 - 95 PSI
DISCHARGE PRESSURE	75 - 140 PSI
LINE PUMPS	L1 - 700 HP, 14.4 MGD, 205 TDH, VFD L2 - 700 HP, 14.4 MGD, 205 TDH L3 - 700 HP, 14.4 MGD, 205 TDH, VFD L4 - 700 HP, 14.4 MGD, 205 TDH L5 - 700 HP, 14.4 MGD, 205 TDH
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

West Service Center



Figure 34. West Service Center

ELEVATION	646.89
SUCTION PRESSURE	35 - 50 PSI
DISCHARGE PRESSURE	110 - 140 PSI
RESERVOIR CAPACITY	2 X 10 MG
RESERVOIR PUMPS	R1 - 400 HP, 24 MGD, 96 TDH R2 - 400 HP, 24 MGD, 96 TDH R3 - 400 HP, 20 MGD, 85 TDH R4 - 400 HP, 20 MGD, 85 TDH
LINE PUMPS	L1 - 700 HP, 30 MGD, 110 TDH L2 - 700 HP, 30 MGD, 110 TDH L3 - 700 HP, 30 MGD, 110 TDH L4 - 1250 HP, 28.8 MGD, 188 TDH L5 - 1250 HP, 29.5 MGD, 188 TDH L5 - 1250 HP, 29.5 MGD, 188 TDH
ELECTRIC FEEDS	2

The West Service Center consists of one main pump house, two reservoir pump houses, and two reservoirs. It increases the pressure in the 54-inch water main running along Eight Mile Road, from the high pressure district of the Northeast and Springwells Plants. There are six line pumps in the main pump house. Three line pumps supply high pressure water to the Franklin station and other upstream member partner communities. The three remaining pumps supply the intermediate pressure line, which serves the Newburgh Station, Farmington Station, and other upstream communities. During low demand periods, water is diverted to the reservoirs. During high demand periods, the reservoir water is pumped to the suction header of the line pumps. The intermediate pressure line running along Eight Mile serves Redford Township and Livonia before reaching the Newburgh Station. High pressure lines running along Inkster Road serve the Farmington Hills and Southeast Oakland County Water Association before reaching the Franklin Station.

Document received by the MI Wayne 3rd Circuit Court.

Schoolcraft Pump Station

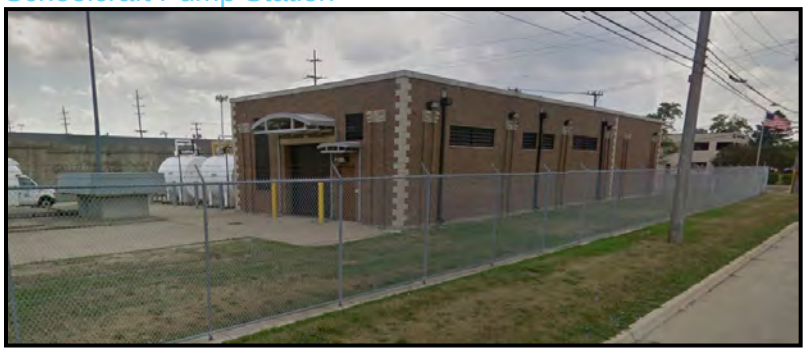


Figure 35. Schoolcraft Pump Station

The Schoolcraft Pump Station consists of one pump house, an electrical building, one reservoir, and one primary unit substation. The station increases the pressure in the 48-inch water main running along Schoolcraft Road. The station is fed by the Springwells Water Treatment Plant and itself feeds the Joy Road Station. The station serves the City of Livonia and interconnects with the Joy Road Station, which services Canton, Westland, and Plymouth.

ELEVATION	626.83
SUCTION PRESSURE	35 - 55 PSI
DISCHARGE PRESSURE	80 - 110 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1 - 1200 HP, 20 MGD, 238 TDH R2/L3 - 1200 HP, 20 MGD, 238 TDH, VFD
LINE PUMPS	L1 - 1000 HP, 20 MGD, 170 TDH, VFD L2 - 1000 HP, 20 MGD, 170 TDH, VFD
ELECTRIC FEEDS	2

West Chicago Pump Station



Figure 36. West Chicago Pump Station

The West Chicago Station increases the water pressure in the 26-inch water main running along West Chicago Road. The 36-inch water main comes from the high pressure district of the Springwells Water Treatment Plant. The station helps increase the pressure in the intake lines for Schoolcraft and Newburgh Stations. Water from the station serves the member partner communities of southern Livonia, West Service Center intermediate district, and Westland.

ELEVATION	636.71
SUCTION PRESSURE	40 - 60 PSI
DISCHARGE PRESSURE	70 - 80 PSI
RESERVOIR PUMPS	R4 - 300 HP, 7.2 MGD, 185 TDH R5 - 300 HP, 7.2 MGD, 185 TDH R6 - 300 HP, 7.2 MGD, 185 TDH
LINE PUMPS	L1 - 300 HP, 7.4 MGD, 180 TDH L2 - 300 HP, 7.4 MGD, 180 TDH L3 - 125 HP, 4.3 MGD, 180 TDH
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

Wick Road Pump Station

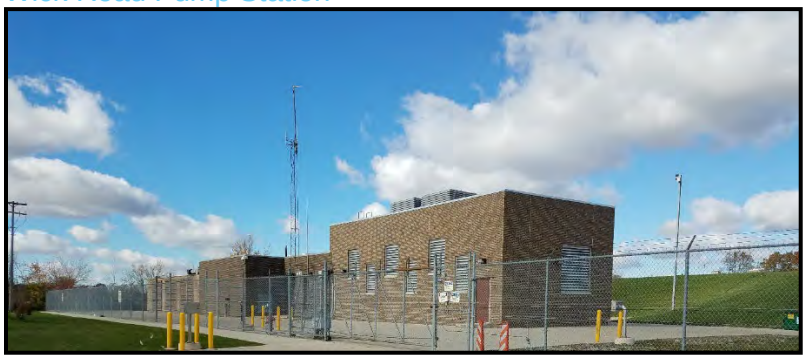


Figure 37. Wick Road Pump Station

The Wick Road Station consists of a pump house, a reservoir, and an electrical building. The station increases pressure in the 48-inch water main running along Wick Road. The station is fed mainly by the Southwest Water Treatment Plant, which is affected by the Springwells Plant's intermediate pressure line. The discharged water from the station flows west through the 48-inch water main along Wick Road. The main is reduced to 42 inches and feeds the Ypsilanti Station. A 24-inch branch from the 48-inch main serves the Van Buren, Sumpter, Huron, and Ash Townships. The station serves the member partner communities of Romulus, Belleville, Carleton, Wayne, and Ypsilanti.

ELEVATION	626.83
SUCTION PRESSURE	40 - 60 PSI
DISCHARGE PRESSURE	80 - 135 PSI
RESERVOIR CAPACITY	10 MG
RESERVOIR PUMPS	R1 - 1000 HP, 12 MGD, 238 TDH R2 - 1000 HP, 12 MGD, 238 TDH R3/L3 - 1000 HP, 12 MGD, 238 TDH, VFD
LINE PUMPS	L1 - 1000 HP, 18 MGD, 252 TDH, VFD L2 - 1000 HP, 18 MGD, 252 TDH, VFD
ELECTRIC FEEDS	2

Ypsilanti Pump Station

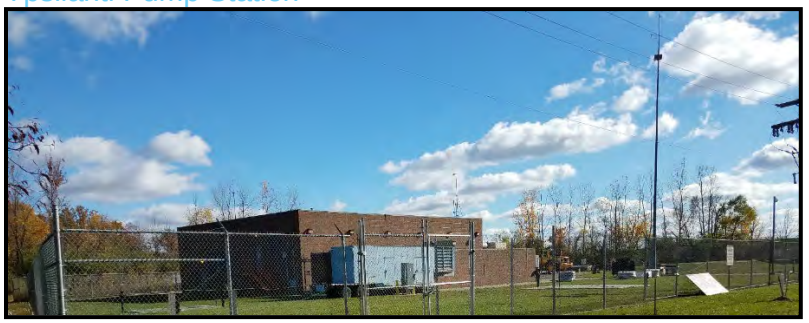


Figure 38. Ypsilanti Pump Station

The Ypsilanti Station consists of a pump house and a transformer yard. The station supplies water at adequate pressure to the City of Ypsilanti's distribution mains. It is fed by the Wick Road Station which receives its water from the Southwest Water Treatment Plant's intermediate pressure line. Discharged water from the station flows through the 42-inch water main running along Old Ecorse Road. It serves the City of Ypsilanti as well as Augusta, Pittsfield, and Superior.

ELEVATION	703.90
SUCTION PRESSURE	30 - 60 PSI
DISCHARGE PRESSURE	110 - 130 PSI
LINE PUMPS	L1 - 1000 HP, 18 MGD, 250 TDH, VFD L2 - 1000 HP, 18 MGD, 250 TDH, VFD L3 - 1000 HP, 18 MGD, 250 TDH, VFD
ELECTRIC FEEDS	2

Document received by the MI Wayne 3rd Circuit Court.

1.4. WATER QUALITY

The Water Quality Group is responsible for the majority of the testing and reporting of water quality throughout the Water System. The Water Quality Group manages the state and federal rules and their application to the entire Water System. Functions include the collection, monitoring and reporting requirements associated with these rules. Total coliform rule (TCR), the consumer confidence rule (CCR) and the lead and copper (LCR) are exclusively managed by the GLWA water quality group for the entire System except in those communities which choose not to participate. The Safe Drinking Water Act (SDWA) rules that apply exclusively to the distribution system, other than TCR and LCR, are the exclusive responsibility of each local water system.

Currently the GLWA Water Quality Group performs a majority of its work for the overall benefit of the GLWA System. These functions include water quality testing, member partner response, disinfection services and the overall program management related to the Water System water quality compliance.

1.4.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

1.5. METERING

The System Analytics and Meter Operations Group is responsible for maintenance and operation of numerous remote assets used in the metering of water, as well as the communication network used to transmit data from the water metering locations to the head end.

The System Analytics and Meter Operations Group maintains assets with the responsibility to meter wholesale water usage at 290 metering sites. Each of the 290 water metering sites contain equipment that is located in a control cabinet, as well as assets that are located in a water meter vault. The assets that are housed in the control cabinet include Remote Terminal Units, radios, batteries, battery chargers and flow transmitters. The assets that are housed in the water meter vault include differential pressure transmitters, venturi tubes, magnetic meters, pressure transmitters, mechanical flow meters, bypass valves, inlet/outlet gate valves, butterfly valves, and sump pumps.

In addition to metering equipment, the System Analytics and Meter Operations Group maintains a 900MHz telemetry network and a Wholesale Automated Meter Reading (WAMR) system. The 900 MHz telemetry network is composed of 445 repeater sites. Each repeater location consists of radios and antennas. The WAMR system collects flow and pressure information from GLWA wholesale water meter sites every five minutes. The portal provides a customizable, web-based interface that displays meter and member partner data in both graphical and tabular formats in increments of five minute, hourly and daily intervals. Member partner and site usage can also be downloaded for off-line examination. Billed Consumption with adjustments can be reviewed for member partner usage analysis.

1.5.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

1.6. GENERAL PURPOSE

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

1.7. PROGRAMS

Programs consist of the replacement and/or rehabilitation of specific capital asset on an ongoing or reoccurring basis. The program scope and/or projected expenses may vary from year-to-year, depending on the needs identified within the program, and as newly established programs develop consistent schedules, requirements and history over time. Although not typically identified in the CIP future years projected expenses, these programs will typically be funded in perpetuity. The numbering structure of the “Program” category is slightly different in order to allow up to 99 separate projects to be attributable to each

Document received by the MI Wayne 3rd Circuit Court.

program. As discussed previously, these projects identified under a parent program will be issued a CIP number, however will be displayed within the CIP as a phase of the overall parent program.

Document received by the MI Wayne 3rd Circuit Court.

1.2. GLWA WASTEWATER SYSTEM

2.1. WATER RESOURCES RECOVERY FACILITY

The Water Resources Recovery Facility (WRRF, formerly referred to as the Wastewater Treatment Plant or WWTP) is the largest single-site wastewater treatment facility in the United States. Of the more than $22.5 million spent to ready the plant for its February 1940 startup, $10 million was spent on plant construction with the balance going to complete the network of huge interceptor sewers through which a combined stream of storm and sanitary wastewater flows to the plant from member partner communities throughout metro Detroit.

The treatment plant was originally designed to provide primary treatment (screening, grit removal, primary sedimentation and chlorination) for the wastewater generated by 2.4 million people and, with modifications, as many as 4 million people. The plant's service area in 1940 included Detroit and 11 nearby suburban communities. Secondary treatment (biological treatment and secondary clarification for removal of biodegradable solids, resulting in an even cleaner effluent) was introduced in the 1960s. GLWA's WRRF continues to be the recipient of continual upgrades in order to ensure it is capable of staying abreast of ever more stringent regulatory standards.

Currently, the WRRF services the needs of 35 percent of the state's population contained within Detroit and 76 other communities in a service area of more than 946 square miles. In 1999, the Michigan section of the American Society of Civil Engineers named the WRRF one of the top 10 engineering projects of the 20th century.

The WRRF treats, on average, 650 MGD. Currently, the peak rated capacity is 1,700 MGD for primary treatment and 930 MGD for secondary treatment. The WRRF has been in service since 1940, at which time it removed approximately 50-70 percent of the pollutant loads. It was upgraded to full secondary treatment in the 1970s. After the upgrade to secondary treatment, the WRRF removes in excess of 85 percent of the pollutant loads to meet federal and state requirements.

Currently, the WRRF serves approximately 3 million residents in southeast Michigan. The WRRF receives wastewater flow from three main interceptors: the Detroit River Interceptor (DRI), the Oakwood Interceptor (OWI), and the North Interceptor East Arm (NIEA). Approximately 36 percent of the flow comes from the DRI, 35 percent from the OWI, and the remaining 29 percent from the NIEA. After the flow reaches the WRRF via the three interceptors, it is pumped to the primary and secondary treatment processes at Pump Station No. 1 (PS-1) and Pump Station No. 2 (PS-2). Each pump station has eight pumps with a combined total pumping capacity in excess of 2 billion gallons per day (BGD).

A diagram of the WRRF layout is shown on the following page in Figure 39.

2.1.1. Primary Treatment

The primary treatment area of the WRRF consists of the following major units:

- Raw wastewater pumping to Pump Station No. 1 (PS-1) and Pump Station No. 2 (PS-2), grit and screenings removal, and chemical addition.
- 12 Rectangular Primary Clarifiers
- 6 Circular Clarifiers
- 7 Rectangular Clarifier Scum Buildings
- 6 Circular Clarifier Scum Buildings
- Rectangular Clarifier Pipe Gallery (including 12 Sludge Pumps)
- 6 Rectangular Clarifier Electrical/Mechanical Buildings
- 3 Circular Clarifier Sludge Pumping Stations
- 1 Scum Concentrator Building
- 1 Thin Sludge Pumping Station
- Miscellaneous Hydraulic Structures and Gates

Document received by the MI Wayne 3rd Circuit Court.

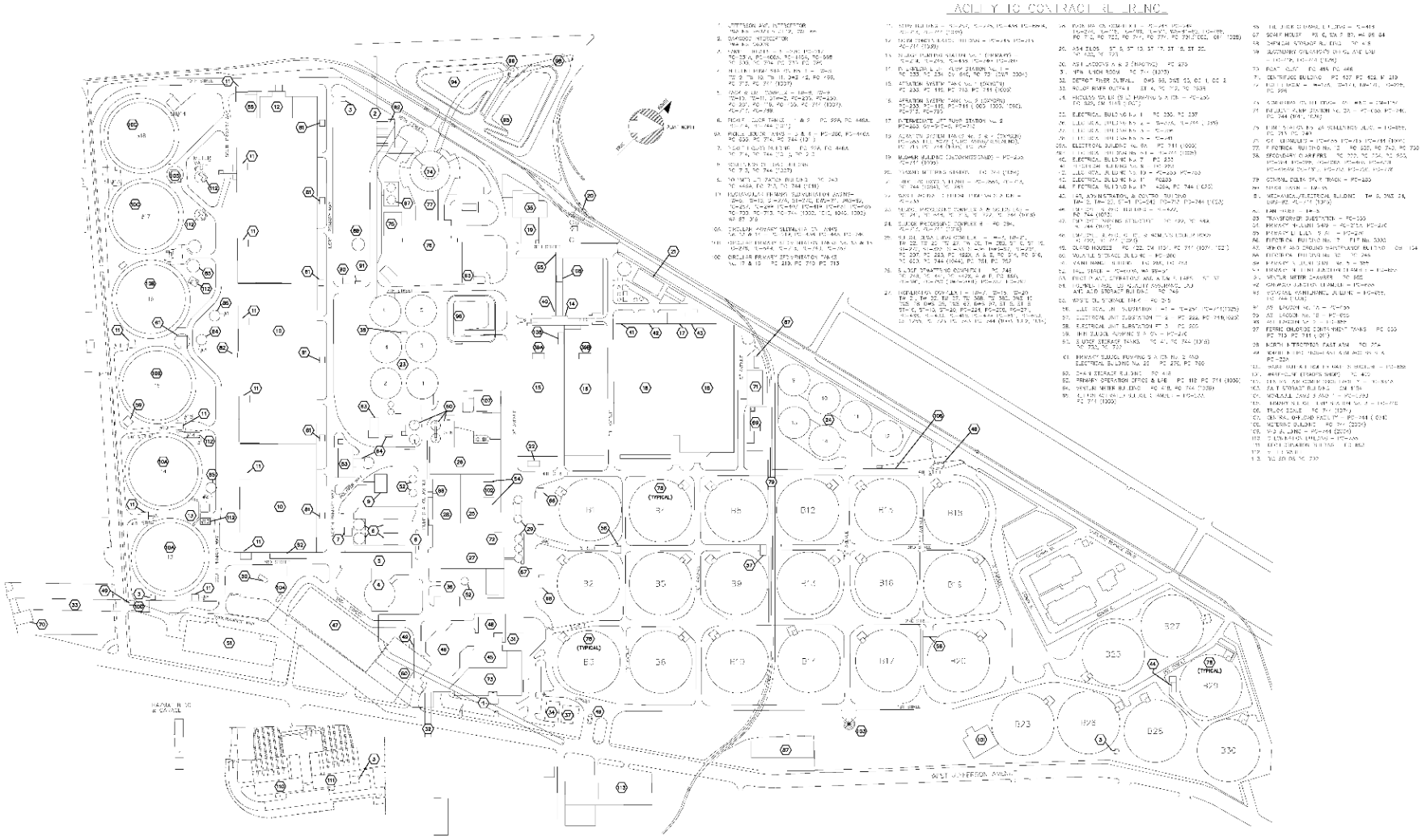


Figure 39. Water Resource Recovery Facility Layout

Document received by the MI Wayne 3rd Circuit Court.

Wastewater from PS-1 and PS-2 flows by gravity to the rectangular and circular primary clarifiers. Under normal dry weather flow conditions, the rectangular clarifiers typically receive flow from PS-1, while the circular clarifiers typically receive flow from PS-2, and all the primary effluent receives secondary treatment. Under wet weather conditions, a portion of the flow from PS-1 may need to be directed to the circular clarifiers to meet the permit primary flow requirement of 1,700 MGD. The permit requires that flow up to 930 MGD be directed to secondary treatment and that flow above 930 MGD receive chlorination and be discharged through the Detroit River Outfall.

2.1.2. Secondary Treatment & Disinfection

The secondary treatment area of the WRRF consists of the following major units (continued after next page):

- ILP Station No. 1 with ILP Nos. 1 and 2
- ILP Station No. 2 with ILP Nos. 3, 4, and 7
- Four Covered Oxygen Tanks (Aeration Deck Nos. 1, 2, 3 and 4)
- One Oxygen Gas Delivery Pipeline
- One Cryogenic Oxygen Production Plant
- Twenty-five Circular Final Clarifiers
- Chlorination/Dechlorination/Outfalls
- Intermediate pumping (ILP Station Nos. 1 and 2).
- Secondary treatment using high purity oxygen activated sludge tanks and 25 secondary clarifiers.
- Disinfection of the final effluent using chlorination and dechlorination.

The Intermediate Lift Pumps (ILPs) lift primary effluent from the Primary Effluent to Activated Sludge (PEAS) Tunnel to the aeration decks. Primary effluent is mixed with return activated sludge at the head of each aeration basin. Aeration Basins Nos. 1 through 4 employ a high purity oxygen activated sludge process.

All required oxygen for the aeration system is supplied by Praxair through a dedicated pipeline. The Praxair pipeline ends at a metering station located where the old T-180 Cryogenic Plant was located (this plant was demolished as part of DWP-1013). From the metering station, an oxygen piping system ties into each aeration deck and the liquid oxygen backup system.

Four covered aeration decks use high purity oxygen for biological treatment. Aeration Deck Nos. 1 and 2 each have 10 bays, while Aeration Deck Nos. 3 and 4 have eight bays each. The volume of each aeration deck is approximately 17.8 million gallons. Oxygen is fed to the headspace at the first bay of each deck. High efficiency aerators dissolve oxygen into the wastewater and keep the mixed liquor in suspension. Primary effluent and return activated sludge (RAS) enter at the first bay of each aeration deck. All decks are equipped with mixers, a purge blower, oxygen feed and vent valves, an oxygen flow meter, and Lower Explosive Limit (LEL) and dissolved oxygen monitoring equipment.

Each aeration deck has a rated capacity of 310 MGD (+50 MGD RAS). The plant typically maintains three decks in service at all times to be able to meet the required wet weather flow of 930 MGD through secondary treatment. The fourth deck is always offline and acts as a backup. Aeration Deck No. 1 was converted to a pure oxygen system, and Aeration Deck Nos. 2, 3, and 4 were rehabilitated in 2004 through 2006 under DWP-1005 “Aeration Deck Conversion and Rehabilitation.”

The mixed liquor flows by gravity from the aeration decks and is distributed to the secondary clarifiers for solids/water separation. Variable speed vertical wet pit pumps return the activated sludge from the clarifiers to the aeration decks. Sludge is wasted on a continuous basis from the return activated sludge to Complex B gravity thickeners.

The secondary effluent is chlorinated and dechlorinated before discharge to the river through the Detroit River Outfall (DRO).

As indicated above, the secondary treatment capacity is 930 MGD during wet weather. The 930 MGD capacity is based on the following assumptions:

- 3 out of 5 ILPs each at 310 MGD
- 3 out of 4 aeration decks each at 310 MGD
- 23 of 25 clarifiers each at 40.4 MGD

The conversion of Aeration Basin No. 1 to high purity oxygen in 2004 increased its capacity from 150 MGD to a maximum of 310 MGD, providing the plant with any one basin as backup capacity. Additionally,

Document received by the MI Wayne 3rd Circuit Court.

the replacement of ILP Nos. 1 and 2 and modification to their flow metering installation under DWP-2004, increased their maximum pumping capacity from 260 MGD to 365 MGD during the year 2004. These improvements have, therefore, provided GLWA adequate redundancy to allow the maintenance staff to schedule shutdowns of aeration basins or ILPs to conduct preventive maintenance throughout the year regardless of weather conditions.

2.1.3 Residuals Management

Solids generated in primary and secondary treatment are gravity-thickened in separate facilities for primary sludge and thickened waste activated sludge for drying and disposal. A portion of the thickened sludge is pumped to the new Biosolids Drying Facility (BDF). The thickened solids are dewatered using both high solids centrifuges and belt filter presses (BFPs). Portions of the dewatered solids are incinerated. The remainder of the dewatered solids are offloaded after lime addition to trucks for either land application or landfill disposal.

2.1.4. Industrial Waste Control

The Authority's Industrial Waste Control (IWC) Division, located at 303 S. Livernois, is responsible for implementing and enforcing city and federal regulations pertaining to the pretreatment of industrial wastewater.

Industrial Waste Control charges are assessed to all commercial and industrial end users that send wastewater to the GLWA wastewater treatment plant. The IWC charges are to offset the costs incurred in administering regulatory activities under the Sewer Use Ordinance/Industrial Waste Control Ordinance as required in the National Pollutant Discharge Elimination System (NPDES) Permit Program and the Clean Water Act (CWA). There is a delegation Agreement with each community to collect the industrial waste control charges from the end-users even though most communities are contracting agency member partner s to the wholesale sewer contract member partner.

In addition to the IWC Charges, a commercial or industrial end user may also have to pay pollutant surcharges if they discharge high-strength wastewater into the System that has compatible pollutant levels higher than is allowed for domestic sources. The IWC Group evaluates users and does testing to identify those users that have excess pollutants. The charges are used to offset the higher chemical and treatment costs for these excess pollutants in the wastewater.

2.1.5. CSO RTB & SDF

The Authority provides treatment at Combined Sewer Overflow (CSO) Retention Treatment Basins (RTB) and Screening and Disinfection Facilities (SDF) on many of its largest outfalls to provide for removal of floatable material and disinfection of wastewater prior to discharge. The CSO basins are also designed with storage capacity to contain a volume of wastewater from each storm event, including the first flush of the storm. When the storm event subsides, the captured flows are pumped back through the system for treatment at the WRRF.

GLWA operates eight of the 18 CSO control facilities tributary to GLWA's Regional Sewer System in Wayne, Oakland and Macomb Counties as prescribed in a lease agreement. The facilities are an outgrowth of the Long-Term CSO Control Plan, started in 1993 to address CSO discharges from 78 outfalls along the Detroit and Rouge Rivers. Of the eight facilities, five are CSO RTBs and three are SDFs. The location of CSO RTBs and SDFs assets can be found on Figure 51 on page 53. The Belle Isle CSO RTB is operated as prescribed in a shared services agreement.

Combined Sewer Overflow Retention Treatment Basins

CSO control is needed because the Sewer System can become overloaded during heavy rain events. In older, large metropolitan areas like Detroit, combined sewers are used to transport both wastewater and storm water in the same pipe. During rainstorms, these sewers can receive many times the volume of flow that is normally transported on a dry day. CSO control facilities adequately treat these excess flows during wet weather in accordance with the GLWA EGLE NPDES permit. Conversely, newer communities have two separate sewer systems: one to handle wastewater flow and the other for storm flow.

A CSO retention treatment basin (RTB) is a storage tank that captures flow equal to its volume during a wet-weather event. Flow to an RTB in excess of its volume is screened and disinfected prior to discharge out of an RTB outfall. Flows are injected with Sodium Hypochlorite disinfectant to kill bacteria before discharging to receiving waters (Detroit and Rouge Rivers). Materials removed by the screens are sent to the WRRF

Document received by the MI Wayne 3rd Circuit Court.

or hauled to a landfill for proper disposal. The stored flows are sent to the WRRF after the storm has subsided and capacity is available in the sewer system. During smaller wet weather events, the flows are small enough to be completely captured and stored in the RTB.

Some RTBs have a first-flush compartment used to store flow with the highest level of pollutants from the first part of the storm. These pollutants include organic material, oil, sediment, salt and lawn chemicals that are picked up by the storm water as it runs off roads and lawns. Flows from this compartment are always stored and sent to the WRRF when the RTB is emptied.

GLWA adopted a four-part strategy to address CSO:

- Source reduction – reduce the amount of storm flow that enters the wastewater system.
- In-system storage – maximize the use of existing storage space in the sewer system during storms.
- Wastewater treatment plant expansion – expand capacity of primary treatment from 1.5 to 1.7 billion gallons per day to treat more flow during storms.
- End-of-pipe treatment – construct facilities to store and treat the combined sewage, preventing it from entering area waterways unless treated and disinfected.

In spite of this progress to eliminate untreated combined sewer overflows, GLWA is preparing for the next phase in combined sewer overflow treatment. This next phase will endeavor to reduce, minimize, and/or eliminate untreated CSO overflows over the next long term CSO period. Strategies for the long-term plan will focus on and further develop elements identified during the 2019 GLWA Wastewater Master Plan project.

A summary of the overall flow and treatment capacity of the GLWA CSO RTB Facilities is shown in Table 3 on the following pages.

Document received by the MI Wayne 3rd Circuit Court.

Table 3. Flow and Treatment Capacity of GLWA CSO RTBs[b]

	HUBBELL-SOUTHFIELD	SEVEN MILE	PURITAN-FENKELL	CONNER CREEK	OAKWOOD
Year of Startup	1999	1999	1999	2005	2012
Drainage Area (Acres)[a]	14,328	508	635	21,840	1,500
Retention Volume (MG)	22	2.2	2.8	30	9.0
In-System Storage (MG)[b]	4.4	7	7	32	0
Peak Flow Rates (cfs)[c]	3,200	656	845	13,962	1,660
Compartments	2	2	2	4	2
Sanitary Pump Station	No	No	Yes	No	Yes
Influent	Gravity	Gravity	Gravity	Gravity	Pumped
Effluent	Gravity				
Dewatering	Gravity / Pumped	Pumped	Gravity / Pumped	Gravity / Pumped	Gravity / Pumped
Screening	1.5-inch Catenary-Type Bar Screens	0.5-inch Open Space Centenary-Type Bar Screens		1.5-inch Centenary Type Bar Screens	Perforated Plate Screens (6-8 mm)
Odor Control	Horizontal Wet Scrubber with Sodium Hypochlorite	Vertical Wet Scrubber with Sodium Hypochlorite		Carbon Absorption	
Flushing	Flushing Nozzles	Tipping Buckets		Flushing Gates	
Ventilation	Forced-Air				
Disinfection	Sodium Hypochlorite				

[a] Combined wet weather flow sources drained from tributary districts (acreage) is preferentially transported to the WRRF until Primary capacity is exceeded per established Operational Protocols; residual flows are transported to CSO Facilities.
[b] Tributary upstream wet weather flow volume also captured and drained to basin during events and subsequently dewatered.
[c] Peak flow rates are dependent on discharge river elevation.

Document received by the MI Wayne 3rd Circuit Court.

Conner Creek CSO RTB



Figure 40. Conner Creek CSO RTB
Detroit's largest CSO control facility, the Conner Creek CSO RTB eliminated three outfalls and has dramatically improved water quality in Conner Creek and the Detroit River since going into operation in November 2005. This RTB provides 62 million gallons of total storage, with 30 million gallons in the retention treatment basin and 32 million gallons in upstream structures. High-speed mixers are used to rapidly disinfect flows and achieve the required fecal coliform limits. This facility was sized to provide five minutes of detention for settling and disinfection for the peak flow from the 10-year, one-hour storm.

Hubbell-Southfield CSO RTB



Figure 41. Hubbell-Southfield CSO RTB
The Hubbell-Southfield CSO RTB is one of GLWA's most active, longest operating CSO facilities and the largest on the Rouge River. Since August 1999, it has been effectively capturing and treating combined sewage through screening, settling and disinfection to meet discharge permit requirements that protect public health. Sized to fit into the available land and site constraints, the basin has a 22-million-gallon storage capacity. Located next to the Tournament Players Championship Golf Course (TPC) in Dearborn, this RTB serves as an example of how these facilities can be good neighbors and blend in with the surrounding environment. The facility features an innovative design component that enables three different operational modes within the RTB and prevents resuspension of solids during large storms with high flow rates.

Document received by the MI Wayne 3rd Circuit Court.

Oakwood CSO RTB



Figure 42. Oakwood CSO RTB
The Oakwood CSO RTB was placed in service in 2012. Located on the lower portion of the Rouge River immediately south of I-75, the 9-million-gallon RTB is designed to provide CSO treatment through storage plus fine screening and disinfection. This facility includes a major influent pumping station with capacity to pump 1,800 cubic feet per second (cfs) combined sanitary and storm flow. This pumping station increases the level of service for the Oakwood District and helps to alleviate basement flooding in the upstream area.

Puritan-Fenkell CSO RTB



Figure 43. Puritan-Fenkell CSO RTB
Located in Eliza Howell Park, the Puritan-Fenkell CSO RTB is the third Rouge River CSO RTB. This facility successfully demonstrated that a facility sized to provide 20 minutes of detention time for settling and disinfection of the one-year, one-hour storm event peak flow is sufficient to meet protection of public health standards. The 2.8-million-gallon facility became operational in August 1999, and eliminated two untreated CSO outfalls.

Document received by the MI Wayne 3rd Circuit Court.

Seven Mile CSO RTB



Figure 44 Seven Mile CSO RTB

The Seven Mile CSO RTB was constructed at the same time as the Hubbell-Southfield and Puritan-Fenkell CSO RTBs with funding from the Rouge River National Wet Weather Demonstration Program. Located on the northeast corner of West Seven Mile Road and Shiawassee Drive, the roof of the basin also serves as the parking lot for the Greater Grace Temple. The RTB is sized to provide 30 minutes of detention time for settling and disinfection of the one-year, one-hour storm event peak flow. It has a 2.2-million-gallon storage capacity. Two untreated CSO outfalls were eliminated when it went into operation in 1999.

Combined Sewer Overflow Screening and Disinfection Facilities

A CSO Screening and Disinfection Facility (SDF) treats combined sewage. These are called flow-through facilities, and use fine screens to remove solids and sanitary trash from the combined sewage. Flows are injected with Sodium Hypochlorite disinfectant to kill bacteria before discharging to receiving waters (Detroit and Rouge Rivers). Materials removed by the screens are sent to the WRRF or hauled to a landfill for proper disposal. A summary of the overall flow and treatment capacity of the GLWA CSO SDFs is shown in Table 4 below.

Table 4. Flow and Treatment Capacity CSO Screening and Disinfection Facilities

COMPONENT CRITERIA	BABY CREEK	LEIB	ST. AUBIN
In Service Date	2007	2002	2002
Peak Hydraulic Capacity [a]	5,100 cfs	2,000 cfs	310 cfs
Toward Treatment Capacity	140 cfs	150 cfs	Not Applicable
Screening Capacity	5,100 cfs	1,550 cfs	250 cfs
Disinfection Capacity (10 minute contact)	5,100 cfs	1,550 cfs	250 cfs
Dewatering Capacity		Static Volume in 24 hours	Static Volume in 24 hours
Influent	Gravity / Pumped	Gravity	Gravity
Effluent	Gravity	Gravity	Gravity

[a] Peak hydraulic capacity is dependent on river elevations.

Document received by the MI Wayne 3rd Circuit Court.

Baby Creek Screening and Disinfection Facility



Figure 45. Baby Creek SDF

The Baby Creek facility is a screening and disinfection facility that uses fine screens and high-rate disinfection to treat combined sewage flows that pass through it. It is located at Miller and Industrial Drive in southwest Detroit at the city limit shared with Dearborn. High-energy mixers are being used to mix sodium hypochlorite to maximize bacterial kill and minimize discharge of residual chlorine to the Rouge River. The facility is rated for 5,100 cfs treatment capacity, although treatment flow rates vary based on the river elevation. The site area includes the Woodmere Pumping Station that services a 450-acre portion of the Baby Creek tributary area.

Leib Screening and Disinfection Facility



Figure 46. Leib SDF

The Leib facility was constructed to address a large outfall on the Detroit River and to demonstrate the effectiveness of fine screening (horizontal and vertical) in combination with 10 minutes of disinfection time for the design flow to meet protection of public health standards. High-energy mixers are being used to mix sodium hypochlorite to maximize bacterial kill and minimize discharge of residual chlorine to the Detroit River. The facility can treat a flow rate of up to 1,550 cfs. It began operation in 2002, and successfully achieved the required treatment levels during the demonstration period.

Document received by the MI Wayne 3rd Circuit Court.

St. Aubin Screening and Disinfection Facility



Figure 47. St. Aubin SDF

The St. Aubin facility was built at the same time as the Leib facility and uses the same technology. High-energy mixers are being used to mix sodium hypochlorite to maximize bacterial kill and minimize discharge of residual chlorine to the Detroit River. While St. Aubin is much smaller, with about one fifth of the treatment capacity of Leib, it is important in addressing water quality along Chene Park (which frequently hosts concerts and other events). This facility has operated successfully since 2002.

2.1.6. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

2.2. FIELD SERVICES

2.2.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

2.2.2. Interceptor

The Regional Wastewater Collection System (RWCS) is responsible for the conveyance of wastewater and stormwater flows to the GLWA WRRF. The collection system is the oldest part of the wastewater treatment and transportation system. Some sewers are over 130 years old and are still in service today.

The RWCS is comprised of approximately 195 miles of sewer mains. Approximately 184 miles of the mains are considered “Common Use” interceptors or trunk sewers, with the remaining 11 miles of mains being considered “Member Partner Connection” (i.e., a dedicated line connecting a suburban member partner to the GLWA WRRF with no other member partner taps to it). In addition, there are approximately 0.1 miles of force main operated and maintained by GLWA. See Figure 51, the map of the RWCS, and the list of all of GLWA-leased sewer main assets below. Information has been gathered in this table from best available sources, including various reference documents, as well as GIS information.

Figure 48, Figure 49, and Figure 50 depict the collection system inventory by material, diameter, and decade installed/age, respectively. The collection system ranges from 12 to 348 inch in diameter with an average age of 78 years.

Most of RWCS is Concrete Pipe (72%) and Brick Pipe (23%). The majority of RWCS are typically 60 inches and larger, of which 161-169

Document received by the MI Wayne 3rd Circuit Court.

inch (12%), 120-129 (12%), and 102-108 inch (9%) are the most common conduit diameters / heights. Detroit and the region went through several growth periods of time evidenced by the greatest periods of water main installation of the 1920s (37%), 1960s (12%) and 1930s (9%).

In recent history, a condition inspection of the Detroit River Interceptor and Outfalls was performed in 2012. A prioritized condition assessment and renewal program has been underway since 2016 on the collection system gravity mains. This effort was initiated to address the aging collection system infrastructure in a proactive and methodic fashion. Over the past two years all 184 miles of sanitary sewer interceptor has been inspected as part of this program. Follow-up repairs and inspections are being planned and are in various stages of completion.

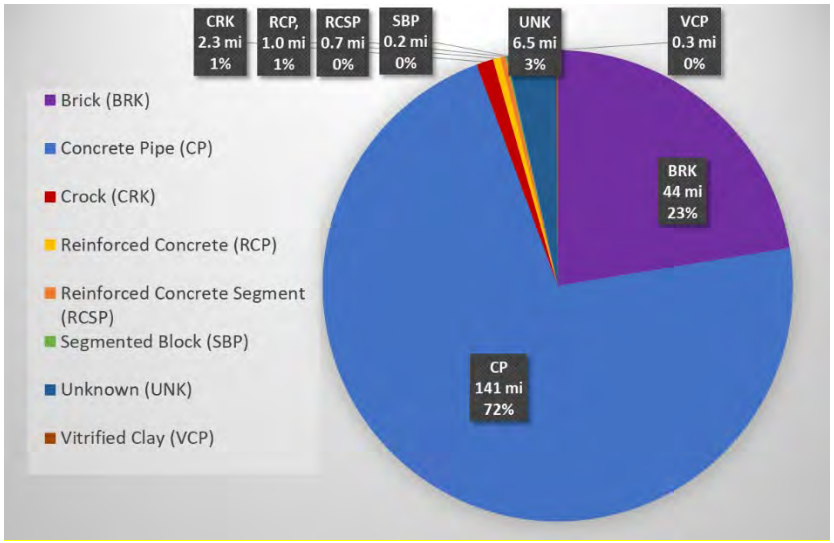


Figure 48. Collection system inventory by material

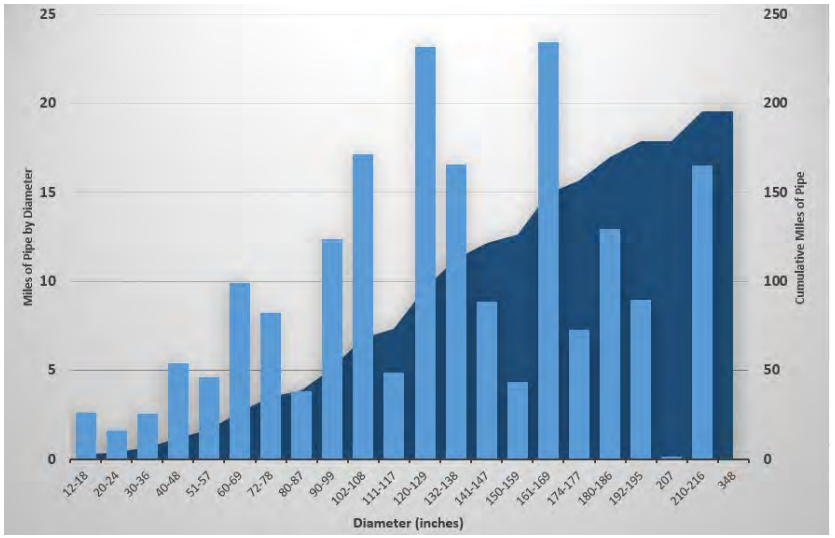


Figure 49. Collection system inventory by diameter/height

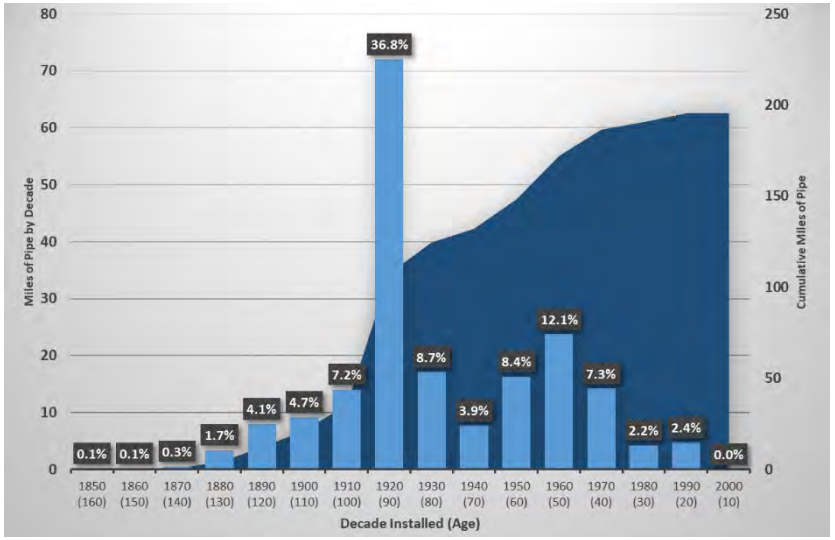


Figure 50. Collection system inventory by decade installed/age

Document received by the MI Wayne 3rd Circuit Court.

Figure 51 depicts only those interceptors and trunk sewers operated/maintained (leased) by GLWA. The suburban communities own, operate, and maintain all of their collection system up to the points of connection to the RWCS.

There are three primary interceptors that make up the RWCS and ultimately serve all the combined drainage districts. Those interceptors are the Detroit River Interceptor (DRI), Oakwood-Northwest Interceptor (O-NWI), and North Interceptor East Arm (NI-EA). These interceptors are shown in red/green. These primary interceptors total approximately 44 miles in length with the remaining 151 miles being trunk sewers that primarily service the City of Detroit's 9 drainage districts.

Document received by the MI Wayne 3rd Circuit Court.

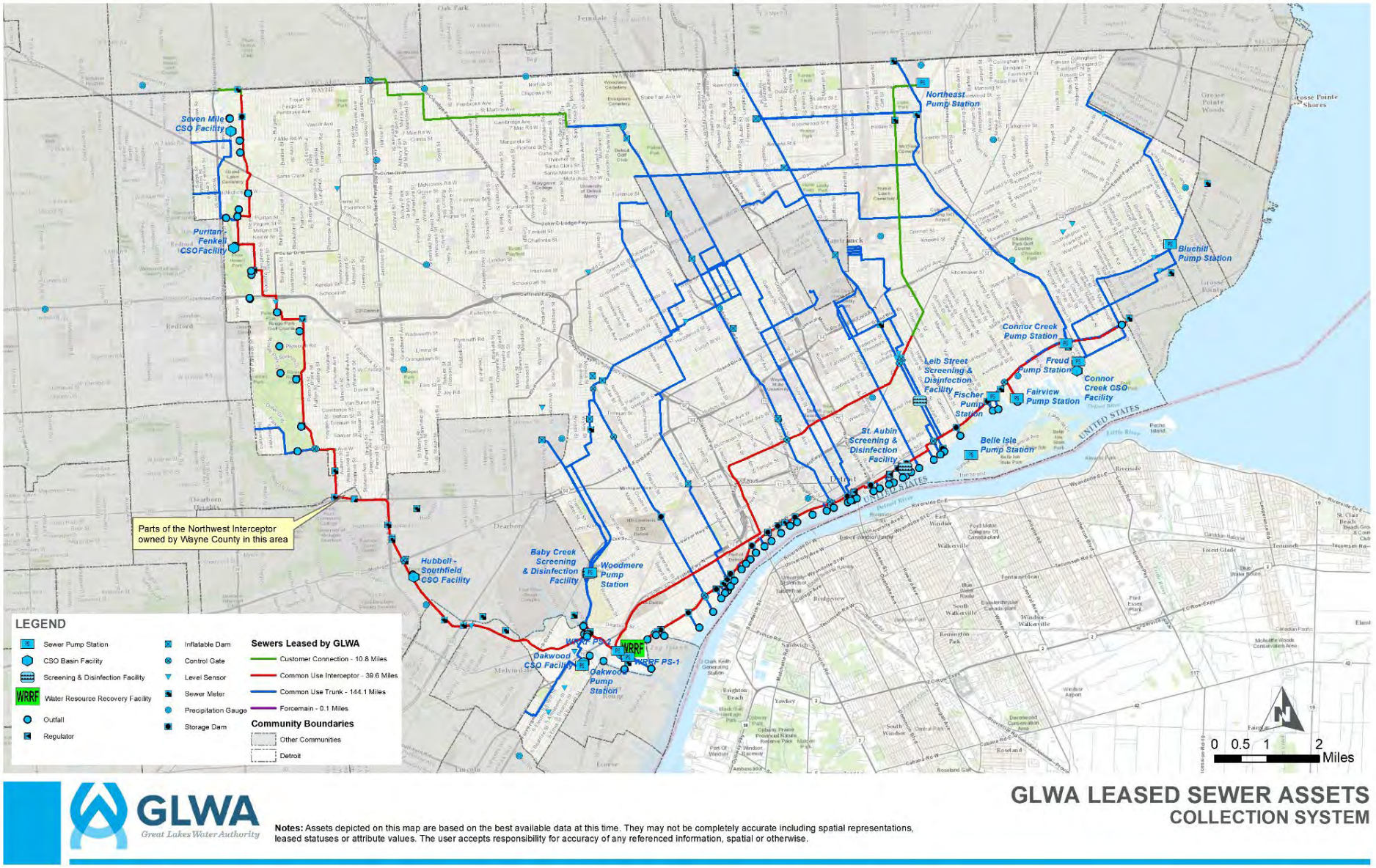


Figure 51. Sewer interceptors and trunk sewers operated/maintained by GLWA

Document received by the MI Wayne 3rd Circuit Court.

Table 5. Sewer interceptors and trunk sewers operated/maintained by GLWA

SEWER NAME	TYPE	LENGTH (MILES)	SIZE	MATERIAL	DRAINS TO INTERCEPTOR	YEARS CONSTRUCTED (YEAR - YEAR)		AGE RANGE (YEARS - YEARS)		AVERAGE AGE	INSPECTION MONTH / YEAR
6 Mile Sewer	Trunk	5.0	9'-10.5'	Concrete / Brick	DRI	1921	1927	98	92	95	9/2017 to 1/2018
6 Mile Sewer East	Trunk	0.4	10.5'	Concrete	DRI	1921	-	98	-	98	9/17
6 Mile Sewer West	Trunk	0.5	6.25'-7.25'	Concrete	O-NWI	1930	-	89	-	89	12/2017
7 Mile Sewer	Trunk	4.2	5.5'-11.5'	Concrete	DRI & NIEA	1921	1924	98	95	97	8/2017 to 11/2017
7 Mile Sewer West	Trunk	0.8	9.25'	Brick	O-NWI	1931	-	88	-	88	10/2017
7 Mile Sewer West Relief	Trunk	0.7	10'	Concrete	DRI & NIEA	1965	1967	54	52	53	8/2017 to 10/2017
7 Mile Sewer East Relief	Trunk	3.2	9'-13.75'	Concrete	DRI	1960	1962	59	57	58	10/2017
8 Mile-Centerline Sewer / Connors Ave. Arm	Trunk	0.7	1.5'-8.5'	Concrete / Brick / Unknown	DRI	1928	1930	58	-	58	4/2018 to 8/2018
Ashland Relief Sewer	Trunk	1.7	11.5'-16'	Concrete	DRI	1961	-	81	-	81	11/2016 to 12/2016
Baby Creek (Dry Weather Line)	Trunk	4.3	3'	Concrete	O-NWI	1938	-	57	-	57	12/2017 to 1/2018
Baby Creek (Wet Weather Line)	Trunk/CSO Storage	4.3	14.5'x17.5'	Concrete	N/A - Rouge River, Miller Rd Gate Outfall	1962	-	97	-	97	12/2017 to 1/2018
Bates St. Sewer	Trunk	5.4	1' - 13.5' 3'x4.5' (Box)	Concrete / Brick / Clay / Unknown	DRI	1922	-	90	-	90	9/2017 to 10/2017
Berg Sewer	Customer Connection	0.1	1.75'	Concrete / Brick	O-NWI	1929	-	107	96	102	9/2017 to 10/2017
Clark Sewer, Morell St. Sewer, Extension to Morrell, Tuxedo Ave. Sewer	Trunk	8.2	5'-14'	Concrete / Brick / Unknown	DRI	1912	1923	65	62	64	8/2017 to 10/2017
Conant-Mt. Elliot Relief Sewer	Trunk	8.2	10.5'-16.25'	Concrete	DRI & NIEA	1954	1957	97	91	94	9/2017 to 10/2017
Connors Creek Enclosure	Trunk	11.5	12'x17.5' (Box) 12.9'x17.5' (Box)	Concrete / Brick	DRI	1922	1928	49	-	49	9/2016 to 12/2017
Dequindre Interceptor	Trunk	0.9	9'	Concrete	DRI & NIEA	1970	-	98	92	95	-
Detroit River Outfalls	Outfalls	10.7	1'-15.5' (Varying Shapes)	Concrete / Brick / Clay / Unknown	Detroit River	1885	1967	134	52	93	10/2016
Detroit River Interceptor (DRI)	Interceptor	12.7	6'-16'	Concrete / Brick	WRRF	1913	1939	106	80	93	07/2012 to 10/2016
East Jefferson Relief Sewer	Trunk	1.1	14'	Concrete	DRI	1927	-	92	-	92	12/2016
Elmer-Ternes Sewer (West End Relief)	Trunk	2.6	14.5' 14.5x14.5' (Box)	Concrete	O-NWI	1962	1965	57	54	56	8/2017 to 10/2017
Evergreen-Farmington Connection	Customer Connection	4.8	8'	Concrete	DRI & NIEA	1991	-	28	-	28	-

Document received by the MI Wayne 3rd Circuit Court.

SEWER NAME	TYPE	LENGTH (MILES)	SIZE	MATERIAL	DRAINS TO INTERCEPTOR	YEARS CONSTRUCTED (YEAR - YEAR)		AGE RANGE (YEARS - YEARS)		AVERAGE AGE	INSPECTION MONTH / YEAR
First-Hamilton Relief Sewer	Trunk	8.8	7'-15.5' 2.7'x4' - 10'x10.5' (Box)	Concrete	DRI & NIEA	1956	1970	63	49	56	8/2017 to 10/2017
Fisher Ave. Storm Sewer	Trunk	0.5	10.5'x13.75'	Concrete	DRI / Detroit River	1928	1965	91	54	73	-
Fort Street Sewer	Trunk	2.7	2'-10'	Concrete / Crock / Brick / Segmented Block	O-NWI	1924	1939	95	80	88	9/2017 to 3/2018
Fox Creek Relief Sewer, Cadieux Road Sewer	Trunk	4.0	9.25'-16'	Concrete	DRI	1923	1953	96	66	81	11/2016 to 12/2016
Jos. Campau Sewer	Trunk	5.0	3.5'-11.5'	Concrete / Brick	DRI	1921	1957	98	62	80	9/2017 to 11/2017
Joy Road Sewer, Highland Park Sewer - Edison Ave. Arm, Highland Park Arm	Trunk	4.1	8.25'-14'	Concrete / Brick	DRI & NIEA & O-NWI	1922	1975	97	44	71	9/2017 to 11/2017
Linwood Ave. Sewer, Lateral Sewer - Puritan & Linwood - Puritan Ave. Arm	Trunk	3.1	1.25'-9.5' 3'x4.5' (Box) 3.3'x5' (Box)	Concrete / Brick / Clay	DRI	1919	1921	100	98	99	9/2017 to 2/2018
Livernois Relief Sewer	Trunk	5.0	3'-10.5' 10'x10' (Box)	Concrete	DRI & NIEA	1949	1972	70	47	59	9/2017 to 10/2017
Lonyo Sewer	Trunk	3.4	13.6' 14.5'x14' (Box)	Concrete / Brick	O-NWI	1922	-	97	-	97	9/2017
Lynch Road Sewer, Davison Ave. Sewer, Chrysler Freeway Davison Sewer Alterations, Connor Creek Connection	Trunk	4.9	5.5'-11.5'	Concrete / Brick	DRI	1920	1975	99	44	72	7/2017
Mack Avenue Relief Sewer	Trunk	2.2	9.25'-14'	Concrete	DRI	1967	-	52	-	52	11/2016
Mt. Elliot Ave. Sewer, Miller Road Sewer, Carrie Ave. Relief, and Laterals	Trunk	6.4	1.25'-9'	Crock / Brick	DRI	1913	1930	106	89	98	7/2017 to 3/2018
North Interceptor East Arm (NIEA) - Upper Portion, Northeast SPS to Gratiot	Interceptor	6.4	12'-17.5'	Concrete	WRRF & DRI	1971	1974	48	45	47	7/2015 to 8/2015

Document received by the MI Wayne 3rd Circuit Court.

The RWCS serves 77 suburban communities that cover an area of 1,100 square miles. A large majority of the suburban communities are served by separated storm/sewer systems. The RWCS is comprised of 27 sewer districts representing drainage districts within the City of Detroit, drainage districts from adjoining counties/municipal districts, and various districts serving individual suburban communities. The sewer service areas served by the RWCS are as shown in Figure 52.

Nine sewer districts: Rouge River, Hubbell, Southfield, Baby Creek, Conner Creek, Oakwood, Central City, Fox Creek, and East Jefferson.

City of Detroit Sewer Districts

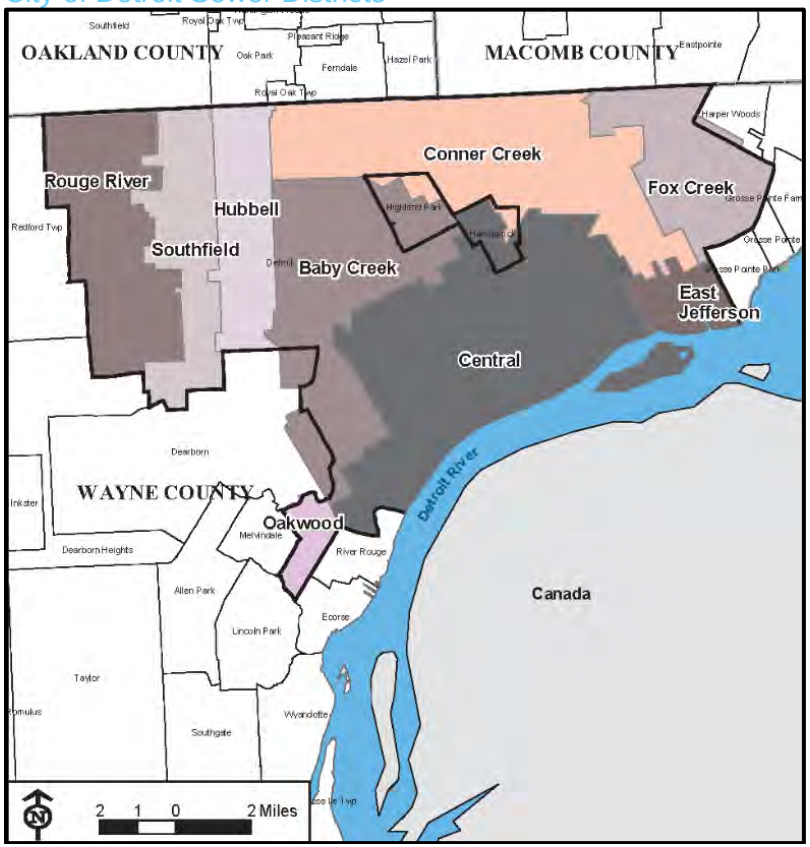


Figure 52. Sewer districts within Detroit

GLWA Regional Sewer Districts

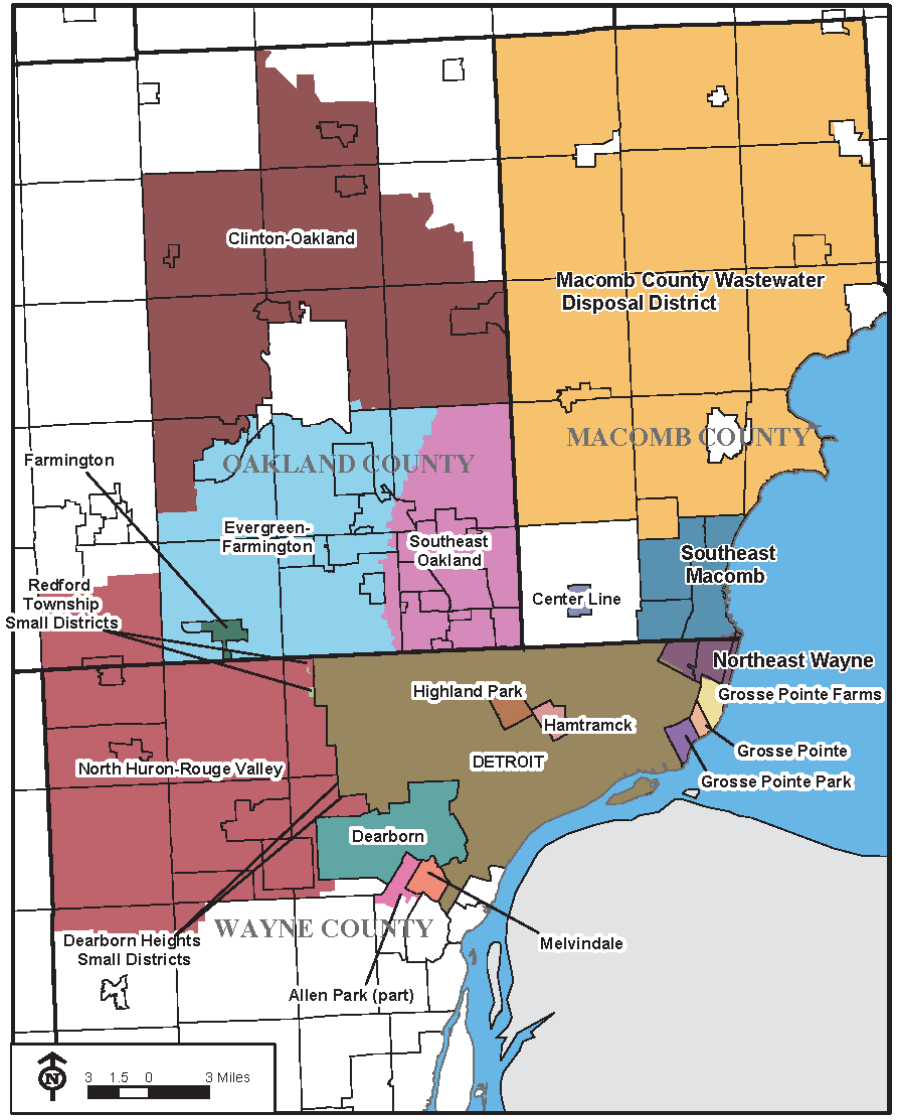


Figure 53. Sewer districts served by GLWA

Document received by the MI Wayne 3rd Circuit Court.

Total GLWA Sewer Districts

Communities served by the varying sewer districts are provided below.

Table 6. GLWA Service Districts & Communities Served

COUNTY/ CITY	DISTRICT	COMMUNITIES
Detroit	Rouge River	City of Detroit
Detroit	Hubbell	City of Detroit
Detroit	Southfield	City of Detroit
Detroit	Baby Creek	City of Detroit, Highland Park
Detroit	Conner Creek	City of Detroit, Highland Park, Hamtramck
Detroit	Oakwood	City of Detroit
Detroit	Central City	City of Detroit
Detroit	Fox Creek	City of Detroit
Detroit	East Jefferson	City of Detroit
Macomb	Southeast Macomb Sanitary Sewer District (SEMSD)	St. Clair Shores, East Pointe, Roseville (Through NESDS)
Macomb	Macomb County Wastewater District (part of Oakland Macomb Interceptor Drainage District)	Fraser, Sterling Heights, Clinton Twp, Harrison Twp, Shelby Twp, Utica, Macomb Twp, Waldenburg, Chesterfield, New Haven, Lenox, Ray, Washington Twp
Macomb	Centerline	City of Centerline
Oakland	Evergreen-Farmington District	Farmington Hills, Orchard Lake Village, Keego Harbor, Bloomfield Hills, Bloomfield Twp, Birmingham, Franklin, Beverly Hills, Lathrup Village, Southfield, Troy
Oakland	Southeast Oakland County District (George W. Kuhn Drainage District)	Troy, Oak park, Madison Heights, Clawson, Hazel Park, Royal Oak, Pleasant Ridge, Huntington Woods, Berkley, Royal Oak Twp, Ferndale
Oakland	Clinton Oakland District (part of Oakland Macomb Interceptor Drainage District)	West Bloomfield Twp, Waterford Twp, Lake Angelis, Auburn Hills, Rochester Hills, Rochester, Oakland Twp, Orion Twp, Village of Clarkston, Independence Twp, Orion Twp, Lake Orion, Oxford Twp, City of Oxford
Oakland	City of Farmington	City of Farmington
Wayne	Rouge Valley Sewage Disposal System (RVSDS)	City of Inkster, City of Wayne, Canton Twp, Van Buren Twp, City of Westland, Garden City, Dearborn heights, Redford Twp, City of Livonia, City of Plymouth, City of Northville, City of Novi, Novi Twp, Romulus
Wayne	Northeast Sewage Disposal System (NESDS)	Harper Woods, Grosse Pointe Shores, Grosse Pointe Woods
Wayne	Grosse Pointe Farms	Grosse Pointe Farms
Wayne	Grosse pointe Park	Grosse pointe Park
Wayne	Grosse Pointe	Grosse Pointe
Wayne	City of Dearborn	City of Dearborn
Wayne	Melvindale	Melvindale
Wayne	Allen Park	Allen Park
Wayne	Redford Township	Redford Township
Wayne	Dearborn heights	Dearborn heights
Wayne	Harper Woods	Harper Woods

Document received by the MI Wayne 3rd Circuit Court.

2.3. SYSTEMS CONTROL CENTER

The Systems Control Center operates and maintains five Wastewater Pumping Stations located in the GLWA collection system that assist conveyance of wastewater and stormwater flows to the WRRF. They are Conner Sewage Pumping Station, Fairview Sewage Pumping Station, Freud Sewage Pumping Station, Northeast Sewage Pumping Station, and Oakwood Sewage Pumping Station. These facilities are described in the table below.

GLWA maintains 13 in-system storage devices throughout central Detroit and seven in-system gates throughout the west side of Detroit to maximize the storage capacity of sewers during storms. The in-system storage devices are rubber, inflatable dams located inside large trunk sewers. The in-system gates are mechanical gates located inside outfall sewers. These devices are designed to temporarily retain flows in the Sewer System during storm events up to a certain level before discharge to the river occurs. These devices operate automatically but are monitored by GLWA staff. These staff members coordinate and apply operational protocols prior to storm events to dewater the wastewater collection system and treatment facilities to maximize the available in-system storage capacity. Along with the flow control devices, the Systems Control Center team also operates and maintains many rain gauges and level sensors throughout the RWCS.

2.3.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

2.3.2. Wastewater Pumping Stations

Wastewater Pump Stations pump wastewater, and when necessary excess storm water, to the WRRF. Most of the wastewater collection system is gravity fed, but in low-lying areas, lift stations are necessary to lift wastewater to a higher elevation in order for flow by gravity to be possible. There are nine sewer lift stations in the wastewater collection system; an example is shown in Figure 54.

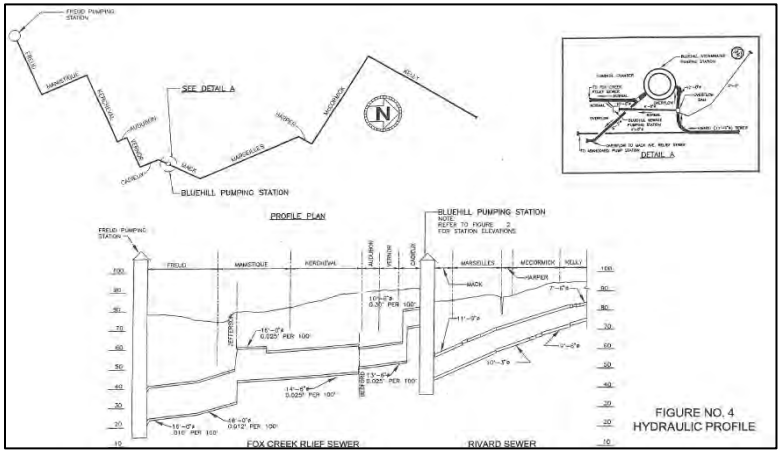


Figure 54. Hydraulic Profile at Bluehill Station

Document received by the MI Wayne 3rd Circuit Court.

Conner Creek Pump Station



Figure 55. Conner Creek Pump Station

MAX WET WELL LEVEL	74 FT
SANITARY PUMPS	SN9 - 500 HP, 96 MGD SN10 - 350 HP, 96 MGD SN11 - 500 HP, 96 MGD SN12 - 200 HP, 48 MGD
STORM PUMPS	ST1- 2300 HP, 320 MGD ST2- 2300 HP, 320 MGD ST3- 2300 HP, 320 MGD ST4- 2300 HP, 320 MGD ST5- 2250 HP, 320 MGD ST6- 2250 HP, 320 MGD ST7- 2300 HP, 320 MGD ST8- 2300 HP, 320 MGD

Sewage flows by gravity to the Conner Creek Pumping Station though the western and eastern East Jefferson Avenue relief sewers. These sewers are designed to carry both sanitary sewage and storm water to the Conner Creek Pumping Station wet wells. The Conner Creek Pumping Station is required because the elevation of the relief sewers is too low to allow the sewage to continue to flow by gravity to subsequent treatment facilities or to the Conner Creek CSO Basin. During normal dry weather flow, wastewater is discharged to the DRI. During wet weather, the wastewater is discharged to the Conner Creek CSO.

This station consists of a sanitary pump house, stormwater pump house, switch house, and backwater gates. During normal dry weather flow, wastewater is discharged by four sanitary pumps (two 71 MGD, one 48 MGD, and one 38 MGD) to the Detroit River Interceptor (DRI). During wet weather, eight stormwater pumps (318 MGD each) discharge combined wastewater to the Conner Creek CSO

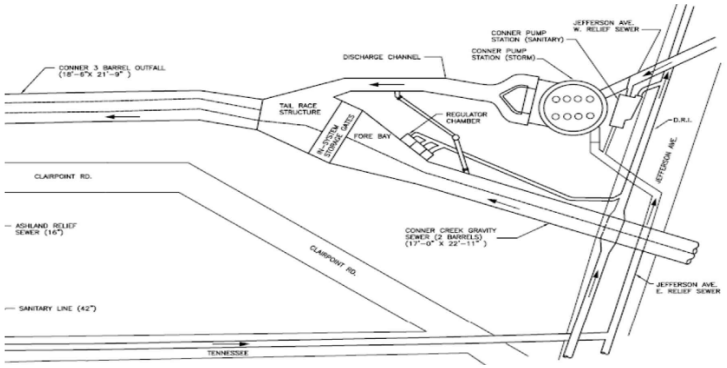


Figure 56. Schematic of Conner Creek Pump Station

Document received by the MI Wayne 3rd Circuit Court.

Table 7. Summary of Major Rahabilitation and Improvements Projects at the Conner Pump Station

CONTRACT NO.	CONTRACT TITLE	SUMMARY OF WORK	YEAR
TW-24-A	Conner Creek	N/A.	
PC-265	Regulator Improvement-Conner Station	N/A.	
PW-212	Conner Creek Pumping Station Motor Driven Pumping Unit Nos. 5 and 6	Installation of Storm Water Pumps 5 and 6.	1947
PW-3042	Conner Creek Sanitary Pumping Station	Construction of the sanitary pump station.	1958
PC-674	Conner Station Rehabilitation	Rehabilitation of buildings at the Conner Station site and Fox Creek Backwater Gate Building. Rehabilitation of the buildings include masonry work, windows and doors, roofing and sheet metal, heating and ventilating systems, toilet facilities, lighting and electrical systems, and interior finishes. Rehabilitation of the sanitary pumps, sanitary pump motors and controls, replacement of the control switchboard for the storm water pumps, and repair the stormwater pumps. Also included are new sanitary pump isolation valves, revised suction and discharge piping, hydraulic modeling of the sanitary wet well, and replacement of stormwater sump pumps. Rehabilitation of the site shall include replacement of all roadways, curbs, sidewalks, site lighting, and demolition of the oil pump house.	May 2009
PC-713	Authority-Wide Instrumentation, Control and Computer Systems Program	Ovation System.	2007
DWS-828	Emergency Generators	Installed the four (4) Emergency Generators with power of 2MW.	December 1999
Maintenance Contract	Transformer	Replaced the powerhead on Transformer 1 and painted.	2015
PC-773	Ovation Control	Control Window upgrade from Window NT to Window 7.0.	2015
		AT&T's Wide Area Network Upgrade.	October 2016

Document received by the MI Wayne 3rd Circuit Court.

Fairview Pump Station



Figure 57. Fairview Pump Station

MAX WET WELL LEVEL	20 FT
SANITARY PUMPS	SN1 - 700 HP, 96 MGD SN2 - 700 HP, 96 MGD SN3 - 700 HP, 96 MGD SN4 - 400 HP, 48 MGD

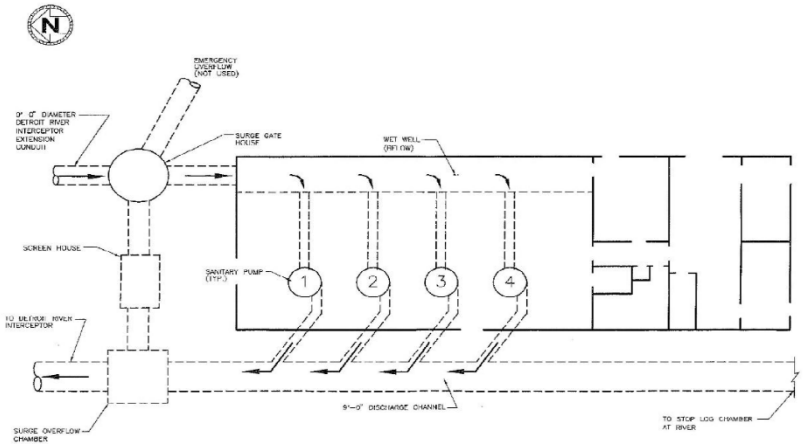


Figure 58. Fairview Pump Station Schematic

The Fairview Pumping Station is an interceptor pumping station on the DRI, which provides about 22 feet of lift. Wastewater flow from the DRI is lifted by pumps at the Fairview Pumping Station and discharged into the downstream DRI to continue on to the Detroit WWTP. The function of this station is to pump the wastewater received in the wet well and return it as efficiently and quickly as possible to the downstream DRI. The station facilities include the influent DRI, gatehouse, and pumping station. The pumping station consists of the pump house and wet well.

Table 8. Summary of Major Rehabilitation and Improvements Projects at the Fairview Pump Station

Contract No.	Contract Title	Work Summary	Year
PW	Fairview Pumping Station	Construction of Fairview Pump Station.	1913
PW-679	Fairview Additions and Alterations	Modification and upgrades at Fairview Pump Station.	1949
PC-264	Modifications to Fairview Pumping Station	Modification of riser chamber and cover, stop log chamber, and surge overflow.	Set of the drawings: April 1972
PC-606	Fairview Seawall Phase II	N/A.	
PC-684	Fairview Pumping Station Rehabilitation	Replacement of the Pump 2 and associated equipment.	1995
PC-713	Authority-Wide Instrumentation, Control and Computer Systems Program	Ovation System.	2007
PC-773	Ovation Control	Control Window upgrade from Window NT to Window 7.0.	2015
		AT&T's Wide Area Network Upgrade.	October 2016

Document received by the MI Wayne 3rd Circuit Court.

Freud Pump Station



Figure 59. Freud Pump Station

MAX WET WELL LEVEL	71 FT
SANITARY PUMPS	SN9 - 200 HP, 27 MGD SN10 - 200 HP, 13 MGD
STORM PUMPS	ST1 - 3000 HP, 290MGD ST2 - 3000 HP, 290MGD ST3 - 3000 HP, 290MGD ST4 - 3000 HP, 290MGD ST5 - 3000 HP, 290MGD ST6 - 3000 HP, 290MGD ST7 - 3000 HP, 290MGD ST8 - 3000 HP, 290MGD

The Freud Pump Station consists of a pump house, wet well, and transformer enclosure area. All wastewater flow to the Freud Pumping Station is combined sanitary sewage and stormwater overflow from the East Jefferson Relief Sewer. This overflow occurs when the handling capacity of the Conner Creek Station has been exceeded. The station's primary goal is to store as much wastewater as possible until it can be pumped back to the Conner Creek Pumping Station using dewatering and sanitary pumps. From the Conner Creek Station, the wastewater is transported to Detroit WRRF. The Freud Pumping Station wet well and corresponding relief sewers provide 20 million gallons of in-line storage.

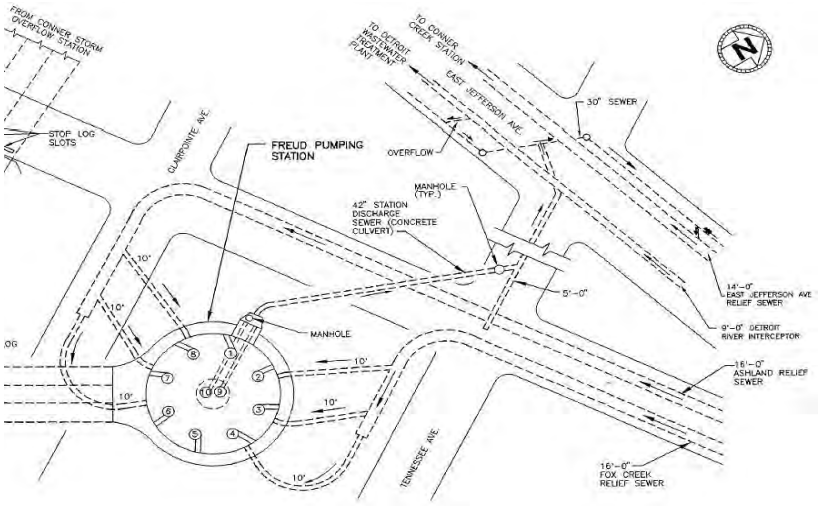


Figure 60. Freud Pump Station Schematic

Document received by the MI Wayne 3rd Circuit Court.

Table 9 Summary of Major Rehabilitation and Improvements Projects at the Freud Pump Station

CONTRACT	CONTRACT TITLE	WORK SUMMARY	YEAR
PC-268	Freud Station Sewerage Discharge	N/A.	
PC-664	Freud Station Improvements Pump Replacement	Replacement of pumps.	1989
PC-685	Bluehill and Freud Sewage Pumping Station Rehabilitation	Freud Sewage Pumping Station work includes removal and replacement of switchgear and protective relaying and controls; maintaining of four bus electrical architecture; extensive rework of conduit and cables for power and control system; and other electrical work due to relocation of switchgear.	2011
PC-713	Authority-Wide Instrumentation, Control and Computer Systems Program	Ovation System.	2007
DWS-828	Emergency Generators	Installed the four (4) Emergency Generators with power of 2MW.	December 1999
PC-773	Ovation Control	Control Window upgrade from Window NT to Window 7.0.	2015
		AT&T's Wide Area Network Upgrade.	October 2016

Northeast Pump Station



Figure 61. Northeast Pump Station

MAX WET WELL LEVEL	26 FT
SANITARY PUMPS	SN1 - 2000 HP, 96 MGD SN2 - 2250 HP, 96 MGD SN5 - 2000 HP, 65 MGD SN6 - 2000 HP, 96 MGD

The Northeast Pump Station consists of a wet well and pump house. The station receives wastewater from the 12.75-foot Corridor Interceptor. The Corridor Interceptor receives flow from the 15 Mile Interceptor, which receives flow from the Romeo Arm and Lakeshore Interceptor through the Clintondale Station. The wastewater flow to the station is nearly all sanitary sewage, with only a small portion of stormwater from suburban communities. The main goal of the pumping station is to transport wastewater to the Detroit WRRF as quickly as possible. The Northeast Pump Station is designed to pump all wastewater from the Corridor and Lakeshore connection into the 17.5-foot North Interceptor, East Arm. The wastewater flow from the North Interceptor East Arm is currently diverted to the Seven Mile Relief Sewer where it is transported by gravity through the Conant-Mt. Elliot Sewer and the DRI to the Detroit WRRF. The station receives wastewater flow from all the communities of Macomb County (except the cities of Centerline and Warren), northeastern communities of Oakland County, and all areas served by the Lakeshore Interceptor through the Clintondale Station. The pumping station currently has six sanitary pumps with a total combined capacity of 355.4 MGD.

Document received by the MI Wayne 3rd Circuit Court.

Table 10. Summary of Major Rehabilitation and Improvements Projects at the Northeast Pump Station

CONTRACT NO.	CONTRACT TITLE	WORK SUMMARY	YEAR
PC-216	Northeast Sewage Pumping Station	The Northeast Sewage Pumping Station was built with this contract. The station consists of wet well, pump house (three sanitary pumps 1, 5, and 6), and transformer.	1969
PC-672	Northeast Sewage Station Improvements	N/A.	
PC-713	Authority-Wide Instrumentation, Control and Computer Systems Program	Ovation System.	2007
PC-736	Northeast Sewage Station-Pump No. 2 Installation	Installation of the new Pump No. 2.	May 2006 (As-built drawings)
DWS-828	Emergency Generators	Installed the tree (3) Emergency Generators with power of 2MW.	December 1999
PC-773	Ovation Control	Control Window upgrade from Window NT to Window 7.0.	2015
		AT&T's Wide Area Network Upgrade.	October 2016

Oakwood Pump Station



Figure 62. Oakwood Pump Station

MAX WET WELL LEVEL	79 FT	
SANITARY PUMPS	SN1 - 6.4 MGD SN2 - 6.4 MGD SN3 - 6.4 MGD SN4 - 6.4 MGD	
STORM PUMPS	ST1 - 97 MGD ST2 - 97 MGD ST3 - 177 MGD ST4 - 177 MGD	ST5 - 177 MGD ST6 - 177 MGD ST7 - 177 MGD ST8 - 177 MGD

The Oakwood Pump Station receives flow through a combined sewer collection system from Junction Chamber No. 1, which is upstream from the pumping station. Once all flows are combined at Junction Chamber No. 1, they are conveyed into the pump station through a pair of 18-foot diameter influent conduits. The combined wastewater, consisting of both sanitary and storm flows, are managed by the pump station. During normal operation, the combined wastewater is pumped by the sanitary pumps to the Detroit WRRF. When the flows into the facility exceed the capacity of these pumps during storm events, the pump station storm pumps convey any excess flow to the screenings facility and then into two 4.5 MG CSO Basins.

Document received by the MI Wayne 3rd Circuit Court.

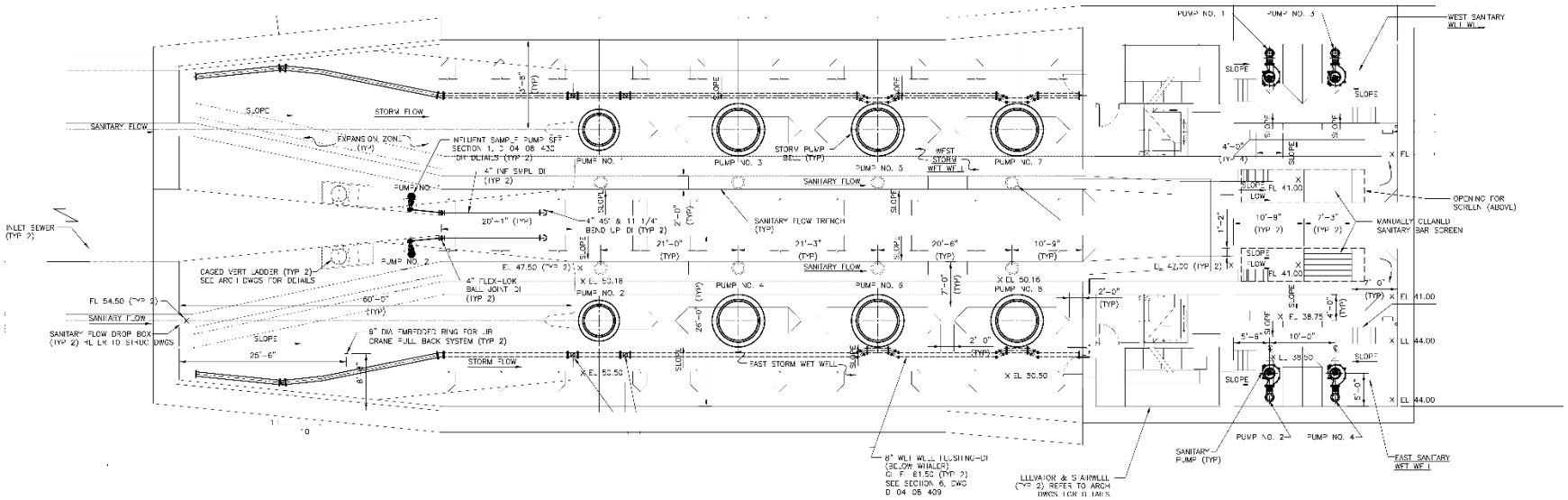


Figure 63. Oakwood Pump Station Schematic

Table 11. Wastewater Pumping Stations

Name of Pump Station	Location	Function	Sanitary Capacity				Storm Capacity				No. of Pumps	
			DESIGN		MAXIMUM		DESIGN		MAXIMUM		SANITARY	STORM
			MGD	CFS	MGD	CFS	MGD	CFS	MGD	CFS		
Conner / GLWA	12244 East Jefferson, Detroit	Sanitary / Storm	158.4	245	229.5	355	2226	3444	2544	3936	4	8
Fairview / GLWA	202 Parkview, Detroit	Sanitary	242.3	375	339.3	525	-	-	-	-	4	-
Freud / GLWA	12300 Freud, Detroit	Sanitary / Storm	12.96	20	35.64	55	2031	3143	2322	3592	2	8
Northeast / GLWA	11000 East Eight Mile, Detroit	Sanitary	162	251	258.4	400	-	-	-	-	4	-
Oakwood / GLWA	12330 Sanders, Detroit	Sanitary / Storm	13	20	26	40	246.9	382	315.4	488	4	8
Puritan-Fenkell / GLWA	Fenkell East of Telegraph, Detroit, MI 48223	Sanitary Pumps	1.4	2.2	2.8	4.4	-	-	-	-	2	-

Document received by the MI Wayne 3rd Circuit Court.

2.2.3. In System Devices (Dams, ISD's)

Level Sensor (LS)

Level sensors detect the level of liquid in the sewers. This information is used to determine the best way to store stormwater, locate possible sewer overflows, and monitor dry weather wastewater pumping operations. There are 25 sewer level sensors located and monitored throughout the collection system. Overall, there are more than 150 level sensors in the entire System. An example is shown in Figure 64.

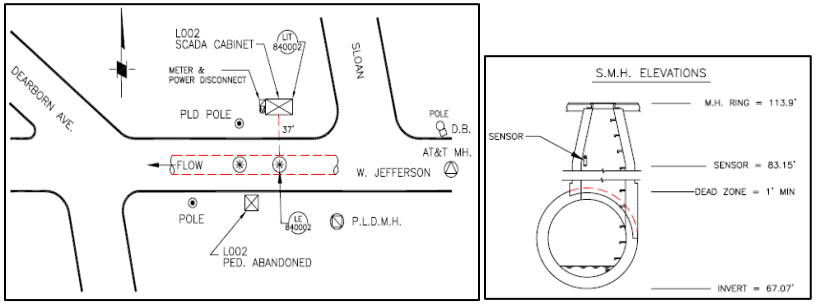


Figure 64. Example of a level sensor at West Jefferson and Sloan

Inflatable Storage Dam (ISD)

Inflatable Storage Dams, as illustrated in Figure 65, are utilized to detain upstream sewage in order to regulate flows to the WRRF. The dams can be remotely deflated and inflated as necessary.

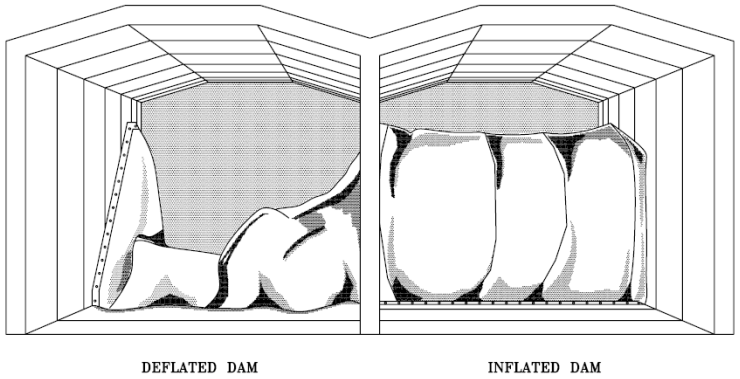


Figure 65. Inflatable dam illustration

Valve Remote (VR)

The GLWA Wastewater conveyance system has 17 Valve Remote (VR) gate locations. At these locations, one or more gates are used to selectively load the interceptors, provide in-system storage and route the flow. These gates are operated locally and remotely from the SCC during wet weather periods. During dry weather, remotely controlled gates are opened to direct flow to the interceptors, and during wet weather they are typically closed when the flow in the interceptors reach predetermined levels. Some are operated by electric operators, but the majority of them are operated by hydraulic units (SCUBA). Most of these gates were installed in the 1970s and rehabilitated in 1998 under PC-695. Average life expectancy is 20 to 35 years. An example of a valve remote location is shown in Figure 66.

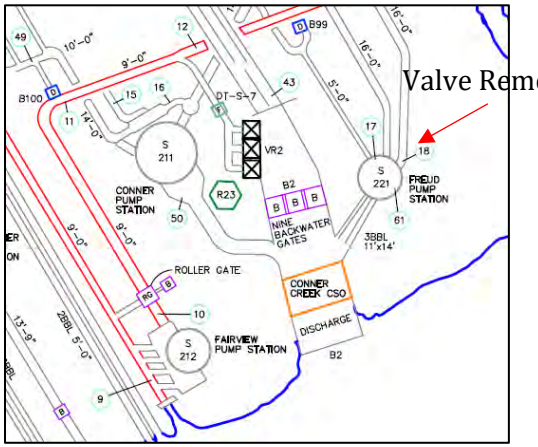


Figure 66. Example of VR located at Conner Pump Station

Document received by the MI Wayne 3rd Circuit Court.

Precipitation Gage

A precipitation gauge (PG, see Figure 67) measures the amount of liquid precipitation over a set time period. Ovation, the Authority's Supervisory Control and Data Acquisition system, reports the precipitation data to aid the operation of the collection system and minimize combined sewer overflows during storm events. Thirty-three tipping bucket rain gages are installed throughout the service area.

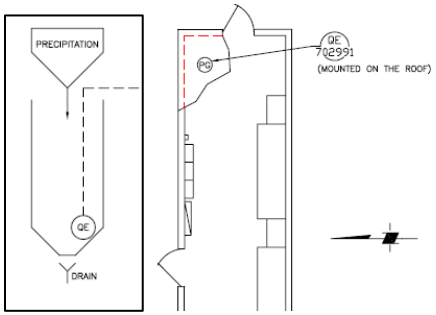


Figure 67. Example of Precipitation Gauge mounted on roof at Schoolcraft Pump Station

2.4. METERING

The System Analytics and Meter Operations Group is responsible for maintenance and operation of numerous remote assets used in the metering of wastewater, as well as the communication network used to transmit data from the metering locations to the head end.

The System Analytics and Meter Operations Group maintains assets at 46 sewer meter locations. Each of these locations contain equipment that is located in a control cabinet, as well as assets that are located in meter vaults. The assets that are housed in the control cabinet include Remote Terminal Units, radios, flow transmitters and level transmitters. The assets that are housed in the meter vault include flow meters and level sensors.

In addition to metering equipment, the System Analytics and Meter Operations Group maintains a 900MHz telemetry network and a Greater Detroit regional sewer system (GDRSS). The 900 MHz telemetry network is composed of 445 repeater sites. Each repeater location consists of radios and antennas. The GDRSS system collects flow and depth information from GLWA sewerage meters in five-minute increments and from rain gauges in 15-minute increments. The GDRSS portal provides a web-based interface that displays meter data (collected the day before) in both graphical and tabular formats in increments of five minute, hourly, daily, monthly, and yearly intervals. Data can be exported for off-line examination. Billing reports can be reviewed for member partner analysis, as well as precipitation data.

2.4.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

2.5. GENERAL PURPOSE

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

2.6. PROGRAMS

Programs consist of the replacement and/or rehabilitation of specific capital asset on an ongoing or reoccurring basis. The program scope and/or projected expenses may vary from year-to-year, depending on the needs identified within the program, and as newly established programs develop consistent schedules, requirements and history over time. Although not typically identified in the CIP future years projected expenses, these programs will typically be funded in perpetuity. The numbering structure of the "Program" category is slightly different in order to allow up to 99 separate projects to be attributable to each program. As discussed previously, these projects identified under a parent program will be issued a CIP number, however will be displayed within the CIP as a phase of the overall parent program.

Document received by the MI Wayne 3rd Circuit Court.

1.3. CENTRALIZED SERVICES

3.1. INFORMATION TECHNOLOGY

Information Technology (IT) at GLWA provides centralized technology implementation, support and services across all business functions. This includes infrastructure and cloud technologies, software and applications, desktop and computing hardware, System security, portfolio and project management services, technology forecasting and budgeting management, as well as print services and document management. The goal of the IT team is to provide reliable and forward-thinking technologies that meet the needs today, and in the future, of GLWA's various business groups, enabling them to realize their goals and make processes more effective and efficient.

3.1.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.1.2. Service Delivery

The Service Delivery Group provides core technology support services, including troubleshooting, desktop and laptop configuration, software installation, mobile device management, smart boards, and printers/scanners. This group also provides physical document management services, in additional to full print shop services. Projects in this area include workstation computing replacements and upgrades, software and system replacements and purchases, mobile computing technologies, printers, scanners and other all in ones devices.

3.1.3. Infrastructure

The Infrastructure Group provides administration and continuous monitoring of the GLWA business network, Internet services, data center, storage, and servers. It maintains Intermediate Distribution Facilities (IDF) and Main Distribution Facilities (MDF) across more than 40 facilities spanning the region. It also provides telephony services and all wireless internet access points. Projects that fall within this group work to improve network and telecommunications infrastructure, server hardware and systems, storage devices and related hardware, enterprise Active Directory and Office 365 infrastructure and licensing.

3.1.4. Enterprise Applications

The Enterprise Applications Group monitors and manages applications that are used by the entire organization and may be public and/or forward facing, web-based and cross-functional. These include the Geographic Information System (GIS), public website, internal (Intranet) Sharepoint site, enterprise content management systems, business intelligence, reporting analytics (KPIs), and Legistar. Projects in this group include system replacements and/or upgrades, and new application implementations.

3.1.5. Business Applications

The Business Applications Group monitors and manages line of business applications, including database administration, for Oracle WAM (Asset Management), ServiceLink, BS&A Financials, Ceridian DayForce, LIMS/PIMS, and many other specialized software packages designed to help individual business groups improve data management and daily operations. Projects in this group include system replacements and/or upgrades, and new application implementations.

3.1.6. Security

The Enterprise Technology Security Group provides secure infrastructure support, administration, monitoring and training for network and computing security across the Authority. It participates in and supports Homeland Security initiatives and exercises, and participates in other desktop security efforts to ensure breaches are monitored, repelled and remediated on a continuous basis. Projects in this area provide additional security features, penetration testing, disaster recovery planning and implementation, and security training.

3.1.7. Project Management Office

The Program Management Office provides various administrative and strategic functions, including overall portfolio and project management, budgeting and forecasting, policy development and strategic planning, and shared services administration. Projects that fall within this group

Document received by the MI Wayne 3rd Circuit Court.

will strengthen the overall management of technology implementations at GLWA, including but not limited to project management software and systems, process and workflow development, analysis, and strategic planning.

3.2. FLEET

The Fleet Group is responsible for efficiently and effectively maintaining all GLWA Fleet and Fleet-related equipment.

The Fleet Group provides the vehicles and proper equipment for GLWA staff to accomplish their required work. The vehicles and equipment acquisition, disposal, record management, inventory and maintenance are accomplished through coordination with the DWSD Garage. All vehicles must be kept in a safe and proper manner in order to provide GLWA staff with reliable equipment to accomplish their work.

3.2.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.3. FACILITIES

The Facilities Group is responsible for efficiently and effectively maintaining all GLWA facilities and structures.

The facilities house the operations of GLWA and must remain clean, secure, environmentally safe and attractive. All systems must operate in a proper and acceptable manner in order to provide a clean and safe working environment for staff, visitors and member partners. The group's objectives are accomplished by maintenance mechanics with specific skills in various trades, team leaders, administrative staff, and a manager.

3.3.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.4. SECURITY

The Water and Wastewater Systems are vulnerable to a variety of security breaches and attacks. If these breaches/attacks were realized, the result could be large numbers of illnesses or casualties and/or a denial of service that would also affect public health and economic vitality. Critical services such as firefighting and healthcare (hospitals), and other dependent and interdependent sectors, would suffer negative consequences from a denial of service from the Water and Wastewater Systems. GLWA's critical security systems, both physical and electronic, require continual upgrade and replacement to minimize the ever-present threats to GLWA staff and infrastructure.

3.4.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.5. ENERGY MANAGEMENT

The Energy Management Team has been very active in pursuing new solutions for GLWA to improve operational efficiency with new concepts and technologies to achieve sustainability. Much of the team's current work revolves around auditing existing facilities, evaluating equipment, studying various processes and developing an overall understanding of the Authority's energy consumption. Many of these initial studies, pilot projects, and evaluations will directly result in future capital investments. To ensure long-term sustainability, the Energy Management Team is in the process of developing a Strategic Energy Plan that will detail the challenges facing GLWA, establish goals and identify the methodology for measuring success.

The Energy Management Group continues to work alongside GLWA's Business Intelligence staff to collect and compile energy consumption data. The effort is evolving from the original concept of monitoring pumps' electric consumption to a broader vision of modeling the entire set of business activities that bring value to our member partner communities. As this specifically relates to energy management, it is anticipated that consumption data will be compiled across multiple business areas to enable the cross-referencing between business areas

Document received by the MI Wayne 3rd Circuit Court.

by using a single data warehouse. This allows for flexibility in data mining, dashboard construction and process tracking. The results of many of these initiatives will allow the team to identify specific, prioritized areas within the Authority for future capital investment to improve efficiency.

3.5.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.6. ENGINEERING

Overall engineering services required because of emergencies, immediate investigations, evaluations, and support to ensure continued operation and the highest level of service will typically be charged against projects and programs within this category. In addition, the engineering work performed will directly result in capital projects. Several categories exist that are typically needed in this manner. These categories are general engineering services, geotechnical services and CIP implementation services.

3.5.1. General Purpose

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.7. GENERAL PURPOSE

The General Purpose category within Project Category 2 and Project Category 3 in the Capital Project/General Ledger Account Numbering Protocol are necessary to identify projects that cross over multiple project categories. Projects that are not specifically attributed to one particular area will be identified here.

3.8. PROGRAMS

Programs consist of the replacement and/or rehabilitation of specific capital asset on an ongoing or reoccurring basis. The program scope and/or projected expenses may vary from year-to-year, depending on the needs identified within the program, and as newly established programs develop consistent schedules, requirements and history over time. Although not typically identified in the CIP future years projected expenses, these programs will typically be funded in perpetuity. The numbering structure of the “Program” category is slightly different in order to allow up to 99 separate projects to be attributable to each program. As discussed previously, these projects identified under a parent program will be issued a CIP number, however will be displayed within the CIP as a phase of the overall parent program.

Document received by the MI Wayne 3rd Circuit Court.

1.4. GLOSSARY

- BCE Business Case Evaluations
- BDF Biosolids Dryer Facility
- BFP Belt Filter Press
- BGD Billion Gallons per Day
- BPS Booster Pumping Station
- CB Construction Bond
- CCR Consumer Confidence Rule
- CCTV Closed-Circuit Television
- cfs cubic feet per second
- CIP Capital Improvement Plan
- CMG GLWA Capital Management Group
- COF Central Offload Facility
- CSF Central Services Facility
- CSO Combined Sewer Overflow
- CTA Common To All
- CWA Clean Water Act
- DDOT Detroit Department of Transportation
- DE Debt Eligible
- DI Ductile Iron
- DRI Detroit River Interceptor
- DRO Detroit River Outfall
- dtpd dry tons per day
- DWRF Drinking Water Revolving Fund
- DWSD Detroit Water and Sewerage Department
- DWSD-R Specifying the new, Detroiter-focused Detroit Water and Sewerage Department
- EPA United States Environmental Protection Agency
- GIS Geographic Information System
- GLWA Great Lakes Water Authority
- GPS Global Positioning System
- HVAC Heating, Ventilation, and Air Conditioning
- I&C Instrumentation & Controls
- I&E Improvement & Extension
- IDF Intermediate Distribution Facilities
- IGA Investment Grade Audit
- ILP Intermediate Lift Pumps
- ISD In System Storage Device
- IT Information Technology
- ITS Information Technology and Services
- IWC Industrial Waste Control
- LCR Lead and Copper Rule
- LED Light-Emitting Diode
- LEL Lower Explosive Limit
- LIMS/PIMS Laboratory Information Management System/Project Information Management System
- LH WTP Lake Huron Water Treatment Plant
- MACP Manhole Assessment Certification Program
- MBO Master Bond Ordinance
- MCC Motor Control Centers
- MDEQ Michigan Department of Environmental Quality
- MDF Main Distribution Facilities
- MG Million Gallons
- MGD Million Gallons per Day
- NAB New Administration Building at the WRRF
- NASSCO National Association of Sewer Service Companies
- NE WTP Northeast Water Treatment Plant
- NEC National Electric Code
- NESDS Northeast Sewerage Disposal System
- NIEA North Interceptor East Arm
- NPDES US EPA National Pollutant Discharge Elimination System
- NPL US EPA National Priorities List
- O&M Operations & Maintenance
- OEM Original Equipment Manufacturer
- O-NWI Oakwood-Northwest Interceptor
- OSHA Occupational Safety and Health Administration
- OWI Oakwood Interceptor

Document received by the MI Wayne 3rd Circuit Court.

