

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,

Case No. 18-011569-CZ  
Hon. Charles S. Hegarty

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.

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**REPORT OF OPINIONS AND CONCLUSIONS OF KERRY A. HEID**

Plaintiff General Mill Supply Co. (hereinafter, "Plaintiff"), by its attorneys, Kickham Hanley PLLC, individually and on behalf of a class of similarly situated class members, submits the following Report of the Opinions and Conclusions of its expert Kerry A. Heid in support of its claims against Defendants Great Lakes Water Authority ("GLWA") and the City of Detroit (the

“City,” collectively with GLWA, “Defendants”).

## I. INTRODUCTION

I understand that this is a certified class action<sup>1</sup> challenging an Industrial Waste Control Charge (“IWC Charge”) GLWA and the City collectively impose on approximately 47,000 owners of certain types of non-residential property located in various municipalities in Southeast Michigan.

I also understand that Defendants impose the IWC Charge solely to recover the costs of GLWA’s Industrial Waste Control Division (the “IWC Division”), which is primarily tasked with monitoring the discharge of industrial waste by a small set of Significant Industrial Users (“SIUs”). There are about 250 SIUs under GLWA’s jurisdiction.<sup>2</sup>

I also understand that the IWC Charge is not intended to cover the actual cost of treating industrial waste, although preventing the discharge of toxic or non-conventional pollutants provides numerous benefits to the publicly owned treatment works (“POTW”) and all of its customers. Instead, the purpose of the IWC Charge is to offset the cost 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

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<sup>1</sup> I understand that the Court already has determined that Plaintiff and the Class may challenge the IWC Charges imposed since July 2013. On April 7, 2020, the Court entered an order certifying a Class for the Unreasonable Rate Claims as follows:

- (1) All persons and entities who/which are not Significant Industrial Users (“SIUs”) and who/which have paid or incurred Industrial Waste Control Charges (“IWC Charges”) to the Great Lakes Water Authority since January 1, 2016 and/or paid or incurred the IWC Charges to the City of Detroit (the “City”) since July 17, 2013.

<sup>2</sup> SIUs are users that are either subject to categorical pretreatment standards per 40 CFR 403 or contribute an average of 25,000 gallons per day or process wastewater which usually requires pretreatment before discharge to the collection system operated by a Publicly Operated Treatment Works (“POTW”). An SIU is specifically defined in City of Detroit Ordinance 08-05, Chapter 56, Article III, Division 3, Section 56-3-58.1. All SIUs operate under permits issued by the City and/or GLWA as the “Control Authority”, court orders or consent decrees.

Act. The IWC Charge purportedly finances, among other things, the costs associated with inspections, issuance of notices of violation or noncompliance, and other enforcement activities related discharge and monitoring of industrial waste generated by SIUs. The IWC Charge also finances other regulatory activities of the IWC Division, such as monitoring and licensing septage haulers and regulating a small number of sewer users who discharge sanitary sewage containing excess concentration of “ordinary” pollutants.

The IWC Division’s regulatory activities, including monitoring the discharge of industrial waste by SIUs, provide a public benefit because they help prevent or minimize pollution, including pollution of waterways, and also benefit all users of the GLWA and Detroit sewer systems by, among other things, helping to maintain the integrity of the wastewater treatment plant. However, I understand that Defendants do not impose the cost of the IWC Division on the public at large or generally on all sewer users. Defendants instead impose the IWC Charge on approximately 47,000 owners of certain types of non-residential property based solely upon the size of the water meter<sup>3</sup> serving their properties.

I understand that Plaintiff’s First Amended Complaint alleges three distinct theories of recovery: (1) the IWC Charges constitute taxes which have been imposed in violation of the Headlee Amendment to the Michigan Constitution and MCL 141.91;<sup>4</sup> (2) even if the IWC Charges are not

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<sup>3</sup> The idea is that facilities with larger water meters discharge more sanitary sewage. However, there is not necessarily a correlation between the IWC Charge collected for a certain size water meter and the volume of water, if any, that actually that flows through the meter. For example, a user could have a 5/8 inch meter with absolutely no metered flow through it during a given billing period and the user will still be charged a static IWC Charge each month.

<sup>4</sup> The Prohibited Taxes by Cities and Villages Act, MCL 141.91, provides: “Except as otherwise provided by law and notwithstanding any provision of its charter, a city or village shall not impose, levy or collect a tax, other than an ad valorem property tax, on any subject of taxation, unless the tax was being imposed by the city or village on January 1, 1964.” I understand that Plaintiff alleges that the City did not impose the IWC Charge on or before January 1, 1964 and, although I understand the Plaintiff argues the IWC Charge is a tax, it is not an ad valorem property

taxes, they still are unreasonable in violation of common-law ratemaking principles because, among other things, Defendants have imposed IWC Charges which generate revenues far in excess of the costs associated with the IWC Division and have not imposed the Charges on other similarly situated sewer users; and (3) the IWC Charges violate equal protection guarantees because Defendants have arbitrarily exempted hundreds of thousands of similarly situated sewer users from paying IWC Charges, which results in significantly higher Charges to Plaintiff and the Class. My opinions in this matter relate to the claims described in (2) and (3) above.

For the reasons described more fully below, it is my opinion that the IWC Charges have been arbitrary, capricious and unreasonable between July 1, 2013 and June 30, 2021, primarily because (1) the Defendants used a grossly-inflated overall “Revenue Requirement” (the “IWC Revenue Requirement”) in determining the amount of the IWC Charges (which made the IWC Charges, viewed as whole, excessive); and (2) the Defendants collected the inflated IWC Revenue Requirement by imposing the IWC Charges only on a subset of nonresidential sewer users instead of all sewer users, which further amplified the magnitude of the overcharge to Plaintiff and the Class. The IWC Charges, viewed as a whole, have been unreasonable in that they have been excessive.

A more detailed description of my Opinions appears in Section III below. A preliminary calculation of the amount of the Defendants’ collective Overcharge between July 1, 2013 and June 30, 2021 is set forth in Section IV below.

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tax. I also understand that Plaintiff argues that, because the IWC Charge is a tax that was not being imposed on January 1, 1964, it is my understanding that Plaintiff argues it is unlawful under MCL 141.91. I understand that whether a municipal charge is a “tax” is an issue of law for the Court, and therefore I offer no opinion as to whether the IWC Charge is or has been a tax.

## II. SUMMARY OF THE FACTS WHICH FORM THE BASIS FOR MY OPINIONS

The following narrative summarizes my understanding of the facts which form the basis for my opinions in this matter.<sup>5</sup>

### A. The Relationship Between GLWA and the City With Respect To Water and Sewer Services.

Defendant GLWA is an incorporated municipal water authority formed pursuant to MCL 124.282 with its primary offices in Detroit, Michigan. Defendant the City of Detroit is a Michigan home-rule city and is located in Wayne County, Michigan.

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 on November 26, 2014 pursuant to Act 233, Public Acts of Michigan, 1955, as amended (“Act 233”). 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”). The City, acting through DWSD, continues to manage and operate its own local retail water and sewer system infrastructure. The leases assigned all revenues of both systems to GLWA for an initial term of 40 years and substituted GLWA for the City as the obligor on all outstanding debt obligations of the City related to the systems. *See* Exhibit A hereto (Summary Description of the GLWA Series 2020 Sewer Bonds described in the Official Statement).

