STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

NICOLA BINNS, JAYNE CARVER, SUSAN MCDONALD, GOAT YARD, LLC, individually And on behalf of others similarly situated, and END OF THE ROAD MINISTRIES, INC., individually And on behalf of others similarly situated,

Plaintiffs-Appellants,

Case No. 21-009013-PZ
Hon. Patricia Perez Fresard

-v-

CITY OF DETROIT, by itself and through its WATER AND SEWAGE DEPARTMENT, Its agent, and the DETROIT BOARD OF WATER COMMISSIONERS,

Defendants-Appellees.
_____/

On remand pursuant to MCR 7.206(E)(3)(d)

COA Case No. 337609

DETROIT ALLIANCE AGAINST THE RAIN TAX, DETROIT IRON AND METAL CO., AMERICAN IRON & METAL CO., MCNICHOLS SCRAP IRON & METAL CO., MONIER KHALIL LIVING TRUST, and BAGLEY PROPERTIES, LLC, individually and on Behalf of similarly situated persons,

Plaintiffs-Appellants,

COA Case No. 339176

-v-

CITY OF DETROIT, DETROIT WATER AND SEWAGE DEPARTMENT, and DETROIT BOARD OF WATER COMMISSIONERS,

Defendants-Appellees.
_____/

SPECIAL MASTER'S REPORT

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Procedural Background

Plaintiffs are property owners within the City of Detroit.[1] The Plaintiffs filed their respective actions in the Court of Appeals, alleging that a drainage charge assessed by the City of Detroit violates the Headlee Amendment, Const. 1963, art. 9, §§25-34. On November 6, 2018, the Court of Appeals issued an opinion and order denying the Plaintiffs' requests for relief. *See Binns v City of Detroit*, unpublished opinion *per curiam* of the Court of Appeals issued November 6, 2018 (Docket No. 337609), *vacated and remanded*, 951 NW2d 327 (Mich 2020), and *vacated and remanded sub nom. Detroit All Against Rain Tax v City of Detroit*, 951 NW2d 354 (Mich 2020), *amended on reconsideration in part*, 507 Mich 871; 953 NW2d 724 (2021). Plaintiffs appealed, and in orders dated December 11, 2020, in lieu of granting leave to appeal, the Michigan Supreme Court vacated the Court of Appeals' decision. In *Binns v City of Detroit*, the Court remanded the case to the Court of Appeals for referral to a judicial circuit for proceedings under MCR 7.206(E)(3)(d). In *DAART v City of Detroit*, the Court ordered the matter held in abeyance, pending reconsideration after its decision in *Binns*. The DAART Plaintiffs moved for reconsideration, which was granted in part. The Supreme Court modified its order to provide that the DAART Plaintiffs could participate in the circuit court proceedings undertaken pursuant to MCR 7.206(E)(3)(d). *Detroit All Against Rain Tax v City of Detroit*, 507 Mich 871; 953 NW2d 724 (2021).[2]

In an order dated March 2, 2021, the Michigan Court of Appeals referred the matter of *Binns v City of Detroit* to Timothy M. Kenny, then Chief Judge of the Wayne County Circuit Court, for the purpose of selecting a judge of the Wayne County Circuit Court to serve as special master in the proceedings. (3/2/21 COA Order, Case No 337609.) With respect to the duties of the special master, the Court of Appeals' order provided:

> The special master shall direct the parties' discovery, resolve all issues concerning discovery, receive proofs and arguments of law, report factual findings for review by this Court, and make such other determinations as are necessary to facilitate this Court's resolution of the factual and legal matters raised by the parties. This order is not intended to limit the parties' or the special master's options regarding the manner in which they or the special master may proceed.

Judge Kenny appointed Hon. Patricia Perez Fresard to serve as special master. In accordance with the Court of Appeals' order, the special master has entered orders directing discovery and resolving various discovery issues that arose during the course of the proceedings. Counsel were able to cooperate on scheduling and most other matters that have arisen. The Court has deeply appreciated counsels' professionalism throughout the proceedings. The parties agreed to facilitation, but were unable to reach a resolution following multiple meetings with the facilitator. The parties subsequently filed proposed findings and fact and conclusions of law, which

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[1] DAART is an unincorporated voluntary association of property owners within the City of Detroit.

[2] Based on the Court's February 12, 2021, order, the parties stipulated to add the DAART Plaintiffs as parties to these proceedings.

were accompanied by proofs. In addition, the parties filed responsive and supplemental briefs. On February 21, 2023, the Court heard oral argument.

Each side has submitted extensive evidence to the Court on a variety of relevant issues, including hydrology as it relates to pervious and impervious surfaces; operation of the combined sewer system, the costs of the CSS, and how those costs are allocated; and municipal ratemaking. While the parties were able to find some common ground,[3] they fundamentally disagree on the degree to which the Court should scrutinize the parties' proofs. In general, Plaintiffs argue that public documents are sufficient to reveal the nature and purpose of the storm charge, noting that in Bolt, neither side took a single deposition or did any "court rule discovery." Plaintiffs urge the Court to "step back from the welter of detail by which the City seeks to obscure the obvious disproportionality of its drainage charge and decide the question of law that this case presents." DAART Response to Def PFF, p 4. Defendant, on the other hand, argues that when Plaintiffs urge the Court to ignore the details, they are really asking the Court to ignore the evidence.

The parties' divergent perspectives were reflected in the evidence they highlighted for the Court in their proposed findings of fact. Plaintiffs relied heavily on information produced for the public by the Detroit Water and Sewerage Department (DWSD), while Defendants more often cited deposition testimony and affidavits. In reviewing the parties' evidence, this Court drew guidance from questions posed by Justice Clement and Justice Zahra in their respective concurrences with the Michigan Supreme Court's February 12, 2021, order. Justice Clement encouraged the parties to develop a record on issues involving "how *proportional* the money being assessed is to the benefit being conferred," including:

(1) a reasonable estimate of the overall cost of the City's sewer system along with what is being recovered by the City to cover those costs;
(2) the portion of costs reasonably ascribed to stormwater versus sanitary sewer;
(3) the reasonableness of the City's assumptions about runoff from permeable versus impermeable surfaces;
(4) whether the cost of clearing water from city streets is a benefit that can be paid for via a drainage fee;
(5) the apportionment of the cost of drainage services among property owners; and
(6) whether the City has overcharged any property owners for the value of the service being provided.

Detroit All Against Rain Tax v City of Detroit, 507 Mich 871; 953 NW2d 724, 725 (2021) (J. Clement, concurring.)

Justice Zahra's concurrence encouraged the parties to develop the record regarding drainage charges billed to the Detroit Land Bank Authority. *Binns v City of Detroit*, 951 NW2d 327 (Mich 2020).

After careful review of the proofs, and based on the analytical framework set forth in *Bolt v Lansing*, 459 Mich 152; 587 NW2d 264 (1998), the Court has prepared the following report,

[3] The parties stipulated to some findings of fact.

which outlines its proposed findings of fact and conclusions of law.[4] The Court's proposed findings of fact, based on its review of the evidence submitted by the parties, support the conclusion that the City's drainage charge is a valid user fee.

Factual Background

Like many older communities, particularly in the Great Lakes region, Detroit has a combined sewer system (CSS), which means that sanitary waste and stormwater runoff are conveyed for treatment via a single pipe. Aldrich Aff Ex U-1, EPA CSO Report p 1-2; Smalley Aff ex A, WMP pp 1-2, 6-7; Smalley Aff Ex B, Operational Plan pp 11-20.) Detroit's CSS was introduced in 1836. Wilczynski Dep Ex 5, WWMP Vol 2, p 3. The CSS replaced privy vaults and cesspool systems which, due to population growth, were increasingly overwhelmed by wastewater. Aldrich Aff Ex U-1, CSO Report pp 2-1 to 2-2; Pl PFF Ex 20, DWSD Stormwater Management Design Manual 1-2.) As development increased over the decades, however, a weakness of the CSS

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[4] In *Bolt*, the Michigan Supreme Court established a three-factor test to determine whether a charge is a valid user fee, or an unlawful tax subject to the Headlee Amendment. According to *Bolt*, a valid user fee must be regulatory, proportional, and voluntary. In *Bolt*, the Court considered a stormwater charge instituted by Lansing to fund approximately half of the $176 million needed to construct the remaining 25% of Lansing's separated system. *Id* at 155. No "end-of-pipe treatment" was being provided to the stormwater flows; instead, water was being discharged directly into the river untreated. *Id* at 167. In addition, over 60% of estimated costs were for capital expenditures, as opposed to operational costs. *Id* at 163-164. Previously incurred costs to separate the system had been funded through special assessments, not fee revenue, such that seventy-five percent of the property owners in the city who had already paid for a separated storm and sanitary sewer system were charged the same amount for storm water service as the twenty-five percent of the property owners who would enjoy the full benefits of the new construction. *Id* at 165. For those reasons, the Court concluded that the stormwater charge was a tax that violated the Headlee Amendment. However, the Court indicated that not all stormwater fees are barred under Headlee, quoting the following from the dissent in *Bolt v Lansing*, 221 Mich App at 91–92; 561 NW2d 423:

> This is not to say that a city can never implement a storm water or sewer charge without running afoul of art 9, § 31. A proper fee must reflect the bestowal of a corresponding benefit on the person paying the charge, which benefit is not generally shared by other members of society. *Nat'l Cable Television Ass'n v United States & Federal Communications Comm*, 415 U.S. 336, 340–342, 94 S.Ct. 1146, 39 L.Ed.2d 370 (1974). Where the charge for either storm or sanitary sewers reflects the actual costs of use, metered with relative precision in accordance with available technology, including some capital investment component, sewerage may properly be viewed as a utility service for which usage-based charges are permissible, and not as a disguised tax. *See Ripperger v Grand Rapids*, 338 Mich 682, 686–687; 62 NW2d 585 (1954). [.]

The factors described in *Bolt* must be weighed in their totality. *Id* at 161-162. "[A] weakness in one area [does] not necessarily mandate a finding that the charge at issue is not a fee." *Graham v Kochville Tp*, 236 Mich App 141, 151; 599 NW2d 793 (1999).

became apparent – it could not handle the increase in stormwater runoff that occurred as impervious surfaces replaced pervious ones. Aldrich Aff Ex U-1, EPA CSO Report, pp 2-3, 4-11 to 4-12; Wilczynski Dep Ex 4, Hoard Report, p 61; Smalley Dep 20:14-21. When stormwater runoff from impervious surfaces during wet weather events overwhelmed the City's water treatment plant, excess flow was then released untreated into the Detroit River in what is known as a combined sewage overflow (CSO). Aldrich Aff Ex U-1, EPA CSO Report, pp 1-2, 2-3; Smalley Dep 20:14-21. CSOs often contain high levels of pollutants. Aldrich Aff Ex U-1, EPA CSO Report, pp 4-2 to 4-8. In 1977, the State of Michigan and the Environmental Protection Agency eventually sued the City in federal district court for violation of the Clean Water Act, which resulted in consent orders requiring the City to invest in CSO control facilities, including six retention basins and three screening and disinfection facilities. Smalley Aff Ex B, Operational Plan pp 74-81, 89-110; Smalley Dep 51:19-53:17, 62:13-24, 63:22-64:6. Such facilities have reduced the annual volume of untreated discharges. Smalley Dep 20:4-21. (Action has also been taken to prevent CSOs through green stormwater infrastructure, which retains stormwater and eliminates it from entering the CSS. Wallick Dep 60:3-5.)