- PAC Powdered Activated Carbon
- PACP Pipeline Assessment Certification Program
- PCCP Pre-Stressed Concrete Cylinder Pipe
- PEAS Primary Effluent to Activated Sludge
- PLC Programmable Logic Controller
- PLD Programmable Logic Device
- PRV Pressure Reducing Valve
- PS Pump Station
- RAS Return Activated Sludge
- RRO Rouge River Outfall
- RRO-2 Rouge River Outfall No. 2
- RTB Retention Treatment Basins
- RVSDS Rouge Valley Sewerage Disposal System
- RWCS Regional Water Transmission System
- SAMO GLWA System Analytics and Meter Operations
- SCADA Supervisory Control And Data Acquisition (GLWA uses Ovation brand)
- SCC Systems Control Center
- SCP Small Capital Projects
- SCUBA actuators Self-Contained Universal Bi-directional Actuator
- SDF Screening and Disinfection Facility
- SDWA Safe Drinking Water Act
- SFE Secondary Final Effluent
- SFP Sludge Feed Pump
- SOW Scope of Work
- SPW WTP Springwells Water Treatment Plant
- SRP Scheduled Replacement Program
- SW WTP Southwest Water Treatment Plant
- T&O Taste and Odor
- TAC Technical Advisory Committee
- TCR Total Coliform Rule
- TPC Tournament Players Championship Golf Course in Dearborn
- VFD Variable Frequency Drive
- VR-Gates Valve Remote Gates
- WAM Work and Asset Management
- WMP Water Master Plan
- WMPU Water Master Plan Update
- WRRF Water Resource Recovery Facility
- WSC West Service Center
- WTP Water Treatment Plant
- WWP WTP Water Works Park Water Treatment Plant
- WWTP Wastewater Treatment Plant (old terminology)

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 9

Document received by the MI Wayne 3rd Circuit Court.

DocuSign Envelope ID: 8C201C5D-7799-4312-AAD8-8C08A0EEC314

GLWA
Great Lakes Water Authority

William M. Wolfson
Chief Administrative/Compliance Officer
735 Randolph Street, Suite 1900
Detroit, Michigan 48226

October 7, 2022

Laura Verona
District Supervisor
Water Resources Division
Michigan Department of Environment, Great Lakes, and Energy ("EGLE")
27700 Donald Court
Warren, MI 48092

Re: Great Lakes Water Authority ("GLWA")'s Submission for Approval of its IPP Rules Pursuant to Rule 323.2307

Dear Supervisor Verona:

Pursuant to Rule 323.2307, GLWA submits its complete pretreatment program to EGLE for approval. In addition to a copy of GLWA's IPP Rules and in compliance with Rule 323.2307(1)(a), GLWA submits the following:

i. A statement from GLWA's General Counsel, that GLWA has adequate authority to carry out the program described in Rule 323.2306.

ii. A copy of any statutes, ordinances, regulations, agreements, or other authorities relied upon by GLWA for its administration of the program.

iii. A brief description, including organization charts, of the GLWA's Industrial Waste Control Team, charged with administering GLWA's IPP Rules.

iv. A description of the funding levels and full- and part-time manpower available to implement the program.

In addition to the submission requirements of Rule 323.2307(1)(a), GLWA submits:

v. A list of industrial users.

vi. Procedures for implementation and sample forms.

vii. An enforcement response plan.

GLWA appreciates EGLE's consideration of GLWA's submission for approval of its pretreatment program and looks forward to being the control authority for its service area.

Respectfully submitted,

Bill Wolfson
)lfson

Chief Administrative and Compliance Officer

MMRCY6AD7MC2-1258141357-2302

Document received by the MI Wayne 3rd Circuit Court.

Randal Brown
General Counsel
735 Randolph Street, Suite 1900
Detroit, Michigan 48226
Phone: 313-964-9068

October 7, 2022

Laura Verona
District Supervisor
Water Resources Division
Michigan Department of Environment, Great Lakes, and Energy ("EGLE")
27700 Donald Court
Warren, MI 48092

Re: Statement from Great Lakes Water Authority's ("GLWA") General Counsel that GLWA has adequate authority to carry out the program described in Rule 323.2306

Dear Supervisor Verona:

Pursuant to Michigan Administrative Rule 323.2307(1)(a)(i)-(iii) and as the General Counsel for GLWA, I submit this statement that GLWA "has adequate authority to carry out the program described in Rule 323.2306."

Provision of legal authority under Rule 323.2306(a) that provides the basis for each procedure under Rule 323.2306(b)

GLWA was created pursuant to Michigan Public Act 233 of 1955, the Municipal Sewage and Water Supply Systems Act ("Act 233"). GLWA's Articles of Incorporation and the Act 233 are attached.

Pursuant to the Regional Sewage Disposal System Lease between GLWA and the City of Detroit (the "Lease"), GLWA operates and maintains the Regional Sewer System. A copy of the Lease is attached and is available on GLWA's website. Under Section 4.1(a)(i), GLWA assumed all of the City's rights and obligations of "[all] DWSD wholesale customer contracts related to the Regional Sewer System and related contracts with wholesale customers…" Schedule D to the Lease identifies the assigned contracts[1]. Beginning in 1980 and pursuant to federal court orders and settlement agreements, all wholesale customer contracts assigned to GLWA were required to be amended to include the following:

[1] Contracts assigned to GLWA included Wastewater Discharge Ordinance Delegation Agreements, which support Detroit, now GLWA's enforcement of Industrial Pretreatment Rules. See pages D-2 & D-3. Copies of the Delegation Agreements are attached. Further, many communities executed assignments of their wastewater contracts to GLWA. Copies of these assignment agreements are attached.

Document received by the MI Wayne 3rd Circuit Court.

DWSD's wastewater contracts shall be amended to include:

- An undertaking of diligent and uniform enforcement and implementation of the ordinances, rules and regulations to be adopted pursuant to Section IV(9) of the 1980 Settlement Agreement.
- An undertaking to pass through to industrial customers amounts billed with respect to such customers for sewage surcharges and industrial cost recovery charges.
- An adoption of the 1978 and 1980 Settlement Agreements as amendments of the wastewater contracts.
- Such provisions as are required to establish delegated or cooperative authority or procedures for inspection, monitoring, measurement, surveillance, enforcement and dispute resolution, with respect to prohibited discharges, sewage surcharges and industrial cost recovery charges.

1980 Settlement Agreement, §IV(9)(e) & Exhibit E.

[2]

In addition to the assigned contracts, Section 124.284a of Act 233 allows GLWA to adopt rules and regulations by resolution of its governing body and with concurrence by resolution of constituent municipalities. GLWA's Board approved its IPP Rules and the Administration secured concurring resolutions of GLWA's IPP Rules from all communities in GLWA's service area that send wastewater to GLWA's Water Resource Recovery Facility ("WRRF"). GLWA's Board Resolution and the concurring resolutions are attached and are available on GLWA's website. Proof of publication is also attached.

Finally, Section 5.1(b) of the Lease makes it clear that the City of Detroit intended for GLWA to "submit an approvable industrial pretreatment program," in which GLWA would become the Control Authority for the service area previously operated and maintained by the City of Detroit.

In summary, through court orders, Michigan statutes, contracts and resolutions, GLWA has the legal authority, enforceable in federal and state court, authorizing and enabling GLWA "to apply and to enforce the requirements of section 3109 of the act, sections 307(b) and (c) and 402(b)(8) of the clean water act and any rules or regulations implementing those sections within" GLWA's service area.

Manner in which GLWA will (i) implement the program requirements set forth in Rule 323.2306(a) and (ii) ensure compliance and (iii) enforce noncompliance with GLWA's Rules

GLWA's implementation of the program requirements, assurance of compliance and enforcement of noncompliance starts with the GLWA's Rules. The provisions of GLWA's IPP

[2] Snippet from *Order to Incorporate Rate Settlements into Wastewater Contracts and Dismiss All Prior Rate Settlements*, Judge Sean Cox, dated August 31, 2011. A copy of the Order is attached.

Document received by the MI Wayne 3rd Circuit Court.

Rules apply to all industrial and commercial users within GLWA's service area. A discussion of the specific provisions of GLWA's IPP Rules follows.

The Preamble states the purpose of GLWA's IPP Rules, and Chapter I sets forth the definitions of terms used in GLWA's IPP Rules.

Chapter II addresses the authority for GLWA's IPP Rules and for enforcement of its provisions. This section provides that GLWA's IPP Rules will apply to every industrial and commercial user whose wastewater is treated at GLWA's WRRF.

GLWA's IPP Rules prohibit the discharge of wastes which do not conform to specified criteria or effluent standards, including Federal Categorical Pretreatment Standards and state requirements and limitations. Section II-602 also sets forth acceptable measuring and sampling methods and procedures and addresses various other matters affecting direct or indirect discharges of wastes into the Regional Sewer System within GLWA's service area.

The user fees and charges are established by the GLWA Board in accordance with the provisions of Act 233.

Section II-602 sets forth the reporting requirements as to pollutants regulated by GLWA's IPP Rules, or by EPA or State of Michigan regulations.

Section II establishes industrial waste permit requirements and sets forth the application and modification criteria and procedures, as well as permit duration and transfer requirements.

Section II-1001 sets forth the enforcement options and procedures to be used by the Board, through GLWA's Chief Executive Officer, to obtain compliance with the provisions of GLWA's IPP Rules or with any industrial waste permit issued thereunder. These enforcement options range from cooperative conciliation conferences to a formal hearing before the Board and discontinuation of services to the violator.

Chapter VIII and Section II-1004 set forth the legal actions available to the Board for violations of GLWA's IPP Rules or of state or federal regulations. The remedies set forth include both injunctive relief and fines for each offense. Penalties for falsification of information are also included.

Section II-901 establishes the confidentiality of information gathered by GLWA employees pursuant to GLWA's IPP Rules.

The specific requirements of Rule 323.2306 are met by the sections of IPP Rules referenced below:

Rule 323.2306 Requirement	**GLWA's IPP Rules**
(i) Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the publicly owned treatment works by nondomestic users where the contributions do not meet applicable pretreatment standards and requirements or where the contributions would cause the publicly owned treatment works to violate its national pollutant discharge elimination system permit.	Section II-201-206
(ii) Require compliance with applicable pretreatment standards and requirements by nondomestic users.	Section II-201-206

Document received by the MI Wayne 3rd Circuit Court.

Rule 323.2306 Requirement	GLWA's IPP Rules
(iii) Control, through permit, the contribution to the publicly owned treatment works by each significant industrial user to ensure compliance with applicable pretreatment standards and requirements.	Section II-201-303, Section II-405, Sections II-701-II-707
(iv) Require the development of a compliance schedule by each nondomestic user for the installation of technology required to meet applicable pretreatment standards and requirements and require the submission of all notices and self-monitoring reports from nondomestic users that are necessary to assess and assure compliance by nondomestic users with pretreatment standards and requirements, including the reports required in R 323.2310	Section II-505, Section II-602 Sections II-501-II-596; Section II-703-II-705 and Section II-1004
(v) Carry out all inspection, surveillance, and monitoring procedures necessary to determine, independent of information supplied by nondomestic users, compliance or noncompliance with applicable pretreatment standards and requirements by nondomestic users.	Section II-500-605
(vi) Obtain remedies for noncompliance by any nondomestic user with any pretreatment standard and requirement. All publicly owned treatment works shall be able to seek injunctive relief for noncompliance by nondomestic users with pretreatment standards and requirements.	Section II-1001 Section II-203-1102
(vii) Comply with confidentiality requirements.	Section II-901

As discussed above, the provisions of GLWA's IPP Rules, in conjunction with the provisions of applicable federal and state statutes and regulations, give GLWA the necessary legal authority to implement, ensure compliance and enforce noncompliance the procedures required by Rule 323.2306.

Thank you for your consideration of GLWA's IPP Rules and request to be the Control Authority for GLWA's service area.

Sincerely,

Randal Brown

General Counsel

MMRCY6AD7MC2-1258141357-2293

Document received by the MI Wayne 3rd Circuit Court.

WASTEWATER DISCHARGE ORDINANCE DELEGATION AGREEMENT
CITY OF DETROIT - CITY OF HARPER WOODS

THIS AGREEMENT is made this 20th day of April, 19 92, between the CITY OF DETROIT, a municipal corporation organized under the laws of the State of Michigan, by its BOARD OF WATER COMMISSIONERS (hereinafter referred to as the "BOARD"), and the City of Harper Woods, a public body corporate under the laws of the State of Michigan.

W I T N E S S E T H :

WHEREAS, the City of Detroit through the Detroit Water and Sewerage Department ("DWSD") operates a publicly-owned treatment works ("POTW"), as defined at 40 C.F.R. Part 403.3(o), presently located at 9300 West Jefferson in the City of Detroit, which treats wastewater or waste and storm water discharged into the wastewater collection system of the City of Detroit to which the City of Harper Woods contributes;

WHEREAS, an Amended Consent Judgement was entered in United States District Court, Civil Action Numbers 77-71100 and 80-71614, which provided that all counties, communities and agencies under contract with the City of Detroit for sewage treatment services enact, or cause to be enacted, and to diligently enforce a sewer use and industrial waste control ordinance that is consistent with, and at least as stringent as, the sewer use and/or industrial waste control ordinance of the City of Detroit;

WHEREAS, on September 30, 1985, the Michigan Department of Natural Resources approved the Industrial Pretreatment Program for the City of Detroit and designated the City of Detroit as the Control Authority throughout the POTW's service area, which includes the City of Harper Woods in accordance with the Federal Regulations, 40 C.F.R. Part 403 (General Pretreatment Regulations) and Part 21 of the Rules (MAC R323.2162) of the Michigan Water Resource Commission and has continuing approval authority over said program;

WHEREAS, the DWSD, as the operator of the POTW, the recipient of, and the responsible party for compliance with, the terms and conditions of the National Pollutant Discharge Elimination System ("NPDES") Permit Number as issued by the Michigan Water Resource

Document received by the MI Wayne 3rd Circuit Court.

Commission to the DWSD, and as Control Authority, must have authority and enforcement rights over Industrial Users and their discharges within the entire service area in order to promptly and effectively fulfill its legal obligations under the NPDES permit, 40 C.F.R. Part 403, MAC R323.2162, and as Control Authority;

WHEREAS, the DWSD, as operator of the POTW, pursuant to 40 C.F.R. Part 403, is responsible for enforcement of the approved Pretreatment Program;

WHEREAS, execution of this agreement is in furtherance of the health, safety and general welfare of the residents of the City of Harper Woods.

NOW, THEREFORE, in consideration of the promises and the covenants herein made, the parties agree as follows:

1. Delegation. The City of Harper Woods hereby delegates and assigns the right, privilege and authority to administer and enforce the industrial pretreatment provisions of its applicable wastewater ordinance, as amended, to the BOARD with all necessary powers attendant to that administration and enforcement, including but not limited to the power to adopt rules and regulations for purposes consistent with said ordinances, and federal and state pretreatment standards, statutes, rules, regulations and requirements, and the BOARD is hereby designated the duly-authorized representative of the City of Harper Woods for such purposes under the powers of said ordinance, which administration and enforcement would otherwise be the responsibility of the the City of Harper Woods.

2. Discharge Limits. At all times, the City of Harper Woods shall through local ordinances enact and keep current discharge limitations no less stringent than those of the DWSD. DWSD shall provide the City of Harper Woods with Detroit's current wastewater ordinances or a model of the adopted current wastewater ordinances and discharge limitations and any amendments thereto as they become effective.

3. DWSD Commitments. The Detroit Water and Sewerage Department will:

A. Industrial User Identification. Maintain a current listing of all known Industrial Users that may be subject to local,

Document received by the MI Wayne 3rd Circuit Court.

state and federal laws, rules and regulations applicable to wastewater discharge into a municipal sewage and treatment system. A file of data sufficient for the DWSD to perform its responsibilities will be maintained on each Industrial User in accordance with the applicable ordinance. Such data shall be available for review and inspection by the duly authorized representatives of the City of Harper Woods and County of Wayne, provided such representatives shall at all times maintain the confidentiality of any data reviewed. Public inspection shall be available, except as otherwise protected by proprietary laws, rules and regulations.

B. Permits. Prepare, issue, administer and revoke an industrial waste discharge permit consistent with DWSD Enforcement Response Plan (ERP), 40 C.F.R. Part 403 and National and Local Pretreatment Standards and Requirements for each user requiring a permit pursuant to the City of Harper Woods ordinance requirements.

C. Wastewater Contributions. Deny or condition new or increased contributions of pollutants or changes in the nature of pollutants to the waste collection system by Industrial Users. The term "Industrial User" shall mean those users defined in Section Four of the City of Harper Woods Ordinance No. 87-9 passed on July 6, 1987 as may be amended from time to time and as defined in 40 C.F.R. Part 403.

D. Inspections and Surveillance. Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable National and Local Pretreatment Standards and Requirements and other more restrictive standards and requirements as may be imposed by the BOARD or the City of Harper Woods and the County of Wayne.

E. Discharge Limitations. From time to time, establish discharge limitations, numerical and otherwise, as required for the proper operation of the system and compliance with its NPDES permit, approved programs, and federal, state and local laws, rules and regulations.

F. POTW Spill Protection. Require Industrial Users to install containment facilities to protect the POTW from accidental

Document received by the MI Wayne 3rd Circuit Court.

spills or critical or hazardous materials in accordance with ordinance requirements.

G. Administrative Action. Subject to the terms and conditions of the ERP adopted by the DWSD pursuant to 40 C.F.R. Part 403 and incorporated herein by reference, utilize administrative actions against the Industrial Users to bring about corrective actions in the event of a finding of noncompliance with local, state or federal laws, rules and regulations as pertains to the user's discharge. DWSD shall notify the City of Harper Woods, in writing, addressed to the City or Village Manager or Township Supervisor of the City of Harper Woods of all formal administrative actions, including notices of all hearings. The City of Harper Woods is invited to have a representative appear and be heard at the hearings. The DWSD shall make the final decision on the contents of any resulting conciliation agreement or order issued. In the event the City of Harper Woods does not agree with the contents of any conciliation agreement or order issued by DWSD in the course of any administrative action, the City, Village or Township shall notify DWSD of the basis of its disagreement, and the parties hereto shall enter into discussions for the purposes of resolving any differences. DWSD will inform the City of Harper Woods of its finding of any noncompliance.

H. Legal Action. In the event the DWSD determines that the discharger's noncompliance has reached a point where legal action is required or where legal action is expressly provided for by the DWSD's ERP, conduct that legal action in its own name to enforce the local ordinance. Upon instituting such legal action, the DWSD shall provide a copy of the Complaint to the City of Harper Woods. The City of Harper Woods may initiate action that is not in conjunction with the DWSD. Upon instituting such legal action, the City of Harper Woods shall provide a copy of the Complaint to DWSD. Both parties shall cooperate in providing any necessary and requisite assistance to each other for the filing and prosecution of the legal action. Nothing in this delegation agreement shall be construed to preclude or prohibit either party to this agreement from participating in legal action initiated pursuant to this paragraph.

Document received by the MI Wayne 3rd Circuit Court.

I. Removal Credit. To the extent authorized by law, in its capacity as operator of a publicly-owned treatment works, DWSD will, upon implementation of a Removal Credit Program for Industrial Users covered by federal categorical standards, be responsible for the issuance or non-issuance of removal credits. DWSD shall establish criteria which are uniform throughout the service area, and which are to be applied and interpreted in a uniform manner in each municipality, including the City of Detroit, by which the issuance or non-issuance of removal credits shall be determined and shall maintain a record of all applications and action taken upon such applications. Upon receipt of an application for removal credits for Industrial Users located within the City of Harper Woods, the DWSD shall notify, in writing, the City or Village Manager or Township Supervisor of the City of Harper Woods of the receipt of such application and the steps to be taken in the administration of that application. Representative(s) of the City of Harper Woods shall have the right to participate in any hearings, conferences or meetings pertaining to the application.

J. Variances. To the extent authorized by law, be the sole controlling and issuing agency for variances from the standards and requirements which it promulgates. Variances from federal categorical limits shall only be issued by DWSD or any other agency to the extent they comply with applicable federal law. The DWSD will establish criteria for variances and guidelines that are uniform throughout its service area, and which are to be applied and interpreted in a uniform manner in each municipality including the City of Detroit, by which the determination of the permits of the variance request shall be guided. DWSD shall maintain a record of all variance requests and of the actions taken on such requests, which record shall be available for inspection by the County of Wayne or any municipal member of a Sewage Disposal System located within Wayne County. Upon receipt of a variance request from an Industrial User located within the City, Village or Township, DWSD shall notify the City or Village Manager or Township Supervisor, in writing, of the receipt of such request and the steps which will be taken in the administration of the request. Representative(s) of the City, Village or Township shall have the right to attend and participate in hearings, conferences or

Document received by the MI Wayne 3rd Circuit Court.

meetings related to the variance request. Variances from entirely local standards which do not affect the POTW or exceed the DWSD's or any federal or state limitations in which the DWSD has no involvement and which do not affect the DWSD's interest may be issued solely by the local jurisdiction. The DWSD shall receive notice of any such variance within seven (7) days of issuance.

4. The City of Harper Woods Commitments. The City of Harper Woods will:

A. Cooperation. Cooperate with reasonable requests from the DWSD in meeting its commitments under this agreement and as the duly-authorized Control Authority.

B. Industrial User List. Annually provide the DWSD a list of nonresidential accounts on the anniversary date of this agreement.

C. Non-Interference. Refrain from any action or steps which could, directly or indirectly, cause the POTW to violate its NPDES permit or its approved Pretreatment Program.

5. Costs. The DWSD's costs to conduct its activities under this agreement shall be borne by and recovered through charges collected from Industrial Users as defined by appropriate rate formulas and existing or future contracts between the parties. The billings for such services will be billed through the contracting agency for collection from the users. Payments from the users shall be forwarded to the DWSD by the contracting agency. The County of Wayne, the City, Village or Township and domestic users or other Industrial Users within the City, Village or Township shall not be responsible for payment of monthly billings of direct charges properly billed to any Industrial User who does not pay the charges billed to its account. The cost of enforcement of non-DWSD requirements (requirements more stringent than those imposed by DWSD's Wastewater Discharge Control Ordinance) shall be borne by the originating agency. Nothing contained in this paragraph shall be construed to alter the responsibilities of the City of Harper Woods under any existing sewer use contract.

6. Successors. This agreement shall inure to the benefit of and be binding upon the respective parties hereto, their successors and assigns.

Document received by the MI Wayne 3rd Circuit Court.

7. Effective Date. This agreement shall take effect upon its approval and execution by the respective parties hereto.

8. Applicable Law. This agreement should be governed by and construed in accordance with the provisions of all applicable federal, state and local laws and regulations.

9. Captions. Captions to paragraphs and subparagraphs of this agreement have been included solely for the sake of convenient reference and are entirely without substantive effect.

10. Counterparts. This agreement may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all counterparts shall together constitute but one agreement.

11. Termination. This agreement may be terminated by joint action of all parties or by an individual party not less than one (1) year after its notice thereof in writing to all parties. Provided, however, that termination by an individual party shall not take effect if the result would be to put either party in violation of state or federal law, and applicable rules, regulations, standards or requirements.

12. Notice. Whenever notice is required to be provided in this agreement to the City of Harper Woods or to DWSD, a copy of such notice shall be sent to the County of Wayne in care of Director DPW.

13. Addendum. Attached hereto and made a part hereof is Addendum A relating to specific conditions unique to the City of Harper Woods, if applicable.

WITNESSES:

(Signed)
Mickey D. Todd, City Clerk
(Typed)

(Signed)
James E. Leidlein, City Manager
(Typed)

CITY OF HARPER WOODS
A Michigan Municipal Corporation

By: James R. Haley
(Signed)
James R. Haley
(Typed)

Title: Mayor

Address: 19617 Harper Avenue
Harper Woods 48225

Telephone No. (313) 343-2505

Document received by the MI Wayne 3rd Circuit Court.

WITNESSES:

(Signed)

DEBRA L. RAGLAND
(Typed)

(Signed)

PHYLLIS FULLER
(Typed)

LAW DEPARTMENT

Approved as to Form
and Execution:

City of Detroit
A Michigan Municipal Corporation
By Its Board of Water Commissioners

By: (Signed)

Charlie J. Williams
(Typed)

Title: Director

Address: Detroit Water & Sewerage
735 Randolph
Detroit, Michigan 48226

Telephone No. 224-4701

Document received by the MI Wayne 3rd Circuit Court.

EXHIBIT - 10

Document received by the MI Wayne 3rd Circuit Court.

TABLE OF CONTENTS

	Preamble	2
Chapter I	Definitions	3
Chapter II	Rules Governing Implementation, Administration and Enforcement of Industrial Pretreatment Program Requirements	13
Chapter III	Surcharge Program for High Strength Wastewater	61
Chapter IV	Septage and Hauled Wastes	75
Chapter V	Revenues to Support Regulatory Programs	78
Chapter VI	Flow Metering	81
Chapter VII	Rules Governing the Wastes and Wastewater from Environmental Remediation, Groundwater & Occasional or Special Waste Sources	84
Chapter VIII	Administrative Appeal Procedures	88

Document received by the MI Wayne 3rd Circuit Court.

PREAMBLE

WHEREAS, the GREAT LAKES WATER AUTHORITY (the "GLWA"), a municipal authority and public body corporation organized and existing under and pursuant to the provisions of Act No. 233, Public Acts of Michigan, 1955, as amended ("Act 233"), for the purpose of establishing a regional Sewage Disposal System to operate, control, and improve the Sewage Disposal System leased from the City of Detroit.

WHEREAS, the GLWA has been incorporated for the purpose of, among other things, acquiring, owning, leasing, improving, enlarging, extending, financing, refinancing, and operating a sewage disposal system, including stormwater collection and treatment system, or combination of such systems.

WHEREAS, the GLWA promulgates these rules and regulations for the protection of the environment, the public health and safety by abating and preventing pollution through the regulation and control of the quantity and quality of sewage, industrial wastes, and other wastes admitted to or discharged into the sewerage systems, and sewage treatment facilities under the jurisdiction of the GLWA and enabling the GLWA to comply with all applicable state and federal laws required by the Federal Water Pollution Control Act, being 33 U.S.C. 1251, et. seq.; the General Pretreatment Regulations for Existing and New Sources of Pollution (40 CFR 403); and the National Categorical Pretreatment Standards at 40 CFR 405 – 471.

WHEREAS, the GLWA seeks to create a uniform code for the regulation of wastes and wastewaters discharged into the collection system for all participating municipalities; prevent the introduction of pollutants into the wastewater systems which will interfere with the operation of the system; contaminate the resulting sludge; would pose a hazard to the health or welfare and safety of people, their communities and to employees of the GLWA; prevent the introduction of pollutants into the wastewater system which will pass inadequately treated, through the system, into receiving waters, the atmosphere, the environment or otherwise be incompatible with the system; provide for the recovery of the costs from Users of the wastewater collection and treatment system sufficient to administer regulatory activities and meet the costs of the operation, maintenance, improvement or replacement of the system;

WHEREAS, the GLWA promulgates these rules and regulations to establish additional requirements and limitations for classes of wastewater originating from non-domestic sources, and those qualifying under one or more of the promulgated National Pretreatment Standards, establishes systems for authorizing and permitting wastewater discharges and the enforcement of the limitations and requirements stated herein.

NOW, THEREFORE, THE GREAT LAKES WATER AUTHORITY ENACTS THESE RULES AND REGULATIONS AS FOLLOWS IN CHAPTERS I – VIII:

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER I - DEFINITIONS

There are a number of regulatory phrases and terms which are used in these Rules and Regulations that warrant definition. The terms included in this Chapter apply to all successive chapters and rules that have been or may be developed by the Control Authority. Where applicable, the terms reference the applicable federal regulation. Terms that have not been listed and defined here have their standard and ordinary meaning.

The meaning of the terms used in these Rules and Regulations shall be as follows:

"**Act**", or "**Clean Water Act**" means the Federal Water Pollution Control Act as amended by the Clean Water Act of 1977 (Pub. L. 95-217), 33 U.S.C. 1251, et seq. It establishes responsibilities of Federal, State, and local government, industry and the public to implement National Pretreatment Standards to control pollutants which pass through or interfere with treatment processes in Publicly Owned Treatment Works ("POTWs") or which may contaminate sewage sludge.

"**Administrator**" means the Administrator of the USEPA.

"**Authorized Representative**" means:

(1) If the Industrial User is a corporation; (a) the president, vice-president, secretary, or treasurer of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) the manager of one or more manufacturing, production, or operation facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five million dollars ($25,000,000.00) in second-quarter 1980 dollars, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures; or

(2) If the Industrial User is a partnership or sole proprietorship: a general partner or proprietor respectively; or

(3) if the Industrial User is a Federal, State or local government facility: a director or highest official appointed or designated to oversee the operation and performance of activities of the government facility, or their designee.

The individual described in sub-paragraphs 1 through 3, above, may designate another duly-Authorized Representative if the authorization is in writing; the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for the environmental matters for the company; and the written authorization is submitted to the GLWA.

"**Baseline Monitoring Report**" or "**BMR**" means the report containing information required by 40 CFR

Document received by the MI Wayne 3rd Circuit Court.

403.12(b) from any Industrial Users subject to a Categorical Pretreatment Standard.

"**Best Management Practice Plan**" or **"BMP"** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b). BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

"**Biochemical Oxygen Demand**" or **"BOD"** means the quantity of dissolved oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure five (5) days at twenty (20) degrees centigrade expressed in terms of mass and concentration (milligrams per liter (mg/l)) as measured by standard methods.

"**Board**" means the Board of the Great Lakes Water Authority.

"**Bypass**" means the intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.

"**Categorical Significant Industrial User**" or "CSIU" means a Significant Industrial User subject to a categorical pretreatment standard or a categorical standard.

"**Categorical Pretreatment Standard"** or **"Categorical Standard**" means any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) of the Act (33 U.S.C. 1317) that apply to a specific category of Industrial Users and that appear in 40 CFR Chapter I, Subchapter N, Parts 405-471.

"**Centralized Waste Treatment Facility**" or **"CWT"** means any facility that treats any hazardous or nonhazardous industrial waste received from off-site by tanker truck, trailer/roll-off bins, drums, barges, or any other forms of shipment including: a facility that treats industrial waste received exclusively from off-site; and a facility that treats industrial waste generated on-site as well as industrial waste received from off-site.

"**Chief Compliance Officer**" means the Chief Compliance Officer for GLWA or his/her designee.

"**Chief Executive Officer**" means the Chief Executive Officer of the GLWA, or his or her designee.

"**Code of Federal Regulations**" or "**CFR**" means the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the United States Government.

"**Collection System**" means the sewers, pump stations, force mains, air release valves, vacuum release valves, flow meters, sampling equipment, regulators, and other appurtenant equipment or devices used to convey sewage to the Water Resource and Recovery Facility.

"**Combined Wastestream Formula**" means the formulae contained in 40 CFR 403.6(e) for calculating alternative concentration limits or alternative mass limits where regulated wastewater is mixed prior to treatment with unregulated and diluting wastewater; and necessary for determining compliance with categorical pretreatment standards.

Document received by the MI Wayne 3rd Circuit Court.

"**Control Authority**" means the GLWA, upon being officially designated as such by the State of Michigan under the provisions of 40 CFR 403.11, and the persons included in the designation enumerated in Chapter II, Article I.

"**Cooling Water**" means the noncontact water discharged from any use, including but not limited to air conditioning, cooling or refrigeration, and whose only function is the exchange of heat.

"**Daily Maximum**" means the arithmetic average of all effluent samples for a pollutant collected during a 24-hour period used to represent a day.

"**Daily Maximum Limit**" means the maximum allowable discharge limit of a pollutant during a 24-hour period used to represent a day. Where Daily Maximum Limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where Daily Maximum Limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

"**Days**" mean consecutive calendar days for the purpose of computing a period of time prescribed or allowed by these Rules.

"**Direct Discharge**" means the discharge of treated or untreated wastewater directly into the waters of the State of Michigan.

"**Discharger**" means a person who, directly or indirectly, with or without intent, contributes, causes, or permits wastewater to be discharged into the POTW by means of, but not limited to, pipes, conduits, pumping stations, ditches or tank trucks and all constructed devices and appliances appurtenant thereto.

"**Domestic Sewage**" means the liquid and water-carried waste and wastewater typically generated from humans or household operations which is discharged to, or otherwise enters, a treatment works from sanitary activities such as kitchens, bathrooms, lavatories and toilets.

"**Domestic Strength of Sewage**" means the pollutant and pollutant concentrations adopted by the Board for the purpose of representing waste and wastewater contributions from Domestic Sources for the Surcharge Program for High Strength Wastewater.

"**Domestic Source**" means residential dwellings including single family and multifamily (regardless of size) from which only domestic sewage is discharged.

"**Environmental Remediation Wastewater**" means wastewater in the form of leachate or wastewaters from clean-up actions pursuant to Comprehensive Environmental Response, Compensation, and Liability Act, or sites of leaking underground storage tanks which are discharged to and commingled with sewage and conveyed to the GLWA sewerage system.

"**Existing Source**" means any facility that is not a "New Source."

"**Fats, Oils and Greases or "FOG"** mean organic polar and non-polar compounds. Polar compounds are derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules. Organic non-polar fraction of oil and grease (petroleum hydrocarbons) is identified as Silica gel treated n-hexane

Document received by the MI Wayne 3rd Circuit Court.

extractable materials (SGT-HEM) in the pretreatment standards.

"**Hazardous Waste**" means any industrial waste, production residue, sewage or sludge which is classified as a hazardous waste pursuant to 40 CFR 261.

"**High Strength Wastewater**" includes any wastewater discharged from a User in excess of the Domestic Strength of Sewage maximum level, and for which a Pollutant Surcharge has been developed and adopted.

"**Michigan Department of Environment, Great Lakes, and Energy**" or "**EGLE**" means the Agency of the State of Michigan responsible for Environmental Protection and designated by US EPA as the Approval Authority.

"**Indirect discharge**" means the discharge or the introduction of pollutants into the POTW from any non-domestic source regulated under 33 U.S.C. § 1317(b), (c) or (d).

"**Industrial User**" or "**IU**" means a User who is a source of indirect discharge.

"**Industrial Waste**" means the liquid and water-carried wastes and all solid, liquid or gaseous waste components thereof, resulting from any commercial, industrial, manufacturing, agricultural, trade or business operation or process or from the development, recovery or processing of natural resources, but does not include Domestic sewage.

"Industrial Waste Control Group" or **"IWC"** means the organizational group responsible for administration, implementation and enforcement of the Industrial Pretreatment Program, Surcharge r Program, Hauled Waste Program and similar regulatory programs on behalf of the Control Authority.

"**Industrial Waste Control Operations Manager**" means the Operations Manager of Industrial Waste of the Control Authority, and authorized staff of the Industrial Waste Control Group.

"**Infiltration**" means water entering a sewer system, including sewer service connections from the ground through such means as, but not limited to, defective pipes, porous pipes, pipe joints, connections or manhole walls. Infiltration does not include, and is distinguished from, inflow.

"**Inflow**" means water discharged into a sewer system, including service connections, from such sources as, but not limited to, roof leaders, cellars, yards, and area drains, foundation drains, cooling water discharges, drains from springs and swampy areas, manhole covers, cross connections from storm sewers and combined sewers, catch-basins, stormwater, surface run-off, street wash-waters, or drainage and river inflow. Inflow does not include, and is distinguished from, infiltration.

"Instantaneous Limit" means the maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

"**Interference**" means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: (i) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge

Document received by the MI Wayne 3rd Circuit Court.

processes, use or disposal; and (ii) therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Act, the Solid Waste Disposal Act ("SWDA") (including Title II, more commonly referred to as the Resource Conservation and Recovery Act ("RCRA"), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

"**Member Community**" means any county, township, city or village receiving wastewater services from the GLWA.

"**Minor User**" a User who does not meet the definition of a Significant Industrial User but is authorized to discharge to the POTW.

"**Monthly Average**" means the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

"**National Pretreatment Standard**", "**Pretreatment Standard**" or "**Standard**" means any regulation containing pollutant discharge limits promulgated by the USEPA in accordance with Section 307 (b) and (c) of the Act, which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to 40 CFR 403.5.

"**National Pollutant Discharge Elimination System**" or "**NPDES**" means the permit and regulation system governing direct discharges into navigable waters administered by the EGLE and USEPA.

"**New Source**" means any building, structure, facility or installation from which there is or may be the discharge of pollutants, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under Section 307(c) of the Act which will be applicable to such source if such standard is thereafter promulgated in accordance with section 307(c) of the Act.

"**Non-detect**" means the achievable laboratory testing quantification level for ascertaining the amount of a pollutant in a wastestream using analytical methods specified in or approved under 40 CFR 136, or pursuant to rules adopted by the EGLE or the USEPA.

"**Non-residential water meter**" means the water meter(s) for an entity that is not a Domestic Source.

"**North American Industrial Classification System" or "NAICS**" means a standard used by Federal statistical agencies to classify business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the United States business economy, as developed by the Office of Management and Budget (OMB), and adopted in 1997 to replace the Standard Industrial Classification (SIC) system.

"**Rules and Regulations**" mean the Sewage and Waste Control Rules and Regulations of the Control

Document received by the MI Wayne 3rd Circuit Court.

Authority, and any rules, regulations and orders adopted by the Board pertaining thereto.

"**Pass-through**" means a discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

"**Person**" means any individual, partnership, co-partnership, firm, company, corporation, association, joint venture, joint stock company, sole proprietorship, trust, estate, co-partnership, unit of government, school authority, or private corporation organized or existing under the laws of the State of Michigan or any other state or country.

"**PFAS Compounds**" mean the list of perfluoroalkyl and polyfluoroalkyl substances that the EGLE has identified as emerging contaminants; which includes: 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS), 2-(N-Ethylperfluorooctanesulfonamido) acetic acid (N-EtFOSAA), 2-(N-Methylperfluorooctanesulfonamido) acetic acid (N-MeFOSAA), 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA), 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA), 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA), 4,8-dioxa-3H-perfluorononanoic acid (ADONA), 9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS), Fluorotelomer sulfonic acid 4:2 (FTS 4:2), Fluorotelomer sulfonic acid 6:2 (FTS 6:2), Fluorotelomer sulfonic acid 8:2 (FTS 8:2), Hexafluoropropylene oxide dimer acid (HFPO-DA), Nonafluoro-3,6-dioxaheptanoic acid (NFDHA), Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA), Perfluoro-3-methoxypropanoic acid (PFMPA), Perfluoro-4-(perfluoroethyl) cyclohexylsulfonate (PFECHS), Perfluoro-4-methoxybutanoic acid (PFMBA), Perfluorobutanesulfonic acid (PFBS), Perfluorobutanoic acid (PFBA), Perfluorobutylsulfonamide (PFBSA), Perfluorodecanesulfonic acid (PFDS), Perfluorodecanoic acid (PFDA), Perfluorododecanoic acid (PFDoA), Perfluoroheptanesulfonic acid (PFHpS), Perfluoroheptanoic acid (PFHpA), Perfluorohexanesulfonamide (PFHxSA), Perfluorohexanesulfonic acid (PFHxS), Perfluorohexanoic acid (PFHxA), Perfluorononanesulfonic acid (PFNS), Perfluorononanoic acid (PFNA), Perfluorooctanesulfonamide (PFOSA), Perfluorooctanesulfonic acid (PFOS), Perfluorooctanoic acid (PFOA), Perfluoropentanesulfonic acid (PFPeS), Perfluoropentanoic acid (PFPeA), Perfluoropropanesulfoonic Acid (PFPrS), Perfluorotetradecanoic acid (PFTeA), Perfluorotridecanoic acid (PFTriA), Perfluoroundecanoic acid (PFUnA); or as amended.

"**pH**" means the intensity of the acid or base condition of a solution, calculated by taking the negative base-ten logarithm of the hydrogen ion activity. Activity is deemed to be equal to concentration in moles per liter.

"**Pollution**" means the man-made or man induced alteration of the chemical, physical, biological and radiological integrity of water.

"**Pollutant Strength Level**" means the concentrations of BOD, TSS, Phosphorus and FOG determined to be present in the wastewater discharged from a User and used to calculate the Surcharge for the High Strength Wastewater contributed by the User.

"**Phosphorus**" means the total concentration of all forms of organic and inorganic phosphorus compounds as measured by standard methods, expressed in mg/l.

"**Pretreatment**" means the reduction of the amount of pollutants, the elimination of pollutants, or the

Document received by the MI Wayne 3rd Circuit Court.

alteration of the nature of pollutant properties in wastewater prior to, or in lieu of, introducing such pollutants into a POTW. This reduction or alteration can be obtained by physical, chemical or biological processes; by process changes; or by other means, except by diluting the concentration of pollutants unless allowed by an applicable Pretreatment Standard.

"**Pretreatment Requirements***"* means any substantive or procedural requirement related to pretreatment, other than a National Pretreatment Standard, imposed on an Industrial User.

"**Process Wastewater**" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product or waste product.

"**Publicly Owned Treatment Works" or "POTW**" means a treatment works as defined by 33 U.S.C. 1292(2)(A) which is owned by a state or municipality, as defined in 33 U.S.C. 1362, including: Any devices and systems used in the storage, treatment, recycling, or reclamation of municipal sewage or industrial wastes of a liquid nature; or sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant; or the municipality, as defined in 33 U.S.C. 1362, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works. For these Rules and Regulations, POTWs include the Control Authority's wastewater facilities.

"**Regulatory Activities**" mean all programs and activities conducted by the Industrial Waste Control Group to meet its obligations under the NPDES Permit MI 0022802 and the Clean Water Act, and any rules adopted by the Board, including, but not limited to, an Industrial Pretreatment Program; Surcharge Program; Hauled Waste Program, Groundwater and Special Discharge Program.

"**Septage" or "Septage Waste**" means Domestic Sewage generated by sources without a direct connection to the sewerage system, including untreated and partially treated sewage solids, liquids, and sludge of human or domestic origin that is removed from a wastewater system for disposal through truck or other hauling.

"**Sewerage System**" means sewers, intercepting sewers, pipes or conduits, pumping stations, force mains, constructed drainage ditches, surface water intercepting ditches, and all other constructions, devices and appliances appurtenant thereto used for collecting or conducting sewage, industrial waste or other wastes to a point of treatment or ultimate disposal.

"**Significant Noncompliance**" means any Significant Industrial User who violates one (1) or more of the criteria of 40 CFR 403.8(f)(2)(viii)(a) -(h); or any Industrial User who violates one (1) or more of the criteria of 40 CFR 403.8(f)(2)(viii)(c), (d) or (h). (See Article XIII).

"Significant Industrial User" or "SIU" means any User who discharges to the POTW and which:

(1) Has an average discharge flow of twenty-five thousand (25,000) gallons per day or more of process wastewater excluding sanitary, boiler blowdown, and noncontact cooling water; or

(2) Has discharges subject to the national categorical pretreatment standards; or

Document received by the MI Wayne 3rd Circuit Court.

(3) Requires pretreatment to comply with the specific pollutant limitations of these Rules; or

(4) Has in its discharge, toxic pollutants as defined pursuant to 33 U.S.C. 1317, or other applicable federal and state laws or regulations, that are in concentrations and volumes which are subject to regulation under these Rules as determined by the Control Authority; or

(5) Is required to obtain a permit for the treatment, storage or disposal of hazardous waste pursuant to regulations adopted by this state or adopted under the Federal Solid Waste Disposal Act, as amended by the Federal Resource Conservation and Recovery Act, as amended, and may or does contribute or allow waste or wastewater into the POTW including, but not limited to, leachate or runoff; or

(6) Is found by the Control Authority to have a reasonable potential for adverse effect, either singly or in combination with other contributing industries, on the POTW operation, the quality of sludge, the POTW's effluent quality, or air emission generated by the POTW.

"**Sludge**" means liquid and precipitated or suspended solid material therein contained, generated from the treatment of water, sewage, industrial waste or other wastes.

"**Slug Discharge**" means any discharge of a non-routine, episodic nature, including, but not limited to, an accidental spill or non-customary batch Discharge, which has a reasonable potential to cause interference, pass-through, or in any other way to cause a violation of the Rules and Regulations, local limits or Permit conditions.

"**Standard Industrial Classification** or **"SIC**" means a classification pursuant to the Standard Industrial Classification Manual issued by the Executive Office of the President, Office of Management and Budget, 1987, as amended.

"**Standard Methods**" means the *Standard Methods for the Examination of Water and Wastewater,* published by the American Public Health Association, and the version(s) approved for use by 40 CFR 136.

"**Storm Water**" means any waste or wastewater occurring during or following any form of natural precipitation and resulting therefrom.

"**Surcharge or Pollutant Surcharge**" means a fee representing the cost of service determined by the Control Authority for each pollutant comprising Domestic Sewage, expressed in Dollars per pound ($/lb.).

"Total Suspended Solids" or "TSS" means the total suspended matter which floats on the surface of, or is suspended in, water, wastewater or other liquids, and is removable by laboratory filtration or as measured by standard methods.

"**Total Phenolic Compounds**" means the quantitative total recoverable phenols determined by US EPA Method 420.1: 4-Aminoantipyrine (4AAP), or alternate approved methods included in 40 CFR 136, as amended.

"Total Poly-Chlorinated Biphenyls" or "**Total PCB**" means the sum of the individual analytical results for each of the following PCB aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 during any single

Document received by the MI Wayne 3rd Circuit Court.

sampling event with any aroclor result less than the quantification level, or non-detect, being numerically treated as zero.

"**Toxic Pollutant**" means any pollutant or combination of pollutants designated as toxic in regulations promulgated by the Administrator of the USEPA under the provisions of the Clean Water Act, being 33 U.S.C. 1317, or included in the Critical Materials Register promulgated by the EGLE, or by other federal or state laws, rules or regulations.

"**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with limits imposed under these Rules or with national categorical pretreatment standards due to factors beyond the reasonable control of the Industrial User but does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

"**Users**" or "**Nondomestic User**" or "**Industrial User**" means an industry, commercial establishment, or other entity that discharges wastewater to a publicly owned treatment works other than, or in addition to, sanitary sewage; and is a source of indirect discharge.

"**United States Environmental Protection Agency**" or "**USEPA**" means the Environmental Protection Agency of the United States Government and its designated agents.

"**Wastewater Treatment Facilities**" mean any method, construction, device, arrangement or appliance appurtenant thereto, installed for the purpose of treating, neutralizing, stabilizing, disinfecting, or disposing of sewage, industrial wastes or other wastes, or for the recovery of by-products from such sewage, industrial waste or other wastes and includes sewers, pipes and other conveyances if they convey wastewater to a POTW.

"**Waters**" mean all accumulations of water, surface and underground, natural or artificial, public or private or parts thereof which flow through the territory of the GLWA.

"**Wastewater**" or "**Sewage**" means the liquid and water-carried wastes of dwellings, commercial buildings, industrial facilities, and institutions, whether treated or untreated, which are contributed to or permitted to enter the POTW including Infiltration and Inflow water, Storm Water and Cooling Water.

"Wastewater Discharge Permits" mean a control mechanism issued by the Control Authority in accordance with these Rules specifying the Pretreatment Standards and Requirements, pollutant discharge limitations, reporting and monitoring requirements, and other conditions under which an Industrial User may discharge to the sewerage system.

"**Wholesale Sewer Contract Customer**" means any county, township, city or village that has contracted for sewerage services with the GLWA.

Document received by the MI Wayne 3rd Circuit Court.

For purposes of these Rules, the following acronyms shall have the meanings designated by this section:

Term	Full Term Description	Term	Full Term Description
		EGLE	Michigan Department of Environment, Great Lakes, and Energy
BMP	Best Management Practice Plan		
BMR	Baseline monitoring report	mg/l	milligrams per liter
BOD	Biochemical Oxygen Demand	NPDES	National Pollutant Discharge Elimination System
CSIU	Categorical Significant Industrial User		
CFR	Code of Federal Regulations	POTW	Publicly Owned Treatment Works
		RCRA	Resource Conservation and Recovery Act, being 42 U.S.C. § 6901 et seq.)
FOG	Fats, Oils and Grease	SDP	Special Discharge Permit
GLWA	Great Lakes Water Authority	SIU	Significant Industrial User
HIW	Hauled-in Waste	SNC	Significant Noncompliance
IWC	Industrial Waste Control	SWDA	Solid Waste Disposal Act, being 42 U.S.C. § 6901 et seq.
IU	Industrial User	TSS	Total Suspended Solids
IPP	Industrial Pretreatment Program		
USEPA	Environmental Protection Agency	ug/l	Micrograms per liter

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER II – RULES GOVERNING IMPLEMENTATION, ADMINISTRATION AND ENFORCEMENT OF INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

The Board has adopted an Industrial Pretreatment Program and received approval from the State of Michigan for GLWA to be a Control Authority to implement, administer and enforce the program within the GLWA Service Area. The following rules have been adopted to describe a uniform means of carrying out the duties and obligations placed upon the GLWA as the Control Authority.

Article I CONTROL AUTHORITY RESPONSIBILITIES

The Board assigns and authorizes the Chief Executive Officer as the person responsible for carrying out the administration, duties, and enforcement responsibilities as the Control Authority, consistent with the intent of these rules.

Article II GENERAL SEWER USE REQUIREMENTS

Section II-201. Unlawful Discharges

It shall be unlawful for any Person to discharge Industrial Waste or Wastewater from non-Domestic Sources, directly or indirectly, into the Sewerage System, without authorization from the Control Authority; or to discharge any Wastewater in violation of the terms and conditions contained in these rules or contrary to any discharge authorization granted by the Control Authority.

Section II-202. Lawful Discharges

It is the duty of every Person seeking to lawfully discharge Sewage, Industrial Wastes, or other wastes or Wastewater of any kind directly or indirectly, into the Sewerage System to conform to the criteria or effluent quality standards established and/or adopted hereunder, and to seek authorization from the Control Authority in accordance with these rules; to comply with these rules, as amended from time to time; and to provide notice to the Control Authority of any substantial changes in the volume, quality, or character of their discharge.

a) Users and Minor Users who were previously authorized, whether by permit or a letter of authorization, by the Detroit Water and Sewerage Department in its prior capacity as the Control Authority, and have and are complying with such authorization, shall be deemed authorized by the GLWA, as the new Control Authority, until (i) a subsequent survey application, permit application or Baseline Monitoring report is filed with or requested by the GLWA; or (ii) a subsequent permit or a letter of authorization is issued by GLWA.

Document received by the MI Wayne 3rd Circuit Court.

Section II-203. General Pollutant Prohibitions

No User shall discharge or cause to be discharged into the POTW, directly or indirectly, any pollutant or Wastewater which will cause Interference or Pass-through. These general discharge prohibitions shall apply to all Users of the POTW whether or not the User is subject to national categorical pretreatment standards or to any other federal, state, or local pretreatment standards or requirements. In addition, it shall be unlawful for any User to discharge into the POTW:

a) Any liquid, solid or gas, which by reason of its nature or quantity, is sufficient either alone or by interaction with other substances to create a fire or explosion hazard or to be injurious in any other way to persons, to the POTW, or to the operations of the POTW. Pollutants, which create a fire or explosion hazard in a POTW, include, but are not limited to, wastestreams with a closed cup flash point of less than 140°F or 60°C using the test methods specified in 40 CFR 261.21; or

b) Any solid or viscous substance in concentrations or quantities, which are sufficient to cause obstruction to the flow in a sewer or other encumbrances to the operation of the POTW, including, but not limited to, grease, animal guts or tissues, bones, hair, hides or fleshing, entrails, whole blood, feathers, ashes, cinders, sand, cement, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, strings, fibers, spent grains, spent hops, wastepaper, wood, plastics, tar, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud or glass grinding or polishing wastes, or tumbling and deburring stones; or

c) Any Wastewater having a pH of less than 5.0 units or greater than 11.5 units; or

d) Any Wastewater containing petroleum oil, non-biodegradable cutting oil, products of mineral oil origin, or toxic pollutants in sufficient concentration or quantity either singly or by interaction with other pollutants to cause Interference, or Pass through, or constitute a hazard to humans or animals; or

e) Any liquid, gas, solid or form of energy, which either singly or by interaction with other waste is sufficient to create toxic gas, vapor, or fumes within the POTW in quantities that may cause acute worker health and safety problems, or may cause a public nuisance or hazard to life, or are sufficient to prevent entry into the sewers for their maintenance and repair; or

f) Any noxious or malodorous liquids, gases, solids, or other Wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair; or

g) Any substance which is sufficient to cause the POTW's effluent or any other product of the POTW, such as residue, sludge, or scum to be unsuitable for reclamation processing where the POTW is pursuing a reuse and reclamation program. In no case shall a substance discharged into the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria guidelines or regulations developed under 33 U.S.C. 1345, with any criteria, guidelines, or developed and promulgated

Document received by the MI Wayne 3rd Circuit Court.

regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Federal Clean Air Act, the Federal Toxic Substances Control Act, or with state criteria applicable to the sludge management method being used; or

h) Any trucked or hauled pollutants, except at discharge points designated by the POTW and authorized by the Control Authority (see Chapter IV); or

i) Any substance which will cause the POTW to violate the NPDES permit; or

j) Any discharge having a color uncharacteristic of the wastewater being discharged; or

k) Any wastewater having a temperature which will inhibit biological activity in the POTW treatment plant resulting in interference, but in no case wastewater with a temperature at the introduction into a public sewer which exceeds 150°F or which will cause the influent at the wastewater treatment facility to rise above 104°F (40°C); or

l) Any pollutant discharge which constitutes a Slug; or

m) Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established in compliance with applicable federal or state regulations; or

n) Any floating FOG which are sufficient to create an obstruction in the collection system, cause interference with the collection system or pass through the POTW; or

o) Any solid materials having a specific gravity greater than 1.2 or a cross section dimension of one-half (½) inch or greater which are sufficient to cause interference with the POTW; or

p) Wastewater causing a reading on an explosion hazard meter at the point of discharge into the POTW, or at any point in the POTW, of more than 20 percent (20%) of the Lower Explosive Limit of the meter; or

q) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.

Section II-204. Specific Pollutant Discharge Limitations

a) National Categorical Pretreatment Standards. All Industrial Users shall comply with the applicable National Categorical Pretreatment Standards and requirements promulgated pursuant to the Act as set forth in 40 CFR Subchapter N, Effluent Guidelines and Standards, which are hereby incorporated by reference and with all other applicable standards and requirements. Affected dischargers shall comply with applicable reporting requirements under 40 CFR Part 403 and as established by the Control Authority. The National Categorical Pretreatment Standards that have been promulgated as of the effective date of this section are delineated in Appendix A.

b) Local Pollutant Discharge Limitations. The Control Authority has developed specific Local Pollutant Discharge Limitations to protect the sewage disposal system from (pollutant) Interference, Inhibition or Pass-through, and worker health & safety in accordance with 40 CFR 403.5(c), which are to be

Document received by the MI Wayne 3rd Circuit Court.

deemed as Pretreatment Standards pursuant to Section 307(d) of the Act. The following specific Local Pollutant Discharge Limitations are adopted, and shall be enforced by the Control Authority:

1) Compatible Pollutants:

Pollutant Name & Symbol	**Daily Maximum Limitation (mg/l)**
Biochemical Oxygen Demand (BOD)	10,000
Total Suspended Solids (TSS)	10,000
Fats, Oils, and Grease (FOG)	1,500
Total Phosphorus (P)	125

2) Metals

Pollutant Name & Symbol	**Daily Maximum Limitation (mg/l)**
Arsenic (As)	1.0
Cadmium (Cd)	3.0
Chromium (Cr)	25.0
Copper (Cu)	0.72
Cyanide, Available (CN_{Av})	1.5
Lead (Pb)	1.0
Mercury (Hg)	0.0002
Nickel (Ni)	5.0
Silver (Ag)	1.0
Zinc (Zn)	12.0

3) Organic Pollutants

Pollutant Name & Symbol	**Daily Maximum Limitation**
PCB, Total	Non-detect
Perfluorooctane Sulfonic Acid (PFOS)	65 ng/l

4) Phenolic Compounds

i) The limitation for Total Phenolic Compounds shall be 5 mg/l using the 4AAP method.

ii) A Significant Industrial User may elect, in lieu of the limit for Total Phenolic Compounds specified in sub-paragraph i above, to substitute the specific limitations for the individual seven (7) phenolic compounds identified in the following table:

Pollutant Name & Symbol	**Daily Maximum Limitation (mg/l)**
2-Chlorophenol	8.0
4-Chlorophenol	8.0
4-Chloro-3-methylphenol	3.0

Document received by the MI Wayne 3rd Circuit Court.

2,4-Dichlorophenol	6.0
2,4-Dinitrophenol	30
4-Methylphenol	40
Phenol	86

Upon written election, the wastewater discharge permit shall be modified to incorporate these substituted parameters and a Significant Industrial User shall be responsible for monitoring and reporting compliance with these parameters.

c) Non-Detectable Limitations. For any pollutant parameter which has a Local Pollutant Discharge Limitation of Non-detect, a User will be in violation of the limitation when the measurement result exceeds by any magnitude the method detection level of the pollutant, using analytical methods authorized under 40 CFR 136, unless a higher level is appropriate because of demonstrated sample interference.

   1) Total PCB shall not be discharged at detectable levels, based upon USEPA Method 608, and the quantification level shall not exceed 0.2 ugms/l, unless a higher level is appropriate because of demonstrated sample interference.

   Any User may develop and implement a Best Management Practice Plan in accordance with Section II-1006 to demonstrate compliance with a Non-detect local pollutant discharge limitation

d) Applicability of most stringent limitation. Where a National Categorical Pretreatment Standard includes a pollutant parameter that also has a Local Pollutant Discharge Limitation, the Control Authority shall apply the most stringent Daily Maximum limitation for that pollutant parameter in a permit issued to the discharger. Where a 4-day, monthly or 30-day limitation contained in a National Categorical Pretreatment Standard is greater than the Local Pollutant Discharge Limitation Daily Maximum limitation, the Control Authority shall apply the more stringent value as the applicable average.

e) Development of Pollutant Discharge Limitations. The Control Authority may periodically review and re-evaluate new or existing wastewater pollutant discharge limitations in accordance with 40 CFR 403.5(c). The Control Authority reserves the right to establish additional or more stringent limitations or requirements on discharges to the POTW.

f) Development of Pollutant Concentration and Mass limits. When limits in a categorical pretreatment standard are expressed only in terms of mass of pollutants per unit of production, the Control Authority may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual Significant Industrial Users. Equivalent limitations shall be calculated in accordance with Sections 40 CFR 403.6(c)(3) and/or 40 CFR 6(c)(4) and shall be deemed pretreatment standards for the purposes

Document received by the MI Wayne 3rd Circuit Court.

of 33 USC 1317(d) and of these rules. Significant Industrial Users will be required to comply with the equivalent limitations in lieu of the promulgated categorical standards from which the equivalent limitations were derived.

Section II-205. Net/Gross Determinations

An Industrial User, subject to a Categorical Pretreatment Standard may obtain a net/gross adjustment to a Categorical Pretreatment Standard in accordance with the following paragraphs of this Section.

a) Categorical Pretreatment Standards may be adjusted to reflect the presence of pollutants in the Industrial User's intake water. Any Industrial User wishing to obtain credit for intake pollutants must make application to the Control Authority. Upon request of the Industrial User, the applicable Standard will be calculated on a "net" basis (i.e., adjusted to reflect credit for pollutants in the intake water) if the requirements of paragraph (2) of this Section are met.

b) Criteria.

   1) Either (i) the applicable Categorical Pretreatment Standards contained in 40 CFR subchapter N specifically provide that they shall be applied on a net basis; or (ii) the Industrial User demonstrates that the control system it proposes or uses to meet applicable categorical Pretreatment Standards would, if properly installed and operated, meet the Standards in the absence of pollutants in the intake waters.

   2) Credit for generic pollutants such as biochemical oxygen demand (BOD), Total Suspended Solids (TSS), and fats, oil and grease should not be granted unless the Industrial User demonstrates that the constituents of the generic measure in the Industrial User's effluent are substantially similar to the constituents of the generic measure in the intake water or unless appropriate additional limits are placed on process water pollutants either at the outfall or elsewhere.

   3) Credit shall be granted only to the extent necessary to meet the applicable Categorical Pretreatment Standard(s), up to a maximum value equal to the influent value. Additional monitoring may be necessary to determine eligibility for credits and compliance with Standard(s) adjusted under this Section.

   4) Credit shall be granted only if the Industrial User demonstrates that the intake water is drawn from the same body of water as that into which the POTW discharges. The Control Authority may waive this requirement if it finds that no environmental degradation will result.

Section II-206. Prohibition of Dilution

Except where expressly authorized to do so by an applicable Pretreatment Standard or Requirement, an Industrial User cannot increase the use of process water, or in any other way attempt to dilute prior to discharge as a partial or complete substitute for adequate pretreatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or requirement. The Control Authority may impose mass limitations on Industrial Users who are using dilution to meet

Document received by the MI Wayne 3rd Circuit Court.

applicable Pretreatment Standards or Requirements, or in other cases when the imposition of mass limitations is appropriate.

Article III PRETREATMENT OF WASTEWATER

Section II-301. Pretreatment Facilities

a) Industrial Users shall provide Wastewater Treatment Facilities, as necessary, to comply with these rules and shall achieve compliance with all Categorical Pretreatment Standards, Local Pollutant Discharge Limitations, and other requirements of these rules within the time limitations specified by EPA, the State, or these rules. Any Wastewater Treatment Facilities necessary for compliance shall be provided, operated, and maintained at the Industrial User's expense. Detailed plans describing such Wastewater Treatment Facilities and operating procedures shall be submitted to the Control Authority for review, before such Wastewater Treatment Facilities are constructed. The Industrial User shall obtain any plan approvals required from any member community or Wholesale Sewer Contract Customer prior to submitting them to the Control Authority for review. The review of such plans and operating procedures shall in no way relieve the Industrial User from the responsibility of modifying such Wastewater Treatment Facilities, as necessary, to produce a discharge that will meet any Wastewater discharge permit, or necessary to comply with these rules.

b) Additional Pretreatment Measures - Whenever deemed necessary, the Control Authority may require Industrial Users through written notice, to restrict their discharge during peak flow periods, designate that certain Wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage wastestreams from industrial wastestreams, and such other conditions as may be necessary to protect the POTW and/or to determine the Industrial User's compliance with the requirements of these Rules and Regulations. This written notice shall state the reasons for the restriction and be incorporated into an individual Wastewater discharge permit, or equivalent control mechanism.

c) As part of the Collection System and Combined Sewer Overflow Plans required by NPDES Permit MI0022802, the Control Authority may require any Person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage and flow-control facility to ensure equalization of flow. Before such action is taken, a written notice stating the reasons for the requirements shall be given to the User and incorporated into an individual Wastewater discharge permit or equivalent control mechanism. An individual Wastewater discharge permit, or equivalent control mechanism, may be issued solely for flow equalization.

Section II-302. Pretreatment Protection Requirements

a) Protection from Flammable and Combustible Substances - All Users who discharge wastewater containing a flammable and combustible substance shall install, operate and maintain a combustible

Document received by the MI Wayne 3rd Circuit Court.

gas monitoring system acceptable to the Control Authority which provides a method of early detection and recording of any discharge of a flammable or combustible substance so that preventive measures can be taken to avoid loss of life, damage to the Sewerage System, and/or damage to public and/or private property.

1) Flammable and combustible substances include, but are not limited to, gasoline, benzene, naptha, solvents, fuel oil; or any other liquid, solid, or gas that would cause or tend to cause flammable or explosive conditions to result in the Sewerage System.
2) Applicability: Petroleum refineries, gasoline storage and transfer facilities, and chemical manufacturing plants having a discharge of 25,000 gallons or more per day of process Wastewater per day shall be required to submit a plan and schedule to install and implement a combustible gas monitoring system, within ninety (90) days, and complete implementation of the plan and schedule within 6 months of these rules adoption or upon commencement of discharge,
3) The Control Authority may issue written notice to any User requiring the installation of a combustible gas monitoring system upon a finding of 15% or greater of the Lower Explosive Level (LEL) from the User's discharge to the POTW.
4) Specific requirements for a combustible gas monitoring system shall be included by the Control Authority in a Significant Industrial User's Wastewater discharge permit, and include the following basic requirements:
    i. The system shall be continuous and fixed (permanent rather than portable) and shall be installed near the company's approved monitoring location (where applicable).
    ii. The system shall have an indicator as well as an automatic continuous recorder capable of maintaining a permanent record of readings (i.e., chart recorder).
    iii. The system shall be equipped with a two-stage alarm system that is adjustable. The upper alarm level must be set at 20% LEL (Lower Explosive Limit).
    iv. The system shall be calibrated for methane detection.
    v. The control unit for the combustible gas detection meter should be located where the alarm will be heard and acted upon promptly (i.e., control room)

b) pH Monitoring Plan and Monitoring Requirement. All Significant Industrial Users, as specified below, who process acidic and/or caustic wastes and Wastewaters; or whose pH is adjusted on-site, whether done for operational or treatment purposes; shall (i) develop an approvable pH Monitoring plan, and (ii) install appropriate pH monitoring and recording devices.
    1) pH Monitoring Plan – In accordance with sub-paragraph 2) below, a pH monitoring Plan shall be provided within 90 days and complete implementation of the plan and schedule within 6 months of the adoption of these rules or included with a new permit application or Baseline Monitoring Report, which shall include the following:

Document received by the MI Wayne 3rd Circuit Court.

i. A description of the location of the pH monitor(s)

ii. Equipment specifications identifying the manufacturer & model of the (a) pH meter; (b) pH probe; (c) pH transmitter (if applicable); and (d) the pH recorder (chart, electronic, other)

iii. Maintenance procedures to be used for cleaning the pH monitoring system used, including the frequency of cleaning. A step by step description of the calibration procedure used shall be maintained by the SIU

iv. Calibration procedure information including (a) whether the probe can or cannot be removed for calibration; (b) whether the direct or indirect method is used for calibration; (c) whether the pH meter is capable of temperature compensation; (d) the pH buffers (reagents) used; and (e) the frequency of meter calibration, with weekly (as a minimum)

v. All records shall be retained for a minimum of three years and shall be made available to the Control Authority's representative upon request. A summary of records shall be provided with the six-month report to demonstrate compliance during the period. This may be submitted as a hard-copy or in electronic form.

2) pH Monitoring - shall be provided by all Significant Industrial Users as follows:

   i. The following Significant Industrial Users will provide a pH monitoring plan addressing continuous monitoring for pH consistent with USEPA method 150.2 using appropriate pH monitoring and recording devices:

      a. All SIUs classified as a Centralized Waste Treatment facility in accordance with 40 CFR 437.

      b. All SIUs who discharge 25,000 gpd or more of Wastewater and who process acidic and/or caustic wastes and Wastewaters; or whose pH is adjusted on-site, whether done for operational or treatment purposes.

   ii. Significant Industrial Users who discharge less than 25,000 gpd of Wastewater will provide a pH Monitoring Plan and monitor for pH using appropriate pH monitoring and recording devices, which are representative of the period of discharge.

   iii. The Control Authority may require any User to install pH monitoring upon finding pH levels below 5.0 or greater than 11.5, and by serving written notice to the User.

3) The pH monitoring plan shall be acknowledged within the Wastewater discharge permit for the SIU. The following criteria shall also be included in the permit:

   i. No individual excursion from the range of pH values shall exceed 15 minutes.

   ii. Where continuous pH monitoring is used, the maximum and minimum pH readings will be reported. Regardless of the number of pH measurements recorded for each day, only one violation per day shall be determined.

Document received by the MI Wayne 3rd Circuit Court.

iii. A summary of pH monitoring records shall be provided with the six-month report to demonstrate compliance during the period. This may be submitted as a hard-copy or in electronic form.

Section II-303. Protection from Accidental Discharges

a) All Users shall provide protection from accidental discharge, spill or Slug discharge of materials prohibited by these rules, contained in any raw materials, chemicals and/or wastes kept on the premises.

b) Users shall develop detailed plans against accidental discharge and/or spill discharge, and construct facilities, develop and implement measures reasonably necessary to avoid loss of life, damage to the Sewerage System, and/or damage to public and/or private property. These shall be implemented, provided, and maintained at the owner's or User's cost or expense.

c) At a minimum, plans against accidental discharge and/or spill discharge will be required when prohibited materials or substances are kept on the premises in a form which could readily be carried into the POTW; constitute a concentration of five (5%) percent or greater in the raw material, chemical solution or waste material; or are stored in volumes of more than fifty-five (55) gallons. Such plans shall include the following information:

   1) Description of facilities and operating procedures to be implemented to provide protection against such accidental discharge, spill or slug discharge. Such facilities and measures to prevent and abate these discharges shall be implemented, provided, and maintained at the owner's or User's cost or expense.
   2) Provide the approximate average and maximum quantities of such prohibited materials or substances kept on the premises in the form of raw materials; chemicals and/or waste therefrom and the containment capacity for each.
   3) Identify facility contacts responsible for implementation and keeping the plan current.
   4) Include notification procedures and post such requirements advising employees whom to contact in the event of any accidental, spill or slug discharge.
   5) Include information on the secondary containment capacity available and the capacity available for containing rainfall or freeboard. Supporting calculations shall be maintained by the User and made available to the Control Authority upon request.
   6) Include a certification statement signed by the facility's Authorized Representative.

d) Significant Industrial Users shall develop plans to control Slug discharges, as defined by 40 CFR 403.8(f)(2)(v). The Control Authority shall evaluate whether any Significant Industrial User is required to develop, modify or revise a slug discharge plan at a frequency of at least once every two (2) years.

e) Existing Users who are required to develop any plan under sub-section b and/or c shall complete and submit such a plan within sixty (60) days of the effective date of these rules. Users who have previously filed such plans are not required to resubmit these plans unless the information has been revised or

Document received by the MI Wayne 3rd Circuit Court.

changed. New Users shall submit plans under sub-section b and/or c prior to the time they commence discharging.

f) The User shall promptly notify the Control Authority of changes or modifications to the plan including, but not limited to, a change in the contact person(s), or substance inventory.

g) The User shall immediately notify the Control Authority of any change at its facility affecting the potential for a Slug discharge**.**

h) The Control Authority shall include as a requirement in a Wastewater discharge permit issued under these Rules, the development, revision and submittal of these plans described in sub-section b and/or c.

Article IV CLASSIFICATION OF WASTEWATER SOURCES

Section II-401. Specific Wastewater Source Classifications

a) The Control Authority shall recognize the following specific Wastewater source classifications for purposes of these Rules:
   1) Septage and waste haulers.
   2) Groundwater sources and occasional or special waste sources.
   3) Grease, oil and solid sources; and
   4) Utility wastes and Wastewater.

b) The Control Authority may establish additional Industrial User classifications where necessary to efficiently carry out the intent of these Rules, or to administer the requirements of these Rules on a defined Industrial User group.

Section II-402. Septage and Waste Haulers

a) The Control Authority has developed a program for the regulation of Septage and hauled wastes that are authorized for treatment from non-point sources. The regulatory requirements for this program are more fully described in Chapter V of these rules.

b) Domestic Sewage and Wastewater from recreational vehicles, individual portable toilets, and vessels and ships shall also be authorized in accordance with Chapter V of these rules.

c) The Control Authority shall not accept any waste or wastewater at its POTW on 9300 West Jefferson delivered by truck, rail or dedicated pipeline, other than Septage Waste and the contents of domestic waste septic tanks, cesspools, seepage pits, sewage lift stations and portable toilets may be discharged to the Sewerage System by haulers authorized to unload such materials and subject to the requirements of the Chapter V rules.

d) Hauled-in industrial wastes, other than described in paragraph b, shall not be discharged into the Sewerage System either directly or indirectly because of the risk potential to the well-being of the system and the receiving waters. Such wastes are to be disposed of in commercial facilities specializing

Document received by the MI Wayne 3rd Circuit Court.

in the reclamation, rendering, disposal, destruction or burial of non-hazardous, hazardous or potentially hazardous wastes.

Section II-403. Special Discharge Environmental Remediation, Groundwater Sources and Occasional or Special Waste Sources may not be discharged unless authorization has been granted by the Control Authority.

a) The Control Authority has developed a program for the regulation of Environmental Remediation, Groundwater Sources and Occasional or Special Waste Sources that are authorized for treatment from non-point sources. The regulatory requirements for this program are described in Chapter V of these rules.

b) Special wastes and Wastewaters not described by subparagraph (a) above, may be authorized for discharge if they do not pose harm or risk of harm to the sewerage system as determined by the Control Authority in its reasonable discretion. Such wastes include, but are not limited to, spoiled beer, wine, milk or other beverages, non-hazardous waste materials, and water and Wastewater from tanks or vessels, ships, freighters or barges.

Section II-404. Grease, Oil and Solids Interceptors

The contributions of FOGs and the discharge of solid or viscous pollutants can cause or contribute to obstructions in the POTW and collection system. The installation and maintenance of grease, oil, and solids interceptors can minimize these occurrences. The Control Authority will work with Member Communities and/or Wholesale Sewer Contract Customers to correct improper handling from sources found to cause or contribute to obstructions in the POTW and collection system.

a) Grease, oil, and solids interceptors shall be provided when, in the opinion of the Control Authority, they are necessary for the proper handling of Wastewater containing excessive amounts of grease and oil, or solids; except that such interceptors shall not be required for Domestic Sources. All interception units shall be of a type and capacity acceptable to the User's Member Communities and/or Wholesale Sewer Contract Customers and the Control Authority.

b) The Control Authority may require Users to provide records or other information concerning the inspection, cleaning and maintenance practices of the User.

c) The Control Authority may require any User to install and/or repair, maintain and operate grease, oil, and solids interceptors when, in the opinion of the Control Authority, they are found to cause or contribute to obstructions in the POTW and collection system. The Control Authority shall notify the User of grease, oil and solids sources in writing of such requirement(s).

d) All interception units shall be of a type and capacity acceptable to the local Health Department, community agency or Member Community, and the Control Authority. Such interceptors shall be regularly inspected, cleaned, and repaired by the User at their expense.

Document received by the MI Wayne 3rd Circuit Court.

Section II-405. General Permits.

a) The Control Authority may authorize the discharge of utility wastes and Wastewater resulting from maintenance and related activities of telephone, gas, steam, or electrical utilities, whether public or private, through the use of general permits. Subject to appropriate reporting requirements, the general permit shall authorize discharge in accordance with the terms of the permit.

b) General Permits may be used by the Control Authority to carry out these rules, for Users other than Significant Industrial Users, to authorize the discharge from User's activities. General Permits shall authorize discharge in accordance with the terms of the permit and include appropriate reporting requirements.

Article V REPORTING AND NOTIFICATION REQUIREMENTS

The Control Authority may require any User to provide any of the reports or notifications described within this section whenever there is a reasonable potential or actual finding.

Section II-501. General Notification Requirements

a) Notification requirements. Within one (1) hour of becoming aware of a discharge into the POTW which has the potential to cause, or does cause, the User to implement any accidental discharge, spill or Slug discharge, or to report the occurrence of an unanticipated by-pass or upset event, the User shall telephone the Control Authority at its System Control Center (313-267-6000), and notify the Control Authority of the discharge event.

   1) The notification shall include the name of the caller, the location and time of discharge, the type of Wastewater, the estimated concentration of excessive or prohibited pollutants and estimated volume, and the measures taken, or being taken, to abate the discharge into the POTW.

   2) Within five (5) calendar days after the discharge, the User shall submit a detailed written report to the Control Authority describing the cause of the discharge and the measures to be taken by the User to prevent similar future occurrences and, when required by the Control Authority, the User's Wastewater discharge permit may be modified to include additional measures to prevent such future occurrences.

b) Such notification shall not relieve the User of any expense, cost of treatment, loss damages or other liability which may be incurred as a result of, among other things, damage to the POTW, fish kills, or any other environmental impairment or any other damage to persons or property.

c) Recovery of costs. Any User discharging in violation of any of the provisions of these rules, which produces a deposit or obstruction or causes damages to or impairs the POTW, or causes the Control Authority to violate its NPDES permit, shall be liable for any expense, loss, damage, penalty or fine incurred because of said violation or discharge. Prior to assessing such costs, the Control Authority shall notify the User of its determination that the User's discharge was the proximate cause of such

Document received by the MI Wayne 3rd Circuit Court.

damage, obstruction, impairment, or violation of the NPDES permit and the intent to assess such costs to the User. Any such notice shall include written documentation which substantiates the determination of proximate cause and a breakdown of cost estimates. Failure to pay the assessed costs shall constitute a violation of these rules. Such charge shall be in addition to, and not in lieu of, any penalties or remedies provided under these rules, or this Code, or other statutes and regulations, or at law or in equity.

Section II-502. Specific Notification Requirements

a) All Users, whether required to have a Wastewater discharge permit, Authorization or not, shall notify the Control Authority at its System control center (313-267-6000) of any discharge or release that is contrary to the requirements of these rules.
b) The Control Authority may identify additional requirements for notice through a Wastewater discharge permit or authorization to discharge.

Section II-503. Hazardous Waste Notification

a) All Industrial Users, who discharge into the Sewerage System, shall notify the Control Authority in writing of any discharge of a substance which, if otherwise disposed of, would be a hazardous waste as set forth in 40 CFR 261. Such notification must comply with the requirements of 40 CFR 403.12(p).
b) At a minimum, any Significant Industrial User regulated under a Wastewater discharge permit issued by the Control Authority shall review their previous notification(s) and report any additions or other changes to the hazardous wastes discharged, in accordance with 40 CFR 403.12(j), to the POTW and provide the current information specified in paragraph (a) above at the time of seeking a Permit Renewal.
c) This provision does not create a right to discharge any substance not otherwise permitted to be discharged by these rules, or any permit issued thereunder, or any applicable Federal or State law.

Section II-504. Authorized Representative.

The Authorized Representative, or a duly Authorized Representative if applicable, shall sign and certify any survey, permit application or re-application, Baseline Monitoring Report, 90-day report, or periodic report or a request for reconsideration or appeal hearing. Other documents, responses or reports may be signed by any other agent as long as the agents name, role and any limitations of the agency, are made known to the Control Authority in writing.

Section II-505. Best Management Practice Plans and Pollution Prevention Plans

The Control Authority shall allow Users to develop and to implement Best Management Practice Plans and Pollution prevention plan initiatives as a partial response to non-compliance and incorporate such plans as an enforceable part of a Wastewater discharge permit. Upon demonstration of compliance, the User may request to be relieved of the Best Management Practice Plans and Pollution prevention implementation requirement.

Document received by the MI Wayne 3rd Circuit Court.

Section II-506. Centralized Waste Treatment Facility Requirements

A Centralized Waste Treatment Facility receive hazardous and non-hazardous materials for treatment and disposal through the local POTW and collection system.

a) Any new or existing Industrial User who operates a Centralized Waste Treatment Facility as described by 40 CFR 437, Subpart D (Multiple Wastestream Subcategory), shall provide an Equivalent Treatment that satisfies the requirements of 40 CFR 437.2(h), and applicable certification statement to the Control Authority when applying for a new Wastewater discharge permit, when submitting its Baseline Monitoring Report, or when re-applying for a Wastewater discharge permit. The statement shall be certified by a professional engineer registered in the State of Michigan. The statement must be provided with the Baseline Monitoring Report, or Wastewater discharge permit application or reapplication form.
b) Any new or existing Industrial User who operates a Centralized Waste Treatment Facility as described by 40 CFR 437, Subpart A, B or C shall provide a statement that the Centralized Waste Treatment Facility has treatment processes capable of treating the Wastewater received or collected by the Centralized Waste Treatment Facility, and necessary to meet the applicable discharge limitations. The statement shall be certified by a professional engineer registered in the State of Michigan. The statement must be provided with the Baseline Monitoring Report, or Wastewater discharge permit application or reapplication form.
c) A Centralized Waste Treatment Facility granted a permit under this section shall provide supplemental information with the periodic reports required under section II-705, that includes the volume (in gallons) of Subpart A (metal bearing wastes), Subpart B (oily wastes), and Subpart C (organic bearing wastes) received each month, held in inventory or removed off-site each month, and discharged to the sewer system each month.
d) A Centralized Waste Treatment Facility granted a permit under this section shall maintain records which, at a minimum, identify the source, volume, character, and constituents of the Wastewater accepted for treatment and disposal. These records may be reviewed at any time by the Control Authority.

Article VI INSPECTION & MONITORING REQUIREMENTS

Section II-601. Right of Entry: Inspection and Monitoring.

a) The Control Authority shall have the right to enter the premises of any User to determine through inspection and monitoring, whether that User is complying with all requirements of these rules; and any Wastewater discharge permit issued hereunder. Such rights shall also permit the Control Authority to collect independent samples at the facility and install and retrieve monitoring equipment and instrumentation. The Control Authority shall perform these activities at reasonable times, and in a reasonable manner.
b) Users shall allow the Control Authority, or the Control Authority's representative, ready access to all

Document received by the MI Wayne 3rd Circuit Court.

parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties authorized by these rules. The Control Authority may access any easement, street or other public location without notice.

c) Upon arrival at the User's premises, the Control Authority's representative shall notify and inform the User, or the User's employees, of their purpose. The Control Authority's representative shall bear proper credentials and identification, and at the User's option may be accompanied by a representative authorized by the User.

d) Where a User has security measures in force, the User shall make prompt and necessary arrangements with the security personnel so that, upon presentation of appropriate credentials, the Control Authority's representative will be permitted to enter for the purposes of performing their specific responsibilities. The Control Authority shall neither refrain from, nor be prevented or delayed from, carrying-out its inspection or sampling duties due to the unavailability of the Authorized Representative of the facility.

e) While performing work on private property, the Control Authority shall observe all reasonable safety, security and other reasonable rules applicable to the premises as established by the User.

f) Should the Control Authority require photographs of the User's facilities, the User shall be notified, provided a consent form, and provided with electronic or printed copies of any such photographs within 48 hours. If requested by the User, these may be transmitted electronically.

g) Upon the request of the Control Authority, Users shall furnish access to information and records relating to discharges into the POTW. The User shall be notified, provided a consent form, and the Control Authority shall be permitted to photograph or copy such records.

h) Noncompliance with this subsection shall be addressed in accordance with the enforcement authority available through Article X of these rules.

Section II-602. Inspection, sampling and record-keeping.

a) Significant Industrial Users shall sample and analyze their discharge in accordance with the provisions of their permit. The Control Authority may require such samples to be split for the Control Authority's independent analysis.

b) Significant Industrial Users shall maintain records of all information from monitoring activities required by these rules, or by 40 CFR 403.12(o), for no less than three (3) years. This period of record retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User, or the operation of the Control Authority's Industrial Waste Program, or when requested by the Control Authority, by the State, or by the USEPA.

c) In the event the Control Authority obtains samples, and analyses are made of such samples, a copy of the results of such analyses shall be promptly furnished upon written request by the Industrial User's Authorized Representative.

d) When requested by the Industrial User, the Control Authority's representative shall leave with the

Document received by the MI Wayne 3rd Circuit Court.

Industrial User, a portion of any sample of the Industrial User's discharge taken from any sampling point on or adjacent to the premises for the Industrial User's independent analysis. Users must provide their own containers for receipt of such samples. Where the sampling protocol, e.g. grab-sampling, would affect the integrity of the sample, the User may be provided with a contemporaneously collected sample.

e) In cases of disputes arising over shared samples, the portion taken and analyzed by the Control Authority shall be controlling unless proven invalid. The Industrial User may request a conference with the Control Authority to review and discuss the shared sample results in dispute, including pertinent supporting materials and documents. The Control Authority shall issue a written conference report following such discussion.

Section II-603. Sampling Plans

a) All Significant Industrial Users shall provide a sampling plan describing the manner and form intended for representative wastewater self-monitoring. At a minimum, the plan shall include:
    1) A description of the sample collection method(s) based on grab, flow-proportional composite or time-proportional composite methods.
    2) Designate applicable requirements for batch and/or continuous discharges, including the release time.
    3) If applicable, the sampler settings, such as pulse, time, sample volume; and
    4) If applicable, the flow-measurement equipment.

b) The sampling plan shall be submitted to the Control Authority and shall be implemented by the Significant Industrial User.

Section II-604. Sample Collection Methods

a) Users shall collect representative samples of the waste and Wastewater discharges using sampling procedures described by 40 CFR 403, Appendix E.

    Except for samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds, wastewater samples must be collected using 24-hour flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the Control Authority. A Significant Industrial User may request the use of time-proportional composite sampling or grab sampling rather than flow-proportional composite sampling by demonstrating that the use of time-proportional composite sampling or grab sampling will provide samples representative of the SIU's discharge. The User shall provide supporting documentation including any statistical analysis submitted in support of the request.

    1) The Control Authority may authorize the use of alternative sampling methods, where such methods are representative of the Significant Industrial User's Discharge and shall document

Document received by the MI Wayne 3rd Circuit Court.

its decision in the SIU file.

2) If granted by the Control Authority, the authorization shall be limited to the duration of the Wastewater discharge permit. A Significant Industrial Users shall request re-authorization of a waiver request with any permit re-application form filed with the Control Authority. The Control Authority shall review any such request *de novo*.

Section II-605. Sampling & Monitoring Facilities

a) All Significant Industrial Users, and any other Industrial User who discharge under an effective Wastewater discharge permit or other control mechanism, shall provide, operate, and maintain at their own expense a sampling and monitoring facility to enable the Control Authority to conduct such other monitoring and sampling as required for determining compliance. The sampling and monitoring facility include but is not limited to, a manhole or special structure to facilitate monitoring, inspection, sampling, and flow measurement of the facility's discharge, if applicable.

b) Consistent with Section II-603(a), the Industrial User shall provide the following technical information to the Control Authority:

1) A drawing or sketch showing all sewer connections and sampling manholes by the size, location, elevation, and points or places of discharges into the POTW; and

2) A flow schematic showing (i) the connections receiving each national categorical process wastestreams, (ii) connections receiving other process wastestreams, storm water, sanitary water or Cooling Water, and (iii) any conveying a combined wastestream; and

3) A sampling plan in accordance with section II-603 above.

4) Where flow-proportional composite sampling is performed on-site, information describing the Industrial User's flow monitoring instruments, including make and model number; recording devices used, including make and model number; and must include a non-resettable flow totalizer; and

5) Where flow-proportional composite sampling is performed on-site, the specific criteria for sampling is described in Chapter VI of these rules shall also be followed.

c) In the event the Control Authority determines that the monitoring facility identified in the permit application is inadequate, or fails to include Wastewater regulated under these rules, a new monitoring facility must be identified, or provided by the Industrial User, which shall allow for collection of a representative sample of the Wastewater discharged from the facility, by serving written notice to the Industrial User.

d) The sampling and monitoring facility should be situated on the Industrial User's premises in a location readily accessible to the Control Authority. There shall be ample room in or near such sampling or monitoring manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility and any permanently installed sampling and measuring equipment shall be maintained at all

Document received by the MI Wayne 3rd Circuit Court.

times in a safe and proper operating condition at the expense of the Industrial User.

e) When such a location would be impractical or cause undue hardship to the Industrial User, the Industrial User may seek approval for the facility to construct the sampling manhole in the public streets, or sidewalk area when there is room and the location will not be obstructed by landscaping or parked vehicles. It shall be the responsibility of the Industrial User to obtain any necessary approvals which may be required from other government entities for the location and construction of monitoring facilities. Whether constructed upon public or private property, the sampling and monitoring facilities shall be provided in accordance with all applicable local construction standards and specifications.

f) The sampling and monitoring facility shall be properly operated, kept clean, and maintained in good working order at all times. The failure of an Industrial User to keep its monitoring facility in good working order shall be grounds for the Control Authority to issue a written finding that sample results are unrepresentative of the Industrial User's discharge.

Article VII WASTEWATER DISCHARGE PERMITS & OTHER CONTROL MECHANISMS

Section II-701. Survey, Permit Applications and Baseline Monitoring Reports

a) Duty to apply. No User may discharge Wastewater, other than Domestic Sewage, without receiving authorization from the Control Authority. Any new or existing User who has not obtained authorization for discharge shall comply with the following:

   1) Any new or existing User, who does not have an effective Wastewater discharge permit but meets the definition of a Significant Industrial User after the effective date of these rules, is required to submit a complete permit application in accordance with Section II-703, to the Control Authority and obtain a Wastewater discharge permit for its discharge. The permit application must be provided by a new User at least ninety (90) days prior to the commencement of any discharge; or for an existing User (as of the effective date of these rules), within thirty (30) days of the effective date of these rules. A failure to apply is a violation of these rules.

   2) Any new or existing Industrial User who performs an operation covered by a National Pretreatment Standard shall file a Baseline Monitoring Report in accordance with Section II-702 to the Control Authority and obtain authorization for its discharge.

   3) All other new or existing Users discharging Wastewater, other than Domestic Sewage and Cooling Water, must file a survey application and receive authorization from the Control Authority for its discharge.

   4) Users who have previously filed a survey, permit application, or Baseline Monitoring Report with the Detroit Water & Sewerage Department or GLWA prior to the effective date of these rules and have received an effective Wastewater Discharge Permit or Letter of Authorization, are not required to resubmit their survey, permit application, or Baseline Monitoring Report.

Document received by the MI Wayne 3rd Circuit Court.

b) The Control Authority may require any User to complete a survey or permit application to determine whether the User is a Significant Industrial User or is subject to other regulatory requirements (described in Chapter III, IV, or VII). Users shall comply within thirty (30) days of receiving written notice. Failure of the Control Authority to so notify a User, shall not relieve the User of its duty to obtain a wastewater discharge permit as required by these rules.

c) Upon receipt of any survey, permit application, or Baseline Monitoring Report, the Control Authority shall notify the User that:

   1) The User is not authorized to discharge. The notice will be in writing and shall indicate what additional information, pretreatment facilities, monitoring facilities or other requirements are necessary for authorization.

   2) The User is a Significant Industrial User and is authorized to discharge, conditioned upon issuance of a Wastewater discharge permit or other control mechanism; or

   3) The User is not a Significant Industrial User and is authorized to discharge as a Minor User under a Wastewater authorization letter.

Section II-702. Baseline Monitoring Report Requirements

a) Within one hundred eighty (180) days after the effective date of a Categorical Pretreatment Standard, or one hundred eighty (180) days after the final administrative decision made upon a category determination submission under Section 40 CFR 403.6(a)(4), whichever is later, existing Industrial Users subject to such Categorical Pretreatment Standards and currently discharging into or scheduled to discharge into the POTW, shall submit to the Control Authority, a report containing the information listed in 40 CFR 403.12(b)(1-7).

b) At least ninety (90) days before commencement of any discharge, each new source and any existing sources that become Industrial Users after the promulgation of an applicable Categorical Pretreatment Standard, shall submit to the Control Authority, a report which contains the information listed in 40 CFR 403.12(b)(1-5). In such report, new sources shall include information concerning the method of pretreatment that the source intends to use to meet applicable Categorical Pretreatment Standards. New sources shall provide estimates of the information requested in 40 CFR 403.12(b)(4) and (5).

c) The USEPA has established regulations at 40 CFR 405 through 471, National Categorical Pretreatment Standards applicable to specific industrial activities. The Control Authority adopts these by reference, as listed in Appendix A, of these rules.

   1) Any Industrial User subject to a National Categorical Pretreatment Standard, or any Industrial User who becomes subject to a new or revised National Categorical Pretreatment Standard, shall apply for a Wastewater discharge permit within ninety (90) days after the promulgation of the applicable National Categorical Pretreatment Standard, unless an earlier date is specified or required by 40 CFR 403.12(b).

Document received by the MI Wayne 3rd Circuit Court.

2) The Control Authority may require any Industrial User to complete a Baseline Monitoring Report to determine whether the Industrial User performs an operation described by a National Categorical Pretreatment Standard. The Industrial User shall provide information demonstrating that it does not perform an operation described by a National Categorical Pretreatment Standard or provide a Baseline Monitoring report within thirty (30) days of being so notified.

3) New Sources. Industrial Users who meet the New Sources criteria shall install, maintain in operating condition, and "startup" all Pollution control equipment required to meet applicable Categorical Pretreatment Standards and requirements before beginning to discharge. Within the shortest feasible time and not to exceed ninety (90) days, new sources must meet all applicable Categorical Pretreatment Standards.

Section II-703. Contents of Survey or Permit Application

a) In support of a survey, permit application or re-application, the User shall submit, in units and terms appropriate for evaluation, the following information:

1) Corporate or individual name, any assumed name(s), address, and location of the discharging facility.

2) Name and title of the Authorized Representative of the User who shall have the authority to bind the User financially and legally. Where the Authorized Representative is represented by an agent, the authorized representative shall also identify the agent and any applicable limitations or restrictions of their agency.

3) The Standard Industrial Classification codes of all processes at this location according to the Standard Industrial Classification manual, issued by the Executive Office of the President, Office of Management and Budget, 1987, or the equivalent based upon the North American Industrial Classification System (NAICS), as amended.

4) Actual or proposed Wastewater constituents and characteristics for each parameter listed in the permit application form. At a minimum, such parameters shall include the applicable Categorical Pretreatment Standards from any applicable National Categorical Pretreatment Standard or any pollutant parameter for which there is a local Pollution discharge limitation; and any other toxic pollutants known or suspected to be present in the discharge, regulated in the previous permit, or specifically requested by the Control Authority. For each parameter, the expected or experienced maximum and average concentrations during a one (1) year period shall be provided.

5) For industries subject to National Categorical Pretreatment Standards, the data requested herein shall be separately shown for each categorical process wastestream. Combined wastestreams proposed to be regulated by the combined wastestream formula shall also be identified. Sampling and analysis shall be performed in accordance with procedures established by the USEPA pursuant to 33 U.S.C. 1314(g) and contained in 40 CFR 136, as amended. Where 40 CFR 136 does not

Document received by the MI Wayne 3rd Circuit Court.

include sampling or analytical techniques for the pollutants in question, sampling and analysis shall be performed using validated analytical methods approved by the administrator.

6) A listing and description of activities, facilities and plant processes on the premises, and the pollutants associated with each process. Those processes, which are subject to National Categorical Pretreatment Standards, shall be so designated.
7) A listing of raw materials and chemicals which are either used in the manufacturing process or could yield pollutants requiring pretreatment prior to discharge to the Sewerage System. Any User claiming immunity from having to provide such information for reasons of national security shall furnish acceptable proof of such immunity.
8) A description of typical daily and weekly operating cycles for each process in terms of starting and ending times for each of the seven (7) days of the week.
9) Information on the average and maximum twenty-four (24) hour wastewater flow rate based on actual measurements, or estimated and the means of estimation, of (i) each process wastestream subject to a National Categorical Pretreatment Standard, (ii) each process wastestream not subject to a National Categorical Pretreatment Standard, (iii) non-process wastestreams including but not limited to Cooling Water, sanitary water, or any other Wastewater. This information shall include any applicable daily, monthly or seasonal variations for each wastestream.
10) Each combined wastestream, specifying the flow rate of regulated, unregulated and diluting wastestreams.
11) A drawing showing all sewer connections and sampling manholes by the size, location, elevation and points or places of discharges into the POTW; also a flow schematic showing which connections receive each national categorical process wastestream and which connections receive Storm Water, sanitary water or Cooling Water; also show which lines handle each combined wastestream;
12) The rate of production as pertains to processes subject to production-based limits under the National Categorical Pretreatment Standards.
13) A statement regarding whether or not the requirements of these rules and of the National Categorical Pretreatment Standards and requirements are being met on a consistent basis and, if not, what additional operation and maintenance work and/or additional construction is required for the Industrial User to meet the applicable standards and requirements. This statement shall be reviewed and signed by the Authorized Representative and, as appropriate, certified by a qualified professional.
14) Basic information on the program for the prevention of accidental discharges.
15) Proposed or actual hours of operation of each pretreatment system for each production process.
16) A schematic and description of each pretreatment facility which identifies whether each

Document received by the MI Wayne 3rd Circuit Court.

pretreatment facility is of the batch type or continuous process type.

17) The source of any intake water if other than through the GLWA and the basis for measurement.
18) The volume of any discharge water other than potable water obtained through any source and the basis of measurement.
19) If additional construction and/or operation and maintenance procedures will be required to meet the requirements of these rules and the National Categorical Pretreatment Standards, the shortest schedule by which the Industrial User will provide such additional construction and/or implement the required operation and maintenance procedures.
20) Identify whether the Industrial User has conducted a waste minimization assessment or audit of its operations in order to identify all feasible source reduction and recycling practices that may be employed to reduce or eliminate the generation of pollutants and other wastes at the facility; and
21) Any other information as may reasonably be required to prepare and process a Wastewater discharge permit.

Section II-704. Permit Issuance

Upon receipt of any survey, permit application, or Baseline Monitoring Report, the Control Authority shall review the information and advise the User of:

a) The User does not meet the definition of a Significant Industrial User and is authorized to discharge as a Minor User under a Wastewater authorization letter; or
b) The User meets the definition of a Significant Industrial User and is authorized to discharge under a Wastewater discharge permit or other control mechanism; or
c) The User meets the definition of a Significant Industrial User and is conditionally authorized to discharge under an administrative order including schedules for additional information, pretreatment facilities, monitoring facilities or other requirements are necessary for processing a Wastewater discharge permit; or
d) The User is not authorized to discharge. The Control Authority may withhold issuance of a permit to a Significant Industrial User, which has not submitted an adequate or timely report, or permit application, to the control authority in accordance with the reporting requirements of 40 CFR 403.12, or whose discharge is in violation of these rules. The failure of the Industrial User to cease discharging following notification shall be considered a violation of these rules.
e) Procedure for Permit Issuance. Only one (1) facility location shall be included in each permit. If the Control Authority determines that the User meets the definition of a Significant Industrial User, is required to have a Wastewater discharge permit, and has evaluated and accepted the data furnished, the Significant Industrial User will be notified by U.S. mail, using certified mail.
    1) Draft Wastewater Discharge Permit. The notification shall contain a copy of the draft permit, so marked, for review. A Significant Industrial User has thirty (30) days from the date of mailing to

Document received by the MI Wayne 3rd Circuit Court.

file comments and/or a response to the draft permit. The Control Authority will evaluate the comments and response to the draft permit and consider them for inclusion in a final Wastewater discharge permit.

2) Final Wastewater Discharge Permit. Following expiration of the thirty (30) day comment period, or consideration of any comments or responses made, the Control Authority shall prepare a Final Wastewater discharge permit. The Final Wastewater discharge permit will be transmitted by U.S. Mail. The Significant Industrial User has twenty (20) days from the date of mailing to file a request for reconsideration and/or appeal hearing in accordance with Chapter VIII. During the appeal process, the SIU will comply with all uncontested terms or conditions which shall be in full force and effect. Upon disposition of any contested terms or conditions, the Wastewater discharge permit shall be issued as final.

Section II-705. Types and Contents of Wastewater Discharge Permits

a) The Control Authority shall develop Wastewater discharge permit formats meeting the needs of Significant Industrial Users as well as the special Wastewater sources discharging to the Sewerage System. Such formats include, but are not limited to, general permits for multiple location facilities, special discharge permits, and unloading permits for hauled-in wastes and Wastewater.

b) Every Wastewater discharge permit shall contain all requirements of 40 CFR 403.8(f)(1)(iii) and shall be deemed to incorporate all provisions of these rules, other applicable laws, rules, regulations, and charges and fees established by the Control Authority without repetition therein.

c) A Wastewater discharge permit may also contain the following:

1) The Wastewater discharge permit shall specify the wastes and Wastewaters which the Control Authority authorizes an Industrial User to discharge to the Sewerage System; and identify any wastes or Wastewater for which the request to discharge is denied; and the wastes and Wastewater requiring imposition of special conditions in order to comply with the permit.