GLWA’s sewer system is one of the largest in the United States, both in terms of treatment capacity and population served. The sewer system currently serves an area of 944 square miles located in three Michigan counties and an estimated population of nearly 2.8 million or

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<sup>5</sup> Many of the documents and other evidence I relied upon to reach my Opinions are referenced in this Section II and have been attached hereto. A complete listing of the documents and other evidence and the professional standards I relied upon in reaching my Opinions is set forth in Exhibit YY hereto. My curriculum vitae is attached hereto as Exhibit ZZ.

approximately 28% of Michigan’s population. Suburban customers comprise approximately 76% of the population served by GLWA, and retail sewer customers in the City of Detroit comprise the remainder served by GLWA. *Id.*

GLWA is authorized to establish rates, fees and charges for its retail water supply and sewage disposal services. Under the 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.* Notably, GLWA has no authority to impose taxes. *See* MCL 124.293 (“The Authority shall not have direct taxing power”).

**B. The Activities Of The IWC Division, And The Public Benefits Conferred By Those Activities.**

GLWA maintains, and previously the City maintained, within their sewer operations a group known as the Industrial Waste Control Division. Prior to January 1, 2016, the City was responsible for the IWC Division. Effective January 1, 2016, the IWC Division was transferred to GLWA.

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. [Exhibit B hereto].

Defendants concede 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 (Exhibit C hereto), 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.

In its First Supplemental Answer to Plaintiff's Third Request for Admission No. 1 (Exhibit D hereto), Defendants admitted 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." [emphasis added].

In his most recent deposition, 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 at pp. 14-15 (Exhibit E hereto).]

Moreover, Defendants admit 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* Defendants' Answer to Third Request for Admission No. 9 (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").

Mr. Kuplicki acknowledged this fact in his recent deposition, in which the following exchange occurred:

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 at p. 14 (Exhibit E hereto) (emphasis added).]

### **C. The IWC Division Is Funded Solely By IWC Charges**

Defendants admit that the IWC Division is funded **solely** through the IWC Charges. *See* Defendants' Answers to Third Request for Admission, RTA No. 22 (Exhibit D hereto). This is the case even though other activities of the IWC Division generate revenues for GLWA and DWSD. *See Id.*, RTA 14, 17, and 20 (admitting that Surcharge, Hauled-in-Waste and Special Discharge and General Permit Program generate revenues). None of those revenues are credited toward the revenue requirements of the IWC Division. *Id.*, RTA 15, 18, and 21 (admitting that revenues from those programs "are not credited toward the Revenue Requirement").

Prior to January 1, 2016, the City imposed and collected the IWC Charges for the entire suburban and City of Detroit service area. Effective January 1, 2016, GLWA established the rates for the IWC Charges for the entire service area. As discussed more particularly below, following GLWA's takeover of the IWC Division, I understand that the IWC Charges in suburban areas were collected by suburban municipalities acting as collection agents for GLWA and forwarded to GLWA, and IWC Charges in the City of Detroit were collected by the City, also as a collection agent

for GLWA, and forwarded to GLWA. Therefore, since January 1, 2016, GLWA has ultimately received all IWC Charge revenues.

**D. The IWC Charges Are Imposed On Certain End-Users Of The GLWA and DWSD Sewer Systems.<sup>6</sup>**

I understand that the IWC Charges are imposed on certain end-users (i.e., certain types of non-residential properties in Detroit and throughout the GLWA service area) and the municipalities act as mere collection agents on behalf of GLWA. Defendants have repeatedly admitted this fact. 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.”

*See* December 18, 2018 email from Stephen Kuplicki of GLWA to Tammy Gushard (GLWA000031, emphasis added) (Exhibit F hereto).

- b) “**A user** challenging the assessment would need to file an appeal with supporting documentation.” *See* December 18, 2018 email from Stephen Kuplicki of GLWA to Tammy Gushard (GLWA000031, emphasis added).
- c) In a March 25, 2015 “Industrial Waste Control and Pollutant Surcharge Program Review” (GLWA000042-GLWA000059) (Exhibit F 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* 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

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<sup>6</sup> I provide the information in this section as additional factual background. I am not giving legal conclusions as to the identity of the persons or entities that are legally responsible for the charges. I have reviewed the documents and testimony referenced in this section and believe that my characterization of that evidence here is accurate.

end-user locations) or a billing from their community customer (for suburban end-user locations) with the proceeds forwarded to DWSD.” *See* 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)” *See* GLWA000046, (emphasis added).

Note that, with respect to the IWC charge, “many are billed a small amount each.” *See* GLWA000051.

- d) 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) (Exhibit H hereto).
- e) “**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 (GLWA000133-GLWA000135, emphasis added) (Exhibit H hereto).
- f) The DWSD “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” or greater than 5/8” in all communities serviced by DWSD’s Wastewater System.” *See* DWSD Information Statement regarding the IWC Charge (GLWA000133-GLWA000135, emphasis added) (Exhibit H hereto).
- g) “**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) (Exhibit I hereto).

In her deposition, DWSD’s former in-house counsel, Cheryl Jordan, confirmed the “pass through” role of the so-called Member 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. at p. 12 (Exhibit J hereto) (emphasis added).]

GLWA has continued that exact same process since taking control of the IWC Division on January 1, 2016. GLWA's Rules, which govern the activities of the IWC Division, set forth the procedure GLWA's suburban wholesale customers (i.e., the "Member Communities") are required to follow in their role as collection agents for the IWC Charges. Those Rules (Exhibit C hereto) provide in pertinent part as follows:

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 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. [Exhibit C hereto at p. 78 (emphasis added)]

Consistent with the GLWA Rules, the “Member Communities” seemingly understand that they are not legally responsible to pay the IWC Charges but instead function solely as collection agents for the IWC Charges. For example, the City of Birmingham, Michigan characterizes its role as follows:

The Industrial Waste Control charge is an additional fixed fee **charged to commercial properties** by the GLWA for additional sewage treatment costs associated with commercial properties. The fixed fee is based on the size of the water meter. **These fees are collected by the City of Birmingham and remitted to the GLWA.** ... [Exhibit K hereto (emphasis added).]

*See also* Exhibit L hereto (St. Clair Shores Council meeting minutes stating that the IWC fees “are a 100% pass thru charge as all monies are remitted directly to GLWA”).

**E. The Defendants Impose The IWC Charges On Tens of Thousands Of Users Who Are Not Even Subject To the Regulatory Programs Administered By The IWC Division**

There are approximately 47,000 non-residential properties which incur IWC Charges. *See* Exhibit F hereto. 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.

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 M hereto.]

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” are **not** subject to those regulatory programs.

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

GLWA’s own documents confirm the extremely limited number of users that are actually “regulated” by the IWC Division. 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.” Exhibit N hereto at p. 1. That memo states 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.* Most importantly, the memo admits that Minor Users are “**not subject to a local regulatory program.**” *Id.* at p. 2 (emphasis added).

Mr. Kuplicki, the head of the IWC Division, confirmed these facts in his recent deposition:

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 E hereto) at p. 23.]

*See also Id.* at 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. *Defendants Concede 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.”***

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.” In his first deposition, 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 U hereto) at pp. 17-18.]

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

I understand that Defendants do not claim that there are any particularized benefits provided to “nondomestic water sources” (*i.e.*, commercial properties) in exchange for their payment of the IWC Charges, or that those users are directly subject to the regulatory activities of the IWC division. Instead, Defendants assert that GLWA must establish “a legal framework to monitor and enforce its pretreatment standards with respect to any ‘Industrial User.’” *See* Kuplicki

Affidavit (Exhibit O hereto).

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 U hereto at pp. 34-35. *See also* Exhibit V hereto at p. 18 (DWSD presentation describing a “Program Overview” and identifying 288 SIUs and 18,453 “Minor Users”). Thus, there are less than 19,000 “users” that Defendants claim are directly benefitted by their IWC regulatory activities.

Significantly, however, there are at least 47,000 properties or “users” who are subject to the IWC Charges. *See* Exhibit F hereto at p. 4 (“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”). *See also Id.* at p. 10 (identifying 47,434 customers who/which incur IWC Charges). Thus, there are over **28,000 properties or “users”** (i.e., the “Commercial Properties”) who are subject to the IWC Charges but are not subject to the regulatory and enforcement activities of the IWC division.