In 1975, the City began assessing drainage charges based on a parcel's IA, as estimated through a customer-supplied land survey, or based on the parcel's water meter size if less than 2 inches. Pospiech Dep 28:18-23, 30:1-9, 30:17-31:22. As it emerged from bankruptcy, the City adjusted its drainage charge such that the charge was based on individually-measured parcel impervious acreage (IA). 5/30/17 Brown Aff ¶17. Before October 2016, approximately 22,000 parcels were not charged for drainage. 5/30/17 Brown Aff Ex E, Drainage Charge Q&A, p 2. Beginning in October 2016, the City started charging the uniform per-acre drainage charge to the owners of the aforementioned 22,000 parcels, known as "New to the World" (NTW) customers. 5/30/17 Brown Aff Ex E, Drainage Charge Q&A, p 2. Plaintiffs in *Binns* and *DAART* are City parcel owners who were first assessed the uniform rate starting in 2016. *Binns* Complaint ¶¶6, 10, 37; *DAART* Complaint ¶¶1, 11-13. As previously noted, Plaintiffs filed their respective actions in the Court of Appeals, alleging that a drainage charge assessed by the City of Detroit violates the Headlee Amendment, Const. 1963, art. 9, §§25-34.

Proposed Findings of Fact

A. As development has increased the amount of impervious area in the City, combined sewage overflows (CSOs) during wet weather events have increasingly burdened the City's Combined Sewer System (CSS), requiring implementation of CSO control measures.

1. In natural, undeveloped landscapes, the hydrologic processes of infiltration of surface water into the ground (both near surface and deep percolation), evaporation, and transpiration work to recycle rainwater through plants and soil, minimizing the transfer of pollutants to surface and ground waters. (DWSD Stormwater Management Design Manual, pp 1-2; Wilczynski Dep, Ex 5.)

2. Pervious surfaces are surfaces that allow the absorption of water into the underlying soil (e.g., uncompacted dirt, swimming pools, ornamental ponds, lawns, open-graded gravel, stockpiled dirt, or sand). (DWSD "A Guide to the Drainage Charge," pp 7-8.)

3. As land development and urbanization occur, natural or vegetated areas are replaced with streets, parking lots, buildings, and compacted soils. Such impervious surfaces modify the natural hydrology, decrease the permeability of the landscape, and dramatically affect the natural hydrologic cycle. (DWSD Stormwater Management Design Manual, pp 1-2.)

4. The Detroit Water and Sewerage Department (DWSD) defines "Impervious Surface" as "any surface area that prevents or substantially impedes the entry of water into the soil in the manner that such water entered the soil prior to development, or which causes water to run off the surface in greater quantities or at an increased rate of flow, including but not limited to, roofs, parking lots, compacted gravel and dirt, driveways, sidewalks, and storage areas." (DWSD "A Guide to the Drainage Charge," pp 7-8.)

6. Like other older communities, the City operates a Combined Sewer System (CSS), which collectively conveys the City's combined sewage to the GLWA's Water Resource Recovery Facility (WRRF) (formerly known as Detroit's Wastewater Treatment Plant (WWTP)) via a single piping system. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 9; Smalley Aff Ex B, Operational Plan pp 11-20; Smalley Aff Ex A, WMP pp l-2, 6-7.)

7. A CSS differs from a separated sewer system, which delivers stormwater and sanitary waste separately through two separate piping systems. (Aldrich Aff Ex U-l, EPA CSO Report p 1-2.)

8. A CSS offers an efficient means of collecting and conveying stormwater and wastewater, but makes treatment difficult due to the large variations in flows between wet weather and dry weather. (Aldrich Aff Ex U-1, EPA CSO Report, p 2-3.)

9. Because the City's CSS contains commingled sanitary waste and stormwater, both components must undergo the same treatment before discharge. (Mobley Dep 17:11-18; Smalley Aff ¶13)

10. Large variations in stormwater flows during dry and wet weather conditions make it difficult to treat all CSS discharges at the WRRF because wet weather events may result in combined flows that are too much for the WRRF to handle at once. (Aldrich Aff Ex U-l, EPA CSO Report 132-3.)

11. These excess CSS flows are known as combined sewage overflows or "CSOs." (Aldrich Aff Ex U-l, EPA CSO Report pp l-2, 2-3.)

12. The volume of CSOs is directly related to the number of wet weather events a community experiences and the volume of rain associated with these events. (Aldrich Aff Ex U-l, EPA CSO Report pp 2-2 to 2-5, 4-17 to 4-18; Smalley Aff Ex B, Operational Plan p 2; Aldrich Dep 82:1 1-24.)

13. CSOs occurring during wet weather days are held in storage until treated at the WRRF or are routed to other system control facilities (CSO facilities) designed to treat and dispose of CSOs. (Smalley Aff Ex B, Operational Plan pp 55-110; Aldrich Aff Ex U-1l, EPA CSO Report p 2-3; Smalley Dep 52:15-53:22; Wallick Dep 58:22-25, 63:4-12, 66:1-7; Aldrich Dep 28:15-22.)

14. CSO facilities do not function during dry weather and are not needed to manage dry weather flow. (Aldrich Dep 98:9-22.)

15. The regional CSO control facilities are designed and operated to manage runoff from small to moderate-sized storms. (Aldrich Dep 93:23-24, 94:17-23, 97:15-21, 108:16-18, 111:21-23.)

16. The City's CSO control facilities include six retention basins and three screening and disinfection facilities. (Smalley Aff Ex B, Operational Plan pp 74-81, 89-110; Smalley Dep 51:19-53:17,62:13-24, 63:22-64:6; Brown Dep 134:9-24; Duggan Dep 28:14-20.)

17. Historically, when the City's CSOs overwhelmed the former WWTP (which occurred primarily during rain events), the CSOs would flow untreated into surrounding waters. (Smalley Dep 20:14-21; Smalley Aff Ex I, EGLE 2019 CSO Report pp l-2, 9; Aldrich Aff Ex U-l, EPA CSO Report p ES-2; Smalley Dep 19:15-22; Rothstein Dep 94:16-23, 97:3-9; Aldrich Dep 94:17-95:1.).

18. Stormwater that runs from impervious surfaces may be contaminated with dirt and debris which flows into the same pipe as wastewater and must be treated at the City's wastewater treatment plant and combined sewer overflow control facilities before it can be released back into the environment. (DWSD Drainage Charge Q & A, p. 1.)

19. In 1977, the State of Michigan and the Environmental Protection Agency (EPA) filed an action against the City in federal district court, alleging that the City had not complied with the Federal Water Pollution Control Act (now the Clean Water Act (CWA)). *City of Detroit v State of Michigan*, 803 F2d 1411, 1413 (6th Cir 1986).

20. For a 35-year period from 1978 through 2013, the City was subject to a federal consent decree and oversight for having violated the CWA. *US v City of Detroit*, Op & Order, Case No. 77-71100, 2013 WL 1282021 (ED Mich, March 27, 2013).

21. In response to the federal court's directives, the City constructed $1 billion in CSO control facilities to treat and dispose of the City's CSOs and prevent untreated CSOs from entering

waterways. (Brown Aff Ex E, Drainage Charge Q&A p 1; Hudson Dep Ex 7, Revised DWSD Drainage Fee Policy 4/19/17 pp 3, 5-7; Smalley Aff ¶ 5.)

22. The City financed the construction of these CSO facilities through bonds, loans, and federal and state grants. (Brown Aff Ex E, Drainage Charge Q&A pp 7, 9; 5/30/17 Brown Aff ¶19.)

23. In 1994 and 1995, respectively, the EPA (a) issued its CSO Control Policy, which requires CSS owners to adopt control measures for CSOs and develop and implement long-term CSO plans, and (b) published its guidance for long-term CSO control plans. 59 FR 18688-01, 1994 WL 133270. (Wilczynski Dep Ex 6, 1995 EPA CSO Guidance for Long-Term Control Plan.)

24. CSO controls provide treatment for about 95% of the annual wet-weather volume generated in the City. (Smalley Aff ¶18, Ex I, EGLE 2019 CSO Report p 9; Brown Dep 134:1-14.)

25. In 2014, the City, Wayne, Macomb and Oakland Counties, and the State of Michigan agreed to establish a regional authority, the Great Lakes Water Authority (GLWA) that would operate, control, and improve the regional assets of the water supply and sewage disposal systems owned by the City. (Rahman Aff Ex M, 2016 Certified Audit Financial Report (CAFR), Note 1, p 8; 5/30/17 Brown Aff Ex B, GLWA Memorandum of Understanding (MOU) p 1.)

26. Effective January 1, 2016, the City of Detroit Water and Sewerage Department (DWSD) regional and retail systems were bifurcated and GLWA assumed responsibility for the regional system, with Detroit retaining control over and responsibility for parts of the combined sewer system located within the City of Detroit. (Rahman Aff Ex N, 2017 CAFR, Note 1, p 7; Hudson Dep 161:15-21; Brown Dep 137:19-22; Rothstein Dep 62:17-25; Mobley Dep 18:13-19; Brown Aff Ex C, Reg'l Sewage Disposal System Lease 6/12/15; 5/30/17 Brown Aff Ex D, Shared Servs Agree 12/1/15.)

27. GLWA also agreed to (1) lease the City's regional water and sewer system assets, including capital, cash, investments, and receivables, for $50 million/year, (2) assume responsibility for the system's existing bond indebtedness, and (3) operate and maintain the regional system for a 40-year term. (Rahman Aff Ex M, 2016 CAFR, Note 1, p 7; Rahman Aff Exs N-R, CAFRs, Note 1, p 8; Rothstein Dep 63:1-5; Duggan Dep 14:15-17; Pospiech Dep 92:1-6; Brown Aff Ex C, Reg'l Sewage Disposal System Lease 6/12/15; 5/30/17 Brown Aff Ex D, Shared Servs Agree 12/1/15.)

28. The regional system directly serves the City's retail water and sewer customers. (Rothstein Dep 42:21-23.)

29. The regional system relies on the Water Resource Recovery Facility (WRRF, formerly known as the Waste Water Treatment Plant (WWTP)), which is the largest single-site municipal plant in the world and treats an average 660 million gallons of combined sewage flows per day from both the City and other communities in Southeastern Michigan, the equivalent of an average of 240.9 billion gallons of combined sewage flow per year (63 billion gallons of which are estimated to be drainage). (Amended Smalley Aff ¶4.)