2) Limits on the average and maximum Wastewater constituents or characteristics which are equivalent, more restrictive than, or supplemental to the numeric limits enumerated in these rules, or the applicable National Categorical Pretreatment Standards.

i. Limits on average, and/or maximum rate and time of discharge or requirements for flow regulation and equalization.

ii. Limits on the average volume, and/or maximum volume of Wastewater that is authorized for discharge. The ratio of average to maximum volume shall not exceed three (3), except where seasonal variations of the average and/or maximum volume are noted in the permit.

iii. Requirements for installation, operation, and maintenance of discharge sampling manholes and monitoring facilities by the Significant Industrial User.

iv. Restrictions on which of the Significant Industrial User's discharge wastestreams are to

Document received by the MI Wayne 3rd Circuit Court.

be allowed to be discharged at each point of connection to the POTW.

v. Specifications for Significant Industrial User monitoring programs which may include sampling locations, frequency and type of sampling, number, types and standards for tests and reporting schedules.

vi. Requirements for the prevention of accidental discharges and the containment of spills or Slug discharges.

vii. Restrictions based on the information furnished in the application.

viii. Additional reporting requirements:

a. All permittees shall submit a report on the form prescribed by the Control Authority, or on an alternative form approved by the Control Authority, indicating the status of compliance with all conditions enumerated or referred to in the Wastewater discharge permit, or made applicable to the permit by these rules. Unless required more frequently, the reports shall be submitted on a periodic basis (generally six months), on a schedule to be established by the Control Authority. Analytical data generated by the Control Authority shall not be submitted in lieu of the facility's own self-monitoring data as required by the Wastewater discharge permit.

b. The report shall show the concentration of each substance for which there is a specific limitation in the permit. The report will include all calculations necessary to demonstrate compliance with any 4-day, 30-day or monthly average, or mass limitation that may be included in the permit.

c. Permittees subject to National Categorical Pretreatment Standards shall submit compliance reports at the times and intervals specified by federal regulations and by the Control Authority. A compliance report shall be submitted to the Control Authority no later than ninety (90) days following the final compliance date for a National Categorical Pretreatment Standard, or in the case of a New Source, no later than ninety (90) days, following commencement of the introduction of wastewater into the POTW, and in accordance with 40 CFR 403.12(d).

A ninety (90) day report shall also be provided where the facility’s treatment system(s) are upgraded, modified or replaced so as to demonstrate compliance with applicable limitations.

d. A report on continued compliance shall be submitted at six-month intervals thereafter on the schedule established by the Control Authority and incorporated into the Significant Industrial User's discharge permit. The reports shall be either on a form prescribed by the Control Authority or on an alternative form approved by the Control Authority and shall indicate the nature and concentration of all pollutants in the

Document received by the MI Wayne 3rd Circuit Court.

discharge from each regulated process which are limited by National Categorical Pretreatment Standards, or which there is a specific limitation in the permit, or which may be identified by the Control Authority. The report shall include a record of measured or estimated average and maximum daily flows for the reporting period for the discharges regulated by the permit. The combined wastestream formula may be used for reporting purposes after the initial information has been furnished to the Control Authority, provided there have been no changes to the elements composing the combined wastestream.

e. Reports shall contain the results of representative sampling performed during the period covered by the report and of the discharge and analysis of pollutants contained therein, and, for Significant Industrial Users subject to production-based standards, shall be cross-referenced to the related flow or production and mass as required to determine compliance with the applicable pretreatment standards. The frequency of monitoring shall be as prescribed in the applicable general pretreatment regulations, being 40 CFR 403, or by the Control Authority, but no less than is necessary to assess and assure compliance by the Significant Industrial User with the most stringent applicable pretreatment standards and requirements. All sampling and analysis shall be performed in accordance with applicable regulations contained in 40 CFR 136 and amendments thereto. Where 40 CFR 136 does not include sampling or analytical techniques for the pollutants in question, sampling and analysis shall be performed using validated analytical methods approved by the Administrator.

f. If any Significant Industrial User monitors any pollutant more frequently than required by the Control Authority, collects the sample(s) at monitoring locations specified in the wastewater discharge permit, and analyzes such samples using approved analytical procedures, the results of this monitoring shall be included in such report.

g. The report shall state whether the applicable pretreatment standards are being met on a consistent basis and, if not, what additional operation and maintenance practices and/or pretreatment system improvements or changes are necessary to bring the Significant Industrial User into compliance with the applicable pretreatment standards.

h. All Significant Industrial Users shall include the following certification statement with the periodic (six-month) report: "*I certify under penalty of law that this document and all attachments were prepared under my direction, or supervision, in accordance with a system designed to assure that qualified personnel properly gather and*

Document received by the MI Wayne 3rd Circuit Court.

evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations." Said certification shall be signed by the facility's Authorized Representative. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of the Authorized Representative must be submitted to the Control Authority prior to, or together with, any reports to be signed by an Authorized Representative.

i. If sampling performed by a permittee indicates a violation, the Significant Industrial User shall notify the Control Authority within twenty-four (24) hours of the time said Significant Industrial User knows, or should have known, of the violation. In addition, the Significant Industrial User shall repeat the sampling and analysis and submit the results of the repeat analysis to the Control Authority within thirty (30) days after said Industrial User becomes, or should have become, aware of the violation in accordance with its Wastewater discharge permit.

d) In the event the Control Authority determines that any Significant Industrial User is discharging substances in quality, quantity or at locations which may cause problems to the POTW, or the receiving stream, the Control Authority has the authority to develop and enforce effluent limits applicable to the Significant Industrial User. To the extent the Control Authority seeks to impose restrictions in a permit which are more restrictive than established in these rules, the Control Authority shall provide written documentation to explain its rational basis for the greater restriction, or protection against pass through, interference, or violation of the NPDES permit, to the Significant Industrial User;

e) Requirement for pollution prevention plan initiatives or Best Management Practice Plans; and

f) Other requirements reasonably necessary to ensure compliance with these rules.

Section II-706. Permit Duration, Notification of Changed Conditions, Modification and Transfer

a) Permit duration. Any permit issued by the Control Authority shall be issued for a specified time period, but in no case shall a permit have a term greater than five (5) years. The effective date and the expiration date shall be included in every permit issued by the Control Authority.

b) Notification of Changed Conditions. It is the duty of each Significant Industrial User to promptly notify the Control Authority of (i) material or substantial changes to its facility or operation, (ii) substantial change in the volume of Wastewater discharged, or (iii) changes in the characteristics of its effluent,

Document received by the MI Wayne 3rd Circuit Court.

including the listed or characteristic Hazardous Wastes for which initial notification under 40 CFR 403.12(p) has been made. The Significant Industrial User shall notify the Control Authority by filing a completed permit application form at least thirty (30) calendar days prior to the change identifying the changes and including supporting documentation. The Control Authority will evaluate the permit application in accordance with sub-paragraph (d) below. The failure of the Significant Industrial User to so apply shall be considered a violation of these rules.

c) Finding of Changed Conditions. Where the Control Authority finds or discovers (i) material or substantial changes to a Significant Industrial User's facility or operation, (ii) substantial change in the volume of Wastewater discharged, or (iii) changes in the characteristics of its effluent, including the listed or characteristic Hazardous Wastes for which initial notification under 40 CFR 403.12(p), it shall require the Significant Industrial User to provide a permit application and supporting documentation within 30 days. The Control Authority will evaluate the permit application in accordance with sub-paragraph (d) below. The failure of the Significant Industrial User to so apply shall be considered a violation of these rules.

d) Permit modification. The terms and conditions of the permit may be subject to modification and amendment by the Control Authority during the term of the permit. The modification may be based upon information provided by the Significant Industrial User or discovered by the Control Authority, which includes:

   1) A permit application provided in accordance with Section II-706. Sub-paragraph b or c.
   2) Changes in the monitoring location or method of sampling.
   3) Typographical errors or omissions discovered in permits.
   4) Amendments or changes to the limitations or pretreatment standards and requirements identified in Section II-204.
   5) Material or substantial changes to a Significant Industrial User's facility or operation, or changes in the characteristics of its effluent.
   6) A Significant Industrial User's noncompliance with portions of an existing permit.
   7) A finding of interference or pass through attributable to the Significant Industrial User.
   8) A change of conditions within the POTW.
   9) Embodiment of the provisions of a legal settlement or of a court order.
   10) Change(s) in the Control Authority's NPDES permit.
   11) Any changes necessary to fulfill the Control Authority's role under federal or state law.
   12) Amendments to, or promulgation of, national categorical pretreatment standards or requirements including 40 CFR 403 and those delineated in Appendix A of these rules.

e) Permit modification Procedure. The Control Authority shall inform the Significant Industrial User of any proposed change in its permit. The Control Authority will issue a draft permit using certified mail

Document received by the MI Wayne 3rd Circuit Court.

and provide the Significant Industrial User thirty (30) days to file a response to the draft modified permit. Thereafter, the Control Authority will issue a final permit and, unless appealed, the permit will become effective twenty (20) days after issuance.

f) Permit custody and transfer. Wastewater discharge permits are issued to a specific person as defined herein for a specific discharge. A Wastewater discharge permit shall not be reassigned or transferred or sold to a different person, new owner, new Significant Industrial User, different premises, or a new or changed operation without notice to and written approval of the Control Authority and providing a copy of the existing permit to the new owner or operator. It shall be the permit holder's duty to notify the Control Authority of any such change at least thirty (30) days before the date of the change. Wastewater discharge permits, which do not receive the written approval of the Control Authority prior to the change, shall be null and void regardless of reassignment, or transfer, or sale. If it determines that an unreported change has occurred, the Control Authority may revoke a permit. If a change takes place, the Control Authority may require the application for a new or modified permit. Any succeeding person shall comply with the terms and conditions of any existing permit which the Control Authority allows to be retained.

Section II-707. Permit Re-application.

A Significant Industrial Users whose Wastewater discharge permit is expiring apply for reissuance of the permit by submitting a complete permit re-application form a minimum of ninety (90) days prior to the expiration date of its existing permit. The permit re-application form shall include all information specified in Section II-703, which includes, but is not limited to, updates and re-certification of the spill or Slug control plans, updates to the 40 CFR 403.12(p) Hazardous Waste notifications, and for a Centralized Waste Treatment Facility, the current equivalent treatment study or treatment statement in accordance with Section II-506. The evaluation and review of a permit re-application by the Control Authority will be *de novo*, and in accordance with Section II-705.

a) Where a Significant Industrial Users has submitted a complete and timely re-application form, the existing permit shall be automatically extended until a permit is issued as final by the Control Authority.

b) Where a Significant Industrial Users has not submitted a complete or timely re-application form, the Control Authority may issue an administrative order authorizing the discharge for a period not to exceed six (6) months.

c) Where a Significant Industrial Users fails to submit a permit re-application, or submits the re-application after the permit expiration date, the Wastewater discharge permit will be expired as of the date specified in the permit. The failure of the Significant Industrial Users to so apply shall be considered a violation of these rules.

Document received by the MI Wayne 3rd Circuit Court.

Article VIII SIGNIFICANT INDUSTRIAL USER REQUESTS

Section II-801: Periodic Compliance Reporting Frequency

a) Significant Industrial Users may request modification and an offset of the time period included in their periodic compliance report. Example, where a Significant Industrial User is required to submit data on the discharge for a six-month period of January through June, or July through December, the Significant Industrial User may request an offset period of December through May and June through November.
b) The Control Authority may authorize the modifications requested by the Significant Industrial User as long as it does not violate any federal or state requirement, or court order. When authorized, the Wastewater discharge permit or permit addendum shall be issued by the Control Authority.

Section II-802. Electronic Reporting

The Control Authority may choose to receive electronic documents and notices described in these rules, upon satisfaction of the electronic reporting requirements of 40 CFR 3. The Control Authority will notify Users if electronic (digital) documents can be accepted in accordance with 40 CFR 3, and the specific requirements for submission of such documents. Users that send electronic (digital) documents must satisfy the specific requirements of the Control Authority.

Article IX. PUBLIC INFORMATION AND CONFIDENTIAL INFORMATION

Section II-901. Public information

a) All information and data on any User obtained from a User or created by the Control Authority, from any written reports, questionnaires, permit applications, permits and monitoring programs, and from inspections, or any other sources shall be available to the public or other governmental agencies without restriction unless the User specifically requests and is able to demonstrate that the release of such information would divulge information, processes, or methods of production entitled to protection as confidential information under State law.
b) Any person may request the above information in accordance with the written procedures and guidelines of the Control Authority found at www.glwater.org.

Section II-902. Confidential information

a) A User claiming a submission contains confidential information must assert such claim at the time of submission of the information or data; and demonstrate that such information should be held confidential or disclosure would pose a risk to trade secrets or secret processes and mark the information and documentation accordingly. The Control Authority's Office of General Counsel shall determine whether the information requested is to be treated as confidential information and provide their decision in writing.
b) Where the User has demonstrated that confidential information is present in the submission, those portions of the report shall not be made available for inspection by the public, but shall be made

Document received by the MI Wayne 3rd Circuit Court.

available immediately upon request to governmental agencies for uses related to the NPDES program or pretreatment program, and in enforcement proceedings involving the person furnishing the report.

c) Wastewater constituents and characteristics and other effluent data, as defined at 40 CFR 2.302, shall not be recognized as confidential information and shall be available to the public without restriction.

d) A User may appeal the decision of the Control Authority's Office of General Counsel in accordance with the Michigan Freedom of Information Act.

Article X ENFORCEMENT

Section II-1001. Enforcement Response Guide

The Control Authority has developed an enforcement response guide to include a range of enforcement responses available to the Control Authority to effectively enforce the terms and conditions of its rules. The Control Authority shall implement the industrial pretreatment program and enforce these rules in accordance with the enforcement response guide approved by the EGLE.

The Control Authority, using information provided by a User or independently collected by the Control Authority's representative, shall identify any User violating these rules and initiate the remedies enumerated in the enforcement response guide to abate the violation and/or restore the User to a compliant condition through administrative and judicial enforcement remedies authorized by these rules.

Section II-1002. Test of Good Faith Effort

The Control Authority may consider the good faith of a User as a factor in determining the enforcement response(s) to invoke to an incident of noncompliance. The good faith of a User may be established by considering the cooperation and efforts made by a User in achieving and maintaining compliance with these rules; and in the promptness with which a User responds to resolution of an incident of noncompliance. If the User appears to be acting in good faith to comply with the rules, the Control Authority may choose an enforcement action on a more conciliatory level than if the User does not appear to be acting in good faith to comply with the rules.

Section II-1003. Violations

a) Violations shall include any act or conduct by a User that includes:
   1) The failure of a User to provide a permit application, Baseline Monitoring Report or other application form for any discharge of Wastewater to the Sewerage System prior to the commencement of discharge, whether from a new or existing source.
   2) The failure of a User to completely and/or accurately report the Wastewater constituents and/or characteristics of the User's discharge.
   3) The failure to report significant changes in the User's operations or Wastewater constituents and/or characteristics within the time frames provided in Section II-706 (b) of these rules.
   4) The failure or refusal to grant reasonable access to the User's premises, waste discharge, or sample

Document received by the MI Wayne 3rd Circuit Court.

location for the purpose of inspection or monitoring.

5) Restricting, locking out or preventing, directly or indirectly, access to any monitoring facilities constructed on public or private property. The locking or securing of the monitoring facility shall not constitute a violation pursuant to this subsection, provided, that upon request, reasonable access to the facility is promptly provided to the Control Authority representatives.
6) Restricting, interfering, tampering with, or rendering inaccurate any of the Control Authority's monitoring devices including, but not limited to, samplers.
7) Failing to obtain a Wastewater discharge permit prior to discharging Wastewater to the POTW.
8) Failing to comply with any condition or requirement of the User's Wastewater discharge permit, or other control mechanism.
9) Failing to provide notification of any self-monitoring violation, accidental release, or other notice required under these rules.
10) Failing to comply with any limitation, prohibition, or requirement of these rules, or order issued hereunder. Users acting in full compliance with wastewater discharge permits issued prior to the effective date of these rules shall be deemed to be in compliance with the requirements of these rules, and such permits shall remain in effect and be enforceable under these rules until a superseding permit is effective.
11) Users shall comply with applicable National Categorical Pretreatment Standards on the date specified in the Federal Regulations regardless of compliance schedules.

Section II-1004. Administrative Enforcement Actions

The Control Authority shall initiate the appropriate administrative enforcement action, except in the case of an emergency or a flagrant violation, in order to compel the User to eliminate or to remedy such violation as soon as possible. These administrative enforcement actions include:

a) Notice of Violation - The Control Authority shall take care to enforce these rules and use reasonable efforts of on-site inspections, records review and independent authority monitoring, to identify violations of the rules. Except in the case of an actual or threatened discharge as specified in sub-paragraph (g) of this section, whenever the Control Authority has reason to believe that any User has violated or is violating these rules, whether as an individual event or pattern, the Control Authority shall serve a written notice upon such User, stating the nature of the violation including its date, time and place, and the action and/or response required from the User.
b) Issuance of Citation of Violation – The Control Authority is authorized to enforce these rules and issue a citation ticket to any person or User who is reasonably believed to have violated these rules. The following fines are authorized for inclusion with the citation:

Document received by the MI Wayne 3rd Circuit Court.

			Within a Calendar Year (per violation)	
Violation Type	**Criteria**	**Event**	**First Violation**	**Succeeding Violation**
Reporting Violation	>45 days after specified due date	Any occurrence	$ 250.00	$ 500.00
Notification Violation	>24 hrs. beyond specified time	Any occurrence	$ 100.00	$ 250.00
Effluent Violation	Pollutant parameter exceeds applicable TRC (See Article XII)	Daily Maximum	$ 100.00	$ 250.00
Effluent Violation	Pollutant parameter exceeds applicable TRC (See Article XII)	Monthly Average	$ 250.00	$ 500.00
Effluent Violation	Pollutant parameter exceeds applicable chronic criteria (See Article XII)	Daily Maximum	$ 250.00	$ 500.00
Effluent Violation	Pollutant parameter exceeds applicable chronic criteria (See Article XII)	Monthly Average	$ 500.00	$ 1,000.00
Effluent Violation	Stipulated penalty as part of administrative enforcement	Daily Maximum	$ 250.00	$ 500.00
Effluent Violation	Stipulated penalty as part of administrative enforcement	Monthly Average	$ 500.00	$ 1,000.00

The Citation shall be in writing and shall specify the date, time and violation alleged, signed by the Control Authority and be served on the Authorized Representative in person or by certified mail. The User may appeal any written citation under the reconsideration and appeal procedures of these rules.

c) Conferences - The Control Authority may order any person, who violates these rules, to attend a conference wherein the Control Authority may endeavor to establish a program wherein the User agrees

Document received by the MI Wayne 3rd Circuit Court.

to eliminate or remedy the violation pursuant to an enforceable compliance schedule. Any notice of violation ordering attendance to a conference, shall be served at least ten (10) days before the scheduled conference and shall set forth the date, time, and place thereof. The conference shall be conducted by the Control Authority or its designated representative. The User may present a plan and schedule for achieving compliance with these rules. Nothing contained herein shall require the Control Authority to accept or agree to any proposed plan or schedule, or to prevent the Control Authority from proceeding with a show cause hearing as set forth in subsection (4) of this section. If the attendees agree upon a compliance schedule, the User and the Control Authority may enter, by consent, into a compliance agreement or an administrative order setting forth the terms of such agreement. A User must exhibit good faith and expeditious efforts to comply with these rules and any procedures, requirements, and agreements hereunder.

d) Compliance schedules - The User and the Control Authority may agree upon a schedule which sets forth the terms and conditions, and time periods or schedules for completion of actions to remedy or to eliminate the causes of violation. These schedules may be developed as part of a conference compliance agreement, or administrative consent order. Schedules developed under this subsection shall adhere to the following conditions:
    1) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of upgraded or additional pretreatment facilities, or to the implementation of additional operation and maintenance procedures required for the User to meet the applicable pretreatment requirements and standards including, but not limited to, hiring an engineer, completing preliminary plans, completing final plans, executing contracts for major components, commencing construction, and completing construction;
    2) No single increment referred to in subsection (1) of this section shall exceed nine (9) months.
    3) Not later than fourteen (14) days following each date in the schedule and the final date for compliance, the User shall submit a progress report to the Control Authority including, at a minimum, whether it has complied with the increment of progress to be met on such date and, if not, the date which it expects to comply with this increment of progress, the reason(s) for delay, and the steps being taken by the User to return to the established schedule; and
    4) Any deviation from the compliance schedule may result in the User being found in violation of these rules or being recommended for an escalated enforcement action.

e) Administrative orders - The Control Authority may order any User, who violates or continues to violate these rules or duly issued permit, to install and to properly operate devices, treatment facilities, or other related appurtenances. In addition, orders may contain such other requirements as might reasonably be necessary and appropriate to address the violation including the installation of pretreatment technology,

Document received by the MI Wayne 3rd Circuit Court.

additional self-monitoring and management practices, implementation of a waste minimization assessment to identify and implement feasible source reduction, and recycling practices to reduce the generation or release of pollutants at the facility. An order may be either an administrative consent order, which is the result of an agreement, or a unilateral administrative order.

f) Show cause hearing - Where a conference, compliance agreement or administrative order has not been effective in remedying the violation(s) or are deemed an inadequate response to an actual or threatened discharge to the POTW, the Control Authority may order any User who violates these rules or allows such violation to occur, to show cause why a proposed enforcement action should not be taken.

A notice shall be served upon the User specifying the time and place of a hearing regarding the violation, and the reason(s) why the show cause action and proposed enforcement action is being taken. The notice of the hearing shall be served personally, or by, registered or certified mail with return receipt requested, at least ten (10) days before the hearing. Service shall be made upon the Authorized Representative, or to its agent.

1) Hearing proceeding. The hearing shall be conducted by the Control Authority's Chief Compliance Officer or his/her designee, who shall serve as hearing officer and conduct the show cause hearing and take the evidence, and may:
    i) Issue notices of hearing requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearing.
    ii) Prepare a report of the evidence and hearing, including transcripts and other evidence.
    iii) Transcript. At any show cause hearing held pursuant to these rules, testimony shall be recorded by a court reporter.
2) Actions. After a show cause hearing has been conducted, the hearings officer shall issue an order directing any of the following actions:
    i) A finding that the User has demonstrated by a preponderance of the evidence that the violation(s) contained within the show cause notice did not occur.
    ii) A finding that the User has failed to demonstrate by a preponderance of the evidence that the violation(s) contained within the show cause notice did not occur, and that the following additional actions are required.
    iii) Immediate compliance with the User's Wastewater discharge permit and/or control mechanism; or with any applicable limitation, condition, restriction or requirement of these rules, or applicable local, state or federal law or regulation.
    iv) Pretreatment of wastes and Wastewater by installation of adequate treatment equipment, monitoring facilities, or proper operation and maintenance of existing treatment equipment be accomplished within a specified time period.
    v) Submission of periodic reports on effluent quality and quantity determined by self-

Document received by the MI Wayne 3rd Circuit Court.

monitoring analysis throughout the final period set by a compliance date.

vi) Control of discharge quantities or volumes.

vii) Payment of costs for reasonable and necessary inspection, monitoring, and administration of the User's activities by the Control Authority during compliance efforts; and/or

viii) Any such other orders as are appropriate including, but not limited to, immediate termination of sewer or wastewater treatment services, revocation of a wastewater discharge permit, or orders directing that following a specified time period sewer or Wastewater treatment service will be discontinued unless adequate treatment facilities, devices, or operation and maintenance practices have been employed.

ix) The User may appeal the decision of the hearing officer in accordance with Chapter VIII.

g) Emergency suspensions and orders - The Control Authority may order suspension of the sewer or Wastewater treatment service and/or a wastewater discharge permit where, in its opinion, such suspension is necessary to stop any actual or threatened discharge which presents or may present an imminent or significant hazard to the health or welfare of persons or to the environment, interferes or may interfere with the POTW, or causes or may cause the Control Authority to violate any condition of its NPDES permit. Any person notified of a suspension of the sewer or wastewater treatment service and/or the wastewater discharge permit shall immediately stop or eliminate the contribution.

1) In the event the Control Authority provides verbal notification under this section, written confirmation providing a detailed written statement from the Control Authority and the basis of its findings in support of its order to suspend contributions by the User, within twenty-four (24) hours of such action, and include the specific recourse available to the User. In any event, the written confirmation order shall provide the User with an opportunity for a hearing before the Control Authority, or its designated representative, within ten (10) days of such action. The User shall submit a detailed written statement at the hearing describing the causes of the harmful contribution and the measures taken to prevent any future occurrence, or, if the hearing has been waived, a report describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be provided to the Control Authority within fifteen (15) days of the written confirmation order. Upon proof of elimination of the noncomplying discharge, the Control Authority shall reinstate the Wastewater discharge permit and/or the sewer or Wastewater treatment service.

2) In the event of a failure of the person to comply voluntarily with any suspension or revocation order, the Control Authority shall take such judicial enforcement actions as deemed necessary, including immediate severance of the sewer connection or services, to prevent or minimize damage to the POTW system or danger to any individual or the environment.

3) Where the Control Authority has issued a show cause order, or hearing decision in paragraph

Document received by the MI Wayne 3rd Circuit Court.

(g)(1) above, calling for the suspension of the sewer or Wastewater treatment service and/or a wastewater discharge permit, and where the Control Authority has not reinstated the wastewater discharge permit and/or the sewer or wastewater treatment service, the User may exercise the appeal provision in Chapter VIII. The Show Cause order and the hearing transcript and report shall substitute for the Reconsideration statement requirement of Chapter VIII of these rules.

Section II-1005. Judicial Enforcement Actions

Where administrative enforcement actions have been unable to eliminate or to remedy the violation(s) or where in the case of emergency or flagrant violation, the Control Authority determines that the enforcement action should be escalated to compel the User to eliminate or to remedy such violation as soon as possible, the following judicial enforcement actions are authorized:

a) Civil action: Whenever the Control Authority has reasonable grounds to believe that a User is violating, or has violated, a provision of its wastewater discharge permit, a pretreatment standard or requirement or any requirement of these rules, including the failure to pay any fee, fine, charge or surcharge imposed hereby, the Control Authority may commence a civil action to compel compliance in a court of competent jurisdiction to enjoin the User from discharging, and/or to obtain appropriate legal and/or equitable relief to remedy the violations and impose the fees, fines, charges and surcharges requested. The commencement of a suit neither constitutes an exclusive election of remedies nor prohibits the Control Authority from commencing action in federal court for discharges believed to be in violation of these rules, state and federal requirements contained in the Clean Water Act, the NPDES permit, or other applicable laws or requirements. In addition, the Control Authority may recover the reasonable attorney fees, court costs, court reporters' fees, and other unusual expenses related to enforcement activities or litigation against the person found to have violated these rules, or the orders, rules, regulations and permits issued hereunder.

b) Criminal action:
    1) Any User, who knowingly makes any false statement, representation of certification, is guilty of a misdemeanor, punishable by imprisonment for not more than ninety (90) days, or a fine of not more than $500.00, or both. Each violation constitutes a separate and distinct offense.
    2) Any User, who knowingly tampers with or alters a monitoring device or process, causing inaccurate readings or results, is guilty of a misdemeanor, punishable by imprisonment for not more than ninety (90) days, or a fine of not more than $500.00, or both. Each violation constitutes a separate and distinct offense.
    3) For all other violations of a rule or regulation adopted and promulgated herein, a User shall be punished by a civil fine not to exceed one thousand dollars ($1,000.00) for each violation per day.

Document received by the MI Wayne 3rd Circuit Court.

4) The Control Authority is hereby authorized, through its general counsel, to seek prosecution of criminal charges against any person violating any provision of these rules.

c) Any fines, costs, and penalties which are imposed by any court of competent jurisdiction shall be payable to the Control Authority.

Section II-1006. Supplemental Enforcement Actions

a) Pollution Prevention Plans and Best Management Practice Plans. The Control Authority may require a User to develop and implement pollution prevention plans or Best Management Practice Plans, designed to eliminate or reduce pollutant contributions beyond the levels required by these rules. Where required, the plans shall be incorporated into a modified or revised Wastewater discharge permit; and include a schedule for periodically reporting implementation progress and results for the plan(s).

b) Local Pollutant Discharge Limitations for Total PCB. In the event where one (1) or more of the measurements taken for Total PCB during a six (6) month period exceeds by any magnitude the method detection level of 0.2 ugms/l, the Control Authority may require a User to develop and implement Pollution prevention plan initiatives or a BMP, as part of its response to the exceedance. Upon acceptance of the Pollution prevention plan initiatives or BMP, the Control Authority will recognize continued performance under the Pollution prevention plan initiative or BMP as continued compliance. Upon approval of the Control Authority, these Pollution prevention plan initiatives or BMPs, shall be made an enforceable part of the Wastewater discharge permit.

c) Local Pollutant Discharge Limitations for Mercury (Hg). In the event where one (1) or more of the measurements taken for Hg during a six (6) month period exceeds by any magnitude the limitation of 10 ugms/l, the Control Authority may require a User to develop and implement Pollution prevention initiatives or a BMP, as part of its response to the exceedance. Upon acceptance of the Pollution prevention plan initiatives or BMP, the Control Authority will recognize continued performance under the Pollution prevention plan initiatives or BMP as continued compliance. Upon approval of the Control Authority, these Pollution prevention plan initiatives or BMPs, shall be made an enforceable part of the Wastewater discharge permit.

d) PFAS Compounds:

1) General Requirement: Any User who manufactured PFAS Compounds; previously used, currently uses, or plans to use materials containing PFAS Compounds; and who has a discharge of wastes and Wastewaters to the POTW, shall be required to develop, submit and implement plans for the reduction and elimination of the PFAS Compounds.

i) Plans shall be submitted to the Control Authority and shall include, but not limited to, monitoring, treatment, product substitutions, BMP or other management protocols, that the User will implement.

Document received by the MI Wayne 3rd Circuit Court.

a) For existing Users, these plans shall be submitted to the Control Authority within ninety (90) days of the effective date of these rules.

b) For Users initiating discharge after the effective date of these rules, these plans shall be submitted to the Control Authority within ninety (90) days of the commencement of discharge to the POTW.

c) Any monitoring program shall be conducted in accordance with sample collection methods defined by the EGLE or USEPA and analyzed in accordance with 40 CFR 136 or other approved methods recognized by the State of Michigan; or where USEPA or the State of Michigan has not established sample collection methods or approved analytical methods in 40 CFR 136, the methods shall be specified by GLWA.

ii) The Control Authority may require any User to conduct discharge monitoring; or the development and implementation of additional source reduction, control and elimination actions for PFAS Compound through a Wastewater discharge permit or equivalent control mechanism.

iii) This paragraph shall not apply to facilities classified as a Centralized Waste Treatment Facility or any active/inactive landfill.

iv) This paragraph does not apply to domestic sources or activities involving commercial maintenance activities for carpet & upholstery cleaning.

2) Centralized Waste Treaters & Landfills: Any Centralized Waste Treatment Facility or an active/inactive landfill who either (i) accepts wastes and Wastewater containing PFAS Compounds for treatment and/or disposal, or (ii) who identifies PFAS Compounds in any wastes or Wastewaters received in accordance with paragraph II-1006-d)(2)(i), or (iii) who becomes or is made aware of PFAS Compounds present in the wastes and Wastewaters from any source, and discharges to the POTW, or (iv) who is notified by the Control Authority that its discharge contains PFAS Compounds; shall, develop, submit and implement a comprehensive "PFAS Compound Program" describing methods and procedures to identify, control, reduce, dispose of, eliminate and/or treat wastes and Wastewaters containing PFAS Compounds. At a minimum, the PFAS Compound Program shall include the following information, as appropriate:

i) The PFAS Compound Program must describe the method(s) and procedures used for <u>screening and monitoring program</u> for PFAS Compounds that may be present in any wastes or Wastewaters received for treatment or disposal.

a) Any monitoring program shall be conducted in accordance with sample collection methods defined by the EGLE or USEPA and analyzed in accordance with 40 CFR 136 or other approved methods recognized by the State of Michigan; or where USEPA

Document received by the MI Wayne 3rd Circuit Court.

or the State of Michigan has not established sample collection methods or approved analytical methods in 40 CFR 136, the methods shall be specified by GLWA.

b) The screening and monitoring program shall include a protocol for notifying the Control Authority when wastes and Wastewaters containing PFAS Compounds are identified.

c) All results and information from the screening and monitoring program shall be available to the Control Authority and copies of such information shall be made available upon written request.

ii) The PFAS Compound Program must describe the waste and Wastewater treatment, or disposal protocols and practices used, and any disposal and/or treatment technologies used to remove and/or treat wastes and Wastewaters containing PFAS Compounds.

a) This information shall be supported by technical documentation defining the effectiveness of such treatment protocols and/or practices used, including the removal efficiency based on mass loadings (lbs.) of PFAS Compounds before and after treatment, and account for dilution effects resulting from the combination of other waste streams, if applicable. Such demonstration may be made through bench-scale testing or site-specific data. Where site-specific data is used, a minimum of one (1) week of data must be collected.

b) The facility shall assess or re-assess, the removal efficiency of its operations for PFAS Compounds at least annually.

iii) The PFAS Compound Program must describe a self-monitoring program acceptable to the Control Authority. This self-monitoring program shall include the discharge to the POTW and may include samples within the treatment process. The self-monitoring program shall identify the sampling protocols and methods of analysis used, and the authority for such methods or analysis (if other than the State of Michigan or USEPA).

iv) The PFAS Compound Program must describe a Recordkeeping Program that at a minimum, documents the volume(s) of PFAS Compounds wastes and Wastewaters received; the mass of PFAS Compounds in pounds received by the facility and any mass (in pounds) removed by treatment, discharged to the POTW and disposed of through any other off-site source. Such information shall be summarized for each calendar month and submitted to the Control Authority by the 10th of the succeeding month.

v) The PFAS Compound Program may include BMP or other management protocols that will be used to control, reduce or eliminate PFAS Compounds from their discharge. Where a User develops BMP or other management protocols, it may submit such plans to the Control

Document received by the MI Wayne 3rd Circuit Court.

Authority for acceptance and incorporation into the facility's Wastewater discharge permit.

vi) The requirements of subparagraphs (i) – (v) shall be submitted as a Material and Substantial change and request for Permit Modification within ninety (90) days of the effective date of these rules or ninety (90) days from the commencement of discharge.

vii) The Control Authority may require any Centralized Waste Treatment Facility or an active/inactive landfill to conduct discharge monitoring; or to develop a PFAS Compound Program; or the development and implementation of additional source reduction, control and elimination actions for PFAS Compound through a Wastewater discharge permit or equivalent control mechanism.

Following acceptance of the facility's PFAS Compound Program, the Control Authority shall review and incorporate its PFAS Compound Program into a Wastewater discharge permit or equivalent control mechanism, as an enforceable part of the permit.

3) Perfluorochemical Fire-fighting Foams and Agents – Any user who stores or uses Firefighting foams using Perfluorochemicals with a carbon chain of 6 or more, shall develop and implement the following plans:

i) Specific reference and controls for contained in a spill/Slug control plan and submit this to the Control Authority. At a minimum, such plans shall identify areas where the Fire-fighting Foams and Agents would be contained and have no potential to reach a drain or sewer; and areas that are not contained and have a potential to reach a drain or sewer and ~~Such plans~~ shall be reviewed and updated as necessary but shall not exceed three (3) years.

ii) Training Operations and Exercises – Plans for the proper use and storage and use of firefighting foams during the exercise and shall employ best environmental and public health practices for the use of Perfluorochemical Fire-fighting Foams and Agents in training including but not limited to containment, and proper disposal.

iii) Fire or Emergency Events – (Potential to drain to sewer) – For those areas where there is a potential for the Fire-fighting Foam and Agents to reach a drain or sewer, the User shall provide notice to the POTW within forty-eight (48) hours of a Fire or other emergency event where Perfluorochemical Fire-fighting Foams and Agents were used including:

a) Purpose for use of foam or agent.

b) Physical address where foam or agent was used.

c) Actual or estimated quantities of foam or agent concentrate used, and quantity of water used to produce foam

d) Name(s) of water bodies potentially affected by foam and agent or other firewater to storm or combined sewer

Document received by the MI Wayne 3rd Circuit Court.

e) Practices employed for cleanup and disposal of materials contaminated by the foam or firewater.

iv) Fire or Emergency Events (No potential to drain to sewer) – For those areas where there is no potential for the Fire-fighting Foam and Agents to reach a drain or sewer, the User shall collect, clean-up and dispose of the Fire-fighting Foam and Agents and any fire-fighting water, in accordance with their BMP. A report shall be provided to the POTW addressing the completion of the clean-up and disposal of the materials within 5-days of the event and, as applicable, include a schedule for completion of the clean-up and disposal.

v) A BMP or other management program shall be established and implemented for the collection and disposal of Perfluorochemical Fire-fighting Foams and Agents with a carbon chain of six or greater. The plan shall include any efforts to identify alternative products.

vi) Any monitoring program shall be conducted in accordance with sample collection methods defined by the EGLE or USEPA and analyzed in accordance with 40 CFR 136 or other approved methods recognized by the State of Michigan; or where USEPA or the State of Michigan has not established sample collection methods or approved analytical methods in 40 CFR 136, the methods shall be specified by GLWA.

Copies of these plans shall be submitted to the Control Authority within ninety (90) days of the effective date of these rules.

4) The GLWA may assign any User who has previously used or received, or will use or receive PFAS Compounds, to a User Class for reimbursement of costs incurred by GLWA to monitor and enforce this requirement, and for which the Board determines costs should be assigned.

5) The GLWA reserves the right to take enforcement action for any violations as described in Section II-1003, and as described in Sections II-1004 and II-1005.

f) The Control Authority may require any User to implement Pollution prevention plan initiatives, or BMP, as part of an enforcement response, or as necessary to comply with its NPDES permit.

g) A User may seek to terminate a BMP when it has demonstrated compliance for a twelve (12) month period supported by a minimum of four (4) analytical test results and a report describing the management and operating procedures used to support the compliance status. Upon acceptance of this demonstration of compliance, the User shall be relieved of this implementation requirement.

Section II-1007. Remedies Nonexclusive

The remedies provided for in these rules are not exclusive. Enforcement of pretreatment violations will generally be in accordance with the Control Authority's enforcement response plan. However, the Control Authority may take other action against any User when the circumstances warrant. Further, the Control Authority is empowered to take more than one enforcement action against any noncompliant User.

Document received by the MI Wayne 3rd Circuit Court.

Article XI AFFIRMATIVE DEFENSES TO DISCHARGE VIOLATIONS

Section II-1101. Upsets.

An upset shall constitute an affirmative defense to an action brought for noncompliance with National Categorical Pretreatment Standards where the requirements of subsection (a) of this section are met.

a) An Industrial User who wishes to establish an upset as an applicable affirmative defense shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that:
    1) An upset occurred and the Industrial User can identify the cause(s) of the upset.
        i. At the time, the facility was being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures.
        ii. The Industrial User has submitted the following information to the Control Authority, orally or in writing, within twenty-four (24) hours of becoming aware of the upset and, where this information is provided orally, a written submission must then be provided within five (5) days:
            a) A description of the discharge and cause of noncompliance.
            b) The period of noncompliance including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
            c) Steps being taken and/or planned to reduce, eliminate and prevent recurrence of the noncompliance.
    2) In any enforcement proceeding, the Industrial User seeking to establish the occurrence of an upset shall have the burden of proof.
    3) The Industrial User shall control production of all discharges to the extent necessary to maintain compliance with these rules upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost or fails.

Section II-1102. Bypass.

A bypass includes any intentional diversion of a wastestream from any portion of an Industrial User's treatment facility. A bypass shall constitute an affirmative defense to an action brought for noncompliance with national categorical pretreatment standards and/or local pollutant discharge limitations where the requirements of subsection (a) of this section are met.

a) The affirmative defense of bypass may be claimed where:
    1) The bypass is for essential maintenance to ensure efficient operation of the treatment system and does not cause a violation of pretreatment standards or requirements.

Document received by the MI Wayne 3rd Circuit Court.

2) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
3) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
4) The Industrial User properly notified the Control Authority as described in subsection (2) of this section.

b) Notice of Bypass Event. An Industrial User shall have properly notified the Control Authority as follows:
1) Anticipated bypass. Any Industrial User anticipating a bypass shall submit notice to the Control Authority at least ten (10) days in advance of the anticipated date.
2) Unanticipated bypass. The Industrial User shall submit oral notice of an unanticipated bypass that exceeds applicable pretreatment standards within twenty-four (24) hours from the time the Industrial User becomes, or should have become, aware of the bypass.
3) For any bypass event, a written submission shall be provided to the Control Authority within five (5) days of the time the Industrial User becomes, or in the case of an unanticipated bypass, should have become aware of the bypass. The written submission shall contain a description of the bypass including exact dates and times, and if the bypass has not been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate and prevent reoccurrence of the bypass.

c) Bypass approval. Where it meets all conditions in subsections (1) and (2) of this section, the Control Authority shall recognize the affirmative defense. However, the Industrial User may still be held liable for costs and fees incurred by the Control Authority as a result of the bypass, including treatment costs, charges and surcharges.

Article XII PUBLICATION OF INDUSTRIAL USERS IN SIGNIFICANT NONCOMPLIANCE

Section II-1201. Public notification of significant noncompliance.

The Control Authority shall publish in the largest daily newspaper published in the jurisdictional limits of the Control Authority, a list of all Users which, at any time during the previous twelve (12) months, were in significant noncompliance with applicable pretreatment standards and requirements.

Section II-1202. Significant Noncompliance Criteria.

A Significant Industrial User (or any Industrial User which violates paragraphs (c), (d), or (h) of this section) is in significant noncompliance if its violation meets one or more of the following criteria:

Document received by the MI Wayne 3rd Circuit Court.

a) Chronic violations of wastewater Discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l).

b) Technical Review Criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH);

c) Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) (daily maximum, long-term average, instantaneous limit, or narrative Standard) that the POTW determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public);

d) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of this section to halt or prevent such a discharge.

e) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.

f) Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules.

g) Failure to accurately report noncompliance.

h) Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program.

Section II-1203. Publication Process.

Any User who is identified for publication as being in Significant Noncompliance shall be notified in writing at least thirty (30) days before the proposed publication; provided with a copy of the proposed notice to be published; the proposed time frame for the publication; and allowed an opportunity to comment. The Control Authority shall incorporate any comments with the proposed publication, or incorporate any comments with a revised publication, but may exercise its discretion to summarize any comments where space or word count is deemed excessive. In addition, the Control Authority may place this information on its web page at www.glwater.org.

Document received by the MI Wayne 3rd Circuit Court.

Article XIII FEES AND CHARGES

Fees and charges may be established by the Board to meet the costs of the operation, maintenance, improvement or replacement of the system and regulatory programs, or as provided by law or by Board action. The specific fees and charges are discussed more fully in Chapter V of these rules.

Article XIV APPEAL PROCEDURES

The decisions and actions taken by the Industrial Waste Control Group and the Control Authority affecting the administration, implementation, and enforcement of the industrial pretreatment program requirements are subject to review through a two-step appeal process. Although the majority of disputes are resolved through open communication, there may be a point where a User seeks to formalize their objection(s) and seek administrative review. The appeal procedures recognized under these rules are described in Chapter VIII.

Article XV STATUTES, LAWS AND REGULATIONS

Section II-1501. Unless otherwise provided, any reference in these rules to a code, standard, rule, regulation, or law enacted, adopted, established, or promulgated by any government or private organization, or by any element or organization of government other than the Control Authority shall be construed to apply to such code, standard, rule, regulation, or law in effect or as amended or promulgated, from the date of enactment of these rules.

Section II-1502. The National Categorical Pretreatment Standards defined in 40 CFR Chapter I, Subchapter N, Parts 405-471, shall be and are incorporated by reference herein and made a part hereof.

Section II-1503. The Board may amend these rules or adopt additional rules necessary and proper for carrying out the conditions and intent of these rules.

Section II-1504. Nothing in these rules shall be deemed to limit the Control Authority from developing explanatory policies, guidance, or opinions to carry out the terms of the industrial pretreatment program which is not in conflict or otherwise prohibited by these rules.

Document received by the MI Wayne 3rd Circuit Court.

Appendix A – National Categorical Pretreatment Standards (NCPS) Categories

NCPS Category	CFR Reference	NCPS Category	CFR Reference
Aluminum Forming	40 CFR Part 467	Meat Products	40 CFR Part 432
Asbestos Manufacturing	40 CFR Part 427	Metal Finishing	40 CFR Part 433
Battery Manufacturing	40 CFR Part 461	Metal Molding and Casting	40 CFR Part 464
Builder's Paper and Board Mills	40 CFR Part 431	Metal Products and Machinery	40 CFR Part 438
Canned and Preserved Fruits and Vegetables	40 CFR Part 407	Mineral Mining and Processing	40 CFR Part 436
Canned and Preserved Seafood Processing	40 CFR Part 408	Nonferrous Metals Forming	40 CFR Part 471
Carbon Black Manufacturing	40 CFR Part 458	Nonferrous Metals Manufacturing I	40 CFR Part 421
Cement Manufacturing	40 CFR Part 411	Nonferrous Metals Manufacturing II	40 CFR Part 421
Centralized Waste Treatment	40 CFR Part 437	Ore Mining and Dressing	40 CFR Part 440
Coal Mining	40 CFR Part 434	Organic Chemicals, Plastics, and Synthetic Fibers	40 CFR Part 414
Coil Coating	40 CFR Part 465	Paint Formulating	40 CFR Part 446
Copper Forming	40 CFR Part 468	Paving and Roofing Materials	40 CFR Part 443
Dairy Products Processing	40 CFR Part 405	Pesticide Chemicals	40 CFR Part 455
Dental Office (Mercury Amalgam)	40 CFR Part 441	Petroleum Refining	40 CFR Part 419
Electrical and Electronic Components I & and II	40 CFR Part 469	Pharmaceutical	40 CFR Part 439
Electroplating	40 CFR Part 413	Phosphate Manufacturing	40 CFR Part 422
Explosives Manufacturing	40 CFR Part 457	Photographic	40 CFR Part 459
Feed Lots	40 CFR Part 412	Plastics Molding and Forming	40 CFR Part 463
Ferroalloy Manufacturing	40 CFR Part 424	Porcelain Enameling	40 CFR Part 466

Document received by the MI Wayne 3rd Circuit Court.

Fertilizer Manufacturing	40 CFR Part 418	Pulp, Paper, and Paperboard	40 CFR Part 430 and 431
Glass Manufacturing	40 CFR Part 426	Rubber Manufacturing	40 CFR Part 428
Grain Mills	40 CFR Part 406	Soap and Detergent Manufacturing	40 CFR Part 417
Gum and Wood Chemicals Manufacturing	40 CFR Part 454	Steam Electric	40 CFR Part 423
Hospital	40 CFR Part 460	Sugar Processing	40 CFR Part 409
Ink Formulating	40 CFR Part 447	Textile Mills	40 CFR Part 410
Inorganic Chemicals Manufacture (I & and II)	40 CFR Part 415	Timber products	40 CFR Part 429
Iron and Steel	40 CFR Part 420	Transportation Equipment Cleaning	40 CFR Part 442
Landfills	40 CFR Part 445	Waste Combusters	40 CFR Part 444
Leather Tanning & finishing	40 CFR Part 425		

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER III: SURCHARGE PROGRAM FOR HIGH-STRENGTH WASTEWATER DISCHARGES

The Control Authority's POTW receives Wastewater from residential, commercial and industrial sources for treatment and discharge under its NPDES Permit MI0022802. The sewer charge rate charged to Member Communities is based upon the Domestic Strength of sewage. A Surcharge program for High Strength Wastewater discharges has been established to capture the additional treatment and operations costs incurred for Wastewater conveying additional pollutants to the Control Authority's POTW for specific Users.

The purpose of these rules are to establish an orderly and fair system whereby the operations, maintenance, and replacement costs incurred by the Control Authority in treating and disposing of the sewage, Industrial Wastes, and other wastes generated by each User is charged to that User for its use of the Control Authority's POTW, as required by the Federal Water Pollution Control Act Amendments of 1972 and the Clean Water Act of 1977 (33 U.S.C. 1251-1387) and the rules of the USEPA, promulgated pursuant thereto. These rules are promulgated pursuant to the statutory authority contained in Act No. 233, Public Acts of Michigan, 1955, as amended ("Act 233").

Article I Domestic Strength of Sewage

The Control Authority has established the following Domestic Strength levels for wastewater discharged to the POTW.

Domestic Strength Levels	
Biochemical Oxygen Demand (BOD)	275 mg/l
Fats, Oils & Grease	100 mg/l
Phosphorus (P)	12 mg/l
Total Suspended Solids (TSS)	350 mg/l

Article II: High Strength Wastewater Sources

Section III-201. Applicability: Domestic Sources

Domestic Sources shall not be subject to a surcharge for High Strength Wastewater where a property is used for the exclusive purpose of a residential dwelling, including but not limited to single or multi-family units or apartments.

Document received by the MI Wayne 3rd Circuit Court.

Section III-202. Applicability: Users

Users and any source who does not qualify as a Domestic Source under section III-201 of these rules, are subject to the Surcharge program for High Strength Wastewater sources, as follows:

a) Users, who as of the date of adoption of these rules have been previously assigned Pollutant Strength Levels (or "Surcharge basis") by the Detroit Water and Sewerage Department, or the GLWA, shall retain these Pollutant Strength Levels, until changed under Article IV.
b) All other Users will be assigned the Pollutant Strength basis equivalent to the Domestic Strength Levels of Article I, until changed under Article IV.

Article III. Surcharge and Surcharge Formula

Section III-301. Domestic Strength Levels.

As part of the annual rate-making process, a surcharge fee will be established for each pollutant included in the Article I Domestic Strength Level, which reflects the actual cost of treating the pollutant by the Control Authority. The Control Authority, through the Board, shall approve the Surcharge Rates as part of its annual Rate-making process.

Section III-302. Surcharge Fee Calculation.

The Surcharge fee will be calculated for each User in accordance with the following formula:

Total Surcharge Fee =

0.0624 x Volume x [a (BOD-275) + b (TSS-350) + c (P – 12) + d (FOG–100)]

Where the terms constituting the total surcharge fee shall have the following meaning:

TERM	Description	Units of Measurement
0.0624	Conversion factor	
Volume	Volume of Wastewater Discharged for a billing period	Thousand Cubic Feet (Mcf)
BOD	BOD Strength Level	Milligrams/liter (mg/l)
TSS	TSS Strength Level	Milligrams/liter (mg/l)
P	Phosphorus Strength Level	Milligrams/liter (mg/l)
FOG	The Fats, Oils & Grease Strength Level	Milligrams/liter (mg/l)
a, b, c, d	The Surcharge Rate	$ per pound

Document received by the MI Wayne 3rd Circuit Court.

Note: Where the difference between the pollutant strength level and domestic strength level is less than zero (0), the difference shall be deemed zero (0).

Article IV Determination of Pollutant Strength Levels of High Strength Wastewater

Following the adoption of these rules, the Pollutant Strength Levels of High Strength Wastewater may be established or revised in accordance with any of the following methods. The Control Authority or User shall not seek to revise the Pollutant Strength Levels of High Strength Wastewater more frequently than every 12-months.

Section III-401. Pollutant Strength Levels from Historical Data Records

A User, or the Control Authority, may use historical data to establish or revise its Pollutant Strength Levels. The Pollutant Strength Level will be determined using a numerical average of the self-monitoring and Control Authority monitoring data for the surcharge pollutant parameters that have been collected in a 12-month period.

a) User Initiated use of Historical Data
    1) Where the User performs this calculation, it shall complete a Waste Strength Determination Form and provide it to the Control Authority, with all supporting data and calculations.
    2) No data shall be excluded from the above calculation unless the User or the Control Authority can demonstrate that the data is non-representative of the facility's discharge and actual operations.
    3) Within fifteen (15) days of receiving the report, the Control Authority will review all data and the User's detailed report and accept or reject the report. If rejected, the Control Authority will provide the reasons for rejection in writing. If not rejected, the new values shall be applied to the next billing cycle following receipt of the User information.
b) Control Authority use of Historical Data
    1) Where the Control Authority performs this calculation, it shall notify the User in writing of the calculated Pollutant Strength Levels. The User has thirty (30) days to file a waste strength determination form and propose a Sample Test (see Section III-402), and unless rejected, the results shall be used for billing purposes.

Section III-402. Pollutant Strength Levels from Sample Test Period Data

a) A User may, on its own initiative, or upon receipt of written notice under section II-401(2) above, file a waste strength determination form and propose a sample test and sampling plan. The sampling plan shall be based upon a 5-day, 6-day or 7-day operating week for all Pollutant Surcharge parameters.
    1) The sampling plan must be provided in writing to the Control Authority no less than fourteen (14) calendar days prior to commencement of the sampling program.
    2) The sampling plan must include the following:
        i) Locations of sampling

Document received by the MI Wayne 3rd Circuit Court.

ii) Method(s) of sampling at each location

iii) Date(s) of sampling

iv) Measurement or determination of volume of Wastewater discharged during the testing period

v) Sample collection for all Pollutants Surcharge (BOD, FOG, P, and TSS).

b) The sampling plan shall be submitted to the Industrial Waste Control Group by one of the following methods:

1) U.S. mail addressed to the Industrial Waste Control Group.

2) Facsimile transmission sent to 313-297-5860; or

3) PDF sent via electronic mail to IWC@GLWATER.org.

c) These submittals shall be considered "not received" if deficient or incomplete, including for any of the following reasons:

1) The sampling plan has not been signed and dated by the User.

2) The User has failed to enclose all supporting documents necessary to aid in the Control Authority's review of the sampling plan.

d) The User shall be authorized to implement the Sampling Plan unless it receives a written notice from the Control Authority specifying whether the sampling plan is deficient or incomplete.

e) The Control Authority shall have the right to observe the User's sampling techniques, sample preservation, flow measurements, and other sampling protocols during the sampling program.

f) Within sixty (60) calendar days of completion of the sampling plan, the User shall forward the findings and supporting documentation to the Control Authority, including field sample collection logs/notes, chain of custody reports, certified laboratory reports, daily incoming meter readings, daily direct discharge meter readings, and any other supporting documentation.

1) If the User fails to notify the Control Authority prior to the sampling or fails to submit the report within the sixty (60) day period the use of the User's data for purposes of User charge calculation will be rejected, and the findings will not be allowed.

2) The User shall provide a calculation of the numerical average for each Pollutant Surcharge which shall be applied as the Pollutant Strength Level for purposes of billing.

3) If an User considers any self-monitoring data inappropriate for inclusion in calculating its User charges, the User must submit such data with its Report, together with a written report detailing the basis for the User's assessment that such data were not representative for purposes of inclusion when calculating its User charges. The Control Authority will accept or reject the inclusion or exclusion of the data.

4) Within fifteen (15) days of receiving the report, the Control Authority will review all data and the User's detailed report and accept or reject the report. If rejected, the Control Authority will provide

Document received by the MI Wayne 3rd Circuit Court.

the reasons for rejection in writing. If not rejected, the new values shall be applied to the next billing cycle following receipt of the User information.

Section III-403. Pollutant Strength Levels Using Table Values.

The Control Authority has adopted Table A to assign average Pollutant Strength Levels for commercial or industrial groups performing operations known to produce High Strength Wastewater.

a) A User who performs a commercial or industrial activity identified in Table A based upon (i) the Standard Industrial Classification Code (SIC); and/or (ii) North American Industrial Classification System (NAICS); or (iii) consistent with the Description of an SIC or NAICS code shall be subject to the applicable Surcharge for the High Strength Wastewater.

b) The Control Authority will notify the User in writing of their classification, and the assignment of the average Pollutant Strength Levels as described in Table A. The new values shall be applied to the next billing cycle unless the User files a waste strength determination form and performs the sample test in accordance with Section III-402 within thirty (30) days of receiving the written notice.

c) Where the User files a waste strength determination form under Section III-403, the Control Authority will evaluate and process it in accordance with Section III-402.
    1) If the waste strength determination form is accepted, the new values shall be applied to the next billing cycle following receipt of the User information.
    2) If the waste strength determination form is rejected, the Table A values shall be applied to the User until an acceptable pollutant strength test is performed.

d) A User who does not have an existing monitoring location and discharges less than 25,000 gallons of wastewater per day may elect to use the values specified in Table A in lieu of performing self-monitoring. The election shall be in writing.

Section III-404. Control Authority Test Data

a) The Control Authority may, on its own initiative, conduct sampling at a user location, to establish the actual Pollutant Strength Level of a User's wastewater. Where this action is taken, the sampling shall be based upon a 5-day, 6-day or 7-day operating week, applicable to the User, for all Pollutant Surcharge parameters. The Control Authority shall review the results of the sampling program and determine whether a revision of the Pollutant Strength Levels is required. Upon such determination, the Control Authority will notify the User in writing.

b) The new values shall be applied to the next billing cycle unless the User files a waste strength determination form and performs the sample test in accordance with Section II-402 within thirty (30) days of receiving the written notice.

c) Where the User files a waste strength determination form under Section III-404, the Control Authority will evaluate and process it in accordance with Section III-402.

Document received by the MI Wayne 3rd Circuit Court.

1) If the waste strength determination form is accepted, the new values shall be applied to the next billing cycle following receipt of the User information.
2) If the waste strength determination form is rejected, the Control Authority's findings will be applied to the User until an acceptable pollutant strength test is performed.

Section III-405. Periodic Review of User and Control Authority Sampling Data

The Control Authority shall periodically review the User's self-monitoring data and its own sampling data, to assess whether a change or revision in the Pollutant Strength Levels is warranted. The Control Authority shall provide written notice to the User where these findings determine a revision of the Pollutant Strength Levels is warranted.

Section III-406. Sampling and Analytical Methods

The measurement and determination of the Pollutant Strength Levels shall be in accordance with 40 CFR 136 and the latest edition of Standard Methods for the Examination of Water and Wastewater, published jointly by The American Public Health Association, The American Water Works Association, and the Water Environment Federation.

Article V. Appeal

Section III-501. The decisions and actions taken by the Industrial Waste Control Group and the Control Authority affecting the administration, implementation, and enforcement of the Surcharge of High Strength Wastewater program are subject to review through a two-step appeal process. Although the majority of disputes are resolved through open communication, there may be a point where a User seeks to formalize their objection(s) and seek administrative review. The Appeal procedures recognized under these rules are described in Chapter VIII.

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
2011	Meat Packing Plants	311611	Animal (except Poultry) Slaughtering	1200	800	*	400
2013	Sausages & Other Prepared Meat Products	311612	Meat Processed from Carcasses	800	700	*	150
		311613	Rendering and Meat Byproduct Processing				
2022	Natural, Processed, and Imitation Cheese	311513	Cheese Manufacturing	2000	500	50	*
2023	Dry, Condensed, and Evaporated Dairy Products	311511	Fluid Milk Manufacturing	1000	500	20	*
		311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing				
2024	Ice Cream and frozen Desserts	311520	Ice Cream and Frozen Dessert Manufacturing	*	*	25	*
2026	Fluid Milk	311511	Fluid Milk Manufacturing	1100	500	*	500
		311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing				
2035	Pickled Fruits and Vegetables, Vegetable Sauces and Seasonings, and Salad Dressings	311421	Fruit and Vegetable Canning	1000	500	*	*
		311941	Mayonnaise, Dressing and Other Prepared Sauce Manufacturing				
2037	Frozen Fruits, Fruit Juices, and Vegetables	311411	Frozen Fruit, Juice, and Vegetable Manufacturing	1000	500	*	*
2038	Frozen Specialties, Not Elsewhere Classified	311412	Frozen Specialty Food Manufacturing	1000	500	*	*
2041	Flour and other Grain Mill Products	311211	Flour Milling	1600	*	*	*
2043	Cereal Breakfast Foods	311230	Breakfast Cereal Manufacturing	1600	*	*	*
		311920	Coffee and Tea Manufacturing				
2044	Rice Milling	311212	Rice Milling	1600	*	*	*
2045	Prepared Flour Mixes and Doughs	311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour	1600	*	*	*
2046	Wet Corn Milling	311221	Wet Corn Milling	1600	*	*	*
		311225	Fats and Oils Refining and Blending	1600	*	*	*
2047	Dog and Cat Food	311111	Dog and Cat Food Manufacturing	1600	*	*	*

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
2048	Prepared Feed and Feed Ingredients for Animals and Fowl, except Dogs & Cats	311119	Other Animal Food Manufacturing	1600	*	*	*
2051	Bread and other Bakery products, except Cookies and Crackers	311822	Commercial Bakeries	3800	1100	*	260
2052	Cookies and Crackers	311822	Commercial Bakeries	800	*	*	*
		311821	Cookie and Cracker Manufacturing				
		311919	Other Snack Food Manufacturing				
2053	Frozen Bakery Products, except Bread	311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	800	*	*	*
2076	Vegetable Oil Mills, except Corn, Cottonseed, and Soybean	311224	Soybean and other Oilseed Products	650	2000	*	500
		311225	Fats and Oils Refining and Blending				
2077	Animal and Marine Fats and Oils	311613	Rendering and Meat Byproduct Processing				
		311710	Seafood Product Preparation and Packaging	650	2000	*	500
2079	Shortening, Table Oils, Margarine, and Other Edible Fats and Oils, Not elsewhere classified	311224	Soybean and other Oilseed Products	1000	*	*	200
		311225	Fats and Oils Refining and Blending				
2082	Malt Beverages	312120	Breweries	1400	600	*	*
2086	Soft Drinks	312111	Soft Drink Manufacturing	600	*	*	*
		312112	Bottled Water Manufacturing				
2090	**Miscellaneous Food Products**						
2091	Canned and Cured Fish and Seafoods	311710	Seafood Products Preparation and Packaging	1000	500	*	150
2092	Prepared Fresh or Frozen Fish and Seafoods	311710	Seafood Products Preparation and Packaging				
2095	Roasted Coffee	311920	Coffee and Tea Manufacturing	1000	500	*	150

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
2096	Potato Chips, Corn Chips, and Similar Snacks	311919	Other Snack Food Manufacturing	1000	500	*	150
2097	Manufactured Ice	312113	Ice Manufacturing				
2098	Macaroni, Spaghetti, Vermicelli and Noodles	311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour				
2099	Food Preparations, Not Elsewhere Classified	111998	All Other Miscellaneous Crop Farming				
		311212	Rice Milling				
		311340	Non-chocolate Confectionery Manufacturing				
		311423	Dried and Dehydrated Food Manufacturing				
		311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour				
		311830	Tortilla Manufacturing				
		311911	Roasted Nuts and Peanut Butter Manufacturing				
		311920	Coffee and Tea Manufacturing				
		311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing				
		311942	Spice and Extract Manufacturing				
		311991	Perishable Prepared Food Manufacturing				
		311999	All other Misc. Food Manufacturing				
2620	Paper Mills	322121	Paper (except Newsprint) Mills	*	480	*	*
		322122	Newsprint Mills				
2640	Converted Paper Products			300	1500	*	*

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
2810	**Industrial Inorganic Chemicals**						
2812	Alkalis and Chlorine	325180	Other Basic Inorganic Chemical Manufacturing	*	2000	*	*
2813	Industrial Gases	325120	Industrial Gas Manufacturing				
2816	Inorganic Pigments	325130	Synthetic Dye and Pigment Manufacturing				
		325180	Other basic Inorganic Chemical Manufacturing				
2819	Industrial Inorganic Chemicals, Not elsewhere classified	211112	Natural Gas Liquid Extraction				
		325130	Synthetic Dye and Pigment Manufacturing				
		325180	Other basic Inorganic Chemical Manufacturing				
		325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing				
		331311	Alumina Refining				
2830	**Drugs**						
2833	Medicinal Chemicals and Botanical Products	325411	Medicinal and Botanical Manufacturing	500	500	*	*
2834	Pharmaceutical Preparation Manufacturing	325412	Pharmaceutical Preparation Manufacturing				
2835	In Vitro and In Vivo Diagnostic Substances	325412	Pharmaceutical Preparation Manufacturing				
		325413	In-Vitro Diagnostic Substance Manufacturing				
2836	Biological Products, except Diagnostic Substances	325414	Biological Product (except Diagnostic) Manufacturing				

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
2840	**Soaps & Detergents**						
2841	Soap and Other Detergents, except Specialty Cleaners	325611	Soap and Other Detergent Manufacturing	600	*	*	200
2842	Specialty Cleaning, Polishing, and Sanitation Preparations	325612	Polish and Other Sanitation Good Manufacturing				
2843	Surface Active Agents, Finishing Agents, Sulfonated Oils, and Assistants	325613	Surface Active Agent Manufacturing				
2844	Perfumes, Cosmetics, and other Toilet Preparations	325620	Toilet Preparation Manufacturing				
2850	**Paints & Allied Products**						
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products	325510	Paint and Coating Manufacturing	*	*	15	200
2860	**Industrial Organic Chemicals**						
2861	Gum and Wood Chemicals	325194	Cyclic Crude, Intermediate and Gum and Wood Manufacturing	500	500	20	150
2865	Cyclic Organic Crudes and Intermediates, and Organic Dyes and Pigments	325110	Petrochemical Manufacturing				
		325130	Synthetic Dye and Pigment Manufacturing				
2869	Industrial Organic Chemicals, not elsewhere classified	325120	Industrial Gas Manufacturing				
		325180	Other Basic Inorganic Chemical Manufacturing				
		325193	Ethyl Alcohol Manufacturing				
		325199	All Other Basic Organic Chemical Manufacturing				

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
		325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	500	500	20	150
2890	**Miscellaneous Chemical Products**						
2891	Adhesives and Sealants	325520	Adhesive Manufacturing	400	*	*	*
2892	Explosives Manufacturing	325920	Explosives Manufacturing				
2893	Printing Ink	325910	Printing Ink Manufacturing				
2895	Carbon Black	325180	Other Basic Inorganic Chemical Manufacturing				
2899	Chemicals and Chemical Preparations, Not Elsewhere Classified	325199	All Other Basic Organic Chemical Manufacturing				
		325510	Paint and Coating Manufacturing				
		325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing				
3010/1	Tire & Inner Tubes	326211	Tire Manufacturing (except Retreading)	*	500	*	*
3060	**Fabricated Rubber Products**						
3061	Molded, Extruded, and Lathe cut Mechanical Rubber Goods	326291	Rubber Product Manufacturing for Mechanical Use	*	500	*	*
3069	Fabricated Rubber Products, Not Elsewhere Classified	313320	Fabric Coating Mills				
		314910	Textile Bag Mills				
		315280	Other Cut and Sew Apparel Manufacturing				
		315990	Apparel Accessories and Other Apparel Manufacturing				
		326199	All other Plastics Products Manufacturing				
		326299	All other Rubber Products Manufacturing				

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
		339113	Surgical Appliance and Supplies Manufacturing	*	500	*	*
		339920	Sporting and Athletic Goods Manufacturing				
		339930	Doll, Toy and Game Manufacturing				
5085	Drums & Barrels - Reconditioning			1200	800	16	1500
5090	**Miscellaneous Durable Goods**						
5091	Sporting and Recreational Goods and Supplies	423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	400	500	*	150
		425110	Business to Business Electronic Markets				
		425120	Wholesale Trade Agents and Brokers				
		451110	Sporting Goods Stores				
5092	Toys and Hobby Goods and Supplies	423920	Toy and Hobby Goods and Supplies Merchant Wholesalers				
		425110	Business to Business Electronic Markets				
		425120	Wholesale Trade Agents and Brokers				
		451120	Hobby, Toy, and Game Stores				
5093	Scrap and Waste Materials	423930	Recyclable Material Merchant Wholesalers				
		425110	Business to Business Electronic Markets				
		425120	Wholesale Trade Agents and Brokers				
5094	Jewelry, Watches, Precious Stones, and Precious Metals	423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers				

Document received by the MI Wayne 3rd Circuit Court.

SIC Number	SIC Description	NAICS Number	NAICS Description	BOD	TSS	Phosphorus	FOG
				* Signifies Domestic Strength Level			
		425110	Business to Business Electronic Markets	400	500	*	150
		425120	Wholesale Trade Agents and Brokers				
		448310	Jewelry Stores				
5099	Durable Goods, not elsewhere classified	423990	Other Miscellaneous Durable Goods Merchant Wholesalers				
		425110	Business to Business Electronic Markets				
		425120	Wholesale Trade Agents and Brokers				
		444190	Other Building Material Dealers				
		451110	Sporting Goods Stores				
		451120	Hobby, Toy, and Game Stores				
7213	Linen Service	812331	Linen Supply	500	*	*	200
7218	Industrial laundries	812332	Industrial Launderers	600	600	*	400

1

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER IV: SEPTAGE AND HAULED WASTES

The majority of wastes and Wastewater treated at the Control Authority's POTW are discharged to and conveyed by the Sewerage System through point-source connections from Domestic and User Sources. However, additional wastes may be conveyed to designated locations via rail, truck, ship or vessel or other equivalent means; hauled to the Control Authority POTW from locations within and outside of the Service Region of the Control Authority. These rules address these sources of *Hauled Wastes*.

Article I General Provisions

Section IV-101. It shall be unlawful for any Person to discharge any waste or Wastewater, directly or indirectly, by rail, truck, ship or other similar means, without authorization from the Control Authority; or to discharge any Wastewater in violation of the terms and conditions contained in these rules or contrary to any discharge authorization granted by the Control Authority.

Article II Authorized Unloading Locations

Section IV-201. The Control Authority's POTW shall not receive or accept any wastes or Wastewater that are directly transported via rail, truck, dedicated pipeline, ship or vessel, or other similar means, at the Control Authority's POTW located at 9300 West Jefferson, Detroit Michigan 48209, except those identified in Section IV-202.

Section IV-202. The Control Authority's POTW shall accept wastes or Wastewater that are directly transported via truck from Septage Waste Hauler with a valid permit. Mobile Food Trucks, Recreation Vehicles and Individual Portable Toilets are not permitted to use the Control Authority's POTW and must use public or private facilities to dispose of their wastes.

Section IV-203. The Control Authority will only accept wastes and Wastewater transported to Authorized Unloading Locations specified in these rules or that may be added upon authorization by the Control Authority.

Section IV-204. The usage of any Authorized Unloading Location shall be restricted to authorized Users who possess a hauled in waste permit issued by the Control Authority, in accordance with the terms and conditions of the permit.

Article III Categories of Authorized and Unauthorized Hauled Wastes

Section IV-301. Authorized Wastes

The following groups of waste and Wastewater may be authorized by the Control Authority.

- Septage Waste and Wastewater

Document received by the MI Wayne 3rd Circuit Court.

- Sanitary Wastewater from Vessels and Ships

The procedures for obtaining authorization are enumerated in Article IV below.

Section IV-302. Unauthorized Waste Sources

The following sources of waste and Wastewater are not authorized by the Control Authority and will not be accepted unless there is an exigent condition or public health concern for which the Control Authority shall authorize disposal.

- Grease Trap Wastes
- Industrial and Commercial Wastes
- Municipal Sludge
- Collection System Solids and Cleanings

Article IV Procedures for Authorization – Septage Waste Hauler

Section IV-401. A Septage waste hauler seeking authorization from the Control Authority to discharge at the Control Authority's POTW or other authorized unloading location shall require the owner/operator of the vehicle to (i) possess a valid Septage hauler license issued by the EGLE; and (ii) obtain a valid Control Authority Septage hauler permit.

Section IV-402. A Septage waste hauler seeking authorization from the Control Authority to discharge at the Control Authority's POTW or other authorized unloading location shall complete an application for a HIW permit. Information will be provided including the vehicles, tank capacities and applicable vehicle licenses for each vehicle; the general area being serviced, and which authorized unloading sites the septage hauler is requesting access.

Section IV-403. The Septage hauler shall letter the vehicles or affix the truck number shown on their HIW permit on each side and rear of the hauling vehicle covered by their permit in clearly visible locations in black numerals and letters six (6) inches high on a white background of at least eight (8) inches in height. The line width of each letter shall be three-fourths of an inch.

Section IV-404. Upon receipt of a Septage hauler application form, the Control Authority will process the application and accept or reject the application. Permits issued by the Control Authority shall contain information including, but not limited to, that specified in Section II-704. A Septage waste hauler seeking authorization from the Control Authority to discharge at the Control Authority's POTW or other authorized unloading location shall only discharge the contents from domestic waste septic tanks, cesspools, seepage pits, sewage lift stations and portable toilets; after receiving a permit.

Section IV-405. The Control Authority shall have the unrestricted right to observe loading, hauling and unloading of Septage hauling vehicles; to obtain representative samples of the vehicle's contents at the unloading site prior to or during the unloading activity; to examine the vehicle operator's EGLE service seal and business license and the unloading permit. The vehicle operator shall cooperate with the request

Document received by the MI Wayne 3rd Circuit Court.

of any properly credentialed the Control Authority's employee and assist in providing a sample of the tank's contents.

Article V Procedures for Authorization – Recreational Vehicle and Individual Portable Toilets

Section IV-501. Mobile Food Trucks, Recreation Vehicles and Individual Portable Toilets are not permitted to use the Control Authority's POTW and must use public or private facilities to dispose of their wastes.

Article VI Procedures for Authorization – Vessels and Ships

Section IV-601. The Control Authority may accept Domestic Sewage from vessels and ships at authorized locations, or from firms servicing vessels and ships traversing the Great Lakes. Individuals or firms shall request authorization from the Industrial Waste Control Group before discharging any Wastewater, and discharge at an authorized unloading location.

Article VII Other Conditions

Section IV-701. Any Person authorized under these rules for Septage and hauled waste or wastewater is subject to the requirements for permits, inspection, monitoring and enforcement, as enumerated in Chapter II.

Section IV-702. Any permit or authorization granted by the Control Authority shall also include the following conditions:

a) Applicable terms and conditions, surcharges, fees or rates as established by the Board.
b) The specific unloading facility location designated by the Control Authority for discharge.
c) As necessary, additional specific limitations and requirements necessary to protect the wastewater treatment plant and collection system.
d) Any applicable surcharge for High Strength Wastewater applicable to the specific contents being hauled under Authorization by the Control Authority; and
e) Any charges or fees established by the Board.

Article VIII. Appeal

The Decisions and Actions taken by the Industrial Waste Control Group and the Control Authority affecting the administration, implementation, and enforcement of the Septage and hauled waste Program are subject to review through a two-step appeal process. Although the majority of disputes are resolved through open communication, there may be a point where a User seeks to formalize their objection(s) and seek administrative review. The Appeal procedures recognized under these rules are described in Chapter VIII.

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER V: REVENUES TO SUPPORT REGULATORY PROGRAMS

The Control Authority has promulgated these rules for the protection of the environment, the public health and safety by abating and preventing pollution through the regulation and control of the quantity and quality of sewage, industrial wastes, and other wastes admitted to or discharged into the sewerage system. The Control Authority seeks to provide for the recovery of the costs from Users of the Wastewater collection and treatment system sufficient to administer regulatory activities and meet the costs of the operation, maintenance, improvement or replacement of the Sewerage System.

Fees and charges may be established by the Board to meet the costs of the operation, maintenance, improvement or replacement of the Sewerage System and regulatory programs, or as provided by law or by Board action.

a) The Board shall adopt charges and fees which shall include, but not be limited to:
    1) Fees for reimbursement of costs of establishing, operating, maintaining, or improving the industrial waste control and pretreatment programs (See Article I below); and
    2) User fees (surcharges) based upon volume of waste and concentration or quantity of specific pollutants in the discharge, and treatment costs including sludge handling and disposal (See Article II); and
    3) Reasonable fees for reimbursement of costs for hearings including, but not limited to, expenses regarding hearings officers, court reporters, and transcriptions; and
    4) Other fees, which the Board may deem necessary, to carry out the requirements contained herein, or as may be required by law.

Article I Industrial Waste Control Charges

Section V-101. The Control Authority is required to implement and enforce an Industrial Pretreatment Program and perform other related duties as required by the NPDES Permit MI 0022802 and the Clean Water Act. To accomplish these duties and requirements, the Control Authority must have a revenue source which insures adequate funding. The Control Authority hereby adopts the following method of funding these regulatory activities:

a) An IWC water meter charge shall be established by the Board to recover the costs incurred in administering, implementing and enforcing the regulatory activities and obligations under the NPDES Permit MI 0022802 and the Clean Water Act, and any rules adopted by the Board.
b) The IWC water meter charge shall be based on the size of the water meter on a proportional basis and assessed on any non-residential water meter with the following exceptions:
    1) The IWC water meter charge shall not be assessed on any meter dedicated for Fire Protection

Document received by the MI Wayne 3rd Circuit Court.

purposes only.

2) The IWC water meter charge shall not be assessed on any meter dedicated for Irrigation purposes only.

3) The IWC water meter charge shall not be assessed on any meter from a multi-family residential dwelling; public and private elementary and secondary school which are part of a government school district; colleges, universities, professional schools, junior colleges and technical institutes; and local, state and federal government facilities.

c) Member Communities shall periodically report the quantity, number and size of non-residential meters, and any exempt meters (as described in paragraph 2).

d) The Control Authority shall prepare a bill to each Member Community using the information provided in paragraph 3 and forward the bill for payment either through the Wholesale Sewer Contract Customer (if applicable) and/or Member Community, indicating the terms and conditions of payment.

e) Each Member Community is responsible for assessing these fees on applicable Users and collection thereof in accordance with the delegation and service agreements; and for reporting changes in the number of meters reported in paragraph 3.

f) The Control Authority reserves the right to collect any and all outstanding amounts in accordance with applicable law.

Article II Pollutant Surcharges

Section V-201. The Control Authority has adopted rates necessary to recover the cost of service based upon the unit volume of Wastewater discharged; and has adopted Pollutant Surcharges applicable to High-Strength Wastewater discharges from Users which will be assessed to these Users so that the proportional share of the cost of service may be recovered.

a) The specific rules and procedures for establishing High Strength Wastewater levels, and administering a program thereof is included in Chapter II of these rules.

b) Member Communities shall report the applicable water and/or sewage meter information to the Control Authority who shall prepare a bill based upon the established High-Strength Wastewater level of a User.

c) The Control Authority shall prepare a bill to each Member Community using the information provided in paragraph 2 and forward the bill for payment either through the Wholesale Sewer Contract Customer (if applicable) and/or Member Community, indicating the terms and conditions of payment.

d) Each Member Community is responsible for assessing these fees on applicable Users and collection thereof in accordance with the delegation and service agreements.

e) The Control Authority reserves the right to collect any and all outstanding amounts in accordance with applicable law.

Document received by the MI Wayne 3rd Circuit Court.

Article III Other Fees

Section V-301. The Appeal Procedures described in Chapter VIII will incur costs for hearings officers, court reporters, and transcriptions. The cost of conducting these appeal procedures shall be equally shared between the Control Authority and the User(s). A deposit may be requested by the Control Authority to cover a portion of these expenses. Where a User fails to pay all fees incurred, the Control Authority shall recover these fees through direct invoicing and using all means authorized by law.

Section V-302. Other fees, which the Board may deem necessary, to carry out the requirements contained herein, or as may be required by law.

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER VI: FLOW-METERING

The Control Authority requires Users to employ accurate and valid methods for measuring and reporting the volume of water consumed and discharged from their properties to satisfy regulatory and monitoring requirements. Each Member Community may establish its own criteria for metering the wastewater discharged into the Sewerage System which is not in conflict with these rules.

Article I General Requirements

The Control Authority recognizes the role of the respective Member Community in prescribing the water and/or sewage meters installed at a User's property. The Control Authority will recognize a User's use of these methods to represent the water usage and/or wastewater discharge as follows:

Section VI-101. Users obtaining all of their water supply from the GLWA shall, unless modified or changed by contract, base the volume of water consumed upon one or more water meters installed at the User's property. Any questions that the GLWA may have concerning the accuracy and validity of a water meter will be directed to the User and the Member Community

Section VI-102. Users obtaining all, or any portion, of their water supply from sources other than the GLWA and who discharge water, wastes and wastewater inclusive of these foreign sources to the GLWA for conveyance and Wastewater treatment, shall base the volume of Wastewater discharged through gauging, metering or using any other equitable method of measuring, the volume of all Wastewater discharged. Acceptance of the Wastewater discharged shall be conditioned upon the acceptance of such methods by the Member Community. Any questions that the GLWA may have concerning the accuracy and validity of a water meter will be directed to the User and the Member Community

Section VI-103. Users obtaining all, or any portion, of their water supply from the GLWA, but also receiving other wastes and Wastewater via truck, rail, vessel or ship, dedicated pipeline, or any other means of transportation shall base the volume of Wastewater discharged through gauging, metering or using any other equitable method of measuring the discharge volume. Acceptance of the Wastewater discharged shall be conditioned upon the acceptance of such methods by the Member Community. Any questions that the GLWA may have concerning the accuracy and validity of a water meter will be directed to the User and the Member Community.

Article II Sub-metering of Water or Sewage Volumes

Section VI-201. Any owner of a premise or User of the system may install, at their own expense, a water sub-meter for determining the utility services used by certain areas or processes. Such meter will not be

Document received by the MI Wayne 3rd Circuit Court.

recognized for purposes of usage, addition or reduction, billing or other regulatory purpose, unless the meter complies with section VI-202.

Section VI-202. Where a Member Community has recognized and accepted a User's sub-meter(s) to gauge the volume of water, for determining the utility services used by certain areas or processes), the GLWA shall recognize the purpose and readings of the sub-meter for purposes of usage, addition or reduction, billing or other regulatory purpose described by these rules.

Article III Requirements for Water or Sewerage Metering

Section VI-301. Where the GLWA, in conducting its regulatory responsibilities described by these rules, identifies an unmetered water or sewerage source, a non-functioning water or sewerage meter or sub-meter, or requires other gauging or metering to fulfill the requirements of its NPDES permit, it shall notify the User in writing of its findings and requirements as well as the Member Community.

Section VI-302. Any water or sewer meter installed by a User must be periodically calibrated by the User and maintained by the User at its own expense. All records of calibration or maintenance shall be provided to the GLWA upon its request.

Article IV Sewage Metering Requirements for Flow-proportional Sampling

Section VI-401. All Significant Industrial Users shall provide, operate, and maintain at their own expense a sampling and monitoring facility which complies with Section II-605.

Section VI-402. Significant Industrial Users required to collect wastewater samples using 24-hour flow-proportional composite sampling techniques, shall provide the Control Authority with a sampling plan in compliance with section II-603 and the following information about the flowmeter and other devices used:

a) The specifications and information describing the flow monitoring instruments, including make and model number.
b) The recording devices used, including make and model number; and
c) Specifications indicating that the meter is equipped with a non-resettable flow totalizer.

Section VI-403. Significant Industrial Users required to collect Wastewater samples using 24-hour flow-proportional composite sampling techniques, shall provide the appropriate interface hardware and cable sufficient to reach the sampler location from the flow metering system's contact point, as follows:

a) Ensure that the flow metering system using an analog output signal, furnish the Control Authority with a flow meter to sampler 4-20 mA input interface: ISCO Part # 60-5314-281, or equivalent.
b) Ensure that the flow metering system using a pulse output signal, furnish the Control Authority with a signal specification of 5 to 15 VDC pulse, with 25 millisecond isolated contact closure using a sampler connection interface cable ISCO Part # 60-1394-077, or equivalent.
c) The Significant Industrial User shall provide an interface port for 6 pin military spec amphenol

Document received by the MI Wayne 3rd Circuit Court.

connector and a parallel or Y-connector for simultaneous sampling event.

d) In the event that an equivalent or new technology is available which permits the Control Authority to collect a Flow-composite based sampling from the User's facility using equipment other than or different then that enumerated in sub-paragraphs a-c above, the Control Authority will permit such technology to be implemented and used at the User's site. User's must, however, notify the Control Authority in writing.

Article V Appeal

The decisions and actions taken by the Industrial Waste Control Group and the Control Authority affecting the administration, implementation, and enforcement of the Flow Metering Program are subject to review through a two-step appeal process. Although the majority of disputes are resolved through open communication, there may be a point where a User seeks to formalize their objection(s) and seek administrative review. The Appeal procedures recognized under these rules are described in Chapter VIII.

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER VII: RULES GOVERNING THE WASTES AND WASTEWATER FROM ENVIRONMENTAL REMEDIATION, GROUNDWATER AND OCCASIONAL OR SPECIAL WASTES SOURCES

The purpose of these Rules is to regulate and control the quality and quantity of wastes and Wastewater derived from Environmental Remediation, Groundwater and Occasional or Special Wastes Sources occurring within the sewer Area under the jurisdiction of the Control Authority to ensure that these sources are not discharged into the local environment without authorization and in quantity and/or concentrations as may cause or contribute to adverse impact upon the environment or the status of the Control Authority's POTW with regard to environmental regulations impacting those facilities.

Article I General Requirements

Section VII-101. The Control Authority may authorize the discharge of wastes and Wastewater derived from Environmental Remediation, Groundwater and Occasional or Special Wastes Sources from facilities located in areas served by the Control Authority's Sewerage System.

Section VII-102. Environmental Remediation Wastewater, Groundwater and Occasional or Special Wastes Sources from facilities located in areas not served by the Control Authority's Sewerage System will not be accepted except where a public health or similar exigent condition exists. In response to such public health or exigent condition, the Control Authority may accept and evaluate an application, and will notify the Board of its findings and determination prior to authorizing the discharge.

Article II Prohibitions

Section VII-201. Unlawful Discharges

It shall be unlawful for any Person to cause or allow the discharge of Environmental Remediation Wastewater, Groundwater and Occasional or Special Wastes Sources from combined sewered areas into the Control Authority's Sewerage System, unless such person has been authorized by the Control Authority and is in possession of a current and valid permit authorizing the discharge of the Environmental Remediation Wastewater, Groundwater and Occasional or Special Wastes Sources.

Section VII-202. Pollutant Discharge Limits

The Control Authority shall apply or develop pollutant discharge limitations necessary to protect the Control Authority's Sewerage System, and at a minimum include:

a) The General Pollutant Prohibitions (Chapter II, Article II) shall be applied to all permit authorizations.
b) The Specific Pollutant Prohibitions (Chapter II, Article III) shall be applied to all permit authorizations.

Document received by the MI Wayne 3rd Circuit Court.

c) For Underground Storage Tank and *Petroleum* clean-up projects, the additional discharge limitations shall be applied:

Benzene	20 ug/l
Toluene	20 ug/l
Ethylbenzene	20 ug/l
Xylene	20 ug/l

d) As necessary, the Control Authority may develop special pollutant discharge limitations in concentration or mass necessary to carry out the intent of these rules. The determination of any such special pollutant discharge limitations shall be attached to any permit granted under these rules.

Article III Special Discharge Permits

Section VII-301. Special Discharge Permit Application

Any Person seeking permission to discharge Environmental Remediation Wastewater, Groundwater and Occasional or Special Wastes Sources wastewater shall complete and submit to the Control Authority (on forms supplied by the Control Authority) a Special Discharge Permit Application (SDP Application). At a minimum, the application shall include the following information:

a) The address, or other description of the location, which is the source or origin of the proposed discharge.
b) The name and address of the (i) officers or principal owners of the real property; (ii) name of the person who will be responsible for operation of the facilities; (iii) any agents for these parties; and; (iv) any other persons seeking the special discharge permit.
c) The applicant shall provide at least one sample analysis which includes the 126 priority pollutants. Additional samples may be tested for pollutants above detection levels or which are present or expected to be present in the discharge.
d) Any information concerning the nature of operations conducted, or previously conducted at the property.
e) Any additional information or documentation necessary to support the application.
f) The SDP Application shall be executed by an Authorized Representative of the person.
g) Acceptance by Member Community. Applications shall be reviewed by the municipality or other unit of local government having jurisdiction over the geographical location for which the SDP is requested and must be certified acceptable to such municipality or other unit of local government prior to submittal to the Control Authority. The certification shall be inclusive of any metering or payment requirements. This acceptance must be in writing.

Within 30 days of receipt of a completed SDP Application, the Control Authority shall notify, in writing, the person submitting the application of its approval or denial, and the reason(s) for denial. If approved, the special discharge permit shall be issued by the Control Authority to the owner of the real property from

Document received by the MI Wayne 3rd Circuit Court.

which the Wastewater originates as permittee and to the agents of the owner as co-permittees who will be responsible for operation of the facilities.

Section VII-302. Special Discharge Permit

The Control Authority shall develop a special discharge permit form that shall contain, at a minimum, the following conditions:

a) Statement of duration, which for special discharge permits shall not exceed one (1) year. The one (1) year term may be renewed upon receipt of an SDP Application petitioning renewal of the permit for an additional one (1) year term if submitted ninety (90) days prior to the expiration date of the existing special discharge permit.
b) A provision against non-transferability of the special discharge permit.
c) Effluent discharge limitations authorized under Section II-202 of these rules.
d) Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including identification of the pollutants to be monitored, sampling points, sampling frequency and sample type. Sample collection and analysis shall conform to the requirements specified by the Control Authority.
e) Requirements for specific treatment, if applicable, including best available technology. Justification for such treatment shall be made in writing and attached to the special discharge permit.
f) Acknowledgement from Member Community.
g) Other requirements including those specified in Section II-704.

Section VII-303. Monitoring of Environmental Remediation Wastewater, Groundwater and Occasional or Special Wastes Sources

a) Each person subject to the terms of these rules shall install and maintain, at its own expense, a control manhole or sampling site, including sampling and flow measurement operations applicable to the discharge.
b) All sampling and analysis shall be performed in accordance with applicable regulations contained in 40 CFR 136 and amendments thereto.
c) Any Flow Monitoring installation shall conform to the requirements and specifications of Chapter VI.

Article IV. Other Provisions

Section VII-401. Representatives of the Control Authority may enter upon the premises for which the special discharge permit has been issued, during reasonable hours, to perform gauging and sampling operations, for inspecting or examining facilities, premises, installations and processes, for inspection and copying of records, and for reviewing pretreatment operating procedures and to determine compliance with the terms and conditions of special discharge permit.

Section VII-402. Fees

Document received by the MI Wayne 3rd Circuit Court.

a) Persons subject to the provisions of these rules are responsible for payment of applicable sewer charges, including any applicable Surcharges.
b) Where the volume of Wastewater discharged under a special discharge permit exceeds 1,000,000 gallons per annum, the Industrial Waste control fee shall be assessed and paid prior to commencement of the discharge.

Article V Enforcement

The Control Authority shall enforce compliance with the special discharge permit in accordance with Chapter II, including a temporary suspension of the special discharge permit or revocation of the special discharge permit. Where the Control Authority has revoked the special discharge permit, the special discharge permit holder may appeal the revocation order in accordance with Article VI of these rules.

Article VI Appeal

The decisions and actions taken by the Industrial Waste Control Group and the Control Authority affecting the administration, implementation, and enforcement of the Environmental Remediation Wastewater, Groundwater and Occasional or Special Wastes Sources Wastewater Program are subject to review through a two-step appeal process. Although the majority of disputes are resolved through open communication, there may be a point where a User seeks to formalize their objection(s) and seek administrative review. The Appeal procedures recognized under these rules are described in Chapter VIII.

Document received by the MI Wayne 3rd Circuit Court.

CHAPTER VIII: ADMINISTRATIVE APPEAL PROCEDURES

The following rules describe the Administrative Appeals Procedures developed and adopted by the Control Authority to resolve disputes with the technical subject matter of these rules or resolve disputes on the meaning of these rules. A User who believes it is aggrieved of the actions of the Authority in enforcing these Rules may appeal to the Control Authority for the relief of that dispute. An appeal shall be made as follows:

Article I APPEAL PROCEDURE

Section VIII-101. Appeal Request

a) The appeal request must be in writing, directed to the Chief Compliance Officer and received within 21 days of the decision or act that is the subject of the appeal. The appeal request shall be made in triplicate and shall set forth the specific act or matter complained of and in dispute. Additionally, the appeal request shall include all documentation which supports the User's position.

b) The Chief Compliance Officer shall within thirty (30) days of receipt of a written appeal request, acknowledge such receipt in writing to all interested parties. Thereafter, the Chief Compliance Officer shall arrange for a hearing to be held in accordance with Section 3 of this Chapter, or if appropriate, direct a representative of the IPP Program (IPP Representative) to schedule a conciliation meeting with the appellant as soon as practicable, at the mutual convenience of the parties to resolve the dispute.

Article II CONCILIATION MEETING

Section VIII-102. Conciliation Meeting Procedure

a) If a conciliation meeting is held, it shall be open to all interested parties and their representatives. The meeting may be adjourned to a mutually acceptable date or dates.

b) If the User or IPP Representative determines that the dispute cannot be resolved through the conciliation meeting process, the parties shall so inform the Chief Compliance Officer in writing and request a hearing in accordance with Section 3 of this Chapter. If future conciliation meetings are no longer needed, the Chief Compliance Officer shall notify the parties involved and issue a decision within fifteen (15) days, in writing, by mail, to the interested parties to the dispute.

c) If it is determined by all interested parties and the IPP Representative that the dispute has been satisfactorily resolved through the conciliation meeting process, within thirty (30) days of the last conciliation meeting, the IPP Representative shall reduce such resolution to the form of a written agreement or order for signature by the interested parties.

Document received by the MI Wayne 3rd Circuit Court.

Article III HEARING PROCEDURE

Section VIII-103. Hearing Procedure

a) In the event a hearing is required pursuant to Sections 1 or 2(b) of this Chapter, the Chief Compliance Officer shall promptly appoint a disinterested hearing officer with suitable qualifications to conduct an administrative hearing and to receive testimony and evidence presented by the aggrieved party. The hearing officer shall also receive testimony and evidence from the Control Authority or others as he or she deems necessary.

b) The hearing officer shall conduct the hearing and file a written report of said hearing with the Chief Compliance Officer or his designee within thirty (30) days of his/her appointment. The hearing officer shall have the right to extend this thirty-day period for good cause. However, in such event, his/her report will be submitted to GLWA Chief Compliance Officer within fifteen (15) days of the conclusion of the hearing and the taking of testimony and evidence.

c) The hearing officer's report shall include a brief statement of factual matters at issue, the nature of the testimony and evidence received and shall include a recommendation to either uphold or modify the decision or action in question on such terms as the hearing officer deems equitable.

d) Upon receipt of the hearing officer's report, the Chief Compliance Officer shall render his/her decision in writing within fifteen days of the receipt of the report. In any event, the Chief Compliance Officer shall not be bound by the recommendation of the hearing officer. The decision of the Chief Compliance Officer shall be final and enforceable at law, unless the appeal involves a citation and a subsequent appeal is made within sixty (60) days and the Authority grants a review of the Chief Compliance Officer’s decision. The decision of the Authority shall be final.

e) A person or Member Community aggrieved by a final decision of the Chief Compliance Officer or the Authority may petition to the Wayne County Circuit Court for judicial review. The petition shall be filed not later than sixty (60) days following the receipt of the final decision. An aggrieved person or municipality shall exhaust all administrative remedies provided in this Section before seeking judicial review.

f) With respect to the hearing conducted, the hearing officer shall not be bound strictly by the rules of evidence which would apply in a court of competent jurisdiction. The hearing officer shall have the authority to receive such evidence as he/she deems relevant and material and to give the evidence received such weight and probative value as, in the hearing officer’s discretion, is deemed proper.

SAVINGS CLAUSE

If any provision, paragraph, section or article of these rules are invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, sections and articles shall not be affected and shall continue in full force and effect.

Document received by the MI Wayne 3rd Circuit Court.

Approved: 11/13/2019

Published:

Effective:

Document received by the MI Wayne 3rd Circuit Court.

25-003683-CZ FILED IN MY OFFICE Cathy M. Garrett WAYNE COUNTY CLERK 4/3/2026 3:30 PM Ibrahim Islam

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

LAURENCE WOLF,
individually and d/b/a Wolf Properties,
individually, and as representatives
of a class of similarly situated persons
and entities,

Plaintiff,

v.

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

Defendant.

Case No. 25-003683-CZ
Hon. Kevin J. Cox

Gregory D. Hanley (P51204)
Jamie K. Warrow (P61521)
Edward F. Kickham Jr. (P70332)
Kickham Hanley PLLC
40950 Woodward Ave., Suite 306
Bloomfield Hills, MI 48304
(248) 544-1500
Attorneys for Plaintiff

Christopher S. Frescoln (P63175)
Stephen J. Brown (P82684)
Fausone & Grysko, PLC
41700 West Six Mile Road, Suite 101
Northville, MI 48168
General Counsel
(248) 380-0000
Attorneys for Defendant

EXHIBITS 11-17 TO PLAINTIFF'S FIRST AMENDED CLASS ACTION COMPLAINT

EXHIBIT - 11

In The Matter Of:

General Mill Supply Co., et al v.
The Great Lakes Water Authority, et al

Stephen Kuplicki
October 15, 2021



Judy Jettke
& Associates
COURT REPORTING AND VIDEO

Original File kuplicki101521.txt
Min-U-Script® with Word Index

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO.,
Individually and on behalf of a
Class of similarly situated
persons and entities,

Plaintiffs,

vs. Case No.: 18-011569-CZ
Hon. Charles S. Hegarty

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

and

CITY OF DETROIT, a municipal corporation,
by and through its WATER AND SEWERAGE
DEPARTMENT,

Defendants.
_____/

DEPOSITION OF STEPHEN KUPLICKI

Taken by the Plaintiffs on Friday, October 15, 2021, at 41700 West Six Mile Road, Suite 101, Northville, Michigan, commencing at 9:00 a.m.

APPEARANCES:

For the Plaintiff: GREGORY D. HANLEY (P51204)
Kickham Hanley, PLLC
32121 Woodward Avenue, Suite 300
Royal Oak, Michigan 48073
(248) 544-1500

APPEARANCES CONTINUED:

I N D E X

STEPHEN KUPLICKI

Examination by Mr. Hanley 4

E X H I B I T S

Identified

EXHIBIT NUMBER 20 8
GLWA Rules

EXHIBIT NUMBER 21 19
User Guidance Information

EXHIBIT NUMBER 22 58
GLWA'S Industrial Pretreatment Program
Updated Rules

EXHIBIT NUMBER 23 68
Response

EXHIBIT NUMBER 24 73
Black & Veatch Report

- - -

APPEARANCES CONTINUED:

For the Defendant: CHRISTOPHER S. FRESCOLN (P63175)
Fausone Bohn, LLP
41700 West Six Mile Road, Suite 101
Northville, Michigan 48168
(248) 380-0000

Co-Counsel for Defendant GLWA: ALEXANDER R. BAUM (76488)
(Appearing via Zoom)
32605 West Twelve Mile Road, Suite 300
Farmington Hills, Michigan 48334
(248) 324-2620

REPORTED BY: Sandra L. Patton, CER 5653
Certified Court Reporter
(586) 783-0060

Judy Jettke & Associates
(586) 783-0060

Northville, Michigan
Friday, October 15, 2021 - 9:00 a.m.

STEPHEN KUPLICKI,

HAVING BEEN CALLED BY THE DEFENDANT AND SWORN:

EXAMINATION

BY MR. HANLEY:

Q Good morning, again, Mr. Kuplicki.

A Good morning.

Q I am Greg Hanley, I represent the Plaintiff in the matter before us.

We've taken your deposition on one other occasion on some limited issues, and now we're proceeding to take the deposition on maybe a broader set of issues.

I'm going to show you what we previously marked as Exhibit 1 in the prior deposition.

MR. HANLEY: For the record, it's an affidavit of Mr. Kuplicki that was signed in November of 2019.

BY MR. HANLEY:

Q I know we went over this in your first deposition, but on paragraph two, it says you're the manager of operations for The Great Lakes Water Authority, GLWA's Industrial Waste Control Division. Is that still the case?

Page 5

A Yes.
Q Has anything changed in your employment duties since the --
A No. You have crossed out analytical lab, but I've surrendered those, but I think I did that before we met last time, too, so.
Q Yeah, that's not my striking. That was part of the affidavit.
So, but my understanding is, is that at one point you were associated with the analytical laboratory?
A Yes.
Q And what periods of time?
A I believe it was from 2016 through I think it was June of 2019.
Q And has that remained the same? In other words, you're no longer working directly for the analytical laboratory?
A Correct.
Q All right. Did you work for the analytical laboratory before the switch-over from DWSD to GLWA?
A I may have done it for one month, November, December of '15. I don't recall offhand.
Q All right. So, who ran the analytical laboratory before you took over?