I understand that the certified Class here includes all “Minor Users” and “non-domestic wastewater sources” who/which incur IWC Charges.

**F. Not Only Do Defendants Impose the IWC Charges On Users Who Are Not Regulated By The IWC Division, But Defendants Also Exempt Thousands Of Other, Similarly Situated Sewer Users From The Obligation To Pay IWC Charges.**

In order to fund the IWC Division, Defendants have 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.

First and foremost, under Defendants' rate-making scheme, all residential sewer users are completely exempt from the IWC Charges. *See* GLWA000133 (Exhibit H hereto). This includes all multi-family properties. *Id.* As a result, there are hundreds of thousands of sewer users in the GLWA service area that are current exempt from the Charges. Plaintiff is currently investigating the total number of such exempt residential sewer users in the GLWA service area in discovery, but there are at least 211,000 residential sewer users in the City of Detroit alone that are exempt from the IWC Charges. *See* Exhibit W hereto.<sup>7</sup>

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<sup>7</sup> Defendants have claimed that they are legally required to impose the IWC Charges only on non-residential properties. *See* Defendants' Supplemental Brief in Opposition to Plaintiff's Motion for Class Certification at p. 7 ("the US EPA requires that [the IWC Division] be funded by non-residential users"). But this is untrue. I understand that the federal court, in remanding this case to this Court, specifically noted:

There is no question that federal law imposes obligations on Defendants. However, Plaintiff's claims challenge how Defendants choose to fund those federally-imposed obligations, not whether those obligations are being met. Defendants have cited no provision under the CWA, or any federal law, that prescribes the manner in which Defendants must fund their pretreatment program. [May 6, 2019 Order in Case No. 18-13255 (E.D. Mich.) at p. 4 (Exhibit CC hereto).]

The Industrial Pretreatment Regulations are silent on the means and methods of financing a Pretreatment Program. *See* Exhibit Q hereto. And even if the Defendants could show that Pretreatment Programs are required to be funded by "Industrial Users," for the reasons discussed above, Plaintiff and the Class are not even within the definition of "Industrial Users."

Even worse, not only does the EPA **not** require Defendants to impose the IWC Charges in the way Defendants have chosen to do so, but the Defendants have ignored one of the methods of funding the IWC Division that the EPA **has** suggested. In its "Guidance Manual for POTW Pretreatment Program Development," the EPA gave some discretion to POTWs concerning charges to recover the costs of Pretreatment Programs, but the EPA gave the following guidance:

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 of 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.** [Exhibit R hereto at p. 7-22 (emphasis added).]

In addition, even though Defendants claim that all non-residential properties are subject to the regulation of the IWC Division, Defendants have exempted tens of thousands of nonresidential properties from the IWC Charges. Indeed, the following types of nonresidential properties do not incur IWC Charges:

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. [Exhibit C hereto at p. 78.]

The head of the IWC Division, Stephen Kuplicki, testified that it was a “policy decision” to create the arbitrary exemptions. Kuplicki Dep. II (Exhibit E hereto) at pp. 39-40. It appears DWSD created these arbitrary exemptions, even though they were not authorized by the original 1981 federal court order which initially established the IWC Charges. *See* Exhibit H hereto (GLWA000133). Kuplicki confirmed that, absent the exemption, the exempted entities would be required to pay IWC Charges. Kuplicki Dep. II at p. 40.

The magnitude of the exemption apparently is substantial. Investigation continues, but common sense indicates that in Detroit, and in the dozens of suburban communities serviced by GLWA, there are tens of 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 that would incur IWC Charges absent the exemption. Indeed, DWSD characterizes at least 56,000 water and sewer accounts in the City of Detroit as “Government” accounts. *See* Exhibit W hereto. As a result, the other payers of the IWC Charges must incur and pay higher rates in order to subsidize the favored, exempted, class.

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Here, in derogation of the EPA guidance, “users” are not charged “based on their relative impact on pretreatment costs” but rather on the size of the water meter servicing their facility. And residential users and certain “favored” non-residential users are not charged at all.

**G. The Gross Inflation Of IWC Charges Confirmed By DWSD's Own Investigation.**

Defendants acknowledge that they were legally obligated only to recover the actual costs of the IWC Division through the IWC Charges. *See* Exhibit F hereto at p. GLWA000046 (acknowledging Defendants may “[c]ollect only the amount necessary to cover the cost of the IWC program”). Former DWSD in-house counsel Cheryl Jordan confirmed in her deposition that it was her understanding that “the IWC charges were limited to those that would allow DWSD to only recover the cost of the IWC program” and that DWSD was not “supposed to make a profit” from the IWC Charges. Jordan Dep. (Exhibit J hereto) at p.14. Even the 1981 federal court order imposes this limitation. *See* Order (Exhibit X hereto) at p. 3 (requiring DWSD to “adjust the fee upward or downward to collect only the amount necessary to recover the cost of the Industrial Waste Control Section budget”). The facts which show that the Defendants have collected far more than the “amount necessary to recover the cost of the Industrial Waste Control Section budget” are summarized below.

***1. The Phantom Charges For The “Analytical Lab” And Other “Wastewater Operations” Costs.***

For FY 2013-14, the City determined that the Revenue Requirement for the IWC Charges was \$22.4 million. In March 2015, however, the City undertook a more detailed analysis of the actual Revenue Requirements associated with the Industrial Waste Control Division. At that time, the City “obtained FY 2014 Revenue Requirement data” for the IWC Charge, and performed a “[r]econstructed cost buildup from ‘bottom up’ based on actual for FY 2014.” In other words, the City used “reconstructed data from FY 2014 to recalibrate FY 2016 rates.” *See* Exhibit F hereto at p. 11. **Most importantly, the March 2015 Analysis compared the City’s actual IWC-related costs for FY 2014 with the cost assumptions that were used to derive the IWC Charges for FY 2014.**

As part of the new analysis, the City determined that the \$22.4 million Revenue Requirement was grossly inflated because it included \$9.5 million in wastewater operations expenses when the actual wastewater operations expenses were \$2.29 million. The analysis further determined that the \$22.4 million Revenue Requirement included \$4.46 million in indirect administrative overhead when the actual indirect administrative overhead was \$2.65 million. As a result of the City's more detailed analysis for FY 2013-14 (conducted in March 2015), the City determined that the Revenue Requirement for the IWC Charges should have been only \$13 million (as opposed to \$22.4 million) and proposed a 38% reduction in the IWC Charges for the fiscal year beginning July 1, 2015. *See Id.*

The "reconstructed" analysis described above was conducted by a third-party consultant for DWSD, Mark Savitskie. In his deposition (Exhibit Z hereto), Mr. Savitskie gave the following testimony:

Q: Just so we are clear on the record, the rate calculation for fiscal year 2014, you concluded that it resulted in \$22,450,700 of charges pursuant to that rate calculation, correct?

A: Yes.

Q: And then when you did your reconstructed calculation, you determined that it was \$13,053,349, correct?

A: Correct.

Q: And that 13 million number is based upon actual information from 2014 as opposed to what was in the rate calculation?

A: Correct. ...

Q: **So what you concluded at the end of the day is that the fiscal year 2014 IWC revenue requirement should have been 13 million dollars as opposed to 22 million dollars?**

A: **Right.**

Q: And so in your calculation here – you would agree with me that the one major driver of this difference is that in the rate calculation, almost 9.5 million dollars was allocated to wastewater operations including the lab, and in your reconstructed wastewater lab operations, it was \$2,300,000, basically?

A: Yes.

Q: And when you reconstructed the wastewater lab ops to come up with – you determined that the budget for, the entire lab operations was a little over three million dollars, correct?

A: Where are you – okay, the 3,016,000?