30. GLWA characterizes the combined sewage coming from the City's CSS as (1) sanitary waste, (2) wet weather flow (WWF) (including "stormwater" or "drainage"), or (3) dry weather inflow and infiltration (DWII), and estimates the percentages of each of these components that flow from the City's CSS to the regional system. (Hudson Dep 39:13-21, 59:23-60:10; Pospiech Dep 96:3-9; 9/18/17 Hudson Aff ¶¶11-12; Aldrich Aff Ex U-l, EPA CSO Report p GL-3; Pospiech Dep Ex 6, Rate Model Diagrams.)

31. Because the City's CSS contains commingled sanitary waste and stormwater, both components must undergo the same treatment before discharge, and must be treated as required

by the provisions of the City's National Pollutant Discharge Elimination System (NPDES) permit.[5] (5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 9; Smalley Aff Ex B, Operational Plan pp 11-20; Smalley Aff Ex A, WMP pp l-2, 6-7; Smalley Aff ¶13; Smalley Aff Ex C, NPDES Permit; Smalley Aff Ex E, NPDES Fact Sheet pp 11-15; Smalley Dep 55:11-13, 56:21-58:2; Mobley Dep 17:11-18.)

B. The City's roads are part of the City's stormwater conveyance system.

1. DWSD operates nearly 3,200 miles of combined sewer. (Aldrich Report, p 9.)

2. Approximately ¾ of these sewers are located within the public right-of-way (ROW), defined as the right-of-way for all City streets and other rights of way that provide stormwater conveyance and/or control integral and necessary to providing adequate service to customer properties. (Aldrich Report, p 9.)

3. The public ROW contains 2,725 miles of streets, based on the Michigan Department of Transportation (MDOT) geodatabase, organized to identify only those streets within DWSD

[5] NPDES Permit No. M10022802 governs the WRRF, along with various CSO treatment facilities, retention basins and other components of the CSS, and various designated outfalls. (Smalley Aff Ex C, NPDES Permit; Smalley Aff Ex E, NPDES Fact Sheet pp 11-15; Smalley Dep 55:11-13, 56:21-58:2.) As co-permittees, the City and GLWA must comply with the terms of the NPDES permit or face civil and/or criminal penalties and/or termination, revocation, modification, or denial of the NPDES permit. (Smalley Aff Ex C, NPDES Permit pp 69, 71; Smalley Aff Ex E, NPDES Fact Sheet p 11). The City's flows (including its CSOs) must be sampled and monitored to ensure that the City does not exceed the NPDES permit's maximum limits as to the quantity or concentration of various pollutants, such as cyanide, TSS, fecal coliform, copper, PCBs, phosphorous, CBODs, nitrogen, mercury, and oil and grease, and that the "end of pipe treatment" provided by the WRRF and CSO facilities eliminates these pollutants from any CSOs before they are released. (Smalley Aff Ex C, NPDES Permit pp 3-22.) In operating a CSS with CSO facilities, the City is required to follow guidance from both the EPA and the Michigan Department of Environment, Great Lakes, and Energy (EGLE): Detroit is required to comply with the Clean Water Act, and the State requires 100% treatment of all CSOs. (Wilczynski Dep 77:5-77:12; Smalley Am Aff ¶17.)

combined sewer area (15.9 square miles of impervious area) plus 850 miles of paved and unpaved alleys (1.1 square miles of impervious area). (Aldrich Report, p 9.)

4. Standard plans for the construction of City of Detroit streets demonstrate that curbs and gutters along the sides of roads convey and/or store surface runoff from the roadway and adjoining properties toward stormwater inlets to the combined sewer system. (Aldrich Report, p 10.)

5. The City's roads are a component of the City's CSS because they are designed to convey stormwater first to the City's CSS pipes and then to the WRRF for treatment. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 9; Brown Dep 35:7-13, 35:21-36:2, 113:2-16; Rothstein Dep 103:12-22; Mobley Dep 76:20-77:1; Smalley Dep 32:7-10, 34:12-16; Aldrich Report at 9-12; Pospiech Aff Ex C, p 44.)

6. Facilitating the conveyance of stormwater is a central concern in every design and maintenance decision made by the City of Detroit Department of Public Works (DPW), which maintains the City's roads (Duggan Dep 34:13-20; Brundidge Dep 15:7-12.):

- City roads are designed to conform with DPW specifications so that the highest point is at the center of the road and the road then slopes back down to a 4-inch or higher curb to direct stormwater to the sewer system. (Brundidge Dep 13:2-11.)
- When DPW repaves the road, the curb is rebuilt to a minimum height of four inches to make sure that the road effectively conveys stormwater into the sewer system. (Duggan Dep 33:23-34:49.)
- DPW designs speed bumps so that they do not cover the full width of the road and allow water to reach the drains. (Brundidge Dep 15:16-24.)
- DPW decides where to locate sidewalks and curbs based on how the roads function as part of the stormwater conveyance system. (Duggan Dep 51:3-20.)
- Stormwater inlets along roadways are designed to (1) keep the road passable to traffic during moderate stormwater events, and (2) prevent stormwater backups into basements during larger events. (Aldrich Report, p 10.)

7. Changing a roadway without moving or ensuring connectivity with the sewer system would result in roadway flooding and other issues. (Brundidge Dep 56:23-57:49.)

8. When DPW makes a change to City roads that impacts sewer system infrastructure, DPW also relocates the existing sewer system infrastructure, at a cost of approximately $1,000,000/mile. (Brundidge Dep 46:18-47:13, 56:4-8, 60:22-61:69.)

9. When DPW maintains roads and/or makes improvements to roads and curbs to facilitate the conveyance of stormwater to the system, it does not charge DWSD for those improvements. (Duggan Dep 32:22-24, 33:10-19; Brundidge Dep 41:13-43:6, 44:6-17, 45:2-14.)

10. If DPW did not consider stormwater conveyance when maintaining and repairing City roads, it would cost DWSD millions of dollars annually to reconnect and relocate sewer infrastructure to ensure connectivity with the roads. (Duggan Dep 49:6-21.)

11. The benefit of the service performed by the City's roads in collecting and transporting stormwater generally offsets the benefit conferred by the CSS in processing runoff generated by the roads. (Aldrich Dep 17:16-18:10, 30:14-25, 43:14-20; Pospiech Aff Ex C pp 44-45.)

12. DPW provides an in-kind service to DWSD for maintaining the roads as part of the stormwater conveyance system, in lieu of cash payments for drainage fees. (Aldrich Dep 44:7-15.)

13. DWSD and DPW share the cost of providing drainage services to customers in the City. DWSD'S costs are those recovered via a drainage fee, and DPW bears the costs of the drainage functions performed by the roads. (Aldrich Dep 50:9-17, 50:23-51:3; Pospiech Dep 46:22-23.)

14. It is extremely common for a municipality's roads department not to be charged a monetary fee for drainage services because the roads provide in-kind services. (Aldrich Dep 67:9-24.)

15. It is common, and accepted for ratemaking purposes, for municipalities to treat municipal roads as part of the stormwater conveyance system. (Rothstein Dep 40:25-41:11.)

16. If DWSD charged DPW drainage fees, DPW would quantify all the costs it covers for DWSD and seek to offset the fees. (Brundidge Dep 47:21-48:11, 50:2-9.)

17. If DWSD charged DPW drainage or other infrastructure fees, DPW would likely offset those fees by charging DWSD for access to the public rights of way. (Brundidge Dep 47:21-48:11, 50:2-9, 53:11-54:22.)

18. The rates and IA allocable to Michigan Department of Transportation (MDOT) and Wayne County (WC) roads are governed by consent orders and agreements resulting from litigation; as such, MDOT and WC roads are not part of the drainage rate calculation. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 6; Pospiech Dep 151:9-13; Hudson Dep 24:2-18, 88:5-8; Brown Dep 32:19-33:5; WC Settlement Agreement (Def PFF Ex 1); MDOT Consent Judgment (Def PFF Ex 2).)

C. The amount of Impervious Area (IA) is the most important factor influencing the cost of stormwater management services.

1. Stormwater volume is more consistently proportionate to impervious area than to pervious area. (Aldrich Report at 6.)

2. While pervious surfaces such as uncompacted dirt, swimming pools, ornamental ponds, lawns, open-graded gravel, stockpiled dirt, or sand allow the absorption of water into the underlying soil, impervious surfaces such as roofs, parking lots, compacted gravel and dirt, driveways, and sidewalks do not, causing runoff. (Wallick Aff Ex A, Stormwater Mgmt Design Manual p 2-2; Wallick Aff Ex B, Drainage Charge Guide pp 7-8; Wallick Dep 45:25-46:2; Aldrich Dep 93:1-10; Aldrich Report at 8.)

3. When stormwater enters a pervious surface and makes its way into the groundwater, that process occurs so slowly that it becomes impossible to trace the origins of that flow; thus, having more pervious area reduces the amount of stormwater a parcel contributes to the CSS because pervious surfaces absorb and/or hold stormwater, which prevents it from entering the CSS and thereby benefits the CSS. (Aldrich Dep 92:15-94:5, 108:10-15, 110:5-111:15, 114:23-115:4;

Mobley Dep 28:12-15; Wilczynski Dep Ex 6, 1995 EPA CSO Guidance for Long-Term Control Plan p 3-31.)

4. Groundwater infiltration via pervious surfaces is generally associated with dry weather, not wet weather, flow, even if it occurs during a wet weather event. (Aldrich Dep 98:9-22, 108:10-15.)

5. CSO control costs are driven by wet weather events. (Aldrich Report at 6-7; Aldrich Dep 82:11-24, 92:23-24, 94:17-23, 97:15-21, 108:16-18, 111:21-23.)

6. CSOs are generated almost entirely by impervious surface runoff from small to moderate rain events. (Aldrich Report at 6-8; Aldrich Dep 82:11-24, 92:23-24, 94:17-23, 97:15-21, 108:16-18, 111:21-23.)

7. Small to moderate storm events generate virtually no pervious runoff, because during small to moderate storm events, most precipitation that falls on or is diverted onto pervious surfaces is absorbed by plants and never enters the CSS. (Aldrich Dep 92:19-93:10, 93:23-24, 94:17-23, 97:15-21, 108:2-9, 108:16-18, 111:21-23.)

8. Precipitation events in metro Detroit are about ¼ inch per event on average (based on data showing 32.42 inches of precipitation per year with precipitation occurring 125 days per year). (Aldrich Report at 6.)

9. Because almost all precipitation volume during a typical year occurs during storms generating less than 1 inch of rainfall, most of the cost to operate a CSS is related to the capture and treatment of small storms during a typical year of precipitation. (Aldrich Dep 92:23-24, 94:17-23, 97:15-21, 108:16-18, 111:21-23.)

10. The use of pervious area is an EPA-recognized source control for mitigating CSOs. (Wilczynski Dep Ex 6, 1995 EPA CSO Guidance for Long-Term Control Plan p 3-31.)