Page 6

A Let's see, I'm trying to remember here. There was a Michael Jurban.
Q Can you spell his name?
A J-u-r-b-a-n.
Q Was that at DWSD?
A That was at DWSD. He ran part of the laboratory, what we used to call the operations laboratory.
There was also a Joseph Piendl, P-i-e-n-d-l. He had a stroke and was unable to continue, so that's when I stepped in.
Q Okay. Whether you were with the analytical laboratory at DWSD, and we're going to get into this in more detail in a little bit, but are you generally familiar with what the analytical lab was doing at DWSD?
A Yes. Generally speaking, yes.
Q Okay. Is Mr. Jurban still with DWSD or GLWA?
A No.
Q Do you know when he left?
A He left, I believe it was last year.
Q Do you know where he went?
A He just retired, I believe.
Q Oh, okay. But did he come --
A He was 72 or something, so, yeah, he just retired.
Q Did he come along to GLWA or did he stay at DWSD?
A No, he did make the transfer to GLWA.

Page 7

Q Okay.
A He worked for me while I was responsible for the laboratory.
Q Okay.
A He was part of my team.
Q So, just so that the record is clear, the analytical laboratory, and we're going to get into what that all is, but it went from DWSD to GLWA when the transition occurred in 2016?
A Correct, it was one of the assets that transferred over to GLWA.
Q Okay. So, DWSD no longer has an analytical laboratory, it's now considered part of GLWA?
A Best of my knowledge, correct.
Q Okay. All right, and so you were responsible for the analytical laboratory from the time of transition in January of 2016 to, you say, June of 2019?
A Correct.
Q And who's been the head of it since then?
A His name is Dale and last name is Bennet, B-e-n-n-e-t.
Q Is it two Ts at the end or just one?
A I don't remember.
Q Okay, and has that been consistent, has Mr. Bennet's role as the head of the analytical laboratory been consistent since June 2019?

Page 8

A Yes.
Q All right. There hasn't been anybody else?
A No, no.
Q Okay. All right, and so now you've been manager of the IWC Division consistently since at least 2013, correct?
A Yes.
Q Whether it's at DWSD or later GLWA?
A Yes.
Q Okay, and just for purposes of the deposition so that the record is clear, when I say "GLWA," we're referring to The Great Lakes Water Authority.
A I understand that.
Q And when I say "IWC," we're talking about Industrial Waste Control?
A Correct.
Q Okay. All right. You can set that aside for now.
(GLWA Rules were marked as Exhibit Number 20 for identification.)
BY MR. HANLEY:
Q I've marked and given you Exhibit Number 20, an 89-page document that's entitled GLWA Rules, and the first page has Table of Contents and there's lots of pages afterward.
Are you familiar with the GLWA Rules?
A Yes, I am.

Page 9

Q And were you involved in the compilation or creation of these rules?
A Yes, I was.
Q Were you primarily responsible at the end of the day?
A I had a significant contribution to it, yes.
Q All right, but we can assume that by implementing these rules and being part of it, that you personally agree with the content?
A Yes.
Q All right. I mean, is there anything that you wanted to put in that was voted down or disagreed with that you can recall?
A No, no. Again, rule making is what it is, so.
Q And there's definitions, which we're going to get into, but do the definitions that are in the Chapter 1 of this, are they intended to track EPA regulations?
A Again, whenever we write rules or ordinances or anything like that, we always look at these definitions. You know, usually, it's EPA, local current usage, state usage, so while many of the times, yes. I mean, this particular model, as well, was modeled off the EPA model ordinance. So, a substantial number of the definitions did come directly from EPA; although, we may have modified some.
Q All right, and this version date is 11/13/2019. Are

Page 10

these the rules that were ultimately implemented?
A Okay, these rules were adopted.
Q I'm sorry. Okay, but this isn't a draft or there's some later incarnation?
A No, this is the current version, the most recent version of these rules.
Q Okay, and I noticed like the faded, on the front page says, "Board Approved." Do you see that?
A Right. It's not on this one.
Q You can see it on mine?
A Yes, I see it on that one.
Q Okay. All right. I just wanted to make sure.
Now, prior to November 2019, did GLWA have similar rules?
A No.
Q Did the DWSD rules kind of carry over?
A DWSD rules did carry over. In fact, those are the ones that are still in effect.
Q Okay. Can you explain to me what you mean by that?
A Okay. When there was a transition from DWSD, a transition of assets from DWSD to GLWA, we were one of the assets. "We," being IWC, was one of the assets that was transferred over. Again, in order to carry out our program responsibilities, we had to go with existing legal authority because the permit is issued

Page 11

jointly to the City of Detroit and to GLWA.
Q Okay.
A So, we're co-permittees. At the time GLWA was formed, again, it was late 2015 when everything came together. GLWA, when it was formed, had no formal rules. I mean, it was just forming its structure, et cetera.
Q Right.
A And so all we had in place was the City of Detroit ordinance, and that is still effect and what is ruling here.
Again, there's a process to get rules adopted, and part of this process requires that the State of Michigan, I mean, basically, they have to make a determination that the rules are acceptable and do a permit modification, whether they call it substantial or non-substantial. They have not done that piece yet and it's because of a policy decision for EGLE, Michigan EGLE.
Q All right. So, Exhibit 20, the rules were adopted, but they're not yet enforced, so to speak?
A Correct. Again, in order to implement these rules, according to the Authority, the state law that the Authority was formed under, we have to obtain concurring resolutions from our communities. We have 78 of 79 communities who have done the concurring

Page 12

resolution.
Q I bet I can guess the one that hasn't.
A We have one who has not.
Q That's Highland Park?
A Yes, Highland Park, yes.
Q Okay. When you say the "DWSD rules," are those the rules that are implemented in the Detroit ordinance?
A Okay. There is, when we call the DWSD legal authority pieces, there's a City of Detroit ordinance. In some of the paperwork you'll see 0805. That was the ordinance number for 2005. It was the eighth ordinance of 2005 at the time they adopted it. I think there was a modification they made, so it's 42 something. They did some recodification with their numbering system, but, in essence, it's predominantly the same; and then there are actual rules, surcharge rules and regulation, hauled-in waste rules.
Again, the intent of these GLWA rules was to update and consolidate some of these older rules because many of those, the surcharge rules date back to '83, 1983. I think hauled-in waste was 1985. So, they're dated to a degree.
Q All right, but do the --
A But those are still in effect.
Q Did the GLWA Rules in Exhibit 20, to your knowledge,

Page 13

reflect the actual activities of the Industrial Waste Control Division, at least?
A You mean as far as the various elements that are our responsibilities?
Q Yes.
A Yes.
Q Okay. What about the definitions, the definitions and these rules guide GLWA?
A Again, I mean, we still have to look at the actual effective legal authority. So, there may be a definition -- while most of them were carried over from what was in the Detroit, there may have been some here that were updated or modification, whether from EPA or ourselves locally. So, those are not yet effective. But oftentimes when we did that it was just a clarification of, if you want to say state of art of how that term has been used and understood in the 16 years since it was last adopted, so.
Q Okay, all right. I'm just going to walk through a few pages of this and then, of course, we can always -- the DWSD ordinance that I think also has definitions is public record?
A Yes.
Q And if we need to refer to it, we can, but in the preamble on page two of Exhibit 20, the third

Page 14

"whereas," it says, The GLWA promulgates these rules and regulations for the protection of the environment, the public health and safety by abating and preventing pollution through the regulation and control of the quantity and quality of sewage, industrial waste, and other wastes admitted to or discharged into the sewage systems and sewage treatment facilities under the jurisdiction of the GLWA and enabling the GLWA to comply with all applicable state and federal laws required by the Federal Water Pollution Control Act, being 33 USC 1251, et seq., the General Pretreatment Regulations for Existing and New Sources of Pollution, which is 40 CFR 403, and the National Categorical Pretreatment Standards at 40 CFR 405 to 471. Do you see that?
A Yes.
Q You agree with the statement in the "whereas"?
A Yes, I do.
Q Okay. So, part of the purpose of the rules and regulations is protection of the environment and the public health and safety?
A Yes.
Q All right. Is protecting the environment benefit to the public, generally?
A It's benefit to all system users.

Page 15

Q Right, but does it provide, in your view, a benefit beyond a benefit conferred on the specific users of the system?
A I guess I don't understand your question. If you can say it again.
Q Well, the users of the sewer system are a subset of the public, right?
A Right.
Q All right, and protection of the environment. Does it benefit more than just the sewer users?
A I mean, there may be benefits to people who are not part of the system. I mean, the state, generally.
Q All right. Well, a major goal of the regulations is to keep bad stuff out of the river, right?
A Correct.
Q All right, and if bad stuff gets in the river, that's a harm that goes beyond just a harm to the sewer users, correct?
A Right. I mean, it impacts, in our case it impacts state waters, federal waters, international waters.
Q Right. All right, and when you're talking about a benefit to the users of the system from the rules and regulations, that's a benefit to, whatever benefit is conferred by let's say the activities of the IWC Division, that's a benefit that's conferred on all

Page 16

users of the system, correct?
A I mean, "benefit" is such a vague term. I mean.
Q Well, I don't really have a different word. I mean, the --
A There's definitely a benefit providing waste treatment services to the region. Those are benefits shared by those people who participate in the use of that system, and I guess to the extent there may be someone who doesn't, it may benefit them, as well.
Q Right, but the status as a residential or non-residential user doesn't change the benefits conferred from the system, correct?
A I mean, in a very broad sense that may be true.
Q All right. If you turn to page six of 89.
A All right.
Q There's a definition of industrial user or IU. It means a user who is a source of indirect discharge?
A Yes.
Q Do you recognize that definition as being one that was used, has been used consistently?
A Honestly, I don't recall. I'd have to look at what the current definition is. These definitions and uses have been modified over the years, but, generally, I don't disagree with it.
Q Okay, and it means a user who's a source of indirect

Page 17

discharge, and then we see indirect discharge being defined as the discharge or introduction of pollutants into the POTW, that's the public treatment works, right?
A Right.
Q From any non-domestic source regulated under 33 USC Section 1317 (b), (c), or (d)?
A Correct, and POTW is publicly owned treatment works.
Q Okay, and what are the non-domestic sources that are regulated under the statute?
A Well, I mean, technically, anybody who has a discharge to the system is not a domestic or residential user. I mean, it's someone who's engaged in some commercial activity, whether it be governmental, non-governmental, some form of commerce.
Q Okay.
MR. FRESCOLN: Counsel, I think you used the phrase, non-direct discharge. Did you mean that to say indirect discharge?
MR. HANLEY: No. I thought I said, "non-domestic source."
MR. FRESCOLN: I apologize.
BY MR. HANLEY:
Q Okay. So, if you turn then to page 11 of 89, at the top there's a definition of users or non-domestic user

Page 18

or industrial user?
A Okay.
Q Those terms are synonymous?
A Yes.
Q Okay. So, if you say "user," that's the same thing as saying a non-domestic user or industrial user?
A For purposes of these rules, correct.
Q Okay. It says it means any industry, commercial establishment or other entity that discharges wastewater to a publicly owned treatment works other than or in addition to sanitary sewage and as a source of indirect discharge. Do you see that?
A Correct.
Q So, if a property only puts sanitary sewage into the sewer, it's not defined as a user under these regulations, correct?
A No, it says other than or in addition to. So, even if they have, if they're a commercial entity and its sanitary sewage alone could qualify them certainly as a non-domestic user.
Q You read that as -- I read it as saying it's industry, commercial establishment or other entity that discharges wastewater to a publicly owned treatment works other than or in addition to sanitary sewage. So, sanitary sewage only doesn't transform you into a

Page 19

user or industrial user. Is that a correct way to read this?
A I don't know. I mean, it says what it says.
Q Right, but do you understand it the way I understand it?
A No. I mean, I understand that in addition to, that sanitary sewage alone, you can still be a non-domestic user because, again, I mean you could be, your conduct would be regulated, as well, under these rules.
Q Okay, and that's notwithstanding the definition?
A Correct.
Q Okay. If you turn then to page seven of 89, there's a definition of minor user is a user who does not meet the definition of a significant industrial user, but is authorized to discharge to the POTW, correct?
A Correct.
Q So, any user that's not an SIU is considered a minor user?
A Yes.
Q All right.
A Correct, right.
Q Okay. All right. Keep that in front of you, but I've got another document that I want to mark.
(User Guidance Information was marked as Exhibit Number 21 for identification.)

Page 20

BY MR. HANLEY:
Q I'll show you what I've marked as Exhibit 21. This is a User Guidance Information, Minor User. It doesn't have a document locator number on it, but I'll represent to you that it was produced by Mr. Frescoln to us in September of this year. It's a two-page document. Are you familiar with this Exhibit 21?
A Yes, yes, I am.
Q Are you responsible for the creation of it?
A I believe I was.
Q Okay. What was the purpose of creating Exhibit 21?
A Again, we're required to develop, as necessary, guidance and procedures for staff to follow and implement in making determinations, decisions. So, part of this was to give as general guidance to staff on how we would interpret and/or evaluate classified users as we approach them.
Q Okay. All right. So, minor user under the definition is any industrial user who does not meet the definition of a significant industrial user or qualify for a Waste Water Discharge Permit under the Industrial Pretreatment Program, correct?
A In this guidance, yes.
Q All right, and is that true?
A I think that's generally true, yes.

Page 21

Q Okay. Then in the discussion you say, GLWA Control Authority is charged with identifying all industrial users who may be subject to the Industrial Pretreatment Program, and then you've created three groups. Group one is significant industrial users; group two, minor users subject to a regulatory program other than IPP. Is IPP Industrial Pretreatment Program?
A Yes.
Q And group three are just plain old minor users, correct?
A Correct.
Q All right. So, you outline an inquiry process to determine where to place facilities within these groups, correct?
A Yes.
Q Okay, and so the step one is, Does the facility generate wastewater from a manufacturing or commercial activity other than sanitary or stormwater that contains pollutants. Do you see that?
A Yes, I do.
Q So, the possible answers are "yes" or "no," but if the answer is no, then the user is expected to be classified as a minor user, subject to the general discharge prohibitions of the GLWA Rules. Do you see that?

Page 22

A I see that.
Q Is that correct?
A Yes.
Q So, basically, if you're just putting sanitary or stormwater in the sewer, you're going to be classified as a minor user?
A Yes.
Q All right, and then if the answer in step one is yes, then there's additional inquiries that are outlined on the second page, correct?
A Yes, there is.
Q All right, and then it says, Where one or more of questions two to ten are yes, the facility must be evaluated to assess whether it is a significant user requiring a Waste Water Discharge Permit and/or whether it requires regulation as part of the surcharge or groundwater discharge regulatory programs. Do you see that?
A Yes, I do.
Q And does that accurately state the process?
A I think so.
Q Okay, and then, Upon completion of this evaluation process, the user is assigned to one or more of the applicable regulatory programs or deemed a minor user, not subject to a local regulatory program. Do you see

Page 23

that?
A Correct.
Q Okay. So, if you're a plain old minor user, you're not subject to a local regulatory program, you're just subject to the general discharge prohibitions under the GLWA Rules, correct?
A Well, you're subject to the general discharge prohibitions and the specific prohibitions apply, too. Those are the specific pollutant limitations.
Q Right, but when you talk about local regulatory programs, what programs are you talking about?
A We were talking the formal Industrial Pretreatment Program, the formal Surcharge Program, the Special Discharge Program, the Hauled-in Waste Program.
Q Right. All of which are administered by the Industrial Waste Control Division?
A Correct.
Q All right. Has GLWA made a determination of how many minor users there are on the system?
A That information is available. I don't know what it is offhand, but, yeah.
Q All right. But minor users, because they're classified as industrial users, are subject to the IWC charges, correct?
A They would be among the class, yeah, IWC charge,

Page 24

correct.
Q All right. I mean, minor users don't include, just by the way it's defined, it doesn't include domestic wastewater sources, like residences and things like that?
A Correct.
Q All right, and is this the, Exhibit 21, does it reflect the policies and practices throughout the time you've been at GLWA?
A I think generally probably correct, yes.
Q Okay. When you say you believe the information is available, if you wanted to get that information about how many minor users there are, where would you go?
A I probably would have to run a report or inquiry. I think in some information, we used to provide it when the State asked for it in some of the annual reports that we would file. It was usually attachment two or three, whichever, depending on the date.
Q Okay. So, I'm not going to do it again because we did it last time because they're voluminous, but if we, if we looked at those reports, any user identified in those reports that wasn't an SIU or subject to a regulatory permit would be considered a minor user?
A I think that report, as I recall, I mean, if this, all entities known in their current status, whether it's

Page 25

active, inactive, they may be included there, as well.
Q Okay.
A And it's based on, I think, the information the State required at the time. They've changed what they've asked for at different times.
Q Okay. The definition of minor user in Exhibit 21 includes significant industrial users, SIUs, or users that qualify for a Waste Water Discharge Permit under the Industrial Pretreatment Program. Is there overlap between those two things?
A Between what two things?
Q Do SIUs also have a Waste Water Discharge Permit?
A Usually someone who qualifies as a significant industrial user would usually have a Waste Water Discharge Permit and they would be subject to Industrial Pretreatment Program.
Q All right, but there may be users that aren't significant industrial users but do have a permit?
A Yes.
Q Is that universe of users a large one or is it --
A Again, I mean, they may have a groundwater discharge, they may have a stormwater discharge that requires them to do it. They may be doing some other activity, even on a short-term basis, some remedial work that may require a temporary discharge. Essentially, anyone who

Page 26

wants -- if you want permission to release wastewater system, you need some permit or authorization. If you don't have it, you're a dumper.
Q All right, but, I mean, I feel confident that I know generally how many significant industrial users there are, but how would I find out how many users have a Wastewater or had a Wastewater Discharge Permit but weren't significant industrial users?
A Again, we'd have to look in the records to see how they were classified and, you know, report similar to what I -- the annual report would tell you that or the database that's the source of that report.
Q Okay. All right.
A There aren't many. I can tell you that right now, there aren't many significant industrial users who don't have a permit, and part of that is because state rules don't match the federal.
Q Right, but there's probably also not many people who have a Wastewater Discharge Permit but aren't significant industrial users?
A That's probably true, too.
Q Okay, but the means of being able to find that out are available to you?
A Sure.
Q Okay. Fair enough.

Page 27

One more question about Exhibit 21. Group two or minor users subject to regulatory program other than the IPP. I just want to make sure that the other regulatory program that you're talking about could either be the Hauled-in Waste Program or the Surcharge Program?
A It could be Hauled Waste, Surcharge Program. There are requirements, as well, in the regulation rules for spill plans to be submitted. So, I mean, there could be a variety of ways people, depending on what their activities are, what their responsibilities may be in order to be responsive to the current rules and regulations.
Q All right, but, again, GLWA maintains records that show the membership of group two?
A Group two being?
Q Minor users subject to a regulatory program other than IPP.
A I mean, they're not a distinct set on the side, I mean, but it's accessible, yes. I mean, it's in the database and it's extractable, so.
Q Okay. All right. Keep 20 close, but we're not going to continue to talk about it right now.
All right. I want to talk a little bit about the analytical lab. Let's first talk about the period

Page 28

of time that you were in charge, 2016 to mid 2019. How many employees did the analytical lab have?
A I don't remember, to be honest with you. I don't remember.
Q All right. Well, how many employees work for IWC?
A Currently, we have 26 employees.
Q Okay. Is your general sense that the analytical lab is smaller or larger than the IWC Division?
A Okay, when we say "analytical lab," it was laboratories. There's several components. There's analytical laboratories, there's what we used to all operations laboratory, and, again, it's because they both have chemists and they do, on occasion, rotate or they did rotate occasionally, but they had different duties. One with instrumentation, the other provided more direct services to the waste treatment plant as for wet bench testing, sample collection, this type of thing.
Q Okay. Let's kind of unpack it. First of all, is analytical lab solely on the sewer side?
A As opposed to?
Q The water side.
A The water side has some laboratories. It's not extensive.
Q All right, but when we're talking about the analytical

Page 29

lab, that is, well, you understand that the analytical lab, part of the budget of the analytical lab is allocated to the Industrial Waste Control Division?
A Correct.
Q All right. So, when I say that analytical lab, I'm referring to the lab that is charged, in part, to the IWC Division. Is that lab solely on the sewer side?
A The analytical lab predominantly services the sewer side. There's very little work they do for the water side.
Q All right, but they do do some work for the water side?
A There is some limited work, yes.
Q All right, and what would that be, in general?
A I think there was an annual requirement for some specific organic chemicals EPA would require to be analyzed for, and rather than send that to a separate laboratory, we had the capability to do those analyses and so we would run those tests.
Q All right, and you told me you don't know how many employees work in the analytical lab, but can you tell me what types of employees there are in the analytical lab?
A Okay. Well, analytical lab typically had, well, they had chemists, all right, various levels of classification. There was at least one secretary. I

Page 30

think there was some maintenance and technical assistance. I mean, they could do anything from washing bottles to helping maintain and clean up materials.
Q Okay. Now, you've mentioned the analytical lab and then you mentioned something called an operations lab?
A Correct.
Q What is the distinction between those two?
A Well, the analytical lab -- laboratory services, first off, are for GLWA, included staff who were assigned to essentially instrumentation. They do instrumentation type analyses of water samples. Those could be for metallic components, organic components, what we call compatible pollutants. There's also the operational aspect. Again, they support directly the waste treatment plant operations. They do their sample collection for them for permit determinations. They do wet tests for operational determinations to give just quick data to the operating staff so they can make decisions on the treatment process.
Q All right, and has that operations lab been in place since 2016?
A Oh, yes.
Q All right, and it is separate from the analytical lab?
A Not anymore.

Page 31

Q Okay. Since when?
A I'll say from about late 2019, where they were merged and are still in the process of being merged.
Q And why were they merged?
A We consolidated operations from an old laboratory we were using to a new laboratory that was on the same site, and we just did that as far as efficiency for the operations so that staff development, growth, opportunities, could be, I guess, better realized.
Q Was there a new facility constructed at the wastewater treatment plant?
A Yes.
Q All right. So, now all of those people are together. Do you know whether, how that budgeted now in terms of they continue to allocate part of that combined lab budget to the IWC Division?
A The cost for the laboratory functions we receive are allocated to the IWC budget, but that's a finance question. I don't have all of the details.
Q Right, and we'll get to that person, but the operations lab before it was merged into the analytical lab so there's one lab, did the operations lab support the IWC Division?
A I don't believe we ever got direct benefits or operations or tasks from them, but, again, there was,

Page 32

even budget-wise, I believe it was a single budget for laboratories.
Q Okay, but you'd rely upon a finance person for how it actually was budgeted?
A Correct.
Q All right. All right. We were talking about just the analytical lab, so let's talk about the 2016 to 2019, before the merger. You said you weren't familiar, you didn't recall the number of employees that worked in the analytical lab, but did the number of employees remain relatively constant during that time period?
A In 2016, again, in our transition from DWSD to GLWA there were some staff reductions overall in the entire organization and it affected the laboratory, as well. I don't recall to what degree. There may have been some reassignments and such, as well, with that, just like any new organization and merger, but during the term from '16 to I think '19, I think the numbers were relatively stable.
Q Okay. Now, what does the analytical lab do?
A Okay. The analytical laboratory uses -- they're set up in multiple sub-laboratories. They'll have a laboratory for metal analysis, for organic analyses, again, a chemical analyses for suspended solids, fats, oils, and grease, cyanide, phenols, what we call

Page 33

compatible pollutants of biochemical oxygen demand, total suspended solids, phosphorus. So, they provide, we use them for permit-related parameters necessary to show compliance as legal evidence.

Q Okay. So, in other words, you find out that somebody put something in the sewer and you get a sample of it and you send it to the analytical laboratory to be looked at?

A Usually, we would send it, we would ask for certain parameters to be evaluated for. So, if we suspected there were metallic compounds, we would ask for that analysis. If we felt they were organic solvents, paints, whatever, we would ask for that. If we weren't sure, we would kind of ask for whatever we could get. If we felt there was something specific that they weren't capable, we would send it to a commercial laboratory outside for a specific analyses.

Q Okay, and anything else that the analytical lab does?

A Well, I mean --

Q I was trying to cover the waterfront, so.

A Yeah. No, I mean, as far as the activities they do, that's predominately the responsibilities they had were to make those determinations on behalf of the organization.

Q All right.

Page 34

MR. FRESCOLN: This question is still limited to 2016 to '19?

MR. HANLEY: Yes, yes.

BY MR. HANLEY:

Q Okay. So, what does the analytical lab do to support the operations of the IWC Division?

A We send our samples, the majority of our samples, to the analytical laboratory for the various determinations that we have required to measure in the permits that are issued or if it's a -- if we don't know when we do that for analysis, we'll send samples to them for that. There are some specific samples we do ship off to other laboratories without going to the analytical laboratory, but those are very limited because it's a specific EPA list that we don't, analytical lab doesn't necessarily do all of those parameters.

Q Okay.

A The special instrumentation that they would need to do that.

Q Anything else that the analytical lab does to support the operations of the IWC Division?

A Well, I mean, if we would have hearings or any type of whether administrative or judicial, if there was ever a question about the evidence and such, we may get

Page 35

someone there to serve in the capacity of how was this analyzed, whether they need a particular chemist evaluating or just generally just speak of the procedure. I mean, they would be selected for that, but during '16, '19, I don't recall that there were many or any cases on that.

Q Okay. Do the employees of the analytical lab keep track of what they're doing, the documentation?

A Yes.

Q In other words, if they're performing a service for IWC, there would be some record of that?

A I believe so, yes.

Q And the same for tasks that don't support the IWC Division?

A I believe so.

Q All right, and has anybody ever asked you to estimate what percentage of time employees in the analytical lab spend supporting IWC as opposed to other tasks?

A I think the only time -- no one asks that particular question. They may have asked for a breakdown in samples analyzed by the different groups, IWC, wastewater operations, water, as I say, for the few that may have been done there. So, there probably are some reports on that.

Q And who asked for that?

Page 36

A I don't remember. I believe they are internal questions, they were not external.

Q Well, I guess what I'm saying is, is I think we've established that you understand, although you're not in the finance, but you understand that part of the analytical lab budget is allocated to IWC, correct?

A Yes.

Q And have you, to your knowledge, ever been involved in assisting in those allocations?

A No.

Q Do you have for 2016, 2019 period of time an idea in your head about what percentage of the time of the analytical lab is devoted to supporting IWC?

A I do not.

Q Do you know whether anybody else has engaged in that process?

A I do not.

Q Okay. Returning to the rules, Exhibit 20, if you'll turn to page 77 of 89.

A Okay.

Q It's Chapter 5, Revenues to Support the Regulatory Programs. You're familiar with Chapter 5?

A I haven't looked at it for quite a while, but, yeah.

Q But it's intended to set out the types of revenue sources that support the programs that are subject of

Page 37

these rules?
A Correct.
Q And that's including the Industrial Waste Control Division, correct?
A Correct.
Q All right, and down at the bottom, under Article 1, Industrial Waste Control Charges, it says, The Control Authority hereby adopts the following method of funding these regulatory activities, and the idea is that there's going to be an IWC water meter charge, correct?
A Correct.
Q And even though these have not actually been implemented, although they've been adopted, what's set forth in Article 1 is consistent with the way it's historically been done, correct?
A As far as I know, water meter charges have been used for funding IWC since at least 1982.
Q All right, and it says, B, subparagraph B of Article 1 says, The IWC water meter charge shall be based on the size of the water meter on a proportional basis and assessed on any non-residential water meter and with the following exceptions, which we'll get into, correct?
A Uh-huh, yes.
Q Yes. So, it's assessed against non-residential water

Page 38

meters subject to the exceptions we will get into, correct?
A Correct.
Q All right, and it's on a proportional basis. So, if you have a five-eighths-inch meter, you're going to pay less than somebody who has a four-inch meter?
A Correct.
Q All right, and do you understand the rationale behind that charging more to somebody with a four-inch meter than a five-eighths-inch?
A It has to do with the, I guess it's a gauge of service.
Q Right. In other words, somebody with a four-inch meter is probably using more water, generating more sewage than someone with a five-eighths; that's the theory?
A Correct.
Q All right, and, again, it's based upon the size of the water meter as opposed to actual sewage flow, correct?
A Correct.
Q But the water use is a proxy for sewer use, correct?
A That's for the most part, yes.
Q All right, and then the exceptions are, The IWC water meter charge shall not be assessed on any meter dedicated for fire purposes only?
A Correct.
Q And is the rationale behind that is that that's not

Page 39

contributing to sewer because it's just --
A Normally, it's a standby service. It's not an active flow. Usually when, you know, those have zero registers.
Q All right, and then the second exception is, The IWC water meter charge shall not be assessed on any meter dedicated for irrigation purposes only. Do you see that?
A Yes.
Q Is the rationale behind that that irrigation water doesn't enter the sewer system, generally?
A I guess that's what it would be, yes.
Q All right, and the final exception is, The IWC water meter charge shall not be assessed on any meter from a multi-family residential dwelling, public and private elementary and secondary school, which are part of a government school district, colleges, universities, professional schools, junior colleges and technical institutes, and local, state and federal government facilities. Do you see that?
A Yes.
Q Do you know why those facilities are exempt from the charges?
A I do not. I think it was a policy decision, that's all.

Page 40

Q All right, but you'd agree with me that leaving aside multi-family residential dwelling, all of these other types of facilities would otherwise be characterized as industrial users?
A Under the earlier definition we had in the rules, yes.
Q Yes. Well, under any definition. Because they're exempt, that implies that they otherwise would be subject to the charges because they fall within the category of users that are --
A They're non-domestic users.
Q Right.
A Okay.
Q But absent this exemption, they would be within the category of users that would incur the IWC charge?
A I believe so, yes.
Q All right. Do you know how far this exemption goes back?
A I do not. I think it goes back to '82.
Q All right, but if we want to determine that, we could find the old federal court order and see whether it goes back that far? Is that what you rely on when you say 1982?
A When I refer to 1982, it's the '81/'82 Rate Settlement Agreement, yes.
Q All right. But you don't know as you sit here today

Page 41

whether the Rate Settlement or any other court-ordered document contains this exception, exception three?
A With all of these elements, no.
Q Okay. Subparagraph C on page 78 says, Member communities shall periodically report the quantity, number, and size of non-residential meters and any exempt meters, as described in paragraph two. Do you see that?
A Yes, I do.
Q Do you know whether the member communities identify the exempt meters as set forth here?
A I do not. I mean, they do not report that information to the IWC Division. Usually, our finance people would make those inquiries and receive that information.
Q All right, but at least under the GLWA Rules, that's Exhibit 20, that's the expectation of GLWA is that not only will they report the quantity, number, and size of non-residential meters, but they'll also report any exempt meters?
A As described in two.
Q So, yeah. So, if things go according to plan, GLWA should have, if I were to say I want to know how many exempt users there are and how many equivalent meters that is, GLWA should have that information?
A Again, as I say, these set of rules are not yet

Page 42

effective.
Q Right, but the idea is that GLWA wants to track that?
A Going forward when these would become effective, they would want to know. If there are any exempt meters, they would want to know that, yes.
Q Right, but do you know, I understand these have not been implemented yet, but do you know as you sit here today whether GLWA has information from member communities regarding exempt meters?
A I do not know.
Q All right, but the exemption, when it talks about local, state, and federal government facilities, that would include things like post offices and state offices and things like that, correct? Any local, state, and federal government facilities are exempt?
A That's what it says.
Q All right. Okay, then we get to subpart d, same page, 78. It says, Control Authority shall prepare a bill to each member community using the information provided in paragraph three and forward the bill for payment either through the wholesale sewer contract customer, if applicable, and/or member community indicating the terms and conditions of payment. Do you see that?
A Yes.
Q And I understand these rules have not been implemented,

Page 43

but that's the historical method of charging, correct?
A I believe so, to the extent I understand it, yes.
Q All right, and then in E it says, Each member community is responsible for assessing these fees on applicable user and collection thereof in accordance with the delegation and service agreements and for reporting changes in a number of meters reported in paragraph three. Do you see that?
A Yes, I do. I think the numbering is off here because there's letters and there's numerical values here. There may not be -- I'm not sure which is paragraph three here, but I assume that should be something other than A, B, C, D.
Q Right. All right, but other than that, the process here is one that's been the historical process?
A My understanding of the billing system generally is, yes, that that's the process.
Q In other words, the member community assesses the fees on applicable users and then collects the money and forwards it to GLWA?
A Correct.
Q All right, and it says finally, The Control Authority reserves the right to collect any and all outstanding amounts in accordance with applicable law.
A Correct.

Page 44

Q And the Control Authority is GLWA?
A Yes.
Q All right. Thank you. All right.
I want to talk, hopefully pretty briefly, about the other regulatory programs that are administered by the IWC Division, and the first one I want to talk about is the Hauled-in Waste Program. Can you just describe, in general, what the Hauled-in Waste Program is?
A Okay. The Hauled-in Waste Program is a permit-based program that was created to control and authorize the discharge of wastewater that was brought, wastewater I guess we'll just called it, was brought in by a vehicle and discharged at some point in the system or brought to the plant at some point in time directly.
The rules I believe as they're currently written include septage waste. So, that whether it's residential septage or commercial septage, they're hauling that material under both authorizations, they would get both from the State and from us to do so. They would be authorized to dispose of that, the contents of that vehicle at designated locations.
Q All right. So, my septic tank gets filled and I hire a contractor to come out and pump it, and I see these trucks on the road that have DWSD permit numbers on

Page 45

them.
A Right.
Q And they take it to one of several facilities and it's discharged into the sewer system at that facility?
A Correct.
Q All right, and then the hauler pays a fee for that, correct?
A Yes.
Q And what does the IWC Division do to support that practice?
A We issue a permit to the hauler, hauling entity. That essentially authorizes them to pre-purchase, usually it's a pre-purchase of these tickets or tokens, depending on the location. I believe, if they're going to use the waste treatment plant, they have historically used a ticket system as a proof of payment, and if it's in Oakland County, I believe Oakland County had a token system that they use.
Q Okay.
A But, essentially, you know, we would inquire about the contents and source of the materials, they would file an application, we would verify that they have passed state licensing requirements, and we would prepare a permit for a limited term that would authorize them to use the receiving facilities; and they normally would

Page 46

register the vehicle or vehicles that they have in use for this of various size because the ticket or token is based on a volume basis. So, if they have a 500-gallon capacity tank, they would have to pay for that 500 gallons as part of the ticket price. If they have 1,000, they'd have to pay a different rate for that particular tank.
Q Is the permit an annual process?
A No, I believe it's every two or three years. I don't remember the term because part of this was to coincide with the state licensing process, as well. There's a parallel process that the State of Michigan uses, and I believe it's two to three years, normally.
Q All right. So, it sounds to me that what the IWC Division does is ensure that the permit requirements are met before the permit is issued?
A That they have the capacity to do that and, essentially, that we would authorize them to use the receiving facilities and to purchase, pre-purchase tokens so that they could use those facilities. So, without a permit, they're not allowed to use the facility.
Q Right, but I guess what I'm saying is it's not just some rote process that you just start issuing permits. There's actual regulatory activities on the part of

Page 47

IWC?
A Correct. We would evaluate the information, we look at what it is. There's reports that are filed by the user with respect to the volume of loads that they've discharged to us, that we would verify with the use of the sites.
Q And what's the benefit of that regulatory activity to industrial users?
A To industrial users alone?
Q Yes.
A I mean, we started the program because there was dumping going on. People didn't want to pay and so they would pick up a manhole cover and dump.
Q Right.
A Leave a mess behind, and if it was in front of your house, it leaves a mess in front of your house for you to clean up.
I mean, there's a benefit in that it's a class of user, of an industrial user, that's made to make sure that they pay their fair share, because, again, as a mobile facility, essentially a mobile waste source, they don't necessarily have a water meter to gauge their particular business commercial activity by. It's solely based on the number of tanks that they are transporting and disposing of to the system.

Page 48

Q Right, but when I talk about "industrial users," I'm talking about the non-domestic wastewater sources that are subject to the IWC charges, okay?
A Right.
Q As opposed to residential users. What is the benefit of the Hauled-in Waste Program that's administered by the IWC Division that is specific to industrial users and not shared by residential users?
A I guess there would be similar benefits. Whether residential or industrial, they would receive the same benefit. Again, it makes sure that a respective class of user pays their fair share for the cost of treatment.
Q Okay. All right, but the Hauled-in Waste Program is, because it's under IWC, is financed through the IWC charges, correct?
A The administration is financed through IWC charges, correct.
Q Right, and the revenues received relating to the Hauled-in Waste Program through these tokens and tickets, correct?
A Correct.
Q All right. Do you have any idea of what percentage of the overall time of the IWC Division is devoted to the Hauled-in Waste Program?

Page 49

A There's only a handful of these users. I think right now there's 36. It's not a lot. I mean, if I had to guess, I would probably say staff time is probably maximum of ten, one person ten days a year. Myself it's probably four hours in signing the permits, and that's generous, because not all of the permits come due the same year. Say it's two to three years. So, roughly, if there's currently, I think there's 36 to 40, somewhere in that number, that seems to be a good number, 12 a year come due.
Q Okay. Do you know, I think you said the program generates revenues through the tickets and tokens, what cost are those revenues intended to cover?
A They're intended to cover the cost of treatment.
Q Anything else?
A Not that I know of.
Q Okay. So, somebody makes an estimate of what the treatment costs are per gallon and then that's what you pay for your tokens or your tickets?
A Yes. In a simple sense, yes.
Q Right. Okay. Now I want to talk about the Pollutant Surcharge Program.
A Okay.
Q What is that program?
A The Surcharge Program is, it was adopted, I think, I

Page 50

want to go back to 1980, '81 period. It's to cover the higher-strength waste costs of wastewater treatment that is discharged typically from commercial industrial users.
Q Okay.
A For those pollutants that the treatment plant is capable of treating.
Q Right, and these aren't toxic-type materials. They are materials that are in all that you see generally in sewage, but they're just in higher concentrations?
A We call this compatible pollutants, yes, and they're higher than domestic levels.
Q So, this is like suspended solids --
A Suspended solids, total suspended solids, biochemical oxygen demand, phosphorus, and fats, oils, and grease, those four.
Q Okay. All right, and so part of the program is identifying users who have these higher concentrations of those materials?
A Through our survey effort, yes, we identify people in certain business activities. The way the Surcharge Program is set up is there's several ways to qualify. One is based on the nature and business activities. There's a list we call Table 3-1 in the rules. There are certain SIC classes and/or business descriptions

Page 51

that are described.
So, for example, someone in meat processing, so if you do meat processing, you would be subject to, you're likely to be subject to the Surcharge Program, so there's a default set of concentrations that may initially apply to you. It's set up also to identify users based on actual sampling measurements.
Q Okay.
A That would be performed by us and/or the user to characterize. Again, the ideal is to have it based on actual waste strength, but, again, sometimes the cost doesn't justify for the particular user. It's a decision they have, as well.
Q All right. So, a particular user, the categories, you know, you said meat packing plant, you would expect to have X pounds of this or, you know, X amount of this per gallon, and so you've assigned that to them?
A Correct.
Q And they would have the option of doing the actual sampling. They may say, no, I'm not doing that much and here's a sample. Is that done?
A Yes, we have some users who probably date back to the early '80s as far as have never had their surcharge bases changed.
Q All right, and how many users are subject to the

Page 52

Pollutant Surcharge Program?
A Wow. That fluctuates. I'm going to say there's probably about 150 to 175 maximum, but I think 150, probably closer to that.
Q I've seen 165 as a number that --
A Yeah. Well, it varies, but it's approximately that range.
Q All right, and has that number stayed relatively constant since, say, 2013?
A Since 2013?
Q Yes.
A Probably.
Q Okay. So, what does the IWC Division do to support the Pollutant Surcharge Program?
A We would, we periodically would conduct wastewater sampling at their facilities. Part of that is to ensure that the surcharge bases, what we call the bases, which is the concentration values that they're assigned, are in the same, I guess, order of magnitude, proximity there. That if someone is putting in higher-strength waste than what they're currently, their surcharge base is scheduled for, there's a protocol where we could get an increase of that waste so they pay their fair share.
Works the other way, as well. If there's a

Page 53

decrease, we could initiate that sampling and/or the user can. It usually works jointly in the end where there's a mutual undertaking of sampling done. They collect samples, we collect samples, but it's mostly a sampling activity on our part.

Q Okay, and do you know what percentage of the overall time of the IWC Division is devoted to supporting the Pollutant Surcharge Program?

A It varies because a number of the surcharge, people who are subject to the Surcharge Program are also significant industrial users and they have other requirements, as well. There are some that are just distinct Surcharge Program only. While we try to issue a permit to as many as possible, just to make it efficient that way, there are some, like I say, that do not have a permit that are under the program. So, I don't offhand know what that is.

Q Okay. What benefit does the Pollutant Surcharge Program have for industrial users that aren't subject to the program?

A Well, it makes sure that, again, people are putting in higher-strength waste pay their fair share of the cost of treatment.

Q All right, but what you're describing is a benefit to all sewer users, whether they're industrial,

Page 54

residential, whatever?

A When the Surcharge Program was developed and adopted, it was, first of all, adopted because of federal requirements. We receive federal money, we had to comply with federal regulations, of which that you had to make sure that people who use the system pay their proportional share.

The method that was elected at the time was to establish a method of base sewer rate applicable to all users, plus surcharge for higher-strength wastewater discharges. So, those people who discharge are subject to the Surcharge Program, pay both the base sewer rate and the surcharge on top of that.

Q Right.

A As their fair share of cost of treatment.

Q So, making those particular users pay their fair share benefits all sewer users by making what they have to pay somewhat lower?

A It benefits, right, because if you can allocate the cost more directly to a particular user, that user pays, let's say, their fair share as opposed to having to distribute it among a wider group.

Q Right, and when I say it's a benefit to all sewer users, I mean domestic and non-domestic sources?

A I mean, I guess generally, yes, because it probably

Page 55

benefits the industrial users more, non-domestic users more because the normal sewer rate is the rate and if people were only all below that rate, it would be one rate. If there's excess above that, so if I have some quantity coming in, the amount you're charging, it's already incorporated into the base rate for the domestic source. So, any excess, if I only know ten people and I have this excess amount, those ten people pay. If I identify additional five, it's divided by that and reduces the cost.

Q Right, but if you're getting this surcharge, it's in the millions of dollars a year, right?

A It's substantial, yeah.

Q All right, but if you didn't surcharge the particular people who have the higher loading, everybody else would have to pay somewhat more?

A Correct.

Q All right. All right, and just so we're clear, the IWC charges finance the Pollutant Surcharge Program because it's under the IWC, correct?

A The administration of the surcharge, as far as the cost of monitoring, et cetera, yes, correct.

Q Right, and the revenues from the surcharge are a treatment cost that GLWA determines are attributable to the higher concentrations?

Page 56

A Could you restate that?

Q Well, the surcharge is intended to cover the treatment costs?

A Correct.

Q As opposed to the administrative costs?

A Right. It's intended to cover the treatment costs only, correct.

Q Okay. Is there any other regulatory program that's administered by the IWC Division?

A I think we've called it a Special Discharge General Permit Program, and that's kind of just a catch-all for other types of wastes.

Q Okay, and, well, other types of waste that aren't the wastes that you described, DOD, TSS?

A They could be of any wastewater type other than what was in the normal sense. So, under special discharge, there are businesses, for example, who occasionally have bad product. They have a tank of orange juice, 5,000 gallons of orange juice has gone bad, they need to dispose of it.

We would evaluation whether, first of all, we could accept that material or not, what would have to be done for us to accept it, and whether it was, there was some type of hazard. I mean, it's acidic in nature, so whether there was a concern, there was some

Page 57

neutralization required, and then the cost of disposal.
Q Okay. So, is there a charge that's associated with those special discharge?
A There would be a cost of treatment charge, yes.
Q And who determines that?
A We would normally, "we," I mean IWC, when we issue like a Special Discharge Permit, usually part of the permit requirement is reporting the gallons or volume discharge. Usually, especially in the City of Detroit area, we would handle those. Some of the other communities are more direct. They may require a meter be put on that covers that cost and we don't get involved in that. We get the regulatory report on the volume to validate that they're consistent with their permit application and what authorization they were given. So, if we granted someone authority to discharge a maximum of, let's say, a hundred thousand gallons, that they didn't charge two.
Q Okay. All right. Fair enough.
MR. HANLEY: I'm going to take a short break. I'm going to recalibrate. I'm going to finish pretty quickly.
MR. FRESCOLN: Okay.
(At 10:16 a.m., off the record.)
(At 10:23 a.m., on the record.)

Page 58

(GLWA's Industrial Pretreatment Program Updated Rules was marked as Exhibit Number 22 for identification.)
BY MR. HANLEY:
Q I'm going to show you what I've marked as Exhibit 22, which is a two-page document that is entitled GLWA's Industrial Pretreatment Program Updated Rules, Frequently Asked Questions, prepared March 6, 2020. You're familiar with Exhibit 22, are you not?
A Yes.
Q You're referenced a couple of times in this document. Are you responsible for the content of this?
A I think as far as, yeah, a lot of the material, information, yes. I had input on the second page, but I think that was mostly our general counsel was working on that.
Q Okay. The first topic is, What is the Industrial Pretreatment Program, and it talks about the various elements that we've been talking about. Is that kind of a good general description of what the overall Industrial Pretreatment Program consists of?
A Yes.
Q All right, and then the second title is, What are the new IPP rules and why were they changed. And it says, GLWA maintains a set of rules by which it implements

Page 59

and enforces the IPP. On November 13th, 2019, the GLWA Board of Directors passed a resolution to add language to the rules regarding regulation of PFAS compounds. The full set of rules with the added language can be found online at the GLWA website. Do you see that?
A Right. Correct.
Q And is the full set of rules that you're referencing, is that Exhibit 20?
A I believe that's the package, yes.
Q All right, and it suggests to me that those rules, there was a previous incarnation of those rules and that the change to the rules was only relating to the regulation of PFAS compounds; is that correct?
A That was the predominant correction and change, yes.
Q All right, but --
A There was a set of rules, I think it was 2016, we were using an interpretation we received that it only needed to be approved by the incorporating bodies of the Authority and then the State changed, after 2016, the State changed their mind and said, no, you have to get concurrent resolutions from all individual municipalities.
Q All right, but the rules that you're talking about from 2016, we could find those and we could compare those rules to the Exhibit 20 rules and determine any

Page 60

differences?
A There were some differences, yes.
Q All right, but my question is, I don't appear to have those rules.
A Right.
Q I have these Exhibit 20 rules, which haven't been implemented yet.
A Correct.
Q If I wanted to get the 2016 rules, that would be available to me?
A They would find it somewhere. Again, yeah, I mean it's not something we have sitting around because, again, those were, while they were adopted by the board, they were never implemented.
Q Okay, but you're referencing the set of rules by which it implement and enforces the IPP?
A Correct.
Q That's the 2016 rules?
A There was a 2016 version. It was modified by the board in 2019 to meet additional requirements, but these PFAS ended up being a portion of it. There were some other, I guess, less significant. This was prepared, if I recall, for our member communities when we were approaching them to pass concurrent resolutions. "We," I believe our Public Affairs Groups, I think that's

Page 61

what we call themselves, I can't remember.
Q Okay.
A Prepared this as a means of educating them, because many of these people who are current members, they don't have the historical agency knowledge to go back to the 1980 days and the development of the consent judgment and such, so they weren't familiar with that.
So, this was just a way to get everyone on board, and in our request that they were receiving for adopting concurring resolutions to education them on the what and the why. So, if they were not familiar, they had an opportunity to ask about it.
Q All right, but you would agree with me that the primary change was adding rules relating to the regulation of the PFAS compounds?
A That was the headline change, yeah.
Q Okay, and what is PFAS?
A PFAS stands for per- and polyfluoroalkyl substances. These are the forever chemicals that are in the news today. They were synthetic chemicals developed in the '40s, usually for heat, oil, water-resistant properties that they had, which were deemed cool at the time but are now considered, some of which are considered toxic to human health.
Q And I suspect that these PFAS compounds are on the

Page 62

regulatory radar and so they've become much more of concern to the regulators?
A They're on the regulatory radar of, first of all, the State of Michigan, a number of individual states, and US EPA, as well.
Q All right. What is the regulation of PFAS compounds? Where does that fall within the Industrial Pretreatment Program?
A Begin, these PFAS compounds are, to the extent that there's a commercial industrial component, a discharge of these materials, that we work to get, I try to identify those sources and implement corrective measures, whether it requires treatment, whether it requires some type of management-type control of that material, to eliminate them as a source of that, because, again, we had permit requirements on our facility for two of these compounds.
There's about 5,000 of these compounds in the entire family. There are two that are currently identified in our Wastewater Discharge Permit, our NPDES Permit, National Pollution Discharge Elimination System Permit, and in the state of Michigan EGLE, and I don't remember all that EGLE stands for, that's why I just call them EGLE, has identified for wastewater 28 compounds to watch; and so we look at mostly industrial

Page 63

contributions of these materials from sources, and there's been some non-source, as well, that we've done some analyses for.
Q All right. But, well, first of all, when you say "we," are you referring to the --
A Industrial Waste Control, yes. I'm sorry.
Q Okay, and where do you get these PFAS compounds? Are they in the sewer system that you get them or are they --
A These are materials, these materials are, well, they're found in wastewater from the use in products and/or additives by commercial industrial sources.
There's a, I guess, a consumer aspect to that. For example, carpeting, Scotchgard is a famous example. The old Scotchgard contained these materials in them. The reformulated Scotchgard does not have these materials. They have alternative PFAS compounds that are not yet regulated, all right? That's how they pass, but, so there's a consumer aspect to that, as well; but most of our attention and work is to look at the water-carried component constituent of these materials that are discharged to the sewer system.
Q Okay. What happens to a PFAS compound when it gets to the treatment plant?
A Not a whole lot. It's what we call pass through, and

Page 64

there's a lot of research ongoing. There's some -- the actual fate, whether these may break down and form other PFAS compounds, smaller carbon chain compounds. Because, again, the PFAS is a carbon chain that has fluorine atoms at each end. They're real twisty type things.
We don't know exactly if they're broken down. We know that the treatment, generally speaking, municipal treatment operations are not expected, nor have we seen a capability to treat and remove these materials. So, they're essentially what we call pass-through pollutants. They're discharged directly into the river without benefit of treatment.
Q Okay. All right, and is the idea of, is the regulatory environment evolving to ultimately identify and segregate for treatment of these PFAS compounds? Is that what the general idea is?
A I guess, I don't know what the overall regulatory environment is, I mean, overall. The key thing is, though, at this point in time, there's, at least not readily available that anyone knows of, localized treatment at a wastewater treatment plant that could be implemented on a practical basis to try to even remove those materials, which is why we're focusing ourselves on a source control program, identifying sources,

Page 65

having them abate, remove, eliminate, reduce their contributions of these compounds to the system as a best means of control to meet our permit requirements.
Q Okay, but the notion is that PFAS are bad for the environment, not that they foul up the treatment works because they pass through, right?
A They're bad for the environment. There's an environmental risk, correct.
Q All right, but it's not like something that can create problems right now at the treatment plant, additional costs, that sort of thing?
A Well, that's still to be determined because, again, there are, we dispose of our solids, biosolids we call them, that's a nice name now, that we dispose of the materials. Some of these compound will find themselves in the solids. There's recent regulations or guidance, I should say, that the State of Michigan put out, I think it was May of this year, and we're currently evaluating and doing measurements on our, what we call residual biosolids disposal; and depending on its level, you fall into one of several categories of which you can continue that disposal activity or you need to change that disposal activity.
Q All right, but is this, the activities that the IWC Division is conducting with respect to PFAS compounds,

Page 66

is that something that has become more of a significant activity for the IWC in recent years?
A It's increased our activities, yes.
Q All right, and in what way?
A Well, it's expanded, among our known sources, it's expanded for people under permit, we've identified among those who we believe have either historical usage, current usage of that material and have them implement, as I say, efforts to reduce control, eliminate these compounds from their discharge.
We also use that in evaluating new applications, whether it's for significant industrial user, hauled-in waste, special discharge, based on the particular application involved. There are some that, you know, if it's virgin territory, I suppose, as far as land, you don't anticipate much pollution and there's just general screening done or that we request from the user.
Where it's a historically industrial site, only their properties have been in use potentially over 300 years for various purposes, it's almost a no-brainer. You have to look for these things and make sure we find out what, if any, is in there in order to, again, work to remove, reduce, eliminate that material from its contribution to the system.

Page 67

Q Okay. Would a PFAS compound, if there's a user that's discharging PFAS compounds, would that transform them into a significant industrial user?
A It could. So, if they were, currently, let's say we had them currently ranked as a minor user, if we find or will find that they have, let's say, PFAS compound as an example, we could reclassify them from minor to significant.
Q Okay, because as I understand the Pretreatment Program first bullet point is regulates the discharge of toxic pollutants to the sewer collection system as opposed to the Surcharge Program, which are non-toxic but higher loadings. Is PFAS considered a toxic pollutant?
A PFAS has toxic, at least the ones we know about, have toxic properties. There's a lot we don't know about, okay, that they're still being researched. As I say, the State of Michigan has only, for wastewater purposes, has identified two compounds. One is PFOS, perfluorooctane sulfonate, I think, and the other one is perfluoroctanoic acid or something. PFOA. That's why I spell it that way.
On the water side, they recently, I think last year, promulgated maximum contaminant levels for I believe eight of these compounds. I don't remember all eight compounds. I didn't memorize that, so.

Page 68

Q Okay.
A So, it's still a developing area at both the regulatory end and even at the base science end.
Q Okay. Fair enough.
(Response was marked as Exhibit Number 23 identification.)
BY MR. HANLEY:
Q All right. Let me show you what I've marked as Exhibit 23 to the deposition. This is, was a Response to Fourth Request for Production of Documents, number one, and third set of interrogatories, number two. It's designated a response from S. Kuplicki of 8/27/2021. Are you familiar with this document?
A Yeah, I wrote it.
Q Okay, and is it fair for me to assume that you wrote this because what we were trying to do is determine the total number of unique sewer end users served by each of the defendants in jurisdiction, which have users that are subject to IWC charges and the total equivalent meter served by each of the defendants in those jurisdictions. Do you see that?
A Yes. There were several questions that were contained in these reference documents, and as I explained to our attorney here, I didn't understand necessarily the terminology. They were not terms that we necessarily

Page 69

use, and I tried to state what we, what my understanding is of what we do and don't do.
Q All right, and so we believe we have information about the number of meters and the size of meters for users that are subject to the IWC charges, and it's my understanding that the purpose of this response was to tell us you don't have, GLWA does not have information for each member community regarding the total number of users, not just the ones subject to the IWC charges?
A I would believe that to be correct.
Q Okay, and can you tell me what sources you went to to determine whether GLWA had the requested information?
A Well, first, I think when I was asked, I indicated that I don't track that information. That normally is something our finance people receive and track.
Q Right.
A They may ask questions about it, but usually that's information shared between the community and finance, and, as I understand, finance will make inquiries to the communities, asking for any updates of that. They do that usually, I think they try to do it quarterly.
Q Right.
A Some provide that information, some are less frequent responders.
Q Right, and I understand that's the process for

Page 70

determining IWC meters.
A Right.
Q Okay. I'm talking about, you know, there's hundreds of thousands of sewer users that aren't subject to the --
A Well, The Great Lakes Water Authority is a wholesale provider of water, portable water, and treatment services. As a wholesale provider, we engage with our retail providers, which are either a county, a city, some other, you know, it could be a township, whatever form of government.
Q Right.
A Usually they're governmental entities that are engaged here, sometimes multi-governmental, that are actually the retail providers of it. So, we provide a wholesale service to, let's just say the City of Dearborn.
Q Right.
A And we measure usage as far as water sold to Dearborn and we measure, there's meters for wastewater discharge or sent back to us from Dearborn. We bill Dearborn and it's up to them to determine among their users who pays what, and usually that's based on volume and the sewage rates are established, but, again, we're the wholesale provider so we just don't have that information because we're not normally engaged at the retail end, unless there's a particular question or issue someone may ask

Page 71

us. Other than that, there's not a normal business function where we would do that.
Q I understand that you bill Dearborn based upon sewage flow. So, whether that comes from 30,000 users or 50,000 users or 10,000 users --
A We don't know.
Q -- is not your concern. But my question is have you made inquiries of people in finance to determine whether they had had that information?
A No.
Q In other words, does anybody at GLWA know how many service meters there are in Dearborn?
A I have no -- I don't know that.
Q Right. And, again, it's not a memory test for you in this deposition. What I'm trying to figure out is that information is important to us for reasons that we probably don't need to get into, but we thought that GLWA might have that information even though it may not be the way they bill. You know, they're not billing per meter, they're billing on sewage flow, but what inquiry did you make before authoring Exhibit 23 determine that this information was not available?
MR. FRESCOLN: I'm going to object to foundation. Just make a comment for the record that, I'm sorry, this was not a response that was served.

Page 72

This was provided, as you recall, as an accommodation for further explanation. Our formal response, I believe, was an objection, which we didn't change. So, just stating that for the record.
MR. HANLEY: I accept that.
MR. FRESCOLN: And you can answer the question.
A I don't believe I asked anyone. Any information on meters and such would be our finance, but my understanding would be, just from the time I've been with DWSD and GLWA, this is not information that is necessary or needed, at least not by the Industrial Waste Control Group. Whether there was some other purpose for that information, if I need it, I'd have to go to each individual community. So, for example, City of Dearborn, I'd have to talk to the City of Dearborn. I guess if I needed that information, I would have to make that request to them.
BY MR. HANLEY:
Q Right, but you're just kind of speculating as opposed to --
A I say I have no knowledge that we get that information either as IWC or just in whatever discussions and relationships I've had with finance that they even receive this. Again, they may receive this

information, I'm not aware of it. I don't believe that they would.
Q Okay. All right, but in the second paragraph, the last sentence, you say, GLWA believes that it receives complete and accurate information from the local communities or wholesale customers of GLWA and has no information on the number and size of residential and fire-only water meters in each community. Is that an accurate reflection of what you understand?
A That's my understanding, yes.
Q Okay. All right.
(Black & Veatch report was marked as Exhibit Number 24 for identification.)
BY MR. HANLEY:
Q I want to mark as Exhibit 24 portions of a larger report authored by Black & Veatch back in December of 2017, Units of Service for Non-master-Metered Customers of Great Lakes Water Authority and System Water Audit. Do you see that?
A Okay.
Q Are you familiar at all with the Black & Veatch reports and recommendations regarding units of service?
A I am not.
Q Okay, and, again, I accept that.
I want to refer you to the second page of

this. It talks about a regional water system audit. Have you ever become aware that there was a regional water system audit that took place?
A I was not.
Q Okay. It says, As part of the overall water system audit, this is in the first paragraph of 10.7, basic data will be requested from each of the master-metered communities. Information requested will include, you know, water purchases, but one of the things is number of connections. Do you see that?
A Yes, I see that.
Q Do you know whether this was actually done my GLWA such that it might have this information about number of connections?
A I have no idea.
Q Do you know who I might want to talk to about that in finance to determine whether GLWA has this information in its finance side?
A Again, I don't get engaged into the rate making. So, it's a Black & Veatch recommendation report, so I'm not sure who they respond to the report or work with. So, I wouldn't know that.
Q But just so that I understand, your Exhibit 23 explanation, which I accept from your standpoint, but my question is, is did you go to someone in finance and

say, do you maintain this information?
A I did not.
MR. HANLEY: I don't think I have any further questions for you, sir. I appreciate your time.
MR. FRESCOLN: I have no questions. Alex, are you all set?
MR. BAUM: No questions. Thank you.
(The deposition was concluded at 10:48 a.m.)

STATE OF MICHIGAN)
COUNTY OF WAYNE)

I certify that this transcript, consisting of 75 pages, is a complete, true, correct record of the testimony of STEPHEN KUPLICKI, held in this case on Friday, October 15, 2021.

I also certify that prior to taking this deposition, STEPHEN KUPLICKI was duly sworn to tell the truth.

I also certify that I am not a relative or employee of or an attorney for a party; or a relative or employee of an attorney for a party; or financially interested in the action.

Dated this 20th day of October, 2021.

Sandra L. Patton, CER-5653
My Commission Expires: April 26, 2025
309 South Gratiot, Suite 2
Mount Clemens, Michigan 48043

EXHIBIT - 12

18-011569-CZ FILED IN MY OFFICE Cathy M. Garrett WAYNE COUNTY CLERK 7/22/2021 6:15 PM JaJuan Williams

STATE OF MICHIGAN

IN THE 3RD CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO., individually and on behalf of a class of similarly situated persons and entities,

Plaintiff,

v

THE GREAT LAKES WATER AUTHORITY, an incorporated municipal authority, and CITY OF DETROIT, a municipal corporation, by and through its WATER AND SEWERAGE DEPARTMENT,

Defendants.

Case No. 2018-011569-CZ
Hon. Charles S. Hegarty

Gregory D. Hanley (P51204)
Edward F. Kickham Jr. (P70332)
Kickham Hanley PLLC
Attorneys for Plaintiff
32121 Woodward Avenue, Suite 300
Royal Oak, Michigan 48073
(248) 544-1500
ghanley@kickhamhanley.com
ekickhamjr@kickhamhanley.com

Mark L. Dolin (P45081)
Michael J. Watt (P63869)
Kopka Pinkus Dolin PC
Co-Counsel for Great Lakes Water Authority
32605 W. Twelve Mile Road, Suite 300
Farmington Hills, MI 48334
(248) 324-2620
mldolin@kopkalaw.com
mjwatt@kopkalaw.com

FAUSONE BOHN, LLP
Christopher S. Frescoln (P63175)
Attorneys for Defendants
41700 West Six Mile Road, Suite 101
Northville, Michigan 48168
(248) 380-0000
cfrescoln@fb-firm.com

DEFENDANTS' FIRST SUPPLEMENTAL ANSWERS TO PLAINTIFF'S THIRD REQUESTS FOR ADMISSIONS

NOW COME Defendants, THE GREAT LAKES WATER AUTHORITY and CITY OF DETROIT, by and through their attorneys, FAUSONE BOHN, LLP, and for their First Supplemental Answers to Plaintiff's Third Requests for Admissions, state:

Defendant, THE GREAT LAKES WATER AUTHORITY, shall be referred to herein in its individual capacity as "GLWA", and Defendant, CITY OF DETROIT, shall be referred to herein in its individual capacity as the "City". Plural references to the "Defendants" herein shall be references to GLWA and the CITY collectively, unless the context indicates otherwise.

GENERAL OBJECTION

Defendants, through their counsel, assert a general objection to the "Instructions" provided by Plaintiff in its "Third Set of Interrogatories, Third Requests for Admissions and Fourth Request for Production of Documents to Defendants" (the "Requests"). Defendants and their counsel will rely on the provisions of the Michigan Court Rules that govern their answers, responses and objections to the Requests. To the extent that Plaintiff's "Instructions" are inconsistent with the relevant provisions of the Michigan Court Rules or impose any different or additional standards for answering, responding or objecting to Plaintiff's Requests, Defendants object to those "Instructions" and intend to comply with their obligations under the Michigan Court Rules. Defendants do not acknowledge any obligation to comply with any of Plaintiff's "Instructions" that are not consistent with the relevant provisions of the Michigan Court Rules.

ANSWERS TO REQUESTS

1. Admit that the activities of the Industrial Waste Control Division confer benefits upon the general public.

ANSWER: Defendants, through their attorneys, object to this Request for the reason that the phrase "confer benefits" is misleading, inappropriate in the context stated and potentially subject to an interpretation as a legal or technical term of art that Plaintiff has not defined in this Request. Without waiving their objection, Defendants further answer and admit only that the general public within the jurisdictions providing Industrial Waste Control ("IWC")

services benefit from those services, similar to the benefit they may derive from other public utility services.

2. Admit that the activities of the Industrial Waste Control Division confer benefits on residential sewer users who receive sewage disposal services from DWSD or GLWA.

ANSWER: Defendants, through their attorneys, object to this Request for the reason that the phrase "confer benefits" is misleading, inappropriate in the context stated and potentially subject to an interpretation as a legal or technical term of art that Plaintiff has not defined in this Request. Without waiving their objection, Defendants further answer and admit only that residential sewer users who receive sewage disposal services from DWSD or GLWA benefit from those services, similar to the benefit they may derive from other public utility services.

3. Admit that the Industrial Waste Control Division does not regulate or provide direct services to "nondomestic wastewater users" that are not Industrial Users.

ANSWER: Defendants deny the statement set forth in this Request, for there are multiple ordinances and rules adopted by the Industrial Waste Control Division that contain general regulations and prohibitions that are applicable to all users. Stephen Kuplicki is knowledgeable of this answer and is competent to testify relative to this denial.

4. Admit that "nondomestic wastewater users" pay IWC Charges.

ANSWER: Admitted.

5. Admit that "nondomestic wastewater users" are assessed IWC Charges on the same basis as Industrial Users and SIUs – i.e., based on meter size.

ANSWER: Admitted.

6. Admit that there are at least 25,000 "nondomestic wastewater users" who/which incur IWC Charges.

ANSWER: Admitted.

7. Admit that there is no direct correlation between the size of a user's water meter and the benefit the user receives from the activities of the IWC Division.

ANSWER: Defendants, through their attorneys, object to this Request for the Request is vague and ambiguous.

8. Admit that the Industrial Waste Control Division does not regulate or provide direct services to residential sewer users who receive sewage disposal services from DWSD or GLWA.

ANSWER: Admitted.

9. Admit that the activities of the Industrial Waste Control Division confer benefits on all sewer users who receive sewage disposal services from DWSD or GLWA.

ANSWER: Defendants, through their attorneys, object to this Request for the reason that the phrase "confer benefits" is misleading, inappropriate in the context stated and potentially subject to an interpretation as a legal or technical term of art that Plaintiff has not defined in this Request. Without waiving their objection, Defendants further answer and admit only that all sewer users who receive sewage disposal services from DWSD or GLWA benefit from those services, similar to the benefit they may derive from other public utility services.

10. Admit that the budget of the Analytical Lab for the fiscal year beginning July 1, 2013 and ending June 30, 2014 did not exceed $3.5 Million.

ANSWER: Defendants admit only that the direct budget for this timeframe did not exceed $3.5 Million. However, Defendants further answer that as indicated in the materials produced to Plaintiff the direct budget for all specific cost centers at the WWTP (including

the Analytical Lab) only included specific contracts, rent, supplies, etc. All WWTP personnel costs (including those to support specific cost centers) and certain contractual services were budgeted in the Plant Administration cost center. Bart Foster is knowledgeable of this answer and is competent to testify relative to the answer.

11. Admit that the budget of the Analytical Lab for the fiscal year beginning July 1, 2014 and ending June 30, 2015 did not exceed $3.5 Million.

ANSWER: Defendants cannot truthfully admit or deny the matter referenced in this Request because Defendants did not provide detailed data for fiscal year 2015 since the rates were based on prior proportional factors under the Rate Simplification Initiative. Defendants further answer that they have made reasonable inquiry into this matter and that the information known or readily obtainable is insufficient to enable Defendants to admit or deny the matter. Bart Foster is knowledgeable of this answer and is competent to testify relative to the answer.

12. Admit that the budget of the Analytical Lab for the fiscal year beginning July 1, 2015 and ending June 30, 2016 did not exceed $3.5 Million.

ANSWER: Admitted.

13. Admit that the Industrial Waste Control Division oversees, regulates or administers the "Surcharge (High Strength) Program" identified in Exhibit A hereto.

ANSWER: Admitted.

14. Admit that Defendants receive revenues from the "Surcharge (High Strength) Program" identified in Exhibit A hereto.

ANSWER: Admitted.

15. Admit that the revenues Defendants receive from the "Surcharge (High Strength) Program" identified in Exhibit A hereto are not credited toward the Revenue Requirement.

ANSWER: Admitted.

16. Admit that the Industrial Waste Control Division oversees, regulates or administers the "Hauled in Waste Program" identified in Exhibit A hereto.

ANSWER: Admitted.

17. Admit that Defendants receive revenues from the "Hauled in Waste Program" identified in Exhibit A hereto.

ANSWER: Admitted.

18. Admit that the revenues Defendants receive from the "Hauled in Waste Program" identified in Exhibit hereto are not credited toward the Revenue Requirement.

ANSWER: Admitted.

19. Admit that the Industrial Waste Control Division oversees, regulates or administers the "Special Discharge and General Permit Program" identified in Exhibit A hereto.

ANSWER: Admitted.

20. Admit that Defendants receive revenues from the "Special Discharge and General Permit Program" identified in Exhibit A hereto.

ANSWER: Admitted.

21. Admit that the revenues Defendants receive from the "Special Discharge and General Permit Program" identified in Exhibit A hereto are not credited toward the Revenue Requirement.

ANSWER: Admitted.

22. Admit that the IWC Charges are the sole source of financing for the activities of the Industrial Waste Control Division.

ANSWER: Admitted.

Submitted Pursuant to MCR 2.312(B):

FAUSONE BOHN, LLP
Attorneys for Defendants

Dated: July 22, 2021

/s/ CHRISTOPHER S. FRESCOLN
Christopher S. Frescoln (P63175)
41700 West Six Mile Road, Suite 101
Northville, Michigan 48168-3460
(248) 380-0000
cfrescoln@fb-firm.com

EXHIBIT - 13

REGULATORY PROGRAM RULES & REGULATIONS

November 10, 2016

Michigan Metalfinshing Association

GLWA

Great Lakes Water Authority

Creation of the GLWA, has sent us on a journey.....



The *OLD* DWSD was separated into a Wholesale entity (Great Lakes Water Authority) and a Retail entity (DWSD).

The NPDES Permit MI0022802 was modified to include <u>both</u> entities to share responsibilities.

The NPDES Permit is scheduled for renewal on October 1, 2017.

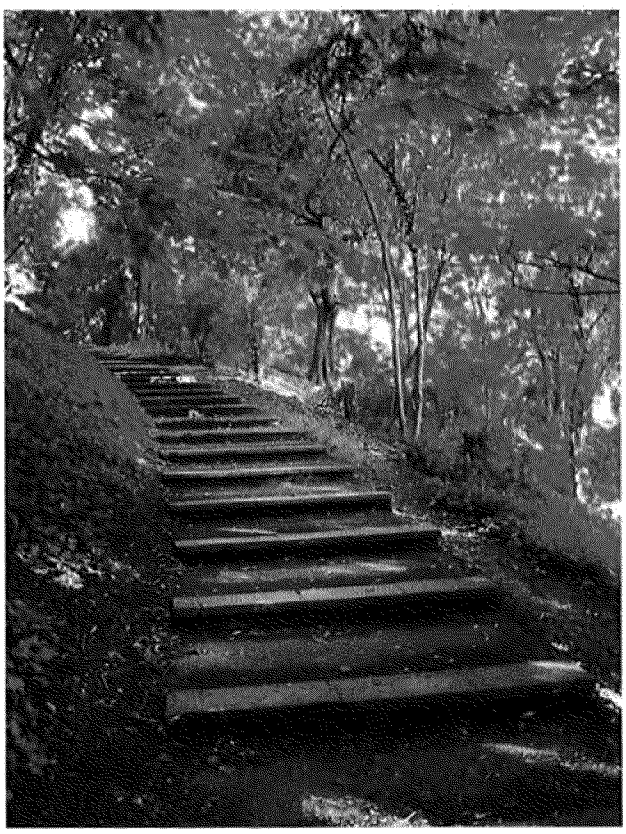
GLWA

The Journey: Become an Independent Control Authority

Legal Authority to carry out NPDES Permit requirements for an Industrial Pretreatment Program (IPP)

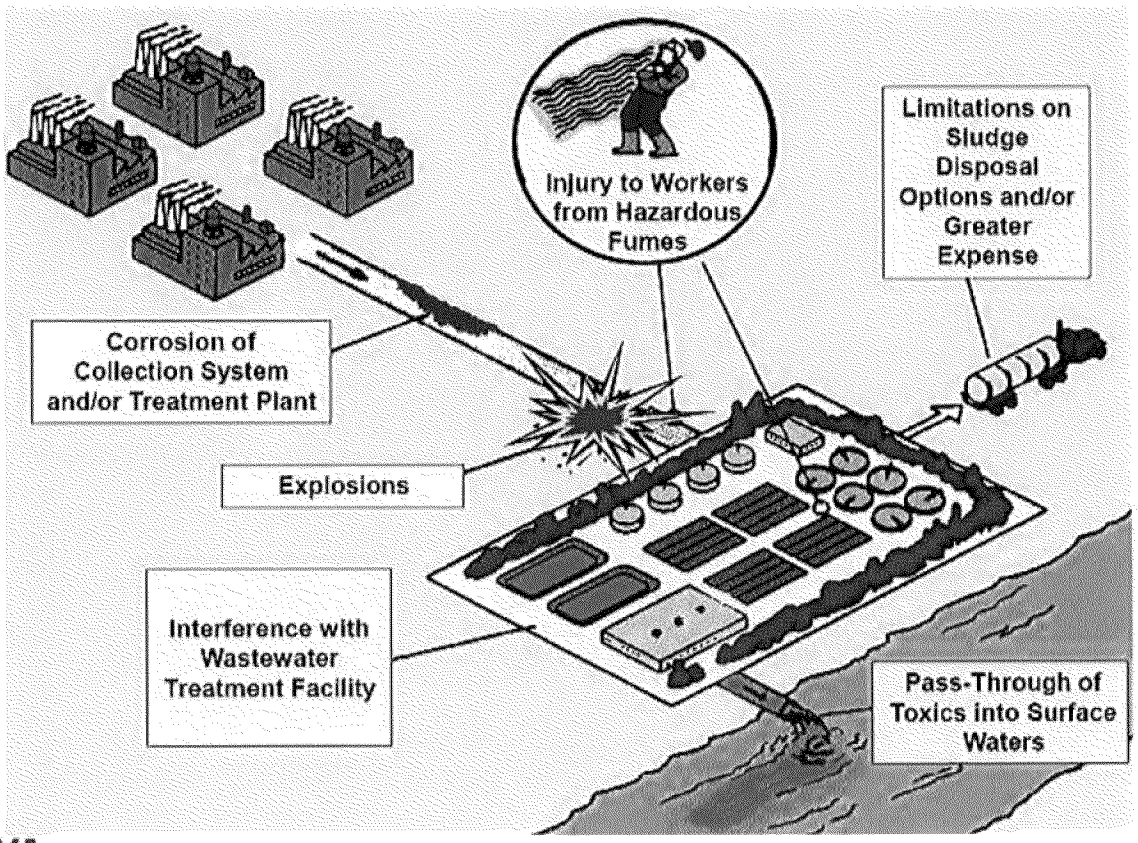
Opportunity to revisit former tools, i.e., Ordinance, Surcharge Rules, Hauled Waste Rules, Groundwater Program, and create something new.

Purpose: Create and obtain approval for a GLWA – Industrial Pretreatment Program from the Michigan DEQ



GLWA

Why is a GLWA – IWC Program Needed?



GLWA

Who are Today's Users?

Industrial Pretreatment Program		
Federal Categorical Users	155	108 MetalFinishing/Electroplating
Local Users	119	
	Sub-Total =	274
Surcharge Program	142	
Septage Waste Haulers	50	
Groundwater/Special Discharge	16	
	Sub-Total =	298
Minor Users	14,622	

GLWA

EXHIBIT - 14

Wastewater Operating Services
Industrial Waste Control, Analytical &
Operations Laboratories
303 South Livernois
Detroit, MI 48209

User Guidance Information	Minor User	
Version: 2017-1	Effective Date:	Pages: 2
Authorization Signature		

Objectives & Scope

This guidance describes the classification term of "Minor User", and seeks to address who and how a User is classified as one. This information is provided for guidance purposes only and addresses the general case. Specific facts about an individual User may result in a different result.

Definition

"**Minor User**" means any Industrial User who does not meet the definition of a Significant Industrial User, or qualify for a Wastewater Discharge Permit under the Industrial Pretreatment Program.

Discussion:

The GLWA Control Authority is charged with identifying all Industrial Users who may be subject to the Industrial Pretreatment Program [40 CFR 403.8(f)(2)]. The objective of the Industrial Pretreatment Program is to regulate and control the discharge of toxic and other pollutants that could impact the treatment works. So that Users fall into one of following groups:

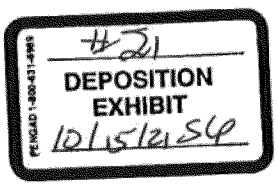
- Group 1: Significant Industrial Users
- Group 2: Minor Users subject to a regulatory program other than IPP
- Group 3: Minor Users

The classification process requires information collected using a Survey Card, Permit Application or Baseline Monitoring Report. The following inquiry process is used in evaluating information about a facility:

Step 1: Does the facility generate wastewater from a manufacturing or commercial activity other than Sanitary or stormwater that contains pollutants?

The possible answers are: [ ] YES or [ ] No. If the answer is No, then the User is expected to be classified as a Minor User, subject to the general discharge prohibitions of the GLWA rules.

Step 2: If the answer in Step 1 is Yes, then additional questions are asked, as follows:



Inquiry?	YES	NO
1. Does the facility discharge Process Wastewater?	X	
2. Is the volume of Process Wastewater greater than 25,000 GPD?		
3. Is the User and wastewater discharge subject to one or more of the National Categorical Pretreatment Standards?		
4. Does the User employ wastewater treatment? If yes, describe the pollutant(s) being treated and method(s) of treatment		
5. Does the User's wastewater discharge contain toxic pollutants?		
6. Does the User discharge High-strength Wastewater subject to Surcharge Program?		
7. Does the User discharge groundwater (whether intermittently or continuously)?		
8. Is the facility regulated under the Resource Conservation and Recovery Act (RCRA)?		
9. Can the User's wastewater discharge have a significant impact upon the POTW? If yes, describe the impact and why it is significant.		
10. Can the User's wastewater discharge cause the POTYW to violate its NPDES permit? If yes, describe why.		

Where one or more of questions 2-10 are yes, the facility must be evaluated to assess whether it is a Significant User requiring a Wastewater Discharge Permit, and/or whether it requires regulation as part of the Surcharge or Groundwater/Special Discharge regulatory programs.

Upon completion of this evaluation process, the user is assigned to one or more off the applicable regulatory programs or deemed a Minor User (not subject to a local regulatory program).

EXHIBIT - 15

18-011569-CZ FILED IN MY OFFICE Cathy M. Garrett WAYNE COUNTY CLERK 1/21/2020 11:03 AM Inga Robertson

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO.,
Individually and on behalf of a
Class of similarly situated persons and entities,

Plaintiff,

vs.

Case No. 18-011569-CZ
Hon. Kevin J. Cox

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

and

CITY OF DETROIT, a municipal corporation,
by and through its WATER AND SEWERAGE DEPARTMENT,

Defendants.

Kickham Hanley, PLLC
Gregory D. Hanley (P51204)
Edward F. Kickham, Jr. (P70332)
Attorneys for Plaintiff and the Class
32121 Woodward Ave., Suite 300
Royal Oak, MI 48073
(248) 544-1500

Fausone Bohn, LLP
James G. Fausone (P33579)
James M. Pelland (P51237)
Andrea E. Hayden (P71976)
Attorney for Defendants
41700 W. Six Mile Rd., Ste. 101
Northville, MI 48168
248-380-0000

KOPKA PINKUS DOLIN PC
MARK L. DOLIN (P45081)
MICHAEL J. WATT (P63869)
Co-Counsel for Defendant GLWA
32605 W. Twelve Mile Rd., Ste. 300
Farmington Hills, MI 48334
(248) 324-2620

DEFENDANTS', THE GREAT LAKES WATER AUTHORITY AND THE CITY OF DETROIT, SUPPLEMENTAL BRIEF IN OPPOSITION TO PLAINTIFF'S MOTION FOR CLASS CERTIFICATION

THE GREAT LAKES WATER AUTHORITY and the CITY OF DETROIT (collectively, "Defendants"), by and through their attorneys FAUSONE BOHN, LLP, for their Supplemental Brief in Opposition to Plaintiff's Motion for Class Certification, state as follows:

Plaintiff has failed to establish the elements for class certification. Defendants noted the numerous flaws in Plaintiff's proofs in Defendants' Response in Opposition to Plaintiff's Motion for Class Certification, which is fully incorporated herein by reference. Plaintiff's Supplemental Brief focusses almost exclusively on the issue of commonality, but fails to its deficiencies regarding typicality, adequacy and superiority. All required for class certification. So, even if Plaintiff could overcome the substantial problems related to commonality, and they cannot, class certification would still fail as Plaintiff has failed to establish the typicality, adequacy and superiority elements for class certification.

Plaintiff cannot overcome the issues of commonality that make the claims inappropriate for class certification. Plaintiff's claims that an individualized analysis of each proposed class member's status as an Industrial User is not needed for its Headlee claim (or what Plaintiff refers to as the "No Particularized Benefit" claim), but this argument is not supported by the case law, the regulatory framework that requires Defendants maintain the Industrial Waste Control department, or Plaintiff's own allegations. Indeed, a core function of a Publicly Owned Treatment Works ("POTW"), like Defendants, under the Industrial Pretreatment Program ("IPP") regulations is to identify and police Industrial Users, which change over time.

Plaintiff further fails to support its claim that there is no individualized benefit to those who pay the IWC Charge compared to the general public, and omits a key consideration of the nature of the IPP – it does not apply to the general public and is only enforced with respect to non-residential users. Finally, Plaintiff concedes that it may not have properly alleged a class, and that

there are likely some subclasses that would be appropriate, yet Plaintiff fails to elaborate or define these phantom classes or subclasses, or establish the required elements to certify them.

Plaintiff's Supplemental Brief provides no additional support for its motion to certify a class, and for the reasons stated in Defendants' Brief in Opposition to Plaintiff's Motion for Class Certification and this Supplemental Brief, Plaintiff's request should be denied in its entirety.

I. THE PROPOSED CLASS LACKS COMMONALITY

Commonality exists where questions of law or fact common to the class predominate over questions affecting only individual members. MCR 3.501(A)(1)(b). In many instances where Michigan courts found that class certification was inappropriate, commonality and the presence of individualized fact patterns was cited. See e.g., *Tinman v Blue Cross & Blue Shield,* 264 Mich App 546 (2004); *Edgcumbe v Cessna Aircraft Co,* 171 Mich App 573; 430 NW2d 788 (1988); *Lee v Grand Rapids Bd of Educ*, 184 Mich App 502; 459 NW2d 1 (1989); *Davis v Cintas Corp*, 717 F3d 476 (6th Cir 2013). The same is true in this case given the diversity of the proposed class group and the nature of the Plaintiff's legal claims. Under Michigan case law, the Plaintiff has failed to establish commonality here, and this Court should deny its motion to certify the class.

Even if the Court were to conclude that there are some issues in common, the relevant inquiry is whether the common or the individualized issue(s) dominate the case. If it were not, a court would be allowed to certify a class action even though the primary or dominate issue(s) in the case require individualized analysis. This would defeat the entire purpose and efficiency of a class action. The case could be certified as a class action, but the practicality of proceeding would be unmanageable because the parties would be subject to almost endless discovery determining the individualized inquiries that dominate the case. Here the individualized analysis of each proposed class member would be required to determine if there is some sort of use or benefit each

received from the IWC Department, and whether such could be deemed a tax, was unjust, or whether monies should be refunded. The unmanageability of the individualized inquiries is what makes class certification inappropriate.

A. Plaintiff admits that the IWC Charge is not a tax if there is an individualized benefit to those who pay the IWC Charge

Plaintiff asserts that "If a charge is a tax, it is a tax as to all people who pay it, regardless of their individualized benefit" PLBr at 5. Plaintiff contends that this is supported by *Bolt v City of Lansing* and other related cases. This is a misinterpretation of the *Bolt* analysis, which, in fact, requires that in determining whether a charge is a tax or valid user fee, an individualized inquiry is required to determine if there is a benefit to the person rather than the public at whole:

> A true "fee", however, is not designed to confer benefits on the general public, but rather to benefit the particular person on whom it is imposed. . . . In this case, lack of correspondence between the charges and the benefit conferred demonstrates that the city has failed to differentiate any particularized benefits to property owners from the general benefits conferred on the public. *Bolt v City of Lansing*, 459 Mich 152, 165, 587 NW2d 264 (1998)

The *Bolt* decision requires that a court consider the distinction between "any particularized benefits to property owners from the general benefits conferred on the public." *Id.* at 166. Commonality is extinguished by the individualized inquiries necessary to determine the service or benefit received by each potential class member who pays the IWC charge. The Plaintiff's Headlee claim involves weighing "any particularized benefit to property owners," and this requires individual inquiries. *Bolt*, 459 Mich at 166.

Plaintiff's proposed class definition in effect concedes that if there is a benefit, the fee is a valid user fee and not a tax. If, as Plaintiff asserts, the IWC charge is a tax, it is a tax to everyone that pays the charge, and if that was true, Plaintiff would have defined the potential class as all person who pay an IWC charge. Plaintiff, however, excludes Significant Industrial Users ("SIUs") from the proposed class admitting that SIUs receive a benefit from the IWC Department -

admitting the IWC charge, at least as to SIU's, is not a tax, but a valid user fee. Essentially, Plaintiff concedes that the inquiry of whether or not a benefit is received, and apparently the amount of the benefit, is fundamental in determining whether or not the charge is a tax or valid user fee.

Even with this clear pleading and admission by Plaintiff, Plaintiff claims that no individualized analysis as to the use or benefit received by an individual is required to determine whether a charge is a tax or a user fee. Plaintiff, however, actually made that very analysis in determining who should be included as a class member. Plaintiff's allegations in its First Amended Complaint run contrary to its entire argument on commonality for its class certification motion.

Plaintiff's Supplemental Brief does not correct the deficiencies obvious in the pleadings. On one page of its brief, Plaintiff states that if the charge is a tax, it is a tax to everyone that pays. On the next page, Plaintiff notes "a charge cannot be a user fee if it is not apportioned according to use" admitting that if there is a benefit, the charge cannot be a tax. PLBr at 5-6.

"Use" and "benefit" are synonymous in this context. A person's use of the system is the benefit. Essentially, all proposed class members use the system, and all then benefit from the IWC Department. Plaintiff concedes that the amount of use, or benefit, is relevant to determine if a person is a class member or not, and in turn, whether or not the charge is a tax or valid user fee. In any event, an individualized inquiry will be necessary for each person charged the IWC charge to first determine if such person should be a class member. Plaintiff cannot escape that an individualized inquiry will be needed for each proposed class member.

This is not only important to determine if the IWC charge is a tax, but also whether there has been an overcharge or an "unjust" enrichment to Defendants. These individualized inquiries

are relevant and necessary for all of Plaintiff's claims. It is this individualized inquiry that defeats the commonality requirement for class certification.

B. The IWC Department confers a benefit on the individualized non-residential users different from the general public

Plaintiff generally makes unsupported allegations that there is no benefit to the non-residential users different than the benefits to the general public. In doing so, Plaintiff's argument wholesale ignores the legal framework under which the IWC department is established and operates – the federal IPP regulations that apply to Industrial Users only and not the general public. In fact there is a benefit conferred by the IWC Department on the all non-residential users that is different than the general public.

Although there may be some benefit to the general public for having an IWC Department that monitors industrial waste discharges, this is no different than the benefits that having a sewer system provide to the general public. The IWC department, however, has a specific function and confers a specific benefit on the individualized persons that are charged – non-residential users a/k/a industrial and commercial users.

Defendants are required to have an IWC Department per United States Environmental Protection Agency ("US EPA") requirements to allow non-residential users to discharge any waste into the sewer system. If Defendants did not have and maintain the IWC Department, Defendants would be in violation of their NPDS Permits, and non-residential users would be prohibited from tying into and using the waste water system. If the system did not have non-residential users using to the system, Defendants would not have a need for the IWC Department. There would still be a sewer system that benefitted the residential users and general public, but non-residential users would be prohibited from using the system. Accordingly, the IWC Department provides an individualized benefit to each non-residential user that is different than any benefit provided to the

general public – the right and benefit to use the sewer system. This is also why Plaintiff's swimming pool analogy is off point. The IWC charge is not akin to a tax for use of a public swimming pool, but more like a charge for membership in a private swim club.

Not only does the US EPA require Defendants to maintain an IWC Department, the US EPA requires that such department be funded by non-residential users. Prior to 1981-82, the expense of the IWC Department was borne by the entire system as part of the general sewage rate requirement. In response to US EPA requirements that residential customers are not to bear such costs, a new allocation formula was worked out in which the costs of the IWC Department were deleted from the general sewage rate model and a new allocation was made to industrial and commercial users (non-residential users) only.

In Early 1980s, the United States filed suit against the State of Michigan and the City of Detroit regarding the Detroit Water and Sewer Department. Communities and Agencies under contract with the City of Detroit for sewage treatment services were added regarding various rate charge challenges. The suit generally involved issues with the City's IWC Department and various rate charges and challenges. As a part of the settlement and by separate Order entered on July 27, 1981 (Exhibit A), a compromise between the City and the industrial challengers on the non-residential surcharges for funding the Industrial Waste Control Section was reached. Pursuant to this Order, such funding was to be accomplished through a monthly flat rate charge based on water meter size. Pursuant to the Order, information regarding non-residential users was to be provided by the municipalities and agencies so the City of Detroit could properly bill the municipalities and agencies for the IWC Charge. End users of the system (outside the City of Detroit) were never directly billed by the City of Detroit. The IWC Charges have been charged accordingly ever since.

At the most fundamental level, all nonresidential user receive a benefit because having the IWC Department allows them to use the sewer system. Arguably, some users may use it more (SIUs), and some may use it less, but all get to use the sewer system only because Defendants maintain an IWC Department. In order for Plaintiff to ultimately succeed on its claims, and the claims of the class members, an individualized inquiry would be required to determine the amount, scope and extent of this use and benefit.

This may be most obvious as applied to Plaintiff's unjust enrichment claim as it requires establishing that the benefit that was received in order to determine if the amount paid for the benefit was unjust. This analysis is also necessary to determine if a charge is a tax, or if there was an overcharge. This issue predominates over all the claims and the entire case, rendering the present action inappropriate to proceed as a class action. Having to conduct this individualized inquiry for the tens of thousands of individual users would render the case completely unmanageable and would take many years to complete, essentially requiring a mini-trial for each end user.

II. PLAINTIFF FAILS TO DEFINE AN APPROPRIATE CLASS OR SUBCLASS FOR EACH OF ITS CLAIMS, OR THAT IT IS THE APPROPRIATE CLASS REPRESENTATIVE

Plaintiff now realizes that its broad assertion of a class for all of its claims is not proper or supportable, and, as a fall back, Plaintiff claims that the Court may fashion a class or subclasses for the claims. Even if different classes or subclasses were proper for the different claims and legal theories, Plaintiff fails to define the alleged classes and subclasses, what claims should be included, or why Plaintiff is an appropriate representative for any of the alleged classes and subclasses. Simply, Plaintiff has failed to properly allege and support its motion for class certification. Plaintiff cannot rely on the Court to make the determinations of the appropriate class without providing the proper analysis.

Plaintiff has the burden to define the class for each of its claims, and show all requirements are met for class certification. If Plaintiff claims that classes should be defined differently or are not applicable to some of the claims, this all needs to be defined so that the Court can make such determinations. It is not appropriate for Plaintiff to assert and support class certification for a small distinguishable claim, and then state that it should therefore apply to all the claims. If a claim or class is not appropriate for class certification, the party cannot rectify this by claiming other claims are proper for class certification. Only those claims and properly defined classes that are appropriate for class certification should be certified. All others must only proceed as individualized claims. Plaintiff has failed to properly plead, assert and support these hypothetical classes and subclasses.

Further, Plaintiff has failed to assert or support that Plaintiff's claims are typical of the claims or defenses of the class, or that Plaintiff will fairly and adequately assert and protect the interests of the class, or that the maintenance of the action as a class action will be superior to other available methods of adjudication in promoting the convenient administration of justice. Simply, Plaintiff has failed to demonstrate typicality, adequacy, and superiority of these hypothetical classes and subclasses. Most importantly, Plaintiff has failed to provide any evidence of Plaintiff or its operation to support that it is the proper person to pursue such claims on behalf of the hypothetical class or sub-classes. Plaintiff has failed to provide any support that it is even a proper Plaintiff in any of the hypothetical classes.

In fact, in 2008, Plaintiff would have been considered a "Minor Industrial User." Exhibit B. Based on Plaintiff's classification, it would not be appropriate for it to represent potential users that do not fall within that category. Even within that category, Plaintiff's use and benefit of the system would be different than all other user. No two users have identical use and requirements

for the system. Although Plaintiff's classification may have been from 2008, Plaintiff has not alleged or demonstrated how this designation may have change over the years or how it would be similar to other class members. Plaintiff has provided absolutely no information about itself or its operations.

Importantly, if such designation did change over the years, this further highlights why such an individualized inquiry is required. Property owners and businesses change frequently, and the use and benefit of the IWC Department also changes with each new owner, business type and size. It is precisely why it would be improper to certify a class when the designations, use and benefits to an individual user can constantly change over time.

CONCLUSION

For the foregoing reasons, the Defendants ask that this Court deny the Plaintiff's Motion for Class Certification.

Respectfully Submitted:

FAUSONE BOHN, LLP

Dated: January 21, 2020

By: /s/JAMES M. PELLAND

James M. Pelland (P51237)
Andrea E. Hayden (P71976)
Attorneys for Defendants
41700 W. Six Mile Rd., Ste. 101
Northville, Michigan 48168
(248) 380-0000
(248) 380-3434 (Fax)

X:\JGF\Great Lakes Water Authority (GLWA)\General Mill Supply v Detroit\WAYNE COUNTY CIRCUIT\Pleadings\Defs Supp Br re Class Cert.docx

EXHIBIT A

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff and
Counter-Defendant,

vs.

STATE OF MICHIGAN,

Defendant, Cross-
Plaintiff and
Cross-Defendant,

vs.

CITY OF DETROIT, a municipal corporation, and DETROIT WATER AND SEWERAGE DEPARTMENT,

Defendant and
Cross-Plaintiff,

vs.

ALL COMMUNITIES AND AGENCIES UNDER CONTRACT WITH THE CITY OF DETROIT FOR SEWAGE TREATMENT SERVICES,

vs.

THE GREATER DETROIT CHAMBER OF COMMERCE, a Michigan non-profit corporation, AND ITS MEMBERS,

vs.

THE FOOD AND ALLIED INDUSTRIES COMMITTEE OF METROPOLITAN DETROIT, a voluntary, non-profit unincorporated association, AND ITS MEMBERS.

HON. JOHN FEIKENS

No. 77-71100

ORDER

At a session of said Court, held in the Federal Building, City of Detroit, County of Wayne, State of Michigan, on the 27th day of July, 1981.

PRESENT: HONORABLE JOHN FEIKENS
JOHN FEIKENS
United States District Court Judge

An Order to Show Cause why the terms of an agreement between the City of Detroit and challengers to the sewage treatment rates adopted by the

EXHIBIT "B"

Board of Water Commissioners on February 11, 1981, and the Detroit City Council on February 18, 1981, should not become binding upon all users, customers and ratepayers of the Detroit Water and Sewerage Department 's ("DWSD") sewage system, having been issued by this Court on July 10, 1981, and objections having been filed and heard at the hearing held pursuant to the Order to Show Cause on July 24, 1981, and the Court being fully advised in the premises,

NOW, THEREFORE, IT IS ORDERED:

(1) In lieu of the non-residential surcharge of 31¢ per thousand cubic feet of metered water and 1.6¢ per surchargeable pound of BOD, TSS, P. and FOG for funding the activities of the Industrial Waste Control Section adopted by the Board of February 11, 1981, and the Council on February 18, 1981, a monthly charge as set forth in Exhibit A, attached hereto, and by reference made a part hereof, shall be effective July 1, 1981, to be collected on all bills rendered on or after August 1, 1981, to non-residential customers provided that said charge shall be further adjusted as necessary, subject to the approval of this Court, to collect $3.2 million dollars in order to recover the full twelve-month cost of the Industrial Waste Control Section budget. In the event the amounts collected by said charge reach the level of $3.2 million dollars prior to June 30, 1982, said charge shall be discontinued until July 1, 1982. Said monthly charge shall not be applied on the basis of any meter which services solely residential users (regardless of the number of dwelling units served by such meter) or which are used for fire protection purposes only.

(2) The City of Detroit, and each suburban governmental body which is a user of the City of Detroit's sewage collection, transportation, disposal or treatment services and purchases

sewage disposal and treatment services from the City of Detroit, either directly or indirectly, shall provide to the Court the following information regarding the industrial and commercial users of the City of Detroit's sewage system located within such governmental body's jurisdiction:

- User's Address
- Local Account or Other Identification #
- Meter Size or Units Assigned
- The most recent billed 12-month flow period
- The Standard Industrial Classification (SIC) category, if known; otherwise, a brief description of business activity of user

Further, each suburban contract customer and municipality or other local governmental unit shall provide the aforementioned information as follows:

1. Such of the aforementioned information as is contained in the billing records of the suburban contract customer and municipal users shall be supplied to the Court on or before September 30, 1981.
2. Such of the aforementioned information as is not contained in the billing records of the suburban contract customer or municipal user shall be obtained and supplied to the Court at such time as the meter of each commercial or industrial customer is next read and the commercial or industrial customer is next billed.
3. In all events, such information shall be supplied to the Court on or before November 30, 1981.
4. Upon being supplied the aforementioned information the City of Detroit shall, on or before December 31, 1981, adjust the fees upward or downward so as to collect only the amount necessary to recover the cost of the Industrial Waste Control Section budget.

A TRUE COPY
CLERK, U. S. DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
BY Bonnie Hamm
DEPUTY CLERK

JOHN FEIKENS
UNITED STATES DISTRICT COURT
JUDGE

EXHIBIT A

METER SIZE	UNIT ASSIGNMENT FACTOR	SERVICE CHARGE (1)	RATIO 5/8"=1	SUGGESTED	METERS (2)	COMMERCIAL AND INDUSTRIAL	EQUIVALENT UNITS	ANNUAL CHARGE FOR IWC	MONTHLY CH FOR IW
5/8	1-4	.56	1.00	1.0	249,110			6.61	.5
3/4		.83	1.48	1.5	61,533			9.92	.8
1	5-10	1.67	2.98	2.5	15,085	15,085	37,712	16.53	1.3
1 1/2	11-20	3.34	5.96	5.5	4,600	4,600	25,300	36.36	3.0
2	21-32	5.56	9.93	8.0	3,887	3,887	31,096	52.88	4.4
3	33-64	7.92	14.14	14.5	1,359	1,359	19,705	95.85	7.9
4	65-100	10.43	18.63	20.0	955	955	19,100	132.20	11.0
6	101-200	16.68	29.78	30.0	846	846	25,380	198.30	16.5
8		25.85	46.16	50.0	697	697	34,850	330.50	27.5
10		37.25	66.52	70.0	129	129	9,030	462.70	38.5
12		43.92	78.43	80.0	48	48	3,840	528.80	44.0
16		71.03	126.84	120.0	18	18	2,160	793.20	66.1
18				140.0	1	1	140	925.40	77.1
20				160.0	4	4	640	1,057.60	88.1
24		125.24	223.64	180.0	5	5	900	1,189.80	99.1
30				200.0	1	1	200	1,322.00	110.1
36				220.0	1	1	220	1,454.20	121.1
48				240.0	1	1	240	1,586.40	132.2
					338,285	12,554	210,513 Det. (3) 273,667 Sub. 484,180		

$$\frac{3,200,000}{484,180} = 6.61$$

(1) Summary of Operating Statistics (1979) p. 103.

(2) Summary of Operating Statistics (1979) p. 69.

(3) Ratio of Population (p. 139) 1.3 x Detroit

$$\frac{1.830}{1.275} = 1.435$$

Ratio of significant industry (p. 122)

$$\frac{2,500}{2,000} = 1.25$$

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff and
Counter-Defendant,

vs.

STATE OF MICHIGAN,

HON. JOHN FEIKENS

Defendant, Cross-
Plaintiff and
Cross-Defendant,

No. 77-71100

vs.

CITY OF DETROIT, a municipal
corporation, and DETROIT WATER
AND SEWERAGE DEPARTMENT,

Defendant and
Cross-Plaintiff,

vs.