Q: Yes

A: Yes.

Q: And that was based upon actual data that you obtained for fiscal year 2014?

A: Yes. [Savitskie Dep. (Exhibit Z hereto) at pp. 13-15 (emphasis added)].

Savitskie went on to confirm this massive overcharge at the conclusion of his deposition:

Q: Was that your understanding of the goal of these charges was to collect only the amount necessary to recover the cost of the IWC program?

A: Yes.

Q: **And isn't it true that your analysis that's reflected on page 11 confirms that at least for fiscal year 2014, DWSD recovered more than the cost of the IWC program?**

A: **The data on page 11 does suggest that, yes.**

Q: By about nine million dollars, correct?

A: I'm not looking at that page now.

Q: If we can just go back to it just to confirm this question.

A: **If you say by about nine million, you're comparing 22.4 to 13 million, yes.** [Savitskie Dep. at pp. 20-21 (emphasis added).]<sup>8</sup>

A primary reason the IWC Revenue Requirement the City used in FY 2013-14 and 2014-15 was so grossly inflated was because DWSD used a fictional number for the so-called "Analytical Lab" budget. The Analytical Lab is a group at DWSD (now GLWA) tasked with analyzing waste materials which provides support to the IWC Division and also to other sewer functions. *See generally* Kuplicki Dep. II (Exhibit E hereto) at pp. 28-34.

In his deposition, Bart Foster confirmed that, in determining the IWC Charges for FY 2013-14 and FY 2014-15, DWSD budgeted **\$8,000,000** per year for the Analytical Lab when the entire Analytical Lab budget for each of those years was only approximately **\$3,000,000**:

Q: Right, but my question is, we know from Mr. Savitskie's document, which we'll get to, but its represented in your document here that the Analytical Lab Budget for the Fiscal Year 2016 was \$3,058,800, correct?

A: Correct.

Q: That would be the entire Analytical Lab Budget?

A: Based upon his review, yes. [Foster Dep. I (Exhibit Y hereto) at p. 24. *See also* Exhibit AA hereto at p. 463957.]

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<sup>8</sup> While Savitskie's analysis was limited to FY 2014, Bart Foster testified that Savitskie's overcharge calculation would apply to FY 2015 as well. This is because there was no new "cost of service" study prepared for that year and therefore the FY 2014 budget and revenue requirement numbers were simply carried-through and applied to FY 2015. *See* Foster Dep. I (Exhibit Y hereto) at pp. 32-33. As a result, the overcharge Defendants admit just for FY 2014 and FY 2015 exceeds **\$18 million**.

Despite the fact that the entire Analytical Lab budget during each of those years was about **\$3,000,000**, Foster acknowledged that the FY 2014 IWC Charge revenue requirement included **\$8 million** as the annual budget for the Analytical Lab:

Q: All right but that's a different question. Let's see if we can agree that for Fiscal Year 2014, in looking back at how the Revenue Requirement was generated in that year, what you assumed was that \$8,000,000 of the Revenue Requirement was attributable to the Analytical Lab Budget, correct?

A: Attributable to the Analytical Lab activities in the budget that were allocable to the Industrial Waste Control program, yes.

Q: All right, so, but at least \$8,000,000 of Analytical Lab Budget was attributable to the IWC Division, correct?

A: Yes, that's the assumption that went into the 2014 Cost of Service Study. [Foster Dep. I (Exhibit Y hereto) at pp. 25-26].<sup>9</sup>

***2. Other Deficiencies In Defendants' IWC Charge Methodology That Further Confirm The Gross Overcharges.***

Defendants also grossly inflated the IWC Charge revenue requirement by utilizing an inflated amount for so-called "direct" IWC expenses, which primarily consist of salary and benefit expenses of the employees of the IWC Division. For example, the "direct" IWC expenses were overstated in at least the following amounts in the following fiscal years:

<b><u>Fiscal Year</u></b>	<b><u>Direct IWC Costs in Rev. Requirement</u></b>	<b><u>Actual Direct IWC Costs</u></b> <sup>10</sup>
FY 2014	\$6,301,600	\$3,759,584

<sup>9</sup> Foster testified that it was a "reasonable assumption" that the \$8 million number for the Analytical Lab was carried through and incorporated into the IWC Charge revenue requirement for FY 2015 as well. Foster Dep. I at p. 33.

<sup>10</sup> The "Direct IWC Costs in Revenue Requirements" for all years other than FY 2019 is derived from Doc No. 463957 in Exhibit AA hereto. The Direct IWC Costs in the Revenue Requirements for FY 2019 is derived from Doc No. 463824. The "Actual Direct IWC Costs" for all years other than fiscal years 2017 and 2018 are derived from Defendants' sworn interrogatory answers. Exhibit BB hereto. The Actual Direct IWC Costs for FY 2017 and 2018 are derived by using the actual Personnel costs for 2018 set forth in Dep. Exh. 31 (\$1,991,900) (Exhibit TT hereto) instead of the Personnel costs set forth in Doc No. 463957 in Exhibit AA hereto for FY 2018 (\$4,321,800) and instead of the Personnel costs set forth in Dep. Exh. 10 (Exhibit II hereto) for FY 2017 (\$5,043,000). Bart Foster testified that the Personnel costs in FY 2017 would not have been materially different from the Personnel costs in fiscal year 2018. Foster Dep. II (Exhibit XX hereto) at p. 125.

FY 2015	\$6,613,400	\$2,365,109
FY 2016	\$4,699,600	\$2,365,109
FY 2017	\$5,871,800	\$2,820,700
FY 2018	\$5,640,400	\$3,310,500
FY 2019	\$2,956,800	\$2,792,000

Bart Foster confirmed in his first deposition that the IWC Charges included millions of dollars in phantom “direct IWC costs” in FY 2014:

Q: In 2014, the actual Direct Industrial Waste Control operating expenses were somewhat less than 3.8 million dollars, correct?

A: Based on this [sworn interrogatory answer], yes, and I will caveat all of this with as reported on the subsidiary financial schedules of DWSD, yes.

Q: Okay, but the IWC Direct Budget that was utilized in deriving the Revenue Requirement was a little bit more than 6.2 million dollars, correct?

A: Correct [Foster Dep. I at p. 53].

Foster further testified in his second deposition that the personnel costs for the IWC division in fiscal year 17 and fiscal year 18 were inflated because the personnel costs for those years were based on prior years’ budgets “which were based upon a higher number of employees than were actually within the IWC division,” and “that got corrected in 2019, which resulted in a material reduction in the personnel costs.” Foster Dep. II (Exhibit XX hereto) at p. 118. *See also Id.* at p. 121 (conceding that the assumed number of employees for the IWC division was higher than the actual because [he] was carrying over earlier year data.”). Foster conceded that the personnel costs in the FY 2018 IWC revenue requirement was \$4.3 million (*Id.* at p. 122) but the actual personnel costs of the IWC division for that fiscal year were only \$2 million. *Id.* at pp. 123-124.

The resulting overcharge is further amplified when one considers that certain indirect costs were allocated based upon the direct IWC costs. Bart Foster testified that the amount of the indirect cost allocation is a direct function of the amount of the direct IWC costs. *See* Foster Dep. I (Exhibit Y hereto) at p. 36 (confirming that “the higher the direct costs under the IWC Revenue

Requirement, the higher these Allocated Admin/Centralized Services overhead costs are going to be”). *See also* Exhibit AA at doc 463957 (“These amounts allocated to Cost Pools based on ‘direct’ allocations, so lower “directs” leads to lower allocation). Therefore, in order to further adjust the IWC Revenue Requirement, one must determine what the indirect cost allocation would have been if the lower (correct) direct IWC costs were utilized. I perform that calculation for certain years in the Class Period in Section IV.B below.