11. Stormwater runoff from IA during small to moderate storm events drives the pollution volume that must be treated by the City's sewer system and therefore drives the size of the CSO facilities and CSO control costs:

- Hydrologic studies demonstrate that there is no stormwater runoff for the first .05 to .1 inches of precipitation
- Stormwater is generated exclusively from impervious surfaces for the next .5 to 1 inch of precipitation
- Beyond 1 inch of precipitation, impervious areas continue to generate stormwater and pervious surfaces start to generate stormwater at varying rates as differing soil types become saturated

(Aldrich Dep 93:23-24, 94:17-23, 97:15-21, 108:16-18, 111:21 23; Aldrich Report at 6.)

12. Like water usage is a proxy for sewer consumption, impervious cover is a well-accepted proxy for actual surface water runoff from a parcel. (Rothstein Dep 96:10-97:2; Aldrich Dep 16:4-9, 82:11-24; Aldrich Report at 8; Pospiech Aff Ex C, p 34.)

13. Pervious surface runoff is not a material driver of system costs, whereas impervious surface runoff is. (Aldrich Report at Aldrich Dep 168:13-25.)

14. Stormwater within the CSS can contain, among other contents, nitrogen oxide, rubber, phosphates, hydrocarbons, bacterial contamination, oil and greases, chlorine, and metals. (Aldrich Aff U-l, EPA CSO Report pp 4-1 to 4-9; Wilczynski Dep Ex 6, 1995 EPA CSO Guidance for Long-Term Control Plan pp 2-17, 2-25.)

15. The pollution volume that must be treated by a stormwater management system directly correlates with the amount of stormwater runoff from IA. (Aldrich Dep 137:8-18, 139:1-19.)

16. The concentration of pollutants in stormwater generally does not vary by land use category and instead is driven by the amount of runoff from IA. (Aldrich Dep 137:8-138:15, 138:25-139:19.)

17. The use of land area and/or flow volume as a method to measure "actual usage" is approved in federal regulations regarding user fee systems. (40 CFR 35.2140(e)(2)(i),(ii); Aldrich Report at 5-8.)

18. Individually "metering" or measuring the amount of stormwater that runs off each City parcel each month would be cost-prohibitive, if not impossible, and would lack precision, because it is difficult to distinguish different types of land cover based on satellite imagery of individual parcels, the variability of soils in urban areas, and the very small contributions of pervious area to system flow during wet weather events. (Aldrich Dep 142:23-143:8, 144:1-146:5; Aldrich Report at 5.)

19. Any increase in the costs of measurement will increase the overall costs allocable to the uniform drainage rate and, thus, increase the rate. (Aldrich Report at 7-8.)

20. Implementing a drainage charge that factored in discharge from pervious surfaces would be impracticable in the City because of differences in types of soil and changes in elevation across the city, the impracticality of sampling the soil on each property, the limitations of the billing system, customers' difficulty understanding pervious area charges, and difficulties in tracing whether groundwater infiltration results from storm precipitation or other groundwater sources. (Pospiech Dep 175:6-176:12; Aldrich Report at 8; Wilczynski Dep 95:16-97:19; 103:11-106:10.)

21. IA is the best available method for measuring how much stormwater a parcel contributes to the City's CSS. (Aldrich Aff Ex K, User-Fee Funded Stormwater Programs, WEF Manual Update p 8; Rothstein Dep 96:10-97:2; Brown Dep 39:7-25; Aldrich Dep 175:23-176:1; Aldrich Report at 8-9.)

D. Because runoff is driven by IA, the City's system designed to convey, treat, and manage runoff provides a service that (1) directly relates to redress of the burden imposed on the community by parcel owners whose property includes impervious area and (2) provides a direct benefit to those parcel owners.

1. Because runoff is driven by impervious area, a system designed to convey, treat, and manage runoff provides a service that (1) directly relates to redress of the burden imposed on the community by parcel owners whose property includes impervious area, and (2) provides a direct benefit to parcel owners whose property includes impervious area because it provides a means to drain their property. (Aldrich Dep 82:11-24, 88:20-89:5, 91:1-94:5, 161:2-162:14, Hudson Dep 30:8-31:8.)

2. The City employs multiple mechanisms to manage CSOs, which are generated almost entirely by impervious surface runoff from small to moderate rain events:

- Double-leaf side gates in several areas of the City hold any CSOs and route them
- Inflatable dams in large diameter sewers create in-system storage
- Diversion dams throughout the CSS help retain and/or route flows to the interceptors
- 11 pump stations route flows to the WRRF or, in the event of CSOs that cannot be held and routed to the WRRF, to one of three screening/disinfection facilities or six retention treatment basins for primary treatment
- Adoption of City-wide GSI initiatives like bioswales and tree planting to mitigate the entry of wet weather flow into the City's CSS.

(Smalley Aff Ex B, Operational Plan pp 38, 41, 55-56, 61-73, 89-100, 195-202; Smalley Am Aff Ex C, NPDES Permit p 41; Smalley Dep 52:15-53:8; Wallick Dep 58:22-59:22; Wallick Aff Ex F, GSI Reports.)

3. The City's efforts to manage CSOs and control stormwater reduces the likelihood of localized flooding and basement back-ups. (Wallick Aff Ex A, Stormwater Mgmt Design Manual pp l-2; 5/30/17 Brown Aff ¶¶47-48; Aldrich Dep 161:2-162:14; Pospiech Dep 45:24-46:3; Rothstein Dep 33:13-34:11.)

4. The City has a responsibility to prevent flooding from occurring in residents' homes and businesses. (Binns Dep 20:21-24; McDonald Dep 29:19-30:4; Gentry Dep 28:20-29:11; Carver Dep 20:23-21:13; Cahn Dep 29:20-30:2; Khalil Dep 28:10-18.)

5. Because stormwater flow from impervious surfaces is contaminated with dirt and debris which flows into the same pipe as sanitary waste, it must be treated at the WRRF and/or CSO control facilities before it can be released back into the environment. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 1; Mobley Dep 17:11-18; Smalley Dep 35:6-11; Smalley Aff ¶13.)

6. The WRRF provides the following disposal and treatment-related services to the City's combined sewage: (1) raw wastewater pumping at Pump Station Nos. 1 and 2, which receive flows from the three interceptors; (2) primary treatment using 12 rectangular and 6 circular clarifiers; (3) phosphorus removal using Ferric Chloride; (4) secondary treatment using 4 high-purity oxygen-activated sludge tanks and 25 secondary final clarifiers; (5) chlorination and dichlorination of the final effluent; (6) gravity thickening of the solids generated in primary and secondary treatment; (7) dewatering of thickened solids using centrifuges and belt filter presses; (8) incineration of a portion of dewatered solids; and (9) offloading of the remainder of the dewatered solids (after lime treatment) to trucks for either land application or landfill disposal.

(Smalley Aff Ex E, NPDES Fact Sheet p 1; Smalley Aff Ex A, WMP p 2.)

E. The direct and indirect costs incurred by the City to operate the CSS include the City's share of GLWA-allocated costs (debt-service, CSO, operations), the City's retail costs (including customer service, field operations and administrative and general costs), non-operation and maintenance (O&M) costs, bad debt expense, and limited capital improvement costs.

1. The City's sewage disposal fund finances the costs to operate, maintain, and administer the City's CSS. (9/18/17 Hudson Aff ¶ 6; Rahman Dep 27:8-11; Hudson Dep 56:15-17.)[6]

[6] For accounting purposes, the sewage disposal fund absorbs all revenues and expenses relating to the CSS (including sewer fee revenue and costs and drainage fee revenue and costs). (Aldrich Dep 202:24-203:13; Rahman Aff ¶5). The City does not have a separate stormwater utility fund because it does not have a separate stormwater system. (Rothstein Dep 41:16-18; Aldrich Dep 202:22-203:18.). The sewage disposal fund is an enterprise fund. (9/18/17 Hudson Aff ¶7; Rahman Aff ¶3; Rahman Aff Ex M, 2016 Sewer CAFR pp 8-9.)

2. Debt service costs are associated with bonds that were issued to pay for capital improvements allocable to the City. (Hudson Dep 169:3-7.)

3. GLWA assumed responsibility for DWSD'S pre-bifurcation bonded debt and any related refinancing and builds the cost of debt service for that bonded indebtedness into the non-CSO and CSO operational costs it allocates to the City. (Pospiech Dep 92:1-6; Pospiech Dep Ex 6, Rate Model Diagrams pp 1-3.)

4. The City's CSS revenue requirement recovers the direct and indirect costs the City incurs to operate the CSS. (9/18/17 Hudson Aff ¶11; Rothstein Dep 20:22-21:4, 22:12-17, 23:16-24:1; Pospiech Dep 52:8-9, Hudson Dep Ex 1, Rate Model Spreadsheets; Pospiech Dep Ex 6, Rate Model Diagrams.)

5. The direct and indirect costs incurred by the City to operate the CSS include the City's share of GLWA-allocated costs (debt-service, CSO, operations), the City's retail costs (including customer service, field operations and administrative and general costs), non-O&M costs, bad debt expense, and limited capital improvement costs. (9/18/17 Hudson Aff ¶11; Rothstein Dep 20:22-21:4, 22:12-17, 23:16-24:1; Pospiech Dep 52:8-9; Hudson Dep Ex 1, Rate Model Spreadsheets p 4; Pospiech Dep Ex 6, Rate Model Diagrams p 1.)

6. The CSS revenue requirements (i.e., costs) for fiscal years ending 2017 through 2022 as approved by the Board of Water Commissioners (BOWC) are $280,021,266 (FY 2017); $274,246,325 (FY 2018); $322,796,600 (FY 2019); $347,329,000 (FY 2020); $354,887,600 (FY 2021); $365,862,900 (FY 2022). (A fiscal year is from July 1 – June 30.) (Rahman Aff Exs G-L.)[7]

[7] The City produced data from its financial system recording all system expenses. (Rahman Aff Exs B-F.)

7. Roughly 80% of the City's CSS revenue requirement includes fixed costs over which the City has no control (e.g., GLWA-allocated operational costs, pre-bifurcation debt service, pension, and legacy costs, CSO costs, and non-O&M costs). (Pospiech Dep Ex 6, Rate Model Diagrams pp1-3.) (GLWA allocated 83% of its CSO control costs (which includes debt) directly to DWSD's retail customers. (Smalley Aff Ex A, WMP p 6; Hudson Dep 137:9-12, 146:8-24; Rothstein Dep 64:15-65:11.))

8. The CSS revenue requirement, and therefore, the revenue requirement used to compute the drainage charge, changes each year based on changes in system expenses. (Rothstein Dep 83:2-84:16, Hudson Dep Ex 1, Rate Model Spreadsheets; Pospiech Dep Ex 6, Rate Model Diagrams.)

9. Because DWSD set drainage rates for a 5-year period, for FYs 2019 through 2022, the City's annual drainage revenue requirement was the total of the following: BIA for each customer class multiplied by net rate for the customer class (i.e., full uniform rate for year multiplied by transition credit for customer class). (Pospiech Dep Ex 6, Rate Model Diagrams p 3.)