ALL COMMUNITIES AND AGENCIES
UNDER CONTRACT WITH THE CITY OF
DETROIT FOR SEWAGE TREATMENT
SERVICES,

vs.

THE GREATER DETROIT CHAMBER OF
COMMERCE, a Michigan non-profit
corporation, AND ITS MEMBERS,

vs.

THE FOOD AND ALLIED INDUSTRIES COMMITTEE
OF METROPOLITAN DETROIT, a voluntary,
non-profit unincorporated association,
AND ITS MEMBERS.

PROOF OF SERVICE

STATE OF MICHIGAN)
)SS
COUNTY OF WAYNE)

NANCY L. ROGERS, being first duly sworn, deposes and states that she served upon counsel of record and municipalities served by the Detroit Water and Sewerage Department's sewage system, a true copy of the Order

issued by the Court on July 24, 1981, by enclosing same in sealed envelopes, with postage fully prepaid for first-class mail, addressed as shown on the attached sheets, and depositing same in a United States government mail receptacle in the City of Detroit, Michigan, on July 28, 1981.

FURTHER, DEPONENT SAYETH NOT.

Nancy L. Rogers
NANCY L. ROGERS

Subscribed and sworn to before me
this 28th Day of July, 1981.

Kathryn A. Vallar
KATHRYN A. VALLAR, Notary Public,
Wayne County, Michigan.

My Commission Expires: 6/7/83

CITY OF BERKLEY
City Clerk
3338 Coolidge Hwy.
Berkley, Michigan 48072

VILLAGE OF BINGHAM FARMS
Village Clerk
23061 Sager Court
Birmingham, Michigan 48010

BLOOMFIELD TOWNSHIP
Township Clerk
4200 Telegraph Road
Bloomfield Hills, MI 48013

BRUCE TOWNSHIP
Township Clerk
223 E. Gates Street
Romeo, Michigan 48065

VILLAGE OF CLARKSTON
Village Clerk
375 Depot
Clarkston, MI 48016

CITY OF CLAWSON
City Clerk
425 North Mail
Clawson, MI 48017

CITY OF DEARBORN
City Clerk
13615 Michigan
Dearborn, MI 48126

CITY OF EAST DETROIT
City Clerk
23200 Gratiot
East Detroit, MI 48021

CITY OF FARMINGTON HILLS
City Clerk
31555 W. Eleven Mile
Farmington, MI 48024

VILLAGE OF FRANKLIN
Village Clerk
32325 Franklin Road
Franklin, MI 48025

CITY OF GARDEN CITY
City Clerk
600 Middlebelt Road
Garden City, MI 48135

CITY OF RIVER ROUGE
City Clerk
10600 W. Jefferson
River Rouge, MI 48218

VILLAGE OF BEVERLY HILLS
Village Clerk
18500 W. 13 Mile Road
Birmingham, MI 48009

CITY OF BIRMINGHAM
City Clerk
151 Martin Street
Birmingham, MI 48012

CITY OF BLOOMFIELD HILLS
City Clerk
45 E. Long Lake Road
Bloomfield Hills, MI 48013

CHARTER TOWNSHIP OF CANTON
1150 S. Canton Road
Canton, MI 48188

CITY OF CENTER LINE
City Clerk
7500 E. Ten Mile Road
Center Line, MI 48015

CHESTERFIELD TOWNSHIP
Township Clerk
50177 N. Gratiot
Mt. Clemens, MI 48043

CLINTON TOWNSHIP
Township Clerk
1129 S. Gratiot
Mt. Clemens, MI 48043

CITY OF DEARBORN HEIGHTS
City Clerk
6045 Fenton
Dearborn Heights, MI 48127

CITY OF FARMINGTON
City Clerk
23600 Liberty Street
Farmington, MI 48024

CITY OF FERNDALE
City Clerk
300 E. Nine Mile Road
Ferndale, MI

CITY OF FRASER
City Clerk
33000 Garfield
Fraser, MI 48025

CITY OF GROSSE POINTE
City Clerk
17147 Maumee Avenue
Grosse Pointe, MI 48230

CITY OF GROSSE POINTE FARMS
City Clerk
795 Lake Shore Road
Grosse Pointe Farms, MI 48236

CITY OF HAMTRAMCK
City Clerk
3401 Evaline Street
Hamtramck, MI 48212

HARRISON TOWNSHIP
Township Clerk
38151 L'Anse Cruese
Mt. Clemens, MI 48043

CITY OF HIGHLAND PARK
City Clerk
30 Gerald Avenue
Highland Park, MI 48203

INDEPENDENCE TOWNSHIP
Township Clerk
90 N. Main Street
Clarkston, MI 48016

CITY OF KEEGO HARBOR
City Clerk
2025 Beechmont
Keego Harbor, MI 48033

CITY OF LATHRUP VILLAGE
City Clerk
27400 Southfield Road
Lathrup Village,MI 48076

MACOMB TOWNSHIP
Township Clerk
19925 Twenty-three Mile Road
Mt. Clemens, MI 48043

CITY OF MELVANDALE
City Clerk
3100 Oakwood Blvd.
Melvandale, MI 48122

CITY OF NORTHVILLE
Clerk Clerk
215 W. Main Street
Northville, MI 48167

CITY OF NOVI
City Clerk
43315 Paul Bunyan
Novi, MI 48050

VILLAGE OF OXFORD
Village Clerk
22 West Burdick
P. O. Box 94
Oxford, MI 48051

PLYMOUTH TOWNSHIP
Township Clerk
42350 Ann Arbor Road
Plymouth, MI 48170

CITY OF GROSSE POINTE WOODS
City Clerk
20025 Mack Avenue
Grosse Pointe Woods, MI 48236

CITY OF HARPER WOODS
City Clerk
19617 Harper
Harper Woods, MI 48225

CITY OF HAZEL PARK
City Clerk
111 E. Nine Mile Road
Hazel Park, MI 48030

CITY OF HUNTINGTON WOODS
City Clerk
26815 Scotia Road
Huntington Woods, MI 48070

CITY OF INKSTER
City Clerk
2121 Inkster Road
Inkster, MI 48141

VILLAGE OF LAKE ORION
Village Clerk
21 E. Church Street
Lake Orion, MI 48035

CITY OF LIVONIA
City Clerk
33001 Five Mile Road
Livonia, MI 48154

CITY OF MADISON HEIGHTS
City Clerk
300 W. Thirteen Mile Road
Madison Heights, MI 48071

CITY OF MT. CLEMENS
City Clerk
1 Crocker Blvd.
Mt. Clemens, MI 48043

NORTHVILLE TOWNSHIP
Township Clerk
16300 Sheldon Road
Northville, MI 48167

OXFORD TOWNSHIP
Township Clerk
18 West Burdick
Oxford, MI 48167

CITY OF PLEASANT RIDGE
City Clerk
23925 Woodward Avenue
Pleasant Ridge, MI 48069

CITY OF PLYMOUTH
City Clerk
201 S. Main Street
Plymouth, MI 48170

REDFORD TOWNSHIP
Township Clerk
15145 Beech Daly
Detroit, MI 48237

CITY OF ROMULUS
City Clerk
11111 Wayne Road
Romulus, MI 48124

CITY OF ROYAL OAK
City Clerk
211 Williams Street
Royal Oak, MI 48068

ROYAL OAK TOWNSHIP
Township Clerk
21075 Wyoming
Ferndale, MI 48220

SHELBY TOWNSHIP
Township Clerk
527 Van Dyke
Utica, MI 48087

CITY OF STERLING HEIGHTS
City Clerk
40555 Utica
Sterling Heights, MI 48078

CITY OF TROY
City Clerk
500 W. Big Beaver Road
Troy, MI 48084

VAN BUREN TOWNSHIP
Township Clerk
46425 Tyler Road
Belleville, MI 48111

WATERFORD TOWNSHIP
Township Clerk
5200 Civic Center Drive
Drayton Plains, Michigan 48020

WEST BLOOMFIELD TOWNSHIP
Township Clerk
4460 Orchard Lake Road
Westbloomfield, Michigan 48033

THOMAS S. WELSH
Public Works Commissioner
P. O. Box 806
Mt. Clemens, MI 48043

WAYNE COUNTY PUBLIC WORKS
900 W. Lafayette
Detroit, Michigan 48226

CITY OF OAK PARK
City Clerk
13600 Oak Park
Oak Park, Michigan 48237

PONTIAC TOWNSHIP
Township Clerk
1827 N. Squirrel Road
Pontiac, MI 48057

VILLAGE OF ROMEO
Village Clerk
121 W. St. Clair
Romeo, MI 48065

CITY OF ROSEVILLE
City Clerk
29777 Gratiot
Roseville, MI 48066

CITY OF ST. CLAIR SHORES
City Clerk
27600 Jefferson
St. Clair Shores, MI 48080

CITY OF SOUTHFIELD
City Clerk
26000 Evergreen Road
Southfield, MI 48076

CITY OF SYLVAN LAKE
City Clerk
1820 Inverness
Sylvan Lake, MI 48053

CITY OF UTICA
City Clerk
7550 Auburn
Utica, MI 48087

WASHINGTON TOWNSHIP
Township Clerk
155 S. Rawles
Romeo, Michigan 48065

CITY OF WAYNE
City Clerk
34808 Sims Avenue
Wayne, Michigan 48184

CITY OF WESTLAND
City Clerk
36601 Ford Road
Westland, Michigan 48185

OAKLAND CO. DRAIN COMM.
1 Public Works Drive
Pontiac, Michigan 48054

OAKLAND COUNTY DPW
1 Public Works Drive
Pontiac, MI 48054

NOVI TOWNSHIP
Township Clerk
P. O. Box 455
Novi, Michigan 48050

ORION TOWNSHIP
Township Clerk
2525 Joslyn Road
Lake Orion, Michigan 48035

WILLIAM P. HAMPTON
30840 Northwestern Hwy.
Farmington Hills, MI 48018

THOMAS EMERY
720 Law Building
525 W. Ottawa
Lansing, Michigan 48913

PHILIP G. TANNIAN
1930 Buhl Bldg.
Detroit, Michigan 48226

GREATER DETROIT CHAMBER OF
Commerce
150 Michigan
Detroit, Michigan 48226

JAY BRANT
Chief Assistant U. S. Attorney
U. S. Attorney's Office
Room 817
Federal Building
Detroit, Michigan 48226

WAYNE COUNTY ROAD COMMISSION
Northeast Wayne-Southeast
Macomb District
Area #3 (Dearborn Heights)
Area #6 (Redford Township)
415 Clifford
Detroit, Michigan 48207

DONALD CAMPBELL, ESQ.
Air Pollution Control Division
1311 E. Jefferson Avenue
Detroit, Michigan 48207

JANE E. SCHULTEIS
Enforcement Attorney
U. S. Environmental Protection
Region V
230 South Dearborn St.
Chicago, Illinois 60604

SOUTH MACOMB SANITARY DISTRICT
Box 284, District Director
St. Clair Shores, MI 48043

PORT HURON PAPER COMPANY
9125 W. Jefferson
Detroit, Michigan
Attn: Mr. Paul Leith

SCOTT PAPER COMPANY
9125 W. Jefferson Avenue
Detroit, Michigan 48209
Atten: Mr. M. F. Schnaufer

WILLIAM D. MARKS
Assistant Bureau Chief
MDNR Stevens T. Mason Bldg.
P. O. Box 30028
Lansing, MI 48909

OAKLAND TOWNSHIP
Township Clerk
4393 Collins Road
Rochester, Michigan 48063

JAMES A. SMITH
34th Floor
100 Renaissance Center
Detroit, Michigan 48243

JOHN E. BREEN
Wayne County Board of
Public Works
900 W. Lafayette
Detroit, Michigan 48226

JOSEPH M. POLITO
2290 1st National Bldg.
Detroit, Michigan 48226

CHARLES R. TOWNER
Two Crocker Blvd.
Mt. Clemens, Michigan 48043

JOHN P. WILLIAMS
1881 1st National Bldg.
Detroit, Michigan 48226

DONALD W. RINGLER
County of Oakland by its
Board of Public Works
Evergreen-Farmington Dist.
Clinton-Farmington Dist.
1 Public Works Drive
Pontiac, Michigan 48054

DOUGLAS E. CUTLER
WILLIAM THEE
Ford Motor Company
World Headquarters
The American Road
Dearborn, Michigan 48243

AMERICAN CEMENT CORPORATION
Peerless Division
9333 Dearborn Street
Detroit, Michigan 48209
Attn: Mr. Myron W. Black

MR. J. W. BRESKO
Engineering Manager
Anaconda American Brass Co.
P. O. Box 1519
Detroit, Michigan 48231

JAMES N. HOWELL, DIRECTOR
Environmental Control
Great Lakes Steel
Division of National Steel Corp.
Ecorse, Michigan 48229

JAMES DRAPER
Hotel St. Regis
3071 W. Grand Blvd.
Detroit, Michigan 48202

CITY OF ORCHARD LAKE VILLAGE
Village Clerk
3951 Orchard Lake Road
Orchard Lake, MI 48033

VILLAGE OF GROSSE POINTE SHORES
Village Clerk
795 Lake Shore Road
Grosse Pointe Shores, MI

CITY OF GROSSE POINTE PARK
City Clerk
15115 E. Jefferson Ave.
Grosse Pointe Park, MI 48230

RICHARD HINSHON
Municipal Facility Water
Quality Grant Section
3800 W. Saginaw
Lansing, MI 48917

CITY OF ALLEN PARK
City Clerk
16850 Southfield
Allen Park, MI 48101

AVON TOWNSHIP
Township Clerk
1275 W. Avon Road
Rochester, MI 48063

Richard J. McClear, Esq.
DYKEMA, GOSSETT, SPENCER, GOODNOW
& TRIGG
400 Renaissance Center
35th Floor
Detroit, Michigan 48243

Robert Franzinger, Esq.
DYKEMA, GOSSETT, SPENCER, GOODNOW
& TRIGG
400 Renaissance Center
35th Floor
Detroit, Michigan 48243

SYLVESTER DELANEY (P23690)
Deputy Corporation Counsel

DARRYL F. ALEXANDER (P10092)
Assistant Corporation Counsel

Attorneys for City of Detroit

735 Randolph, Room 1004
Detroit, Michigan 48226
(313) 224-4752

EXHIBIT B

Facility ID	Facility Name	Business Description	Address	City	Zip Code	Status Code
27664	General Filters, Inc.	Company manufactures humidifiers, filters	43800 Grand River	Novi	48376-8025	CSIU
79011	General Furniture Repair Shop	General Furniture Repairs	2769 Coolidge Hwy	Berkley	48072	CMIN
83224	General Gear Co Inc.	Mfg Gears	6061 WABASH ST	Detroit	48208-1695	CMOV
78934	General Hardwood Co		7201 E MCNICHOLS RD	Detroit	48212-2050	CMIN
78935	General Hydraulics Corp.		40761 BRENTWOOD DR	Sterling Heights	48310-2291	CMIN
87808	General Interiors	OFFICE RENOVATION AND PLANNING	44772 HELM ST	Plymouth	48170	CMIN
83225	General Kinetics Co Inc.	Mfg Camshafts Valve	5161 TRUMBULL ST	Detroit	48208-1730	CMOV
27318	General Linen And Uniform Service	Laundry - industrial, linen, & mats and uni	1016 E. Palmer Street	Detroit	48211-2522	CSIU
79012	General Machining And Technology		43630 Utica Rd	Sterling Heights	48314	CMOV
78936	General Mill Supply	Paper Recycling	189 VINEWOOD ST	Detroit	48216-1699	CMIN
92323	General Motors Heritage Center	Automotive display and storage	6400 Center Dr	Sterling Heights	48312-	CAMI
90020	General Motors Stg. Body Shop	Auto Body Repair	20495 SHERWOOD ST	Detroit	48234-2928	CMOV
83266	General Motors Systems Eng.	Engineering	1151 Crooks Road	Troy	48084	CMOV
84508	General Oak Fabricators	Contractors	2501 Brown Rd.	Orion Township	48359	CNSC
86195	General Office Supply Co		645 GRISWOLD ST	Detroit	48226-4062	CAMI
87809	General Office Supply Co.	Wholesale/Retail	6612 TELEGRAPH RD	Birmingham	48010-3883	CMIN
75807	General Oil Co. Inc.	Administration/Bus office	31478 Industrial Rd.	Livonia	48150	CAMI
91957	General Oil Company	Blending Industrial Fluids/Laboratory	35796 Veronica (See Mail /	Livonia	48150-	CMIN
27541	General Oil Company, Inc.	Recycling of oil	12680 Beech Daly Road	Redford Township	48239	CSIU
79013	General Pattern	Pattern Shop (Modeling)	15401 Century Dr.	Dearborn	48120	CMOV
78937	General Plastics Corp.		33441 JAMES J POMPO D	Fraser	48026-1625	CMIN
78938	General Printing Co.	Letterpress Lithohgrapher	525 HARPER AVE	Detroit	48202-3537	CMIN
75808	General Pulaski Civic Club	Bar	7651 Schaefer	Dearborn	48126	CAMI
87810	General Rehab Mgt. Center	MEDICAL REHAB	47659 HALYARD DR	Plymouth	48170	CMIN
76802	General Rv. Centers		5300 Highland Rd.	Waterford	48328	
90040	General Safety Corp. - Plnt #2		23015 W Industrial Dr	St. Clair Shores	48080	CMOV
83267	General Safety Corp. - Plnt.#4		20400 Stephens Dr	St. Clair Shores	48080	CMOV
27698	General Safety Corp.		23060 Industrial Drive	St. Clair Shores	48080	CMOV
92300	General Seal	Mechanical Seals	42320 Yearego	Sterling Heights	48314-	CMIN
87850	General Seal Corp.		35455 Stanley Dr.	Sterling Heights	48312	CMOV
27295	General Spice Inc.	Mfg Seasonings Spices	17800 Filer	Detroit	48212	
92041	General Steel	Steel processing	37945 Commerce Dr	Sterling Heights	48312-	ASCS
83226	General Tape And Supply Inc.		7451 W 8 MILE RD	Detroit	48221-1295	CMOV
93666	General Transport	Trucking Warehouse	4800 Stecker	Dearborn	48126-	CMIN
93327	General Truck Sales		26575 W. 8 Mile Rd	Redford Township	48240-	CMIN
79014	General Truck Sales	Used truck sales	19750 Livernois	Detroit	48221	CMIN
92864	General Wine & Liquor Company	Distribution Warehouse & Maintenance G	373 Victor	Highland Park	48203-	CMIN
90021	General Wood Products Co Inc.	Mfg Wooden Pallets	12700 BERWYN	Detroit	48239-2744	CMOV
79015	Generation Tool Inc.	Machine Shop	25907 Trowbridge	Inkster	48141	CMOV
79006	Gene's Automotive Supply	Automotive Parts Sales	24344 Ford Rd	Dearborn Heights	48127	CMOV
92105	Gene's Towing Service	Towing	7200 18 Mile Rd	Sterling Heights	48314-	ASCS
86202	Genesee Ceramic Tile	Tile Sales	24701 Telegraph Rd	Southfield	48034	CAMI
75809	Genesee Ceramic Tile	Tile Sales	43220 Merrill Rd	Sterling Heights	48314	CMIN
79016	Genesee Underground Constructi	Telephone Utility Contractor	946 Livernois	Troy	48083	CMIN

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO.,
Individually and on behalf of a
Class of similarly situated persons and entities,

Plaintiff,

vs.

Case No. 18-011569-CZ
Hon. Kevin J. Cox

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

and

CITY OF DETROIT, a municipal corporation,
by and through its WATER AND SEWERAGE DEPARTMENT,

Defendants.

Kickham Hanley, PLLC
Gregory D. Hanley (P51204)
Edward F. Kickham, Jr. (P70332)
Attorneys for Plaintiff and the Class
32121 Woodward Ave., Suite 300
Royal Oak, MI 48073
(248) 544-1500

Fausone Bohn, LLP
James G. Fausone (P33579)
James M. Pelland (P51237)
Andrea E. Hayden (P71976)
Attorney for Defendants
41700 W. Six Mile Rd., Ste. 101
Northville, MI 48168
248-380-0000

KOPKA PINKUS DOLIN PC
MARK L. DOLIN (P45081)
MICHAEL J. WATT (P63869)
Co-Counsel for Defendant GLWA
32605 W. Twelve Mile Rd., Ste. 300
Farmington Hills, MI 48334
(248) 324-2620

PROOF OF SERVICE

I, Lisa Paliszewski, hereby certify that on the 21st day of January, 2020, I served a copy of the **DEFENDANTS', THE GREAT LAKES WATER AUTHORITY AND THE CITY OF DETROIT, SUPPLEMENTAL BRIEF IN OPPOSITION TO PLAINTIFF'S MOTION FOR CLASS CERTIFICATION** and this **PROOF OF SERVICE,** on all attorneys appearing in this action by E-File.

/s/ LISA PALISZEWSKI
Lisa Paliszewski

EXHIBIT - 16

833B83100

United States
Environmental Protection
Agency

Office of
Water Enforcement
and Permits

833B83100

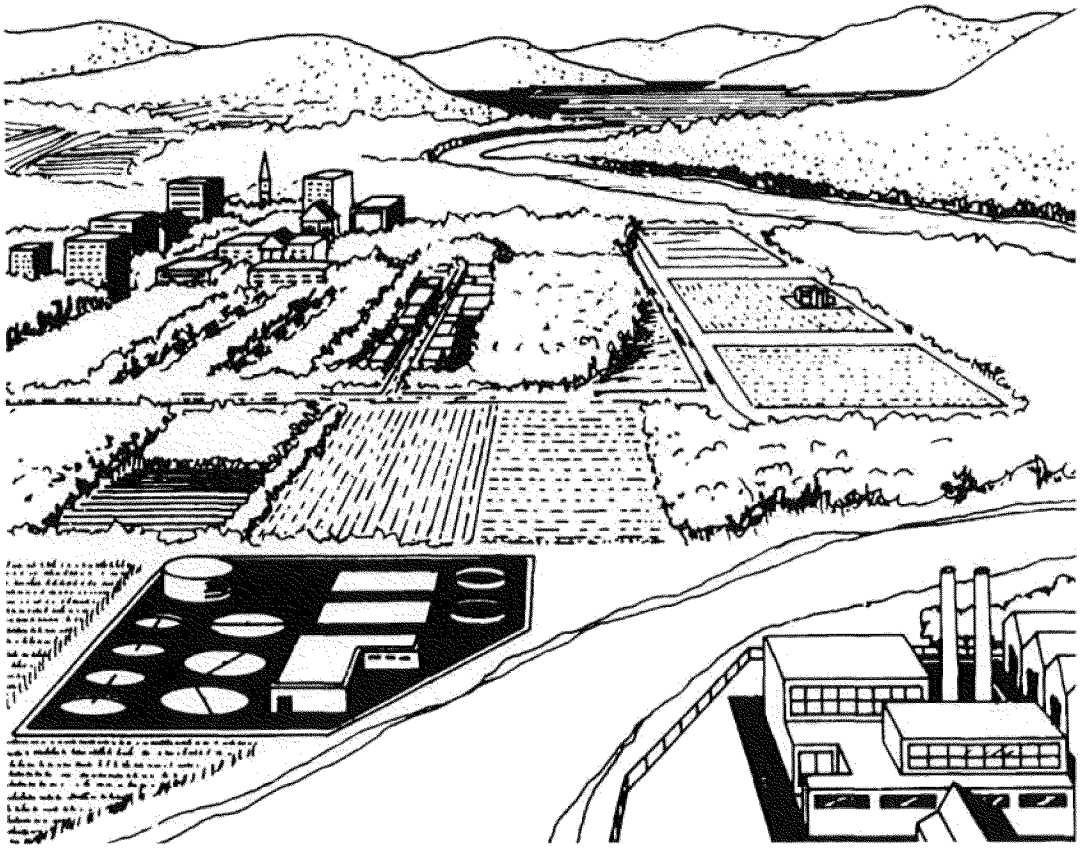
EPA

Guidance Manual for POTW Pretreatment Program Development

ENVIRONMENTAL
PROTECTION
AGENCY

DALLAS, TEXAS

LIBRARY



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

ENVIRONMENTAL PROTECTION AGENCY
DALLAS, TEXAS
LIBRARY

OCT 5 1983

OFFICE OF WATER

MEMORANDUM

SUBJECT: Pretreatment Program Guidance

FROM: Rebecca W. Hanmer
Acting Assistant Administrator for Water (WH-556)

TO: Users of the Guidance Manual for POTW Pretreatment Program Development

This manual provides information needed by a local POTW to develop an approvable pretreatment program. It also delineates what data and information the POTW must include in its submittal package so that the appropriate Approval Authority (either an approved State or an EPA Regional Office) can review and approve the program. The information is based on the requirements specified in the General Pretreatment Regulations (40 CFR Part 403) for an approvable pretreatment program. If changes to these requirements are needed, EPA will issue timely supplemental guidance.

The manual does not discuss in detail certain provisions of the national pretreatment program including the Combined Wastestream Formula and Removal Credits. The Agency will provide separate guidance on these aspects of the pretreatment program in the future.

EPA developed this manual for two reasons. First, POTWs need guidance on developing pretreatment programs which satisfy the regulatory requirements of the General Pretreatment Regulations. This manual includes instructions and guidance for conducting an industrial waste survey, developing a compliance sampling program, producing resource and funding estimates, and developing local effluent limitations for industrial users of the POTW's treatment facility. The manual's appendices contain very useful information, not only for program development, but also for program implementation. It contains worksheets for assisting the POTW in developing each element of the program.

Second, EPA recognized that there are differences in POTWs and that POTW pretreatment programs should consider such local conditions as the size of the POTW's service area, the number of industrial users, and the specific pollutants and the amounts of these pollutants which the industrial users are discharging to the POTW's treatment facilities.

The regulatory requirements which must be met are set forth in the General Pretreatment Regulations, 40 CFR Part 403. This guidance manual does not establish any new requirements. Where the term "must" is used, refer to a regulatory requirement. The term "should" denotes recommended good practice, but you do not have to abide by this practice in order to meet regulatory requirements if you have an acceptable alternate.

I believe that you, the POTW personnel responsible for developing a pretreatment program, will find this manual useful. As this guidance may be revised periodically to reflect program experience or changes in program regulations, please feel free to write to the Office of Water Enforcement and Permits (EN-336) if you have suggestions on how the guidance may be improved or areas which should be addressed. Thank you.

GUIDANCE MANUAL
FOR
POTW PRETREATMENT PROGRAM DEVELOPMENT

Rebecca Hanmer
Acting Assistant Administrator, Office of Water

Bruce R. Barrett, Jr.
Director, Office of Water Enforcement and Permits

Martha G. Prothro
Director, Permits Division

Dr. James D. Gallup
National Pretreatment Coordinator

October 1983

Office of Water Enforcement and Permits
Office of Water
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

ACKNOWLEDGEMENTS

This document was prepared with guidance from EPA Headquarters, Office of Water Enforcement and Permits and EPA Regional Offices. The North Carolina Department of Natural Resources and Community Development and Tennessee Department of Health and Environment participated as peer reviewers and provided valuable comments which have been incorporated into this document. This Guidance Manual was prepared by JRB Associates under EPA Contract No. 68-01-6514.

TABLE OF CONTENTS

		PAGE
1.	INTRODUCTION	1-1
	1.1 THE NATIONAL PRETREATMENT PROGRAM	1-1
	1.2 ELEMENTS OF A PRETREATMENT PROGRAM	1-4
	1.3 ORGANIZATION OF THIS MANUAL	1-6
2.	INDUSTRIAL WASTE SURVEY	2-1
	2.1 COMPILE A MASTER LIST OF INDUSTRIAL USERS	2-1
	2.2 SURVEY INDUSTRIAL USERS	2-2
	2.3 CONDUCT FOLLOW-UP ACTIVITIES	2-5
	2.4 SUMMARIZE SURVEY RESULTS	2-5
	2.4.1 Industrial Classification Scheme	2-9
	2.4.2 Industrial Waste Survey Data Management	2-10
	2.5 IWS INFORMATION FOR THE PROGRAM SUBMISSION	2-11
3.	LEGAL AUTHORITY	3-1
	3.1 REQUIRED LEGAL AUTHORITIES	3-1
	3.1.1 Deny or Condition	3-2
	3.1.2 Compliance with Pretreatment Standards	3-2
	3.1.3 Control Mechanism	3-4
	3.1.4 Compliance Schedules/Reporting Requirements	3-5
	3.1.5 Inspection, Sampling, and Monitoring	3-6
	3.1.6 Legal Remedies	3-7
	3.1.7 Emergency Relief	3-8
	3.1.8 Confidentiality	3-8
	3.1.9 Multijurisdictional Issues	3-9
	3.2 ATTORNEY'S STATEMENT	3-10
	3.3 LEGAL AUTHORITY INFORMATION REQUIRED FOR THE PROGRAM SUBMISSION	3-12
4.	TECHNICAL INFORMATION	4-1
	4.1 BACKGROUND INFORMATION	4-1
	4.2 PLANT PERFORMANCE AND INDUSTRIAL DATA	4-2
	4.3 SAMPLING AND ANALYSIS TO DETERMINE FATE AND EFFECT	4-3
	4.4 LIMITATIONS ON POTW EFFLUENT AND SLUDGE	4-5
	4.4.1 Water Quality Limitations	4-5
	4.4.2 Sludge Limitation	4-6

TABLE OF CONTENTS (Continued)

		PAGE
4.5	METHODOLOGY FOR DETERMINING LOCAL DISCHARGE LIMITATIONS	4-7
4.5.1	Types of Standards	4-9
4.5.2	General Procedure for Setting Local Limits	4-10
4.6	TECHNICAL INFORMATION FOR THE PROGRAM SUBMISSION	4-12
5.	DESIGN OF MONITORING PROGRAM	5-1
5.1	TYPES OF MONITORING	5-1
5.1.1	Scheduled Monitoring	5-1
5.1.2	Unscheduled Monitoring	5-2
5.1.3	Demand Monitoring or Investigative Monitoring	5-2
5.1.4	Industrial Self-Monitoring	5-3
5.2	DETERMINATION OF MONITORING FREQUENCY	5-3
5.3	FIELD MONITORING STRATEGY	5-5
5.3.1	Industrial Inspections	5-5
5.3.2	Sample Collection and Handling	5-7
5.4	LABORATORY CONSIDERATIONS IN MONITORING	5-9
5.5	CHAIN-OF-CUSTODY PROCEDURES	5-10
5.6	ADMINISTRATION	5-11
5.7	COMPLIANCE MONITORING INFORMATION FOR THE PROGRAM SUBMISSION	5-14
6.	PROGRAM IMPLEMENTATION PROCEDURES	6-1
6.1	UPDATE INDUSTRIAL WASTE SURVEY	6-1
6.2	NOTIFY INDUSTRIAL USERS OF APPLICABLE STANDARDS AND REQUIREMENTS	6-2
6.3	REVIEW SELF-MONITORING REPORTS	6-3
6.4	INVESTIGATE NONCOMPLIANCE INCIDENTS	6-6
6.5	CONDUCT PUBLIC PARTICIPATION ACTIVITIES	6-8
6.6	IMPLEMENTATION PROCEDURES FOR THE PROGRAM SUBMISSION	6-9

TABLE OF CONTENTS (Continued)

		PAGE
7.	PROGRAM ORGANIZATION, COSTS, AND REVENUE SOURCES.....	7-1
7.1	ORGANIZATION AND STAFFING.....	7-1
7.1.1	Organization Chart.....	7-2
7.1.2	Considerations in Staffing and Organizing the Pretreatment Program.....	7-2
7.2	PROGRAM COSTS AND FUNDING MECHANISMS.....	7-6
7.2.1	Estimating Program Costs.....	7-6
7.2.2	Financing Sources and Cost Recovery Systems....	7-15
7.3	INFORMATION ON RESOURCES REQUIRED FOR THE PROGRAM SUBMISSION.....	7-29
8.	APPROVAL AND IMPLEMENTATION.....	8-1
8.1	APPROVAL.....	8-1
8.1.1	Approval Procedures for a Final Pretreatment Program.....	8-2
8.1.2	Special Cases.....	8-3
8.2	IMPLEMENTATION.....	8-4
8.2.1	Ongoing Activities.....	8-5
8.2.2	Program Effectiveness.....	8-5
8.2.3	Oversight.....	8-7

APPENDICES

APPENDIX A Pretreatment Information Contacts

APPENDIX B Bibliography of Pretreatment References

APPENDIX C General Pretreatment Regulations for Existing and New Sources and Amendments

APPENDIX D Priority Pollutants and Categorical Industry Information

APPENDIX E Sample Pretreatment Compliance Schedule

APPENDIX F Blank Worksheets

APPENDIX G Checklist for Pretreatment Program Submission

APPENDIX H Sample Industrial Waste Survey Questionnaire

APPENDIX I EPA Model Ordinance

APPENDIX J Sample Sewer Use Permit

APPENDIX K Sample Attorney's Statement

APPENDIX L Development of Discharge Limits to Control Incompatible Pollutants

APPENDIX M Sample Collection and Preservation Procedures

LIST OF TABLES AND FIGURES

Table		Page
1.1	Industries Subject to Categorical Pretreatment Standards	1-5
2.1	Industrial Waste Survey Results	2-6
2.2	Industries Eliminated from Further Survey Efforts	2-7
2.3	Industrial Users Discharging Nondomestic Waste	2-8
4.1	Determining Need for Local Limitations	4-8
5.1	Sampling Record	5-12
5.2	Monitoring Results Report Form	5-13
7.1	Factors Affecting POTW Levels of Effort for Pretreatment Program Operating Tasks	7-7
7.2	POTW Pretreatment Program Personnel Requirement Ranges	7-8
7.3	Estimated POTW Personnel Requirements for a POTW Pretreatment Program by Program Activity	7-9
7.4	Typical Equipment for a Two-Person Field Sampling Crew	7-12
7.5	Typical Commercial Laboratory Costs	7-13
7.6	Worksheet for Calculating Annual Operating Costs	7-16
7.7	Pretreatment Program Financing Options	7-17
7.8	Cost Recovery Options	7-23
7.9	Rate Calculation Worksheet for Service Model	7-25
7.10	Rate Calculation Worksheet for Industry Surcharge Model	7-27
7.11	Rate Calculation Worksheet for Pollutant Strength Model	7-30

Figure		
6.1	Review Process for Industrial Self-Monitoring Reports	6-5
7.1	Worksheet for Developing an Organization Plan	7-3

1. INTRODUCTION

This manual provides guidance to the municipal personnel responsible for the development and implementation of a local pretreatment program. It also provides relevant information to the official who will supervise the local program. This development manual has two purposes:

- To help you in developing your pretreatment program and implementing the program on an ongoing basis
- To assist you in preparing your program submission to obtain approval.

The intent of the manual is to provide sufficient guidance so that you can independently develop a local pretreatment program. However, some questions may require additional assistance beyond this manual's scope. Special questions or problems that are not completely addressed here should be referred to your State pretreatment office or the appropriate EPA Regional Office (a list of these offices appears in Appendix A). In addition, Appendix B lists other documents that you may find useful when developing a pretreatment program.

It is important for you to understand the goals of the National Pretreatment Program and the integral role of your local program in achieving these goals. The first section of this chapter briefly describes the National Pretreatment Program. The remainder of the chapter outlines typical pretreatment program elements and discusses this manual's organization.

1.1 THE NATIONAL PRETREATMENT PROGRAM

The goal of the U.S. Environmental Protection Agency's (EPA) National Pretreatment Program is to protect municipal treatment plants (commonly called "POTWs" for "publicly-owned treatment works") and the environment from the adverse impact that may occur when hazardous or toxic wastes are discharged into a sewage system. This protection is achieved mainly by regulating

nondomestic users of POTWs that discharge toxic wastes or unusually strong conventional wastes. There are four major problems that can be prevented through implementation of a local pretreatment program:

(1) Interference with POTW operations. Since municipal treatment systems are designed primarily to treat domestic wastes, the introduction of nondomestic wastes may affect these systems. For example, the bacteria in activated sludge systems or digesters can be inhibited by toxic pollutants. The result is interference with the treatment process, which means that domestic and industrial wastes are discharged essentially untreated into the receiving stream.

(2) Pass-through of pollutants. Even if pollutants do not interfere with the treatment systems, they often pass through POTWs without being removed because the systems are not designed to remove them. In many cases, industries may not be allowed to directly discharge these pollutants into a lake or stream because of potential environmental damage.

(3) Municipal sludge contamination. The removal of certain pollutants by the POTW's treatment system is likely to result in contamination of its sludge. If the sludge is buried in an unsecured landfill, these pollutants may leach and contaminate adjacent surface waters and aquifers. If the sludge is incinerated, these pollutants may be released to the air. If the sludge is applied to agricultural land, crops or pasture grasses may no longer be safe for human or animal consumption. In general, industrial pollutants (especially metals), can limit the POTW's sludge management alternatives and increase the cost of appropriate sludge disposal methods.

(4) Exposure of workers to chemical hazards. When combined with domestic wastes, industrial wastes can produce poisonous gases, such as hydrogen sulfide, which may be hazardous to POTW personnel.

EPA first issued regulations for the National Pretreatment Program on June 26, 1978. The revised regulations (see Appendix C) became final on January 28, 1981, with an effective date of March 30, 1981. The General Pretreatment Regulations for Existing and New Sources of Pollution (40 CFR 403) require that any POTW (or combination of POTWs operated by the same authority) with a design flow greater than 5 million gallons per day (mgd) must establish a pretreatment program as a condition of its National Pollutant Discharge Elimination System (NPDES) permit. POTWs with design flows less than 5 mgd may also be required to establish a pretreatment program if nondomestic waste causes upsets, sludge contamination, or violations of NPDES permit conditions,

or if their industrial users are subject to national pretreatment standards (described below). EPA estimates that about 1,700 of the nation's 14,000 POTWs must develop programs. The remaining municipal treatment plants are not believed to be receiving industrial wastes of concern at this time and will probably not be required to develop pretreatment programs unless local circumstances regarding industrial users of their system change.

The General Pretreatment Regulations establish prohibited discharge standards and categorical pretreatment standards to control pollutant discharges into treatment plants. Prohibited discharge standards apply to all industrial and commercial establishments connected to POTWs. Categorical pretreatment standards apply to industrial and commercial discharges in 25 specific industrial categories determined to be the most significant sources of toxic pollutants.*

Prohibited discharge standards protect the POTW's plant and operations by prohibiting the discharge of pollutants that:

- Create a fire or explosion hazard in the sewers or treatment works
- Are corrosive (with a pH lower than 5.0)
- Obstruct flow in the sewer system or interfere with operation
- Upset the treatment processes or cause a violation of the POTW's permit
- Increase the temperature of wastewater entering the treatment plant to above 104°F (40°C).

---

*Originally, there were 34 categorical industries; however, to date nine categories have been exempted. Two industrial categories--organic chemicals, and plastics and synthetic fibers--were combined to form a single industrial class. In addition, the mechanical products category was incorporated into the metal-finishing industry group. A new industrial category, nonferrous metals forming, was recently added to the list of categories pending regulation under categorical standards.

Each categorical pretreatment standard is published by EPA as a separate regulation. The standard contains limits for pollutants commonly discharged by the specific industrial category. All firms regulated by a particular category are required to comply with these standards, no matter where they are located in the country. Table 1.1 lists the 25 industries and the status of the standard regulating that industry. One hundred and twenty-six toxic pollutants are being considered for regulation in the 25 categorical standards. Appendix D lists these pollutants, the generally accepted detection limits for each pollutant, and the regulated and exempted industrial categories.

Municipalities will use these national standards, as well as locally developed regulations, to control nondomestic users discharging to their wastewater collection and treatment systems. A local pretreatment program is the legal, technical, and administrative framework for achieving effective control of such dischargers. States participate in the National Pretreatment Program because the Federal pretreatment regulations require all States that administer NPDES programs to develop and administer State pretreatment programs. States with approved programs have the responsibility of overseeing and coordinating the development of local pretreatment programs, and approving or disapproving local pretreatment program submissions. If a State does not administer a pretreatment or NPDES program, then EPA is the Approval Authority for local pretreatment programs. However, many States participate in some pretreatment activities even before their State program is approved. By contacting your State pretreatment office, you can determine whether the State or EPA will review and approve your program.

1.2 ELEMENTS OF A PRETREATMENT PROGRAM

The development and implementation of a pretreatment program usually becomes a condition of your treatment plant's existing NPDES permit when the permit is reissued or revised. A compliance schedule is attached to the permit requiring the submission of certain elements of the pretreatment program by prescribed dates. A typical compliance schedule is shown in Appendix E. Each EPA Region has specific interim submission deadlines which all POTWs in

TABLE 1.1
INDUSTRIES SUBJECT TO CATEGORICAL PRETREATMENT STANDARDS

FINAL REGULATIONS

Industry Category	Date Issued In Federal Register	Page Number	Effective Date
Timber Products	1-26-81	8260	3-30-81
Electroplating[1]	1-28-81	9462	3-30-81
Iron & Steel	5-27-82	23258	7-10-82
Inorganic Chemicals (Phase I)	6-29-82	28260	8-12-82
Textile Mills	9-02-82	38810	10-18-82
Coal Mining[2]	10-13-82	45382	11-26-82
Petroleum Refining	10-18-82	46434	12-01-82
Pulp & Paper Mills	11-18-82	52006	1-03-83
Steam Electric Power Plants	11-19-82	52290	1-02-83
Leather Tanning & Finishing	11-23-82	52848	1-06-83
Porcelain Enameling	11-24-82	53172	1-07-83
Coil Coating	12-01-82	54232	1-17-83
Ore Mining[2]	12-03-82	54598	1-17-83
Electrical & Electronic Components (Phase I)	4-08-83	15382	5-19-83
Metal Finishing	7-15-83	32462	8-29-83
Copper Forming	8-15-83	36942	9-26-83
Aluminum Forming	10-24-83	49126	12-07-83
Pharmaceuticals	10-27-83	49808	12-12-83
Coil Coating (Canmaking)	11-17-83	52380	1-02-84

PROPOSED REGULATIONS

Battery Manufacturing	11-10-82	51052	
Metal Molding & Casting (Foundries)	11-15-82	51512	
Pesticides	11-30-82	53994	
Nonferrous Metals (Phase I)	2-17-83	7032	
Electrical & Electronic Components (Phase II)	3-09-83	10012	
Organic Chemicals and Plastics and Synthetic Fibers	3-21-83	11828	
Inorganic Chemicals (Phase II)	10-25-83	49408	

PENDING REGULATIONS

Nonferrous Metals (Phase II)
Plastics Processing
Nonferrous Metals Forming

[1]Existing job shop electroplaters and independent printed circuit board manufacturers must comply with only the electroplating regulations. All other electroplating subcategories are now covered by both the electroplating and metal finishing standards.

[2]These two industries, to EPA's knowledge, contain only direct dischargers (i.e., they do not discharge to POTWs) and thus no pretreatment standards have been developed.

that Region must meet. This procedures manual will assist you in developing any interim program elements or your final program submission.

A local program includes the following six general elements. These elements parallel the pretreatment compliance schedule activities specified in most POTWs' NPDES permits.

(1) Industrial Waste Survey - The POTW must identify and evaluate the nondomestic discharges to its treatment system.

(2) Legal Authority - The POTW must operate under a legal authority that will enable it to apply and enforce the requirements of the General Pretreatment Regulations and any other State or local rules needed to control nondomestic discharges.

(3) Technical Elements/Local Limits - The POTW must characterize discharges to its treatment system and establish local effluent limits to protect the operation of its treatment plant, the quality of its receiving water, and the quality of its sludge.

(4) Compliance Monitoring - The POTW must develop procedures for monitoring its industrial users to determine compliance and noncompliance.

(5) Procedures - The POTW must develop administrative procedures to implement its pretreatment program.

(6) Resources - The POTW must have sufficient resources (funds, equipment, and personnel) to operate an effective and ongoing program.

1.3 ORGANIZATION OF THIS MANUAL

This manual is designed as a set of procedures to be followed in the development of your pretreatment program. Chapter 2 outlines the steps involved in an industrial waste survey. The survey is usually the first activity required in most POTW compliance schedules, and is the technical basis for the rest of the program. Chapter 3 presents the necessary legal authorities for a pretreatment program. Establishing these authorities is the next major step in developing a pretreatment program. Chapter 4 discusses the technical information required for pretreatment program development. Chapter 5 details compliance monitoring procedures, and Chapter 6 covers administrative procedures. Chapter 7 provides information concerning the resources necessary to

implement a pretreatment program, including organization, staffing, equipment, and funding. Chapter 8 describes the approval process and indicates your responsibilities after the pretreatment program is approved.

Each chapter of this manual summarizes the relevant regulations, discusses how to develop and present the required information, and outlines what to include in the request for approval submission. In addition, several worksheets have been provided to aid in program development. Within the text of the chapters, these worksheets have been filled in with examples to demonstrate their use. Appendix F contains blank worksheets for your use.

Every element in your program submission should be thoroughly documented, and this documentation should be included in the program submission to the Approval Authority (either the State or EPA). Without thorough documentation, the Approval Authority reviewing your program cannot determine the adequacy and effectiveness of the proposed local program. Your submission should describe a viable and effective pollution control program that serves to protect your treatment system, receiving water, and sludge, and therefore, to protect public health and the environment.

To assist you in preparing your submission and to ensure that all of the necessary program elements are included, Appendix G contains a checklist that addresses required and recommended program components. This checklist, or one similar to this, is frequently used by EPA Regional Offices and delegated States in conducting their review of a POTW program.

2. INDUSTRIAL WASTE SURVEY

Section 403.8(f)(2) of the General Pretreatment Regulations requires a POTW to identify and locate all possible industrial users subject to the pretreatment program, and to identify the volume and character of pollutants discharged by these users. The Industrial Waste Survey (IWS) is commonly used to obtain this information. The information gathered during the IWS is essential in developing your pretreatment program because it provides the basis for most other activities. By identifying these industries and what they discharge, you can logically identify sources of known (or suspected) treatment plant problems, develop local limits for problem dischargers, determine sampling and analysis needs (both at the industries and in the treatment plant itself), and estimate manpower and equipment needs. Four major activities comprise the IWS:

(1) Compiling a master list of potential industrial users located in the POTW service area

(2) Surveying each of these industries to collect the necessary information

(3) Conducting follow-up activities, where needed, to obtain complete and accurate information

(4) Summarizing the data for use in developing the pretreatment program.

Each of these activities is discussed in detail below.

2.1 COMPILE A MASTER LIST OF INDUSTRIAL USERS

The first step in conducting an IWS is to develop a master list of all industries (commonly called industrial users or IUs) in your POTW's service area that discharge to the treatment system. To identify these potential industrial users (including those in neighboring jurisdictions where appropriate) and to obtain their mailing addresses, you may want to consult the following sources:

- Existing sewer authority files

- Water use and billing records
- Utility company records
- Sewer connection permits
- Business license records
- Chamber of Commerce rosters
- Local telephone directory
- Property tax records
- City and State industrial directories
- Other standard listings of industrial firms.

Lists of industrial users from the first four sources are usually very complete and may be the best places to start in compiling a master list. If these listings are not available, the other sources indicated above may be consulted to develop the master list.

2.2 SURVEY INDUSTRIAL USERS

Once the master list has been compiled, the next step is to gather data from each IU. This information may be gathered by using questionnaires or telephone calls, or by visiting IUs. Some information may already be on file at the POTW. If your POTW is small (typically 7 or 8 mgd or less) and has very few industries (typically less than 10), you may visit or call to survey these industries. A POTW may also sponsor a workshop to distribute and explain survey questionnaires to its IUs. Questions about the survey or the local pretreatment program can be answered at this time.

POTWs with current industrial information may find it feasible to eliminate particular industries or groups of industries from survey efforts if the industry is:

- A manufacturing operation which does not generate wastewater (dry manufacturing process)
- A direct discharger
- A discharger of sanitary wastewater only.

If your master list of potential industrial users includes theaters, beauty shops, barber shops, or retail sales firms, such businesses can usually be eliminated prior to contacting the firms. These businesses can be eliminated because their discharges typically do not contain the volume or type of significant pollutants that concern the POTW.

Other listings may be classified as industries but are actually offices or warehouses, with no nondomestic wastewaters discharged. Thus, they also may be eliminated from the master list. Hotels, motels, restaurants, and gas stations may be removed as well if they do not contribute to problems in the collection system or the treatment plant involving oil and grease or other discharged substances. You should have reliable or verifiable information in order to eliminate any industry from the list. In addition, criteria for eliminating the industry from this list should be valid, and should be documented in your pretreatment program submission.

Regardless of how you decide to conduct the survey, the following information, at a minimum, should be requested from those industries that are contacted:

- Name of industry
- Address of facility
- Standard Industrial Classification (SIC) code(s) or expected classification
- Wastewater flow (if unknown, may use water consumption rate)
- Types and concentrations (or mass) of pollutants contained in discharge
- Major products manufactured or services supplied if pollutant constituents in discharge are not known
- Description of existing on-site pretreatment facilities and practices.

Although these data are sufficient for developing the pretreatment program, you may consider requesting the following information to better evaluate your industrial dischargers:

- Locations of discharge points

- Raw materials used or stored at the site
- Flow diagram or sewer map for the industry
- Number of employees
- Operation and production schedules
- Spill Prevention Control and Countermeasures (SPCC) plan description.

If the POTW already has portions of the necessary survey information in its files, then the survey need only request the outstanding portions of information. Generally, if the information was collected within the last three years, you may consider it up-to-date. However, this guideline should be followed only if POTW personnel can be relatively sure that the IUs in question have not significantly changed their operations during the period.

Most POTWs use questionnaires to gather the required information. You should develop questionnaires that are easy to read and understand. The questionnaire should require the signature of an official authorized to sign for the company, as well as the name of a company representative who can be contacted to arrange site visits for inspection and monitoring. A sample questionnaire is provided in Appendix H. This questionnaire uses a two-stage approach. If the company does not generate certain wastes (specified in Question A.8 of the questionnaire), then it need not complete the entire questionnaire. Also note that the questionnaire can serve as a wastewater discharge permit for the IU if the POTW chooses to use permits as a control mechanism.

A letter should accompany the questionnaire explaining the purposes of a local pretreatment program and describing how survey data will be used. It should also state the deadline for completing the form and returning it. Approximately two to three weeks should be sufficient time. The name and telephone number of a municipal official who can be contacted if the industries have questions about the survey should be included in the letter. To increase the initial response rate, you might include a stamped, self-addressed envelope for returning the completed questionnaire.

2.3 CONDUCT FOLLOW-UP ACTIVITIES

As industrial waste survey responses are gathered, they should be reviewed for completeness and accuracy. To determine which firms have not responded to the survey, you should develop a method to track firms that return a properly completed questionnaire and firms that do not respond. For firms that do not respond by the deadline, the POTW should undertake follow-up activities, such as letters of reminder, telephone calls, or site visits. A maximum of approximately six to eight weeks from the initial survey mailout date should be sufficient time to conduct follow-up activities. The amount of time you will need for follow-up activities will vary according to the number of firms which you are surveying. Your program submission should describe the follow-up measures used and list any IUs that ultimately did not submit a completed form.

2.4 SUMMARIZE SURVEY RESULTS

Your next step will be to summarize the type and number of local IUs and the types and quantities of specific pollutants, particularly toxic pollutants, entering the treatment plant system. This summary is the best way to interpret industrial data and begin to determine IU sampling and monitoring schedules, as well as specific local effluent limits.

Tables 2.1, 2.2, and 2.3 are presented here as sample worksheets for summarizing data. Table 2.1 provides a format to list industries surveyed by the POTW. Check marks can be used to complete the form where appropriate. Where further explanation is necessary for clarification, you can simply attach additional pages. Table 2.2 can be used to list those industries eliminated from survey efforts and the reason for their elimination. The combined lists of industries in Tables 2.1 and 2.2 should represent your master list of industrial users; thus, a separate master list would not be required in your submission.

Table 2.3 can be used to summarize information specifically related to the quantity and quality of waste discharged by the IUs. It can also be valuable if you operate more than one treatment plant and/or service other jurisdictions with your plant. The list should include only those firms that

TABLE 2.1

INDUSTRIAL WASTE SURVEY RESULTS

Company Name	Company Address	SIC Code	No Discharge to POTW	Domestic Wastewater Only (Noncontact Cooling, Boiler/Tower Blowdown)	Pollutants In Nondomestic Wastewater 126 Priority Pollutants	Prohibited Pollutants	Did Not Respond
ABC Metal Prods.	111 2nd Ave.	3471		X			
Allen Co.	2 Fisk Pl.	3471			(Follow-up visit scheduled)		X
Anderson, Inc.	15 S. 9th St.	3351	X				
Boyd & Sons	3 Boyd Pl.	3471			X		
Cobol Enterpises	21 Main St.	3353		X			
D & D Leather, Inc.	622 Broadway	3111			X		

TABLE 2.2

INDUSTRIES ELIMINATED FROM FURTHER SURVEY EFFORTS

	Company Name	Company Address	Company Contact	Telephone Number
1.	ABC Metal Products	111 2nd Ave.	Joe Green, Manager	222-1111
	Reason Eliminated: Domestic discharge only, no process water discharged to sewer, inspected 5/3/83			
2.	Anderson, Inc.	15 S. 9th St.	John Anderson, Pres.	222-1234
	Reason Eliminated: Direct discharger, NPDES #222105, inspected 4/19/83			
3.	Cobol Enterprises	21 Main St.	Al Johnson, Manager	222-2211
	Reason Eliminated: Branch sales office, domestic sewage only, inspected 4/21/83			
4.				
	Reason Eliminated:			
5.				
	Reason Eliminated:			
6.				
	Reason Eliminated:			

Note: The reason for eliminating each of these industrial users from further survey efforts must be shown. If groups of industrial users were all eliminated for the same or similar reasons, these can be listed together and a single explanation provided.

TABLE 2.3

INDUSTRIAL USERS DISCHARGING NONDOMESTIC WASTE

Company Name	SIC Code/ Industrial Category	Average Flow (gpd)	Pollutants Known or Suspected Present in Nondomestic Wastestream	Average Pollutant Concentrations, if known	Is Pretreatment of Nondomestic Wastestream Provided?	Treatment Plant	Jurisdiction
Allen Co.	3471	Site visit scheduled to attain information 5/19/83				Seatown #1	Seatown
Boyd & Sons	3471	13,000	Al Cr^{+6} Cr total CN amenable CN total Cu Ni Zn	0.3(mg/l) 0.04 0.5 0.1 0.2 0.2 0.07 0.05	Yes	Seatown #1	Seatown
D&D Leather, Inc.	3111	6,000	Cr^{+6}, Cr^{+3}, Sulfides not available		Yes	Seatown #1	Seatown

discharge nondomestic industrial wastewater to the POTW. Data from the table can be organized in several formats:

- By SIC categories
- By specific pollutants entering the POTW system
- By POTW system.

The example in Table 2.3 illustrates grouping by SIC code. Depending on the format selected, the table can be used to identify industries subject to categorical standards, pollutants subject to local discharge limitations, or the treatment plant to which an industrial user discharges. To assist you in compiling these data, Appendix D presents the priority pollutants commonly found in the discharges of categorical industries, the SIC codes for industries affected by categorical standards, and a listing of generally accepted detection limits for the analysis of the priority pollutants.

2.4.1 Industrial Classification Scheme

At this stage of your pretreatment program development, it may be helpful to group IUs according to a classification scheme. A classification scheme is not required for the submission, but can be very useful for establishing monitoring, permitting, and administrative procedures. IUs can be classified by factors such as type of industry, flow rate, and the character of their waste. One suggested classification scheme involves a permit system and divides industries into the following three groups:

- Group 1: Major or significant industries, defined as any industry that:
  - Is subject to categorical standards
  - Discharges a nondomestic wastestream of 25,000 gallons per day (0.025 mgd) or more
  - Contributes a nondomestic wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic (BOD, TSS, etc.) capacity of the treatment plant
  - Has a reasonable potential, in the opinion of the POTW Supervisor, to adversely affect the POTW treatment plant (inhibition, pass-through of pollutants, sludge contamination, or endangerment of POTW workers).

These industries would be regulated individually and have specific effluent limitations (including conventional pollutants, where necessary) placed on their discharges. They should also be monitored and inspected periodically to ensure compliance with their limitations.

- Group 2: Minor IUs, defined as small industries and some commercial users (restaurants, auto repair shops, etc.) whose individual discharges do not significantly impact the treatment system, degrade receiving water quality, or contaminate sludge. Industries that have the potential to discharge a nondomestic or process wastestream, but at the present time discharge only sanitary waste, may also be included in this group. However, this group does not contain any categorical industries. Industries in this classification may be included in a general permit system and occasionally monitored and inspected to determine if their status has changed. If wastestreams from any of these users or a group of these IUs becomes a problem, the POTW may require a general permit for all IUs in that group or may wish to change their classification to a significant or major IU.

- Group 3: Insignificant IUs, defined as those that have been eliminated from further consideration. These include industries that do not discharge to the POTW, or do not have any reasonable chance of discharging a nondomestic wastestream to the POTW.

2.4.2 Industrial Waste Survey Data Management

In conducting the IWS, a POTW (especially a large one with many industrial users) may generate a great quantity of data that must be summarized and readily accessible. To manage this information, you will need to establish a data management system, either by developing a new filing system, expanding your current filing system, or using a computerized management information system. For large POTWs, a computer may be the most accurate means to maintain and update IU information because of the varied capabilities it offers, such as:

- Accepting IWS data
- Printing labels for mailing out questionnaires, notices, etc.
- Tracking the status of each mailed questionnaire
- Storing survey responses in an accessible manner
- Providing aggregate data statistics
- Incorporating data from future monitoring programs.

Chapter 6 of this manual also discusses data management needs you might encounter as you develop the pretreatment program.

2.5 IWS INFORMATION FOR THE PROGRAM SUBMISSION

To adequately document the IWS and assist the Approval Authority in reviewing your program, the submission should include the following:

- Sources used to compile a comprehensive (master) list of IUs
- Methods used for the survey (questionnaire, site visit, telephone, etc.)
- A copy of the questionnaire and the letter sent to the industries including dates the forms were sent (if questionnaire was used)
- A description of follow-up actions taken by the POTW to obtain properly completed survey forms from IUs, and the response rate for the entire survey (including industries that did not return completed survey forms despite follow-up actions)
- A master list of all industries discharging to the treatment plant that:
  - Indicates which industries were eliminated from the survey and the criteria used to eliminate them
  - Summarizes IWS results including a list of IUs affected by the program, a classification of these users (either by SIC code, industrial category, or other appropriate scheme), and a list of pollutants known or suspected to be discharged from each IU. Where available, information on the concentrations of these pollutants should also be presented.

  These two items can appear either separately or together (as a master list).

7. PROGRAM ORGANIZATION, COSTS, AND REVENUE SOURCES

The ability to develop and implement a successful pretreatment program depends on a number of factors. The importance of legal authority, sound technical information, and proper procedures has already been discussed. This chapter focuses on needed resources and the organization to apply them efficiently and effectively. Section 403.8(f)(3) requires that your POTW has "sufficient" resources and qualified personnel to implement program authorities and procedures. To implement properly a pretreatment program, your POTW must have:

- A workable organization to integrate elements of the program
- A staff of appropriate size and training to carry out program requirements
- The necessary equipment and supplies to fulfill monitoring and other program needs
- Adequate funds to support the program.

The above elements are closely interrelated and will be based primarily on such considerations as the number and type of IUs to be monitored, the frequency and type of monitoring, and compliance procedures to be followed. All of the above elements should be present to enable your program to be successful.

7.1 ORGANIZATION AND STAFFING

Organization and staffing requirements will vary according to the complexity and comprehensiveness of your local program. Whether the staff is large or small, it should be organized in a way that facilitates the successful execution of program responsibilities. The adequacy of the program's organization and staffing is based not only on whether essential functions are covered, but also on whether the level-of-effort and type of staff proposed are appropriate to implement the requirements of the program.

7.1.1 Organization Chart

The organizational structure of your pretreatment program should be designed to accomplish your goals. The key is to tailor the structure to your specific situation so that it is practical and workable. In the submission, you must include an organization chart which explains how the pretreatment program is organized. The titles, brief job descriptions, and level-of-effort for employees responsible for the following activities may be included on the organization chart:

- Sampling and inspection
- Laboratory analysis
- Technical assistance
- Legal assistance
- Program administration.

An example organization chart is shown in Figure 7.1. This type of chart can be adapted for your pretreatment program submission.

7.1.2 Considerations in Staffing and Organizing the Pretreatment Program

You will need to consider the following items in staffing and organizing your pretreatment program:

- Clear and appropriate lines of authority
- Coordination with other departments
- Identification of staff responsibilities
- Qualifications of staff
- Staffing levels related to required work effort.

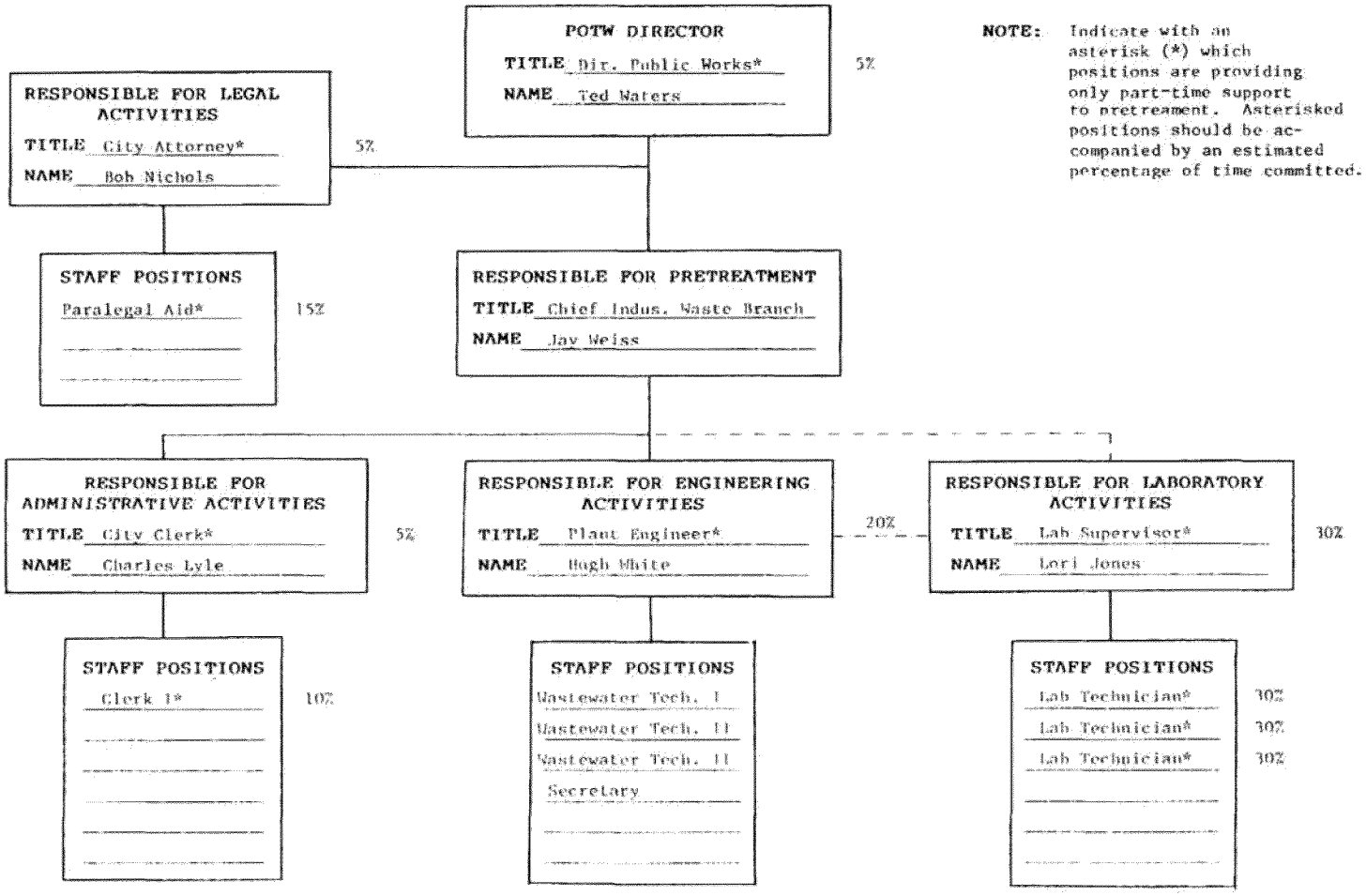
Each of these aspects is discussed below.

7.1.2.1 Lines of Authority

Your pretreatment program should be clearly and appropriately structured. The following suggestions for designing your organization will contribute to an effective pretreatment program:

- Designate clearly all authorities and responsibilities

FIGURE 7.1 WORKSHEET FOR DEVELOPING AN ORGANIZATION PLAN



- Avoid unwieldy, fragmented structures
- Ensure that supervisors do not have direct responsibility for too many employees, usually no more than six or eight staff members
- Ensure that the pretreatment program is effectively integrated with other POTW activities.

7.1.2.2 Coordination with Other Departments

It is important to promote interaction between groups within the pretreatment program and other POTW departments in order to facilitate the program's smooth operation. You may find it useful as you prepare the program to develop a flow chart for routine program operations. For example, the chart would show who receives and reviews self-monitoring reports, what happens when the reports are acceptable, and what happens when they indicate violations. This chart could show the interaction between an engineer reviewing the reports, the pretreatment program administrator notifying an industry of noncompliance, and the POTW legal staff taking enforcement action against a violating industry.

7.1.2.3 Identification of Staff Responsibilities

You should also explain the duties and responsibilities of each staff member or department depicted in the organization chart in your submission. The following functional areas should be addressed in your submission:

- Technical assistance. A staff member or department should be assigned the responsibility of evaluating data that IUs supply on their IWS forms, self-monitoring reports, and compliance schedule reports. This person or department also should have responsibility for reviewing results of POTW monitoring and sample analyses and for industrial inspections.
- Industrial monitoring. The submission should designate a staff member or department with responsibility for staffing and supervising field monitoring personnel. It should also specify the number and qualifications of personnel who will be assigned to the field monitoring crew(s).
- Laboratory analysis. As indicated earlier, a POTW may either perform its own sample analyses or contract with a commercial laboratory for analytical services. If the work is to be done in-house, laboratory support staff must be identified.

- Legal assistance. The person(s) providing legal assistance to the municipality will interpret regulations and other legal documents that affect pretreatment program operations and prepare contracts or other agreements. This person also will initiate formal legal actions against violators, including injunctive relief when necessary.

- Administration. The program administrator and administrative staff should have responsibility for data management, communication with IUs, program finances and accounting, personnel, and the public participation program.

A small POTW may have the same person performing the duties associated with one or more of these five general work areas, while a large POTW may have several people assigned to each functional group. In addition, a large POTW may wish to separate functions that are grouped together under administration. Responsibility for some of the work areas may be assigned to contractors or other local agencies, but all areas of work and corresponding staff should be identified in the submission.

7.1.2.4 Staff Qualifications

Your program submission should also describe the qualifications of persons that currently fill or will be hired to fill key positions in the work areas identified above. Education and experience should be appropriate for the tasks that the person will be expected to perform. The pretreatment program is likely to require support from personnel with experience in engineering (environmental, civil, sanitary, or chemical), chemistry, public administration, accounting and finance, and law.

7.1.2.5 Staffing Levels

In general, the size of your treatment system and the number of IUs regulated under your program will dictate the level of effort required to operate the pretreatment program. Small POTWs with few IUs may be able to implement a pretreatment program satisfactorily using only one or two person-years of effort. Large POTWs with many IUs will need a much larger pretreatment staff, depending on the number of samples and measurements to be obtained, the frequency of monitoring, and the number and complexity of analyses to be performed. POTW staff requirements will also depend on the amount of work to be performed by outside personnel (e.g., contract support).

You should develop and include in the submission a quantitative estimate of the level of effort, including outside support, for each staff position and/or function. Such estimates should be in the form of labor hours per year, person-years, or percent involvement of a person in pretreatment program activities. Table 7.1 indicates some of the factors affecting level-of-effort requirements for your pretreatment program. Generalized estimates of personnel requirements as a function of POTW size and number of industrial users are shown in Table 7.2. They are based on experience with successful programs. More refined and detailed personnel estimates for program development and program operation for a POTW with 10 industrial users and a flow of 5 mgd are shown in Table 7.3. Although these figures should not be treated as rigid requirements, they can be used to gauge the adequacy of staffing levels for individual functions.

7.2 PROGRAM COSTS AND FUNDING MECHANISMS

Your submission must include an estimate of the operating costs of your pretreatment program. It must then demonstrate that your POTW has sufficient revenues to recover those costs. You can demonstrate that the POTW has developed a mechanism to fund the program either by describing the cost recovery method proposed, or, if the program costs are to be covered by general revenues, by including the budget request which specifically delineates the estimated cost of pretreatment. Funding mechanisms are discussed in detail in Section 7.2.2.

7.2.1 Estimating Program Costs

It is essential that your POTW accurately estimates program operating costs in order to ensure proper implementation of the program. It is also important that the local officials endorsing your pretreatment program be aware of the costs required to operate the program. Costs should be estimated for the following program elements:

- Procurement, operation, and maintenance of necessary sampling and analytical equipment
- Sampling and monitoring of IUs and POTW system

TABLE 7.1

FACTORS AFFECTING POTW LEVELS OF EFFORT FOR
PRETREATMENT PROGRAM OPERATING TASKS

Activities	Factors
Sampling and Inspection	-Total number of IUs -Frequency of sampling
Laboratory Analysis	-Number of samples -Type of analysis -Pollutants analyzed (i.e., toxics, conventionals, metals, etc.)
Technical Assistance (including permitting process and report review)	-Treatment plant capabilities -POTW influent and effluent characteristics -Total number of IUs -Number of IUs with pretreatment
Legal Assistance	-Number and seriousness of violations -Availability of in-house counsel -Burden of proof created by ordinance
Financial/ Administrative	-Total number of IUs -Frequency of monitoring -Size of service area

TABLE 7.2

POTW PRETREATMENT PROGRAM
PERSONNEL REQUIREMENT RANGES

Ranges presented in this table are estimates based on anticipated averages for typical programs. Individual program personnel requirements may vary significantly from the ranges shown here.

POTW Flow Range (MGD)	Relative Number of Indirect Dischargers	Range of Personnel Requirements for Pretreatment Program
5	small	1-3
	large	2-5
5-25	small	2-4
	large	4-8
25-50	small	4-6
	large	8-10
50	small	6-8
	large	10-15
100	large	15-50*

*Special cases, such as large metropolitan systems, require more in-depth review.

Source: Local Pretreatment Program Requirements and Guidance. Environmental Technology Consultants, Inc.: September 1979.

TABLE 7.3

ESTIMATED POTW PERSONNEL REQUIREMENTS FOR A POTW PRETREATMENT PROGRAM BY PROGRAM ACTIVITY

Estimates presented in this table are based on anticipated averages for typical programs. Individual program personnel requirements may vary significantly from the estimates shown here.

POTW AVERAGE DESIGN FLOW: 5 MGD
NUMBER OF INDUSTRIAL USERS IN PROGRAM: 10

	Program Activity	Frequency of Activity per POTW or IU	Number of Activities	Workdays per Activity	Total Workdays
	Program Development				
1.	Develop Pretreatment Program	once	1	15-25	25
2.	Conduct Industrial Waste Survey	once[1]	1	15-25	25
3.	Determine POTW Removal Allowance	once[2]	1	10-20	20
4.	Review IU Pretreatment Facility Proposal	once	10	0.5-2	20
		TOTAL WORKDAYS = 90			
		90 ÷ 220 WORKDAYS/PERSON/YEAR = .41 Person-years			
	Program Operation				
1.	Review IU Compliance Schedule Reports	3/year	30	0.5-1	30
2.	Review IU Final Compliance Schedule Report	once	10	0.5-2	20
3.	Review IU Self-Monitoring Report	2/year	20	0.1-0.5	10
4.	Sample IU (spot-check)	1/year	10	2-4	40
5.	Investigate IU Non-compliance	-----	5	1-5	25

TABLE 7.3 (Continued)

ESTIMATED POTW PERSONNEL REQUIREMENTS FOR A POTW PRETREATMENT PROGRAM BY PROGRAM ACTIVITY

Program Activity	Frequency of Activity per POTW or IU	Number of Activities	Workdays per Activity	Total Workdays
6. Administrative Enforcement Action	-----	3	3-10	30
7. Legal Enforcement Actions	-----	1	15-20	20
8. Comply with Public Notice Requirements	1/year	1	1-3	3
9. Sample POTW Influent, Effluent, and Sludge	1/year	1	5-10	10
10. Prepare Self-Monitoring Report for Approval Authority	2/year	2	5-10	20
11. Laboratory Analysis of Required Sampling	1/year	13	1-2	26
		TOTAL WORKDAYS = 234		
		234 ÷ 220 WORKDAYS/PERSON/YEAR = 1.06 Person-years		

[1] IWS is periodically updated during program implementation procedures

[2] Annual monitoring and reporting by the POTW is required during program implementation to maintain any removal credit allowance.

Source: Local Pretreatment Program Requirements and Guidance. Environmental Technology Consultants, Inc.: September 1979.

- Laboratory analysis (both in-house and contract services)
- Technical assistance
- Legal assistance
- Program administration.

Costs for each element should reflect employee salaries, contractor services, debt payments, supplies, and indirect costs.

7.2.1.1 Procurement, Operation, and Maintenance of Sampling and Analytical Equipment

You should decide how you intend to procure the equipment needed to perform required sampling and analyses. Equipment may be purchased or leased, or a contractor may be hired to perform sampling and analytical tasks. The most cost-effective option will be determined by the size of your POTW, the number of industries covered, and the frequency and type of monitoring necessary for each. Smaller municipalities may choose to purchase equipment for sampling and conventional pollutant analysis, and to rely on a commercial laboratory for metals and toxic organics analyses. A larger municipality may choose to purchase all the equipment necessary to have a complete in-house analytical capability. Table 7.4 shows typical equipment needed to sample and analyze toxic pollutants. Table 7.5 shows average fees charged for analysis by commercial laboratories. Note that the figures in Table 7.5 are estimates and are intended for guidance only. Actual costs may vary somewhat from these estimates.

7.2.1.2 Sampling and Monitoring/Laboratory Analysis

If sampling is to be performed by the POTW, the level of effort required will depend on the number and type of IUs in the pretreatment program, the type of monitoring to be conducted (how much will be industrial self-monitoring vs. POTW compliance monitoring), and the revenues available for the POTW monitoring program. Some generalized estimates follow.

- A POTW with few industries (up to 30 IUs) may need only one field inspector and an assistant.

TABLE 7.4

TYPICAL EQUIPMENT FOR A TWO-PERSON FIELD SAMPLING CREW

- Van with two-way radio
- Gas Detector
- 2 self-contained breathing units
- 4 portable samplers with bottles
- Grab sample collection and storage containers
- 1 portable pH meter
- 2 flow meters
- Flumes and weirs
- Coolers and reagents for sample preservation
- Safety equipment
- Miscellaneous tools and equipment

LABORATORY EQUIPMENT FOR SAMPLE ANALYSIS

- Atomic absorption spectrometer (AA)
- Supplies for AA
- Gas chromatograph/ mass spectrometer (GC/MS)
- Accessories and glassware for GC/MS
- Reagents and other chemicals

Source: Odeal, Erwin J. "Economics of Local Pretreatment Program Administration." Proceedings: National Pretreatment Symposium. Duluth, Minnesota: August 22-24, 1979.

TABLE 7.5

TYPICAL COMMERCIAL LABORATORY COSTS[1]

Parameter	Price per Analysis
Conventional Analysis	
Acidity/alkalinity	$ 9
BOD_5	20
COD	20
Chloride	15
Nitrogen (total)	20
Oil & grease	20
Suspended solids	8
Toxics Analysis	
Metals (typical)	$10 - 18/metal
Organics by GC	60/compound
NPDES Analysis (scans)	
Base neutrals	$350
Acid extracts	200
Pesticide/PCBs	225
13 metals	300
Total 126 Compounds	800-1200[2]

[1]Based on 1983 estimated costs from commercial laboratories

[2]Includes $300 for asbestos

- A medium-sized POTW may require the full-time efforts of two two-person sampling teams.
- A large POTW (more than 150 IUs) may require the full-time commitment of at least three two-person field teams.

If sample analysis will be performed in-house, you will also need laboratory support staff. The level of laboratory staff effort and training required will depend on the scope of your sampling and analysis program. Resources will also be needed to maintain and operate the sampling equipment. Debt or lease payments for equipment must also be included in program cost estimates.

7.2.1.3 Technical Assistance

Your pretreatment program also needs technical personnel. A small municipality can meet this requirement if its plant or pretreatment program manager has a strong engineering or wastewater background. Alternatively, an outside consultant can be retained for technical support as needed. A medium-sized municipality may require the part-time efforts of a senior technical specialist and small support staff. Large municipalities are likely to need one or more full-time senior technical specialists and support staff.

7.2.1.4 Legal Assistance

Legal assistance will be required to take legal (as opposed to administrative) enforcement actions, to interpret requirements of new or revised local, State, and Federal regulations, and to prepare ordinances and contracts. Small municipalities will usually be able to rely on the city attorney or outside counsel on an as-needed basis. Medium-sized municipalities can designate a portion of the city attorney's time for pretreatment activities. Large municipalities may require the full-time efforts of one or more attorneys to support their pretreatment programs.

7.2.1.5 Program Administration

Administration of a pretreatment program may require a significant amount of time for data management and recordkeeping and for the preparation, review and submission of pretreatment reports. Public participation activities are

also part of program administration. In a small municipality, the POTW superintendent or other municipal employee, such as the Director of Public Works, usually will be responsible for administering the program with part-time clerical support. Larger municipalities are likely to require a full-time program manager and clerical staff.

As is apparent from the above discussion, labor is the single largest cost element in the continued operation of your program. Table 7.6 provides a worksheet for computing total annual operating expenditures. The numbers used in Table 7.6 are not estimates of actual program costs, but serve only to illustrate the calculations involved in estimating annual operating expenditures.

7.2.2 Financing Sources and Cost Recovery Systems

After you have estimated your pretreatment program operation costs, you must design a financing plan to obtain funds to cover the program's development costs (including additional equipment necessary for implementation) and its annual operating costs. The financing plan should also ensure continued support of the program. Financing options for program development and revenue sources for program operation are outlined in the sections that follow.

7.2.2.1 Sources of Revenue For Program Development and For Obtaining Necessary Program Equipment

The Federal Construction Grants Program, municipal bonds, surplus or reserved funds, and leasing arrangements can be used to finance the development of your pretreatment program or the purchase of equipment needed for the program. Table 7.7 describes these four funding options and provides information to help you determine which option is appropriate for your municipality. Each of these methods is summarized briefly below.

The Construction Grants Program can provide Federal funds for 75 percent of eligible pretreatment program development costs; the remaining 25 percent is funded by your municipality, either through bonds, surplus funds, or user charges (all of these financing options are described later in this chapter).

TABLE 7.6

WORKSHEET FOR CALCULATING
ANNUAL OPERATING COSTS

I. Direct Labor:	Labor hours	Average Hourly Rate	Annual Program Cost
Management	2290	12.00	$ 27,500
Legal	160	15.63	$ 2,500
Engineering	416	14.42	$ 6,000
Laboratory	1872	11.58	$ 20,700
Field inspection/sampling	6240	7.69	$ 48,000
Clerical	1248	9.17	$ 11,450
		Subtotal	$ 116,150

II. Other Direct Costs	Amount
Vehicle operation	$5,000
Laboratory equipment/supplies	8,000
Sampling and laboratory equipment operating & maintenance	1,200
Miscellaneous	
- commercial laboratory	
- contractor services	
- debt service repayment	
	Subtotal $ 14,200

III. Indirect Costs (May include overhead and general and administrative expenses)	42% of direct labor cost	$ 48,783
	Subtotal	$ 48,783

TOTAL ANNUAL OPERATING EXPENDITURES $ 179,133

TABLE 7.7

PRETREATMENT PROGRAM FINANCING OPTIONS

Funding Mechanism	Description	Procedures Required	Considerations Affecting Use
I. Construction Grants	Federal government will pay up to 75 percent of program development costs.	Prepare plan of study and submit to State and EPA.	Availability of Federal funds major factor.
II. Municipal Bonds			
A. General Obligation Bond	Payment guaranteed by general taxing power of community.	Voter referendum and underwriting procedures.	Debt limitations often restrict repayment through general public funds. Complicates application of user charges.
B. Revenue Bond	Payment guaranteed by revenues generated from POTW.	Underwriting and issuing procedures.	Independence of issuance afforded since voter referendum not required. Appropriate for payment through user charges.
C. Small Denomination Bond	Smaller face values than traditional bonds. Sold directly to public.	Municipality must: • Set interest rate • Obtain rating for bond • Design bond (denomination, method of interest payments, form of ownership, and maturity).	Direct sale to public may result in lower interest rates. Appropriate for modest sized investments. Smaller values more accessible to markets. Municipality has greater underwriting responsibilities since underwriter not involved.

TABLE 7.7 (Continued)

PRETREATMENT PROGRAM FINANCING OPTIONS

Funding Mechanism	Description	Procedures Required	Considerations Affecting Use
III. Surplus or Reserve Revenues	Excess revenues generated from operations; may be planned or incidental.	Detailed financial analysis required to plan appropriate amount of reserves to generate.	Avoids surge in user fees. Appropriate for operating contingencies and equipment replacement.
IV. Leasing	Rental of equipment for use. Lease-purchase agreements possible.	Minimal procedures involved, will vary depending on agreement.	Financial obligation on annual basis only. Less influenced by long-term leverage budget restrictions. Suitable for modest capital requirements. Possibility of greater overall expense.

Pretreatment costs fundable under the Construction Grants Program include:

- Industrial waste survey
- Legal authority review
- Evaluation and selection of appropriate revenue source
- Technical information determination
- Design of monitoring program
- Public participation meetings.

The purchase of POTW monitoring and analysis equipment may also be eligible for Federal assistance; the determination of allowable costs is spelled out in Appendix A of 40 CFR 35, Subpart I.

The first step in obtaining Federal funds for pretreatment program development is to prepare a "plan of study." This plan consists of a general description of the POTW and community, an explanation of planned development activities, a schedule for conducting these activities, and an estimate of the level of effort to accomplish these activities. The plan of study is submitted to both your state water pollution control agency and the Regional EPA office for their review.

It must be emphasized that only program development costs are grant-eligible. Once your program is operating, the actual costs of maintaining it are your responsibility. If you receive a construction grant, the Clean Water Act requires that you establish and maintain a user charge system. The next section of this chapter discusses various user charge systems.

Municipal bonds are another possible revenue source. Three types of municipal bonds are available: (1) general obligation bonds, (2) revenue bonds, and (3) small denomination bonds. General obligation bonds generally require a voter referendum and are secured by the taxing power of the community. Revenue bonds are commonly used by municipalities to finance projects such as the expansion of sewage treatment plants and are appropriate for projects that have revenue-earning potential from user charges. Revenue bonds may be preferred to general obligation bonds because an election is not

required to issue revenue bonds. These bonds do pose disadvantages, however, because they are typically issued in denominations of over $1 million for long periods of time, and your pretreatment program financing needs may be significantly less. Therefore, it may not be appropriate to issue a revenue bond solely for recovering pretreatment costs. Instead, you might consider including pretreatment program costs within a bond designed to finance treatment plant expansion or new sewer system development.

Another alternative to revenue bonds is a relatively new type of bond--the small denomination or mini-bond. This type of bond may be advantageous for financing pretreatment since it can be issued in amounts less than $1 million. It is sold to investors in small denominations and is accessible to local citizens. In addition, there is no need for underwriting, which often presents a complication. Mini-bonds are generally secured by the POTW's own revenues, not the municipality's revenues. Thus, the POTW can fund its pretreatment program without being limited by the municipality's financial situation. If your municipality is interested in issuing bonds to fund the purchase of equipment, your municipal treasurer, department of finance, or other appropriate office can provide more information, and will probably have a key role in the decision-making process.

Surplus or reserved funds may also be used to finance the purchase or replacement of needed equipment. Surplus revenues result from either a planned activity, such as generating additional revenue from user fees, or from an unexpected reduction in operating expenditures. These revenues are important to your POTW because they serve as a buffer to cover a variety of unanticipated or "non-routine" costs. Keep in mind that a revenue surplus may be viewed by users of a facility as overcharging for services by the POTW. However, it is good planning to accumulate some surplus to cover unforeseen costs.

Equipment leasing is a third alternative for obtaining necessary equipment. Equipment can be obtained through a straight-operating lease or through a lease-purchase agreement under which your POTW will eventually own the equipment. Leasing may be a suitable alternative for your POTW because leases

are not subject to legally established debt limits. Leases are appropriate for financing capital needs which are too small to be considered for bond financing and yet too large to be funded from current revenues.

7.2.2.2 Sources of Revenue For Recovering Operating Costs

Several sources of revenue, including general municipal taxes (i.e., ad valorem taxes), special assessments and fees, and user charges can be used to recover the operating costs of your pretreatment program. In choosing the cost recovery method most suitable for your municipality, it may be desirable that the majority of the pretreatment program's cost be paid by the POTW's industrial users.

The ad valorem tax can be used to recover equitably the cost of pretreatment by adjusting the tax rate with certain surcharges and rebates to ensure that each industry's charge represents its respective share of the costs. Special assessments, hook-up fees, and septic tank disposal fees can also be applied to collect revenue from industrial users to offset the program's cost.

The most equitable method for recovering pretreatment costs is a user charge system. User charge systems are widely used for recovering wastewater treatment costs and providing a method for proportionally allocating and recovering a project's costs among the POTW system users. If your POTW already has an established user charge system, the system may be modified to recover the additional cost of program implementation. Such a system can also be developed specifically to fund the pretreatment program.

Developing a user charge system for your pretreatment program requires the following general steps:

- Estimate program costs
- Design a cost allocation scheme
- Allocate the costs proportionately across the user groups designated in the cost allocation scheme
- Calculate the user charge.

The cost allocation scheme you develop will be dependent on the situation in your municipality. However, it is important to re-emphasize that before you can accurately estimate program costs, you must develop a detailed monitoring schedule specifying industrial users to be monitored, parameters to be monitored, and monitoring frequency. A projected monitoring schedule is essential for estimating cost since monitoring expenses represent a very large portion of total program operating costs. Several cost allocation schemes and example user charge models with their advantages and disadvantages are discussed in the following sections.

In all cases, the function of the cost allocation scheme is to allocate costs to appropriate categories of users of the POTW system based on specific criteria. Criteria for cost allocation include such things as number and type of sampling and analysis events performed, and amount and type of pollutant discharged. In this way, users will be charged based on their relative impact on pretreatment program costs.

The following examples explain a few of the allocation schemes employed by municipalities, and illustrate the mechanics and design of particular user charge systems. The descriptions of each system are general and serve only to explain basic concepts. You must tailor the user charge system for your municipality to your specific situation. The three user charge systems described below (the service charge, industry surcharge, and pollutant strength charge) are all particularly well suited to pretreatment cost recovery, although there are numerous other systems which can also be considered. The three models are summarized in Table 7.8.

Service Charge

In a service charge system, industries are charged based on the amount of sampling and analysis performed by the POTW for the particular IU (or group of IUs). It employs a cost allocation scheme in which industries are grouped by the type of sampling and analysis required. The service charge provides an equitable way to recover pretreatment costs because monitoring costs are a significant portion of overall pretreatment program implementation costs.

TABLE 7.8

COST RECOVERY OPTIONS

Funding Mechanism	Description	Procedures Required	Consideration Affecting Use
A. Service Charge	Pretreatment charges based on service used (i.e., monitoring activities).	Need to determine monitoring schedule in order to decide charge rate. End-of-year accounting adjustments required so that charges actually represent expenditures. Continuous record-keeping of individual industry activities.	Projections to calculate charge rate can be complex. Probably most equitable method since service charges closely represent program.
B. Industry Surcharge	Existing user charge by pretreatment factor.	Must determine pretreatment factor based on industry classes and related monitoring activities.	Ease of applying existing charge system. Inequities may result because of averaging effect.
C. Pollutant Strength Charge	Pretreatment charges based on amount of pollutant discharged.	Monitoring data must be coordinated with charge system. Need to determine total amount of pollutants discharged and which pollutants are to be used to assess charges.	Provides positive incentive for industries to reduce pollutant discharges.

The service charge calculations are shown in Table 7.9 and are described below. The industries are divided into groups based on those requiring high cost (i.e., labor or equipment intensive), or low-cost (i.e., grab) sampling procedures, and the types of analyses required (metals, organics, or conventional pollutants). The total program costs are then distributed proportionally to these groups, based on the number of industries which fall into each group and their contribution to the total costs. The total costs for each group is divided next by the frequency of sampling and analysis for that group to obtain the service charge for each individual sampling and analysis event. The total charge for each industry is calculated by multiplying the number of events by the appropriate service charge. For example, using the information from Table 7.9, the charge for an industry requiring two high-level sampling events and metals analysis would be two times (916 + 280) or $2,392/year.

The basic service charge model is:

$$UC_I = S_C S_I + A_C A_I$$

where:

UC_I = Pretreatment monitoring charge for a particular industry
S_C = Cost per sampling activity
S_I = Number of sampling activities for a particular industry
A_C = Cost for laboratory analysis
A_I = Number of analyses required for a particular industry.

Note that these charges are applied in addition to existing user charges. You may distribute the estimated annual service charge for each industry on a monthly basis or may charge the industry for each site visit. The difference between actual and estimated POTW costs should be corrected by charge adjustments at the end of the year.

The service charge is easily implemented since monitoring is a major pretreatment cost and is conducted as a normal, routine implementation function. In a city with few industries, the service charge can be very simple to calculate. If monitoring is contracted out to a commercial firm, the costs may be charged directly to the industry. Conversely, in a city with many

TABLE 7.9 RATE CALCULATION WORKSHEET FOR SERVICE MODEL

Cost Items	Total Cost	Sampling				Analysis					
		High Cost		Low Cost		Conventional		Metals		Toxic Organics	
	$	%	$	%	$	%	$	%	$	%	$
A. Operating Costs											
1. Labor											
Administration/management	30,000		12,600		5,400		6,000		3,000		3,000
Industrial monitoring	48,000		33,600		14,400						
Laboratory analysis	20,700						11,400		9,300		
2. Other Direct Costs	14,200		3,100		1,100		5,500		3,500		1,000
3. Overhead	(42% of Labor)		19,404		8,316		7,308		5,166		1,260
B. Total Annual Cost			68,704		29,216		30,208		20,966		5,260
C. Summary											
Total Annual Cost ÷ Frequency per Year = Service Charge/Sampling or Analysis Event			$916/event*						$280/event*		

*Assuming a total of 75 sampling/analysis events

industries, sampling and analysis equipment may be purchased and these costs, along with labor and O&M, allocated and recovered as in the example service charge model. In developing this type of charge system, you should give special attention to monitoring projections and the sampling and analysis schedules determined for each IU.

Industry Surcharge

With industry class surcharges, a pretreatment surcharge is incorporated into the industry's sewer use charge. Each class (or group) of industries is charged proportionally based on their relative impact on the pretreatment program costs. This is accomplished by calculating a surcharge factor which is applied to the IU's base sewer use charge. Table 7.10 illustrates the process.

In the example, the total pretreatment costs attributable to metal platers is divided by the total sewer use charge for metal-plating IUs to generate a pretreatment surcharge factor. The base sewer use charge for each metal-plating facility is then increased by this factor. Using the information on Table 7.10 and assuming that the base sewer use charge for a metal-plating facility is $1,000 per year and that there are 60 platers in the service area, the pretreatment surcharge would be $529 per year. The total annual sewer use charge would be $1,529. In most cases, the industry surcharge system is easy to develop and implement because it is based on an existing user charge system and is simply an increase in sewer charges.

The formula for calculating the industry surcharge for pretreatment is as follows:

$$UC_I^* = UC_I\ (1 + P_I)$$

where:

UC_I^* = Sewer and pretreatment charge for a given industry
UC_I = Sewer charge for a given industry
P_I = Pretreatment factor for industry class.

TABLE 7.10 RATE CALCULATION WORKSHEET FOR INDUSTRY SURCHARGE MODEL

Cost Items	Total Cost $	Pulp & Paper[1]	Food Products[1]	Laundries[1]	Metal Plating[1]	Pharmaceutical[1]
A. Operating Costs						
1. Labor						
Administration	$30,000				$2,500	
Industrial monitoring	48,000				12,200	
Laboratory analysis	20,700				5,200	
2. Other Direct Costs	14,200				3,500	
3. Overhead (42% of Labor)	41,454				8,358	
B. Total Annual Cost					31,758	
C. Summary					31,758 ÷ 60,000 = .529*	

Total annual pretreatment costs for an industrial group ÷ Total annual sewer revenue generated by that industrial group = Pretreatment factor for each industry class.

*P_I for metal plating is .529
This calculation assumes that the total annual sewer use charge to metal platers is $60,000.

[1]Allocation is assisted by calculating total number of sampling/analysis activities required per year.

It should be noted that the example sewer charge (UC_I) is derived from an averaging process and that inequitable charges may result. For example, if within an industry group, costs are allocated based on a few industries and their monitoring requirements vary widely, the resulting pretreatment factor may overcharge small users and undercharge large users. To correct this problem, POTW costs and pretreatment factors can be assigned to individual firms, and charges levied on a per-firm basis.

Pollutant Strength Charge

Pollutant strength charges distribute pretreatment program costs based on the types and/or amounts of pollutants discharged (e.g., conventionals, metals, toxic organics) by an IU. Costs are assigned to pollutant groups by determining the number of industries and the costs of monitoring activities for each pollutant or pollutant group. While it is possible to develop and implement this type of charge system for any pollutant type or group, it is usually a realistic and meaningful charge system for conventional pollutants only. Overall treatment costs for facilities are typically recovered using this type of system based on conventional pollutants. The example calculation will, therefore, address only conventional pollutants.

The pollutant strength charge for each group is calculated by dividing the total costs associated with the conventional pollutants by the amount of each pollutant group discharged. The pollutant strength charge model is:

$$UC_I = V_C(V_I) + B_C(B_I) + S_C(S_I)$$

where:

UC_I = Pollutant strength charge for a given industry
V_C = Charge rate per gallon of wastewater discharged
V_I = Amount of wastewater discharged
B_C = Charge rate per pound of BOD discharged
B_I = Amount of BOD discharged
S_C = Charge rate per pound of TSS discharged
S_I = Amount of TSS discharged.

Table 7.11 illustrates how the pollutant strength charge was calculated for a particular industry.

Since individual charges are based on the amount of a given pollutant discharged, industries are given a positive economic incentive to reduce their waste discharges. This incentive is the system's major benefit. In addition, if specific industrial wastes cause an increase in operational costs at a treatment plant, pollutant charges enable the municipality to recover any incremental costs that result. The drawback to this charge system is that fairly accurate IU flow measurements must be obtained. In the absence of accurate flow measurements, IU water usage data may be substituted. If the pollutants discharged by industry or group of industries are contributing to operational problems or NPDES violations, a maximum limit should be set for the pollutants. The surcharge would then be applied to the portion of the pollutant loading that exceeds typical domestic waste strength up to the maximum allowable limit.

As the discussion of these charge models suggests, you can consider a wide range of options before implementing a user charge to recover pretreatment program costs. Issues of equity, ease of administration and implementation, and coordination with existing user charge systems will determine the appropriate charge system to be used.

7.3 INFORMATION ON RESOURCES REQUIRED FOR THE PROGRAM SUBMISSION

To demonstrate adequate organization and staffing, your final program submission must include the following:

- A description of the POTW organization, including the most current POTW organizational chart as well as an identification of the functional departments that will carry out the program [403.9(b)(3)]
- Identification of any agency, city, service district, or entity other than the POTW involved in the pretreatment program (e.g., in a multijurisdictional submission), along with its responsibilities and a description of coordination of procedures with the POTW [403.9(b)(3)].

TABLE 7.11

RATE CALCULATION WORKSHEET FOR POLLUTANT STRENGTH MODEL

	Total Cost	Wastewater Volume		BOD		TSS	
	$	$	%	$	%	$	%
A. Operating Costs							
1. Labor							
Administration	30,000	7,500		11,250		11,250	
Industrial monitoring	48,000	12,000		18,000		18,000	
Laboratory analysis	20,700	5,175		7,763		7,763	
2. Other Direct Costs	14,200	3,550		5,325		5,325	
3. Overhead	33,054	8,264		12,395		12,395	
B. Total Pretreatment Costs		36,489		54,733		54,733	
C. Summary							
Costs by pollutant group ÷ amount of pollutant group discharged per year = Charge rate per unit for each pollutant group		36,489 / 900 million gallons/year = $40.5/million gallons		54,733 / 1.5 million pounds/year = $.04/lb.		36,489 / 1.5 million pounds/year = $.04/lb.	

User Charge = $40.5 x 150 + .04 x 35,000 + .04 x 35,000 = $8,875.

(Assumes the industry discharges 150 million gallons of wastewater per year and 35,000 pounds of BOD and TSS each year.)

To meet the financial and resource requirements, your final pretreatment program submission must contain the following:

- An itemization of pretreatment program implementation costs, either projected for the first year of program operation or the actual costs for the most recent operating year if the pretreatment program was fully implemented in that year [403.9(b)(4)]. These costs should be itemized in the following areas:

  - Labor
  - Operating and maintenance costs
  - Overhead
  - Debt service and/or other annual equipment payments
  - Other applicable costs.

- A demonstration that the POTW has sufficient funds to operate the program, including an account of the revenue sources to be used to cover annual program costs. This account may be descriptive or may be an itemization of revenue source and amounts. It is a good idea to discuss your system for continuous revenue generation (e.g., user charges) [403.9(b)(4)].

The following items may be included to describe more fully the required elements of the program submission:

- A description of the duties of each staff position (or functional group) involved with the program, including an estimate of the level of effort anticipated for each position (or group). Such an estimate may be represented as labor hours per year or percent involvement in pretreatment activities.

- A list of the major equipment (e.g., vehicles, sampling/analysis apparatus) to be used in the program, including any commercial services or alternative capabilities required by the program.

EXHIBIT - 17

In The Matter Of:

General Mill Supply Co., et al v.
The Great Lakes Water Authority, et al

Stephen Kuplicki
December 13, 2019



Judy Jettke
& Associates
COURT REPORTING AND VIDEO

Original File KUPLICKI191213.txt
Min-U-Script® with Word Index

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO.,
Individually and on behalf of a
Class of similarly situated
persons and entities,
Plaintiff,
vs. Case No. 18-011569-CZ
Hon. Kevin Cox
THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority
and
CITY OF DETROIT, a municipal corporation,
by and through its WATER AND SEWERAGE
DEPARTMENT,
Defendants.

The Videotaped Deposition of STEPHEN KUPLICKI
Taken at 41700 W. Six Mile Road, Suite 101
Northville, Michigan
Commencing at 10:19 a.m.
Friday, December 13, 2019
Before Steve Brown, Videographer & CER-999

APPEARANCES:

GREGORY D. HANLEY
Kickham Hanley
32121 Woodward Avenue, Suite 300
Royal Oak, Michigan 48073
248.544.1500
Appearing on behalf of the Plaintiff.

JAMES M. PELLAND
Fausone Bohn
41700 W. Six Mile Road, Suite 101
Northville, Michigan 48168
248.380.0000
Appearing on behalf of the Defendants.

MICHAEL WATT
Kopka Pinkus Dolan
32605 W. 12 Mile Road, Suite 300
Farmington Hills, Michigan 48334
248.324.2620
Appearing on behalf of the Defendant, Great Lakes Water Authority.

TABLE OF CONTENTS

WITNESS PAGE
STEPHEN KUPLICKI

EXAMINATION BY MR. HANLEY: 5

EXHIBITS

EXHIBIT PAGE
(Exhibits attached to transcript.)