***3. Defendants Have Gradually Reduced The IWC Charges, But They Remain Far Too High.***

The City’s “reconstructed” IWC Charges imposed between July 1, 2015 and June 30, 2018 (approximately \$14 million per year) were still grossly excessive and wholly disproportionate to the direct and indirect costs incurred by the City through December 31, 2015 and GLWA from January 1, 2016 through June 30, 2018 relating to the IWC Division.

In 2018, GLWA undertook a detailed cost of service study for FY 2018-19 and determined that the actual direct and indirect costs associated with the activities for which the IWC Charges are imposed are far less than the revenues generated by the Charges. In fact, GLWA’s rate consultant determined in February 2018 that the direct and indirect costs associated with GLWA’s IWC Division were only approximately \$9.1 million per year.

Effective July 1, 2018, GLWA finally implemented an additional 31% reduction in the amount of the IWC Charges for FY 2018-19. Mr. Foster characterized this reduction as “material.”

By utilizing the actual Analytical Lab and direct IWC costs instead of the inflated costs used in generating the Revenue Requirements, and allocating the administrative overhead and MBO costs based upon the actual direct IWC costs, Plaintiff will establish a minimum Gross Overcharge to Plaintiff and the Class for the Class Period in excess of **\$32.3 million** through just the end of FY 2021 based just upon the inflated Revenue Requirement. The overcharge Plaintiff will ultimately prove under this theory is actually much higher, because, assuming Defendants are legally authorized

to impose IWC Charges, the Revenue Requirements for the Charges should have been allocated among **all** sewer users, not just the nonresidential users upon whom the IWC Charges have historically been imposed. In other words, not only should the total IWC Charge Revenue Requirements have been dramatically lower during the Class Period, but those lower Revenue Requirements should have been allocated among a much larger number of “meters” (i.e., both residential and nonresidential sewer users). This calculation greatly lowers the IWC Revenue Requirements that should have been allocated to Plaintiff and the Class and greatly amplifies the overcharge to Plaintiff and the Class, increasing it to over **\$98** million through June 30, 2021.

A more complete analysis which more specifically quantifies the Overcharges during the Class Period is set forth in Section IV.B below.

### **III. STATEMENT OF MY OPINIONS IN THIS MATTER**

Principles of ratemaking that guide the legal and technical aspects of ratemaking are necessarily discussed herein. This section presents an overview of cost of service studies and cost allocation theory. It first introduces the role of cost of service studies in the ratemaking process. It then introduces and briefly discusses the major steps in the cost allocation process: the determination of the revenue requirements, the “functionalization” of costs, and finally the “allocation” of costs among customer classes and services.

Cost of service studies are among the basic tools of ratemaking. Few analysts seriously question the standard that services should be provided at cost. The cost principle remains the primary criterion for the reasonableness of rates.

The cost principle applies not only to the overall level of rates, but to the rates set for individual services, classes of customers, and segments of the utility’s business. Cost studies are therefore used for the following purposes:

- To determine the total revenue requirement for the services offered by a utility.

- To calculate costs of individual types of service based on the costs each service requires the utility to expend.
- To attribute costs to different categories or classes of customers based on how those customers cause costs to be incurred and benefit.

Generically, the prime purpose of cost of service studies is to aid in the design of rates. The development of rates for a utility may be divided into four basic steps:

- Development of the test period total utility revenue requirement. The total revenue requirement is the level of revenue to be collected from all sources.
- Calculation of the test period revenue requirement to be recovered through rates. This is simply the total revenue requirement of the utility from all sources less the amount from sources other than rates.
- The cost allocation procedure. The total revenue requirement of the utility is attributed to the various classes of customers in a fashion that reflects the cost of providing utility services to each class. The cost allocation process consists of three major parts: functionalization of costs, classification of costs, and allocation of costs among customer services and classes.
- Design of rates. The rates or prices charged to customer classes and/or services are finally determined using the costs incurred as a major determinant.

The first step in the ratemaking process is the determination of the revenue requirement. The revenue requirement analysis examines the utility's operating and capital costs to determine the total revenue needs of the utility. The purpose of the revenue requirement analysis is to determine the adequate and appropriate funding needs of the utility. The revenue requirement is the summation of the annual operating expenses and capital costs that a utility must recover annually

over the time period for which the rates and charges will be in place. The type of ownership of the utility will typically guide the manner in which the revenue requirement is determined. In a publically-owned (municipal or regional) utility the cash needs (sometimes called the cash basis)<sup>11</sup> is commonly used. The objective of the cash needs approach for developing the revenue requirement is to provide revenue sufficient to recover total cash requirements. Municipal sewer utility departments or regional utilities are generally managed as independent enterprises. Thus, financial self-sufficiency of the utility is prudent and, as in the case of GLWA, is required. Many municipal utilities budget in a format that may be very similar to the cash needs approach. For this reason GLWA's revenue requirement have been based on its fiscal year budget.

As previously discussed, GLWA is the regional utility providing water and sewer services in southeast Michigan. While many individual GLWA water and sewer services do of course typically have their own clearly identifiable specific costs, many GLWA costs are common or joint costs that cannot generally be identified specifically with either the sewer service or the water service.

As part of the rate analysis process to ensure that appropriate operation and maintenance expense items and general plant are being assigned to the proper water and wastewater functions, the rate analysis should conduct an examination of the percentage allocation basis of the direct and joint-use activities of each division, section, and activity. Some expense and plant items are readily identifiable as being related to providing sewer or water service, while other items are shared between the two Utility functions. In those instances where expenses are jointly budgeted, a determination must be made as to how to apportion these expenses to sewer and water functions by

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<sup>11</sup> As used herein, the term cash needs, as it applies to determining revenue requirements of a utility, should not be confused with the accounting terminology of the cash-basis accounting method of revenue and expense recognition (in contrast to the accrual method of revenue and expense recognition).

relating them to number of customer accounts, work orders, service activity statistics, and other cost-causative criteria.

Well-established principles of utility ratemaking require the utility to deduct Non-Rate Revenues<sup>12</sup> from the revenue requirement in establishing the Rates and Charges. In this regard, Water Environment Federation Manual of Practice No. 27, “Financing and Charges for Wastewater Systems,” (2005) states: “In establishing the total revenue requirements to be recovered from the rates for wastewater service, recognition of other sources of revenues within the utility are recognized and deducted from the total annual revenue requirement.” *See* WEF Manual of Practice No. 27, “Financing and Charges for Wastewater Systems” at p. 83-84. Similarly, AWWA Manual M-1, “Principles of Water Rates, Fees and Charges,” refers to Non-Rate Revenues as “miscellaneous service charges,” and states: “Revenues generated via miscellaneous service charges (other operating revenues) are a direct reduction or credit against the total revenue requirements to be recovered from all customers ...” *See* AWWA Manual M-1, Seventh Edition, at p. 253. Deducting Non-Rate Revenues (Miscellaneous Revenues and Credits) from the total Revenue Requirement yields the Net Revenue Requirement. There will be separate Net Revenue Requirements for the sewer utility and the water utility, although our remaining focus will be on the sewer utility.

Once the Net Revenue Requirement for the sewer utility is determined (including the allocation of general and common costs to the sewer utility), GLWA must allocate those Net Revenue Requirements to the various services for ratemaking purposes. The sewer utility is comprised of various customer classifications and rate components, to which all Net Revenue Requirements must be allocated. The most frequently used approach to such allocation, which is also used for GLWA, is Fully Distributed Cost pricing. Fully Distributed Cost pricing consists of a

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<sup>12</sup> Sometimes referred to as Miscellaneous Revenues and Credits.

whole set of approaches to allocating common costs to services. Once these allocations are done, prices or Rates and Charges are set so that each service covers its fully distributed cost.