F. The City's 2016 drainage charge was developed based on standard ratemaking methodologies and improved data for measuring IA; CSO costs are allocated for recovery through the drainage charge because this flow occurs primarily during wet weather events and is the driver for these costs.

1. The City is responsible for establishing a rate structure to recover all of its CSS costs. (Hudson Dep 145:13-19; Rothstein Dep 63:20-25; Pospiech Dep Ex 6, Rate Model Diagrams.)

2. Assessing a rate for water, sewage, and drainage services on a per-unit basis is a standard methodology in municipal ratemaking. (Rothstein Dep 19:1-14.)

3. Together, the City's sewer fee and its drainage fee constitute the total fee assessed for use of the City's CSS. (Pospiech Dep 62:19; 9/18/17 Hudson Aff ¶6; Brown Dep 137:6-9; Wallick Dep 31:6-12.)

4. Fees from drainage charges generally pay for the costs associated with CSOs, which are caused by wet weather events and driven by stormwater flow. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 1; Hudson Dep Ex 1, Rate Model Spreadsheets p 4; Pospiech Dep Ex 6, Rate Model Diagrams.)

5. In 1975, the City began assessing drainage charges based on a parcel's IA, as estimated through a customer-supplied land survey, or based on the parcel's water meter size if less than 2 inches. (Pospiech Dep 28:18-23, 30:1-9, 30:17-31:22.)

6. Immediately prior to October 2016, if DWSD did not have updated property information for residential or nonresidential customers, they were charged for drainage using meter size as a proxy for a parcel's IA. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A pp 2-3; 5/30/17 Brown Aff ¶4; Rothstein Dep 20:9-21:15; Brown Dep 138:15-18; Hudson Dep 87:13-14; Pospiech Dep 30:1-31:5, 152:8-153:5; Pospiech Dep Ex 3, The Cost of Clean Water p 15; Pospiech Dep Ex 13, November 1976 Report on Sewerage Rates, Schedules 1-1A.)

7. If, on the other hand, the City had an owner-provided survey of a parcel's IA, the parcel's charge was based on one of five assigned "average impervious factors." (Pospiech Dep Ex 2, Foster Memo pp 1-3; Hudson Dep 105:13-15; Mobley Dep 91:22-92:17; Rothstein Dep 123:25-125:4.)

8. Before October 2016, the City assessed a base drainage charge of $771.91 (multiplied by the assigned average impervious factor) or meter-based drainage rates of $20.36 (small meter) and $190.56 (large meter). (Hudson Dep 109:4-8; Fulton Dep 18:20-19:14; Pospiech Dep Ex 17, 11/1/17 Rate Schedule.)

9. In 2015, a purported class of customers who paid the drainage charge based on owner supplied IA sued the City, alleging, among other things, that the City's differential assessment of

the charge violated the Michigan Constitution's equal protection clause. (Brown Aff Ex A, *Michigan Warehousing* Judgment & Order Approving Class Settlement.)

10. As it emerged from bankruptcy and in response to equal protection concerns, DWSD revised the drainage charge in 2016 with the goal of ensuring uniformity and that all parcels contributing to the system were being charged in an equitable manner, including parcels that had previously not been charged or had been billed based on meter size. (Duggan Dep 19:13-20:21, 82:3-4; Aldrich Dep 53:22-54:49; 5/30/17 Brown Aff ¶17; Rothstein Dep 81:5-82:4, 115:10-17; Brown Dep 24:6-10, 84:10-15; Pospiech Dep 50:17-22.)

11. While DWSD's drainage charge had always been based on IA, the revised drainage charge ensured that all persons who contributed stormwater to the City's CSS were charged based on individually-measured parcel IA, and reflected a refined methodology that used improved data. (Pospiech Dep 18:21-24, 27:20-21, 145:15-24.)

12. The City used aerial photographs of the City's parcels from a GIS flyover commissioned by the Southeast Michigan Council of Governments (SEMCOG) to create an impervious cover study of City parcels and combined that data with the City Assessor's 2015 parcel data, then segregated IA by parcel ID and measured IA for each parcel in hundredths of an acre (one hundredth of an acre is equal to 435 square feet, roughly the size of a two-car garage.) (Wallick Aff Ex B, Drainage Charge Guide pp 16-17; 5/30/17 Brown Aff ¶¶19-22; Rothstein Dep 17:2-6; Duggan Dep 21:24-22:6; Pospiech Dep 48:10-22.)[8]

13. Eric Rothstein, a one-time member of American Water Works Association (AWWA) Rates and Charges Committee, the AWWA Water Environment Federation Committee on Finances and

[8] The City has incorporated updated 2021 Assessor's Office and GIS/flyover data into its drainage billing system beginning with August 2022 billing statements. (Facaeanu Aff ¶15.)

Charges, and the EPA Environmental Finance Advisory Board, who has served as a rate consultant for over 30 years, provided input for rate model cost allocations and helped to craft and implement the uniform drainage charge. (Rothstein Dep 10:14-23, 15:1-10, 15:17-22, 26:3-15.)

14. The uniform drainage charge per impervious acre was computed by dividing the drainage revenue requirement by the amount of BIA. (Rothstein Dep 16:10-15, 18:13-16; Brown Dep 95:7-19; Pospiech Dep 105:15-106:19; Pospiech Dep Ex 6, Rate Model Diagrams.)

15. Only impervious parcel acres are included in the drainage rate calculation because the City's roads are designed to convey stormwater and thus, are part of the CSS. (Brown Aff Ex E, Drainage Charge Q&A p 9; Brown Dep 35:7-13, 35:21-36:2, 113:2-16; Rothstein Dep 103:12-22; Mobley Dep 76:20-77:1; Pospiech Dep 178:13-179:13.) See Section B., *supra*.

16. MDOT and WC roads are also not part of the drainage rate calculation because the rates and IA allocable to these roads are governed by consent orders and agreements resulting from litigation. (Brown Aff Ex E, Drainage Charge Q&A p 6; Pospiech Dep 151:9-13; Hudson Dep 24:2-18, 88:5-8; Brown Dep 32:19-33:5; Wayne County Settlement Agreement (Ex 1 to Def PPF); MDOT Consent Judgment (Ex 2 to def PPF).)

17. The amount that a parcel owner in the City ultimately pays for drainage is based on the amount of runoff contributed by a parcel (as measured by parcel-specific IA), less the value of services provided by that parcel in absorbing or conveying stormwater (reflected in green, direct discharge, or residential credits. (Aldrich Dep 42:14-20, 43:2-5, 46:17-47:1, 133:24-134:2; Pospiech Dep 48:10-22; Wallick Aff Ex B, Drainage Charge Guide pp 3-5, 16-19; see Section B, *supra*.)

18. As of October 1, 2016, the uniform per-acre drainage charge was $750/impervious acre. (Fulton Dep 29:9-11.)

19. Beginning in October 2016, the City started charging the uniform per-acre drainage charge to the owners of 22,000 parcels with IA that had never been previously billed for the stormwater they contributed to the City's CSS (i.e., "New to the World" (NTW) customers). (5/30/17 Brown Aff Ex E, Drainage Charge Q&A, p 2; Mobley Aff ¶4; Hudson Dep 105:13-15; Mobley Dep 91:22-92:17; Rothstein Dep 123:25-125:4.)

20. The 22,000 NTW parcels included industrial, commercial, and residential properties (as classified by the assessor's office). (Fulton Dep 21:10-19; Hudson Dep 92:6-11.)

21. Between October 2016 and April 2017, the City began to transition other ratepayer classes to the uniform impervious acre rate, including those customers who were previously paying for drainage based on meter size. (5/30/17 Brown Aff Ex E, Drainage Charge Q&A pp 2-4; Rothstein Dep 123:25-125:4.)

22. Parcels with IA that truncates to less than .02 are not assessed a drainage charge because this area (which is less than 30 ft x 30 ft) falls within the margin of error of flyover views. (Wallick Aff Ex B, Drainage Charge Guide p 17; 5/30/17 Brown Aff Ex E, Drainage Charge Q&A p 6; Facaeanu Aff ¶11.)

23. At the time the uniform drainage charge was implemented in 2016, DWSD predicted that if all parcel owners paid their fair share, the drainage rate would decrease. (Duggan Dep 23:3-10.)

24. As of August 2022, there are approximately 381,000 discrete parcels in the City's billing system, approximately 253,500 of which receive monthly drainage bills. (Facaeanu Aff ¶¶4, 6-7.)

25. Most billed parcels contain pervious and impervious area. (Facaeanu Aff ¶8.)

26. Approximately 95% of all parcels billed for drainage (240,700 out of 253,500 parcels) are billed less than $101/month. (Facaeanu Aff ¶9)

27. Currently, approximately 123,441 parcels are not assessed the drainage charge because they contain less than .02 IA. (Facaeanu Aff ¶11.)

28. The City does not charge approximately 238 parcels that drain entirely to the river because these parcels do not burden the City's CSS with their stormwater runoff. (Wallick Aff Ex D, Guide to Drainage Charge Bill Adjust pp 4-5; Brown Dep 145:19-25; Wallick Dep 38:1-11, 87:16-23; Pospiech Dep 22:17-22; Mobley Dep 20:14-22; Facaeanu Aff ¶13-14; Wallick Aff ¶¶8-9)

29. The City generally treats all IA equivalently in terms of percentage runoff (meaning that it assumes that the percentage of runoff from an IA is the same regardless of the impervious cover). (Wallick Aff Ex B, Drainage Charge Guide pp l, 5.)

30. The City estimated which of its CSS costs related to CSOs (i.e., stormwater, drainage, wet weather) and which of its costs related to sanitary waste and dry weather infiltration and inflow. (9/18/17 Hudson Aff ¶¶11-12; Pospiech Dep Ex 6, Rate Model Diagrams pp1-3; Hudson Dep 39:13-21, 59:23-60:10; Pospiech Dep 95:12-14, 96:3-9.)

31. The City allocated its CSO and other stormwater-related costs for recovery through its drainage charge (which is assessed upon users who contribute stormwater to the CSO) because this flow occurs primarily during wet weather events and is the driver for these costs. (Aldrich Dep 53:22-54:4, 133:17-134:2; Pospiech Dep 155:16-156:16; Wallick Aff Ex B, Drainage Charge Guide p 2; 9/18/17 Hudson Aff ¶¶11-12, 15; Pospiech Dep Ex 6, Rate Model Diagrams; Hudson Dep Ex 1, Rate Model Spreadsheets p 4; Aldrich Aff Ex K-l, WEF Manual of Practice Fin & Charges for Wastewater Sys (4th ed), Ch 9 §5.0, pp 190—93.) *See also City of Detroit*, 803 F2d at 1413-1414.)