DEPOSITION EXHIBIT 1 6
DEPOSITION EXHIBIT 2 32
DEPOSITION EXHIBIT 3 40
DEPOSITION EXHIBIT 4 44
DEPOSITION EXHIBIT 5 51
DEPOSITION EXHIBIT 6 66

Northville, Michigan
Friday, December 13, 2019
10:19 a.m.

VIDEO TECHNICIAN: We are now on the record. The time now is 10:19 a.m. This is the videotaped deposition of Mr. Stephen Kuplicki, being taken on Friday, December 13, 2009. We are located at 41700 West Six Mile Road, Northville, Michigan. We are here in the matter of General Mills Supply Company versus the Great Lakes Water Authority, et al. This is case number 18-011569-CZ. This matter is being held in the Circuit Court for the County of Wayne.

Sir, can you raise your right hand?

STEPHEN KUPLICKI,

Was thereupon called as a witness herein, and after having first been duly sworn to testify to the truth, the whole truth and nothing but the truth, was examined and testified as follows:

VIDEO TECHNICIAN: Counsel, please identify yourselves for the record.

MR. HANLEY: Good morning. My name is Greg Hanley, and I represent the defendant.

MR. PELLAND: Jim Pelland, representing

Great Lakes Water Authority and the City of Detroit.

MR. WATT: Michael Watt on behalf of Great Lakes Water Authority Only.

MR. HANLEY: Good morning, sir.

THE WITNESS: Good morning.

MR. HANLEY: My name is Greg Hanley. First of all, I want to apologize for the delay in getting started this morning. It was our fault, snafu with scheduling the court reporter. And also want to put on the record it's not the court reporter's fault, it's ours.

Before we start the questioning, I wanted to put on the record an agreement that we had reached prior to the deposition concerning the areas of inquiry today. The court has allowed supplemental briefing on class certification issues, and it's my understanding that we're going to try to limit as best we can the questioning today relating only to those class certification issues. In exchange for that, counsel for defendants have agreed that we can retake your deposition on other issues at some later point in time. Is that correct?

MR. PELLAND: Yes.

EXAMINATION

BY MR. HANLEY:

Q. Mr. Kuplicki, are you a current employee of the Great Lakes Water Authority?

A. Yes, I am.

Q. And in the last year or so, have you become generally aware of the existence of this lawsuit and the basic allegations?

A. I think so, yes.

Q. And there came a time when you executed an affidavit that was submitted to the court in this case, correct?

A. Yes.

Q. And I'm going to mark that because it has some background information about you that I would like to confirm.

MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 1
10:21 a.m.

BY MR. HANLEY:

Q. I have marked as Exhibit 1 an affidavit of Stephen J. Kuplicki, which bears the date of November 5th, 2019. Sir, do you recognize this document as the affidavit you submitted to the court?

A. Yes.

Q. And is that your signature that appears on the final page?

A. Yes, it is.

Q. First page says in paragraph number one, I hold degrees including a J.D., that's a Juris Doctor?

A. Correct.

Q. And when did you get that degree?

A. 2006.

Q. Have you ever practiced as a lawyer?

A. No.

Q. And where did you get your J.D. from?

A. University of Detroit Mercy.

Q. And you have a Master of Engineering and a Bachelor of Science in chemical engineering. Where did you get those degrees?

A. Master of Engineering was from University of Detroit. That was in, I think it was 1996, I believe. And my Bachelor of Science was from Wayne State University, that was 1979.

Q. And how long have you been a professional engineer?

A. Since 1985.

Q. And you're currently a professional engineer?

A. Yes, I am.

Q. So you've maintained that license certification?

A. I maintained my license, yes.

Q. Now paragraph two says you're the manager of operations for the Great Lakes Water Authority's industrial waste control division. And then it

appears the words and analytical laboratory appear to be stricken. Is that an accurate characterization?

A. Yes, it is.

Q. And can you explain, first of all, can you tell me what the analytical laboratory is?

A. The Great Lakes Water Authority has an analytical laboratory where they receive samples predominantly wastewater samples but there are some other samples that are submitted to them for chemical and/or physical analyses. There's a number of chemical analyses that they can perform at that facility. There's a few they do not and they would however be the go between to a commercial laboratory to distribute that.

Q. But is it fair for me to say that that's not within the industrial waste control division?

A. Correct.

Q. And has that been the case since you've been at GLWA?

A. The analytical laboratory provides services to the industrial waste control division. Our samples, the majority of our samples are submitted for analysis, so they provide a service to the industrial waste control division at a cost. Again, it's stricken here because up until probably the last two months, I was manager of an analytical laboratory as well; that was a recent

Page 9

change, they made a new hire, finally, after a number of years here, they hired someone to actually manage that operation by itself, so I could focus only on the industrial waste control group.
Q. And is it fair for me to assume that the analytical laboratory provides services to the wastewater function that is in addition to the industrial waste control division?
A. Yes. It provides support for our wastewater treatment plant, there's some other wastewater related facilities that samples are collected from periodically, they're industrial waste control, and I believe there's a few samples even from our freshwater side that are analyzed several times a year for reporting purposes.
Q. And was what you just said true with respect to DWSD from, say, 2013 through January 1st, 2016?
A. I believe so, yes.
Q. And is it true that when GLWA took over in January of 2016, the industrial waste control division and the analytical laboratory became under the umbrella of GLWA and left the umbrella of DWSD?
A. Yes, that would be a true statement.
Q. And just so we're clear for the deposition, when I'm asking you about how things were when it was under

Page 10

DWSD, I only am referring to the time period from 2013 through 2016; I don't want to go back to ancient history.
A. No problem.
Q. By the way, have you been involved in looking at the cost of the analytical laboratory and allocating it among the various functions of either GLWA or DWSD that it supports?
A. I guess can you ask that question a different way?
Q. I think you said earlier that the analytical laboratory provides services to, among other things, the industrial waste control division at a cost, and what I'm trying to understand is, are you the person involved in determining how much that cost should be?
A. No, I'm not.
Q. So if we were trying to determine how much of that analytical laboratory cost is parted out to the IWC division versus other aspects of the wastewater function, that's something that's done by somebody else; would that be fair to say?
A. Correct.
Q. Now, paragraph three says prior to GLWA's inception, I was the manager of the industrial waste control division for the City of Detroit Water and Sewer Department, and you had been in that role since 1990

Page 11

through December 2015. First of all, that's a true statement, correct?
A. Yes.
Q. And as manager of the industrial waste control division, did you also have oversight over the analytical laboratory?
A. No. The analytical lab responsibilities, I think it was, it may have been late 2015 that I assumed that, that was just prior to the GLW standing up, as they say. Again, we knew it was going to be at that time, so it was an organizational move.
Q. Who was responsible for the analytical laboratory before you took it over?
A. I believe his name was Michael Jurban, J-U-R-B-A-N.
Q. And who is the individual who is now responsible for the analytical laboratory?
A. His name is Dale, last name is Bennett.
Q. Now, paragraph five -- first of all, is there a typo in one of the dates in paragraph four?
A. It's reversed, but what was true was from '82 to '83, I was working for Hydromation Company prior to joining DWSD. The dates were transposed apparently.
MR. PELLAND: So it should be '82 to '83?
THE WITNESS: Yes. Both say March but --
BY MR. HANLEY:

Page 12

Q. Paragraph five says in my current role with GLWA, my responsibilities included implementation and enforcement of the industrial pretreatment program, surcharge, high strength wastewater program, groundwater and special discharge and the PCB, Hg and PFAS minimization programs. Do you see that?
A. Yes, I do.
Q. Is that a full and complete listing of the general areas of your responsibility?
A. These are the primary program names that we have that are under the whole regulatory umbrella. I mean, there are other, some other functions that are performed there, but they're not a program necessarily by themselves.
Q. And what I'm trying to get at is, I've heard a reference to something called a hauled in waste program; is that encompassed with any of these?
A. Yes, we would put that under the industrial pre-treatment program. Again, we do have something we call a hauled in waste program; it allows us to regulate those discharges that are in vehicular in nature, it's not necessarily a specific point source.
Q. They have some kind of waste and they transport it via a vehicle to some disposal site?
A. Some designated point, correct.

Page 13

Q. And you have regulatory authority over that process?
A. Within our service area, correct.
Q. But you would refer to that as part of the industrial pretreatment program?
A. Yes.
Q. And the surcharge high strength wastewater program, is that the program where certain facilities or users pay additional amounts because they're introducing certain types of materials into the system?
A. The surcharge program is for discharge who are putting in concentrated, what we call conventional pollutants. These are the pollutants that the facilities are designed to process. They pay dollars per pound above a certain domestic level, yes.
Q. So their concentrations are higher than a quote, unquote, usual or normal source?
A. Right.
Q. And there are costs associated with those surcharges, correct?
A. Correct.
Q. And they're dependent upon volume?
A. The surcharge program is based on -- the pound loading of the -- there's four parameters that are charged, there's charges for. There's BOD, which is biochemical oxygen demand; there's total suspended

Page 14

solids, there's phosphorous and there's fats oils and grease. Whether one or all four of those components, it's the pound loading and it's determined by determining an average concentration of the discharge and multiplied by the volume because that changes over time.
Q. But the industrial waste control division has regulatory oversight for that surcharge program?
A. Correct. We select samples, we evaluate data submitted by users under that program and then we would submit that to finance for billing.
Q. Are the users that incur the surcharge -- well, let me back up and be more foundational, so to speak. I understand that there's a type of user that's known as a significant industrial user?
A. That's a classification of a user, correct.
Q. And can we agree when I say ISIU, it refers to a significant industrial user?
A. Yes.
Q. And then there's also something called a CIU or a categorical industrial user, correct?
A. Correct.
Q. And that's -- all CIUs are SIUs but not all SIUs are CIUs; would that be fair to say?
A. That's true.

Page 15

Q. So if I refer to a CIU in the deposition, can we agree it refers to a categorical industrial user?
A. Yes.
Q. And the users that incur surcharge, are those typically SIUs?
A. No. Someone subject to surcharge, there are some that are SIUs, there are some who are CIUs, there are some who are neither one, they're just industrial users.
Q. That's another question I have. Industrial user, is that a term of art, when you use it that way?
A. I guess that would be the best description, because again, over the 40-year period where this program has been implemented, there's a lot of different definitions and/or ways of describing facilities that have come up. So we try to keep it to industrial user, significant industrial user, categorical industrial user, and then the only other category is like commercial user.
Q. And what is a commercial user?
A. A commercial and industrial user are actually very much the same, it's just at different times, different language either on our part in our programs or in the dialogue between state, federal and ourselves use these terms and they use them interchangeably. An industrial user is a commercial user, depending on how

Page 16

it's defined. And the definition has changed, I believe, over the years. My current understanding is essentially it's anybody who's involved in any trade, business, governmental, private, public, essentially nondomestic, nonresidential type operation.
Q. And when did that become the case?
A. I think the industrial user definition goes back to the 70's. Again, it's evolved several times over the years. I don't remember exactly.
Q. Would this office building be an industrial user?
A. It would be, I guess I would call it commercial user. It's a commercial industrial user, yes.
Q. But are there -- you would agree with me that an office building like this incurs an IWC charge?
A. I don't know that for a fact.
Q. But it's within the classification of users that would incur an IWC charge, correct?
A. It may be.
Q. What I'm trying to understand is, and we'll get into this because I have some documents, but I've seen documents that have said that there are less than 20,000 industrial users, and then I've seen documents that say there are 407,000 properties that incur the IWC charge. First of all, do you have knowledge as to how many industrial users GLWA believes there to be?

Page 17

A. I don't have that number. Again, if you're asking for purposes of the user charge?
Q. Yes.
A. No, I don't know.
Q. But you use -- for example, paragraph seven, the last sentence on page 2 going over to page 3, it says: The IPP program is designed to protect the POTW -- that's Publicly Owned Treatment Works -- infrastructure and reduce conventional and toxic pollutant levels discharged by industries and other nondomestic wastewater sources into the municipal sewer system and environment. Do you see that?
A. Yes, I do.
Q. So there are nondomestic wastewater sources that don't necessarily qualify as industrial users, correct?
A. Yes.
Q. And further down in paragraph eleven, the first sentence says: The IWC chart was established by DWSD and continued by GLWA to recover sufficient revenues to operate the IWC division and is paid by municipalities from industrial and other nondomestic wastewater users residing based in a specific municipality who use GLWA's services. Do you see that?
A. Yes, I do.

Page 18

Q. So the charge, the IWC charge is paid by both industrial and certain nondomestic wastewater users as you stated in your affidavit, correct?
A. That's my understanding, correct.
Q. Do you know how that breaks out, how many non-domestic wastewater users who aren't industrial users incur the charge?
A. I don't know that.
Q. But that, is that number knowable? Is there a source we can consult?
A. It may be knowable, I think you would have to talk to our finance staff because they're the ones in communication with their counterparts at the municipalities where that information would be produced.
Q. But at least we know GLWA makes a distinction between industrial users and other nondomestic wastewater users?
A. I think it's just a way to capture it all.
Q. Right, right. In paragraph eight, you talk about the pretreatment program includes, among other things, identifying industrial users requiring pretreatment regulation, and then in parentheses it said (significant industrial users). Do you see that?
A. Yes, I do.

Page 19

Q. So that activity would be limited to significant industrial users, correct?
A. No. Again, that's one of the results that we seek to identify, whether they're significant industrial users. When we do that, we identify, again, as it continues here, their character volume requires some other pretreatment standards, requirements, again, whether they're part of the surcharge program also should be considered or some other activities, because again, each site or facility is unique in those. There's no necessarily fixed way to look at these things.
Q. But what's the reason you need to identify industrial users requiring pretreatment regulation?
A. Well, first reason is that by state and federal regulation, we're required to maintain a list of users who discharge and the potential for being subjected to the pretreatment program. We also have notification obligations to certain classes of users that are there, we have to notify them the RCRA requirements, the requirement of the local ordinance rules, state rules, federal rules applicable here, to at least advise them how we expect that they should already know these things. We also use as an opportunity to try to make them aware that there are these rules, a

Page 20

little more specifically where they can find these if there's a question and whether they are or are not in compliance with these rules.
Q. Let's start more basic. You have regulatory requirements that relate solely to significant industrial users, correct?
A. I guess that would be true, I guess yes.
Q. I mean, inspection obligations, that sort of thing?
A. Well, again, inspection is a tool or a function we use, it's not dependent wholly and solely and only done for significant or categorical users. Any contact is an inspection.
Q. What you actually do is different than what the regulatory requirements may be, and my question right now is limited to, there are regulatory requirements including reporting requirements to the government that relate solely to significant industrial users, correct?
A. Under the program and under the requirements of our permit, if someone is a significant industrial user categorical, we have commitments to do a certain number and type of inspections at a facility, yes.
Q. Is it the policy of GLWA to inspect non-SIUs in the order course of your activities?
A. Yes, it is.

Page 21

Q. And when I'm talking about non-SIUs, I'm talking about like an office building, for example.
A. Again, under our survey where we need to identify users who have a potential -- have an impact, it's a very broad statement. The inspection we perform is different than what we do or may continue to do for a significant user, for example, but we consider inspection any kind of contact, personal contact and/or visit.
Q. And if there was a personal contact and visit, for example, with this office building, there would be a record created, correct?
A. Correct.
Q. And as part of your reporting requirements to the MDEQ, you are supposed to include all inspection activity in those reports, correct?
A. Correct.
Q. So if we -- can we rely on those reports to make a judgment as to whether the inspections of non-SIUs are occurring?
A. Which reports are you talking about?
Q. Your annual reports to the DEQ.
A. The annual report asks us specific questions relative to specific types of users. I don't recall and I don't believe they ask for -- they asked us about

Page 22

significant users, they asked us about categorical users, number of inspections we perform for those particular groups.
Q. Right.
A. I don't believe they ask for nondomestic users.
Q. Right. Were you involved in gathering documents that were going to be given to us to review in the case?
A. I believe I was involved in some part of it, yes.
Q. And there are several hundred thousand pages of inspection reports that have been produced. If there were inspections of this type of building, an office building, a non-SIU, would they be within those reports that were produced?
A. The inspection we perform for a facility of this nature is recorded usually with a survey card, and then there would be a subsequent letter, a minor user letter or some other communication if there's additional classifications or requirements, permitting or others done, those would be in place and those probably would have been in there.
Q. There wasn't an effort to exclude those?
A. Not that I'm aware of, no.
Q. First of all, if somebody has a permit number, if a property has a permit number, are they an SIU?
A. Again, I guess I don't understand your question.

Page 23

Q. I guess what I'm saying is, do SIUs get assigned permit numbers?
A. If we issue a permit to a facility, they are assigned a permit number, yes.
Q. I get that. But what I'm trying to do is try to understand who has these permit numbers. Are they SIUs and CIUs?
A. Again, we have several different permitting systems, and each one has a numbering system associated with that particular type of permit. But yes, we would issue to that type. So significant industrial users receive a permit number for their permit as do CIUs receive a similar permit number description for their permits.
Q. So if we have records of inspection activity that refer to a permit number, is it fair for us to assume that that is an SIU or a CIU?
A. If it's an SIU/CIU permit number, yes.
Q. Those end in IU?
A. Yes.
Q. What are the other types of purposes?
A. There's hauled in waste permit, again, that allows them to dispose of at the designated locations as we commented before. It allows them to purchase either tokens or tickets which is a method of payment because

Page 24

no cash is transacted at those locations. There's either a coin or a ticket used to access the disposal location, so it's prepaid. There are -- I believe we identified in some of the description your special discharge, groundwater permits that are issued, again, there is a numbering system with that that's usually either SD, GW designation.
Q. What's the designation for the hauled in waste?
A. HIW.
Q. Any other types of permits?
A. We have general permits that we issue. There are several different times of general permits. One group that received general permits are breweries and micro-breweries, to authorize them to discharge, a condition of discharge and reporting requirements. We have general discharge permits for demolition projects, if and when the construction projects, demolition projects where, during excavations, depending on weather conditions, there may be accumulation of water material or there may be some groundwater discovery. There's authorization to allow that to occur under a permit program. We issue permits to utilities predominantly, now it's just DTE, slash, the former Michigan Consolidated entity, I still call them Michigan Bell but AT&T, I guess, for their ground-

Page 25

water -- underground facilities, they have some vaults, they have some manholes in the different parts of the city where they have some infrastructure that are there, again, on occasion they need to pump those out if they're maintaining, so we provide a mechanism by which they're authorized to discharge that material to the sewer system. They have reporting requirements with that.

Q. Anything else? Any other types of permits that you issue?

A. I mean, the permit itself is a minor user discharge letter because we typically in that, identify that they are not required to maintain a permit where they have to do regular reporting, recordkeeping, compliance activities, but that they're authorized under the terms that they need to comply with the law that if something changes, they have a duty to submit an application to be reassessed, re-evaluated.

Q. Anything else?

A. I mean, there may be other permits that we have issued or do issue from time to time depending on specific situations that come up. But those are the primary permitting programs that we currently have.

Q. Appreciate that. Paragraph eight of your affidavit refers to self-monitoring and reporting requirements.

Page 26

What type of users are subject to self-monitoring and reporting requirements?

A. Let's see. The significant industrial user permits would include self-monitor requirements reporting, CIU permits would also have requirements. I believe our hauled in waste, septage waste have some self-monitoring requirements. The special discharge groundwater has monitoring, self-monitoring requirements, as do the utility permits. So the only ones really that don't would be the minor user authorization; it's essentially a permit, we don't call it a permit, but it's an authorization letter but essentially it supplants the need for a permit.

Q. And at the end of paragraph eight, it talks about one of -- as part of GLWA's pretreatment program, it involves taking enforcement action against user non-compliance. Do you see that?

A. Yes.

Q. What's involved in an enforcement action?

A. Our enforcement program, again, it's defined and described within our industrial pretreatment program. There's a range, I guess you would initially say there are administrative functions, it could be as basic as a phone call to someone to say hey, you failed to do something. It would be -- could be written

Page 27

notification. We have several varieties of written notification depending on if it's discovered based on an analytical chemical determination or if it's based on an observational. We call one just a notice of violation and the other one we call a notice of noncompliance. Essentially, it's a written notification in either case where we're putting them on notice for some finding, we tell them what corrective measure or measures are required and whether any additional actions on their part are required.

There are -- there also are notice of violation where we're requiring more aggressive corrective measures, it's not an occasional infrequent event that occurred. There's a pattern of noncompliance. We may call the person in for an informal enforcement conference discussion to identify, have them identify to us what corrective measures are they going to take. Those often may involve either installing or improving, enhancing their compliance equipment, recordkeeping, their compliance techniques, increased self-monitoring. Again, there's a variety of things that could be included there.

Administratively, we can also ask someone

Page 28

to show cause why some action should be taken, action being cease and desist order, termination of discharge, revocation of a permit. Revocation of permit is another, I guess, administrative step that we will do or can do. Then there are the, I guess you would call more judicial or legal steps, which again, which is more formal action; there's some complaint filed, could either be a criminal, it could be criminal in nature; that's one option. We don't do too many criminal, but civil matter.

Q. You're required under your DEQ permit to report on your enforcement actions, correct?

A. Correct.

Q. And so if we review an annual report, we would expect to see detail about all the enforcement activity during a particular period of time, correct?

A. Again, generally, the answer is yes; however, in the last several years, the state has changed the reporting form. So the amount of detail that is available in an annual report has changed.

Q. Meaning less detail?

A. It's different. They ask for different things.

Q. I'm not trying to hide the ball, I'll show you some. But I'm just trying to get an understanding -- we're trying to figure out who these enforcement actions are

Page 29

taken against, and are the annual reports sufficient for us to determine the identity of the user?
A. The annual report would identify any user who we initiated some type of enforcement action with, yes.
Q. So in order to determine whether those enforcement actions included enforcement actions against non-SIUs, we could take your list and compare it to the list of SIUs and we could make that determination, correct?
A. That would be a method to do it, yes.
Q. As part of this case, have you personally investigated or has anybody else investigated whether GLWA has taken enforcement actions in connection with non-SIUs?
A. Yes, we have.
Q. You've investigated it or you've made a determination that you have?
A. Well, there have been some people who -- some facilities who eventually may have been classified as SIU or CIU, they were identified, they failed to obtain a permit, they were discovered operating without authorization, and so we initiated some enforcement response, some of those would be the civil actions that we took to correct that and abate that situation. They may now be a significant user or a

Page 30

CIU but possibly at the time we initiated that action, they may not have been, depending on the individual case.
Q. But that enforcement action would be to enforce requirements that would be applicable to an SIU, correct?
A. The regulations spell out who needs to submit and tender an application. And so yes, they predominantly would be SIUs, correct. There may be some non-SIUs, but generally most are them are SUIs who submit that.
Q. Are you aware of any enforcement action that's been taken by GLWA against a non-SIU other than based upon the contention that they should be reporting as an SIU?
A. I guess in one sense, part of the answer is yes. There's some current activities we're working actually jointly with the state, it's an ongoing, I guess, enforcement action. It does involve SIUs and also involves non-SIUs.
Q. How does it involve non-SIUs?
A. Well, their contributions, which are resulting -- this happens to be the subject of these PFOS compounds, polyfluoralkyl substances that we read about in the news, there were releases from one or more of these facilities that have contributed to problems in the

Page 31

system requiring -- we did investigation, we did inspection, fieldwork, we work with the state to collect field samples of these materials and we're working jointly with the state to pursue an enforcement action, but they're in varying stages.
Q. Other than those circumstances and the circumstances with respect to non-SIUs who should be SIUs, are you aware of any other enforcement actions against non-SIUs?
A. My own recollection, no. Again, I guess I would have to look at the annual reports would be one place to look at that just to see if there were documents -- again, as I say, we would record that in the document we took actions, again, if and when the reports ask for those type of details. The think the more current ones as I indicated, they don't include as much detail requirements.
Q. But isn't it true that as a matter of policy, the enforcement actions are directed against SIUs or CIUs?
A. Well, no. As a matter of policy, the enforcement is a tool, are tools to be used to address noncompliance by any user.
Q. All right.
A. Typically, we would exclude, I guess domestic users, but it includes nondomestic users too.

Page 32

Q. And how does it include nondomestic wastewater users?
A. One example I can easily think of is, there are blockages that may be occurred in a sewer system, maybe grease or some other obstructive material; we would respond to that on a call based on maintenance, whether GLWA or DWSD maintenance, we work together again with them. We would follow up and try to identify the origin source or sources of those materials, who may be responsible parties, and it would be a twofold approach and enforcement would be, one is possibly to seek to recover the cost of the cleanup of that activity, as well as what actions to abate further occurrences of those activities, because again, we don't like to see the sewer system plugged with fats, oils, grease, other materials.

MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 2
11:02 a.m.

BY MR. HANLEY:
Q. Let me show you what I've marked as Exhibit 2 is for the record, a presentation dated February 6, 2014, produced by GLWA as document number 73 through 94. Take a minute to peruse that and my first question is going to be, do you recognize it?
A. Yes.

Page 33

Q. Is this something that you had input in when you were at DWSD?
A. I believe I was prime author of this.
Q. So it would be fair for me to assume that you're able to interpret each of these slides and explain the content?
A. I believe so.
Q. I want to -- the page that's 75 at the bottom, it says what is IWC.
A. Okay.
Q. And it says what is IWC. It says, the term also refers to the DWSD group charged with the implementation of the pollution control responsibilities within a Detroit service area. Do you see that?
A. Correct.
Q. And then there's a little chart that says, under Detroit service area federal IPP program, 298 significant industrial users. Do you see that?
A. Yes.
Q. And that corresponds to the users who are SIUs that we've been discussing, correct?
A. Actually, this number is probably both, SIUs and CIUs. Again, that term is used interchangeably. SIU, CIU, while you can distinguish, it's also used as a common

Page 34

term.
Q. But that's identified as being part of the federal IPP program. Do you see that?
A. Correct, because that's how it's identified, I believe, in our permit.
Q. And then there's system users, other, and there's identified 18,453 minor industrial users. Do you see that?
A. I see that.
Q. And what does that refer to?
A. That would refer to other users that we have identified either through our survey efforts, through their application, through their completion and submission of a survey card to us, where we've made a determination that they don't qualify for the permit controls of the federal IPP program, but that they essentially are identified and authorized to discharge their wastewater to our system.
Q. And do these minor industrial users correspond to the industrial users as you've used that term in your affidavit?
A. Generally, yes. Again, the distinction of making a minor industrial user suggests that a determination or decision was made, as I said before, about authorization to discharge. You can be an industrial

Page 35

user, but if you don't have any documentation showing you're authorized to discharge, I guess you're just an industrial user.
Q. Are there other users of the system that incur the IWC charges beyond the 298 significant industrial users and the 18,453 minor industrial users that are listed in Exhibit Number 2?
A. I guess there may be. I think as I said earlier, I really don't know the number.
Q. And we'll look at some documents to maybe establish that number. But you would agree with me that there are users beyond the users that are identified on page 75 of Exhibit 2, that incur the IWC charge?
A. Again, all I know, all I could tell you from this document is that the summation of these two, it's at least at a minimum that number of users, there may be additional there that either are industrial users that haven't been identified as minor or as significant.
Q. If you can turn to the page, it's several pages thereafter, and it's either 14 in your presentation or 87 as the document number.
A. 87, okay.
Q. It says, the legal foundation for the IWC programs continued and then there's the IWC meter charge. Do you see that?

Page 36

A. I'm reading this, yes.
Q. It says, IWC budget be funded through a non-residential user meter charge for meters of 5/8th's inch diameter or greater, and then says costs assigned to nonresidential users only. Do you see that?
A. Yes, I do.
Q. And then it excludes meters used for fire service and multifamily dwellings. Do you see that?
A. I do.
Q. So you would agree with me that leaving aside the exceptions noted on page 14, that nonresidential users, which would include both commercial and industrial, are assessed this charge, correct?
A. That's my understanding, correct.
Q. And that's been true all through the time period up till today, correct?
A. Again, that's my understanding of reading the rates, correct.
Q. And then on page 91, which is also page 18, there's a program overview.
A. Okay.
Q. It's another chart where they have classifications and a number of facilities. We've already covered the significant industrial users and the minor users. Says surcharge users, 153. Are those the users or

Page 37

facilities that incur the extra charge because the concentration of pollutants that you were discussing earlier?
A. Yes. They have a high strength wastewater, correct.
Q. And then hauled in waste, 46 facilities or users. Does that hauled in waste, that 46 number, does it refer to the generators of that waste or the people who bring the waste to the facility?
A. It would refer to the people who bring the waste to the facility. Chiefly these are what we call septage haulers.
Q. In other words, you get your septic tank pumped out?
A. They include two groups generally. One is septic tanks, the other are the Port-a-Potties, Johnny-on-the-spot kind of producers.
Q. But they get a permit that allows them to bring that stuff to a facility and dispose of it?
A. Correct.
Q. And do they pay money for that?
A. Yes, they do. I believe my earlier statement was that a part of the permit that we would give them allows them to purchase either tokens or tickets, depending on the disposal location that they use. Several of them use a token system to access that property.
Q. Okay.

Page 38

A. The other just is a ticket that's collected as payment and remitted and returned. The permit allows them to purchase either tokens and/or tickets.
Q. Do you know whether that money that's generated goes to support the IWC division or where the money goes?
A. I don't know where the money goes.
Q. Do you know who at GLWA would know that?
A. Again, you probably would need to talk to the finance people, because they would be the people issuing the tickets.
Q. Do you ever deal with finance people?
A. I deal with the people in finance, yes.
Q. Who is the person you deal with mostly?
A. I deal with different ones depending on what the issue is. Again, finance is a very broad term. So is there a particular -- in a particular vein or just generally?
Q. I just want to know who the individuals are who you deal with in financial.
A. I guess two people are, number one is Kim -- I forget her name -- I just had it in my head. I forget.
Q. We can find that out.
A. And the other one is Pam Fladger.
Q. How do you spell her last name?
A. I think it's F-L-A-D-G-E-R.

Page 39

Q. Continuing on on page 18, there's a special discharge classification, 49 facilities; can you tell me what that refers to?
A. Again, special discharge is a term we use for -- it can include groundwater, it can include construction, cleanup projects, anything that really is not a significant user, it's not a regular process, it's usually some specialized cleanup function going on. It my include, an example would be a gas station that is remediating because of leakage of petroleum material. As part of the cleanup, they usually have had offsite contamination; it's a way for them to collect and treat that material, remove the petroleum components and dispose of the water to the system. We accept the water under permit. Again, they usually pay for that.
Q. And what is spill plans, 620 facilities?
A. Again, one of the requirements we have in our local requirements, and I believe it also had some origins in the federal requirements, where for users to report quantities of material that could be released either in uncontrolled fashion, they're stored in some quantity. The way our ordinance is written, it's really any material that would be 55 gallons or greater and 5 percent greater concentration. You

Page 40

would need to file a spill plan with our agency.
Q. And the spill plans, are they reported in your annual reports?
A. I don't remember if that's a line item. I guess I would have to look at the annual report, because again, it usually is specific criteria that they're asking us to report on. I'm not sure if that's one that's usually on there or not.

MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 3
11:13 a.m.

BY MR. HANLEY:
Q. You can set that aside for a moment at least. Let me show you what I've marked as Exhibit 3 for your deposition. This is an Industrial Waste Control and Pollutant Surcharge Program Review dated March 25th, 2015. It's GLWA 42 through GLWA 60. And take your time to review it. Your name's not on the front page but I want to know whether you recognize this.
A. I believe I've seen this before. I did not create it, I know that.
Q. Right.
A. But I may have provided comments to it.
Q. And I don't have a lot of questions, but if you can turn to the page that has 45 at the bottom.

Page 41

A. Okay.
Q. And it says the fourth bullet point down: Over 47,000 nonresidential, commercial and industrial users pay IWC charges monthly either through a direct billing from DWSD for Detroit end user locations or a billing from their community customer for suburban end user locations with the proceeds forwarded to DWSD. Do you see that?
A. Yes, I do.
Q. Do you have any reason to contest the number that's in this presentation, 47,000 that incur the IWC charges?
A. Mr. Savitskie was a CPA working for the finance group. He had access to finance records, and if that's what he found, I don't have reason to contest that number or think it's erroneous.
Q. Is Mr. Savitskie still employed by DWSD or GLWA?
A. I really don't know. I have not seen him for a long time, so I really don't know.
Q. Do you understand what his function was when he was back with DWSD back in 2015?
A. I don't know the full scope of his function, I just know to produce this, one of the things he may have been working on was this particular subject that he talks about and he may have had other assignments. I don't know.

Page 42

Q. But he was a finance guy?
A. He was a finance guy.
Q. Fair enough. Then the next page, which is 46, talks about the history and legal precedent for IWC. The very last bullet point says: Collect only amount necessary to recover the cost of the IWC program. Do you see that?
A. Yes, I do.
Q. Has that been the policy both while you were at DWSD or at GLWA, to your knowledge?
A. Again, I think in the prior submission, Exhibit 2 here, I address the rate settlement agreement. I don't remember exactly without looking at that if that was as limiting as it was, but it's not incorrect. There may have been other conditions in the agreement itself, in the scope.
Q. Fair enough. And I don't have any specific questions about the document other than what I've asked you, but I would ask you to go through it and tell me which slides you personally contributed or provided information on, if you can recall.
A. Let me take a look. I'll make an attempt. Because again, the two persons identified here, Mr. Savitskie was a finance, Ms. Jordan was with the law department, so certainly some of these little things she put

Page 43

together. I think if anything, I think it was more editorial just to review and see if there was anything incorrect. So that was chiefly my role. I don't believe -- I know Mr. Savitskie spoke to me prior to this, so he may have gleaned this from some of our discussions. But he didn't tag them and say this was from Steve. So I don't know which ones necessarily.
Q. Fair enough.
A. I mean, it's possible that what's on 51, there's information here about Detroit Metro Airport. He may have gotten that from a letter I wrote to finance asking them to prepare a bill for this. Just because the case of that particular discharge and the size of it, that I would do that. Normally I wouldn't do on an individual basis request a bill, but we can. So again, while you probably found that with finance, it probably was a letter I had originated. Again, I don't see anything else here. It could have come from some dialogue with me. He talks, for example, about publish annual reporting, the lead is myself he identifies in some other things. So he probably discussed these with me, but he was the primary author I think of most of this material, other than editorial or review comments I may have provided.
Q. You can set that aside. I want to spend a little bit

Page 44

of time talking about the annual reports. Do you have reporting requirements to any governmental agency other than the MDEQ?
A. As far as?
Q. I'm talking about the IWC division.
A. Well, for permit programs, it's predominantly the State of Michigan. MDEQ, now they call them EGLE, Environmental Great Lakes Energy group or something of that nature. I still call them DEQ.
Q. But is there any other governmental entity that you have reporting requirements to?
A. Not regular reporting requirements, no. We may get special requests from EPA for information, not necessarily legal in nature, just inquiries about either particular users or other information, but not a permit based routine report.

MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 4
11:20 a.m.

BY MR. HANLEY:
Q. Let me show you what I have marked as Exhibit Number 4, which is a document supplied to us by GLWA, GLWA 2989 through 3013. Take your time to review it, and it's dated April 1st, 2019. And my first question is going to be, is this your MDEQ annual report for 2018?

Page 45

A. There's actually two pieces here. First the answer to the initial question is yes, this is our submission, it was made in, I guess, April of 2019, and it's for the period of January through December of 2018.
Q. Okay.
A. There are essentially three elements here, the first of which is to address the enforcement of authority point; we had some extraordinary enforcement powers of limited duration granted to us through the State of Michigan to, primarily to pursue additional legal actions if and when necessary and to seek additional penalty ranges that were not allowed by local regulation or law.
Q. And where in the document does that reporting --
A. Page 1. It's a letter. They just wanted to know, did we take any enforcement actions where we exercised that authority. So that would be the reference.
Q. So that's component number one. You said there were three, what's the second one?
A. The second is -- and I'm going to go by your page number 2990 through 3006, that appears to be a continuation of the table report. I think there's a name for it that's not here. But this is information that the state is asking for relative to identifying users, their classification, their volume, how many

Page 46

inspections performed, sampling events, et cetera.
Q. So let's talk about --
A. Then the third piece is from 3007 to -- 3007 is the third piece. What's after this? I don't know what this table of contents -- oh. This is -- the remainder of this, pages 1 through 4, this is part of the template in the state reporting system, it's called MI Waters. There are questions that we or information that we respond to, so that this first set, which is, 2990 is an attachment to one of the questions, the one on 3006 is an attachment -- excuse me, 3007, is an attachment on another part of their question and answer list here.
Q. Now, let's break that up just a little bit. I want to talk about the reporting that occurs at page 2990, which is the second page, through 3003. So I guess we can start on the first page, because I'm trying to understand the columns.
A. Okay.
Q. The second column -- the first column says SIU/CIU, NPDES ID. Do you see that?
A. Yes, I do.
Q. And then there's numbers. Is that an internal ID that is maintained by GLWA?
A. That's an internal ID, correct.

Page 47

Q. And the second page or the second column is SIU/CIU name and then, for example, in the first row it's 3M Company, the second is A&R Packing Company, LLC. Do you see that?
A. Yes, I do.
Q. And that column identifies the SIU and the CIU name that is subject to this report, correct?
A. Correct.
Q. So would it be fair for me to assume that since you're identifying SIU and CIUs by name, that all of the data between 2990 and 3003 relates to SIUs?
A. Yes, because that's what the column says, SIU/CIU names.
Q. I'm trying to get at whether any of this reporting relates to any non-SIUs.
A. I don't believe so.
Q. And then continuing on with, I guess it's page 3004, little bit of a different -- 3004, 3005 and 3006, would you agree with me that that reporting also relates only to SIUs or CIUs?
A. Yes.
Q. Then the page that's 3007 --
A. Excuse me, just to clarify, the pages 3004 to 3006, I guess just to clarify, while it's a similar template to just the prior report, again, I didn't get this far

Page 48

to this document, this page. Again, this was just an update because in this particular year, this particular group of users were being deleted because, again, we're required to identify additions or deletions to the list from any prior listings we gave for SIU/CIUs, so this was a specific way to do it as opposed to just burying it in the other document. We essentially used a similar template but we modified it to just convey that specific information. Otherwise, it's very similar to the aforementioned.
Q. Then the POTW monitoring data summary that appears on 3007, can you tell me briefly what that refers to?
A. Again, within our NPDS permit, there's some sections and pages relative to the industrial pretreatment program requirements we're required to both carry out, maintain and report upon. This is one of those elements where we're required to identify and summarize information from the wastewater treatment plant over the -- in a calendar year here, for both influent and effluent biocides. They have a specific list that they've identified us to report on, so we supply that information. As a summary, again, that's just one of the requirements criteria they put under industrial pretreatment program.
Q. So you go to the treatment plant and you take samples

Page 49

and you measure, for example, milligrams per liter of arsenic and you report that to the DEQ?
A. Actually, no. The treatment plant has requirements in the same NPDS permit to do certain monitoring and reporting, and they do that usually on a monthly basis, it's called a DMR that they file, daily monitoring report. And so this is data we obtain from them averaged for the year 2018.
Q. But I guess what I'm saying is, this isn't measuring any particular user's contributions, this is taken from the plant generally?
A. This is taken at the treatment plant. So the parameter arsenic, for example, is a result of the discharge from all sources, from any source as it would be seen at the front end of the treatment works.
Q. So it's not user specific?
A. Correct.
Q. And then the annual report, you called it a template that starts at 3009 and goes I guess to 3013, you're saying this is a state template that you fill out and submit as part of your annual report?
A. Yeah, it's all electronic system that they've went to in the last, I believe, I think they went to, 2017 was the first year they implemented this. And so this is what we use. These are particular questions and

Page 50

information they ask us for.
Q. So when it talks about attaching documents, the document attachments would be what we've already reviewed?
A. Correct. The aforementioned that are attached.
Q. So is this a full and complete, is Exhibit 4 a full and complete version of the annual report provided to the MDEQ?
A. Yes.
Q. And in the form, the template, is there any information you can point to that is specific to non-SIUs?
A. No, because again, as I already commented, that the information that they are asking for in their templates is strictly about SIU/CIUs.
MR. HANLEY: Thank you. You can put that aside. Hopefully Mr. Pelland will forgive me for not providing extra copies of the next exhibit, but I really didn't want to copy a thousand pages. So if you need to review it, I'm only going to ask him a few questions, but if you need to review it, we can swap it out.
MR. PELLAND: Are we going through it page by page?
MR. HANLEY: No, I don't think so.

Page 51

Actually, it may be helpful if we want to take a break and you could just make a copy copies for you and Mike of this, the body of it.
VIDEO TECHNICIAN: Off the record, the time is 11:31.
(Off the record at 11:31 a.m.)
(Back on the record at 11:40 a.m.)
VIDEO TECHNICIAN: Back on the record, the time is 11:40.
MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 5
11:40 a.m.
BY MR. HANLEY:
Q. Mr. Kuplicki, I'm going to hand to you a very voluminous Exhibit 5 that is Industrial Waste Control Division Annual Report Book I and it's actually Book II as well for January-December 2016. It bears the locator numbers GLWA 2390 through 2842, and I assure you we are not going to go through every page.
A. Thank you.
Q. But if we can focus on -- first of all, is this the form of the annual reporting to the DEQ that applied for the 2016 time frame?
A. Yes.
Q. And this would have been the first report that came

Page 52

out of the GLWA umbrella, correct?
A. Yes, January-December 2016 would have been the first GLWA reporting, because the prior version, GLWA submitted it but it was really representing DWSD, work done as DWSD.
Q. But were there -- in the 2013, '14 and '15 time frames, were there reports in this similar format that were submitted?
A. Generally, the answer is yes. Again, the criteria of what we would report on was contained within the NPDS permits, those are generally at five-year intervals, although sometimes they get extended depending on the state issuance. While I don't believe the provisions have changed that dramatically, they may have made some small changes in that, but I believe the reports prior to this, at least '15/'14, were under the same permit. So it would have been similar type document.
Q. And I know from the second page that the report was sent to the DEQ under the signature of Miss McCormick, but did you have input into the creation of this annual report?
A. Yes. This report would have been created under my authority.
Q. On page 3, where it says number 1. Additions, deletions and any other modifications to the

Page 53

permittees's previously submitted nondomestic user inventory; do you see that?
A. Yes, sir, I see that.
Q. Was that a reporting requirement in the 2016 time frame, to provide an inventory of quote, unquote, nondomestic users?
A. Yes, it was.
Q. And it would be fair for me to assume that that is no longer a requirement?
A. That is not an item identified in the current templates that the state has us complete.
Q. But it wasn't part of the 2018 report?
A. Right. So we didn't provide a specific report. This Book II is that list as it refers to here, yeah, that wasn't a component of the subsequent reports I believe in '17 or '18.
Q. And what was the criteria for inclusion of a user within Book II, which is in front of you?
A. I think in, what was it, Exhibit 2, there had been identified in that one chart about minor industrial users, 18,000 or so, some number or figure near that number. This, essentially this report would have identified any users who in the respective communities, it's an alpha order by the name of the facility, whatever their particular status is or was

Page 54

as it's known to us or made known to us, again, we believe it's as representative as can be.
Q. But what I'm saying is, going back to my question, is the nondomestic user inventory synonymous with industrial users as we've been talking about or minor industrial users?
A. Generally, I would have to say yes. I would expect -- as I say, these terms have kind of gotten inter-mingled and mixed.
Q. As I see it, there's about 286 pages of what are called nondomestic users in that inventory, correct?
A. The report is called Industrial User Survey, but the states -- at that time, the state permit language asked for nondomestic use. We saw them as the same.
Q. We're not having a math quiz here, but I add up 286 pages in Book II --
A. It says 1 to 286. I have no reason to believe it's different than that.
Q. I counted 42 users on each page for a total of about 12,000 twelve users. You don't have to accept my math, but would you agree with me that there are users that incur the IWC charge that are not listed in the inventory that's part of Exhibit 5?
A. Again, this is not intended to be a compilation of all users who are or would receive an IWC charge. Again,

Page 55

that is something that, I think earlier you mentioned that you have to obtain from finance.
Q. Right.
A. This is some subset of that group that we have had additional contact with to collect information and to make a determination.
Q. Okay. And there's some other things that you're asked to provide, but number 8, which is on page 2393, it asks for summary of the enforcement activities by the permittee during the report period. Do you see that?
A. Yes, I do.
Q. And you reference table 4, it says identify the industrial users under enforcement action during 2016. Do you see that?
A. Wait. The pages are mixed up here. This is 2391. I don't know why it was there. Excuse me, could you repeat your question, please?
Q. You identify on page 2394, you see table 4 identifies the industrial users under enforcement action during 2016; do you see that?
A. Yes, I do.
Q. Are we able to determine from table 4 the identity of the users that were under enforcement action, such that we could determine whether they were SIUs or non-SIUs?

Page 56

A. Let me look at table 4. Table 4 starts at page 2460 through page 2501. And let's see, there are several different tables here. There's a specific table of fines and penalties that had been assessed during the period.
Q. Right.
A. And the name of the company or user who received that, again, I think this report includes an identification of significant industrial users. So if you went back to see if they were SIU -- this table itself doesn't tell you that. But you would have to go back and see are they on the list.
Q. But the data is available for us to make that determination?
A. Yes, I believe it should be, yes.
Q. In other words, anything in table 4, if somebody wanted to determine all those enforcement actions or whatever data is there, how much of that was relating to an SIU or a non-SIU, that data is available in the document? If you want to do the work.
A. My understanding and belief is it should be in the document. And again, I haven't validated each and every item, but I believe it should be discernible from the other contents in the document.
Q. And would that -- with respect to, for example, the

Page 57

self-monitoring or other reports that are submitted by users that are in table 5A and table 5 --
A. 5A and 5? Okay.
Q. Do those identify the user who submitted reports?
A. This is a summary of users who were expected to submit a report and whether it was received or whatever other disposition, because there's an accounting status, and so some of the violation -- again, I don't know the particular terms of the violation, whether they didn't submit a report at all or there's something missing. But it gives a status with respect to each one's. These are facilities that were expected to turn in a six-month report.
Q. So a user who was not expected to turn in such a report would not be identified in table 5?
A. Correct.
Q. So collectively in this several hundred pages report, is there any other enforcement or regulatory activity undertaken by the IWC division that wouldn't be reflected in some way in that report?
A. No. I guess my answer would be no, because we expect this to be a complete summary of any facility that some action was taken, whatever type -- again, we give a description of the enforcement actions taken, the dates, et cetera.

Page 58

Q. And are you aware, and I'm not asking you to agree with it, but are you aware that one of the allegations in our case is that the IWC division doesn't really do anything outside of the SIUs; you understand that's our allegation, correct?
A. I think I recall that, yes.
Q. I'm not asking you to agree with it, I just want to make sure you understand that that's what we're alleging, correct?
A. Right.
Q. So in order to rebut that allegation, is there any information in Exhibit 5 that you could say no, you're wrong, Mr. Hanley, look at this information, it shows that we're regulating non-SIUs?
A. I would have to go through this report. I don't have my recollection of whatever pages here.
Q. Let's start with, again, and I want to be fair to you, but let's start with your actual narrative report that goes from 2390 to 2397. That's a summary, isn't it, of all of the charts and information that follows?
A. Right, this would be a summary, correct.
Q. Is there anything in your summary that you can point to that reflects regulatory activity directed at non-SIUs?
A. Well, item 1, to begin with, which refers to

Page 59

nondomestic user inventory. 2 is specific to significant users. 3 is specific to significant industrial users. 4 is specific to significant industrial users. 5 is significant to industrial users. 6 is specific to significant and categorical industrial users. 7 is specific -- let's see. 7, possibly. Again, I'd have to look at what shows up in 7.
Q. So we could look through table 3 and it would tell us whether this is -- listing of the names of industrial users in significant noncompliance and proof of publication in the largest daily newspaper in the permittee's area; we could review table 3 to identify who those users are, correct?
A. Again, my understanding is table 3 would show any one we published that we determined were in noncompliance, and from that we may be able to determine whether they were SIU, CIU or an IU.
Q. Continue on.
A. 8, again, 8 is broadly written of any industrial users because, again, our enforcement is not just limited to SIU or CIU. As I indicated already, it's voluminous, I haven't reviewed all the pages.
Q. But we could tell, the data is available in table 4 to tell us whether any of the industrial users that were

Page 60

subject to the enforcement action were not SIUs, correct?
A. You should be able to determine that, yes. Again, 9 is specific to significant industrial users, as is 10.
Q. All right.
A. Additional activities we report, which is the investigations of -- under incident prevention and emergency response, as it indicates, these are citizen complaints and referrals on legal dumping or incidents. So again, I would have to look at that table 6, I don't recall what details are there.
Q. Whatever that is, though, that incident prevention and emergency response section isn't providing services to a particular user; they're just responding to situations that may be at various geographical locations around the area, correct?
A. Usually these would involve two situations. Some may involve a specific user site address; others would involve a geographic location, intersection of a street or whatever, that is used to identify the event, because again, we don't know necessarily where the incident occurred.
Q. Right. But whatever detail would be in table 6, correct?
A. Correct. Item 2 here, which is a special project

Page 61

program, these are, as it indicates here, predominantly for groundwater remediation and similar type projects. Again, I believe, as I said earlier, these would receive a distinctive special discharge permit, so some could be SIUs but most are probably not SUIs.

Q. But table 7A would list those users so that we could--

A. Whoever had an active permit would be listed in table 7A.

Q. And do the people that have those special discharge permits have to pay for those?

A. There is no -- I'm not aware of any permit fees that is assessed on those users, no. Actually, we don't assess a fee, I don't assess a fee on those users.

Q. So now we're up to number 3, I guess, the hauled in waste?

A. Hauled in waste, again, as previously indicated, these are a class of users who are usually some mobile truck with some tank, small or large on it, they're usually not significant industrial users, but again, they identify who those persons are.

Q. But they don't, to your knowledge, they don't pay IWC charges, they're people who are regulated under the IWC division but they pay for the privilege of being able to dispose of whatever waste they have, correct?

Page 62

A. It's correct that they pay for the privilege. Again, I don't know enough about the ratemaking process for that. While it would include as part of it, I imagine, the concentration of the materials discharge, there may be some incorporation of other costs that are there. But again, that would be a ratemaking process.

Q. Okay.

A. PCB mercury report, again, this is just an indication that a report had been submitted to the state on that date. Again, those are permit identified requirements and we would just validate that we made the submission. Usually we did this because the state was tardy in acknowledging or processing these reports. And so I imagine by the time of our finance report, we had no determination or acknowledgment from them of receipt, and so it was our way to document we complied with the permit requirement.

Q. All right.

A. Again, here's a reference to report on re-evaluation of wastewater pollutant discharge limitations, again, that was submitted June 1st, 2016. Same thing, it was put here as a -- our validation that the component had been submitted. I don't believe we had received any response from the state as of the date of the filing

Page 63

of this report. Item 6 here, which is table 8, is a summary of results for the wastewater treatment plant. Again, it's essentially akin to that last table in one of the prior exhibits we looked at here, I think it was Exhibit 4.

Q. Okay.

A. Appointment of enforcement authority, again, that is, along with Exhibit 4, too, I think it was the first page of that, where we were responding to -- because we had a requirement to report the exercise of that specific state authority. We had an ongoing requirement to get communities to update and/or make revisions to their ordinances to correspond to the City of Detroit's, and this is a report addressing that. And again, number 9, because again, this was for 2016, and so with the creation of the Great Lakes Water Authority as a separate entity from DWSD, again, while the state understood from the process that we were now a co-permittee, I believe the permit even in 2016 was still issued to the City of Detroit. There were actually two entities, City of Detroit and Great Lakes Water Authority. So there was some additional items that we were in dialogue with the state as far as what they wanted for us to make a transition or to address. That's what number 9 refers to.

Page 64

Q. Okay.

A. And again, it's primarily to document that we've had ongoing discussions and dialogue.

Q. And then the last two pages appear to be responses to what perhaps is another template provided by the DEQ?

A. 2396 and 97?

Q. Yes.

A. Again, yeah, this is a statistical summary of information gleaned from the attachments.

Q. All right. And one final question about Roman numeral III, industrial user, it says, see Book II for list of industrial users. Do you know why you're required to provide the information about the quote, unquote, industrial users?

A. The regulatory requirements that are in the federal, I think for federal, I remember the number, it's 4038 F1, I don't remember the corresponding designation in the state authority, but it's almost equivalent -- there are certain provisions of legal authority we are expected to exercise, and one of them is, again, to be aware of and know who are all these nondomestic industrial sources contributing to us, to make a judgment determination on the need for pretreatment, permitting or other actions related to those. As I think, I believe I said earlier, we have some

Page 65

additional responsibilities to at least advise them that they may have reporting responsibilities under the Resource Conservation Recovery Act, I think it's C and D, but I don't remember exactly, it's been a while since I looked at that. And there are some other notification requirements I believe under Clean Water Act that we're required to make. And we try to do that when we send out and have a contact ourselves or communicate, we've tried to incorporate that as much as we can into the forms, we advise that, to at least give that. So if it's not exactly verbally exchanged, it's at least sought to be documented via the form or formats that are employed in order to convey that information.

Q. But somebody at some point, maybe this was an ongoing process, had to make a judgment about which users would be characterized as industrial users and therefore disclosed as part of this annual reporting?

A. Correct.

Q. Would that have been made at DWSD and/or GLWA?

A. That would be -- DWSD, yes, it would be part of DWSD and GLWA because that's part of the pretreatment program requirements.

Q. Right. Now, if you want to kind of piece that back together so that we can --

Page 66

A. I think I've got most of it as it was.

Q. You did a good job of keeping it in order. We're done with this for now. We're going to compare it to another document and then I think we're going to be done with the deposition.

A. I think I'm missing one piece together.

MR. PELLAND: It didn't go back together as clean.

A. Well, there was a cover page here, Book II or something and I don't see it handy.

Q. We'll figure it out.

A. I don't want to mix it up for you.

Q. We can reorder the pages, let's just make sure -- the record will reflect there's no pages around him other than -- whatever is out of order is in exhibit -- no, it is Book II. That needs to go -- there we go.

A. Here's the page.

MARKED BY THE REPORTER:
DEPOSITION EXHIBIT 6
12:05 p.m.

BY MR. HANLEY:

Q. Perfect. We now have a complete Exhibit 5. Now I'm going to put Exhibit 6 in front of you, and examination of this is going to be a lot shorter but I still need to mark it. Exhibit 6 is just Book II with

Page 67

respect to 2015, correct?

A. That appears to be that as well, correct.

Q. And you would agree with me that Book II for 2015, which is Exhibit 6, has 469 pages of users listed, correct?

A. Correct.

Q. As opposed to 286 pages that are in the 2015 -- or the 2016 Book II?

A. Correct.

Q. And again, we can count them up, but do you know whether there was a conscious decision between '15 and '16 to reduce the number of industrial users that were identified in the Book II for 2016?

A. I believe the 2015 is more voluminous because it reports some additional information that is not in the '15 -- or '16 report. For example, I see on page 1921, there's a status of CMOV. I don't necessarily think that we included the facilities moved. It may have been a dialogue with the state where they said hey, look, we don't want to see companies that are closed, terminated -- again, we would maintain that in a database. So this may be, the '15 report may be -- I'm just --

Q. I don't want you to guess. All I want is to know whether you know of a specific explanation for why --

Page 68

A. I don't have a particular recollection. There may have been a dialogue with the state to clean up the report, but I don't recall specifically.

MR. HANLEY: Fair enough. I don't believe I have any further questions for you, sir. I appreciate your time. And again, I apologize for the late start.

MR. PELLAND: I don't have anything.

MR. WATT: I don't have anything.

VIDEO TECHNICIAN: This concludes the deposition, the time is 12:08.

CERTIFICATE OF NOTARY

STATE OF MICHIGAN)
) SS
COUNTY OF MACOMB)

I, STEVE BROWN, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me digitally and reduced to computer transcription; that this is a true, full and correct transcript of my digital recording so taken; and that I am not related to, nor of counsel to, either party nor interested in the event of this cause.

Steven Brown

STEVE BROWN, CER-999
Notary Public,
Macomb County, Michigan
My Commission expires: March 18, 2023

25-003683-CZ FILED IN MY OFFICE Cathy M. Garrett WAYNE COUNTY CLERK 4/3/2026 3:30 PM Ibrahim Islam

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

LAURENCE WOLF,
individually and d/b/a Wolf Properties,
individually, and as representatives
of a class of similarly situated persons
and entities,

Plaintiff,

v.

THE GREAT LAKES WATER AUTHORITY,
an incorporated municipal authority,

Defendant.

Case No. 25-003683-CZ
Hon. Kevin J. Cox

Gregory D. Hanley (P51204)
Jamie K. Warrow (P61521)
Edward F. Kickham Jr. (P70332)
Kickham Hanley PLLC
40950 Woodward Ave., Suite 306
Bloomfield Hills, MI 48304
(248) 544-1500
Attorneys for Plaintiff

Christopher S. Frescoln (P63175)
Stephen J. Brown (P82684)
Fausone & Grysko, PLC
41700 West Six Mile Road, Suite 101
Northville, MI 48168
General Counsel
(248) 380-0000
Attorneys for Defendant

EXHIBITS 18-22 TO PLAINTIFF'S FIRST AMENDED CLASS ACTION COMPLAINT

EXHIBIT - 18

Presentation
What is IWC?

February 6, 2014



What is IWC?

- IWC – Acronym for **Industrial Waste Control**

- IWC refers to any plan or program for the enforcement of local pollution control

- IWC activities fulfill objectives of the NPDES Permit Program mandated by 33 U.S.C. 1342 (b)(8) & (9) [CWA]

What is IWC?

The term also refers to the DWSD group charged with the implementation of the Pollution Control responsibilities within the Detroit Service Area.

Detroit Service Area	City of Detroit and seventy-seven (77) suburban communities
Federal IPP Program	298 Significant Industrial Users
System Users – Other	18,453 Minor Industrial Users

What are the IWC Programs?

The following regulatory programs are being implemented and enforced:

- Industrial Pretreatment Program
- Surcharge Program
- Hauled in Waste Program
- Special Discharge Program
- Special Programs

What are the IWC Programs?

Industrial Pretreatment Program (IPP)

- The IPP is a local regulatory program to control toxic pollutant discharges to the Detroit Collection System.
- The IPP regulates the indirect discharge of wastewater by non-domestic, commercial and industrial users through a command/control program

What are the IWC Programs?

Industrial Pretreatment Program (IPP) [cont.]

- Program complies with requirements of CWA and associated regulations 40 CFR 401 – 471.
- No Toxics in toxic amounts
- Program funded by IWC Meter Charge

What are the IWC Programs?

Surcharge Program

- Recipients of federal construction grants required to "proportionately share" treatment costs among user classes.
- Requirements in 33 U.S.C. 1284 (b)(1)(A) and associated regulations promulgated by the US.EPA in 40 CFR 35.929.
- User Charge (Surcharge) established annually $/lb. of pollutant

What are the IWC Programs?

Hauled-in-Waste Program

- Program regulates and control discharge and release of septage and septic wastes into the Detroit system.
- Discharges permitted at specific "Dump Sites" for a fee.
  - Oakland County – 2
  - Detroit Wastewater Plant
- Ticket or token sold $/gallon

What are the IWC Programs?

Special Discharge Program

- Program regulates and controls the discharge and release of treated groundwater, groundwater from:
  - ✓ Underground Storage Tank (UST) sites
  - ✓ Construction and pond water
  - ✓ Wastewater associated with the development or cleanup of buildings and properties
  - ✓ Other uncategorized wastewater
- Second element includes a general permit program for gas, steam and electrical utilities.

What are the IWC Programs?

Specialty Programs

Developed to address specific NPDES or achieve local environmental objectives.

PCB and Mercury Program – system-wide effort to minimize discharges and sources of these pollutants.

Best Management Practices and Pollution Prevention Program – Management plans developed by Commercial and Industrial Users to achieve pollutant reductions.

What are the IWC Programs?

Specialty Programs

Restaurant Grease Program – Informational program addresses User maintenance of grease trap wastes.

Spill Plan Program – requires development of spill plans to notify affected parties of actions during an uncontrolled release.

What is the Legal Foundation for the IWC Programs?

Industrial Pretreatment Program (IPP)

- 1972 Clean Water Act created NPDES program and requirements for POTWs to control indirect dischargers [33 U.S.C. 1342 (b)(8) & (9)]
- Consent Judgment CV 771100 (September 11, 1977) required Detroit to develop a Sewer Use Ordinance and implement a program to minimize interference, pass-through and incompatibility with treatment plant operations.
- Specific program requirements specified in federal regulations 40 CFR 403.8 and NPDES permit MI 0022802

Legal Foundation for the IWC Programs cont

Local Legal Authority

- NPDES Permit MI 0022802
- City of Detroit Ordinance 08-05 and local ordinances
- Community and County Service Agreements
- Community Delegation Agreements
- Appointment of State Enforcement Authority (Section 3114 of Act 451)

Legal Foundation for the IWC Programs cont

User Charge Program

- 1972 Clean Water Act required recipients of federal grants to proportionately share costs among user classes. 33 USC 1284 (b)(1)(A).
  - Specific program requirements specified in federal regulations 40 CFR 35.929
- Consent Judgment CV 771100 (September 11, 1977) required Detroit to develop a User charge program
  - Program rules adopted in Court Order of July 10, 1981 (Rate Settlement Agreement)
  - Rules adopted by Board of Water Commissioners in July 1983.

Legal Foundation for the IWC Programs cont

IWC Meter Charge

- Rate Settlement Agreement of July 27, 1981 adopted system of funding IWC Program costs through meter charge system.
- IWC budget be funded through a non-residential user meter charge, for meters of 5/8" diameter or greater.
- Costs assigned to Non-residential users only
- Excludes meters used for fire service and multi-family dwellings

How does the IWC Billing Process Work?

IWC Charge

- Established as part of annual rate-making process
- Costs based upon 5/8" meter and equivalents

Surcharges

- Pollutant basis determined through user classification (Table 3-1) or actual testing program
- User notified w/Appeal opportunities
- Bills prepared by Commercial using volume data from local community

How are the programs working?

Regulatory Programs – current program approved by MDEQ in 1997.

- No violations cited by State for past 16 audited years.
- Three (3) Federal audits – no violations

Surcharge Program – on-going review of user discharges.

Overview of current procedures and history of the IWC and Surcharge Programs

IWC Program - Program elements include:

- Maintain User Database – continuous survey effort
- Inspect facilities – annual requirements, validate permit modifications
- Monitor facilities – independent monitoring requirement matched to User self-monitoring program
- Permit Program – defines terms, conditions, limitations
- Enforcement – written violations, administrative hearings, legal action

Program Overview

Classification	Number of Facilities
Significant Industrial Users	288
Minor Users	18,453
Surcharge Users	153
Hauled in Waste	46
Special Discharge	49
Spill Plans	620

Program Overview (12-13)

Program Activity	Program Effort
Facility Inspections	706
Monitoring Events (DWSD)	6,878
Monitoring Events (Facilities)	5,432
User Self-Monitoring Reports	596
Enforcement Actions	
Notice of Violation	243 (2% of all samples)
Administrative Enforcement Actions & Orders	9
User Survey Inspections	1,797

Program Overview

Surcharge Program

Waste Strength Determination required to establish pollutant basis.

- Minimum sampling is seven days (or days of operation)
- Annual data alternative.
- Pollutants are:
  - BOD (Biochemical Oxygen Demand)
  - TSS (Total Suspended Solids
  - P (Phosphorus)
  - FOG (Fats, Oils and Grease)

Conclusion – Nutshell Version

	IWC Charge	Surcharge
Who	Non-residential, Commercial and Industrial Sources within Service Area falling within scope of regulatory program(s).	Non-residential, Commercial and Industrial Sources within Service Area who discharge wastewater > domestic levels.
What	Support costs of regulatory programs	Recover cost of service for high-strength wastewater discharges from WWTP
When	From inception to ..... perpetuity	From inception to ..... perpetuity
Where	Service Area of Detroit Wastewater Treatment Plant	Service Area of Detroit Wastewater Treatment Plant
Why	Support implementation and operation of regulatory programs to protect WWTP, Collection System and Local Environment.	Ensure system users pay "Proportional share" of treatment costs and services, as a condition of receiving construction grants
How_1	Assessment of meter charge to water meters > 5/8" diameter, excluding fire-only meters and multi-residential units.	Assess treatment costs ($/lb) for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Phosphorus (P), and Fats Oils & Grease (FOG).
How_2	City of Detroit Local Ordinance 08-05 and equivalent community ordinances (2005)	BOWC Surcharge Rules and Regulations (1983)

EXHIBIT - 19

In The Matter Of:

General Mill Supply Co., et al v.
The Great Lakes Water Authority, et al

William Stannard
August 22, 2022
Video Deposition



Judy Jettke
& Associates
COURT REPORTING AND VIDEO

Original File STANNARD220822.txt
Min-U-Script® with Word Index

STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

GENERAL MILL SUPPLY CO.,
Individually and on behalf
of a class of similarly
situated persons and entities,
Plaintiff,
vs. Case No. 18-011569-CZ
Hon. Charles Hegarty
THE GREAT LAKES WATER AUTHORITY
an incorporated municipal authority,
and
CITY OF DETROIT, a municipal corporation,
by and through its WATER AND SEWERAGE
DEPARTMENT,
Defendants.

The Videotaped Deposition of WILLIAM STANNARD
Taken Via Zoom Videoconference
Commencing at 9:28 a.m.
Monday, August 22, 2022
Before Carolyn Grittini, CR-3381

APPEARANCES:

GREGORY D. HANLEY
Kickham Hanley
32121 Woodward Avenue, Suite 300
Royal Oak, Michigan 48073
248.544.1500
Appearing on behalf of the Plaintiff.

MICHAEL J. WATT
Kopka Pinkus Dolin
32605 W. 12 Mile Road, Suite 300
Farmington Hills, Michigan 48334
248.324.2620
Appearing on behalf of the Defendant, GLWA only.

CHRISTOPHER FRESCOLN
Fausone Bohn
41700 W. 6 Mile Road, Suite 101
Northville, Michigan 48168
248.380.0000
Appearing on behalf of the Defendants.

INDEX

WITNESS: WILLIAM STANNARD
EXAMINATION BY MR. HANLEY: 5

EXHIBITS
(Attached to Transcript).
DEPOSITION EXHIBIT 21 - GLWA DOCUMENT 56
DEPOSITION EXHIBIT 44 - SAN DIEGO IWCP DOC. 64
DEPOSITION EXHIBIT 49 - DWSD INFORMATION SHEET 89
DEPOSITION EXHIBIT 51 - STANNARD AFFIDAVIT 87
DEPOSITION EXHIBIT 50 - FEIKEN'S ORDER 94
DEPOSITION EXHIBIT 53 - DEFENDANT'S RESPONSE TO PLAINTIFF'S MOTION 115

Monday, August 22, 2022
9:34 a.m.

VIDEO TECHNICIAN: We're now on the record, the time now is 9:28 a.m. This is the videotaped deposition of William Stannard, being taken on Monday, August 22nd, 2022. This deposition is being taken via Zoom. We are here in the matter of General Mills Supply Company versus the Great Lakes Water Authority, et al. This is case number 18-011569-CZ. This matter is being held in the Circuit Court for the County of Wayne. Would the court reporter please swear in the witness.

WILLIAM STANNARD,
Was thereupon called as a witness herein, and after having first been duly sworn to testify to the truth, the whole truth and nothing but the truth, was examined and testified as follows:

VIDEO TECHNICIAN: Counsel please identify yourselves for the record.

THE WITNESS: Williams Stannard, spelling of my last name is S-T-A-N-N-A-R-D.

MR. HANLEY: Good morning. My name is Greg Hanley, and I'm representing the plaintiff in the class in this case.

MR. FRESCOLN: Christopher Frescoln

Page 5

representing the defendants, Great Lakes Water Authority and City of Detroit by and through its Department of Water, DWSD.

MR. WATT: Good morning, Michael Watt on behalf of Great Lakes Water Authority as well.

EXAMINATION

BY MR. HANLEY:

Q. Good morning, Mr. Stannard. My name is Greg Hanley. I just introduced myself. Can you hear me okay?

A. I can.

Q. And I can hear you as well. Where are you located today, sir?

A. I'm in Kansas City, Missouri.

Q. Are you at your business office?

A. Yes, I am.

Q. We're here -- you're appearing in your capacity as an expert witness in this matter, and I understand that you've come to certain opinions that you plan to offer at the trial of this case, correct?

A. Yes, sir.

Q. And we're going to get into some of that at least. Zoom works pretty good for these kind of things. I'm sure you've probably done one or more since the pandemic. The only thing I would ask is that you let me finish my question and I'll try and let you answer

Page 6

before I jump back in again. Okay?

A. That's fair.

Q. I'm going to share the screen with you if I can do it correctly. I've put on the screen here a document that was attached to the motion the defendants filed several weeks ago, which includes an affidavit of yourself. I'm going to scroll kind of slowly to make sure you can identify it. And is that your signature, sir?

A. Yes, it is.

Q. And is this the affidavit that you signed on other about August 12th that you understood would be submitted to the court in this matter?

A. Yes, it is.

Q. Have you done any other affidavits in this case?

A. No, I have not.

Q. And then I'm going to scroll down a little bit more, there's a reference here to Exhibit A, the Supplemental Answers, which I'll submit to you appear below. And we're going to go through this in detail at points in the deposition, but for this, at this point I just want you to identify this as the document that sets forth the summary of your opinions.

A. Yes, it does.

Q. Are there any other documents that you have created

Page 7

that set forth your opinions that are in any way different from this one?

A. No, sir.

Q. So subject to a literation from you during the deposition, this is the document that we should rely upon as setting forth your opinions in this matter?

A. Yes.

Q. Going back to the affidavit, there's a reference in paragraph 3: In the course of my retainer, I have reviewed the expert opinions offered by plaintiff's exert of Kerry Heid, of Heid Rate and Regulatory Services, including but not limited to those opinions set forth in the 39-page report of opinions and conclusions of Kerry A. Heid, (the Heid report), that was served on defendant's counsel, Christopher Frescoln, on or about May 23rd, 2022, together with all exhibits referenced or incorporated therein. With the exception for the voluminous exhibits containing community meter counts, as well as pleadings, papers, documents, orders, discovery answers and response and deposition transcripts. Do you see that?

A. Yes, sir.

Q. First of all, do you know of Mr. Heid at any time before -- did you know of Mr. Heid any time before this case?

Page 8

A. Actually, back in the 80's when, I think it was the late 80's, when he was at Black & Veatch, we worked together, we worked in the same operation at Black & Veatch.

Q. And you recognize Mr. Heid as -- I know you've come to different opinions, but you recognize Mr. Heid as somebody who is kind of learned in the art, so to speak?

A. I really don't know much about Mr. Heid since that time. I've seen his name from time to time, but given his experience and I think his resume was also included in his one of the documents I read, he's certainly had experience in the industry and learned in the concepts of cost of service for utility ratemaking.

Q. You reference in general some documents that you reviewed. Did you maintain a list of the documents that represent the universe of documents that you reviewed in order to come to your opinions?

A. I have documents on file that have been provided by counsel in this case, and I think -- and so as far as an identified list, I don't have a list that I have available.

Q. Well, then, I guess we'll go through the general list and you'll just have to tell me what you remember.

Page 9

What court papers or pleadings did you review in this case?
A. The material with regard to the amended complaint filed by the plaintiffs and the responses from Great Lakes Water Authority to that complaint. There was also early on, there was -- I was provided a copy of a mediation summary to review as I started in this engagement, that I think required your authorization for that to be shared with me. There was other responses to Interrogatories as well as production of documents, and then more recently some of the motions, several of the motions provided by plaintiffs as well as the defendants.
Q. Other than attachments to motions -- I understand there's always a lot of exhibits, including the mediation summary -- did you review generally the defendant's document production?
A. Most of that came from the attachments and exhibits that were included with depositions as well as the items that were referred to by Mr. Heid in his report and referenced in his report.
Q. You referenced deposition transcripts, do you remember which deposition transcripts you reviewed?
A. Yes. Mr. Bart Foster, I believe there were two depositions of Mr. Foster, a deposition of Steve

Page 10

Kuplicki, who was the head of the Great Lakes Water Authority Industrial Waste Control Program and a deposition of Mr. Savitskie. I want to put an L in his name, but Savitskie.
Q. Did you see a deposition of a former DWSD lawyer named Cheryl Jordan?
A. I saw the deposition, I just reviewed it quickly, because I think she participated with Mr. Savitskie in their review of the Industrial Waste Control Program in about 2015.
Q. Any other depositions you recall reviewing?
A. Not at this point.
Q. By the way, are you aware that one of the issues in this case is who is legally responsible to pay the IWC charges in the suburban communities?
A. I've seen that issue, I believe it was questions that you had in some of the depositions maybe to Mr. Kuplicki.
Q. All I need to know is whether you plan to express any opinions on that issue.
A. Not at this point, I don't plan to.
Q. And you haven't been asked to either, correct?
A. No, I have not.
Q. When was your firm first retained in this matter?
A. About December of last year.

Page 11

Q. So December 2021?
A. Yes.
Q. And do you have a retention agreement?
A. Yes, I do.
Q. Is the arrangement between you personally and the defendants or is it between your firm Raftelis and the defendants?
A. My firm.
Q. Has anybody else at your firm worked on this engagement?
A. No, they have not.
Q. When were you first provided with documents in this matter, background documents?
A. Provided some -- the mediation summary at the outset and then really did not start getting documents until this spring.
Q. Can you nail it down a little bit closer in time than the spring?
A. Yeah, I didn't go -- I would have to go back and look at my calendar and see when I started receiving things, but it could have been about March or April. I would have to go back to confirm actual dates.
Q. And I'm not asking you to do it at this moment, but do you have your calendar in your physical location so that if we needed to get a more firm answer to that,

Page 12

we could find it?
A. We could do that, yes.
Q. I may. I'm not asking you to do it right now. Your affidavit says that Heid report was served on Mr. Frescoln on or around May 23rd, 2022. Do you know when you received it?
A. It was, of course, after that date, so maybe in June.
Q. Would that still be on your calendar as well?
A. I should have a record of when I received it from Mr. Frescoln.
Q. And then how many hours total have you devoted to the project so far?
A. Probably 75 -- I would say about 75 hours. Again, I would have to go back and look at my time records to confirm that.
Q. Would the bulk of that have been incurred after you received the Heid report?
A. Yes, as well as reviewing other documents as well. Most of it -- yes. The bulk of it after receipt of the Heid report.
Q. Had you formed any opinions prior to the arrival of the Heid report?
A. No. Well, I had not formed any opinions until I had gotten through not only the Heid report but other material and, of course, the depositions and the

Page 13

exhibits in those depositions that helped me understand more fully the process that was employed by Great Lakes Water Authority, and prior to that, Detroit Water and Sewerage Department, in the establishment of the Industrial Waste Control charges.
Q. Did you undertake a detailed review of -- well, let me start more basic. You understood that on pretty much an annual basis, Mr. Foster would perform a cost of service study first for DWSD and later for GLWA, which included calculation of the revenue requirement for the IWC charges and the derivation of the rates, correct?
A. Yes, maybe a little bit of -- that is a correct statement, but I believe he did annual review of rates, I think there were a few years where he did not undertake a full cost of service analysis during that period. But for the most part, he would establish rates, work with Great Lakes Water Authority, and prior to that Detroit Water and Sewerage Department in establishing understanding the costs and then recommending adjustments to rates to recover the revenue requirements.
Q. And you would agree with me that the methodology sometimes differed throughout the period? It wasn't constant from, say, July 2013 to June 2021?

Page 14

A. I think there were some nuances within the methodology as to the level of detail that was entered into as part of that process.
Q. And as part of your engagement, did you undertake a detailed review of each of the cost of service studies?
A. I'm sorry, there's -- I have to apologize, there's construction equipment, they're building a streetcar outside my window on Main Street in Kansas City, and there's a truck making noise. So could you repeat that?
Q. Yes. The question is, did you perform a detailed review of each of the cost of service studies to get an understanding of how the rates were being determined?
A. No, I did not. Nor was I asked to.
Q. But did you become aware of the elements of costs that were being recovered to the IWC charges?
A. Yes, in reviewing, particularly the exhibits to Mr. Foster's depositions, where I could see -- and his responses to your questions, see what the process and elements of costs that were identified and related to the Industrial Waste Control charge structure.
Q. And you would agree with me that the costs primary consisted of personnel costs, correct?

Page 15

A. I believe principally there's direct and indirect costs, there were some allocation of costs, but the personnel costs are a significant element of the Industrial Waste Control Program activities.
Q. But would it be fair to say that you didn't independently evaluate whether the cost inputs for, say, personnel, were accurate or correct?
A. No. I used the data that had been provided, and essentially, it was budget information, so use of budgets is the common way to set prospective rates. So I did not go back and drill into the veracity of each budget item.
Q. So in other words, you didn't -- if the budget assumed that a personnel cost was, for example, three million, you didn't go back and determine whether it was five million or one million; you just analyzed it as the three million budget number, correct?
A. Yes. I took the data as it existed.
Q. Are there any other elements of costs that you kind of, for lack of a better word, audited as part of your analysis?
A. I did not audit any of the data, the input data, I just relied on the data and the assumptions that were employed by Mr. Foster in his work that was implemented by the Great Lakes Water Authority.

Page 16

Q. And you would agree with me that Mr. Heid's report has a number of calculations, mathematical calculations in the back of it, correct?
A. Yes, it does.
Q. And I understand that you are disagreeing with the opinion regarding the reasonableness of the rates, but would it be fair for me to assume that you didn't check Mr. Heid's math, for lack of a better word? You're not challenging his calculations?
A. Being a great analyst and an engineer, I did -- taking the material in his report and the numbers, tried to determine, follow the calculations to see if I could come up with the same results. I did that, but I'm not going to offer any direct opinions at this point if there were any issues with his calculation that he employed in his report.
Q. In other words, when he, say, corrected revenue requirement input to reflect what he determined was the appropriate, for example, personnel cost, you're not offering an opinion that the number he used was correct or incorrect?
A. That is a correct statement.
Q. I want to talk generally about ratemaking principles so that we can make sure that when we get into the details of your opinion, we're using the same

Page 17

language. In your mind, what's a revenue requirement?
A. The revenue requirement for utility includes the elements of costs that will be incurred by the utility in providing its service, both in terms of operation and maintenance expense, then there's debt service, principal and interest on debt that is used to finance the overall system and infrastructure for the system as well as other significant elements of equipment. There's revenue that is used for capital improvements or investments in the system, so that's part of the revenue requirement, and then any either mandatory or desired levels of reserve fund balances the utility believes is appropriate to help manage the risk of utility operations. So it's the level of revenue needed to provide for the operation and maintenance expense and investment in the system.
Q. And would it be fair for me to also conclude that the revenue requirement to be recovered through rates would require the deduction of what are called non-rate revenues before determining those charges?
A. Yes. That's common practice to -- there are other revenue sources that a utility can generate through investment earnings on idle funds, interest earnings back in the days, there was a long period where interest rates were very low, but they're starting to

Page 18

grow again, but there's interest incomes, nonoperating income that's reported on their financial statements and also miscellaneous fees and charges that can be utilized as an offset against that revenue requirement.
Q. And you're familiar with the term "fair and reasonable" as it relates to utility rates, correct?
A. Yes.
Q. And there is a distinction between fair and reasonable, correct?
A. I believe there is a distinction, but it's a topic that's there has been a lot of discussion in the industry as to exactly what fair and reasonable means. But I think there is a distinction, a generally accepted distinction.
Q. And you've expressed opinions in the past that make a distinction between fair and reasonable, correct?
A. Yes.
Q. And what's your definition of fair in connection with utility rates?
A. Fair is the total level of revenues desired to be generated by the utility fairly represents the level of revenue needed for adequate and appropriate operation and maintenance and investment in the system as well as appropriate levels of reserve funds to help

Page 19

manage the risks associated with utility operations.
Q. Well, does fair also encompass the notion of each customer class bearing its proportionate share of the total costs?
A. That's more in the reasonable side of when I look at it as how costs are distributed among customer classes so that they -- it gets into the equitable distribution of those costs among those customer classes. So it kind of ranges from fair to reasonable. But that is an important issue that needs to be reflected and why utilities undertake cost of service studies from time to time to examine what that distribution or cost should be.
Q. Have you ever expressed the opinion that fair means that the rates recover revenues from customer classes in relation to the costs incurred in providing utility services to those customer classes and be free from self-interest, prejudice or favoritism?
A. Yes.
Q. Okay. And so that means that the classes that either cause or benefit from a particular aspect of the utility services should be assigned those costs?
A. Yes, to the extent that it can be accomplished through the cost of service process and that there's adequate data to be able to utilize that -- undertake that

Page 20

analysis.
Q. Right. And fairness encompasses the idea that similarly-situated customers or certain groups of customers don't subsidize costs associated with similarly situated customers, correct?
A. To the extent that that's available and possible, that is certainly the objective, to try to do that to the best ability of the utility. Within each class, there's a wide variety of users within a class that can make some of the other analysis a little more complicated, but certainly the overarching objective is that classes of customers pay in proportion to the costs that have been allocated to them.
Q. Right.
A. In total.
Q. Right. And I understand that you can make -- you can have some discrimination in rates, but the discrimination needs to be cost based and justified, correct?
A. Yeah, to the extent that it can -- yes. Generally, the discrimination, there would have to be a basis for why that would be appropriate to have some discrimination.
Q. And I guess a classic example would be sewer users, separating them into residential, commercial,

Page 21

industrial, based upon assumed pollutant loadings, for example?
A. Yes.
Q. And that would be an example of where there's a cost-based reasonable discrimination among the customers because they have different characteristics?
A. I would not use the term discrimination. The premise that you've laid out there is that as a class of customers, say commercial customers or some subset of a commercial class of customers, has characteristics of wastewater different than sanitary discharge from homes. And that's a fairly common method, and certainly in California but in other states as well where there's recognition that commercial users, even though they're not -- we don't invest the money to go out and sample and analyze their waste like the high strength surcharge customers, where it is economically feasible to get that data, that we use limited amount of data to determine that yes, this group of customers has characteristics that vary. So I wouldn't describe that recognizing that cost of service difference as discrimination.
Q. And I won't quibble with the term, but differing rates need to be based upon a cost foundation, correct?
A. Yes.

Page 22

Q. So, for example, simple example, you have a street that has ten homes on it, it would be inappropriate to distribute the revenue requirement only against the addresses that end in a 1, right?
A. Yes.
Q. And we'll get into it in the course of the deposition, but you would agree with me that with respect to the IWC charges, they are not assessed against all sewer users, correct?
A. That is correct, they are not assessed against all customers of the wastewater system.
Q. And also you would agree that they're not assessed even against all nonresidential sewer users, correct?
A. Currently, yeah. If you're talking about this case in particular, yes, that's my understanding.
Q. Okay. Would you agree with me that ratemaking is a prospective exercise?
A. Yes, it is.
Q. And because of that, one limitation on ratemaking is you need to use budgeted or historical figures as part of the process?
A. Yes. The common method used for municipal utilities in the United States is using budgets, budget data, and then for those that do multiple years in their rate setting, they will forecast off of a budget year.

Page 23

So the budget is an important component, both in terms of operating and maintenance expense as well as the capital improvement program investment that may be needed. Budgets are the common method to be used in the industry.
Q. And you would agree with me that it's appropriate to use the most accurate estimate of the amount of each of the cost components, as is available?
A. I'm sorry, could you --
Q. You would agree with me that it's appropriate to use the most accurate estimate of the amount of each of the cost components to the extent it's available?
A. Yes.
Q. And so if a particular cost is known or fairly estimable, you should use that amount when determining the revenue requirement, correct?
A. Yes, and hopefully in the formation of budgets, that level of rigor is undertaken by the utility to the extent that they have the wherewithal to do that.
Q. And so you would agree that it would be inappropriate to use a cost amount that's materially higher or lower than the expected or known amount?
A. If you knew that it was -- if you went into the process knowing that an element was higher than it was going to be, then I think that would need to be

Page 24

recognized.
Q. And then I think we've established that it's not exclusive, but the primary cost associated that is recaptured through the IWC charge are personnel costs; do you remember that testimony?
A. As far as individual line items, personnel costs is probably the highest line item, but there are other costs that are -- whether it be administrative costs, other allocation costs that also reflect personnel costs. So there's a wide variety of elements that all come together, but in total, personnel costs are the most significant item of any individual line item.
Q. And in your experience, personnel costs for a future period are something that can be fairly estimated if you know the number of employees and their compensation, correct?
A. Yes, that's generally how budgets are created.
Q. So if personnel costs are expected to be a million dollars, it would be inappropriate to say use three million dollars as the revenue requirement, attributable to that cost element, correct?
A. Without any other information that would lead me to believe that the three million is where it was going to head, I would say that using the best information and the best information, that the million dollars

Page 25

would be the right number.
Q. Would you agree with me that personnel costs in the ratemaking process are more susceptible to accurate determination than, say, how much water you're going to sell or how much sewage you're going to dispose of in a coming period?
A. In general it should be, other than if there are changes, organizational changes going on and if there are need for additional, hiring additional staff and -- so there's a lot of intricacies that go into that. But certainly it's information that the utility should have knowing here's the personnel that we have and here's -- next year we need to hire ten more individuals, then how that would be reflected and what's the costs for those. So you also have compensation issues, salary issues and how the utility would, or the community, how they develop their -- either doing their salary compensation studies or they're getting information as to what level of salaries are needed in order to be able to recruit people and retain people. And then finally, there's the cost of the benefit side of things as well, whether it be pensions and health care costs, all which can be reflected based on the number of positions that you anticipate there being funding in

Page 26

the budget.
Q. Hold that thought for a minute. You haven't performed a cost of service study in this case relating to the IWC charges, correct?
A. No, I have not.
Q. But if you were, all the things you just described to me would be something that you would do. In other words, you'd look at the historical personnel costs, you would make inquiries of your clients to determine whether there are material changes and the expectations about those personnel costs, and you would try to incorporate that information into what you were doing, correct?
A. That would be a reasonable approach, yes.
Q. And, in fact, it's an approach you have taken in the past, correct?
A. It's an approach I have taken and my firm has taken, as well as other colleague firms in the past as well as currently.
Q. And given the fact here that the primary driver of costs of the IWC division is personnel, that's something that if you were performing a cost of service study, you would perform a detailed analysis of that, correct?
A. In a going forward approach, yes.

Page 27

Q. In other words, you would say okay, personnel costs were this and you had 30 employees, are you going to have 15 employees in the coming period or are you going to keep the same amount of employees; that sort of inquiry is what you do in determining rates and charges, correct?
A. Yes.
Q. And have you gone back and compared the amount of costs that were included in the IWC revenue requirements for the fiscal year '14 through '21 to compare them with the actual costs?
A. The only -- I've only examined the information that was in the exhibits where there was information either from the Savitskie report where some adjustments were made to reflect actual costs, and so I've looked at the material that was presented in those exhibits. I did not independently go back to try to audit or gather that kind of information. I've used that information that was in the exhibits as the basis for looking at how things have changed.
Q. And so it would be fair for me to assume that you reviewed what Savitskie did and his conclusions, but you didn't investigate whether the distinctions that he made between budgeted costs and actual costs were, in fact, true and accurate?

Page 28

A. I did not review beyond -- I accepted what he did as a reasonable assumption for my work, and did not go back behind that to see if what he did was reasonable.
Q. And you would agree with me that the IWC charges here, I mean, they may increase or decrease on an annual basis, but in any given year, they're a fixed charge to the users, correct?
A. The way they're calculated, they're calculated as a fixed charge.
Q. And they don't vary based upon actual water or sewer usage, correct?
A. That's correct. So like any fixed charge or base service charge that are employed, they do not vary by the amount of water usage.
Q. And varying water usage can, for a usage charge, create challenges, correct?
A. I'm sorry, create challenges for who?
Q. For ratemaking. And I guess the classic example is, you have a dry summer versus a wet summer. People tend to use a lot more water in a dry summer than they do a wet summer, correct?
A. Right.
Q. And that can impact the accuracy of the forecast, correct?
A. Certainly the most rate consultants are not weather

Page 29

forecasters, which can be a challenging career in its own right, I guess, but what we attempt to do is project on a normalized basis because there are hot and dry years and other elements. Weather is a primary element of certainly outdoor water usage, whereas indoor water usage will be more consistent, but we don't -- it's difficult to make that distinction from every customer, how much is indoor versus outdoor usage. But we try to project using a normalized basis so that we're not going to assume that next year there will be a drought, a continuation of a drought that will reflect what's going on to the best of our ability.

Q. But you would agree that the cost inputs into the IWC charges are relatively stable?

A. Yes.

Q. And so large variations in usage, for example, dry summers, don't affect the IWC charge cost inputs?

A. The level of costs incurred for IWC activities, it does not -- it is not impacted by the amount of water usage to the best of my knowledge.

Q. So that fact makes forecasting the IWC revenue requirements more susceptible to accurate determination than, say, water or sewer usage charges?

A. Again, the projection of costs, even for the

Page 30

volumetric kinds of costs -- when you look at the costs that are related to, directly related to (inaudible) treatment operations for the volume of water are pretty narrowly defined as powering chemicals. So you look at the total cost of a wastewater treatment plant, or in the case of Great Lakes Water Authority, the Water Resource Recovery Facility, formerly known as the Wastewater Treatment Plant, large portions of those costs are pretty much fixed related to all the personnel costs and regular routine maintenance of those facilities. So it's really the element of cost powering chemicals which can vary from year-to-year based on the amount of water usage or in this case the amount of wastewater that comes through the treatment plant.

Q. Fair enough. Do you understand that the IWC charges here are intended to cover just the costs of the IWC division?

A. I believe that's true, the direct and indirect costs associated with the -- in the support of the Industrial Waste Control division.

Q. Right. And are you aware that there are no other rate revenues that are used to -- rate or charge revenues that are used to finance the IWC division?

A. I don't believe there are any other costs that have

Page 31

been -- of the IWC that were allocated to other users to recover those costs. So when you say finance, it's a division of the Great Lakes Water Authority, and so it's not like it's carved out. And the only money they can spend is the money that comes in, the revenue, so it's not a subsidiary or franchise of Great Lakes Water Authority. In totality, the revenues come to the utility and that's what finances their operations and their capital investments.

Q. But there is a separately calculated IWC revenue requirement, correct?

A. There is a separately calculated IWC revenue requirement, that is correct.

Q. And that is intended to cover the full cost basis for the IWC division including indirects correct?

A. Yes.

Q. And you're familiar with what the IWC -- you familiarized yourself with the programs and services that are provided by the IWC division?

A. Yes.

Q. And in addition to what's called the Industrial Pretreatment Program, which we're going to get into in detail, there's also a Hauled in Waste Program that is under the IWC division?

A. Yes.

Page 32

Q. Have you evaluated whether the Hauled in Waste Program provides any rate or charge revenue to the GLWA or DWSD systems?

A. No, I did not.

Q. In your view, if there was revenue associated with those activities, would you at least have to look at whether that should be used or counted toward satisfaction of the revenue requirement?

A. The Hauled Waste Program, whatever that is, there will be two components, one is the cost of treating that waste, but there's a cost of administering, managing that program, which I believe is within the IWC. So if there's revenues that were generated from that and you could segment out the administrative portion of those revenues, then that can be treated as a revenue offset against the IWC program.

Q. Are you also aware that IWC division administers or oversees the Pollutant Surcharge Program?

A. Yes.

Q. And you understand that the Pollutant Surcharge Program is separate from an Industrial Pretreatment Program in that the pollutant surcharges are intended to compensate for the fact that certain users have higher concentrations of what you'd call the normal pollutants?

Page 33

A. Yes.
Q. And there's a treatment cost associated with that. Do you know -- have you analyzed how the costs of the Pollutant Surcharge Program are recovered?
A. I did not go back -- I knew at one point years and years ago, back in probably the mid-80's, but costs are allocated for treatment to the traditional pollutants, which would be biochemical oxygen demand, suspended solids and phosphorous, and then those costs become the basis for the surcharge rate that is applied to those users that have higher than normal domestic sewage in their waste stream. So those costs -- to the best of my knowledge, that continues to be the basis for Great Lakes Water Authority's approach to developing the costs or the surcharges.
Q. And so there's a treatment cost, but to the extent that part of those charges are intended to compensate for the administration that's performed or the regulation performed by the IWC division, it would be appropriate to look at whether that should be credited toward the IWC revenue requirement, correct?
A. Yeah, either credited toward or segmented out from the IWC activity so the surcharge piece of it would be recovered from the surcharge customers.
Q. And that's an analysis that you haven't done and you

Page 34

haven't seen any documents reflecting that, correct?
A. That's correct.
Q. Would you agree with me that revenue requirements are usually determined on a periodic basis and typically a year for the utilities of the type represented by DWSD and GLWA?
A. I wouldn't -- certainly Great Lakes Water Authority uses an annual basis, but they do a two-year budget, so they do a biannual budget, but then they examine rates on an annual basis. I wouldn't go so far to say -- there's other utilities that do multiple year, whether it be city of Los Angeles or city of St. Louis where they're projecting out for a four or five-year period and develop rates and approve rates based on that approach. I think even Philadelphia only adjusts their rates, their cost service analysis about every three or four years.
Q. But that's not the way it's historically happened with DWSD and GLWA?
A. DWSD and GLWA have historically done things on an annual basis.
Q. You've pointed out some exceptions to that, but that's generally what prevails in the municipal utility world, correct?
A. I wouldn't say generally prevails. It's common, but

Page 35

there's other methods that are also used.
Q. But part of the reason you do it on a periodic basis, leaving aside whether it's a year or two years or three years, is that things change over time, correct?
A. Yeah. Certainly revenue needs change with each budget or how costs -- certainly inflation or whatever, costs grow, and so it's appropriate then to have -- to reflect that in future rates. As far as a cost of service determination, it's probably far more common to do periodic cost of service analysis maybe every four or five years and a cost of service study is actually redone, a comprehensive cost of service study. So setting rates on an annual basis to reflect what is happening from the cost component element of it is appropriate.
Q. And again, I know that GLWA/DWSD didn't do full-blown cost of service studies for the IWC charges every year, but they did do a determination of the rates in each year that we're looking at, correct?
A. Yes.
Q. And the rates changed every year, correct?
A. Yes.
Q. And some of the cost inputs changed every year, correct?
A. Yes.

Page 36

Q. Have you heard -- you're familiar with the term "test period" or "test year"?
A. Yes.
Q. What does that refer to?
A. Generally, that's a year that's selected for a cost of service study that reflects the data that you have that would be utilized for the cost of service analysis to establish that test year rate structure, cost of service allocation or classes and then the ultimate rates.
Q. In the course of your experience, have you been retained to address the reasonableness of utility rates during a particular year?
A. Retrospectively?
Q. Yes.
A. Yes. Actually, in my -- during my time at Black & Veatch, I did work for the Detroit Water and Sewerage Department where it where I was involved in disputes from wholesale customers with regard to rates, and then we examined -- and early on I was involved just as a staff consultant on engagements to determine the reasonable set of rates that were established.
Q. And with respect to DWSD, are you talking about the Novi case from years ago?
A. That was one that I was involved with, yes. That was

Page 37

later on, I was a little more senior at that point. I was really thinking of the first one against Oakland County, might have been southeast Oakland County and a few other Oakland County communities that was back in the late 70's.
Q. But leaving aside DWSD, have you been involved in assessing the reasonableness of rates over -- on a yearly basis over more than one year?
A. I'm not sure -- can you explain --
Q. Let me withdraw the question, because it's inartful. Is it possible for a rate to be reasonable in one year and unreasonable in another?
A. I think it would be an unusual circumstance that would result in that swing from being reasonable to unreasonable. I'm not sure where you draw the line -- if you can draw a line someplace, if it's everything on this side of the line is reasonable, everything on that side of the line is unreasonable, makes it even a little more complex. But I don't recall that, having been engaged with something where there was swings in reasonableness and unreasonableness from year to year.
Q. Well, what's the idea -- what is the reason for the test year, using a test year?
A. Well, historically, when we start out with investor-owned utilities, it was common for regulatory

Page 38

commissions to use a historical test year adjusted for known and measurable changes to the actual results. And for municipal utilities, I'll give you a couple examples. I'm doing a water system cost of service study currently for San Diego, California, and in this case, the rates will be in effect for three years and our test year will be 2014. Excuse me, 2024. We're not -- we just have the 2023 budget, so we're projecting for 2024, but that becomes the test year for establishing rates for the cost of service study with subsequent years adjusted on an across-the-board adjustment based on the revenue needs.
Q. Does your San Diego work include the sewer side?
A. I'm sorry?
Q. Does your work in San Diego involve the sewer side or just water?
A. Not at this time. It's just the water cost of service that we're currently working on.
Q. Have you worked on any other sewer side stuff for San Diego?
A. We did a wastewater cost of service study two years ago.
Q. Were you involved in a study that dealt with their Industrial Waste Control charges?
A. I was not personally, no.