The total cost of sewer service is analyzed by system functions in order to equitably distribute costs of service to the various classes of customers. Costs of sewer service may be classified and assigned to basic functional cost components including volume-related costs, strength-related costs, industrial monitoring or pretreatment program costs, and other direct related costs. These costs are often referred to as cost functions, or as GLWA refers to them “Cost Pools.” Costs allocable only to a specific customer group are assigned directly to that group. One of the functional cost components, or Cost Pools as GLWA refers to it, which is of primary significance in this case, is that of Industrial Waste Control. Industrial Waste Control, or IWC, is a separate functional cost component, or Cost Pool, which is assigned its Direct IWC costs plus Indirect costs, including Master Bond Ordinance (“MBO) costs.<sup>13</sup> The Indirect costs plus the MBO costs were substantial but had no direct relationship to the Industrial Waste Control.

Rate design concerns the manner in which customers are billed. Rate designs should be developed to promote equity among customers by charging each customer or customer group in such a way that a customer is neither subsidized by nor subsidizes other customers.

In the often contentious process of ratemaking, reference is often made to the norms of reasonable, fair and equitable, and nondiscriminatory rates. Reasonable sewer rates are rates that are based on generating sufficient (neither insufficient nor excessive) revenues to operate the sewer utility in a prudent manner and without any undue discrimination among customers

However, the determination of customers from which the IWC revenue requirements should be recovered is difficult. There are several fundamental cost allocation approaches and even hybrid cost-allocation approaches that combine the fundamental cost allocation approaches.

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<sup>13</sup> MBO costs began on January 1, 2016 effective with the implementation of GLWA.

### **Cost Causation as a Basis for Rate Design**

The first cost allocation methodology is a cost-causative allocation approach. Operating expenses and capital costs are assigned to cost components using predominant operational or service purposes as cost-causing factors. For example, publicly owned treatment works (“POTWs”) are designed to treat typical household waste, biodegradable commercial waste, and biodegradable industrial waste. Certain commercial and industrial facilities may, however, discharge toxic or non-conventional pollutants that the treatment plant is neither designed for nor able to remove. Consequently, discharges from both commercial and industrial sources can cause problems at POTWs and can have detrimental effects on the water quality of the receiving waterbody. The undesirable effects of those discharges can be avoided by (1) preventing customers from introducing pollutants into a POTW that will either interfere with the operation of the POTW including interference with its use or disposal of municipal sludge, and (2) preventing customers from introducing pollutants into a POTW that will pass through the treatment works or otherwise be incompatible with such works. The act of the customer treating wastewater before discharge to a POTW is commonly referred to as pretreatment. The National Pretreatment Program provides the regulatory basis to require discharges to comply with pretreatment standards to ensure that the goals of the Clean Water Act (“CWA”) are attained. The IWC was created to ensure compliance with the National Pretreatment Program. Under the cost causation basis of rate design, it is the dischargers of the toxic or non-conventional pollutants that should bear the cost of the IWC program. The General Pretreatment Regulations apply to all nondomestic sources that introduce pollutants into a POTW. These sources of indirect discharges are more commonly referred to as IUs. Because an IU can be as simple as an automated, coin-operated car wash, EPA developed criteria that define a “significant IU” or “SIU.” Many of the General Pretreatment Regulations apply to SIUs as opposed to IUs; the distinction is based on the presumption that control of SIUs will, in most cases, provide

adequate protection of the POTW. Where a smaller IU has the potential to adversely affect the POTW, the POTW would be expected to designate the facility as an SIU.

### **Receipt of Benefits as a Basis for Rate Design**

As I have described above based on the Rules related to the IPP, Plaintiff's Third Request for Admission No. 1 ("RTA"), and the deposition of Mr. Kuplicki, the IWC Division confers benefits upon the general public through the protection of the environment, the public health and safety by abating and preventing pollution. The IWC Division confers benefits upon the general public and not just those persons and entities who pay the IWC Charges. Certain industrial discharge practices can interfere with the operation of POTWs, leading to the discharge of untreated or inadequately treated wastewater into rivers, lakes, and other waters of the United States. A discharge that causes interference inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal. Some pollutants are not amenable to biological wastewater treatment at POTWs and can pass through the treatment plant untreated. This pass through of pollutants affects the receiving water, making waters unswimmable or unfishable and possibly causing fish kills or other deleterious effects. Even when a POTW has the capability to remove toxic pollutants from wastewater, the pollutants can end up in the POTW's sewage sludge, which might then be processed into fertilizer or soil conditioner that is land-applied. Incinerating contaminated sludge can release toxic emissions into the atmosphere. Volatile organics, if allowed to enter the POTW collection system, result in gases or vapors that can accumulate in the head space of sewers, increasing the likelihood of explosions that could cause significant damage to the general public. Discharges of toxic organics can also result in the release of poisonous gas. This occurs most often when acidic wastes react with other wastes in the discharge. Such gases can be highly dangerous to POTW collection system operators as they perform their duties. As described above, the avoidance of SIU discharge of toxic or non-conventional pollutants provides a

widespread public interest benefit to the general public as well as benefit to all users of the POTW and increased safety to POTW employees.

I understand that the rates for the IWC Charges have historically been determined by Defendants' outside consultant, Bart Foster. In his deposition, Foster confirmed various basic-ratemaking principles that apply to the calculation of the IWC Charges. For example, Foster testified or agreed with the following statements:

1. The determination of the IWC Charges begins with the establishment of the "Revenue Requirement," which is the "budgeted operating and other expenditures, including capital recovery that must be generated from rates charges and fees from customers." Foster Dep. (Exhibit Y hereto) at p. 9;
2. In determining the Revenue Requirement, it is "appropriate to use the most accurate estimate of the amount of each of the cost components." *Id.* at pp. 9-10;
3. "And if the amount of a particular cost is known or fairly estimable, you should use that amount in determining the revenue requirement." *Id.* at p. 10;
4. "And it would be, from a rate-making standpoint, it would be inappropriate to use a cost amount that's materially higher or lower than the expected or known amount." *Id.*
5. "[i]n deriving Revenue Requirements, you endeavor not to materially overstate those requirements." *Id.* at p. 97;
6. "If the revenue requirement is materially overstated, it could result in rates that are in excess of the cost of service." *Id.* at p. 98.

I agree with each of the six statements set forth above. In my opinion, Defendants indisputably have violated these basic rate-making principles by including in the IWC Revenue Requirements elements of cost that are grossly in excess of Defendants' actual costs, as detailed below.

Under Plaintiff's "Gross Overcharge" theory, the IWC Charges have generated revenues far in excess of the actual direct and indirect costs associated with the IWC division and the Defendants have not imposed IWC Charges on all properties that benefit from the activities of the IWC division – *i.e.*, residential properties and non-residential property types that have been arbitrarily exempted

from the IWC Charges. In other words, (1) the IWC Revenue Requirement has been grossly inflated and (2) the IWC Charges to Plaintiff and the Class have been further inflated because the inflated IWC Revenue Requirement has not been allocated to all similarly-situated sewer users.

In order to quantify the Overcharges for the period of July 1, 2013 through June 30, 2021, one needs to (1) calculate the appropriate IWC Charge Revenue Requirement for each fiscal year and (2) then allocate that IWC Revenue Requirement over all sewer users, not just Plaintiff and the class of non-residential sewer users.