32. The City allocated its sanitary waste and dry weather infiltration and inflow costs for recovery through its sewer rate because these costs are not impacted by or tied to wet weather events or CSOs. (Pospiech Dep 96:6-9.)

33. Because wet weather events drive the City's CSOs and associated costs, the City relied on estimated percentages of system wet weather flow to allocate certain CSS costs (eg, GLWA allocated costs, retail costs, non-O&M costs) for recovery through a drainage charge. (Aldrich Dep 82:11-24; 9/18/17 Hudson Aff ¶12; Hudson Dep 39:13-21, 59:25-60:10; Rothstein Dep 30:7-24; Pospiech Dep 96:3-98:10; Hudson Dep Ex 1, Rate Model Spreadsheets p 4; Pospiech Dep Ex 6, Rate Model Diagrams pp l-2; Smalley Aff Ex G, GLWA Flow Balance Analysis, Attach 4, p 14.)

34. The City relied on estimated percentages of CSS sanitary waste and dry weather inflow and infiltration to allocate system costs for recovery through the sewer rate. (Pospiech Dep 96:3-5; Hudson Dep 39:13-21, 59:25-60:10; Pospiech Dep Ex 2, Foster Memo; Pospiech Dep Ex 6, Rate Model Diagrams; 9/18/17 Hudson Aff ¶12.)

35. GLWA estimates the percentage of sanitary waste, wet weather flows, and dry weather inflow and infiltration from the CSS and reports these amounts annually. (Pospiech Dep 96:3-5; Smalley Aff Ex G, GLWA Flow Balance Analysis p 14.)

36. The flow percentages are derived, in part, from data collected from meters and pumps used by the Greater Detroit Regional Sewer System (GDRSS) metering program maintained by GLWA. (Pospiech Dep 96:3-97:1; Hudson Dep 39:12-23; Pospiech Dep Ex 6, Rate Model Diagrams pp 1-2; 9/18/17 Hudson Aff ¶12; Smalley Aff Ex G, GLWA Flow Balance Analysis pp 1-1 to 1-2.)

37. The City's flow estimates reflect the difference between total flows managed by GLWA less the metered flows attributable to all other communities served by GLWA. (Pospiech Dep Ex

6, Rate Model Diagrams pp l-2; Smalley Aff Ex G, GLWA Flow Balance Analysis, Attach 4, p 14, Note.)

38. The percentage of wet weather flow has ranged from 27-39% in the past few years. (Smalley Aff Ex G, GLWA Flow Balance Analysis, Attach 4, p 14, n3 (formula: (WRRF (WW) +RTB/CSO)/All Days); Pospiech Aff, Ex C, p 105.)

39. Based on the historical and anticipated wet weather flows and declining sanitary flows due to population loss, the City relied on a 33% allocation rate to assign many of its CSS costs for recovery through a drainage charge. (Hudson Dep 39:13-21, 59:25-60:10; Rothstein Dep 30:7-24; Pospiech Dep 96:13-18, 97:6-10; Smalley Aff Ex G, GLWA Flow Balance Analysis, Attach 4, p 14.)

40. GLWA allocated 83% of its CSO control costs (which includes debt) directly to DWSD's retail customers. (Smalley Aff Ex A, WMP p 6; Hudson Dep 137:9-12, 146:8-24; Rothstein Dep 64:15-65:11.)

41. The City allocated 100% of all CSO control costs for recovery through the drainage charge because these costs are driven by wet weather events and/or increased stormwater flow. (Smalley Aff Ex A, WMP p6; Hudson Dep 44:7-9; Brown Dep 22:18-25; Pospiech Dep 119:10-120:4; Pospiech Dep Ex 6, Rate Model Diagrams pp 1-3.)

42. Capital improvements to the City's CSS, which are major construction projects, including significant repairs and projects that include excavating the sewer system, are paid for through DWSD's I&E fund, which is funded by GLWA's $50 million annual lease payment. (Drainage rate revenue is generally not used to pay for capital improvements or post-bifurcation debt.) (Pospiech Dep 59:10-60:7, 65:19-66:9, 144:20-23; Hudson Dep 165:2-12, 165:22-166:5.)

43. Capital improvements are also financed by proceeds from GLWA and/or DWSD revenue

bonds issued after bifurcation. (Rahman Aff Ex O, 2018 CAFR, Note 4, p 17; Rahman Aff Ex P, 2019 CAFR (Certified Audit Financial Report) Note 5, p 18.)

44. Post-bifurcation debt service is generally paid for through the I&E fund. (Rahman Aff ¶6.)

45. The drainage charge recovers a small percentage of revenue-financed CSS capital improvements, which consist of unanticipated repair projects. (Pospiech Dep 98:10-18, 113:24-25, 140:14-141:1.)

46. Approximately 2% was allocated to revenue-financed capital ($3.3M/$123M). (Hudson Dep Ex 1, Rate Model Spreadsheets p 4.)

47. The drainage charge also recovers bad debt expense attributable to unpaid drainage bills. (9/18/17 Hudson Aff ¶13; Hudson Dep 52:11-54:1; Rothstein Dep 45:11-14; Hudson Dep Ex 1, Rate Model Spreadsheets p 1; Pospiech Dep Ex 6, Rate Model Diagrams p 1.)

48. Under principles of municipal ratemaking, bad debt expense is a recognized and legitimate operating expense that can be included in utility revenue. (Rothstein Dep 47:22-48:7.)

49. The City allocated approximately 47% of CSS bad debt expense for recovery via the drainage charge based on estimated bad debt expense for various customer classes and past data. (Hudson Dep 44:10-19, 52:1117, 53:1-17; Pospiech Dep Ex 6, Rate Model Diagrams p 2; Hudson Dep Ex 1, Rate Model Spreadsheets p 4; City's Resp to Document Req No. 5 pp 7-9.)

50. The bad debt allocation assumed that approximately 8-10% of drainage bills would be uncollectible. (Hudson Dep Ex 1, Rate Model Spreadsheets p 4.)

51. This bad debt assumption was consistent with the subsequent monthly collection rate from FY 2018 to FY 2022 for customer accounts billing only drainage (between 69-90%) and customer accounts billing for drainage and other services (between 82-89%). (City's Interrog Resp Ex 5,

Collections Spreadsheet for Drainage-Only Accounts; Pospiech Dep Ex 8, Collections Spreadsheet.)

52. The cost of credits (green, direct discharge, and residential) are also included in the allocation of costs attributable to the drainage charge. (Pospiech Dep 96:13-98:20, 122:14-24, 123:1-5; Hudson Dep Ex 1, Rate Model Spreadsheets p 6; Pospiech Dep Ex 6, Rate Model Diagrams p 1.)

53. Once CSS costs were allocated, DWSD's drainage revenue requirement reflected 100% of all CSO costs, 33% of other system costs (including non-CSO debt service and other GLWA-allocated costs, non-O&M costs, legacy and pension costs), a small allowance for revenue-financed I&E maintenance, a portion of bad debt expense attributable to unpaid drainage bills, and the cost of various credits. (Pospiech Dep 96:13-98:20; Pospiech Dep Ex 6, Rate Model Diagrams pp 1-3.)

54. The City has spreadsheets generally reflecting the preliminary, but not final, anticipated CSS costs during the relevant period and how those costs were allocated between drainage and sewer rates but does not have the final cost allocations or rate analysis for the drainage charge from FY 2017-FY 2022 because the rate model was unintentionally corrupted when a computer storing the model suffered water damage. (Hudson Dep 114:24-115:2; Hudson Dep Ex 1, Rate Model Spreadsheets; 10/26/21 Hudson Aff ¶¶7-10; Pospiech Dep 98:20-24; City's Resp to Interrog No. 14 pp 25-26; City's Resp to Document Req No. 12 pp 13-15.)[9]

[9] The process used to allocate costs and set rates for FY 2017 through FY 2022 is generally reflected in the spreadsheets from an earlier iteration of the rate model and further described in a diagram outlining the process for FY 2017 through FY 2022. (Hudson Dep 114:24-115:2; Hudson Dep Ex 1, Rate Model Spreadsheets pp 6, 8; Pospiech Dep Ex 6, Rate Model Diagrams.)

55. CSS users may reduce their drainage charge by reducing their parcel IA, which minimizes the stormwater flow to the system. (Wallick Aff Ex E, Guide to Drainage Charge Credits p 3.)[10]

56. Parcel owners implicitly receive a 100% credit for all pervious areas on their parcels (or for removing impervious area). (Wallick Dep 37:21-38:11.)

57. Drainage customers can offset up to 80% of charges with green credits. (Wallick Aff Ex E, Guide to Drainage Charge Credits p 3; Mobley Dep 32:11-23; Brown Dep 30:3-9, 146:13-18.)

58. Because residential parcels with a lower percent imperviousness contribute proportionately less stormwater than non-residential parcels with higher percentages of imperviousness, the City provides a 25% credit to these residential properties. (Aldrich Report at 7.)

59. Parcel owners may verify their calculated IA online or by contacting the City's drainage customer care specialists. (Wallick Aff Ex D, Guide to Drainage Charge Bill Adjust pp 5-7; Wallick Aff ¶5.)

60. Parcel owners may challenge their drainage assessment by (1) contesting ownership, parcel size, configuration, or the GIS polygon orientation used to calculate IA, (2) clarifying impervious cover changes, (3) correcting areas designated impervious as pervious, and/or (4) showing that

[10] The City offers green credits to parcel owners who provide an in-kind service by absorbing or managing stormwater from their parcels using Green Stormwater Infrastructure (GSI) (which can include downspout disconnection, bioretention, detention basins, green roofing, permeable pavement, and water harvesting), and thereby curtail their use of CSS. (Wallick Aff Ex E, Guide to Drainage Charge Credits pp 6-10; 5/30/17 Brown Aff ¶31; Mobley Dep 32:15-23; Aldrich Dep 46:17-47:1, 55:13-17; Pospiech Aff Ex C p 43.) DWSD developed its green credit system to incentivize parcel owners to decrease the stormwater burdening the CSS, thereby decreasing the need for gray infrastructure to manage stormwater. (Duggan Dep 81:1-82:10.) The credit provided to GSI users is based on how well the GSI techniques reduce the volume and "peak flow" characteristics of the parcel runoff that is burdening the system. (Wallick Aff Ex E,Guide to Drainage Charge Credits p 3; Brown Dep 30:3-9.)

their impervious parcels drain directly into adjacent rivers. (Wallick Aff Ex D, Guide to Drainage Charge Bill Adjust pp 3-5; Wallick Aff ¶6.)

61. The total amount of impervious parcel acres in the City is constantly changing based on the way parcel owners choose to develop their parcels. Thus, the City's calculation of total billable acres is a "snapshot" that approximates the total amount of IA at a given point in time with the best technology available to the City. (Pospiech Dep 134:14-135:9.)

62. When the uniform charge was initially implemented in 2016, customers who had previously not been charged or who had been charged based on meter size faced either new or higher monthly drainage fees. (Duggan Dep 36:11-20.)