Page 39

Q. But you're aware that it happened?
A. Yes.
Q. Did you become familiar with the results of that?
A. Not -- I just know that -- we were asked to review the Industrial Waste Control Program and come up with a new system of fees and charges, permit fees and other charges that could be applied going forward. And I believe the city adopted that and (inaudible) over a four or five-year period.
Q. And you would agree with me that the charges in San Diego that have been implemented are not fixed costs assessed based upon the size of meters, correct?
A. In their case, no.
Q. And, in fact, the San Diego charges are covered primarily by SUIs that create the need for permitting and inspection and monitoring, correct?
A. I'd have to go back. I don't know how their charges are applied and who they're applied to.
Q. Do you know who at Raftelis is responsible for that?
A. Yes, I do.
Q. And what's his or her name?
A. The managers name was Todd, T-O-D-D, Chrisano, C-H-R-I-S-T-A-N-O.
Q. Okay. And again, I'm testing your memory, but did you become aware that part of that analysis involved

Page 40

parting out parts of the IWC costs that benefited the public generally or all sewer users?
A. I'm not aware of that.
Q. You're familiar with the cost of service concept, are you not?
A. Yes.
Q. And would you agree with me that cost of service is a fundamental benchmark used for establishing utility rates in the United States?
A. Yes, it is.
Q. And that the cost of service concept is a cost-based process of converting revenue requirements into the unit costs?
A. Yes.
Q. So basically cost of services, the total annual revenue requirement is to be derived from utility revenues, right?
A. Yes.
Q. And would it be fair to say that cost of service, one of the goals of cost of service is to match rates charged to each group to the cost of servicing those groups?
A. The objective is to establish a schedule of rates and charges that would reasonably recover the cost of service by class. So I think what you said is true

Page 41

and just to clarify that, objective is to have rates that recover the cost of service for the class.
Q. And the idea is that each class pays its own way with no subsidies, correct?
A. To the extent that it's possible, yes, that's the objective.
Q. And a subsidy means that one user who benefits from the utility service and/or causes cost to be incurred by the utility should not have those costs subsidized by other system users?
A. From an economic equity standpoint, that's the basis for rate setting and that has been the basis for many decades in the United States.
Q. All right. So the idea is to achieve equity, which is an attempt to recover costs from users in proportion to their use of the system by recognizing the impact of each class on system facilities and operations?
A. Yes.
Q. So with respect to IWC charges, it's appropriate to, in your view, it would be appropriate to recover those costs by imposing them on people who contribute to the cost of the IWC division, correct?
A. Yes. IWC, Industrial Waste Control is a federal requirement, both in terms of from an implementation of the Clean Water Act and then the formation of the

Page 42

part 403 regulations of Environmental Protection Agency requiring estimates to implement, develop and implement approvable pretreatment, Industrial Pretreatment Programs, which the IWC is for Great Lakes Water Authority. So they are responsible for administering and controlling all the waste that is under the -- in the rules, the Great Lakes Water Authority rules, or in a sewer use ordinance. There's a wide range, direct federal requirements as well as local requirements that require regulation of users of the system and how we manage that.
Q. Let's talk about IPP programs. You've touched on it a little bit. The primary purpose of an IPP program is to identify and pretreat toxic pollutants that could harm Publicly-Owned Treatment Works, correct?
A. That's one of the objectives, yes.
Q. And just so that we make sure we understand, if I use POTW in this line of questioning, you understand that that refers to the Publicly-Owned Treatment Works, correct?
A. Yes.
Q. And that would, in this case, it would be the GLWA, the Water Resource Recovery facility or whatever it's called currently, correct?
A. Yes, and the collection system that feeds the

Page 43

wastewater to that facility.
Q. But an IPP addresses something called indirect discharges, correct?
A. I'm not sure what you mean by indirect discharges.
Q. Have you heard a distinction between direct discharges and indirect discharges?
A. No, it's not coming to me, not a distinction I've made.
Q. I'll tell you what I understand the difference is, is that the direct discharges are discharged directly to a waterway and indirect discharges don't, but that may not necessarily be a precise definition, but have you ever heard that distinction being made that way?
A. Not that I recall. But I think certainly the concept, when you're talking about discharging into a waterway, so there's -- a direct discharger is someone who -- if you discharge waste to a water in the United States, you need to have a permit from the state and the EPA to be able to do that. Others discharge through a wastewater system, and then the treatment facility and the utility, in this case, Great Lakes Water Authority and DWSD, have the NPDES permit. So users that discharge to the GLWA system are, in fact, indirect discharges to the Detroit River and Rouge River
Q. You're familiar with the term "conventional

Page 44

pollutants", are you not?
A. Conventional pollutants?
Q. Yes.
A. Yes.
Q. Would you agree that they consist of something called BOD, which is biochemical oxygen demand is one of them?
A. Yes.
Q. Total suspended solids or TSS is one of them?
A. Yes.
Q. Phosphorous is one of them?
A. Yes.
Q. Fats, oils and greases or FOG is one of them?
A. Yes.
Q. Is fecal coliform one of them as well?
A. I haven't seen it in terms of calling it a conventional pollutant, but they exist, so --
Q. It's part of what goes there, right?
A. It's there in the waste.
Q. So would you agree with me that sewage treatment plants generally are designed to treat conventional pollutants?
A. Yes. I'd say that certainly BOD and TSS or suspended solids primarily, nutrients are a growing concern around the United States, so many treatment plants do

Page 45

not deal with any treatment processes for phosphorous and nitrogen, but in the Detroit situation, phosphorous has been a pollutant of concern for some time, and so there has been a process involved with adding chemicals and treatment elements to control phosphorous.
Q. Okay.
A. FOG is another issue. I have my own opinions with regard to the best way to manage fats, oils and greases. I believe it's more of a collection system challenge than it is a treatment plant challenge. But many utilities prohibit discharge of fats, oils and greases above 100 milligrams per liter, but others, such as Great Lakes Water Authority, provides a surcharge for that. So they allow it, it's not prohibited, but excessive fats, oils and greases can cause problems within the collection system and cause sewer line blockages.
Q. But to your understanding, is monitoring fats, oils and greases part of the IPP program that GLWA administers?
A. Certainly there's a surcharge program for fats, oils and greases, so they must monitor some discharges of fats, oils and greases to the extent that those are surcharged to some users.

Page 46

Q. But my point is, you're not required under, to your understanding, to pretreat fat, oils and greases, correct?
A. Correct.
Q. And so, of course, would you agree that sewage treatment plants are generally not designed to treat toxic or nonconventional pollutants?
A. There's no specific design criteria. Certainly understanding what the waste treatment is going to be before the plant is designed, but whether it be toxics, inorganic, organic chemicals or heavy metals, things that are not deemed to be something that will be directly incorporated in the design to remove. They may be removed just by the nature of the process, but it's not that it drives the system to be different in its nature.
Q. But the IPP regulations require certain users to pre-treat their discharges before they enter the system, correct?
A. Yes.
Q. And the idea behind that is that certain types of pollutants can evade the biological water or wastewater treatment and therefore pass through the treatment plant untreated?
A. Yes.

Page 47

Q. And there may be others. And you would agree that this can harm the environment, correct?
A. Yes.
Q. Kill fish, do other bad things once it hits the water?
A. It can cause problems, environmental problems if allowed to happen.
Q. So at least part of the purpose of the pretreatment program is to protect the environment, correct?
A. Just as the purpose of the treatment plant is to protect the environment.
Q. Right. I agree. Would you agree with me that significant industrial users are the focus of an IPP program because they're more likely to be required to perform pretreatment?
A. The regulations require recognition of significant industrial users, which are any user that has more than 25,000 gallons per day of discharge or one that falls within one of the categories of industries of concern. So we used to describe it as significant industrial users as being 25 gallons a day and more in the categorical industries on the list of categories that are included in the regulations.
Q. But the idea is if you're in that group, you're subject to the monitoring and permitting process that is administered by the IWC division, correct?

Page 48

A. Yes. Essentially, there's more monitoring, more oversight, more reporting both in terms of the user, what they have to submit on a regular basis that has to be reviewed, filed and determined if there's any violations of the sewer use ordinance or the rules and regulations of GLWA.
Q. Right. And in your many years of experience, you've come to understand that the primary drivers of cost for Industrial Pretreatment Program are the permitting, monitoring, inspecting activities that are largely devoted to SIUs and perhaps other industries that are known to be generators of waste that is of concern, correct?
A. That's going to be a significant element of cost and effort, certainly not only the administration of the program, but also notices of violation and enforcement activities, those elements as well are going to be the preponderance. Then also, there's things that are outside of that next group of users keeping track and monitoring, is how do we know when a new industry appears or someone that might be a small user, say a metal finisher comes in and locates in an existing building, and how do we continue that understanding and then get to the point of being able to inspect new users and see what they -- new commercial customers to

Page 49

determine that they would fall under a category or not. So there's a process that has to be engaged in with the IPP program.
Q. And that would be -- I've heard that referred to as the survey requirement; they're required to conduct a survey of all of the commercial and industrial users within the jurisdiction to determine whether their usage characteristics have changed?
A. Yes.
Q. Have you heard the terms "interference" and "passthrough"?
A. Yes.
Q. I understand these to be the two primary goals of an IPP program, one we touched upon. You would agree with me passthrough refers to the idea that certain types of pollutants can evade the treatment process and enter the environment?
A. Yes, or end up in the sludge, biosolids that can impact the ability of the utility to efficiently dispose of their sludge. Great Lakes Water Authority, they incinerate their sludge, so that concern may not be as significant. But certainly as we have new emerging contaminants of concern, that continues to add responsibility on to the IPP program.
Q. Are you talking about things like PFAS or something?

Page 50

A. PFAS, Ebola, as well as -- there's going to be even more, whether it be pharmaceuticals or microplastics and how to manage the source control of those.
Q. We've talked about passthrough. Interference, I understand that refers to pollutants that can do actual damage to the treatment plant and its processes; is that correct?
A. Yes, such as a toxic chemical that would cause the secondary treatment process to fail and no longer remove biochemical oxygen demand in that secondary treatment process, so that the bacteria used in that process could be killed if some toxic pollutant was discharged to that. So that would interfere with the treatment process and result in the treatment plant's inability to achieve its discharge limitations.
Q. And then the treatment plant is designed to serve all sewer users who contribute to the system, correct?
A. Yes.
Q. So eliminating interference, protecting the treatment plant is a benefit to all sewer users, correct?
A. Such as treating the wastewater is a benefit to all users and same thing with surcharges. High strength discharges of BOD can adversely affect the ability to treat the wastewater and meet your permit. That's why there's limits in the rules as to how much BOD or

Page 51

suspended solids any individual industry can discharge, but then to fairly and equitably recover the cost, try to -- someone that discharges more pounds of a pollutant should pay more for that polluter pay concept.
Q. I understand that's the concept behind the surcharge. What I'm talking about is the IPP program, one of the purposes is to prevent interference, which is a discharge that can inhibit or disrupt the POTW, right?
A. Right.
Q. So if you have a program that prevents that and preserves the integrity of the treatment plant, that is a benefit to everybody who disposes of their sewage in the system, correct?
A. I guess from the standpoint of having the program benefits everyone is true, but what you're doing is, you're controlling the people that without that control would adversely impact the system.
Q. But those people are a class of users that is less than all of the users, correct?
A. Yes.
Q. And leaving aside whether it's required, you would agree that it is appropriate to recover the cost of the IPP program through rates and charges imposed on the users who are actually subject to the permitting

Page 52

and inspection and regulation, correct?
A. Yes.
Q. And, in fact, in your experience, you've done cost of service studies where that was the method of recovering the cost, correct?
A. Yes. There's always considerations as to the extent of the program and what the particulars of the program and who they are responsible for administering and managing, so there's a wide variety. There's no single way that costs are recovered from Industrial Waste Control programs across the United States. There's a variety of approaches that are used based on individual utility's determinations of what their program is and who should pay for that program.
Q. And different methods are applied, I get that. But the underlying idea is that the people who -- or the users that cause the costs should be the one that pay the costs, correct?
A. That's the basic principle, yes.
Q. And other than this case, have you ever encountered an IPP program that recovered its costs through fixed charges to nonresidential users based upon the size of their meters?
A. Kind of a nuance there, the size of meters -- St. Louis Metropolitan Sewage District in St. Louis,

Page 53

Missouri, which serves the city of St. Louis and St. Louis County, their system charges to all non-residence users but they've categorized those non-residence users in maybe five tiers of grouping. Initially, I think prior to 2017, they charged everyone the same flat rate regardless of size. So they didn't make a distinction on meter size, they just charged everyone the same. Since then, they've categorized into five tiers. So the largest industries would pay at the highest tier, so whoever they grouped those tiers, they'd pay them the most -- it's almost based on meter size, but it's not as granular based on all the number of meter sizes there are in Great Lakes Water Authority's system, but just narrowed down to five tiers. But all nonresidential users pay from tier I to tier V rates.

Q. And what is the basis for the tiered distinction?

A. They make that distinction based on the level of management and oversight they have to do to those enforcement activities that they do with different types of businesses.

Q. So for example, an office building would probably be at the lowest tier because its discharge is expected to be in the nature of sanitary sewage, correct?

A. Yes, unless maybe they have food processing, say they

Page 54

have a cafeteria or restaurant within that building, might a nuance thing, or other activities that might require additional, but could certainly be in that tier I group.

Q. Right. But the idea of the tiers is to correlate the cost of the IPP program to those users, various tiers of users based upon a correlation of the costs that the IPP program incurs associated with those tiers of customers, correct?

A. Yes, yes, you're correct.

Q. Have you ever encountered an IPP program that was financed through charges on nonresidential customers but excluded certain types of nonresidential customers like schools or colleges or government offices?

A. Not that I'm aware of. I don't recall seeing that. I'm not aware of any others that do that.

Q. So we touched on the idea of a survey, but the EPA regulations require a POTW to conduct a survey of what are called industrial users to determine whether or not they're subject to the IPP, correct?

A. Yes.

Q. And industrial users, at least at the start of this process, includes basically all nonresidential properties in a jurisdiction, correct?

A. That would be the start, yes.

Page 55

Q. And then once they're identified, the Publicly-Owned Treatment Works has to classify them to determine whether pretreatment standards and requirements apply to any of the facilities, correct?

A. Yes.

Q. So if an IU is determined to not discharge the type of pollutants that are the cause of concern, that IU is not subject to the pretreatment program, correct?

A. Say it's an IU that is not 25,000 gallons a day or more and not one of the categories, they would fall out of that grouping into another grouping that would be -- might be monitored or reviewed periodically but not where there would be more significant requirements for that user to comply with federal or local limits or regulations.

Q. But you would expect that the cost correlation to that group of users would be less than the cost of the first group, which are the people who are -- or the facilities that are subject to the pretreatment standards and requirements?

A. Yes.

Q. Are you aware that GLWA now has three classifications of users that are subject to the IWC charges?

A. I believe so, yes.

Q. And we'll get into it in some detail a little bit

Page 56

later, but the SIUs which includes CIUs are subject to the charges, correct?

A. Yes.

Q. And there are what are classified as industrial users, which meet the EPA definition of industrial users, correct?

A. Yes.

Q. And then there are something else called nondomestic wastewater sources, correct?

A. Yes, I remember seeing something called minor users.

Q. I'll get into that in a minute, but do you understand that there's a group of people or group of properties that are not classified as industrial users under the EPA definition or under the GLWA definition, but which incur the IWC charges?

A. Yes.

Q. Let me show you what has previously been marked as Exhibit 21. And for the record, this is a memo that was discussed in Mr. Kuplicki's second deposition, I'll just scroll down and show you that it has two pages.

A. Yes, I recall seeing this.

Q. Let's start up here on page 1. The definition of minor user means any industrial user who does not meet the definition of a significant industrial user or

Page 57

qualify for a wastewater discharge permit under the Industrial Pretreatment Program, correct?
A. Yes.
Q. And you understand that minor users are by far the vast amount of industrial users?
A. Yes.
Q. So this is kind of what we talked about, the GLWA control authority is charged with identifying all industrial users who may be subject to the Industrial Pretreatment Plan or Program, and so the users fall into one of the following groups. There's SIUs, there's minor users subject to a regulatory program other than IPP and then there's minor users. Correct?
A. Yes.
Q. So the first step in the process is to ask whether the facility generates wastewater from a manufacturing or commercial activity other than sanitary or storm water that contains pollutants. Do you see that?
A. Yes.
Q. And that's the standard test that you do as part of a survey, right?
A. Yes.
Q. And so if it's yes -- I mean if the answer is no, then the user is expected to be classified as a minor user subject to the general discharge prohibitions of the

Page 58

GLWA rules. Correct?
A. Yes.
Q. And the general discharge prohibitions of GLWA rules apply to everybody, right?
A. Yes.
Q. I mean, if I'm in my house, I'm not allowed to put certain kinds of pollutants down my drain, right?
A. Should not be putting copper sulphate down your toilet.
Q. Right. So then at the end of this memo, it says: Upon completion of the evaluation process, the user is assigned to one or more of the applicable regulatory programs or deemed a minor user not subject to a local regulatory program. You see that?
A. Yes.
Q. And you know that the vast -- the overwhelming percentage of the nonresidential users who incur IWC charges are characterized as minor users, correct?
A. Yes. I've seen some other breakdowns of the number of SIUs, number of surcharge users and number of minor users.
Q. All right. And you know that there are properties that aren't even considered to be minor users that incur the IWC charges?
A. Yes, there are nonresidential users.

Page 59

Q. That don't fit the definition of industrial user or quote, unquote, "minor user" under the GLWA rules, correct?
A. Correct.
MR. HANLEY: So you would agree with me that -- you know what, we've been going for an hour and a half, why don't we take a ten minute break? I'm kind of moving on to a new area. We're being fairly efficient here. So why don't we come back at 11:10 and we'll pick up where we left off. Is that okay with everybody?
MR. FRESCOLN: That's fine.
MR. HANLEY: I think our court reporter has to put something on the record that we're stopping.
COURT REPORTER: We're going off the record at 11:00.
(Off the record at 11:00 a.m.)
(Back on the record at 11:09 a.m.)
COURT REPORTER: We're back on the record at 11:09 a.m.
BY MR. HANLEY:
Q. Continuing on, so you would agree with me that all users that are subject to the pretreatment program must be controlled through a permit or order or similar means to ensure compliance with the applicable

Page 60

pretreatment standards and requirements?
A. At different levels, whether it be a discharge permit specifically or a general permit or other means by which the utility provides oversight and regulation and implementation of the regulations.
Q. And the utility incurs costs associated with the permit process, correct?
A. Yes.
Q. And here the IWC division is the one that administers the permit process?
A. Yes.
Q. So necessarily the costs associated with the permit process are intended to be covered by the IWC charges, correct?
A. Yes.
Q. You also agree with me that under the regulations of Publicly-Owned Treatment Works, it is required to inspect all SIUs at least once per year?
A. Yes.
Q. And obviously the utility incurs costs for these inspections, correct?
A. Yes.
Q. And here it's the IWC division that performs the inspections, correct?
A. Yes.

Page 61

Q. And you would also agree that the cost of those inspections is necessarily recovered through the IWC charges, correct?
A. That's the source of funding.
Q. And then would you agree that the Public-Owned Treatment Works and SIUs are required to conduct sampling of sewage?
A. Yes.
Q. And there are costs that a Publicly-Owned Treatment Work incurs relating to that sampling process, correct?
A. Yes.
Q. And here it's the IWC division that is responsible for administering the sampling process?
A. Yes.
Q. And then the cost of that sampling process that the POTW incurs is in this case recovered through the IWC charges, correct?
A. Yes.
Q. To your knowledge, has either of the defendants conducted any study or analysis that would determine a percentage of IWC costs that are attributable to the activities that I just described?
A. I have not seen that. I'm not aware that they did or have done that.

Page 62

Q. Have you ever performed a cost of service study that derived a specific revenue requirement for an IPP program, or a department or division of a utility charged with administering or enforcing the IPP program?
A. Many years ago as we were engaged in consulting with communities in the development of their initial Industrial Pretreatment Programs, whether it be in city of Baltimore, Baltimore County, Washington Suburban Sanitary Commission. City of San Diego, back in the 1982, we developed an initial concept of trying to project what the costs would be and then developed a permitting process to recover those costs.
Q. And so in those situations, the costs of the program were recovered through permit fees?
A. Principally through permit fees or other enforcement activities or other direct charges to the impacted or managed users of the system.
Q. And that's because in those particular circumstances, you determined that that was the best way to recover those costs using a cost of service analysis?
A. In collaboration with the client at the time, trying to determine who should be subject to permitting and also charge fees. Washington Suburban Sanitary Commission, they went down to, certainly down to

Page 63

dentists, identifying dentists in dentist offices because they felt that they should also pay a fee for any regulation that would be related to dental services.
Q. Are you aware of any federal law or regulation dictating the methodology that has to be employed to recover IPP program costs?
A. No, I am not.
Q. Are you aware of any State of Michigan law or regulation dictating the methodology that must be employed to recover IPP program costs?
A. No, I am not.
Q. Have you encountered municipalities that, municipal utilities that simply recover the IPP costs through their general sewer rates?
A. Not that I'm aware of. I don't -- again, not -- I don't recall if that was even an item of discussion that they -- as a policy, this is what they did. So no, I'm not aware of any that do that.
Q. Well, I guess one way of asking it is, are you aware of any municipal utility that is required to have an IPP program that doesn't have a distinct charge to fund that program?
A. The ones that have IPP programs have charges that they assess to the businesses that they are regulating. Or

Page 64

in the case of St. Louis, it's -- they establish their charge, they apply it to all nonresidential users. So in the rate process that we are engaged with, we examine -- we project what the cost of their IPP program would be, but then it's recovered through all nonresidential users.
Q. But pursuant to the tiered system we were discussing earlier?
A. Yes.
Q. Which attempts to make estimates of the costs attributable to each tier and then recovering the relevant portion of the revenue requirement through charges to that tier?
A. Certainly more refined than size of a water meter.
Q. And you would agree with me generally that an office building is a nonresidential use, but that it obviously contributes less to the cost of the IWC division than, say, an SIU?
A. Yes, that is correct.
Q. All right. Let me show you what I have marked as Exhibit 44 to the deposition. For the record, it's a 23-page document called City of San Diego, Industrial Waste Control Program, Cost Allocation Study and Model User Guide, Final Report/November 23, 2020. And it was prepared by Raftelis. Would that have been

Page 65

primarily the responsibility of the gentleman you identified earlier?
A. Yes. There may be a cover letter included with that, but yes, Mr. Christano.
Q. Have you ever seen this before?
A. I have seen it, I have not reviewed it in detail, but I have seen it, yes.
Q. And I have just a few questions, and if I overstep your memory, you'll let me know or your knowledge. But I want to go through some concepts that are identified. First of all, does Raftelis have any kind of established template or methodology for allocating IPP costs?
A. No.
Q. Is that within the discretion of the particular person who is managing the engagement?
A. Yes. The manager who would be working with the community -- and I note some of the background with San Diego, because they had not adjusted their fees and charges, permit fees and other charges for analytical services since the formation of their IPP program back in the mid 1980's. And so the city auditor questioned whether or not they were recovering the -- they were not recovering their full costs. And so directed them to undertake work to do that, which

Page 66

resulted in this -- they hired Black & Veatch to do an initial study, but their recommendation was very complex and would have been very difficult for them to implement, and then they retained Raftelis to do another examination of how those charges would be updated.
Q. For example, I'm aware that some consulting firms have an institutional policy for certain types of methodologies like, for example, in the water area to use a base extra capacity approach as opposed to a commodity demand approach. You're saying there's no such institutional policy or template for allocating IPP program costs?
A. No. We rely on the knowledge, judgment and some cases -- well, knowledge and judgment of the project manager to follow basic agreed upon concepts, generally accepted concepts, but then working with the client in establishing the best method that can be applied to their situation. If it's going to vary, then they have to -- they need to discuss that with a more senior person in the organization, whether it be an office manager or what we call an executive lead that has responsibility over multiple offices.
Q. But the person at Raftelis who is responsible for this is somebody that you deem to be competent to perform

Page 67

this type of analysis, correct?
A. Yes.
Q. And are you aware of anything he did that would be an inappropriate methodology?
A. No, I'm not aware of anything that would be inappropriate.
Q. As I read the document, Raftelis got retained to complete a comprehensive review and update its Industrial Waste Control Program fees, and the tables below summarize our analysis and present the proposed fees. Would you agree with me that it was the recommendation of Raftelis to the city of San Diego that these program fees be recovered through three sources; one of which is permit fees, one of which trucked waste fees and one of which is enforcement fees, correct?
A. Yes.
Q. And these types of fees would clearly not be imposed on all nonresidential users, correct?
A. In San Diego's case, it's a limited group of customers that are being charged those fees.
Q. And in your judgment, that's appropriate as a method of ratemaking?
A. Yes.
Q. In the introduction, in this paragraph here it says:

Page 68

Raftelis developed these fees based upon the city's top down approach. The idea was developing a cost allocation methodology to equitably recover cost of IWCP operations. Do you see that?
A. Yes.
Q. And that would be a goal in any case where you're trying to allocate IPP program costs, correct?
A. Yes.
Q. And it says: The process started with determining the total budgetary requirements, salaries, fringe and non-personnel expenses for administering IWC permits and enforcement. Next, city staff identified the primary functions of IWCP (permits, trucked waste and violations) and then determined the overall percentage of time for each functional area. You see that?
A. Yes.
Q. So the idea is take all these costs, including the personnel costs, and assign them to these three cost centers based upon an estimate of how much effort is put into each of the three cost buckets?
A. Working with the client and the client's staff, the people that are directly engaged in the IWCP program to develop best estimates of proportion of time that would be related to each of these three categories.
Q. So to get into a little bit more detail, the permit

Page 69

process and the enforcement process and the trucked waste process are all characteristics that are shared with the IPP program that GLWA administers, correct?
A. Plus GLWA also applies the surcharge, I'm not sure if the surcharge program is part of the -- it may be but I'm not sure, if -- can you just scroll up? I just want to see something.
Q. I think it's under Trucked Waste at the bottom.
A. There it is, High Strength Surcharge Billing.
Q. But you would agree with me that this program is very similar to what GLWA is administering through the IWC division here, correct?
A. Yes.
Q. And on page 7, there's a breakdown of personnel expenses and non-personnel expenses, and you would agree with me that the majority of the IWCP budget is personnel expenses, correct?
A. Yes.
Q. And then there's also an environmental chemistry services budget which is a lab, right?
A. Yes.
Q. And there's a lab that is part of the IWC cost structure as well, correct?
A. Yes.
Q. So you get to the point where they're presenting some

Page 70

fees, and it says: The fees cover monitoring of significant industrial users and nonsignificant -- or nonsignificant industrial users that are categorized to have significant strength loadings on the wastewater system. So that was the class that was identified as being the ones that should be subject to the charges which financed IPP program, correct?
A. That appears to be so.
Q. And it says: The fees do not take into consideration the benefits to the average wastewater customer - which are discussed in the Program Benefits Section. Do you see that?
A. Yes.
Q. So the idea is if there are benefits to the average wastewater customer or all wastewater customers, they would be taken out of this budget and recovered in some other way, correct?
A. Yes.
Q. So when it talks about the program benefits, it says: The IWCP is a critical component of the city's wastewater treatment system because a pretreatment program is required for Publicly-Owned Treatment Works and sewage collection agencies and enforcement of these regulations has been identified as an effective approach to source control of industrial pollutants.

Page 71

The many tangible and intangible benefits provided by this program are listed below. And then there's four bullet points.
A. Yes.
Q. Protects infrastructure and helps to manage operation and maintenance costs. You see that?
A. Yes.
Q. And that's a benefit of all IPP programs, correct?
A. It would be an ancillary benefit, yes.
Q. Right. And then ensures the treatability of the wastewater being discharged protecting public health and the ocean environment, or in this case, the lake environment or river environment, correct?
A. Yes.
Q. And that's a benefit of all IPP programs, correct?
A. Yes.
Q. And if there's -- the fourth bullet point: If there is a benefit in that significant upgrades to a treatment plan are avoided, that would save ratepayers money. Correct?
A. Yes. In San Diego's case, the Loma Wastewater Treatment Plant is a primary, enhanced primary treatment plant because they have a specific waiver or secondary treatment that's been issued by the Federal Environmental Protection Agency as well as the state

Page 72

of California that has to be renewed, and one of the principal requirements of that secondary treatment and waiver was an effective Industrial Waste Control Program.
Q. Right. And again, I'm not in any way suggesting that the situation with GLWA's treatment plant is the same as the treatment plant that's at issue here, but the idea is, is if there are identifiable benefits from the program to the general wastewater customer, it's appropriate to separate those from the rate structure that's going to be imposed on, say, the SIUs and the other industrial users that are subject to the IPP program?
A. Yes.
Q. And have you done any analysis in this case as to whether there are benefits to the quote, unquote, average sewer user that should be excluded from the IWC revenue requirement and recovered in some other manner?
A. No, I have not done that analysis, nor have I seen any material where the DWSD or the Great Lakes Water Authority examined if a portion of the costs could reasonably be attributed to or shared with all users. San Diego -- California has some interesting constitutional issues, and I believe in this case one

Page 73

of the concerns is can they reasonably charge this to all users. And so it appears there was some discussion with the client with regard to identifying a portion and basing the analysis on that.

I was involved in the wastewater cost of service study that was going on at the same time that was approved by the city council and went through their Proposition 218 hearing process without challenge. And in that case, we were not reflecting any changes in the implementation of this because the council had not -- it was kind of going on at the same time with the final decisions with regard to how they wanted to make changes in the Industrial Waste Control Program, charges to the -- in their permit fees and these three buckets of fees that they charge.

Q. And I appreciate the explanation about San Diego, but my question is, you've not made any determinations here in this case as to whether there are any activities of the IWC division that confer benefits on, say, all sewer users?

A. No, I have not. It would take some effort to really examine the policies, activities and the veracity of should -- is there components that are -- in some cases, the Industrial Waste Control Program is doing system monitoring as well as industrial monitoring.

Page 74

So in those cases, I've had experience with, whether it be in Little Rock, Arkansas, where they're doing things for the system in total, and so those elements were carved out of the allocation of costs for the IWCP permit fees.

Q. Okay. But you don't have an opinion on that issue in this case at least at this juncture, correct?

A. That is correct.

Q. Have you become familiar with the issue of the Headlee Amendment in Michigan and its impact on water and sewer rates and charges?

A. Yes, sir, I have.

Q. And you're familiar with -- again, I'm not going to make you a lawyer -- but you're familiar with the Bolt versus City of Lansing case and the cases that came after it, correct?

A. I remember the Bolt decision as it related to the city of Lansing's proposed storm water charge system that they had proposed to be implemented.

Q. And you haven't offered any opinion in this case as to whether the IWC charges constitute taxes under Michigan law, correct?

A. No, I haven't formed any opinions related to whether or not they'd be a tax under current Michigan law.

Q. And have you become familiar with the test that

Page 75

applies, the three factor test that looks at whether the charges have a revenue raising or regulatory purpose? That's one of them; whether the charges are proportionate, that's the second one; and the third is whether the charges are voluntary. Are you familiar with those factors?

A. I am familiar with those.

Q. And would you agree with me that your opinions do not specifically address the application of those three specific factors, correct?

A. At this point, they don't specifically address those three factors in particular.

Q. Right. So you're not expressing an opinion as to whether the payment of the IWC charges is voluntary or not?

A. No, I don't have an opinion whether it's voluntary or not, other than the extent of use of the system -- what's the voluntary element, that's a component of it, but I don't have an opinion whether or not it is voluntary or not.

Q. Fair enough. But you do understand that the IWC charges are imposed on certain nonresidential properties based on the size of the water meter that services the premises, correct?

A. Yes.

Page 76

Q. And in the course of your engagement, have you become aware of the rationale for distributing the cost of the IWC division using fixed cost based on the size of the meter?

A. Yes, I have.

Q. And what is that?

A. Essentially, it goes back to an order of Judge Feikens, Federal Judge Feikens I believe in 1981, which was before anytime I was working -- well, I had done some work prior to that, but (inaudible) McKee was the rate consultant working with Detroit Water and Sewerage Department and developed the rate models that were going into place at that time, and there was a 1981 order directing this to be -- it would be charged on a basis of equivalent meter size or Industrial Waste Control Program costs.

Q. And we're going to get into that order, because it's a big part of the case, but that's what a judge says. What I'm trying to understand, is what is the rationale, as you sit here today, what's the rationale for that particular methodology?

A. I don't know what discussions were had at the time or what the base for that -- the basic concept that others have used, not prior IWCP things, but for, whether it be storm water charges initially

Page 77

implemented, that the larger the water meter, the more relationship there is for increased regulatory costs. So kind of relates the size of the water meter to the size of effort for the -- any of these enforcement or management activities of the IPP program.
Q. And I understand water meter size being used in developing water rates and charges, because the notion is that if you have a larger meter, you're using more water, and therefore, it's appropriate. And it's used primarily to recover a fixed portion of the charges, correct?
A. Yes. And I'll also say that in this case, where the SIU significant industrial users, based on 25,000 gallons a day of flow or more, they most likely have larger meters than the ones that are the minor users that would have smaller meters. So Ford Motor Company would have many large water meters that would be subject to this.
Q. Right. But while the meter may be a proxy for water and maybe even sewage volumes, wouldn't you agree that the cost of the IWC division is not dependent on sewer volumes themselves?
A. Not directly at all. But it's a proxy -- well, the larger users would have more kind of that tier concept, they would also have larger meters as well as

Page 78

being in a larger tier. So it was a way to make a recognition that those with larger meters have more impact on the system from the standpoint of activity required by the Industrial Waste Control Program.
Q. And do you have any evidence that that is, in fact, true?
A. No, I haven't seen anything, but I believe your question was what might have been the rationale for that. I haven't seen any direct rationale, I'm just providing my conclusion as to what possible rationale could be made making that a larger water meter would be -- also represent a larger significant industrial user.
Q. Have you come to understand that certain types of non-residential users are exempt from the IWC charges?
A. It's my understanding that the system, DWSD and GLWA have exempted certain schools and governmental properties from this charge.
Q. Do you know why that has occurred?
A. I haven't seen why they made that decision, but I presume that the governing bodies of those organizations determined that there was -- that those would clearly be residential or domestic type waste and would not be charged for this program.
Q. I'm sorry, I didn't understand your answer. You're

Page 79

saying that you know that there was a determination made that those types of users did not have sewer use characteristics of others?
A. Let me try this again. I believe that I had not seen any deliberations, I don't know what they discussed, but it was a policy decision made by the governing bodies of DWSD and then Great Lakes Water Authority that certain nonresidential users would be exempted from this charge. I don't have -- I have not seen anything beyond that they made that conclusion. I don't know how they reached that conclusion.
Q. So it would be fair to say that you haven't seen any cost-based justification for those exclusions?
A. Cost-based or waste-nature basis.
Q. So, for example, are you aware of any difference between, say, a school with a two-inch service line and a commercial office building with a two-inch service line when it comes to allocating the cost of the IWC division?
A. No.
Q. You would agree with me that in allocating a revenue requirement, if you exempt certain users from payment of rates and charges, it necessarily results in the nonexempt customers have marginally higher rates and charges?

Page 80

A. If you start from the -- I would agree if you start from the premise that it's a zero some gain and you've identified the cost and you've concluded that you only want to charge certain people within that group, whether you define the group or change the definition of the group, if you reduce the number of customers to recover the same amount of costs, the number of customers that are paying will pay more.
Q. Right. And you know that the way GLWA and DWSD have historically allocated the IWC division revenue requirement, is by dividing that revenue requirement by the total number of what's called equivalent meters to come up with a cost per equivalent meter, correct?
A. Yes.
Q. And then based upon certain ratios, that would be further distributed by the size of the pipe or the meter based upon a number of equivalent meters associated with that size of meter?
A. Yes.
Q. So if I said there were about 212,000 plus or minus equivalent meters that are currently in the calculation, would that sound about right to you?
A. I'll accept that, yes.
Q. And do you know whether anybody at GLWA or DWSD have calculated or estimated the number of equivalent

Page 81

meters associated with the schools and government offices and colleges that are exempt from the charges?
A. I'm not aware if that exists or has been done. I would presume that it had been done at some point.
Q. But, for example, instead of exempting them, they had included them, you would agree with me that the number of equivalent meters that is used in the calculation would go up by whatever amount represented by those equivalent meters, correct?
A. Yes. If the number of equivalent meters went up by including others, then that total would be larger.
Q. Right. And so assuming a certain revenue requirement for the IWC division, the higher the number of equivalent meters that's included in the calculation, the lower the charge per equivalent meter will be?
A. Yes.
Q. So if they were 400 -- instead of 212,000, there were 424,000 equivalent meters, the rates would be cut in half?
A. The calculated rate would be cut in half, yes.
Q. Have you ever been called upon to give an opinion concerning the propriety of the exemptions from utility rates?
A. Not -- to the best of my recollection, no.
Q. We've touched on this before, but for purposes of the

Page 82

IWC charges, GLWA breaks the nonresidential properties that incur the IWC charges into three groups. There are SIUs, there are industrial users, also known as minor users, and nondomestic wastewater users. Do you recall that testimony?
A. Yes.
Q. What do you understand about the basis for those distinctions? That's a really bad question. I understand what SUIs are and the industrial users, but nondomestic wastewater users do not qualify as industrial users. Have you become aware of why they're included, nondomestic wastewater users are included within the class of people who incur these charges?
A. Specifically, no. But I do know that it's been the methodology since '82, and that -- but I have not seen an analysis that said, here is why we're going to include those. I know in some cases -- St. Louis example, I believe they examined and determined that they have to do efforts related to all their non-residential users to confirm that they're not -- have not become a member of the larger tiered activities of the -- require more intense oversight management and enforcement.
Q. But under those circumstances, the cost would be

Page 83

allocated based upon the cost of having to do that survey and then allocating that to the lower tiers, correct?
A. Yes.
Q. But all the permitting and inspecting and enforcing activities that we've been talking about would be allocated to the higher tiers, correct?
A. The process, it's not necessarily a direct allocation, but it's a percentage allocation of their costs within the tiers.
Q. Fair enough.
A. Essentially get to the same point.
Q. But you agree that when it comes to the IWC division, an SIU serviced by a two-inch meter generally causes more of the IWC-related costs than, say, a commercial office building with the same two-inch meter?
A. Yes, it would.
Q. But isn't it true that an SIU serviced by a two-inch meter pays the exact same IWC charge as a commercial office building serviced by a two-inch meter?
A. It does in this case.
Q. And you're of the opinion that the IWC charges should not be imposed on residential properties, correct?
A. That is correct.
Q. And can you give me the reasons why you don't think

Page 84

it's an appropriate way of recovering the costs?
A. I believe those are costs that are specifically related to nonresidential users, and it would be -- it would not be appropriate to charge residential users for something that is targeted to nonresidential users.
Q. But what about the nondomestic wastewater users who are not in any way regulated by the IWC division, what is your basis for -- I'm assuming you're saying it's okay to impose it on nondomestic wastewater users but not residential users, correct?
A. Yes.
Q. And what is the distinction that is a cost-based distinction for your opinion?
A. That it's within the nonresidential group of customers, that the IWCP has to do activities related to the whole panoply of users, that it's because of the nature of that group, and that they should pay for a portion of that Industrial Waste Control Program charge, again, whether it be -- in this case, they're using meter size, but even if we did it on a tier basis, those that would be at the smallest impact would be at a tier I level, which would be at the lower cost, just like a meter size would be a lower meter size cost.

Page 85

Q. All right. But you understand that the survey activities are conducted only with respect to industrial users or minor users, correct?
A. But I think it requires more investigation, more examination, data gathering to see what is happening within the system on a regular basis. I haven't done a detailed study of the Industrial Waste Control Program to see how their daily activities, how they deal with changes in the makeup of their commercial users across the board.
Q. Right. But the IPP regulations require the POTW to survey all industrial users to make sure that they're in the proper categories, right?
A. Yes.
Q. But the regulations do not require and, in fact, the IWC division does not conduct surveys or evaluations of what are referred to as nondomestic wastewater users?
A. If you start from the premise that once you know they're an industrial user, you need to survey them. The first challenge is identifying when industrial user -- when someone is subject to a survey. So the commercial community is changing constantly, so they have to examine, gather data, review and see, are there changes within these structures that this was a

Page 86

warehouse before, what is it today? And so that requires effort, and how do you manage that, and that's the kind of costs that we recovered in that fee structure for all nonresidential users.
Q. But are you aware, sir, of any activities of the IWC division, actual activities that are directed toward nondomestic wastewater users?
A. I'm not aware of any. I don't believe that was addressed by Mr. Kuplicki in his depositions either.
Q. And, in fact, let's assume for my next question that the facts turn out that there are no activities of the IWC division that are devoted or directed at nondomestic wastewater users. Under those circumstances, there would be no meaningful distinction between nondomestic wastewater users and residential users as it comes to the issue of contributing -- or causing costs to be incurred with respect to the IWC division, correct?
A. That's possible, yes.
Q. Okay. But in any event, you would agree that charging in the way that they do the same IWC charge to each user based upon their meter size does not correlate with the costs that are caused by each of the three groups?
A. Yes, that is a correct statement. There's not a

Page 87

direct correlation by meter size and the three groups and the buckets of costs within those three groups.
Q. And they might all benefit under your view from the IWC program, but the level of benefit varies between the three classes, correct?
A. Yeah, not only benefit, but impact a need for oversight and regulation, yes.
Q. And when you're developing rates, a proportionate charge would be one that more closely approximates each group's either benefit from the IWC program or the cost causation, correct?
A. Yes.
Q. Now I want to return to Exhibit 51 and review in some detail the opinions that you have given in the supplemental responses. It says that you are expected to testify about your knowledge, experience and expectation that the setting of municipal utility rate structures, including those such as the Industrial Waste Control charge, as described and defined as IWC charm in the Heid report, are and should be done on a prospective basis using historical data and budgets as a guide for rate setting entities such as DWSD and GLWA.
And that goes to the issue we were discussing earlier about how you have to do a

Page 88

prospectively based upon historical data and budgets, correct?
A. Yes.
Q. And did you as part of your analysis evaluate whether DWSD and later GLWA actually developed the charges in this way?
A. There's two components. One, based on what I saw was that they were using this budget information to inform them as to the level of revenue requirement, and then the cost of service analysis would define the costs and identify the costs associated with the IWCP program. So the costs were allocated and then, not only the direct costs, but then the -- like the (inaudible) costs that were, whether it be the analytical lab that was not directly under the IWCP cost but it was a separate, allocating costs to that and then other administrative overhead costs that would be incorporated into the total revenue requirement. So I think they were using budgets to do that.
Q. And we'll get into some of that as we continue here, but it says: Mr. Stannard is expected to testify based on his assumption that the document entitled DWSD Information State - Industrial Waste Control Charge, and marked with the page numbers GLWA 171

Page 89

through GLWA 173, the quote: DWSD Information Sheet, accurately describes the actual methodologies and rationales employed by defendants in their assessment of the IWC charge as described therein during the period described as the class period in the Heid report, that defendants have assumed as consisting of the period from July 1st through June 30th, 2021, that the methodologies and the rationales as stated in the DWSD Information Sheet were and are reasonable and consistent with generally accepted industry principles and practices and regulatory program requirements as referenced in the DWSD Information Sheet. And that these methodologies and rationales are not arbitrary, capricious or unreasonable. It's a long sentence, but that's your opinion, correct?

A. Yes.

Q. So the methodologies and rationales in the DWSD Information Sheet are not arbitrary, capricious or unreasonable, correct?

A. Correct.

Q. Let me pull that up. I pulled up what I have marked as Exhibit Number 49. Is this the DWSD Information Sheet that you're talking about?

A. Yes.

Q. And this is -- you would agree with me that the DWSD

Page 90

Information Statement, Exhibit 49, doesn't say anything about how the revenue requirements were determined, correct?

A. That is correct.

Q. And it doesn't say anything about how the IWC charges were determined from a calculation standpoint, correct?

A. Correct.

Q. So it basically says we're applying these industrial waste charges to nonresidential except for the following types of facilities: Public and private elementary and secondary schools, which are part of the government school district, colleges, universities and professional schools, junior colleges and technical institutes and local and state government offices. Correct?

A. Yes.

Q. And then it says: Any user not specifically exempted by the 1981 order, or as stated above, is to be assessed the Industrial Waste Control charge correct?

A. Correct.

Q. So you understand that the exemptions, the school and college and local and state government office exemptions are not in the 1981 order but arose sometime thereafter?

Page 91

A. Yes.

Q. So your statement about methodologies and rationales has nothing to do with the actual rates and charges for IWC, but rather the methodologies to determine who should pay, correct?

A. Yes.

Q. And utilizing a proper methodology to determine who should pay does not necessarily mean that the associated rates imposed on those users are going to be fair and reasonable, correct?

A. Only if the process in the budgetary costs were reasonable in representation of the level of revenue needed provide that program cost element.

Q. Right. But you could have a perfectly reasonable methodology, but if the wrong numbers are plugged in, the rates may not recover the actual revenue requirement, correct?

A. Up or down, yes.

Q. And this document, the DWSD Information Sheet does not in any way set forth revenue requirements or disclose how the revenue requirements or the IWC charges themselves were determined, correct?

A. That's correct.

Q. And it says further on down this page: Mr. Stannard is expected to testify that the statement of

Page 92

Industrial Waste Control charges in chapter 1 of the GLWA rules are generally consistent with the description of the IWC charges given in the DWSD Information Sheet and the rule described therein is likewise reasonable and consistent with applicable industry standards and regulatory program requirements as referenced therein. You see that?

A. Yes.

Q. You would also agree with me, I mean, we would find it at a break, but the GLWA rules don't disclose a charge methodology for the IWC charges or describe how the revenue requirement is determined, do they?

A. No, they do not.

Q. So now we're getting up to the order that everybody wants to talk about. It says: Mr. Stannard is expected to testify that the methodologies and rationales -- that the methodologies and rationales described in the DWSD Information Sheet are consistent and compliant with the Federal Court Order dated July 27, 1981 issued by the Honorable John Feikens and referenced as Exhibit X to the Heid report.

Does your opinion assume that the Feikens order, the 1981 Feikens order is still in effect?

A. It's not founded on that, but to the best of my -- I don't know why it would not be in effect.

Page 93

Q. Well, let me ask it this way: If the Feikens order is not in effect, does that have any impact on your opinions?
A. It would not change my opinions.
Q. Are you of the opinion that the methodology that's employed is necessarily appropriate because of the Feikens order?
A. It's not appropriate -- it's not, as I say, unreasonable, arbitrary or capricious, because without the -- only because of the Feikens order, I believe it's reasonable and it's not unreasonable, arbitrary or capricious to follow what they've done. Not saying that there's not always a better way to do things, a more precise methodology, but again, from the standpoint of reasonableness, it's a reasonable approach. Could something more precise be done, certainly, that's possible as well.
Q. Well, I guess what I'm saying is, we've agreed that the exemptions that are extended to schools and governmental offices and colleges are not authorized by the Feikens order, correct?
A. I recall the Feikens order said that residential users could not be charged.
Q. Right. But it required all nonresidential properties to be charged, correct?

Page 94

A. I don't recall that being said, that only non-residential -- all nonresidential customers will be charged. I don't recall that in the order.
Q. Well, let's pull it up. There's a lot of stuff on here, but I'm going to get to the order itself. This is Exhibit 50 for the record. And I will represent that our documents that are produced by GLWA very early in the case, they go from GLWA 175 to GLWA 205, and refer you to -- okay. This is the order July 27 of 1981, John Feikens, it begins: Judge Feikens - GLWA 199. And you recognize this as the order, right?
A. Yes.
Q. And it says: Its ordered -- in paragraph 1 -- that in lieu of the nonresidential surcharge of 31 cents per thousand cubic feet of metered water and 1.6 cents per surchargable pound of BOD, TSS, P and FOG, for funding the activities of the Industrial Waste Control Section adopted by the board February 11th, 1981 and the council on February 18, 1981, a monthly charge as set forth in Exhibit A (attached hereto, and by reference made a part hereof) shall be effective July 1st 1981, to be collected on all bills rendered on or after August 1st, 1981, to nonresidential customers. Provided that such charge shall be further adjusted as necessary subject to the approval of this court, so as

Page 95

to collect -- or to collect 3.2 million dollars in order to recover the full twelve month cost of the Industrial Waste Control Section Budget. In the event the amounts collected by said charge reach the level of 3.2 million dollars prior to June 30th, 1982, said charge shall be discontinued until July 1st, 1982. Said monthly charge shall not be applied on the basis of any meter which services solely residential users, regardless of the number of dwelling units served by the water meter -- by such meter, or which are used for fire protection purposes only. Do you see that?
A. Yeah, and that's what I was referring to.
Q. Does this refresh your recollection that they were required to charge all nonresidential customers except for meters that are used for fire protection purposes only?
A. I'm not sure if I read that all nonresidential customers shall pay it. That refers to the exhibit --
Q. Well, to be fair, there's no exclusions in here for schools and government offices, right?
A. Yeah, I don't see that. The only exclusion is, specific exclusion is residential users or private fire protection meters.
Q. So you would agree with me that if the 1981 order were still in effect and required all nonresidential users

Page 96

except for fire protection purposes to be charged, that the GLWA is not complying with the order?
MR. FRESCOLN: Objection, foundation.
BY MR. HANLEY:
Q. You can answer.
A. So there's a couple things. One is, I don't see where the determination of expanding an exclusion list would be -- I'm not sure. I would have to require -- that would require some more specific legal advice, but I don't see that it excludes the ability to or prevents the ability to exclude users for specific reasons that would come to the governing body's determination. And frankly, I don't recall when they made that decision to exclude those users, and whether or not it was even addressed by the court at that time.
Q. And I don't want to turn you into a lawyer and I don't want to fence with you about this issue, but you would agree with me that it says that the charge is imposed on nonresidential customers, and there's no express exclusion other than the residential users and the fire protection purposes meters only?
A. Nor does it says this is what's included in non-residential customers, or that grouping of non-residential customers includes governmental -- schools -- it doesn't say what's included in non-

Page 97

residential.
MR. FRESCOLN: I was going to object to the last question. I didn't want to interrupt the witness, but objection as to foundation.
BY MR. HANLEY:
Q. But we know that the DWSD Information Sheet that we've been reviewing says the exclusions are either in the 1981 order or as set forth in the Information Sheet, correct?
A. Yes.
Q. You're not aware of any cost-based justification for excluding schools, colleges and local and state government offices from payment of the IWC charges, correct?
A. I'm not aware of the analysis procedurally or operationally how that -- what was undertaken to come to the conclusion to exclude those from the charge. So I'm not aware of a cost-base determination or an oversight in management process either.
Q. Are schools, colleges and local and state government offices within the EPA definition of industrial users?
A. I don't believe so.
Q. Then what other types of nonresidential properties are not within the category of industrial users?
A. I would have to go back and look at whether -- the SIC

Page 98

codes and whatever -- there's the categorical industries, there's the significant industrial users, so I would have to go back and research that.
Q. Continuing on with this order, the very last paragraph, paragraph 4 on page 3 says: Upon being supplied the aforementioned information, the City of Detroit shall, on or before December 31st, 1981, adjust the fees upward or downward so as to collect only the amount necessary to recover the cost of the Industrial Waste Control Section Budget. You see that?
A. Yes.
Q. So if the 1981 order is still in effect, that requirement remains in effect, right?
A. Yes. Their budget should reflect that.
Q. And they can only recover the cost of the Industrial Waste Control Section Budget, right?
A. Yes.
Q. Are you aware of any principle of ratemaking that would justify the exemptions that are given by the defendants to schools, government offices and colleges?
A. Some ways, from a standpoint of policy decision, with regard to recognition of the services provided to those entities, I think even -- some states have

Page 99

exemptions in their statutes with regard to certain governmental institutions not being subject to, say, storm water charges.
Q. Right. But those are statutes, right?
A. Yes, that would be, in that case, it would be statute. Again, whether it be a statute or an ordinance or policy by a governing body of the utility made a determination that that group of customers should not be charged this.
Q. But policy decisions are not principles of ratemaking, right?
A. They certainly guide the rate maker as to what can be done for that client.
Q. Right. You've heard the term unfair discrimination in the municipal utility context?
A. Yes.
Q. And unfair discrimination -- well -- means that you have to have a cost-based justification for charging different rates to different users, correct?
A. That's the principle, yes.
Q. And so applying ratemaking practices, if you were doing the cost of service study and determining rates for IWC charges, you would need to investigate whether the exemptions for colleges and schools and local and state government offices had a cost-based

Page 100

justification, correct?
A. That would be part of the analysis would be to understand and examine, is there -- what is the basis for excluding them.
Q. I think we established earlier that there are approximately 212,000 equivalent meters that are part of the IWC rate calculation; do you remember that testimony?
A. Yeah, I'll accept that number.
Q. Have you reviewed the Feikens order and what the Feikens order determined would be the number of equivalent meters that were subject to the IWC charges here?
A. I remember looking at it, so I think --
Q. I show you a number down here, 484,180 between the Detroit and the suburbs.
A. Yeah.
Q. Which is actually more than twice the number of equivalent meters that are used today, correct?
A. Back in 1981, yes.
Q. And have you investigated as to why the Feikens order used 484,000 equivalent units, but yet today, 41 years later, the number of equivalent meters is less than half?
A. No, I have not.

Page 101

Q. But if the difference is attributable to the exemptions that have been granted, that would mean that because of the exemptions, the nonexempt customers are paying more than double than they would pay without the exemptions?
MR. FRESCOLN: Objection, foundation.
A. I'm not sure you can make that linkage, that the reason it was 44 and now it's say 212, that the sole result of that is exemptions. I don't know that for a fact.
BY MR. HANLEY:
Q. No, no, I'm not asking you to -- I'm asking you in your capacity as an expert witness, the hypothetical question, that if the difference is attributable to the exempt properties, then that would mean by virtue of the exemptions, the nonexempt customers are paying more than double?
A. Again, the math is it correct. If the number, the 44 -- 484,000 was cut to 212,000, the resultant rate would be more than double.
Q. Okay. Now, going back to your opinion, one of the things you say is you disagree with Mr. Heid's opinion that it should have been allocated among a larger number of meters, including residential. And you say that would be unreasonable and inconsistent with

Page 102

prevailing industry practice and procedures, inconsistent with the requirements of the 1981 Feikens order and perhaps unlawful. Do you see that?
A. Yes.
Q. Why would it potentially be unlawful?
A. Well it would be recovering costs that don't have a direct relationship to the service provided those to customer. So to say well, we're going to take that total cost and charge everyone, whether they are managed or there's any role or oversight of their discharge and activities involved by the Industrial Waste Control Program.
Q. I'm sorry. They shouldn't be charged because they are a class of users who do not benefit from -- do not specifically benefit from the IWC division's activities, correct?
A. Directly benefit or directly cause IWC to -- for example, if we had no nonresidential users in the system, you wouldn't even need an IWC program.
Q. Okay. But by extension, then, any class of customers that doesn't benefit directly from the IWC program and who don't cause costs associated with the IWC program should not incur the charges. That's the basis of your opinion?
A. If there are nonresidential users, within that group

Page 103

of nonresidential users, IWC could be doing things or should be doing things relative to understanding and evaluating what those users are doing and discharging to the system. So they have an impact on the system and why some cases those charges are charged to all nonresidential users.
Q. You're anticipating a different question. My question is, your rationale for why residential users should not incur IWC charges is because they neither need to benefit directly from the activities of the IWC division, nor cause costs to be incurred by the IWC division, correct?
A. Correct.
Q. So therefore, any class of users who is the same as the nonresidential customers in those regards should not incur the IWC charges?
MR. FRESCOLN: Object to foundation.
A. If there are any other classes of customers that don't require any effort and that are solely domestic nature of waste with no potential or changing environment that would require ongoing activity, I would agree that your statement is correct.
BY MR. HANLEY:
Q. Going back to the Feikens order, I want to take you up to page 180. By the way, do you recall being provided

Page 104

a document called a Settlement Agreement?
A. I don't recall seeing this, being provided this, and I believe -- was this the initial Settlement Agreement that came out of the Palo Masters --
Q. This is dated after the Feikens order, and I'll take you down to get you a date. It's dated July of 1982. So it's after the Feikens order. So I want to direct your attention to a page of this Settlement Agreement that references the Feikens order, and it's page 183. It says: Parties hereto agree -- hereby agree as follows. Says: The recomputed rates as set forth in the Court's Order dated March 31st, 1982, (attached hereto as Exhibit A and by reference made a part of) together with one, the charges for funding the activities of the Industrial Waste Control Section as provided for in the Court's Order dated July 27, 1981 (attached hereto as Exhibit B and by reference made a part hereof). Then there's surcharges. And Exhibit C says: Shall be the rates in effect for the 1981-1982 rate year. Do you see that?
A. Yes.
Q. Are you aware of any agreement, rate agreement, rate settlement agreement or other order other than the Feikens July 1981 order that dictates IWC rates and charges?

Page 105

A. No, I'm not aware of any other order.
Q. So in this Settlement Agreement, the parties have agreed that IWC charges that are dictated by the July 27, 1981 order shall be the rates in effect for the 1981 to '82 rate year. Do you see that?
A. Yes.
Q. And again, you are not aware of this or haven't seen it before now, right?
A. I have seen this in earlier years in my career, may have been involved with the activities that resulted in that rate settlement agreement, because there were several others subsequent to this, but I think the Industrial Waste Control Component, I don't recall that ever being changed. That was a rate change in how Industrial Waste Control charges were assessed prior to the Feikens order and then afterwards.
Q. So paragraph 13 starts on page 10, it says: It is expressly understood and agreed that the matters hereby agreed to are in compromise of the disputes among and between the parties. Except as expressly set for herein, nothing contained in this Settlement Agreement shall govern future ratemaking or constitute evidence in any subsequent proceeding regarding the reasonableness of said rates. No party by execution hereof acknowledges the correctness of the methodology

Page 106

used in deriving the rates or of the positions or claims asserted by others. Subject to the provisions of items 3, 5 and 6 hereof, which are continuing obligations, Detroit and DWSD expressly preserve unimpaired by this Settlement Agreement the right to adopt sewage treatment rates and charges in the future pursuant to the authority vested in them by virtue of state law and the charter of the City of Detroit. And the rate challenges likewise preserve unimpaired the right to challenge any such future rates unaffected by the Settlement Agreement or the failure to fully prosecute to judgment their challenges to the rates as asserted in their pleadings. Do you see that?
A. Yes.
Q. So in 1982, this Settlement Agreement both said that the Feikens order will govern till June 30th, 1982, and then going forward, all bets are off, correct?
A. Yeah. The Settlement Agreement did not preclude any future challenges, which there were, and there were subsequent settlement agreements as well.
Q. But then I want to take you to the final piece of this puzzle, which is an Order of Dismissal of Rate Challenges, it's dated July 21st, 1982. And it references -- it is ordered that the Settlement Agreement, a copy of which is attached hereto, being

Page 107

the same hereby is approved by the court and its terms are hereby made binding upon DWSD and all customers, users and ratepayers of the DWSD sewerage system. Do you see that?
A. Yes.
Q. So at least as of July 31st, 1982, the Feikens order, by virtue of the Settlement Agreement that was approved by the court in this order, addressed only the fiscal year 1982 rate year, correct?
A. Correct.
Q. And are you aware of any subsequent rate settlement agreement or court order that specifically addressed the manner in which the IWC charges had to be calculated and applied?
A. No, I'm not aware of that, nor do I recall -- I mean, the biggest issues were between the City of Detroit and the suburban communities, the 60 to 80 communities that received wholesale service, which was the driver in the challenges.
MR. HANLEY: We've been going for about three hours. I don't know what your preference are, whether you're a lunch guy or whether you want to keep going and be done. I will tell you that my sense is that I've got about an hour left. So we can either take a lunch break, we can take a shorter break,

Page 108

because I need to identify a couple documents I want to use, but you're the master of this, I don't eat during the day, so I'm happy to do whatever you want to do.
THE WITNESS: Because of health reasons, I do need to take a lunch break. So I need to go grab something. So I will -- away from the office, but I will then be back.
MR. HANLEY: Do you want to say 1:45? That gives you an hour plus.
THE WITNESS: An hour should be adequate.
MR. HANLEY: The idea would be we'll probably be done before three then.
THE WITNESS: So Mr. Frescoln's schedule can be accommodated as well.
MR. HANLEY: We can go off the record, Carolyn.
COURT REPORTER: We're going off the record at 12:39.
(Off the record at 12:39 p.m.)
(Back on the record at 1:46 p.m.)
COURT REPORTER: We're back on the record at 1:46).
BY MR. HANLEY:
Q. Mr. Stannard, in the course of your engagement in this

Page 109

matter, did you have any conversations with -- and I don't want to talk about lawyers -- people at DWSD or GLWA about this subject matter?
A. No, I did not.
Q. Did you rely on any specific industry guidance?
A. Only my familiarity with principally the Water and Firemen Federation Manual Practice Number 27, that covers at a high level of cost of service allocations and principles. To a lesser extent, the American Waterworks Association, M1 Manual that deals on similar issues but just for water utilities but really not -- other than cost of service principles. And relied upon my experience in working in this industry for more than 40 years.
Q. And you would agree with me that the Manual Practice 27 doesn't specifically dictate any particular methodology with respect to recovery of IPP costs, correct?
A. That is correct.
Q. Now, going back to Exhibit 51, you would agree with me that your opinion, I guess the last part of this, at the very last sentence of the paragraph before Interrogatory number 17 you say: Mr. Stannard is expected to testify that in viewing the IWC charges as a whole during the class period, including the

Page 110

preparation of periodic costs of service studies and measures defendants voluntarily undertook in the course of the class period prior to the commencement of this action to audit and align its projected revenue requirement with its actual revenue requirement, defendant's actions were not arbitrary, capricious and unreasonable. Do you see that?
A. Yes.
Q. Do you agree that your opinions as reflected in Interrogatory Answers do not address the reasonableness of the IWC charges in any particular year?
A. That's correct.
Q. You would agree with me that in fiscal year 13/14 and 14/15, the revenue requirement that was used was significantly in excess of the actual revenue requirement for those two fiscal years?
A. Based on the information that I've been able to see, as part of this case, I have -- the actual costs that were incurred were in excess of what had been included in the budget -- in the development of that revenue requirement for the IWC charges.
Q. And you say at the beginning of this paragraph that based on your understanding that the pre-class period revenue requirement for the IWC division in the years

Page 111

immediately preceding the class period was substantially greater than the reduced revenue requirement that is evident in defendant's records that were introduced and addressed in the deposition of Bart Foster, that the differences between defendant's projections and its requirements in fiscal year 13/14 and fiscal year 14/15 appear to have been the result of historical modeling of rates based on data and budgets from the pre-class period years, and that this difference became generally diminished throughout the class period's years following the fiscal year 14/15. Do you see that?
A. Yes.
Q. How did you reach that understanding when you said it appears to have been the result of historical modeling of rates?
A. From my understanding of the prior periods when Mr. Foster was advising DWSD and the methodology that was being used throughout the budgets and cost of service and rates in those years, that's really more from not the detailed, because I didn't have access to any detailed rate model determinations, but just from my understanding of the methodologies that had been employed in prior years, and then as we went through to fiscal years '14 and then under that same time

Page 112

period when the Detroit bankruptcy was in place and Great Lakes Water Authority was being established in that transition period, so those moving parts and then -- so the prior years, was just an understanding from my prior experience and knowledge of how things were done in the historical years, how that informed them with regard to setting those Industrial Waste Control charges.
Q. You're not saying, are you, that the revenue, actual revenue requirements prior to fiscal years 13/14 were actually higher but then something changed to lower those revenue requirements but the prior revenue requirements were kept in effect; is that what you're saying?
A. No. I'm saying, again, I would say the revenue requirements used for rate setting were the budgets and then beginning -- so in the prior years, they were using budget, and then after the -- during this class period, those revenue requirements and the budgets started to evolve, and so the numbers identified for the Industrial Waste Control Program were -- the trend was downward, and part of that was the information that was provided and the guidance provided as a result of the Savitskie report with regard to, I think it's fiscal year 2014 or 2015.

Page 113

Q. You're familiar with the term "materially overstated" as it relates to revenue requirements?
A. Yes.
Q. You would agree with me that if you were just looking at fiscal year '14 and fiscal year '15, the IWC revenue requirements were materially overstated in those two years, correct?
A. Looking at those only, just carving that piece out of the entire system revenue requirement and budget that would have been identified as the budgetary and allocated cost, IWCP exceeded what the actual costs were.
Q. By a material amount?
A. Significantly.
Q. So if you were -- if this case were limited to those two fiscal years, you would agree that the IWC charges based upon those revenue requirements were not reasonable during those specific two years, correct?
A. Before I can come to that conclusion, I would want to examine what was going on overall with all of the budgetary items, were there other costs that were understated, how do all those pieces fit together in kind of a pretty big puzzle. But what were -- let me back up. So then with the IWCP alone and just carving out those pieces, the actual costs appeared to be

Page 114

significantly less than what had been included in the calculation of the revenue requirement that was used for setting the rate.
Q. I guess what I'm saying is, your ultimate opinion that the IWC charges during the class period were not arbitrary, capricious or unreasonable is based upon taking into account the entire period between July 2013 and June 2021, correct?
A. Yes.
Q. And you have not expressed an opinion as to the reasonableness of the charges in fiscal year '14 and fiscal year '15 as those two standalone years, correct?
A. That's correct.
Q. And to do so, you say you would have to look at data and do an analysis that you have not yet done, correct?
A. Correct. There's also the other half of the puzzle, which is the amounts that were actually billed and collected during those periods as well, which I don't think there's much information that I've seen yet with regard to the actual billings and collections for the IWC charges.
Q. To your knowledge, there isn't?
A. Yeah, I haven't seen that.

Page 115

Q. Let me show you what we have marked as Exhibit 53.

And this is for the record the Defendant's Response to Plaintiff's Motion For Partial Summary Disposition as to Counts III and IV based upon defendant's admitted overcharges in fiscal years 2014 and 2015. Did you have a chance to review this response?
A. I did see it, yes.
Q. I want to refer your attention to a couple points. First of all, I just want to make sure we're in agreements on the facts. Defendants admit that in fiscal '14 and '15, the revenue requirement was approximately 22.4 million and that the actual revenue requirement was 13 million. Do you see that?
A. Yes.
Q. And that's consistent with your understanding and you agree that that was a material overstatement of the revenue requirement?
A. A significant overstatement.
Q. And then you are aware that one of the things that we say contributed to the significant overstatement of the revenue requirement was the amount allocated for what's called the wastewater lab operations. Correct?
A. Yes.
Q. And so one of the things that Mr. Savitskie did in his reconstruction was to determine that the allocated

Page 116

wastewater lab operations were approximately 9.5 million in the revenue requirement, but the reconstructed calculation reduced that cost to 2.29 million. Correct?
A. Yes, I remember seeing that.
Q. And you don't have any basis to contest that as a factual matter?
A. No, I do not.
Q. And then there's a further admission that DWSD budgeted eight million dollars in costs for the analytical lab, but that the analytical lab budget for 2014 to '15 was approximately three million dollars. Do you see that?
A. Yes.
Q. And that's consistent with your understanding of the facts, and you don't have any basis to contest it, correct?
A. No the budget had been -- what was eight million, and then in the following year, the budget was, as stated, three million.
Q. Now returning to your opinions, you say at the bottom of page 4, or the defendants say that you're expected to testify that the objective in setting utility rates such as the IWC charge should be to make a reasonable distribution of the cost impact of the waste that is

Page 117

put into the wastewater system in alliance with the federal and state environmental regulations affecting the defendant's ability to maintain compliance with the Federal Clean Water Act, its applicable NPDES permits and regulating user compliance with the applicable sewer use ordinances in effect. For it is impossible to discretely measure the volume and pollutants of waste that is put into the wastewater system by utility customers, and the methodologies referenced in the 1981 Feikens order and the DWSD Information Sheet provide a reasonable means for making such a distribution. Do you see that?

A. Yes.

Q. Now when you refer to making a reasonable distribution of the cost impact of the waste, isn't that the objective when you're talking about treatment costs?

A. Kind of a nuanced point of that, it's the nature of the waste that requires the operation of the Industrial Waste Control Program to manage and enforce compliance with the sewer use ordinance or rules and regulations of Great Lakes Water Authority, as well as comply with the MPS permits requirements as well as the Clean Water Act requirements with regard to Industrial Pretreatment Programs.

Q. But you agree with me that IWC costs are not treatment

Page 118

costs per se, correct?

A. That is true. And the intent was not to limit -- it was just the nature of the waste discharge -- if we were all residential customers within the system, then we wouldn't be having this discussion.

Q. But how did the methodologies referenced in the '81 Feikens order and the DWSD Information Sheet provide a means or reasonable means for making such a reasonable distribution of the costs?

A. The costs for an Industrial Waste Control Program were identified and then recovered from nonresidential users on the basis of the, in this case, meter size and equivalent meter basis to develop a monthly charge for recovery of Industrial Waste Control Program costs, linking meter size with the potential impact that that customer would have on the system.

Q. Anything else that provide a reasonable means for making such a reasonable distribution in those two documents?

A. No.

Q. You would agree that under the EPA regulations, the cost of a pretreatment program relate to permits, enforcement, sampling and the other things we've been talking about in the deposition, correct?

A. The whole panoply of activities required of a

Page 119

wastewater utility through their Industrial Waste Control Program to not only enforce the regulations on the significant industrial users in categorical industries but also whatever else is necessary in determination of the utility that needs to be part of their activities of the Industrial Waste Control Program.

Q. One of the things you say is that the IWC charges are reasonable because it's impossible to discretely measure the volume and pollutants of waste that is put in the wastewater system by utility customers. You see that?

A. Yes.

Q. But you're aware that water usage is a well-recognized proxy for sewer usage?

A. It's certainly, it's a proxy -- yeah, it's a proxy that's used because it's the only information we have.

Q. Right. But you've designed rates and charges that recover sewer disposal charges based upon how much water somebody draws from the system, correct?

A. Yes.

Q. So if we have a meter, the volume can -- volume of sewage can be generally estimated based upon how much water a premises uses, correct?

A. Right. They use whatever period information as a

Page 120

basis to examine how water might be returned as sewage or other studies that would determine return factors, and it becomes more complicating with commercial users, some will use -- even in Detroit where you have some users that use substantial amount of water in product that they're producing, such as a beer manufacturer, brewery, who doesn't discharge 100 percent of the water they use but they can't meter the sewage. So there's work that ought to be done to really examine those kinds of things.

Q. Right. I understand that there are certain circumstances where the proxy doesn't hold up, but it's generally recognized as an industry standard that it's appropriate to approximate sewer usage by metered water usage?

A. I would agree with that.

Q. And similarly, I think we were talking about earlier how it's appropriate to design sewer usage charges based upon presumed, the presumed character of the waste that's put into the system by various types of industries; is that correct?

A. That's correct.

Q. So the character of the waste can be approximated based upon assumptions about the pollutant loadings of different types of users, correct?

Page 121

A. Correct.
Q. In fact, as we've said, it's not unusual to impose sewer usage charges based upon the assumed pollutant loadings of different classes of users?
A. Right.
Q. But the IWC charges are fixed charges, correct?
A. They are, and the volumetric work, Great Lakes Water Authority assumes everyone other than the high strength surcharge customers has the same strength waste.
Q. Right. And the IWC charges for each size of meter are the same regardless of the volume and the character of the pollutants of the waste that's actually put into the wastewater system by any user?
A. That's true.
Q. We were talking about the St. Louis tiered system of recovering IPP costs, and do you agree that that was an attempt to charge each class of user based upon their relative impact on pretreatment program costs?
A. Yes.
Q. And you would agree that the IWC charge methodology does not allocate pretreatment program costs to each class of user based upon their relative impact on those costs, correct?
A. It's an imprecise method that has been used to

Page 122

correlate meter size with that impact that it would have on the IWCP program. So it's not as precise as what St. Louis has proceeded with.
Q. Have you ever familiarized yourself with EPA guidance about implementing pretreatment programs?
A. Years ago, I certainly was involved with advising utilities in establishing and implementing pretreatment programs. So I have not been -- since then, I've not really drilled into any guidance manuals at this point.
Q. Well, I guess I'm saying, would it be fair to say that you didn't -- that EPA guidance manuals did not inform your opinions in this case?
A. That is true. The guidance manuals were only focused on the processes for implementing an approvable Industrial Pretreatment Program, and they've evolved a lot, even the EPA expectations have evolved a lot since the early 1980's.
Q. So you've got Mr. Heid's report which had voluminous exhibits attached as part of your review?
A. Yes, but I did not spend time looking at all the long list of nonresidential accounts.
Q. But other than that, you had access to and were able to review each of the supporting documents, correct?
A. Yes.

Page 123

Q. Let me share, this was just for reference, Exhibit R to Mr. Heid's report.
A. Yes.
Q. And it's Guidance Manual for POTW Pretreatment Program Development. Was this one of the things that you at least saw?
A. I saw it was there. I did not spend time studying it.
Q. I'm just going to spend a couple minutes on it because there's two things I want to bring to your attention. Did you know when you reviewed it that it does address user charge systems to recover the cost of the IPP programs?
A. Yes, I knew there was a small section in there about that.
Q. It says: In all cases, the function of the cost allocation scheme -- and this is page 7-22 -- in all cases, the function of the cost allocation scheme is to allocation costs to appropriate categories of users of the POTW system based on specific criteria. Criteria for cost allocation include such things as number and type of sampling, an analysis of events performed and the amount and type of pollutant discharged. And then it says: In this way, users will be charged base on their relative impact on pretreatment program costs. You see that?

Page 124

A. Yes.
Q. So you recognize this as the EPA giving guidance, they're not saying -- they're not dictating a particular methodology, but they're saying that the goal should be to charge users based on their relative impact on pretreatment program costs, correct?
A. That's what it says, yes.
Q. And you don't disagree with that, do you?
A. No.
Q. One other thing I want to touch upon about the definition of industrial users. There's guidance about surveying industrial users, and we talked about this, that there's a need to separate the wheat from the chaff, so to speak, by looking at all the industrial users and identifying the ones that might need to be roped into or placed within the IPP program, correct?
A. Correct.
Q. So the guidance document speaks to that, but it says: POTWs with current industrial information may find it feasible to eliminate particular industries or groups of industries from survey efforts if the industry is, among other things, a discharger of sanitary wastewater only. You see that?
A. Yes.

Q. And is that your understanding of what is appropriate to do in terms of administering an IPP program?
A. The beginning of an IPP program, this guidance was really -- the call was developed to help communities design and implement their pretreatment program more so than how to manage it once it's up and running. So there's the identification of potential participants, the surveying, interviewing, getting that information, but then it's, how do you stay on top of that as customers change. So certainly, you don't want to have to be doing lot of in-depth surveys and actually inspections of facilities if it's not needed. Some cases, for example, with some of the new regulations with PFAS and those related contaminants and we want to do source control, finding out who might be potential sources of those in their operations. And it's a pretty broad group of any business that's using fire retardant materials or heat resistant materials or waterproofing activities that can be -- that are contingent upon that operation.
Q. Right. But that continuing kind of reassessment of properties or users that have been eliminated to make sure they continue to -- that they should continue to be eliminated from the IPP program, you understand that that's a minor part of the total activities of

the IWC division, correct?
A. I don't know. Depends on the system, depends on -- I can't say for certain that it would always be a minor part.
Q. But, for example, in San Diego, that wasn't even in one of the three groupings of costs that were created, correct?
A. Yeah, I believe -- I didn't see it as we were reviewing that report. But I don't know what the discussions were with regard to that activity.
Q. Fair enough. You would agree with me that Mr. Heid in his report spent some amount of space talking about the public benefits of an IPP program that extended to beyond just sewer users; do you recall reviewing that?
A. I remember seeing that, yes.
Q. Your opinions, at least at this point, do not address the public benefit, at least directly in response to Mr. Heid's report, correct?
A. Correct.
Q. In other words, you haven't indicated in your opinions any disagreement or agreement one way or the other with what he said, correct?
A. Correct.
MR. HANLEY: I don't believe I have any further questions for you, sir. I appreciate your

time. Mr. Frescoln may have some questions.
MR. FRESCOLN: I'm okay. Thank you.
COURT REPORTER: This concludes the deposition. We're going off the record at 2:18 p.m.)

CERTIFICATE OF NOTARY

STATE OF MICHIGAN)
) SS
COUNTY OF MACOMB)

I, CAROLYN GRITTINI, certify that this deposition was taken before me on the date hereinbefore set forth; that the foregoing questions and answers were recorded by me stenographically and reduced to computer transcription; that this is a true, full and correct transcript of my stenographic notes so taken; and that I am not related to, nor of counsel to, either party nor interested in the event of this cause.

CAROLYN GRITTINI, CSR-3381
Notary Public,
Macomb County, Michigan.
My Commission expires: July 15, 2024

A

ability (7)
20:8;29:13;49:19;50:23;96:10,11;117:3
able (6)
19:25;25:20;43:19;48:24;110:18;122:23
above (2)
45:13;90:19
accept (2)
80:23;100:9
accepted (4)
18:15;28:1;66:17;89:10
access (2)
111:21;122:23
accommodated (1)
108:15
accomplished (1)
19:23
account (1)
114:7
accounts (1)
122:22
accuracy (1)
28:23
accurate (6)
15:7;23:7,11;25:3;27:25;29:23
accurately (1)
89:2
achieve (2)
41:14;50:15
acknowledges (1)
105:25
across (2)
52:11;85:10
across-the-board (1)
38:11
Act (3)
41:25;117:4,23
action (1)
110:4
actions (1)
110:6
activities (30)
15:4;29:19;32:6;48:10,17;53:20;54:2;61:23;62:17;73:19,22;77:5;82:22;83:6;84:16;85:2,8;86:5,6,11;94:17;102:11,16;103:10;104:15;105:10;118:25;119:6;125:19,25
activity (5)
33:23;57:17;78:3;103:21;126:10
actual (19)
11:22;27:11,15,24;28:10;38:2;50:6;86:6;89:2;91:3,16;110:5,16,19;112:9;113:11,25;114:22;115:12
Actually (10)
8:1;35:12;36:16;51:25;88:5;100:18;112:11;114:19;121:13;125:11
add (1)
49:24
adding (1)
45:5
addition (1)
31:21
additional (3)
25:9,9;54:3
address (6)
36:12;75:9,11;110:10;123:10;126:16
addressed (5)
86:9;96:15;107:8,12;111:4
addresses (2)
22:4;43:2
adequate (3)
18:23;19:24;108:11
adjust (1)
98:8
adjusted (4)
38:1,11;65:19;94:24
adjustment (1)
38:12
adjustments (2)
13:21;27:14
adjusts (1)
34:15
administered (1)
47:25
administering (8)
32:11;42:6;52:8;61:14;62:4;68:11;69:11;125:2
administers (4)
32:17;45:21;60:9;69:3
administration (2)
33:18;48:15
administrative (3)
24:8;32:14;88:17
admission (1)
116:9
admit (1)
115:10
admitted (1)
115:4
adopt (1)
106:6
adopted (2)
39:8;94:18
adversely (2)
50:23;51:18
advice (1)
96:9
advising (2)
111:18;122:6
affect (2)
29:18;50:23
affecting (1)
117:2
affidavit (4)
6:6,11;7:8;12:4
affidavits (1)
6:15
aforementioned (1)
98:6
afterwards (1)
105:16
again (16)
6:1;12:13;18:1;29:25;35:16;39:24;63:16;72:5;74:13;79:4;84:20;93:14;99:6;101:18;105:7;112:15
against (7)
18:4;22:3,8,10,13;32:16;37:2
agencies (1)
70:23
Agency (2)
42:2;71:25
ago (6)
6:6;33:6;36:24;38:22;62:6;122:6
agree (59)
13:23;14:24;16:1;22:7,12,16;23:6,10,20;25:2;28:4;29:14;34:3;39:10;40:7;44:5,20;46:5;47:1,11,11;49:14;51:23;59:5,22;60:16;61:1,5;64:15;67:11;69:10,16;75:8;77:20;79:21;80:1;81:6;83:13;86:20;89:25;92:9;95:24;96:18;103:21;104:10,10;109:15,20;110:9,14;113:4,16;115:16;117:25;118:21;120:16;121:17,21;126:11
agreed (5)
66:16;93:18;105:3,18,19
agreement (18)
11:3;104:1,3,8,22,22,23;105:2,11,22;106:5,11,15,18,25;107:7,12;126:21
agreements (2)
106:20;115:10
al (1)
4:9
align (1)
110:4
alliance (1)
117:1
allocate (2)
68:7;121:22
allocated (11)
20:13;31:1;33:7;80:10;83:1,7;88:12;101:23;113:11;115:21,25
allocating (6)
65:12;66:12;79:18,21;83:2;88:16
allocation (12)
15:2;24:9;36:9;64:23;68:3;74:4;83:8,9;123:16,17,18,20
allocations (1)
109:8
allow (1)
45:15
allowed (2)
47:6;58:6
almost (1)
53:12
alone (1)
113:24
always (4)
9:15;52:6;93:13;126:3
amended (1)
9:3
Amendment (1)
74:10
American (1)
109:9
among (6)
19:6,8;21:5;101:23;105:20;124:23
amount (21)
21:18;23:7,11,15,21,22;27:4,8;28:14;29:20;30:13,14;57:5;80:7;81:8;98:9;113:13;115:21;120:5;123:22;126:12
amounts (2)
95:4;114:19
analysis (24)
13:16;15:21;20:1,10;26:23;33:25;34:16;35:10;36:8;39:25;61:21;62:21;67:1,10;72:15,20;73:4;82:17;88:4,10;97:15;100:2;114:16;123:21
analyst (1)
16:10
analytical (4)
65:21;88:15;116:11,11
analyze (1)
21:16
analyzed (2)
15:16;33:3
ancillary (1)
71:9
and/or (1)
41:8
Angeles (1)
34:12
annual (8)
13:8,14;28:5;34:8,10,21;35:13;40:15
anticipate (1)
25:25
anticipating (1)
103:7
apologize (1)
14:7
appear (2)
6:19;111:7
appeared (1)
113:25
appearing (1)
5:16
appears (4)
48:21;70:8;73:2;111:15
applicable (5)
58:12;59:25;92:5;117:4,6
application (1)
75:9
applied (8)
33:11;39:7,18,18;52:15;66:19;95:7;107:14
applies (2)
69:4;75:1
apply (3)
55:3;58:4;64:2
applying (2)
90:9;99:21
appreciate (2)
73:16;126:25
approach (11)
26:14,15,17,25;33:15;34:15;66:10,11;68:2;70:25;93:16
approaches (1)
52:12
appropriate (24)
16:19;17:13;18:23,25;20:22;23:6,10;33:20;35:7,15;41:19,20;51:23;67:22;72:10;77:9;84:1,4;93:6,8;120:14,18;123:18;125:1
approvable (2)
42:3;122:15
approval (1)
94:25
approve (1)
34:14
approved (3)
73:7;107:1,8
approximate (1)

120:14
approximated (1)
120:23
approximately (4)
100:6;115:12;116:1, 12
approximates (1)
87:9
April (1)
11:21
arbitrary (6)
89:13,18;93:9,11; 110:6;114:6
area (3)
59:8;66:9;68:15
Arkansas (1)
74:2
arose (1)
90:24
around (2)
12:5;44:25
arrangement (1)
11:5
arrival (1)
12:21
art (1)
8:7
aside (3)
35:3;37:6;51:22
aspect (1)
19:21
asserted (2)
106:2,13
assess (1)
63:25
assessed (6)
22:8,10,12;39:12; 90:20;105:15
assessing (1)
37:7
assessment (1)
89:3
assign (1)
68:18
assigned (2)
19:22;58:12
associated (14)
19:1;20:4;24:3; 30:20;32:5;33:2;54:8; 60:6,12;80:18;81:1; 88:11;91:9;102:22
Association (1)
109:10
assume (5)
16:7;27:21;29:10; 86:10;92:22
assumed (4)
15:13;21:1;89:6; 121:3
assumes (1)
121:8
assuming (2)
81:12;84:9
assumption (2)
28:2;88:23
assumptions (2)
15:23;120:24
attached (6)
6:5;94:20;104:12,17; 106:25;122:20
attachments (2)
9:14,18
attempt (3)
29:2;41:15;121:18
attempts (1)
64:10
attention (3)
104:8;115:8;123:9
attributable (5)
24:21;61:22;64:11; 101:1,14
attributed (1)
72:23
audit (3)
15:22;27:17;110:4
audited (1)
15:20
auditor (1)
65:23
August (4)
4:1,6;6:12;94:23
Authority (24)
4:8;5:2,5;9:5;10:2; 13:3,18;15:25;30:7; 31:3,7;34:7;42:5,8; 43:21;45:14;49:20; 57:8;72:22;79:7;106:7; 112:2;117:21;121:8
Authority's (2)
33:14;53:14
authorization (1)
9:8
authorized (1)
93:20
available (4)
8:23;20:6;23:8,12
average (3)
70:10,14;72:17
avoided (1)
71:19
aware (36)
10:13;14:17;30:22; 32:17;39:1,25;40:3; 54:15,16;55:22;61:24; 63:5,9,16,19,20;66:7; 67:3,5;76:2;79:15; 81:3;82:11;86:5,8; 97:11,15,18;98:19; 104:22;105:1,7; 107:11,15;115:19; 119:14
away (1)
108:7

B

back (33)
6:1;7:8;8:1;11:19, 22;12:14;15:11,15; 16:3;17:24;27:8,17; 28:2;33:5,6;37:4; 39:17;59:9,18,19; 62:10;65:22;76:7; 97:25;98:3;100:20; 101:21;103:24;108:8, 21,22;109:20;113:24
background (2)
11:13;65:18
bacteria (1)
50:11
bad (2)
47:4;82:8
balances (1)
17:12
Baltimore (2)
62:9,9
bankruptcy (1)
112:1
Bart (2)
9:24;111:5
base (4)
28:12;66:10;76:23; 123:24
based (43)
20:18;21:1,5,24; 25:24;28:10;30:13; 34:14;38:12;39:12; 52:12,22;53:12,13,18; 54:7;68:1,19;75:23; 76:3;77:13;80:15,17; 83:1;86:22;88:1,7,23; 110:18,24;111:8; 113:17;114:6;115:4; 119:19,23;120:19,24; 121:3,18,23;123:19; 124:5
basic (4)
13:7;52:19;66:16; 76:23
basically (3)
40:15;54:23;90:9
basing (1)
73:4
basis (35)
13:8;20:21;27:19; 28:6;29:3,10;31:14; 33:10,14;34:4,8,10,21; 35:2,13;37:8;41:11,12; 48:3;53:17;76:15; 79:14;82:7;84:9,22; 85:6;87:21;95:7;100:3; 102:23;116:6,16; 118:12,13;120:1
bearing (1)
19:3
became (1)
111:10
become (9)
14:17;33:10;39:3,25; 74:9,25;76:1;82:11,22
becomes (2)
38:9;120:3
beer (1)
120:6
beginning (3)
110:23;112:17;125:3
begins (1)
94:10
behalf (1)
5:5
behind (3)
28:3;46:21;51:6
believes (1)
17:13
below (3)
6:20;67:10;71:2
benchmark (1)
40:8
benefit (19)
19:21;25:22;50:20, 21;51:13;71:8,9,15,18; 87:3,4,6,10;102:14,15, 17,21;103:10;126:17
benefited (1)
40:1
benefits (11)
41:7;51:16;70:10,11, 14,19;71:1;72:8,16; 73:19;126:13
best (12)
20:8;24:24,25;29:13, 21;33:13;45:9;62:20; 66:18;68:23;81:24; 92:24
bets (1)
106:17
better (3)
15:20;16:8;93:13
beyond (3)
28:1;79:10;126:14
biannual (1)
34:9
big (2)
76:18;113:23
biggest (1)
107:16
billed (1)
114:19
Billing (1)
69:9
billings (1)
114:22
bills (1)
94:22
binding (1)
107:2
biochemical (3)
33:8;44:6;50:10
biological (1)
46:22
biosolids (1)
49:18
bit (6)
6:17;11:17;13:13; 42:13;55:25;68:25
Black (4)
8:2,3;36:16;66:1
blockages (1)
45:18
board (2)
85:10;94:18
BOD (5)
44:6,23;50:23,25; 94:16
bodies (2)
78:21;79:7
body (1)
99:7
body's (1)
96:12
Bolt (2)
74:14,17
both (5)
17:4;23:1;41:24; 48:2;106:15
bottom (2)
69:8;116:21
break (5)
59:7;92:10;107:25, 25;108:6
breakdown (1)
69:14
breakdowns (1)
58:19
breaks (1)
82:1
brewery (1)
120:7
bring (1)
123:9
broad (1)
125:17
buckets (3)
68:20;73:15;87:2
budget (26)
15:9,12,13,17;22:23, 25;23:1;26:1;34:8,9; 35:5;38:8;69:16,20; 70:16;88:8;95:3;98:10, 15,17;110:21;112:18; 113:9;116:11,18,19
budgetary (4)
68:10;91:11;113:10, 21
budgeted (3)
22:20;27:24;116:10
budgets (12)
15:10;22:23;23:4,17; 24:17;87:21;88:1,19; 111:9,19;112:16,19
building (8)
14:8;48:23;53:22; 54:1;64:16;79:17; 83:16,20
bulk (2)

12:16,19
bullet (2)
71:3,17
business (2)
5:14;125:17
businesses (2)
53:21;63:25

C

cafeteria (1)
54:1
calculated (7)
28:8,8;31:10,12;80:25;81:20;107:14
calculation (9)
13:10;16:15;80:22;81:7,14;90:6;100:7;114:2;116:3
calculations (4)
16:2,2,9,12
calendar (3)
11:20,24;12:8
California (4)
21:13;38:5;72:1,24
call (3)
32:24;66:22;125:4
called (14)
4:14;17:19;31:21;42:24;43:2;44:5;54:19;56:8,10;64:22;80:12;81:21;104:1;115:22
calling (1)
44:16
came (3)
9:18;74:15;104:4
Can (51)
5:9,10,11;6:3,8;11:17;16:24;17:22;18:3;19:23;20:10,16,16,20;24:14;25:24;28:15,23;29:1;30:13;31:5;32:15;37:9,16;45:16;46:22;47:2,5;49:16,18;50:5,23;51:1,9;66:18;69:6;73:1;83:25;96:5;98:16;99:12;101:7;107:24,25;108:15,16;113:19;119:22,23;120:23;125:19
capacity (3)
5:16;66:10;101:13
capital (3)
17:9;23:3;31:9
capricious (6)
89:14,18;93:9,12;110:7;114:6
care (1)
25:23
career (2)
29:1;105:9
Carolyn (1)
108:17
carved (2)
31:4;74:4
carving (2)
113:8,24
case (41)
4:9,24;5:19;6:15;7:25;8:21;9:2;10:14;22:14;26:3;30:6,14;36:24;38:6;39:13;42:22;43:21;52:20;61:17;64:1;67:20;68:6;71:12,21;72:15,25;73:9,18;74:7,15,20;76:18;77:12;83:21;84:20;94:8;99:5;110:19;113:15;118:12;122:13
cases (9)
66:15;73:24;74:1,15;82:18;103:5;123:15,17;125:13
categorical (3)
47:21;98:1;119:3
categories (6)
47:18,21;55:10;68:24;85:13;123:18
categorized (3)
53:3,9;70:3
category (2)
49:1;97:24
causation (1)
87:11
cause (10)
19:21;45:17,17;47:5;50:8;52:17;55:7;102:17,22;103:11
caused (1)
86:23
causes (2)
41:8;83:14
causing (1)
86:17
centers (1)
68:19
cents (2)
94:14,15
certain (20)
5:18;20:3;32:23;46:17,21;49:15;54:13;58:7;66:8;75:22;78:14,17;79:8,22;80:4,15;81:12;99:1;120:11;126:3
certainly (24)
8:13;20:7,11;21:13;25:11;28:25;29:5;34:7;35:5,6;43:14;44:23;45:22;46:8;48:15;49:22;54:3;62:25;64:14;93:17;99:12;119:16;122:6;125:10
chaff (1)
124:14
challenge (5)
45:11,11;73:9;85:21;106:10
challenges (7)
28:16,17;106:9,12,19,23;107:19
challenging (2)
16:9;29:1
chance (1)
115:6
change (6)
35:4,5;80:5;93:4;105:14;125:10
changed (6)
27:20;35:21,23;49:8;105:14;112:11
changes (8)
25:8,8;26:10;38:2;73:10,13;85:9,25
changing (2)
85:23;103:20
chapter (1)
92:1
character (3)
120:19,23;121:12
characteristics (6)
21:6,10,20;49:8;69:2;79:3
characterized (1)
58:18
charge (45)
14:23;24:4;28:6,9,12,13,15;29:18;30:23;32:2;62:24;63:22;64:2;73:1,15;74:18;78:18;79:9;80:4;81:15;83:19;84:4,20;86:21;87:9,19;88:25;89:4;90:20;92:10;94:19,24;95:4,6,7,14;96:18;97:17;102:9;116:24;118:13;121:18,21;123:11;124:5
charged (16)
40:21;53:5,8;57:8;62:4;67:21;76:14;78:24;93:23,25;94:3;96:1;99:9;102:13;103:5;123:24
charges (99)
10:15;13:5,11;14:18;17:20;18:3;22:8;26:4;27:6;28:4;29:15,24;30:16;33:17;35:17;38:24;39:6,7,10,14,17;40:24;41:19;51:24;52:22;53:2;54:12;55:23;56:2,15;58:18,24;60:13;61:3,18;62:17;63:24;64:13;65:20,20;66:5;70:7;73:14;74:11,21;75:2,3,5,14,22;76:25;77:7,10;78:15;79:23,25;81:2;82:1,2,14;83:22;88:5;90:5,10;91:3,21;92:1,3,11;97:13;99:3,23;100:12;102:23;103:5,9,16;104:14,25;105:3,15;106:6;107:13;109:24;110:11,22;112:8;113:16;114:5,11,23;119:8,18,19;120:18;121:3,6,6,11
charging (2)
86:20;99:18
charm (1)
87:20
charter (1)
106:8
check (1)
16:8
chemical (1)
50:8
chemicals (4)
30:5,12;45:5;46:11
chemistry (1)
69:19
Cheryl (1)
10:6
Chrisano (1)
39:22
Christano (1)
65:4
C-H-R-I-S-T-A-N-O (1)
39:23
Christopher (2)
4:25;7:15
Circuit (1)
4:10
circumstance (1)
37:13
circumstances (4)
62:19;82:25;86:14;120:12
City (19)
5:2,13;14:9;34:12,12;39:8;53:1;62:9,10;64:22;65:22;67:12;68:12;73:7;74:15,17;98:6;106:8;107:16
city's (2)
68:1;70:20
CIUs (1)
56:1
claims (1)
106:2
clarify (1)
41:1
class (25)
4:24;19:3;20:8,9;21:8,10;40:25;41:2,3,17;51:19;70:5;82:13;89:5;102:14,20;103:14;109:25;110:3;111:1,11;112:18;114:5;121:18,23
classes (10)
19:6,9,15,17,20;20:12;36:9;87:5;103:18;121:4
classic (2)
20:24;28:18
classifications (1)
55:22
classified (3)
56:4,13;57:24
classify (1)
55:2
Clean (3)
41:25;117:4,23
clearly (2)
67:18;78:23
client (5)
62:22;66:18;68:21;73:3;99:13
clients (1)
26:9
client's (1)
68:21
closely (1)
87:9
closer (1)
11:17
codes (1)
98:1
coliform (1)
44:15
collaboration (1)
62:22
colleague (1)
26:18
collect (3)
95:1,1;98:8
collected (3)
94:22;95:4;114:20
collection (4)
42:25;45:10,17;70:23
collections (1)
114:22
college (1)
90:23
colleges (9)
54:14;81:2;90:13,14;93:20;97:12,20;98:22;99:24
coming (3)
25:6;27:3;43:7
commencement (1)
110:3
commercial (13)
20:25;21:9,10,14;48:25;49:6;57:17;79:17;83:15,19;85:9,23;120:3
Commission (2)
62:10,25

commissions (1)
38:1
commodity (1)
66:11
common (8)
15:10;17:21;21:12;
22:22;23:4;34:25;35:9;
37:25
communities (6)
10:15;37:4;62:7;
107:17,17;125:4
community (4)
7:19;25:17;65:18;
85:23
Company (2)
4:8;77:16
compare (1)
27:11
compared (1)
27:8
compensate (2)
32:23;33:17
compensation (3)
24:16;25:16,18
competent (1)
66:25
complaint (2)
9:3,5
complete (1)
67:8
completion (1)
58:11
complex (2)
37:19;66:3
compliance (4)
59:25;117:3,5,20
compliant (1)
92:19
complicated (1)
20:11
complicating (1)
120:3
comply (2)
55:14;117:22
complying (1)
96:2
component (5)
23:1;35:14;70:20;
75:18;105:13
components (5)
23:8,12;32:10;73:23;
88:7
comprehensive (2)
35:12;67:8
compromise (1)
105:19
concentrations (1)
32:24
concept (8)
40:4,11;43:14;51:5,
6;62:11;76:23;77:25
concepts (4)
8:14;65:10;66:16,17
concern (7)
44:24;45:3;47:19;
48:13;49:21,23;55:7
concerning (1)
81:22
concerns (1)
73:1
conclude (1)
17:17
concluded (1)
80:3
concludes (1)
127:3
conclusion (5)
78:10;79:10,11;
97:17;113:19
conclusions (2)
7:14;27:22
conduct (4)
49:5;54:18;61:6;
85:16
conducted (2)
61:21;85:2
confer (1)
73:19
confirm (3)
11:22;12:15;82:21
connection (1)
18:19
consideration (1)
70:9
considerations (1)
52:6
considered (1)
58:23
consist (1)
44:5
consisted (1)
14:25
consistent (7)
29:6;89:10;92:2,5,
18;115:15;116:15
consisting (1)
89:6
constant (1)
13:25
constantly (1)
85:23
constitute (2)
74:21;105:22
constitutional (1)
72:25
construction (1)
14:8
consultant (2)
36:21;76:11
consultants (1)
28:25
consulting (2)
62:6;66:7
contained (1)
105:21
containing (1)
7:18
contains (1)
57:18
contaminants (2)
49:23;125:14
contest (2)
116:6,16
context (1)
99:15
contingent (1)
125:20
continuation (1)
29:11
continue (4)
48:23;88:21;125:23,
23
continues (2)
33:13;49:23
Continuing (4)
59:22;98:4;106:3;
125:21
contribute (2)
41:21;50:17
contributed (1)
115:20
contributes (1)
64:17
contributing (1)
86:17
Control (44)
10:2,9;13:5;14:23;
15:4;30:21;38:24;39:5;
41:23;45:5;50:3;51:18;
52:11;57:8;64:23;67:9;
70:25;72:3;73:13,24;
76:16;78:4;84:19;85:7;
87:19;88:24;90:20;
92:1;94:17;95:3;98:10,
17;102:12;104:15;
105:13,15;112:8,21;
117:19;118:10,14;
119:2,6;125:15
controlled (1)
59:24
controlling (2)
42:6;51:17
conventional (4)
43:25;44:2,17,21
conversations (1)
109:1
converting (1)
40:12
copper (1)
58:8
copy (2)
9:6;106:25
corrected (1)
16:17
correctly (1)
6:4
correctness (1)
105:25
correlate (3)
54:5;86:22;122:1
correlation (3)
54:7;55:16;87:1
cost (111)
8:14;13:8,16;14:5,
13;15:6,14;16:19;
19:11,13,24;20:18;
21:21,24;23:8,12,14,
21;24:3,21;25:22;26:3,
22;29:14,18;30:5,12;
31:14;32:10,11;33:2,
16;34:16;35:8,10,11,
12,14,17,23;36:5,7,9;
38:4,10,17,21;40:4,7,
11,15,19,20,21,24;
41:2,8,22;48:8,14;51:3,
23;52:3,5;54:6;55:16,
17;61:1,16;62:1,21;
64:4,17,23;68:2,3,18,
20;69:22;73:5;76:2,3;
77:21;79:18;80:3,13;
82:25;83:1;84:24,25;
87:11;88:10,16;91:13;
95:2;98:9,16;99:22;
102:9;109:8,12;
111:19;113:11;116:3,
25;117:15;118:22;
123:11,15,17,20
cost- (1)
21:4
cost-base (1)
97:18
cost-based (7)
40:11;79:13,14;
84:13;97:11;99:18,25
costs (131)
13:20;14:17,22,24,
25;15:2,2,3,19;17:3;
19:4,6,8,16,22;20:4,13;
24:4,6,8,8,9,10,11,13,
18;25:2,15,23;26:8,11,
21;27:1,9,11,15,24,24;
29:19,25;30:1,2,9,10,
17,19,25;31:2;33:3,6,9,
13,15;35:6,6;39:11;
40:1,13;41:9,15,21;
52:10,17,18,21;54:7;
60:6,12,20;61:9,22;
62:12,13,14,21;63:7,
11,14;64:10;65:13,24;
66:13;68:7,17,18;71:6;
72:22;74:4;76:16;77:2;
80:7;83:9,15;84:1,2;
86:3,17,23;87:2;88:10,
11,12,13,14,16,17;
91:11;102:6,22;
103:11;109:17;110:1,
19;113:11,21,25;
116:10;117:16,25;
118:1,9,10,15;121:17,
19,22,24;123:18,25;
124:6;126:6
council (3)
73:7,11;94:19
Counsel (3)
4:18;7:15;8:21
counted (1)
32:7
counts (2)
7:19;115:4
County (6)
4:10;37:3,3,4;53:2;
62:9
couple (5)
38:3;96:6;108:1;
115:8;123:8
course (9)
7:9;12:7,25;22:6;
36:11;46:5;76:1;
108:25;110:3
Court (16)
4:10,11;6:13;9:1;
59:13,15,19;92:19;
94:25;96:15;107:1,8,
12;108:18,22;127:3
Court's (2)
104:12,16
cover (4)
30:17;31:14;65:3;
70:1
covered (2)
39:14;60:13
covers (1)
109:8
create (3)
28:16,17;39:15
created (3)
6:25;24:17;126:6
credited (2)
33:20,22
criteria (3)
46:8;123:19,20
critical (1)
70:20
cubic (1)
94:15
current (2)
74:24;124:20
Currently (6)
22:14;26:19;38:5,18;
42:24;80:21
customer (11)
19:3,6,8,15,17;29:8;
70:10,15;72:9;102:8;
118:16
customers (42)
20:3,4,5,12;21:5,9,9,
10,17,19;22:11;33:24;
36:19;48:25;54:9,12,
13;67:20;70:15;79:24;
80:6,8;84:16;94:2,23;
95:14,18;96:19,23,24;
99:8;101:4,16;102:20;
103:15,18;107:2;
117:9;118:4;119:11;
121:9;125:10

cut (3)
81:18,20;101:19

D

daily (1)
85:8
damage (1)
50:6
data (16)
15:8,18,22,22,23; 19:25;21:18,19;22:23; 36:6;85:5,24;87:21; 88:1;111:9;114:15
date (2)
12:7;104:6
dated (6)
92:19;104:5,6,12,16; 106:23
dates (1)
11:22
day (5)
47:17,20;55:9;77:14; 108:3
days (1)
17:24
deal (2)
45:1;85:9
deals (1)
109:10
dealt (1)
38:23
debt (2)
17:5,6
decades (1)
41:13
December (3)
10:25;11:1;98:7
decision (5)
74:17;78:20;79:6; 96:13;98:23
decisions (2)
73:12;99:10
decrease (1)
28:5
deduction (1)
17:19
deem (1)
66:25
deemed (2)
46:12;58:13
defendants (12)
5:1;6:5;9:13;11:6,7; 61:20;89:3,6;98:21; 110:2;115:10;116:22
defendant's (8)
7:15;9:17;110:6; 111:3,6;115:2,4;117:3
define (2)
80:5;88:10
defined (2)
30:4;87:19
definition (11)
18:19;43:12;56:5,14, 14,23,25;59:1;80:5; 97:21;124:11
deliberations (1)
79:5
demand (4)
33:8;44:6;50:10; 66:11
dental (1)
63:3
dentist (1)
63:1
dentists (2)
63:1,1
Department (6)
5:3;13:4,19;36:18; 62:3;76:12
dependent (1)
77:21
Depends (2)
126:2,2
deposition (17)
4:5,6;6:21;7:5,21; 9:22,23,25;10:3,5,7; 22:6;56:19;64:21; 111:4;118:24;127:4
depositions (8)
9:19,25;10:11,17; 12:25;13:1;14:20;86:9
derivation (1)
13:11
derived (2)
40:16;62:2
deriving (1)
106:1
describe (3)
21:20;47:19;92:11
described (7)
26:6;61:23;87:19; 89:4,5;92:4,18
describes (1)
89:2
description (1)
92:3
design (4)
46:8,13;120:18; 125:5
designed (5)
44:21;46:6,10;50:16; 119:18
desired (2)
17:12;18:21
detail (7)
6:20;14:2;31:23; 55:25;65:6;68:25; 87:14
detailed (7)
13:6;14:5,12;26:23; 85:7;111:21,22
details (1)
16:25
determination (10)
25:4;29:24;35:9,18; 79:1;96:7,12;97:18; 99:8;119:5
determinations (3)
52:13;73:17;111:22
determine (15)
15:15;16:12;21:19; 26:9;36:21;49:1,7; 54:19;55:2;61:21; 62:23;91:4,7;115:25; 120:2
determined (14)
14:15;16:18;34:4; 48:4;55:6;62:20;68:14; 78:22;82:19;90:3,6; 91:22;92:12;100:11
determining (5)
17:20;23:15;27:5; 68:9;99:22
Detroit (14)
5:2;13:4,19;36:17; 43:24;45:2;76:11;98:7; 100:16;106:4,8; 107:16;112:1;120:4
develop (5)
25:17;34:14;42:2; 68:23;118:13
developed (6)
62:11,12;68:1;76:12; 88:5;125:4
developing (4)
33:15;68:2;77:7; 87:8
development (3)
62:7;110:21;123:5
devoted (3)
12:11;48:11;86:12
dictate (1)
109:16
dictated (1)
105:3
dictates (1)
104:24
dictating (3)
63:6,10;124:3
Diego (13)
38:5,13,15,20;39:11, 14;62:10;64:22;65:19; 67:12;72:24;73:16; 126:5
Diego's (2)
67:20;71:21
differed (1)
13:24
difference (6)
21:21;43:9;79:15; 101:1,14;111:10
differences (1)
111:5
different (13)
7:2;8:6;21:6,11; 46:15;52:15;53:20; 60:2;99:19,19;103:7; 120:25;121:4
differing (1)
21:23
difficult (2)
29:7;66:3
diminished (1)
111:10
direct (14)
15:1;16:14;30:19; 42:9;43:5,10,16;62:17; 78:9;83:8;87:1;88:13; 102:7;104:7
directed (3)
65:25;86:6,12
directing (1)
76:14
directly (11)
30:2;43:10;46:13; 68:22;77:23;88:15; 102:17,17,21;103:10; 126:17
disagree (2)
101:22;124:8
disagreeing (1)
16:5
disagreement (1)
126:21
discharge (18)
21:11;43:17,19,23; 45:12;47:17;50:15; 51:2,9;53:23;55:6; 57:1,25;58:3;60:2; 102:11;118:3;120:7
discharged (4)
43:10;50:13;71:11; 123:23
discharger (2)
43:16;124:23
discharges (11)
43:3,4,5,6,10,11,24; 45:23;46:18;50:23; 51:3
discharging (2)
43:15;103:3
disclose (2)
91:20;92:10
discontinued (1)
95:6
discovery (1)
7:20
discretely (2)
117:7;119:9
discretion (1)
65:15
discrimination (9)
20:17,18,21,23;21:5, 7,22;99:14,17
discuss (1)
66:20
discussed (3)
56:19;70:11;79:5
discussing (2)
64:7;87:25
discussion (4)
18:12;63:17;73:3; 118:5
discussions (2)
76:22;126:10
Dismissal (1)
106:22
disposal (1)
119:19
dispose (2)
25:5;49:20
disposes (1)
51:13
Disposition (1)
115:3
disputes (2)
36:18;105:19
disrupt (1)
51:9
distinct (1)
63:22
distinction (15)
18:9,11,14,15,17; 29:8;43:5,7,13;53:7,17, 18;84:13,14;86:15
distinctions (2)
27:23;82:8
distribute (1)
22:3
distributed (2)
19:6;80:16
distributing (1)
76:2
distribution (7)
19:8,13;116:25; 117:12,14;118:9,18
District (2)
52:25;90:13
dividing (1)
80:11
division (34)
26:21;30:18,21,24; 31:3,15,19,24;32:17; 33:19;41:22;47:25; 60:9,23;61:13;62:3; 64:18;69:12;73:19; 76:3;77:21;79:19; 80:10;81:13;83:13; 84:8;85:16;86:6,12,18; 103:11,12;110:25; 126:1
division's (1)
102:15
document (10)
6:4,22;7:5;9:17; 64:22;67:7;88:23; 91:19;104:1;124:19
documents (17)
6:25;7:20;8:12,16, 17,18,20;9:11;11:12, 13,15;12:18;34:1;94:7; 108:1;118:19;122:24
dollars (7)
24:19,20,25;95:1,5;