In Section IV below, I calculate the Revenue Requirements the Defendants should have used during the Class Period. I believe that virtually all of the cost allocations Defendants have utilized to determine the IWC Revenue Requirements have been grossly inflated. My overcharge analysis is based solely upon three distinct costs which Defendants included in the IWC Revenue Requirement that were grossly inflated during the Class Period:

- (a) The so-called “Analytical Lab” costs;
- (b) The “direct” IWC costs; and
- (c) The allocation of administrative overhead

#### **IV. CALCULATION OF THE OVERCHARGE**

By utilizing the actual Analytical Lab and direct IWC costs instead of the inflated costs used in generating the IWC Revenue Requirement, and allocating the administrative overhead based upon the actual direct IWC costs, Plaintiff will establish a minimum overcharge to Plaintiff and the Class for the Class Period in excess of **\$32.3 million** through just the end of FY 2021 based just upon the inflated IWC Revenue Requirement. The overcharge Plaintiff will ultimately prove under this theory is actually much higher because, assuming Defendants are legally authorized to impose IWC Charges, the IWC Revenue Requirements for the Charges have to be allocated among **all** sewer users, not just the nonresidential users upon whom the IWC Charges have historically been imposed. In other words, not only should the IWC Revenue Requirements have been dramatically

lower during the Class Period, but those lower IWC Revenue Requirements should have been allocated among a much larger number of “meters” (i.e., both residential and nonresidential sewer users). This calculation greatly lowers the IWC Revenue Requirements that should have been allocated to Plaintiff and the Class and greatly amplifies the overcharge.<sup>14</sup>

Alternatively, the overcharge Plaintiff will ultimately provide under this theory is actually much higher because the IWC Revenue Requirements for the Charges should be allocated only to the SIUs resulting in little or no allocation of the IWC Revenue Requirement to Plaintiff.

I understand that Plaintiff is pursuing discovery concerning the total number of unique sewer users served by Defendants and the total “equivalent meters” associated with those users. For purposes of my current calculation, however, I have assumed that the total number of equivalent meters in the sewer areas serviced by Defendants that have members of the class who incur IWC Charges is 1.3 million. I believe this is a reasonable, in fact, very conservative, assumption for the following reasons.

Plaintiff’s counsel has received meter data from 33 of 77 municipalities who are within the sewer areas serviced by Defendants and have members of the class who incur IWC Charges. *See* Exhibit VV hereto. That data indicates that there are 924,000 equivalent meters in those 33 municipalities, which collectively have a population of approximately 1.6 million people. *See* Summary (Exhibit VV hereto). Because GLWA services approximately 2.8 million total sewer “customers” in its service area (see Exhibit A hereto), extrapolating the data from the 33 municipalities to the entire relevant service area, one can reasonably estimate the total equivalent meters is approximately 1,600,000.  $(924,000 \times (2,800,000/1,600,000))$ .

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<sup>14</sup> This overcharge calculation is conservative because I have not adjusted the so-called MBO allocations as a part of my recalculation of the IWC revenue requirements. Foster testified in his second deposition that, if the actual IWC direct costs are less than the amounts that were included in the revenue requirements, both the administrative overhead allocations and the allocation of MBO costs would be lower.

I understand that, in order to supplement the subpoena data, Plaintiff's counsel has identified the communities that did not respond to the subpoenas and researched publicly available information in an attempt to determine how many sewer users were in each of those communities. I understand that Plaintiff's counsel confirmed that there are over 500,000 connections in the additional areas. *See* Exhibit WW hereto. The actual **equivalent** meter counts would be much higher, because we are only able to identify the number of connections. But assuming that each connection in these additional communities was only 5/8 inch in size, that still would justify a finding that there are at least 1.4 million equivalent meters in the relevant service areas.

As a further cross-check, demographic data suggests that the average household in the GLWA service area contains approximately 2.5 persons (resulting in at least 1,000,000 distinct sewer connections) (2,800,000 GLWA customers / 2.5 persons per customer).

For purposes of my analysis, I have conservatively assumed 1,300,000 equivalent meters, significantly less than my aforementioned estimate of 1,600,000.

The total number of equivalent meters associated with the properties that currently incur IWC Charges is approximately 212,000. *See* Dep. Exh. 25. Thus, Plaintiff and the Class should only be allocated approximately 16.3% of the IWC Charge Revenue Requirement (212,000/1,300,000).<sup>15</sup> When these adjustments are made, the total overcharge for the period of July 1, 2013 through June 30, 2021 exceeds **\$101 million**. A calculation of this overcharge is set forth below.

**FISCAL YEAR 2013-14 – Minimum overcharge – \$20,382,624**

I. **Total IWC Revenue Requirement** – \$22,450,700 (doc 463957)

II. **Direct IWC Costs**

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<sup>15</sup> Obviously, this specific calculation could go up or down depending upon whether the actual number of equivalent meters associated with all relevant sewer users is higher or lower.

- A. Direct IWC Costs in Revenue Requirement -- \$6,201,600 (doc 463957)
- B. Actual Direct IWC Costs per Interrogatory Responses – \$3,759,584
- C. Overcharge of Direct IWC Costs – **\$2,442,016 (II.A. – II.B.)**

**III. Analytical Lab**

- A. Amount included in Revenue Requirement -- \$8,000,000 (doc 463957)
- B. Actual Analytical Lab total budget -- \$3,058,800 (Dep. Exhibit 11)
- C. Max percentage of Analytical Lab budget that could be allocated to IWC – 76% (Dep. Exhibit 11)<sup>16</sup>
- D. Maximum amount that could have been allocated to IWC – \$2,324,700 (III.B.\* III.C.)
- E. Minimum overcharge of Analytical Lab costs -- **\$5,675,300 (III.A. – III.D.)**

**IV. Indirect Cost Allocation (“Admin/Centralized Svcs OH”)**

- A. Indirect Costs included in Revenue Requirement -- \$3,500,800
- B. Maximum indirect Costs that could have been included in Revenue Requirement – \$1,855,600 (\$3,500,800 x .53)<sup>17</sup>
- C. Overcharge of Indirect Costs -- **\$1,645,800 (IV.A. – IV.B)**

**Maximum Total Revenue Requirement – \$12,687,584 (I. – II.C. – III.E. – IV.C.)**

**Maximum Revenue Requirement For Plaintiff and Class – \$2,068,076 (16.3%x \$12,687,584)**

**Overcharge to Plaintiff and Class -- \$20,382,624 (\$22,450,700 minus \$2,068,076)**

**Overcharge to Plaintiff and Class If Only IWC Meters Are Considered: \$9,763,116 (\$22,450,700 minus \$12,687,584)**

**FISCAL YEAR 2014-15 – Minimum overcharge – \$21,126,994**

**I. Total IWC Revenue Requirement – \$22,950,500 (doc 463957)**

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<sup>16</sup> This percentage is probably itself inflated but I have accepted it for purposes of my analysis. In later years, Defendants used a maximum percentage of 60% and a minimum of 40%.

<sup>17</sup> The reduction in the indirect administrative cost is determined by reducing the cost by the same percentage as the direct revenue requirement costs. For example, for FY 2014, \$3,500,800 in administrative costs were allocated based upon \$17,489,500 in direct costs (doc 463957). Deducting the excessive costs of \$8,117,316 (II.C. + III.E.) from the direct revenue requirement of \$17,489,500 (doc 463957) leaves \$9,372,184 in direct costs. \$8,117,316 is 47% of \$17,489,500. Accordingly, the administrative cost allocation needs to be reduced by approximately 47%. For FY 2014, that results in a reduction from \$3,500,000 to \$1,855,600 – an additional overcharge of \$1,645,200.