63. The projections in the rate model for the uniform drainage charge implemented in October 2016 overestimated how many customers would pay the rate. (Pospiech Dep 105:12-14.)

64. Drainage charge collections dropped significantly after NTW customers began receiving bills in October 2016. (Pospiech Dep 74:1-75:2, 104:8-18, 103:2-16, 108:1-9.)

65. The total collection rate for the drainage charge assessed upon NTW customers from October 2016 through March 2017 was approximately 37%. (City's Interrog Resp Ex 3, NTW Collections Spreadsheet; Pospiech Dep Ex 9 (summary), p 2; Pospiech Dep 74:1-75:2.)

66. Based on the high percentage of unpaid bills, the City ultimately determined that customers were experiencing "rate shock" from the immediate transition to the uniform drainage charge. (Mobley Aff ¶5; Brown Dep 46:11-13; Mobley Dep 93:25-94:3.)

67. Rate shock can lead to customers not paying their bills, which causes an increase in future bad debt expenses and eventually requires the City to charge higher rates. (Mobley Aff ¶5; Rothstein Dep 48:8-20; Mobley Dep 94:12-18.)

68. To alleviate the rate shock that customers were experiencing due to the transition to the

uniform drainage rate, the City decided to phase in the uniform drainage rate over time for those customers who had never paid a drainage charge before. (Mobley Aff ¶5; Rothstein Dep 49:2-20; Brown Dep 46:11-20; Pospiech Dep 108:1-9.)

69. Other large urban areas with CSSs have phased-in drainage rate transitions to mitigate the impact that large changes in rates have on customers. (Mobley Aff ¶7.)

70. On April 19, 2017, the Board of Water Commissioners (BOWC) resolved that "[t]hrough the proposed drainage fee program, over a period of five (5) years, every customer will be charged its equitable share, and it will help customers reduce its monthly drainage charges." (Brown Aff Ex F, BOWC Resolution 17-0075.)

71. Per the BOWC vote, DWSD developed and implemented a five-year drainage fee plan, which was finalized as of November 1, 2017, and utilized transition credits. (Pospiech Dep Ex 17, 11/1/17 Rate Schedule.)

72. The phase-in rates were adopted using the City's revenue requirement and cost-allocation principles underlying the calculation of its uniform drainage charge, also incorporating the costs of transition credits. (Pospiech Dep Ex 6, Rate Model Diagrams; Hudson Dep Ex 1, Rate Model Spreadsheets; Hudson Dep 28:4-21, 126:19-128:2, Pospiech Dep 169:16-171:7; Pospiech Dep Ex 17, 11/1/17 Rate Schedule.)

73. Various property classes of customers were charged a uniform rate under the phase-in, but also received gradually declining transition credits over the course of the 5-year phase-in to mitigate rate shock and increase collections; net rates for each customer class are memorialized in the document titled "DWSD Drainage Program: Schedule of Rates as Agreed on Nov 1, 2017." (Pospiech Dep Ex 6, Rate Model Diagrams and Ex 17, 11/1/17 Rate Schedule; Pospiech Dep 169:16-171:7; Hudson Dep 28:4-21; Fulton Dep 76:19-25.)

74. The phase-in and use of transition credits were intended to decrease the number of customers who were not paying their drainage charges and thereby decrease the bad debt expense that would need to be covered by the revenue requirement. (Pospiech Dep 139:2-10, 133:18-22.)

75. The purported class in *Binns* and *DAART* consists of City parcel owners who were first assessed the uniform rate starting in 2016. (*Binns* Complaint ¶ ¶6, 10, 37; *DAART* Complaint ¶ ¶11-13.)

76. Currently, the average monthly drainage bill is $337.00 for non-residential customers, and $23.74 for residential customers. (Facaeanu Aff ¶ ¶10-11.)

77. Over the years of the phase-in, even though costs have increased, the overarching uniform rate has declined from $750/impervious acre in FY 2017 to $677/impervious acre for FY 2022. (Pospiech Dep Ex 17, 11/1/17 Rate Schedule.)

78. The phase-in resulted in a loss of revenue to DWSD because DWSD'S rate model for the phase-in once again overestimated customers' willingness and ability to pay the uniform rate and underestimated the cost of phase-in credits. (Pospiech Dep 74:19-75:2, 122:25-123:25; Pospiech Dep Ex 8, Collections Spreadsheet; Pospiech Dep Ex 5, Estimated RR v Billings/Collections Spreadsheet.)

79. Due to its phase-in, DWSD experienced a budget shortfall in its Sewage Disposal Fund for 2017 ($29.3 million) and 2018 ($24.1 million). (Rahman Aff Ex N, 2017 CAFR pp 3-4; Rahman Aff Ex O, 2018 CAFR pp 3-5; Rahman Aff Ex P, 2019 CAFR Note 6, p 21; Pospiech Dep 57:25-58:22.)

80. DWSD borrowed funds from GLWA to cover these shortfalls and repaid GLWA from monies in the I&E fund. (Rahman Aff Ex N, 2017 CAFR pp 3-4; Rahman Aff Ex O, 2018 CAFR pp 3-5; Rahman Aff Ex P, 2019 CAFR Note 6, p 21; Pospiech Dep 57:25-58:22.)

81. As the City reached the end of the phase-in, its collection rate for drainage-only accounts is approximately 75% and its collection rate for all accounts that bill for drainage is around 89%. (Pospiech Dep 66:15-69:5; Pospiech Dep Ex 8, Collections Spreadsheet p 1; City's Interrog Resp Ex 5, Collections Spreadsheet for Drainage-Only Accounts p 7.)

82. The Detroit Land Bank Authority (DLBA) claims that it is not responsible for drainage fees and the City has been unable to collect drainage charges from it, despite billing the Land Bank for those charges. (Pospiech Aff Ex B, DLBA Response Letter; Rahman Dep 25:2-6; Hudson Dep 49:18-25; Duggan Dep 97:10-14.)

83. DLBA is an independent authority created pursuant to the Land Bank Fast Track Act, MCL 124.751 *et seq*, via an intergovernmental agreement between the Michigan Land Bank Fast Track Authority and the City. (2d Am & Restated Articles of Incorporation of DLBA (Def PFF Ex 3); Duggan Dep 98:19-22.)

84. Before 2014, DWSD demolished abandoned homes to increase the stormwater that could be absorbed by the property and decrease the burden on the CSS. (Duggan Dep 97:18-98:5.)

85. Beginning around 2014, DLBA took over demolishing abandoned properties in the City and tailored its demolitions to maximize the properties' water retention. (Duggan Dep 98:6-13.)

86. Impervious parcels owned by DLBA receive bills for (i.e., are charged) drainage fees. (Rahman Dep 25:2-6; Hudson Dep 49:18-25; Duggan Dep 97:10-14.)

87. DLBA files quiet title actions prior to selling or auctioning DLBA parcels, which, in accordance with MCL 124.759(11), result in court orders that discharge any past-due drainage charges. (Duggan Dep 99:10-100:6; MCL 124.759(11).)

88. DWSD is required by state law to write off any unpaid drainage charges that were billed to DLBA parcels subject to quiet title actions. (Pospiech Dep 114:18-25, 130:22-25.)

89. Since 2016, DLBA has filed quiet title actions on 8,319 parcels, resulting in the discharge of approximately $7,494,415.63 in drainage fees as of June 6, 2022. (Pospiech Dep 114:8-118:9; Pospiech Dep Ex 11, Land Bank Write-Off Spreadsheet.)

90. The discharged amount, $7,494,415.63, includes drainage fees for an indeterminate number of years, including prior to 2016, as evidenced by write-off amounts applicable to parcels with less than .02 IA. (Pospiech Dep Ex 11, Land Bank Write-Off Spreadsheet.)

91. Of the 8,319 parcels subject to DLBA quiet title actions as of June 6, 2022, approximately 1,600 parcels did not have enough billable acreage to be billed under the 2016 drainage charge. (Pospiech Dep 115:13-118:4.)

93. The estimated bad debt expense associated with DLBA parcels was excluded from the uniform drainage charge formula and calculations. (Pospiech Dep 118:10-119:4.)

94. When the DLBA quiets title to property and drainage charges are discharged pursuant to state law, the resulting bad debt (like all bad debt resulting from failure to pay drainage bills) has the effect of shifting costs. (Pospiech Dep 130:22-131:6.)

95. The DLBA is not exempt from payment of drainage bills. *See City of Highland Park v State Land Bank Auth*, 340 Mich App 593; 986 NW2d 638 (2022).

96. DWSD requested that DLBA pay its assessed drainage charges after the Court of Appeals issued its ruling in *City of Highland Park v State Land Bank Auth*, 340 Mich App 593; 986 NW2d 638, 651 (2022). (Pospiech Aff ¶13, Ex A, Demand Letter to DLBA.)

97. DLBA asserts that it is not responsible for drainage fees given the in-kind services that it performs for DWSD. (Pospiech Aff Ex B, DLBA Response Letter.)

G. The City's estimated drainage expenses have annually exceeded the amounts collected for drainage services since January 1, 2016.

1. Since the second quarter of 2016, DWSD tracks the amount billed in drainage and sewer fees to its customers and records this amount within its financial system as "revenues." (Pospiech Dep 69:9-16, 86:2-14; Pospiech Dep Ex 8, Collections Spreadsheet; Hudson Dep 158:13-17.)

2. DWSD deposits collected/paid drainage and sewer fees collectively into a single sewage disposal fund because it has one CSS. (Rahman Dep 27:8-23, 28:1-21; Pospiech Dep 66:6-9, 66:12-67:5, 67:20-22; City's Resp to Interrog No. 13 pp 22-24.)[11]

3. Since bifurcation, the City's total CSS costs/expenses have annually exceeded the amount collected for drainage and sewer services. (Rahman Aff Exs B-L; Pospiech Dep Ex 8, Collections Spreadsheet; City's Interrog Resp Ex 5, Collections Spreadsheet for Drainage-Only Accounts.)

4. If DWSD assumes that (1) the ratio of sanitary sewer payments to water payments is the same as the ratio of sanitary sewer net revenues/billings to water net revenues/billings; and (2) drainage collections are equal to the difference between total cash collections less revised water collections less the estimated sanitary sewer payments (which are determined using the ratio of sanitary sewer net revenues/billings to water net revenues/billings), DWSD can estimate the amount it has collected in drainage fees since bifurcation. (Pospiech Dep 66:15-69:5; Pospiech Dep Ex 8, Collections Spreadsheet p 1.)

5. Since bifurcation, the City's drainage revenue requirement (i.e., amount needed to cover costs) has exceeded the City's estimated drainage collections in every year, meaning estimated drainage expenses have annually exceeded the amounts collected for drainage services since January 1, 2016. (Pospiech Dep Ex 5, Estimated RR v Billings/Collections Spreadsheet; Pospiech

[11] DWSD bills for water, sewer, and drainage services through separate line items on one single customer invoice. (Pospiech Dep 62:19-20.)