116:10,12
domestic (3)
33:12;78:23;103:19
done (21)
5:23;6:15;33:25;
34:20;52:3;61:25;
72:15,20;76:10;81:3,4;
85:6;87:20;93:12,16;
99:13;107:23;108:13;
112:6;114:16;120:9
double (3)
101:4,17,20
down (13)
6:17;11:17;53:15;
56:20;58:7,8;62:25,25;
68:2;91:18,24;100:15;
104:6
downward (2)
98:8;112:22
drain (1)
58:7
draw (2)
37:15,16
draws (1)
119:20
drill (1)
15:11
drilled (1)
122:9
driver (2)
26:20;107:18
drivers (1)
48:8
drives (1)
46:15
drought (2)
29:11,12
dry (4)
28:19,20;29:4,17
duly (1)
4:15
during (11)
7:4;13:16;36:13,16;
89:4;108:3;109:25;
112:18;113:18;114:5,
20
dwelling (1)
95:9
DWSD (36)
5:3;10:5;13:9;32:3;
34:5,19,20;36:23;37:6;
43:22;72:21;78:16;
79:7;80:9,24;87:22;
88:5,24;89:1,9,12,17,
22,25;91:19;92:3,18;
97:6;106:4;107:2,3;
109:2;111:18;116:9;
117:10;118:7

E

earlier (6)
64:8;65:2;87:25;
100:5;105:9;120:17
early (4)
9:6;36:20;94:8;
122:18
earnings (2)
17:23,23
eat (1)
108:2
Ebola (1)
50:1
economic (1)
41:11
economically (1)
21:17
effect (11)
38:6;92:23,25;93:2;
95:25;98:13,14;
104:19;105:4;112:13;
117:6
effective (3)
70:24;72:3;94:21
efficient (1)
59:9
efficiently (1)
49:19
effort (6)
48:15;68:19;73:21;
77:4;86:2;103:19
efforts (2)
82:20;124:22
eight (2)
116:10,18
either (12)
10:22;17:11;19:20;
25:18;27:13;33:22;
61:20;86:9;87:10;97:7,
19;107:24
element (9)
15:3;23:24;24:21;
29:5;30:12;35:14;
48:14;75:18;91:13
elementary (1)
90:12
elements (10)
14:17,22;15:19;17:3,
8;24:10;29:4;45:5;
48:17;74:3
eliminate (1)
124:21
eliminated (2)
125:22,24
eliminating (1)
50:19
else (4)
11:9;56:8;118:17;
119:4
emerging (1)
49:23
employed (9)
13:2;15:24;16:16;
28:13;63:6,11;89:3;
93:6;111:24
employees (4)
24:15;27:2,3,4
encompass (1)
19:2
encompasses (1)
20:2
encountered (3)
52:20;54:11;63:13
end (3)
22:4;49:18;58:10
enforce (2)
117:19;119:2
enforcement (10)
48:16;53:20;62:16;
67:15;68:12;69:1;
70:23;77:4;82:24;
118:23
enforcing (2)
62:4;83:5
engaged (5)
37:20;49:2;62:6;
64:3;68:22
engagement (6)
9:8;11:10;14:4;
65:16;76:1;108:25
engagements (1)
36:21
engineer (1)
16:10
enhanced (1)
71:22
enough (4)
30:16;75:21;83:11;
126:11
ensure (1)
59:25
ensures (1)
71:10
enter (2)
46:18;49:17
entered (1)
14:2
entire (2)
113:9;114:7
entities (2)
87:22;98:25
entitled (1)
88:23
environment (8)
47:2,8,10;49:17;
71:12,13,13;103:20
Environmental (5)
42:1;47:5;69:19;
71:25;117:2
EPA (10)
43:18;54:17;56:5,14;
97:21;118:21;122:4,
12,17;124:2
equipment (2)
14:8;17:8
equitable (1)
19:7
equitably (2)
51:2;68:3
equity (2)
41:11,14
equivalent (18)
76:15;80:12,13,17,
21,25;81:7,9,10,14,15,
18;100:6,12,19,22,23;
118:13
essentially (4)
15:9;48:1;76:7;
83:12
establish (4)
13:17;36:8;40:23;
64:1
established (5)
24:2;36:22;65:12;
100:5;112:2
establishing (5)
13:20;38:10;40:8;
66:18;122:7
establishment (1)
13:5
estimable (1)
23:15
estimate (3)
23:7,11;68:19
estimated (3)
24:14;80:25;119:23
estimates (3)
42:2;64:10;68:23
et (1)
4:9
evade (2)
46:22;49:16
evaluate (2)
15:6;88:4
evaluated (1)
32:1
evaluating (1)
103:3
evaluation (1)
58:11
evaluations (1)
85:16
even (16)
21:14;22:13;29:25;
34:15;37:18;50:1;
58:23;63:17;77:20;
84:21;96:14;98:25;
102:19;120:4;122:17;
126:5
event (2)
86:20;95:3
events (1)
123:21
everybody (4)
51:13;58:4;59:11;
92:14
everyone (5)
51:16;53:6,8;102:9;
121:8
evidence (2)
78:5;105:23
evident (1)
111:3
evolve (1)
112:20
evolved (2)
122:16,17
exact (1)
83:19
exactly (1)
18:13
EXAMINATION (3)
5:6;66:5;85:5
examine (9)
19:12;34:9;64:4;
73:22;85:24;100:3;
113:20;120:1,10
examined (5)
4:17;27:12;36:20;
72:22;82:19
example (18)
15:14;16:19;20:24;
21:2,4;22:1,1;28:18;
29:17;53:22;66:7,9;
79:15;81:5;82:19;
102:18;125:13;126:5
examples (1)
38:4
exceeded (1)
113:11
except (4)
90:10;95:14;96:1;
105:20
exception (1)
7:18
exceptions (1)
34:22
excess (2)
110:16,20
excessive (1)
45:16
exclude (3)
96:11,14;97:17
excluded (2)
54:13;72:17
excludes (1)
96:10
excluding (2)
97:12;100:4
exclusion (4)
95:21,22;96:7,20
exclusions (3)
79:13;95:19;97:7
exclusive (1)
24:3
Excuse (1)
38:7
execution (1)
105:24
executive (1)
66:22
exempt (4)
78:15;79:22;81:2;
101:15
exempted (3)

78:17;79:8;90:18
exempting (1)
81:5
exemptions (12)
81:22;90:22,24;
93:19;98:20;99:1,24;
101:2,3,5,9,16
exercise (1)
22:17
exert (1)
7:11
Exhibit (16)
6:18;56:18;64:21;
87:13;89:22;90:1;
92:21;94:6,20;95:18;
104:13,17,18;109:20;
115:1;123:1
exhibits (10)
7:17,18;9:15,18;
13:1;14:19;27:13,16,
19;122:20
exist (1)
44:17
existed (1)
15:18
existing (1)
48:22
exists (1)
81:3
expanding (1)
96:7
expect (1)
55:16
expectation (1)
87:17
expectations (2)
26:11;122:17
expected (10)
23:22;24:18;53:23;
57:24;87:15;88:22;
91:25;92:16;109:24;
116:22
expense (3)
17:5,16;23:2
expenses (4)
68:11;69:15,15,17
experience (10)
8:11,13;24:13;36:11;
48:7;52:3;74:1;87:16;
109:13;112:5
expert (3)
5:17;7:10;101:13
explain (1)
37:9
explanation (1)
73:16
express (2)
10:19;96:19
expressed (3)
18:16;19:14;114:10
expressing (1)
75:13
expressly (3)
105:18,20;106:4
extended (2)
93:19;126:13
extension (1)
102:20
extent (11)
19:23;20:6,20;23:12,
19;33:16;41:5;45:24;
52:6;75:17;109:9
extra (1)
66:10

F

facilities (6)
30:11;41:17;55:4,19;
90:11;125:12
Facility (5)
30:8;42:23;43:1,20;
57:16
fact (13)
26:15,20;27:25;
29:22;32:23;39:14;
43:23;52:3;78:5;85:15;
86:10;101:10;121:2
factor (1)
75:1
factors (4)
75:6,10,12;120:2
facts (3)
86:11;115:10;116:16
factual (1)
116:7
fail (1)
50:9
failure (1)
106:11
fair (23)
6:2;15:5;16:7;17:17;
18:6,9,13,17,19,21;
19:2,9,14;27:21;30:16;
40:19;75:21;79:12;
83:11;91:10;95:19;
122:11;126:11
fairly (6)
18:22;21:12;23:14;
24:14;51:2;59:8
fairness (1)
20:2
fall (3)
49:1;55:10;57:10
falls (1)
47:18
familiar (13)
18:6;31:17;36:1;
39:3;40:4;43:25;74:9,
13,14,25;75:5,7;113:1
familiarity (1)
109:6
familiarized (2)
31:18;122:4
far (7)
8:21;12:12;24:6;
34:10;35:8,9;57:4
fat (1)
46:2
Fats (7)
44:13;45:9,12,16,19,
22,24
favoritism (1)
19:18
feasible (2)
21:18;124:21
February (2)
94:18,19
fecal (1)
44:15
federal (9)
41:23;42:9;55:14;
63:5;71:24;76:8;92:19;
117:2,4
Federation (1)
109:7
fee (2)
63:2;86:3
feeds (1)
42:25
fees (24)
18:3;39:6,6;62:15,
16,24;65:19,20;67:9,
11,13,14,15,16,18,21;
68:1;70:1,1,9;73:14,
15;74:5;98:8
feet (1)
94:15
Feikens (26)
76:8,8;92:20,22,23;
93:1,7,10,21,22;94:10,
10;100:10,11,21;
102:2;103:24;104:5,7,
9,24;105:16;106:16;
107:6;117:10;118:7
felt (1)
63:2
fence (1)
96:17
few (3)
13:15;37:4;65:8
figures (1)
22:20
file (1)
8:20
filed (3)
6:5;9:4;48:4
Final (3)
64:24;73:12;106:21
finally (1)
25:21
finance (3)
17:6;30:24;31:2
financed (2)
54:12;70:7
finances (1)
31:8
financial (1)
18:2
find (3)
12:1;92:9;124:20
finding (1)
125:15
fine (1)
59:12
finish (1)
5:25
finisher (1)
48:22
fire (6)
95:11,15,23;96:1,21;
125:18
Firemen (1)
109:7
firm (6)
10:24;11:6,8,9,25;
26:17
firms (2)
26:18;66:7
first (11)
4:15;7:23;10:24;
11:12;13:9;37:2;55:18;
57:15;65:11;85:21;
115:9
fiscal (17)
27:10;107:9;110:14,
17;111:6,7,12,25;
112:10,25;113:5,5,16;
114:11,12;115:5,11
fish (1)
47:4
fit (2)
59:1;113:22
five (5)
15:15;35:11;53:4,9,
15
five-year (2)
34:13;39:9
fixed (9)
28:6,9,12;30:10;
39:11;52:21;76:3;
77:10;121:6
flat (1)
53:6
flow (1)
77:14
focus (1)
47:12
focused (1)
122:14
FOG (3)
44:13;45:8;94:16
follow (3)
16:12;66:16;93:12
following (4)
57:11;90:11;111:11;
116:19
follows (2)
4:17;104:11
food (1)
53:25
Ford (1)
77:16
forecast (2)
22:25;28:23
forecasters (1)
29:1
forecasting (1)
29:22
formation (3)
23:17;41:25;65:21
formed (3)
12:21,23;74:23
former (1)
10:5
formerly (1)
30:8
forth (8)
6:23;7:1,6,13;91:20;
94:20;97:8;104:11
forward (3)
26:25;39:7;106:17
Foster (6)
9:24,25;13:8;15:24;
111:5,18
Foster's (1)
14:20
foundation (5)
21:24;96:3;97:4;
101:6;103:17
founded (1)
92:24
four (5)
34:13,17;35:11;39:9;
71:2
fourth (1)
71:17
franchise (1)
31:6
frankly (1)
96:13
free (1)
19:17
Frescoln (12)
4:25,25;7:16;12:5,
10;59:12;96:3;97:2;
101:6;103:17;127:1,2
Frescoln's (1)
108:14
fringe (1)
68:10
full (4)
13:16;31:14;65:24;
95:2
full-blown (1)
35:16
fully (2)
13:2;106:11
function (2)
123:15,17
functional (1)
68:15
functions (1)
68:13
fund (2)

17:12;63:23
fundamental (1)
40:8
funding (4)
25:25;61:4;94:16;104:14
funds (2)
17:23;18:25
further (5)
80:16;91:24;94:24;116:9;126:25
future (6)
24:13;35:8;105:22;106:6,10,19

G

gain (1)
80:2
gallons (4)
47:17,20;55:9;77:14
gather (2)
27:18;85:24
gathering (1)
85:5
General (9)
4:7;8:16,24;25:7;57:25;58:3;60:3;63:15;72:9
generally (19)
9:16;16:23;18:14;20:20;24:17;34:23,25;36:5;40:2;44:21;46:6;64:15;66:17;83:14;89:10;92:2;111:10;119:23;120:13
generate (1)
17:22
generated (2)
18:22;32:13
generates (1)
57:16
generators (1)
48:12
gentleman (1)
65:1
gets (1)
19:7
given (6)
8:10;26:20;28:6;87:14;92:3;98:20
gives (1)
108:10
giving (1)
124:2
GLWA (34)
13:9;32:2;34:6,19,20;42:22;43:23;45:20;48:6;55:22;56:14;57:7;58:1,3;59:2;69:3,4,11;78:16;80:9,24;82:1;87:23;88:5,25;89:1;92:2,10;94:7,8,8,11;96:2;109:3
GLWA/DWSD (1)
35:16
GLWA's (1)
72:6
goal (2)
68:6;124:5
goals (2)
40:20;49:13
goes (3)
44:18;76:7;87:24
Good (4)
4:22;5:4,8,22
govern (2)
105:22;106:16
governing (4)
78:21;79:6;96:12;99:7
government (10)
54:14;81:1;90:13,15,23;95:20;97:13,20;98:21;99:25
governmental (4)
78:17;93:20;96:24;99:2
grab (1)
108:6
granted (1)
101:2
granular (1)
53:13
greases (8)
44:13;45:10,13,16,20,23,24;46:2
Great (25)
4:8;5:1,5;9:4;10:1;13:3,18;15:25;16:10;30:6;31:3,7;33:14;34:7;42:4,7;43:21;45:14;49:20;53:14;72:21;79:7;112:2;117:21;121:7
greater (1)
111:2
Greg (2)
4:22;5:8
group (18)
21:19;40:21;47:23;48:19;54:4;55:17,18;56:12,12;67:20;80:4,5,6;84:15,18;99:8;102:25;125:17
grouped (1)
53:11
grouping (4)
53:4;55:11,11;96:23
groupings (1)
126:6
groups (8)
20:3;40:22;57:11;82:2;86:24;87:1,2;124:21
group's (1)
87:10
grow (2)
18:1;35:7
growing (1)
44:24
guess (10)
8:24;20:24;28:18;29:2;51:15;63:20;93:18;109:21;114:4;122:11
guidance (11)
109:5;112:23;122:4,9,12,14;123:4;124:2,11,19;125:3
Guide (3)
64:24;87:22;99:12
guy (1)
107:22

H

half (5)
59:7;81:19,20;100:24;114:18
HANLEY (17)
4:22,23;5:7,8;59:5,13,21;96:4;97:5;101:11;103:23;107:20;108:9,12,16,24;126:24
happen (1)
47:6
happened (2)
34:18;39:1
happening (2)
35:14;85:5
happy (1)
108:3
harm (2)
42:15;47:2
Hauled (3)
31:23;32:1,9
head (2)
10:1;24:24
Headlee (1)
74:9
health (3)
25:23;71:11;108:5
hear (2)
5:9,11
heard (6)
36:1;43:5,13;49:4,10;99:14
hearing (1)
73:8
heat (1)
125:18
heavy (1)
46:11
Heid (19)
7:11,11,14,14,23,24;8:5,6,9;9:20;12:4,17,20,22,24;87:20;89:5;92:21;126:11
Heid's (6)
16:1,8;101:22;122:19;123:2;126:18
held (1)
4:10
help (3)
17:13;18:25;125:4
helped (1)
13:1
helps (1)
71:5
hereby (4)
104:10;105:19;107:1,2
herein (2)
4:14;105:21
hereof (4)
94:21;104:18;105:25;106:3
here's (2)
25:12,13
hereto (5)
94:20;104:10,13,17;106:25
high (5)
21:16;50:22;69:9;109:8;121:8
higher (8)
23:21,24;32:24;33:11;79:24;81:13;83:7;112:11
highest (2)
24:7;53:10
hire (1)
25:13
hired (1)
66:1
hiring (1)
25:9
historical (8)
22:20;26:8;38:1;87:21;88:1;111:8,15;112:6
historically (4)
34:18,20;37:24;80:10
hits (1)
47:4
Hold (2)
26:2;120:12
homes (2)
21:12;22:2
Honorable (1)
92:20
hopefully (1)
23:17
hot (1)
29:3
hour (4)
59:6;107:24;108:10,11
hours (3)
12:11,13;107:21
house (1)
58:6
hypothetical (1)
101:13

I

idea (15)
20:2;37:22;41:3,14;46:21;47:23;49:15;52:16;54:5,17;68:2,17;70:14;72:8;108:12
identifiable (1)
72:8
identification (1)
125:7
identified (12)
8:22;14:22;55:1;65:2,11;68:12;70:6,24;80:3;112:20;113:10;118:11
identify (6)
4:18;6:8,22;42:14;88:11;108:1
identifying (5)
57:8;63:1;73:3;85:21;124:15
idle (1)
17:23
III (1)
115:4
immediately (1)
111:1
impact (18)
28:23;41:16;49:19;51:18;74:10;78:3;84:22;87:6;93:2;103:4;116:25;117:15;118:15;121:19,23;122:1;123:24;124:6
impacted (2)
29:20;62:17
implement (4)
42:2,3;66:4;125:5
implementation (3)
41:24;60:5;73:10
implemented (4)
15:25;39:11;74:19;77:1
implementing (3)
122:5,7,15
important (2)
19:10;23:1
impose (2)
84:10;121:2
imposed (7)
51:24;67:18;72:11;75:22;83:23;91:9;96:18
imposing (1)
41:21
impossible (2)
117:7;119:9

imprecise (1)
121:25
improvement (1)
23:3
improvements (1)
17:9
inability (1)
50:15
inappropriate (5)
22:2;23:20;24:19;
67:4,6
inartful (1)
37:10
inaudible (4)
30:3;39:8;76:10;
88:14
incinerate (1)
49:21
include (3)
38:13;82:18;123:20
included (14)
8:12;9:19;13:10;
27:9;47:22;65:3;81:6,
14;82:12,13;96:22,25;
110:20;114:1
includes (5)
6:6;17:2;54:23;56:1;
96:24
including (8)
7:12;9:15;31:15;
68:17;81:11;87:18;
101:24;109:25
income (1)
18:2
incomes (1)
18:1
inconsistent (2)
101:25;102:2
incorporate (1)
26:12
incorporated (3)
7:17;46:13;88:18
incorrect (1)
16:21
increase (1)
28:5
increased (1)
77:2
incur (8)
56:15;58:17,24;82:2,
13;102:23;103:9,16
incurred (8)
12:16;17:3;19:16;
29:19;41:8;86:17;
103:11;110:20
incurs (5)
54:8;60:6,20;61:10,
17
independently (2)
15:6;27:17
in-depth (1)
125:11
indicated (1)
126:20
indirect (7)
15:1;30:19;43:2,4,6,
11,23
indirects (1)
31:15
individual (4)
24:6,12;51:1;52:13
individuals (1)
25:14
indoor (2)
29:6,8
Industrial (85)
10:2,9;13:5;14:23;
15:4;21:1;30:21;31:21;
32:21;38:24;39:5;
41:23;42:3;47:12,16,
20;48:9;49:6;52:10;
54:19,22;56:4,5,13,24,
25;57:2,5,9,9;59:1;
62:8;64:22;67:9;70:2,
3,25;72:3,12;73:13,24,
25;76:15;77:13;78:4,
12;82:3,9,11;84:19;
85:3,7,12,20,21;87:18;
88:24;90:9,20;92:1;
94:17;95:3;97:21,24;
98:2,10,16;102:11;
104:15;105:13,15;
112:7,21;117:19,24;
118:10,14;119:1,3,6;
122:16;124:11,12,15,
20
industries (9)
47:18,21;48:11;
53:10;98:2;119:4;
120:21;124:21,22
industry (12)
8:13;18:13;23:5;
48:20;51:1;89:10;92:6;
102:1;109:5,13;
120:13;124:22
inflation (1)
35:6
inform (2)
88:8;122:12
information (34)
15:9;24:22,24,25;
25:11,19;26:12;27:12,
13,18,19;88:8,24;89:1,
9,12,18,22;90:1;91:19;
92:4,18;97:6,8;98:6;
110:18;112:22;114:21;
117:11;118:7;119:17,
25;124:20;125:8
informed (1)
112:6
infrastructure (2)
17:7;71:5
inhibit (1)
51:9
initial (4)
62:7,11;66:2;104:3
Initially (2)
53:5;76:25
inorganic (1)
46:11
input (2)
15:22;16:18
inputs (4)
15:6;29:14,18;35:23
inquiries (1)
26:9
inquiry (1)
27:5
inspect (2)
48:24;60:18
inspecting (2)
48:10;83:5
inspection (2)
39:16;52:1
inspections (4)
60:21,24;61:2;
125:12
instead (2)
81:5,17
institutes (1)
90:15
institutional (2)
66:8,12
institutions (1)
99:2
intangible (1)
71:1
integrity (1)
51:12
intended (5)
30:17;31:14;32:22;
33:17;60:13
intense (1)
82:23
intent (1)
118:2
interest (4)
17:6,23,25;18:1
interesting (1)
72:24
interfere (1)
50:13
interference (4)
49:10;50:4,19;51:8
Interrogatories (1)
9:10
Interrogatory (2)
109:23;110:10
interrupt (1)
97:3
interviewing (1)
125:8
into (35)
5:21;14:2;15:11;
16:24;19:7;20:25;22:6;
23:23;25:10;26:12;
29:14;31:22;40:12;
43:15;53:9;55:11,25;
56:11;57:11;68:20,25;
70:9;76:13,17;82:2;
88:18,21;96:16;114:7;
117:1,8;120:20;
121:13;122:9;124:16
intricacies (1)
25:10
introduced (2)
5:9;111:4
introduction (1)
67:25
invest (1)
21:15
investigate (2)
27:23;99:23
investigated (1)
100:21
investigation (1)
85:4
investment (4)
17:16,23;18:24;23:3
investments (2)
17:10;31:9
investor- (1)
37:24
involve (1)
38:15
involved (11)
36:18,20,25;37:6;
38:23;39:25;45:4;73:5;
102:11;105:10;122:6
IPP (44)
42:12,13;43:2;45:20;
46:17;47:12;49:3,14,
24;51:7,24;52:21;54:6,
8,11,20;57:13;62:2,4;
63:7,11,14,22,24;64:4;
65:13,21;66:13;68:7;
69:3;70:7;71:8,15;
72:12;77:5;85:11;
109:17;121:17;123:11;
124:16;125:2,3,24;
126:13
issue (10)
10:16,20;19:10;45:8;
72:7;74:6,9;86:16;
87:24;96:17
issued (2)
71:24;92:20
issues (7)
10:13;16:15;25:16,
16;72:25;107:16;
109:11
item (5)
15:12;24:7,12,12;
63:17
items (4)
9:20;24:6;106:3;
113:21
IU (3)
55:6,7,9
IV (1)
115:4
IWC (114)
10:14;13:11;14:18;
22:8;24:4;26:4,21;
27:9;28:4;29:14,18,19,
22;30:16,17,24;31:1,
10,12,15,17,19,24;
32:12,16,17;33:19,21,
23;35:17;40:1;41:19,
22,23;42:4;47:25;
55:23;56:15;58:17,24;
60:9,13,23;61:2,13,17,
22;64:17;68:11;69:11,
22;72:18;73:19;74:21;
75:14,21;76:3;77:21;
78:15;79:19;80:10;
81:13;82:1,2;83:13,19,
22;84:8;85:16;86:5,12,
18,21;87:4,10,19;89:4;
90:5;91:4,21;92:3,11;
97:13;99:23;100:7,12;
102:15,17,19,21,22;
103:1,9,10,11,16;
104:24;105:3;107:13;
109:24;110:11,22,25;
113:5,16;114:5,23;
116:24;117:25;119:8;
121:6,11,21;126:1
IWCP (13)
68:4,13,22;69:16;
70:20;74:5;76:24;
84:16;88:11,15;
113:11,24;122:2
IWC-related (1)
83:15

J

John (2)
92:20;94:10
Jordan (1)
10:6
Judge (4)
76:7,8,18;94:10
judgment (4)
66:14,15;67:22;
106:12
July (13)
13:25;89:7;92:19;
94:9,21;95:6;104:6,16,
24;105:3;106:23;
107:6;114:7
jump (1)
6:1
juncture (1)
74:7
June (6)
12:7;13:25;89:7;
95:5;106:16;114:8
junior (1)
90:14
jurisdiction (2)
49:7;54:24
justification (4)
79:13;97:11;99:18;

100:1
justified (1)
20:18
justify (1)
98:20

K

Kansas (2)
5:13;14:9
keep (2)
27:4;107:22
keeping (1)
48:19
kept (1)
112:13
Kerry (2)
7:11,14
Kill (1)
47:4
killed (1)
50:12
kind (17)
5:22;6:7;8:7;15:19;19:9;27:18;52:24;57:7;59:8;65:11;73:11;77:3,24;86:3;113:23;117:17;125:21
kinds (3)
30:1;58:7;120:10
knew (3)
23:23;33:5;123:13
knowing (2)
23:24;25:12
knowledge (9)
29:21;33:13;61:20;65:9;66:14,15;87:16;112:5;114:24
known (6)
23:14,22;30:8;38:2;48:12;82:3
Kuplicki (3)
10:1,18;86:9
Kuplicki's (1)
56:19

L

lab (7)
69:20,22;88:15;115:22;116:1,11,11
lack (2)
15:20;16:8
laid (1)
21:8
lake (1)
71:12
Lakes (24)
4:8;5:1,5;9:5;10:1;13:3,18;15:25;30:7;31:3,7;33:14;34:7;42:5,7;43:21;45:14;49:20;53:14;72:21;79:7;112:2;117:21;121:7
language (1)
17:1
Lansing (1)
74:15
Lansing's (1)
74:18
large (3)
29:17;30:9;77:17
largely (1)
48:11
larger (12)
77:1,8,15,24,25;78:1,2,11,12;81:11;82:22;101:23
largest (1)
53:9
last (6)
4:21;10:25;97:3;98:4;109:21,22
late (2)
8:2;37:5
later (5)
13:9;37:1;56:1;88:5;100:23
law (5)
63:5,9;74:22,24;106:8
lawyer (3)
10:5;74:14;96:16
lawyers (1)
109:2
lead (2)
24:22;66:22
learned (2)
8:7,13
least (10)
5:21;32:6;47:7;54:22;60:18;74:7;107:6;123:6;126:16,17
leaving (3)
35:3;37:6;51:22
left (2)
59:10;107:24
legal (1)
96:9
legally (1)
10:14
less (5)
51:19;55:17;64:17;100:23;114:1
lesser (1)
109:9
letter (1)
65:3
level (14)
14:2;17:14;18:21,22;23:18;25:19;29:19;53:18;84:23;87:4;88:9;91:12;95:4;109:8
levels (3)
17:12;18:25;60:2
lieu (1)
94:14
likely (2)
47:13;77:14
likewise (2)
92:5;106:9
limit (1)
118:2
limitation (1)
22:19
limitations (1)
50:15
limited (4)
7:12;21:18;67:20;113:15
limits (2)
50:25;55:14
line (11)
24:6,7,12;37:15,16,17,18;42:18;45:18;79:16,18
linkage (1)
101:7
linking (1)
118:15
list (7)
8:17,22,22,24;47:21;96:7;122:22
listed (1)
71:2
liter (1)
45:13
literation (1)
7:4
little (10)
6:17;11:17;13:13;20:10;37:1,19;42:13;55:25;68:25;74:2
loadings (4)
21:1;70:4;120:24;121:4
local (8)
42:10;55:14;58:13;90:15,23;97:12,20;99:24
located (1)
5:11
locates (1)
48:22
location (1)
11:24
Loma (1)
71:21
long (3)
17:24;89:14;122:21
longer (1)
50:9
look (10)
11:19;12:14;19:5;26:8;30:1,5;32:6;33:20;97:25;114:15
looked (1)
27:15
looking (7)
27:20;35:19;100:14;113:4,8;122:21;124:14
looks (1)
75:1
Los (1)
34:12
lot (8)
9:15;18:12;25:10;28:20;94:4;122:17,17;125:11
Louis (9)
34:12;52:25,25;53:1,2;64:1;82:18;121:16;122:3
low (1)
17:25
lower (6)
23:21;81:15;83:2;84:24,24;112:11
lowest (1)
53:23
lunch (3)
107:22,25;108:6

M

M1 (1)
109:10
Main (1)
14:9
maintain (2)
8:17;117:3
maintenance (6)
17:5,15;18:24;23:2;30:11;71:6
majority (1)
69:16
maker (1)
99:12
makes (2)
29:22;37:18
makeup (1)
85:9
making (6)
14:10;78:11;117:12,14;118:8,18
manage (9)
17:13;19:1;42:11;45:9;50:3;71:5;86:2;117:19;125:6
managed (2)
62:18;102:10
management (4)
53:19;77:5;82:23;97:19
manager (3)
65:17;66:16,22
managers (1)
39:22
managing (3)
32:11;52:9;65:16
mandatory (1)
17:11
manner (2)
72:19;107:13
Manual (4)
109:7,10,15;123:4
manuals (3)
122:10,12,14
manufacturer (1)
120:7
manufacturing (1)
57:16
many (8)
12:11;41:12;44:25;45:12;48:7;62:6;71:1;77:17
March (2)
11:21;104:12
marginally (1)
79:24
marked (5)
56:17;64:20;88:25;89:21;115:1
master (1)
108:2
Masters (1)
104:4
match (1)
40:20
material (8)
9:3;12:25;16:11;26:10;27:16;72:21;113:13;115:16
materially (3)
23:21;113:1,6
materials (2)
125:18,18
math (2)
16:8;101:18
mathematical (1)
16:2
matter (10)
4:7,9;5:17;6:13;7:6;10:24;11:13;109:1,3;116:7
matters (1)
105:18
May (17)
7:16;12:3,5;23:3;28:5;43:11;46:14;47:1;49:21;57:9;65:3;69:5;77:19;91:16;105:9;124:20;127:1
maybe (7)
10:17;12:7;13:13;35:10;53:4,25;77:20
McKee (1)
76:10
mean (9)
28:5;43:4;57:23;58:6;91:8;92:9;101:2,15;107:15
meaningful (1)
86:14

means (12) 18:13;19:14,20;41:7; 56:24;59:25;60:3; 99:17;117:11;118:8,8, 17
measurable (1) 38:2
measure (2) 117:7;119:10
measures (1) 110:2
mediation (3) 9:7,16;11:14
meet (3) 50:24;56:5,24
member (1) 82:22
memo (2) 56:18;58:10
memory (2) 39:24;65:9
metal (1) 48:22
metals (1) 46:11
meter (37) 7:19;53:7,12,13; 64:14;75:23;76:4,15; 77:1,3,6,8,19;78:11; 80:13,17,18;81:15; 83:14,16,19,20;84:21, 24,25;86:22;87:1;95:8, 10,10;118:12,13,15; 119:22;120:8;121:11; 122:1
metered (2) 94:15;120:14
meters (25) 39:12;52:23,24; 77:15,16,17,25;78:2; 80:12,17,21;81:1,7,9, 10,14,18;95:15,23; 96:21;100:6,12,19,23; 101:24
method (7) 21:12;22:22;23:4; 52:4;66:18;67:22; 121:25
methodologies (12) 66:9;89:2,8,13,17; 91:2,4;92:16,17; 111:23;117:9;118:6
methodology (19) 13:23;14:1;63:6,10; 65:12;67:4;68:3;76:21; 82:16;91:7,15;92:11; 93:5,14;105:25; 109:17;111:18;121:21; 124:4
methods (2) 35:1;52:15
Metropolitan (1) 52:25
Michael (1) 5:4
Michigan (4) 63:9;74:10,22,24
microplastics (1) 50:2
mid (1) 65:22
mid-80's (1) 33:6
might (10) 37:3;48:21;54:2,2; 55:12;78:8;87:3;120:1; 124:15;125:15
milligrams (1) 45:13
million (18) 15:14,16,16,17; 24:18,20,23,25;95:1,5; 115:12,13;116:2,4,10, 12,18,20
Mills (1) 4:7
mind (1) 17:1
minor (16) 56:10,24;57:4,12,13, 24;58:13,18,20,23; 59:2;77:15;82:4;85:3; 125:25;126:3
minus (1) 80:20
minute (3) 26:2;56:11;59:7
minutes (1) 123:8
miscellaneous (1) 18:3
Missouri (2) 5:13;53:1
Model (2) 64:23;111:22
modeling (2) 111:8,15
models (1) 76:12
moment (1) 11:23
Monday (2) 4:1,5
money (4) 21:15;31:4,5;71:20
monitor (1) 45:23
monitored (1) 55:12
monitoring (9) 39:16;45:19;47:24; 48:1,10,20;70:1;73:25, 25
month (1) 95:2
monthly (3) 94:19;95:7;118:13
more (55) 5:23;6:17;9:11; 11:25;13:2,7;19:5; 20:10;25:3,13;28:20; 29:6,23;35:9;37:1,8, 19;45:10;47:13,16,20; 48:1,1,2;50:2;51:3,4; 55:10,13;58:12;64:14; 66:21;68:25;77:1,8,14, 24;78:2;80:8;82:23; 83:15;85:4,4;87:9; 93:14,16;96:9;100:18; 101:4,17,20;109:14; 111:20;120:3;125:5
morning (3) 4:22;5:4,8
Most (9) 9:18;12:19;13:17; 23:7,11;24:12;28:25; 53:11;77:14
motion (2) 6:5;115:3
motions (3) 9:11,12,14
Motor (1) 77:16
moving (2) 59:8;112:3
MPS (1) 117:22
much (11) 8:9;13:7;25:4,5; 29:8;30:9;50:25;68:19; 114:21;119:19,23
multiple (3) 22:24;34:11;66:23
municipal (7) 22:22;34:23;38:3; 63:13,21;87:17;99:15
municipalities (1) 63:13
must (3) 45:23;59:24;63:10
myself (1) 5:9

N

nail (1) 11:17
name (7) 4:21,22;5:8;8:10; 10:4;39:21,22
named (1) 10:5
narrowed (1) 53:15
narrowly (1) 30:4
nature (7) 46:14,16;53:24; 84:18;103:19;117:17; 118:3
necessarily (7) 43:12;60:12;61:2; 79:23;83:8;91:8;93:6
necessary (3) 94:25;98:9;119:4
need (19) 10:19;21:24;22:20; 23:25;25:9,13;39:15; 43:18;66:20;85:20; 87:6;99:23;102:19; 103:9;108:1,6,6; 124:13,16
needed (7) 11:25;17:15;18:23; 23:4;25:20;91:13; 125:12
needs (5) 19:10;20:18;35:5; 38:12;119:5
neither (1) 103:9
new (7) 39:6;48:20,24,25; 49:22;59:8;125:13
next (5) 25:13;29:11;48:19; 68:12;86:10
nitrogen (1) 45:2
noise (1) 14:10
non- (9) 17:19;53:2,3;78:14; 82:20;94:1;96:22,23, 25
nonconventional (1) 46:7
nondomestic (10) 56:8;82:4,10,12; 84:7,10;85:17;86:7,13, 15
nonexempt (3) 79:24;101:3,16
nonoperating (1) 18:1
non-personnel (2) 68:11;69:15
nonresidential (36) 22:13;52:22;53:15; 54:12,13,23;58:17,25; 64:2,6,16;67:19;75:22; 79:8;82:1;84:3,5,15; 86:4;90:10;93:24;94:2, 14,23;95:14,17,25; 96:19;97:23;102:18, 25;103:1,6,15;118:11; 122:22
nonsignificant (2) 70:2,3
Nor (5) 14:16;72:20;96:22; 103:11;107:15
normal (2) 32:24;33:11
normalized (2) 29:3,10
note (1) 65:18
notices (1) 48:16
notion (2) 19:2;77:7
Novi (1) 36:24
NPDES (2) 43:22;117:4
nuance (2) 52:24;54:2
nuanced (1) 117:17
nuances (1) 14:1
number (31) 4:9;15:17;16:2,20; 24:15;25:1,24;53:13; 58:19,20,20;80:6,7,12, 17,25;81:6,10,13; 89:22;95:9;100:9,11, 15,18,23;101:18,24; 109:7,23;123:21
numbers (4) 16:11;88:25;91:15; 112:20
nutrients (1) 44:24

O

Oakland (3) 37:2,3,4
object (2) 97:2;103:17
Objection (3) 96:3;97:4;101:6
objective (7) 20:7,11;40:23;41:1, 6;116:23;117:16
objectives (1) 42:16
obligations (1) 106:4
obviously (2) 60:20;64:17
occurred (1) 78:19
ocean (1) 71:12
off (9) 22:25;59:10,15,17; 106:17;108:16,18,20; 127:4
offer (2) 5:18;16:14
offered (2) 7:10;74:20

offering (1)
16:20
office (9)
5:14;53:22;64:15;66:22;79:17;83:16,20;90:23;108:7
offices (11)
54:14;63:1;66:23;81:2;90:16;93:20;95:20;97:13,21;98:21;99:25
offset (2)
18:4;32:16
oils (8)
44:13;45:9,12,16,19,22,24;46:2
once (5)
47:4;55:1;60:18;85:19;125:6
one (49)
5:23;7:2;8:12;10:13;15:16;22:19;32:10;33:5;36:25;37:2,8,11;40:19;41:7;42:16;44:6,9,11,13,15;47:17,18;49:14;51:7;52:17;55:10;57:11;58:12;60:9;63:20;67:14,14,15;72:1,25;75:3,4;87:9;88:7;96:6;101:21;104:14;115:19,24;119:8;123:5;124:10;126:6,21
ones (4)
63:24;70:6;77:15;124:15
ongoing (1)
103:21
only (28)
5:24;12:24;22:3;27:12,12;31:4;34:15;48:15;80:3;85:2;87:6;88:13;91:11;93:10;94:1;95:11,16,21;96:21;98:9,16;107:8;109:6;113:8;119:2,17;122:14;124:24
operating (1)
23:2
operation (7)
8:3;17:4,15;18:24;71:5;117:18;125:20
operationally (1)
97:16
operations (9)
17:14;19:1;30:3;31:9;41:17;68:4;115:22;116:1;125:16
opinion (21)
16:6,20,25;19:14;74:6,20;75:13,16,19;81:21;83:22;84:14;89:15;92:22;93:5;101:21,22;102:24;109:21;114:4,10
opinions (25)
5:18;6:23;7:1,6,10,12,13;8:6,19;10:20;12:21,23;16:14;18:16;45:8;74:23;75:8;87:14;93:3,4;110:9;116:21;122:13;126:16,20
opposed (1)
66:10
order (49)
8:19;25:20;59:24;76:7,14,17;90:19,24;92:14,19,23,23;93:1,7,10,21,22;94:3,5,9,11;95:2,24;96:2;97:8;98:4,13;100:10,11,21;102:3;103:24;104:5,7,9,12,16,23,24;105:1,4,16;106:16,22;107:6,8,12;117:10;118:7
ordered (2)
94:13;106:24
orders (1)
7:20
ordinance (4)
42:8;48:5;99:6;117:20
ordinances (1)
117:6
organic (1)
46:11
organization (1)
66:21
organizational (1)
25:8
organizations (1)
78:22
Others (9)
43:19;45:13;47:1;54:16;76:24;79:3;81:11;105:12;106:2
ought (1)
120:9
out (17)
21:8,16;31:4;32:14;33:22;34:13,22;37:24;40:1;55:11;70:16;74:4;86:11;104:4;113:8,25;125:15
outdoor (2)
29:5,9
outset (1)
11:14
outside (2)
14:9;48:19
over (5)
35:4;37:7,8;39:8;66:23
overall (3)
17:7;68:14;113:20
overarching (1)
20:11
overcharges (1)
115:5
overhead (1)
88:17
oversees (1)
32:18
oversight (7)
48:2;53:19;60:4;82:23;87:7;97:19;102:10
overstated (2)
113:1,6
overstatement (3)
115:16,18,20
overstep (1)
65:8
overwhelming (1)
58:16
own (3)
29:2;41:3;45:8
owned (1)
37:25
oxygen (3)
33:8;44:6;50:10

P

page (11)
56:23;69:14;88:25;91:24;98:5;103:25;104:8,9;105:17;116:22;123:16
pages (1)
56:21
Palo (1)
104:4
pandemic (1)
5:24
panoply (2)
84:17;118:25
papers (2)
7:19;9:1
paragraph (8)
7:9;67:25;94:13;98:5,5;105:17;109:22;110:23
part (31)
13:17;14:3,4;15:20;17:10;22:20;33:17;35:2;39:25;42:1;44:18;45:20;47:7;57:20;69:5,22;76:18;88:4;90:12;94:21;100:2,6;104:13,18;109:21;110:19;112:22;119:5;122:20;125:25;126:4
Partial (1)
115:3
participants (1)
125:7
participated (1)
10:8
particular (12)
19:21;22:15;23:14;36:13;62:19;65:15;75:12;76:21;109:16;110:11;124:4,21
particularly (1)
14:19
particulars (1)
52:7
Parties (3)
104:10;105:2,20
parting (1)
40:1
parts (2)
40:1;112:3
party (1)
105:24
pass (1)
46:23
passthrough (3)
49:11,15;50:4
past (3)
18:16;26:16,18
pay (16)
10:14;20:12;51:4,5;52:14,17;53:10,11,16;63:2;80:8;84:18;91:5,8;95:18;101:5
paying (3)
80:8;101:4,16
payment (3)
75:14;79:22;97:13
pays (2)
41:3;83:19
pensions (1)
25:23
people (13)
25:21,21;28:19;41:21;51:17,19;52:16;55:18;56:12;68:22;80:4;82:13;109:2
per (8)
45:13;47:17;60:18;80:13;81:15;94:14,15;118:1
percent (1)
120:8
percentage (4)
58:17;61:22;68:14;83:9
perfectly (1)
91:14
perform (5)
13:8;14:12;26:23;47:14;66:25
performed (5)
26:2;33:18,19;62:1;123:22
performing (1)
26:22
performs (1)
60:23
perhaps (2)
48:11;102:3
period (23)
13:17,24;17:24;24:14;25:6;27:3;34:14;36:2;39:9;89:5,5,7;109:25;110:3,24;111:1,9;112:1,3,19;114:5,7;119:25
periodic (4)
34:4;35:2,10;110:1
periodically (1)
55:12
periods (2)
111:17;114:20
period's (1)
111:11
permit (18)
39:6;43:18,22;50:24;57:1;59:24;60:2,3,7,10,12;62:15,16;65:20;67:14;68:25;73:14;74:5
permits (5)
68:11,13;117:5,22;118:22
permitting (7)
39:15;47:24;48:10;51:25;62:13,23;83:5
person (3)
65:15;66:21,24
personally (2)
11:5;38:25
personnel (21)
14:25;15:3,7,14;16:19;24:4,6,9,11,13,18;25:2,12;26:8,11,21;27:1;30:10;68:18;69:14,17
PFAS (3)
49:25;50:1;125:14
pharmaceuticals (1)
50:2
Philadelphia (1)
34:15
phosphorous (5)
33:9;44:11;45:1,3,6
physical (1)
11:24
pick (1)
59:10
piece (3)
33:23;106:21;113:8
pieces (2)
113:22,25
pipe (1)
80:16
place (2)
76:13;112:1
placed (1)
124:16
plaintiff (1)
4:23
plaintiffs (2)

9:4,12
plaintiff's (2)
7:10;115:3
plan (5)
5:18;10:19,21;57:10;71:19
plant (15)
30:6,9,15;45:11;46:10,24;47:9;50:6,16,20;51:12;71:22,23;72:6,7
plants (3)
44:21,25;46:6
plant's (1)
50:14
pleadings (3)
7:19;9:1;106:13
please (2)
4:11,18
plugged (1)
91:15
Plus (3)
69:4;80:20;108:10
pm (3)
108:20,21;127:4
point (16)
6:22;10:12,21;16:14;33:5;37:1;46:1;48:24;69:25;71:17;75:11;81:4;83:12;117:17;122:10;126:16
pointed (1)
34:22
points (3)
6:21;71:3;115:8
policies (1)
73:22
policy (7)
63:18;66:8,12;79:6;98:23;99:7,10
pollutant (12)
21:1;32:18,20,22;33:4;44:17;45:3;50:12;51:4;120:24;121:3;123:22
pollutants (17)
32:25;33:8;42:14;44:1,2,22;46:7,22;49:16;50:5;55:7;57:18;58:7;70:25;117:8;119:10;121:13
polluter (1)
51:5
portion (6)
32:14;64:12;72:22;73:4;77:10;84:19
portions (1)
30:9
positions (2)
25:25;106:1
possible (6)
20:6;37:11;41:5;78:10;86:19;93:17
potential (4)
103:20;118:15;125:7,16
potentially (1)
102:5
POTW (7)
42:18;51:9;54:18;61:17;85:11;123:4,19
POTWs (1)
124:20
pound (1)
94:16
pounds (1)
51:4
powering (2)
30:4,12
practice (4)
17:21;102:1;109:7,15
practices (2)
89:11;99:21
pre- (1)
46:17
preceding (1)
111:1
precise (4)
43:12;93:14,16;122:2
pre-class (2)
110:24;111:9
preclude (1)
106:18
preference (1)
107:21
prejudice (1)
19:18
premise (3)
21:7;80:2;85:19
premises (2)
75:24;119:24
preparation (1)
110:1
prepared (1)
64:25
preponderance (1)
48:18
present (1)
67:10
presented (1)
27:16
presenting (1)
69:25
preserve (2)
106:4,9
preserves (1)
51:12
presume (2)
78:21;81:4
presumed (2)
120:19,19
pretreat (2)
42:14;46:2
Pretreatment (27)
31:22;32:21;42:3,4;47:7,14;48:9;55:3,8,19;57:2,10;59:23;60:1;62:8;70:21;117:24;118:22;121:19,22;122:5,8,16;123:4,25;124:6;125:5
pretty (6)
5:22;13:7;30:4,9;113:23;125:17
prevailing (1)
102:1
prevails (2)
34:23,25
prevent (1)
51:8
prevents (2)
51:11;96:10
previously (1)
56:17
primarily (4)
39:15;44:24;65:1;77:10
primary (10)
14:24;24:3;26:20;29:5;42:13;48:8;49:13;68:13;71:22,22
principal (2)
17:6;72:2
principally (3)
15:1;62:16;109:6
principle (3)
52:19;98:19;99:20
principles (5)
16:23;89:10;99:10;109:9,12
prior (16)
12:21;13:3,19;53:5;76:10,24;95:5;105:16;110:3;111:17,24;112:4,5,10,12,17
private (2)
90:11;95:22
probably (7)
5:23;12:13;24:7;33:6;35:9;53:22;108:13
problems (3)
45:17;47:5,5
procedurally (1)
97:15
procedures (1)
102:1
proceeded (1)
122:3
proceeding (1)
105:23
process (36)
13:2;14:3,21;19:24;22:21;23:24;25:3;40:12;45:4;46:14;47:24;49:2,16;50:9,11,12,14;54:23;57:15;58:11;60:7,10,13;61:10,14,16;62:13;64:3;68:9;69:1,1,2;73:8;83:8;91:11;97:19
processes (3)
45:1;50:7;122:15
processing (1)
53:25
produced (1)
94:7
producing (1)
120:6
product (1)
120:6
production (2)
9:10,17
professional (1)
90:14
Program (107)
10:2,9;15:4;23:3;31:22,23;32:1,9,12,16,18,21,22;33:4;39:5;42:13;45:20,22;47:8,13;48:9,16;49:3,14,24;51:7,11,15,24;52:7,7,14,14,21;54:6,8,11;55:8;57:2,10,12;58:14;59:23;62:3,5,14;63:7,11,22,23;64:5,23;65:22;66:13;67:9,13;68:7,22;69:3,5,10;70:7,11,19,22;71:2;72:4,9,13;73:14,24;76:16;77:5;78:4,24;84:19;85:8;87:4,10;88:12;89:11;91:13;92:6;102:12,19,21,22;112:21;117:19;118:10,14,22;119:2,7;121:19,22;122:2,16;123:4,25;124:6,17;125:2,3,5,24;126:13
programs (13)
31:18;42:4,12;52:11;58:13;62:8;63:24;71:8,15;117:24;122:5,8;123:12
prohibit (1)
45:12
prohibited (1)
45:16
prohibitions (2)
57:25;58:3
project (6)
12:12;29:3,9;62:12;64:4;66:15
projected (1)
110:4
projecting (2)
34:13;38:9
projection (1)
29:25
projections (1)
111:6
proper (2)
85:13;91:7
properties (11)
54:24;56:12;58:22;75:23;78:18;82:1;83:23;93:24;97:23;101:15;125:22
proportion (3)
20:12;41:15;68:23
proportionate (3)
19:3;75:4;87:8
proposed (3)
67:10;74:18,19
Proposition (1)
73:8
propriety (1)
81:22
prosecute (1)
106:12
prospective (3)
15:10;22:17;87:21
prospectively (1)
88:1
protect (2)
47:8,10
protecting (2)
50:19;71:11
Protection (7)
42:1;71:25;95:11,15,23;96:1,21
Protects (1)
71:5
provide (5)
17:15;91:13;117:11;118:7,17
provided (16)
8:20;9:6,12;11:12,14;15:8;31:19;71:1;94:24;98:24;102:7;103:25;104:2,16;112:23,23
provides (3)
32:2;45:14;60:4
providing (3)
17:4;19:16;78:10
provisions (1)
106:2
proxy (6)
77:19,23;119:15,16,16;120:12
public (5)
40:2;71:11;90:11;126:13,17
Publicly-Owned (6)
42:15,19;55:1;60:17;61:9;70:22
Public-Owned (1)
61:5
pull (2)
89:21;94:4
pulled (1)
89:21

purpose (4)
42:13;47:7,9;75:3
purposes (6)
51:8;81:25;95:11,15;96:1,21
pursuant (2)
64:7;106:7
put (10)
6:4;10:3;58:6;59:14;68:20;117:1,8;119:10;120:20;121:13
putting (1)
58:8
puzzle (3)
106:22;113:23;114:18

Q

qualify (2)
57:1;82:10
quibble (1)
21:23
quickly (1)
10:7
quote (3)
59:2;72:16;89:1

R

Raftelis (9)
11:6;39:19;64:25;65:11;66:4,24;67:7,12;68:1
raising (1)
75:2
range (1)
42:9
ranges (1)
19:9
Rate (35)
7:11;17:20;22:25;28:25;30:22,23;32:2;33:10;36:8;37:11;41:12;53:6;64:3;72:10;76:11,12;81:20;87:17,22;99:12;100:7;101:19;104:20,22,22;105:5,11,14;106:9,22;107:9,11;111:22;112:16;114:3
ratemaking (11)
8:15;16:23;22:16,19;25:3;28:18;67:23;98:19;99:10,21;105:22
ratepayers (2)
71:19;107:3
rates (63)
13:11,15,18,21;14:14;15:10;16:6;17:18,25;18:7,20;19:15;20:17;21:23;27:5;34:10,14,14,16;35:8,13,18,21;36:10,13,19,22;37:7;38:6,10;40:9,20,23;41:1;51:24;53:16;63:15;74:11;77:7;79:23,24;81:18,23;87:8;91:3,9,16;99:19,22;104:11,19,24;105:4,24;106:1,6,10,12;111:8,16,20;116:23;119:18
rather (1)
91:4
rationale (7)
76:2,20,20;78:8,9,10;103:8
rationales (7)
89:3,8,13,17;91:2;92:17,17
ratios (1)
80:15
reach (2)
95:4;111:14
reached (1)
79:11
read (3)
8:12;67:7;95:17
really (11)
8:9;11:15;30:12;37:2;73:21;82:8;109:11;111:20;120:10;122:9;125:4
reason (3)
35:2;37:22;101:8
reasonable (30)
18:7,10,13,17;19:5,10;21:5;26:14;28:2,3;36:22;37:11,14,17;89:9;91:10,12,14;92:5;93:11,15;113:18;116:24;117:11,14;118:8,8,17,18;119:9
reasonableness (8)
16:6;36:12;37:7,21;93:15;105:24;110:11;114:11
reasonably (3)
40:24;72:23;73:1
reasons (3)
83:25;96:11;108:5
reassessment (1)
125:21
recall (16)
10:11;37:19;43:14;54:15;56:22;63:17;82:5;93:22;94:1,3;96:13;103:25;104:2;105:13;107:15;126:14
recaptured (1)
24:4
receipt (1)
12:19
received (4)
12:6,9,17;107:18
receiving (1)
11:20
recently (1)
9:11
recognition (4)
21:14;47:15;78:2;98:24
recognize (4)
8:5,6;94:11;124:2
recognized (2)
24:1;120:13
recognizing (2)
21:21;41:16
recollection (2)
81:24;95:13
recommendation (2)
66:2;67:12
recommending (1)
13:21
recomputed (1)
104:11
reconstructed (1)
116:3
reconstruction (1)
115:25
record (18)
4:3,19;12:9;56:18;59:14,15,17,18,19;64:21;94:6;108:16,18,20,21,22;115:2;127:4
records (2)
12:14;111:3
recover (23)
13:21;19:15;31:2;40:24;41:2,15,20;51:2,23;62:13,20;63:7,11,14;68:3;77:10;80:7;91:16;95:2;98:9,16;119:19;123:11
recovered (15)
14:18;17:18;33:4,24;52:10,21;61:2,17;62:15;64:5;67:13;70:16;72:18;86:3;118:11
recovering (7)
52:5;64:11;65:23,24;84:1;102:6;121:17
Recovery (4)
30:7;42:23;109:17;118:14
recruit (1)
25:20
redone (1)
35:12
reduce (1)
80:6
reduced (2)
111:2;116:3
refer (4)
36:4;94:9;115:8;117:14
reference (7)
6:18;7:8;8:16;94:20;104:13,17;123:1
referenced (8)
7:17;9:21,22;89:12;92:7,21;117:10;118:6
references (2)
104:9;106:24
referred (3)
9:20;49:4;85:17
referring (1)
95:12
refers (4)
42:19;49:15;50:5;95:18
refined (1)
64:14
reflect (7)
16:18;24:9;27:15;29:12;35:8,13;98:15
reflected (4)
19:11;25:14,24;110:9
reflecting (2)
34:1;73:9
reflects (1)
36:6
refresh (1)
95:13
regard (12)
9:3;36:19;45:9;73:3,12;98:24;99:1;112:7,24;114:22;117:23;126:10
regarding (2)
16:6;105:23
regardless (3)
53:6;95:9;121:12
regards (1)
103:15
regular (3)
30:10;48:3;85:6
regulated (1)
84:8
regulating (2)
63:25;117:5
regulation (8)
33:19;42:10;52:1;60:4;63:3,5,10;87:7
regulations (17)
42:1;46:17;47:15,22;48:6;54:18;55:15;60:5,16;70:24;85:11,15;117:2,21;118:21;119:2;125:13
Regulatory (9)
7:11;37:25;57:12;58:12,14;75:2;77:2;89:11;92:6
relate (1)
118:22
related (12)
14:22;30:2,2,10;63:3;68:24;74:17,23;82:20;84:3,16;125:14
relates (3)
18:7;77:3;113:2
relating (2)
26:3;61:10
relation (1)
19:16
relationship (2)
77:2;102:7
relative (5)
103:2;121:19,23;123:24;124:5
relatively (1)
29:15
relevant (1)
64:12
relied (2)
15:23;109:13
rely (3)
7:5;66:14;109:5
remains (1)
98:14
remember (9)
8:25;9:22;24:5;56:10;74:17;100:7,14;116:5;126:15
remove (2)
46:13;50:10
removed (1)
46:14
rendered (1)
94:22
renewed (1)
72:1
repeat (1)
14:10
report (22)
7:13,14;9:20,21;12:4,17,20,22,24;16:1,11,16;27:14;87:20;89:6;92:21;112:24;122:19;123:2;126:9,12,18
Report/November (1)
64:24
reported (1)
18:2
reporter (7)
4:11;59:13,15,19;108:18,22;127:3
reporting (1)
48:2
represent (3)
8:18;78:12;94:6
representation (1)
91:12
represented (2)
34:5;81:8
representing (2)
4:23;5:1
represents (1)
18:22
require (13)

17:19;42:10;46:17; 47:15;54:3,18;82:23; 85:11,15;96:8,9; 103:19,21
required (14) 9:8;46:1;47:13;49:5; 51:22;60:17;61:6; 63:21;70:22;78:4; 93:24;95:14,25;118:25
requirement (43) 13:10;16:18;17:1,2, 11,18;18:5;22:3;23:16; 24:20;31:11,13;32:8; 33:21;40:16;41:24; 49:5;62:2;64:12;72:18; 79:22;80:11,11;81:12; 88:9,19;91:17;92:12; 98:14;110:5,6,15,17, 22,25;111:3;113:9; 114:2;115:11,13,17,21; 116:2
requirements (30) 13:22;27:10;29:23; 34:3;40:12;42:9,10; 55:3,13,20;60:1;68:10; 72:2;89:11;90:2;91:20, 21;92:6;102:2;111:6; 112:10,12,13,16,19; 113:2,6,17;117:22,23
requires (3) 85:4;86:2;117:18
requiring (1) 42:2
research (1) 98:3
reserve (2) 17:12;18:25
residence (2) 53:3,4
residential (19) 20:25;78:15,23; 82:21;83:23;84:4,11; 86:16;93:22;94:2;95:8, 22;96:20,23,24;97:1; 101:24;103:8;118:4
resistant (1) 125:18
Resource (2) 30:7;42:23
respect (6) 22:7;36:23;41:19; 85:2;86:18;109:17
response (4) 7:20;115:2,6;126:17
responses (4) 9:4,10;14:21;87:15
responsibility (3) 49:24;65:1;66:23
responsible (6) 10:14;39:19;42:5; 52:8;61:13;66:24
restaurant (1) 54:1
result (6) 37:14;50:14;101:9; 111:8,15;112:24
resultant (1) 101:19
resulted (2) 66:1;105:10
results (4) 16:13;38:2;39:3; 79:23
resume (1) 8:11
retain (1) 25:21
retained (4) 10:24;36:12;66:4; 67:7
retainer (1) 7:9
retardant (1) 125:18
retention (1) 11:3
Retrospectively (1) 36:14
return (2) 87:13;120:2
returned (1) 120:1
returning (1) 116:21
revenue (69) 13:10,22;16:17;17:1, 2,9,11,14,18,22;18:4, 23;22:3;23:16;24:20; 27:9;29:22;31:6,10,12; 32:2,5,8,15;33:21; 34:3;35:5;38:12;40:12, 16;62:2;64:12;72:18; 75:2;79:21;80:10,11; 81:12;88:9,18;90:2; 91:12,16,20,21;92:12; 110:5,5,15,16,21,25; 111:2;112:9,10,12,12, 15,19;113:2,6,9,17; 114:2;115:11,12,17,21; 116:2
revenues (9) 17:20;18:21;19:15; 30:23,23;31:8;32:13, 15;40:17
review (16) 9:1,7,16;10:9;13:6, 14;14:5,13;28:1;39:4; 67:8;85:24;87:13; 115:6;122:20,24
reviewed (11) 7:10;8:17,19;9:23; 10:7;27:22;48:4;55:12; 65:6;100:10;123:10
reviewing (6) 10:11;12:18;14:19; 97:7;126:9,14
right (53) 12:3;20:2,14,16; 22:4;25:1;28:22;29:2; 30:22;40:17;41:14; 44:18;47:11;48:7;51:9, 10;54:5;57:21;58:4,7, 10,22;64:20;69:20; 71:10;72:5;75:13; 77:19;80:9,22;81:12; 85:1,11,13;91:14; 93:24;94:11;95:20; 98:14,17;99:4,4,11,14; 105:8;106:5,10; 119:18,25;120:11; 121:5,11;125:21
rigor (1) 23:18
risk (1) 17:13
risks (1) 19:1
River (3) 43:24,24;71:13
Rock (1) 74:2
role (1) 102:10
roped (1) 124:16
Rouge (1) 43:24
routine (1) 30:11
rule (1) 92:4
rules (10) 42:7,8;48:5;50:25; 58:1,3;59:2;92:2,10; 117:20
running (1) 125:6

S

salaries (2) 25:20;68:10
salary (2) 25:16,18
same (20) 8:3;16:13,25;27:4; 50:22;53:6,8;72:6; 73:6,11;80:7;83:12,16, 19;86:21;103:14; 107:1;111:25;121:9,12
sample (1) 21:16
sampling (6) 61:7,10,14,16; 118:23;123:21
San (15) 38:5,13,15,19;39:10, 14;62:10;64:22;65:19; 67:12,20;71:21;72:24; 73:16;126:5
sanitary (6) 21:11;53:24;57:17; 62:10,24;124:23
satisfaction (1) 32:8
save (1) 71:19
Savitskie (7) 10:3,4,8;27:14,22; 112:24;115:24
saw (4) 10:7;88:7;123:6,7
saying (12) 66:11;79:1;84:9; 93:12,18;112:9,14,15; 114:4;122:11;124:3,4
schedule (2) 40:23;108:14
scheme (2) 123:16,17
school (3) 79:16;90:13,22
schools (12) 54:14;78:17;81:1; 90:12,14;93:19;95:20; 96:25;97:12,20;98:21; 99:24
screen (2) 6:3,4
scroll (4) 6:7,17;56:20;69:6
se (1) 118:1
second (2) 56:19;75:4
secondary (5) 50:9,10;71:24;72:2; 90:12
Section (7) 70:11;94:17;95:3; 98:10,17;104:15; 123:13
seeing (6) 54:15;56:10,22; 104:2;116:5;126:15
segment (1) 32:14
segmented (1) 33:22
selected (1) 36:5
self-interest (1) 19:18
sell (1) 25:5
senior (2) 37:1;66:21
sense (1) 107:23
sentence (2) 89:14;109:22
separate (4) 32:21;72:10;88:16; 124:13
separately (2) 31:10,12
separating (1) 20:25
serve (1) 50:16
served (3) 7:15;12:4;95:9
serves (1) 53:1
service (48) 8:14;13:9,16;14:5, 13;17:4,5;19:12,24; 21:21;26:3,23;28:13; 34:16;35:9,10,11,12, 17;36:6,7,9;38:4,10,17, 21;40:4,7,11,19,20,25; 41:2,8;52:4;62:1,21; 73:6;79:16,18;88:10; 99:22;102:7;107:18; 109:8,12;110:1;111:19
serviced (3) 83:14,18,20
Services (11) 7:12;19:17,22;31:18; 40:15;63:4;65:21; 69:20;75:24;95:8; 98:24
servicing (1) 40:21
set (9) 7:1,13;15:10;36:22; 91:20;94:19;97:8; 104:11;105:21
sets (1) 6:23
setting (10) 7:6;22:25;35:13; 41:12;87:17,22;112:7, 16;114:3;116:23
Settlement (15) 104:1,3,8,23;105:2, 11,21;106:5,11,15,18, 20,24;107:7,11
several (3) 6:6;9:12;105:12
sewage (14) 25:5;33:12;44:20; 46:5;51:13;52:25; 53:24;61:7;70:23; 77:20;106:6;119:23; 120:1,9
sewer (28) 20:24;22:8,13;28:10; 29:24;38:13,15,19; 40:2;42:8;45:18;48:5; 50:17,20;63:15;72:17; 73:20;74:11;77:21; 79:2;117:6,20;119:15, 19;120:14,18;121:3; 126:14

Sewerage (5)
13:4,19;36:17;76:12;107:3
shall (9)
94:21,24;95:6,7,18;98:7;104:19;105:4,22
share (3)
6:3;19:3;123:1
shared (3)
9:9;69:2;72:23
Sheet (12)
89:1,9,12,18,23;91:19;92:4,18;97:6,8;117:11;118:7
shorter (1)
107:25
show (5)
56:17,20;64:20;100:15;115:1
SIC (1)
97:25
side (7)
19:5;25:22;37:17,18;38:13,15,19
signature (1)
6:8
signed (1)
6:11
significant (19)
15:3;17:8;24:12;47:12,15,19;48:14;49:22;55:13;56:25;70:2,4;71:18;77:13;78:12;98:2;115:18,20;119:3
significantly (3)
110:16;113:14;114:1
similar (3)
59:25;69:11;109:11
similarly (2)
20:5;120:17
similarly-situated (1)
20:3
simple (1)
22:1
simply (1)
63:14
single (1)
52:10
sit (1)
76:20
situated (1)
20:5
situation (3)
45:2;66:19;72:6
situations (1)
62:14
SIU (4)
64:18;77:13;83:14,18
SIUs (8)
48:11;56:1;57:11;58:20;60:18;61:6;72:11;82:3
size (24)
39:12;52:22,24;53:6,7,12;64:14;75:23;76:3,15;77:3,4,6;80:16,18;84:21,24,25;86:22;87:1;118:12,15;121:11;122:1
sizes (1)
53:13
slowly (1)
6:7
sludge (3)
49:18,20,21
small (2)
48:21;123:13
smaller (1)
77:16
smallest (1)
84:22
sole (1)
101:8
solely (2)
95:8;103:19
solids (4)
33:9;44:9,24;51:1
somebody (3)
8:7;66:25;119:20
someone (4)
43:16;48:21;51:3;85:22
someplace (1)
37:16
sometime (1)
90:25
sometimes (1)
13:24
sorry (6)
14:7;23:9;28:17;38:14;78:25;102:13
sort (1)
27:4
sound (1)
80:22
source (4)
50:3;61:4;70:25;125:15
sources (4)
17:22;56:9;67:14;125:16
southeast (1)
37:3
space (1)
126:12
speak (2)
8:8;124:14
speaks (1)
124:19
specific (10)
46:8;62:2;71:23;75:10;95:22;96:9,11;109:5;113:18;123:19
specifically (9)
60:3;75:9,11;82:15;84:2;90:18;102:15;107:12;109:16
spelling (1)
4:20
spend (4)
31:5;122:21;123:7,8
spent (1)
126:12
spring (2)
11:16,18
St (9)
34:12;52:24,25;53:1,1;64:1;82:18;121:16;122:3
stable (1)
29:15
staff (4)
25:9;36:21;68:12,21
standalone (1)
114:12
standard (2)
57:20;120:13
standards (4)
55:3,20;60:1;92:6
standpoint (6)
41:11;51:15;78:3;90:6;93:15;98:23
Stannard (9)
4:5,13,20;5:8;88:22;91:24;92:15;108:25;109:23
S-T-A-N-N-A-R-D (1)
4:21
start (9)
11:15;13:7;37:24;54:22,25;56:23;80:1,1;85:19
started (4)
9:7;11:20;68:9;112:20
starting (1)
17:25
starts (1)
105:17
state (11)
43:18;63:9;71:25;88:24;90:15,23;97:12,20;99:25;106:8;117:2
stated (3)
89:8;90:19;116:19
statement (7)
13:14;16:22;86:25;90:1;91:2,25;103:22
statements (1)
18:2
states (8)
21:13;22:23;40:9;41:13;43:17;44:25;52:11;98:25
statute (2)
99:5,6
statutes (2)
99:1,4
stay (1)
125:9
step (1)
57:15
Steve (1)
9:25
still (4)
12:8;92:23;95:25;98:13
stopping (1)
59:14
storm (4)
57:17;74:18;76:25;99:3
stream (1)
33:12
Street (2)
14:9;22:1
streetcar (1)
14:8
strength (6)
21:17;50:22;69:9;70:4;121:9,9
structure (5)
14:23;36:8;69:23;72:10;86:4
structures (2)
85:25;87:18
studies (8)
14:6,13;19:12;25:18;35:17;52:4;110:1;120:2
study (17)
13:9;26:3,23;35:11,13;36:6;38:5,10,21,23;61:21;62:1;64:23;66:2;73:6;85:7;99:22
studying (1)
123:7
stuff (2)
38:19;94:4
subject (23)
7:4;47:24;51:25;54:20;55:8,19,23;56:1;57:9,12,25;58:13;59:23;62:23;70:6;72:12;77:18;85:22;94:25;99:2;100:12;106:2;109:3
submit (2)
6:19;48:3
submitted (1)
6:13
subsequent (5)
38:11;105:12,23;106:20;107:11
subset (1)
21:9
subsidiary (1)
31:6
subsidies (1)
41:4
subsidize (1)
20:4
subsidized (1)
41:9
subsidy (1)
41:7
substantial (1)
120:5
substantially (1)
111:2
suburban (4)
10:15;62:10,24;107:17
suburbs (1)
100:16
suggesting (1)
72:5
SUIs (2)
39:15;82:9
sulphate (1)
58:8
summarize (1)
67:10
summary (5)
6:23;9:7,16;11:14;115:3
summer (4)
28:19,19,20,21
summers (1)
29:18
Supplemental (2)
6:19;87:15
supplied (1)
98:6
Supply (1)
4:8
support (1)
30:20
supporting (1)
122:24
surchargable (1)
94:16
surcharge (16)
21:17;32:18,20;33:4,10,23,24;45:15,22;51:6;58:20;69:4,5,9;94:14;121:9
surcharged (1)
45:25
surcharges (4)
32:22;33:15;50:22;104:18
sure (15)
5:23;6:8;16:24;37:9,15;42:17;43:4;69:4,6;85:12;95:17;96:8;101:7;115:9;125:23
survey (11)
49:5,6;54:17,18;57:21;83:2;85:1,12,20,22;124:22
surveying (2)
124:12;125:8

surveys (2)
85:16;125:11
susceptible (2)
25:3;29:23
suspended (4)
33:9;44:9,23;51:1
swear (1)
4:11
swing (1)
37:14
swings (1)
37:20
sworn (1)
4:15
system (51)
17:7,7,10,16;18:24;
22:11;38:4;39:6;41:10,
16,17;42:11,25;43:20,
23;45:10,17;46:15,18;
50:17;51:14,18;53:2,
14;62:18;64:7;70:5,21;
73:25;74:3,18;75:17;
78:3,16;85:6;102:19;
103:4,4;107:3;113:9;
117:1,9;118:4,16;
119:11,20;120:20;
121:14,16;123:19;
126:2
systems (2)
32:3;123:11

T

tables (1)
67:9
talk (4)
16:23;42:12;92:15;
109:2
talked (3)
50:4;57:7;124:12
talking (12)
22:14;36:23;43:15;
49:25;51:7;83:6;89:23;
117:16;118:24;120:17;
121:16;126:12
talks (1)
70:19
tangible (1)
71:1
targeted (1)
84:5
tax (1)
74:24
taxes (1)
74:21
technical (1)
90:15
TECHNICIAN (2)
4:3,18
template (2)
65:12;66:12
ten (3)
22:2;25:13;59:7
tend (1)
28:20
term (7)
18:6;21:7,23;36:1;
43:25;99:14;113:1
terms (8)
17:4;23:1;41:24;
44:16;48:2;49:10;
107:1;125:2
test (11)
36:1,2,8;37:23,23;
38:1,7,9;57:20;74:25;
75:1
testified (1)
4:17
testify (7)
4:15;87:16;88:22;
91:25;92:16;109:24;
116:23
testimony (3)
24:5;82:5;100:8
testing (1)
39:24
thereafter (1)
90:25
therefore (3)
46:23;77:9;103:14
therein (4)
7:17;89:4;92:4,7
thereupon (1)
4:14
thinking (1)
37:2
third (1)
75:4
though (1)
21:15
thought (1)
26:2
thousand (1)
94:15
three (26)
15:14,17;24:19,23;
34:17;35:4;38:6;55:22;
67:13;68:18,20,24;
73:15;75:1,9,12;82:2;
86:23;87:1,2,5;107:21;
108:13;116:12,20;
126:6
throughout (3)
13:24;111:11,19
tier (11)
53:10,16,16,23;54:4;
64:11,13;77:24;78:1;
84:21,23
tiered (4)
53:17;64:7;82:22;
121:16
tiers (10)
53:4,9,11,15;54:5,6,
8;83:2,7,10
till (1)
106:16
today (5)
5:12;76:20;86:1;
100:19,22
Todd (1)
39:22
T-O-D-D (1)
39:22
together (5)
7:16;8:3;24:11;
104:14;113:22
toilet (1)
58:9
took (1)
15:18
top (2)
68:2;125:9
topic (1)
18:11
total (15)
12:11;18:21;19:4;
20:15;24:11;30:5;
40:15;44:9;68:10;74:3;
80:12;81:11;88:18;
102:9;125:25
totality (1)
31:7
touch (1)
124:10
touched (4)
42:12;49:14;54:17;
81:25
toward (4)
32:7;33:21,22;86:6
toxic (4)
42:14;46:7;50:8,12
toxics (1)
46:11
track (1)
48:19
traditional (1)
33:7
transcripts (3)
7:21;9:22,23
transition (1)
112:3
treat (4)
44:21;46:6,18;50:24
treatability (1)
71:10
treated (1)
32:15
treating (2)
32:10;50:21
treatment (45)
30:3,6,8,15;33:2,7,
16;42:15,19;43:20;
44:20,25;45:1,5,11;
46:6,9,23,24;47:9;
49:16;50:6,9,11,14,14,
16,19;51:12;55:2;
60:17;61:6,9;70:21,22;
71:19,22,23,24;72:2,6,
7;106:6;117:16,25
trend (1)
112:21
trial (1)
5:19
tried (1)
16:11
truck (1)
14:10
trucked (4)
67:15;68:13;69:1,8
true (9)
27:25;30:19;40:25;
51:16;78:6;83:18;
118:2;121:15;122:14
truth (3)
4:15,16,16
try (7)
5:25;20:7;26:12;
27:17;29:9;51:3;79:4
trying (4)
62:11,22;68:7;76:19
TSS (3)
44:9,23;94:16
turn (2)
86:11;96:16
twelve (1)
95:2
twice (1)
100:18
two (14)
9:24;32:10;35:3;
38:21;49:13;56:20;
88:7;110:17;113:7,16,
18;114:12;118:18;
123:9
two-inch (6)
79:16,17;83:14,16,
18,20
two-year (1)
34:8
type (6)
34:5;55:6;67:1;
78:23;123:21,22
types (12)
46:21;49:16;53:21;
54:13;66:8;67:18;
78:14;79:2;90:11;
97:23;120:20,25
typically (1)
34:4

U

ultimate (2)
36:10;114:4
unaffected (1)
106:10
under (18)
31:24;42:7;46:1;
49:1;56:13,14;57:1;
59:2;60:16;69:8;74:21,
24;82:25;86:13;87:3;
88:15;111:25;118:21
underlying (1)
52:16
understated (1)
113:22
understood (3)
6:12;13:7;105:18
undertake (6)
13:6,16;14:4;19:11,
25;65:25
undertaken (2)
23:18;97:16
undertook (1)
110:2
unfair (2)
99:14,17
unimpaired (2)
106:5,9
unit (1)
40:13
United (6)
22:23;40:9;41:13;
43:17;44:25;52:11
units (2)
95:9;100:22
universe (1)
8:18
universities (1)
90:13
unlawful (2)
102:3,5
unless (1)
53:25
unquote (2)
59:2;72:16
unreasonable (10)
37:12,15,18;89:14,
19;93:9,11;101:25;
110:7;114:6
unreasonableness (1)
37:21
untreated (1)
46:24
unusual (2)
37:13;121:2
up (18)
16:13;39:5;49:18;
56:23;59:10;69:6;
80:13;81:8,10;89:21,
21;91:18;92:14;94:4;
103:24;113:24;120:12;
125:6
update (1)
67:8
updated (1)
66:6
upgrades (1)
71:18
upon (33)
7:6;21:1,24;28:10;
39:12;49:14;52:22;
54:7;58:11;66:16;68:1,
19;80:15,17;81:21;
83:1;86:22;88:1;98:5;

107:2;109:13;113:17;114:6;115:4;119:19,23;120:19,24;121:3,18,23;124:10;125:20
upward (1)
98:8
usage (18)
28:11,14,15,15;29:5,6,9,17,21,24;30:14;49:8;119:14,15;120:14,15,18;121:3
use (26)
15:9;21:7,18;22:20;23:7,10,15,21;24:19;28:20;38:1;41:16;42:8,17;48:5;64:16;66:10;75:17;79:2;108:2;117:6,20;119:25;120:4,5,8
used (30)
15:8;16:20;17:6,9;22:22;23:4;27:18;30:23,24;32:7;35:1;40:8;47:19;50:11;52:12;76:24;77:6,9;81:7;95:10,15;100:19,22;106:1;110:15;111:19;112:16;114:2;119:17;121:25
user (26)
41:7;47:16;48:2,21;55:14;56:24,24,25;57:24,24;58:11,13;59:1,2;64:24;72:17;78:13;85:20,22;86:22;90:18;117:5;121:14,18,23;123:11
users (133)
20:9,24;21:14;22:9,13;28:7;31:1;32:23;33:11;40:2;41:10,15;42:10;43:22;45:25;46:17;47:12,16,20;48:19,25;49:6;50:17,20,22;51:19,20,25;52:17,22;53:3,4,16;54:6,7,19,22;55:17,23;56:4,5,10,13;57:4,5,9,10,12,13;58:17,18,20,21,23,25;59:23;62:18;64:2,6;67:19;70:2,3;72:12,23;73:2,20;77:13,15,24;78:15;79:2,8,22;82:3,4,4,9,10,11,12,21;84:3,4,6,7,10,11,17;85:3,3,10,12,18;86:4,7,13,15,16;91:9;93:22;95:8,22,25;96:11,14,20;97:21,24;98:2;99:19;102:14,18,25;103:1,3,6,8,14;107:3;118:12;119:3;120:4,5,25;121:4;123:18,23;124:5,11,12,15;125:22;126:14
uses (2)
34:8;119:24
using (14)
16:25;22:23;24:24;29:9;37:23;62:21;76:3;77:8;84:21;87:21;88:8,19;112:18;125:17
usually (1)
34:4
utilities (10)
19:11;22:22;34:5,11;37:25;38:3;45:12;63:14;109:11;122:7
utility (39)
8:14;17:2,3,12,14,22;18:7,20,22;19:1,16,22;20:8;23:18;25:11,16;31:8;34:23;36:12;40:8,16;41:8,9;43:21;49:19;60:4,6,20;62:3;63:21;81:23;87:17;99:7,15;116:23;117:9;119:1,5,11
utility's (1)
52:13
utilize (1)
19:25
utilized (2)
18:4;36:7
utilizing (1)
91:7

V

variations (1)
29:17
varies (1)
87:4
variety (4)
20:9;24:10;52:9,12
various (2)
54:6;120:20
vary (5)
21:20;28:10,13;30:13;66:19
varying (1)
28:15
vast (2)
57:5;58:16
Veatch (4)
8:2,4;36:17;66:1
veracity (2)
15:11;73:22
versus (4)
4:8;28:19;29:9;74:15
vested (1)
106:7
via (1)
4:6
VIDEO (2)
4:3,18
videotaped (1)
4:4
view (3)
32:5;41:20;87:3
viewing (1)
109:24
violation (1)
48:16
violations (2)
48:5;68:14
virtue (3)
101:15;106:7;107:7
volume (6)
30:3;117:7;119:10,22,22;121:12
volumes (2)
77:20,22
volumetric (2)
30:1;121:7
voluminous (2)
7:18;122:19
voluntarily (1)
110:2
voluntary (5)
75:5,14,16,18,20

W

waiver (2)
71:23;72:3
wants (1)
92:15
warehouse (1)
86:1
Washington (2)
62:9,24
Waste (66)
10:2,9;13:5;14:23;15:4;21:16;30:21;31:23;32:1,9,11;33:12;38:24;39:5;41:23;42:6;43:17;44:19;46:9;48:12;52:11;64:23;67:9,15;68:13;69:2,8;72:3;73:13,24;76:16;78:4,23;84:19;85:7;87:19;88:24;90:10,20;92:1;94:17;95:3;98:10,17;102:12;103:20;104:15;105:13,15;112:7,21;116:25;117:8,15,18,19;118:3,10,14;119:1,6,10;120:20,23;121:10,13
waste-nature (1)
79:14
wastewater (40)
21:11;22:11;30:6,8,14;38:21;43:1,20;46:23;50:21,24;56:9;57:1,16;70:5,10,15,15,21;71:11,21;72:9;73:5;82:4,10,12;84:7,10;85:17;86:7,13,15;115:22;116:1;117:1,8;119:1,11;121:14;124:24
Water (78)
4:8;5:1,3,5;9:5;10:1;13:3,4,18,19;15:25;25:4;28:10,14,15,20;29:5,6,20,24;30:4,7,7,14;31:3,7;33:14;34:7;36:17;38:4,16,17;41:25;42:5,7,23;43:17,21;45:14;46:22;47:4;49:20;53:14;57:17;64:14;66:9;72:21;74:10,18;75:23;76:11,25;77:1,3,6,7,9,17,19;78:11;79:7;94:15;95:10;99:3;109:6,11;112:2;117:4,21,23;119:14,20,24;120:1,5,8,15;121:7
waterproofing (1)
125:19
waterway (2)
43:11,15
Waterworks (1)
109:10
Watt (2)
5:4,4
way (25)
7:1;10:13;15:10;28:8;34:18;41:3;43:13;45:9;52:10;62:20;63:20;70:17;72:5;78:1;80:9;84:1,8;86:21;88:6;91:20;93:1,13;103:25;123:23;126:21
Wayne (1)
4:11
ways (1)
98:23
weather (2)
28:25;29:4
weeks (1)
6:6
well-recognized (1)
119:14
wet (2)
28:19,21
what's (13)
17:1;18:19;25:15;29:12;31:21;37:22;39:21;75:18;76:20;80:12;96:22,25;115:22
wheat (1)
124:13
whereas (1)
29:6
wherewithal (1)
23:19
whole (4)
4:16;84:17;109:25;118:25
wholesale (2)
36:19;107:18
wide (4)
20:9;24:10;42:9;52:9
William (2)
4:5,13
Williams (1)
4:20
window (1)
14:9
withdraw (1)
37:10
within (21)
14:1;20:8,9;32:12;45:17;47:18;49:7;54:1;65:15;80:4;82:13;83:9;84:15;85:6,25;87:2;97:21,24;102:25;118:4;124:16
Without (5)
24:22;51:17;73:8;93:9;101:5
witness (9)
4:12,14,20;5:17;97:4;101:13;108:5,11,14
word (2)
15:20;16:8
words (5)
15:13;16:17;26:8;27:1;126:20
work (11)
13:18;15:24;28:2;36:17;38:13,15;61:10;65:25;76:10;120:9;121:7
worked (4)
8:2,3;11:9;38:19
working (7)
38:18;65:17;66:17;68:21;76:9,11;109:13
works (7)
5:22;42:15,19;55:2;60:17;61:6;70:22
world (1)
34:24
wrong (1)
91:15

Y

year (42)
10:25;22:25;25:13;27:10;28:6;29:11;34:5,11;35:3,18,19,21,23;36:2,5,8,13;37:8,11,21,21,23,23;38:1,7,9;60:18;104:20;105:5;107:9,9;110:12,14;111:7,7,12;112:25;

113:5,5;114:11,12; 116:19
yearly (1)
37:8
years (35)
13:15;22:24;29:4; 33:5,6;34:17;35:3,4, 11;36:24;38:6,11,21; 48:7;62:6;100:22; 105:9;109:14;110:17, 25;111:9,11,20,24,25; 112:4,6,10,17;113:7, 16,18;114:12;115:5; 122:6
year-to-year (1)
30:13

Z

zero (1)
80:2
Zoom (2)
4:7;5:22

1

1 (4)
22:4;56:23;92:1; 94:13
1.6 (1)
94:15
1:45 (1)
108:9
1:46 (2)
108:21,23
10 (1)
105:17
100 (2)
45:13;120:7
11:00 (2)
59:16,17
11:09 (2)
59:18,20
11:10 (1)
59:9
11th (1)
94:18
12:39 (2)
108:19,20
12th (1)
6:12
13 (2)
105:17;115:13
13/14 (3)
110:14;111:7;112:10
14 (5)
27:10;111:25;113:5; 114:11;115:11
14/15 (3)
110:15;111:7,12
15 (5)
27:3;113:5;114:12; 115:11;116:12
17 (1)
109:23
171 (1)
88:25
173 (1)
89:1
175 (1)
94:8
18 (1)
94:19
180 (1)
103:25
18-011569-CZ (1)
4:9
183 (1)
104:9
1980's (2)
65:22;122:18
1981 (22)
76:8,14;90:19,24; 92:20,23;94:10,18,19, 21,23;95:24;97:8;98:7, 13;100:20;102:2; 104:16,24;105:4,5; 117:10
1981-1982 (1)
104:19
1982 (10)
62:11;95:5,6;104:6, 12;106:15,16,23;107:6, 9
199 (1)
94:11
1st (4)
89:7;94:21,23;95:6

2

2.29 (1)
116:3
2:18 (1)
127:4
2013 (2)
13:25;114:8
2014 (4)
38:7;112:25;115:5; 116:12
2015 (3)
10:10;112:25;115:5
2017 (1)
53:5
2020 (1)
64:24
2021 (4)
11:1;13:25;89:7; 114:8
2022 (4)
4:1,6;7:16;12:5
2023 (1)
38:8
2024 (2)
38:7,9
205 (1)
94:8
21 (2)
27:10;56:18
212 (1)
101:8
212,000 (4)
80:20;81:17;100:6; 101:19
218 (1)
73:8
21st (1)
106:23
22 (1)
4:1
22.4 (1)
115:12
22nd (1)
4:6
23 (1)
64:24
23-page (1)
64:22
23rd (2)
7:16;12:5
25 (1)
47:20
25,000 (3)
47:17;55:9;77:13
27 (6)
92:20;94:9;104:16; 105:4;109:7,16

3

3 (3)
7:9;98:5;106:3
3.2 (2)
95:1,5
30 (1)
27:2
30th (3)
89:7;95:5;106:16
31 (1)
94:14
31st (3)
98:7;104:12;107:6
39-page (1)
7:13

4

4 (2)
98:5;116:22
40 (1)
109:14
400 (1)
81:17
403 (1)
42:1
41 (1)
100:22
424,000 (1)
81:18
44 (3)
64:21;101:8,19
484,000 (2)
100:22;101:19
484,180 (1)
100:15
49 (2)
89:22;90:1

5

5 (1)
106:3
50 (1)
94:6
51 (2)
87:13;109:20
53 (1)
115:1

6

6 (1)
106:3
60 (1)
107:17

7

7 (1)
69:14
70's (1)
37:5
7-22 (1)
123:16
75 (2)
12:13,13

8

80 (1)
107:17
80's (2)
8:1,2
81 (1)
118:6
82 (2)
82:16;105:5

9

9.5 (1)
116:1
9:28 (1)
4:4
9:34 (1)
4:2

EXHIBIT – 20

INVOICE

GLWA
Great Lakes Water Authority

www.glwater.org

Account Name	**DETROIT IWC**
Account Number	**CUS-0000422**
Invoice Number	**CIN-0000949**
Invoice Date	**Sep 11, 2024**
Due Date	**Sep 11, 2024**

Billing Inquiries: (313) 965-9775
billing@glwater.org

DETROIT IWC
735 RANDOLPH ST
DETROIT, MI 48226
United States of America

IWC charges for the month of August 2024

Description	Quantity	Rate	Charge
DWSD IWC 1	2035.70	$9.300	$18,932.01
DWSD IWC 1 1/2	641.98	$20.460	$13,134.91
DWSD IWC 10	24.00	$260.400	$6,249.60
DWSD IWC 2	966.11	$29.760	$28,751.43
DWSD IWC 3	252.00	$53.940	$13,592.88
DWSD IWC 3/4	1920.13	$5.580	$10,714.33
DWSD IWC 4	235.40	$74.400	$17,513.76
DWSD IWC 5/8	1521.44	$3.720	$5,659.76
DWSD IWC 6	133.00	$111.600	$14,842.80
DWSD IWC 8	49.00	$186.000	$9,114.00
NUMBER OF METERS:7778.76		**TOTAL CURRENT CHARGES**	**$138,505.48**

PAYMENT OPTIONS

By Check
GREAT LAKES WATER AUTHORITY
ATTN: TREASURY
P.O. BOX 441370
DETROIT, MI 48244-1370
Please include remittance with check

By Wire
ABA #: 042000013
Account #: 130121405893
ATTN: GLWA TREASURY
Email remittance information to
treasury@glwater.org

By ACH
ABA #: 021052053
Account #: 88136631
Attn: GLWA TREASURY
Email remittance information to
treasury@glwater.org

PLEASE DETACH AND RETURN THIS PORTION WITH YOUR PAYMENT IF BY CHECK

Account Name	Account Number	Due Date	Amount Due
DETROIT IWC	CUS-0000422	Sep 11, 2024	$138,505.48

AMOUNT REMITTED $

DETROIT IWC
735 RANDOLPH ST
DETROIT, MI 48226
United States of America

REMIT TO: Great Lakes Water Authority
Attn: Treasury
P.O. Box 441370
Detroit, MI 48244-1370

EXHIBIT – 21

Director's Report

April 16, 2025

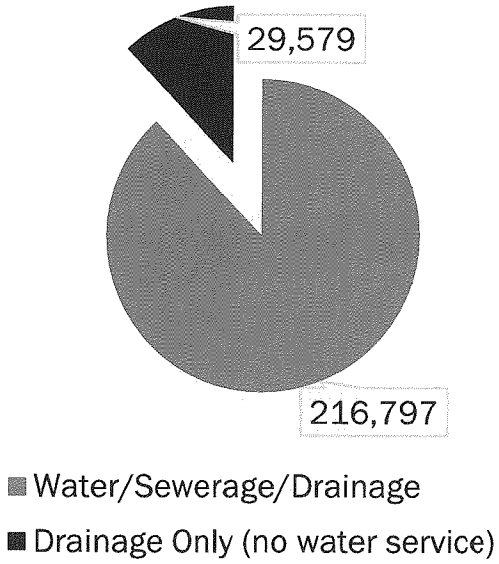
CITY OF DETROIT

Water & Sewerage Department

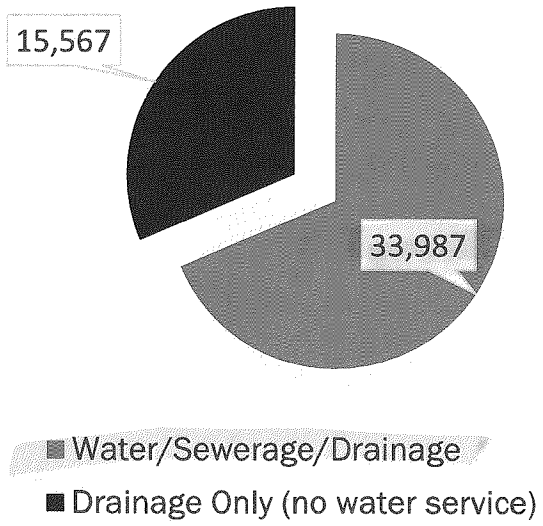


Customer Service: Number of Active Accounts

Active Residential Accounts



Active Non-Residential Accounts



Vacant parcels, parking lots and other properties with no need for water service, receive stormwater charges only (drainage).

EXHIBIT – 22

Table 10
Sewage Disposal System
Proposed FY 2025 Industrial Specific Charges

Industrial Waste Control Charges	
Revenue Req't - $ *from Table 2*	8,714,100
Eq Mtrs	195,322
Unit Cost - $/eq mtr	3.72

Meter Size	Equivalency Ratio	Unit Rate
5/8	1.0	3.72
3/4	1.5	5.58
1	2.5	9.30
1-1/2	5.5	20.46
2	8.0	29.76
3	14.5	53.94
4	20.0	74.40
6	30.0	111.60
8	50.0	186.00
10	70.0	260.40
12	80.0	297.60
14	100.0	372.00
16	120.0	446.40
18	140.0	520.80
20	160.0	595.20
24	180.0	669.60
30	200.0	744.00
36	220.0	818.40
48	240.0	892.80

Administrative Only Industrial Waste Control Charges

Meter Size	Equivalency Ratio	Unit Rate
5/8	1.0	0.93
3/4	1.5	1.40
1	2.5	2.33
1-1/2	5.5	5.12
2	8.0	7.44
3	14.5	13.49
4	20.0	18.60
6	30.0	27.90
8	50.0	46.50
10	70.0	65.10
12	80.0	74.40
14	100.0	93.00
16	120.0	111.60
18	140.0	130.20
20	160.0	148.80
24	180.0	167.40
30	200.0	186.00
36	220.0	204.60
48	240.0	223.20

Industrial Surcharges *from Table 5*

	Revenue Req't $	Estimated Loadings lbs	Unit Rate $/lb
BOD	68,000,000	173,548,100	0.392
SS	127,588,900	242,967,400	0.525
PHOS	31,008,700	4,095,700	7.571
FOG	3,244,200	26,032,200	0.125

SEPTAGE DISPOSAL FEE
Per 500 gallons of disposal $38.00