**II. Direct IWC Costs**

- A. Direct IWC Costs in Revenue Requirement -- \$6,613,400 (per interrogatory answers)
- B. Actual Direct IWC Costs per Interrogatory Responses – \$2,365,109
- C. Overcharge of Direct IWC Costs – **\$4,248,291 (II.A. – II.B.)**

**III. Analytical Lab**

- A. Amount included in Revenue Requirement -- \$8,000,000 (doc 463957)
- B. Actual Analytical Lab total budget -- \$3,058,800 (Dep. Exhibit 11)
- C. Maximum percentage of Analytical Lab budget that could be allocated to IWC – 76%
- D. Maximum amount that could have been allocated to IWC – \$2,324,700
- E. Minimum overcharge of Analytical Lab costs -- **\$5,675,300 (III.A. – III.D.)**

**IV. Indirect Cost Allocation (“Admin/Centralized Svcs OH”)**

- A. Indirect Costs included in Revenue Requirement -- \$3,500,800
- B. Maximum indirect Costs that could have been included in Revenue Requirement – \$1,661,042 (\$3,500,800 x .47)
- C. Minimum overcharge of Indirect Costs -- **\$1,839,758 (IV.A. – IV.B.)**

**Maximum Total Revenue Requirement – \$11,187,151 (I. – II.C. – III.E. – IV.C.)**

**Maximum Revenue Requirement For Plaintiff and Class – \$1,823,506 (16.3% x \$11,187,151)**

**Overcharge to Plaintiff and Class -- \$21,126,994 (\$22,950,500 minus \$1,823,506)**

**Overcharge to Plaintiff and Class If Only IWC Meters Are Considered: \$11,763,349 (\$22,950,500 minus \$11,187,151)**

**FISCAL YEAR 2015-16 – Minimum overcharge – \$12,200,423**

**I. Total IWC Revenue Requirement – \$13,950,100 (doc 463957)**

**II. Direct IWC Costs**

- A. Direct IWC Costs in Revenue Requirement -- \$4,699,600 (doc 463957)
- B. Actual Direct IWC Costs per Interrogatory Responses – \$2,365,109<sup>18</sup>
- C. Overcharge of Direct IWC Costs – **\$2,334,391 (II.A. – II.B.)**

**III. Indirect Cost Allocation (“Admin/Centralized Svcs OH”)**

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<sup>18</sup> Defendants claim not to know the actual “direct” IWC costs for FY 2016. Therefore, this number is estimated, but is believed to be reasonably accurate, given the other data provided.

- A. Indirect Costs included in Revenue Requirement -- \$3,672,900
- B. Indirect Costs that should have been included in Revenue Requirement – \$2,791,404  
(\$3,672,900 x .76)
- C. Overcharge of Indirect Costs -- **\$881,496 (III.A. – III.B.)**

**Maximum Total Revenue Requirement – \$10,734,213 (I. – II.C. – III.C.)**

**Maximum Revenue Requirement For Plaintiff and Class – \$1,749,677 (16.3% x \$10,734,213)**

**Overcharge to Plaintiff and Class -- \$12,200,423 (\$13,950,100 minus \$1,749,677)**

**Overcharge to Plaintiff and Class If Only IWC Meters Are Considered: \$3,215,887\_  
(\$13,950,100 minus \$10,734,213)**

**FISCAL YEAR 2016-17 – Minimum overcharge – \$12,583,734**

**I. Total IWC Revenue Requirement – \$14,259,700 (doc 463957)**

**II. Direct IWC Costs**

- A. Direct IWC Costs in Revenue Requirement -- \$5,404,000 (doc GLWA367-368 (Dep. Ex. 14) (Exhibit LL hereto)
- B. Actual Direct IWC Costs (see FN 9) – \$2,820,700
- C. Overcharge of Direct IWC Costs – **\$2,583,300 (II.A. – II.B.)**

**III. Indirect Cost Allocation (“Admin/Centralized Svcs OH”)**

- A. Indirect Costs included in Revenue Requirement -- \$4,980,000 (doc GLWA 367-368 (Dep. Ex. 14) (Exhibit LL hereto)
- B. Indirect Costs that should have been included in Revenue Requirement – \$3,585,600  
(\$4,980,000 x .72)<sup>19</sup>
- C. Overcharge of Indirect Costs -- **\$1,394,400 (III.A. – III.B.)**

**Maximum Total Revenue Requirement – \$10,282,000 (I. – II.C. – III.C.)**

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<sup>19</sup> Again, to illustrate the indirect cost allocation, I calculated the total indirect administrative overhead costs that were included in the FY 2017 revenue requirement from Dep. Exh. 8 (Exhibit GG hereto). The direct revenue requirements for FY 2017 were \$9,288,800. See Dep. Exhibit 14. The direct revenue requirements for FY 2017 should have been \$6,705,500 (\$9,288,800 minus 2,583,300). \$6,705,500 is 72% of \$9,288,800. Therefore, to calculate the overcharge of indirect and MBO costs, I multiplied the total indirect administrative and MBO costs in the actual revenue requirement (\$4,980,000) by .72, which results in \$3,585,600. The overcharge is the difference between \$4,980,000 and \$3,585,600.

**Maximum Revenue Requirement For Plaintiff and Class – \$1,675,966 (16.3% x \$10,282,000)**

**Overcharge to Plaintiff and Class -- \$12,583,734 (\$14,259,700 minus \$1,675,966)**

**Overcharge to Plaintiff and Class If Only IWC Meters Are Considered: \$3,977,700\_  
(\$14,259,700 minus \$10,282,000)**

**FISCAL YEAR 2017-18 – Minimum overcharge – \$12,782,885**

**I. Total IWC Revenue Requirement – \$14,560,600 (doc 463957)**

**II. Direct IWC Costs**

A. Direct IWC Costs in Revenue Requirement -- \$5,640,400 (doc 463957)

B. Actual Direct IWC Costs (see FN 9) – \$3,310,500

C. Overcharge of Direct IWC Costs – **\$2,329,900 (II.A. – II.B.)**

**III. Indirect Cost Allocation**

A. Indirect Costs included in Revenue Requirement -- \$5,297,900 (doc 463957)

B. Indirect Costs that should have been included in Revenue Requirement –\$3,973,425  
(\$5,297,900 x .75)

C. Overcharge of Indirect Costs – **\$1,324,475 (III.A. – III.B.)**

**Maximum Total Revenue Requirement – \$10,906,225 (I. – II.C. – III.C.)**

**Maximum Revenue Requirement For Plaintiff and Class – \$1,777,715 (16.3% x \$10,906,225)**

**Overcharge to Plaintiff and Class -- \$12,782,885 (\$14,560,600 minus \$1,777,715)**

**Overcharge to Plaintiff and Class If Only IWC Meters Are Considered: \$3,653,775\_  
(\$14,560,000 minus \$10,906,225)**

**FISCAL YEAR 2018-19 – Minimum overcharge – \$7,657,043<sup>20</sup>**

**Total IWC Revenue Requirement – \$9,148,200 (doc 463957)**

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<sup>20</sup> At this time, for the fiscal years ending June 30, 2019, June 30, 2020 and June 30, 2021, I have accepted the overall IWC Charge Revenue Requirements allegedly used by GLWA to establish the IWC Charges for those fiscal years. Investigation continues as to whether those Revenue Requirements are inflated. Plaintiff reserves the right to amend these calculations if additional information is received and analyzed.

**Maximum Revenue Requirement For Plaintiff and Class – \$1,491,157 (16.3% x \$9,148,200)**

**Overcharge to Plaintiff and Class -- \$7,657,043 (\$9,148,200 minus \$1,491,157)**

**FISCAL YEAR 2019-20 – Minimum overcharge – \$7,193,178**

**Total IWC Revenue Requirement – \$8,594,000 (doc 463957)**

**Maximum Revenue Requirement For Plaintiff and Class – \$1,400,822 (16.3% x \$8,594,000)**

**Overcharge to Plaintiff and Class -- \$7,193,178 (\$8,594,000 minus \$1,400,822)**

**FISCAL YEAR 2020-21 – Minimum overcharge – \$7,345,010**

**Total IWC Revenue Requirement – \$8,775,400 (doc 463957)**

**Maximum Revenue Requirement For Plaintiff and Class – \$1,430,390 (16.3% x \$8,775,400)**

**Overcharge to Plaintiff and Class -- \$7,345,010 (\$8,775,400 minus \$1,430,390)**