Dep Ex 8, Collections Spreadsheet; City's Interrog Resp Ex 5, Collections Spreadsheet for Drainage-Only Accounts.)

6. Since bifurcation, the City's estimated collection rate (collections as a percentage of revenues/billings) for all drainage accounts has ranged between 82.6% to 90.8%. (Pospiech Dep Ex 8, Collections Spreadsheet p 1; City's Interrog Resp Ex 5, Collections Spreadsheet for Drainage-Only Accounts (showing roughly 75% collection rate for accounts receiving only drainage services).)

7. Any shortfalls in DWSD's collections for its operating costs remain DWSD's financial responsibility to cover. (Duggan Dep 15:2-7.)

8. Shortfalls are covered through non-rate sources of revenue (e.g., the lease payment, borrowing, and/or the City's general fund). (Rahman Aff Ex P, pp 11, 18, 21.)

9. The City's estimated CSS collections for fiscal years ending 2017-2022 are $266,180,948 (FY 2017); $238,132,356 (FY 2018); $261,313,954 (FY 2019); $267,708,388 (FY 2020); $280,984,991 (FY 2021); $218,566,216 (through Apr 2022). (Pospiesch Dep Ex 8.)

Proposed Conclusions of Law

IV. The facts presented support a finding that the City's drainage charge is lawful under *Bolt*.

A. The City's uniform drainage charge is regulatory.

A regulatory charge seeks to defray the costs of a regulatory activity. *Bolt*, 459 Mich at 163-164. In other words, a fee is regulatory (and not revenue-raising) if it raises money to support an underlying regulatory purpose. *Graham*, 236 Mich App at 151-153; *see also Merrelli v St Clair Shores*, 355 Mich 575, 582-583; 96 NW2d 144 (1959). If there is an absence of a "significant element of regulation," then the charge is designed to raise revenue and more akin to a tax. *Bolt* at 166. A fee is regulatory (and not revenue-raising) if it raises money to support an underlying regulatory purpose. *Graham*, 236 Mich App at 151-153; *see also Merrelli v St Clair Shores*, 355 Mich 575, 582-583; 96 NW2d 144 (1959). A regulatory activity reflects a valid exercise of police power. Per *Merrelli* - a case relied upon by *Bolt*, 459 Mich at 161, to illustrate the differences between the "municipal power of taxation" and the "police power of the community"- regulatory measures (and related fees) involve "the public health, morals, or welfare." *Merrelli*, 355 Mich at

582-583. Monies obtained for the exercise of a municipality's police power are "incidental to the accomplishment of the primary purpose of guarding the public." *Id* at 583.

A regulatory activity does not solely confer benefits to a ratepayer. It may also arise out of burdens that the ratepayer imposes on a community. In *Merrelli*, the Michigan Supreme Court recognized both the burden that parcel development imposes upon a city, and the corresponding need to assess a fee to cover the costs of this burden. *Merrelli*, 355 Mich at 581-583. The Court's acknowledgment that a fee is appropriately charged to offset the costs associated with any burdens imposed upon a municipality dates back to *Fletcher Oil Co v Bay City*, 247 Mich 572; 226 NW 248 (1929). In *Fletcher*, the city imposed a license fee for the operation of a gasoline station. In deciding the fee was not a tax, the Court found that

> A burden is imposed upon defendants by reason of the operation of gas stations in inspection, supervision, fire prevention, police regulation of congested traffic and otherwise. This court should not substitute its judgment as to the precise amount of the license fee for that of the legislative body of the city which passed the ordinance with knowledge of the facts.

Id at 577.

In the present case, Plaintiffs acknowledge that the drainage charge "has regulatory components" but contend that it is predominantly revenue-generating. Specifically, Plaintiffs claim that "the City calculated and imposed the 2016 drainage charge without regard to any measured or quantified service uniquely rendered to any particular parcel subject to the 2016 drainage charge." Plaintiffs further allege that the rate was designed to produce an additional $20 million in revenue. The evidence showed that impervious area or acreage (IA) is the best proxy for measuring the stormwater burden a parcel places on the CSS, and therefore the corresponding benefit it derives from the system. In addition, the evidence established that the drainage charge was calculated only to recover the cost of a regulatory activity (the mandatory management of stormwater commingled with sewage, per the CWA and NPDES permit).

1. **CSS costs associated with wet weather flow, which generates stormwater runoff that drives the size of the CSO facilities and CSO control costs, are only recovered through BIA.**

The Court will first address Plaintiffs' argument that they do not receive a particularized benefit or identifiable service as a result of the charge. Underpinning this argument is Plaintiffs' position that the use of impervious acreage as the sole proxy for stormwater runoff is flawed. Plaintiffs assert that "[t]he City of Detroit…has no data to confirm its expert's assertion that the use of impervious acreage as the sole proxy for storm water runoff is proportional."

In *Bolt*, the Court concluded that the charge imposed did not correspond to the benefits conferred because approximately seventy-five percent of the property owners in the city were already served by a separated storm and sanitary sewer system. Those property owners had paid for the separated system through a special assessment, but were being charged the same amount for storm water service as the twenty-five percent of the property owners who would enjoy the full

benefits of the newly constructed CSO controls. Here, Defendant produced extensive evidence that IA is the best and most proportionate available method for measuring how much stormwater a parcel contributes to the City's CSS. See Special Master's Proposed Findings of Fact (FF), Section C. Plaintiffs, on the other hand, failed to establish that runoff from pervious acreage is a meaningful driver of CSS costs.

In *Merrelli v St Clair Shores*, 355 Mich 575; 96 NW2d 144 (1959), the Michigan Supreme Court recognized that a regulatory activity may arise out of the burdens a ratepayer imposes on the community. As described by the City's expert hydrologist, John Aldrich, because impervious area drives stormwater runoff, those whose parcels contain IA are burdening the CSS. See Aldrich Report, pp 7-8. At the same time, owners of parcels with IA receive a benefit from having a system that drains stormwater from their property.

Plaintiffs suggest that drainage customers receive an insufficient service because CSOs do occasionally occur. The evidence established that efforts undertaken by the City since 1994 have significantly improved management, treatment, and control of CSOs. Moreover, the City maintains a green credit program to assist property owners in reducing the use of the CSS by absorbing or managing stormwater on their property through green stormwater infrastructure (GSI) (Wallick Aff Ex E, Guide to Drainage Charge Credits pp 6-10; 5/30/17 Brown Aff ¶31; Mobley Dep 32:15-23.) GSI can include green roofing, permeable pavement, and water harvesting. (Wallick Aff Ex E, Guide to Drainage Charge Credits pp 6-10; 5/30/17 Brown Aff ¶31.) The credit provided to GSI users is based on how well GSI techniques reduce the volume and "peak flow" characteristics of the parcel runoff that is burdening the system. (Wallick Aff Ex E, Guide to Drainage Charge Credits p 3; Brown Dep 30:3-9.)

2. <u>The City used standard ratemaking practices to design a charge that defrays CSS costs associated with wet weather flow for the mandatory management, treatment, and disposal of stormwater commingled with sewage</u>.

Plaintiffs argue that the 2016 drainage charge was consciously designed to raise approximately $20 million of additional revenue in its first year, and suggest that it had a revenue-generating purpose. During oral argument, Plaintiffs suggested that the costs of the CSS are excessive, claiming that DWSD is grossly overstaffed, although no supporting data for that claim was ever provided. Contrary to Plaintiffs' claims, Defendant presented evidence that (1) unlike the charge in *Bolt*, the drainage charge was calculated only to recover the cost of a regulatory activity (the mandatory management of stormwater commingled with sewage, per the CWA and NPDES permit), (2) for the class period, cash collected from sewer and drainage rates (which recover CSS costs) was less than CSS costs, and estimated drainage cash collections are lower than the drainage revenue requirement; and (3) the City relies on non-rate revenue to recover the bulk of its capital infrastructure-related costs.

Defendants presented evidence that the drainage charge was calculated only to recover the cost of a regulatory activity (the mandatory management of stormwater commingled with sewage, per the CWA and NPDES permit). FF Section A.30-31; Section F.

Plaintiffs contend that the 2016 drainage charge is based on an inflated percentage of total revenue needed for all DWSD operations (water, sanitary sewer, and drainage), and that the drainage charge is intended to raise an additional $20 million in revenue for the City. In support of this position, Plaintiffs cite the deposition testimony of Rothstein, DWSD's ratemaking consultant, who helped design the 2016 drainage charge. Rothstein testified that the simplest way of describing the formula for the rate is "the division of the established revenue requirement by the amount of billable impervious acreage." (Rothstein Dep at 16; *See Youmans v Charter Tp of Bloomfield*, 336 Mich App 161, 172-173; 969 NW2d 570 (2021) (noting rate consultant's testimony that "'first step' in utility ratemaking 'is to determine the revenue requirement,' i.e., the revenue that the utility will need to cover its expenses").) As Defendant points out, the term "revenue requirement," as used in ratemaking, means the money required on an annual basis to cover the costs of operating the system. A basic tenet of ratemaking is that a revenue requirement reflects the revenue needed to meet system costs. (Ex A to Def Reply Brief in Support of PFF, WEF Manual, pp 84-86.) When asked whether higher drainage billings in FY 2017 were designed to increase revenues, DWSD's CAO, Debra Pospiech, responded, "No, no...The costs are the costs...You're not increasing revenue how ever you use the term. Your billings have to match to cover the costs." Pospiech Dep at 126:2-22.) Plaintiffs have not introduced evidence that the revenue requirement includes a component of profit beyond the system costs. Defendants introduced ample evidence that the 2016 drainage charge did not raise additional revenue, but rather, it more equitably distributed the CSS costs across all parcels that burden the system by including additional parcels that had not previously been billed. (Rothstein Dep 81:5-82:4, 115:10-17; Brown Dep 24:6-10, 84:10-15; Pospiech Dep 50:17-22.)

Nor have Plaintiffs produced evidence that the revenue requirements, i.e., the costs required to operate the system, were inflated or included inappropriate elements. (The allocation of costs to the drainage charge is discussed herein *infra*, section B.2.) It is undisputed that calculation of the 2016 drainage rate included estimates and assumptions. For example, as described in additional detail in section B., because DWSD has a single CSS and a single stream of CSS costs and collections, it must allocate those costs and collections based on assumptions and estimates. (Hudson Dep 32:3-33:3.) Similarly, Aldrich's expert opinion was based on rainfall data for 1874-2021. (Aldrich Report at 6.) Population trends and weather patterns can change over time, but the evidence established a reasonable relationship between the amount of the fee and the value of the service or benefit.

In *Bolt*, the Court found that a major portion of the cost of implementing the CSO control program over 30 years (approximately sixty-three percent) constituted capital expenditures. The Court concluded that the capital expenditures constituted an investment in infrastructure as opposed to a fee designed simply to defray the costs of a regulatory activity. *Bolt* at 163. In the present case, the City has established that the bulk of its capital infrastructure-related costs are recovered through non-rate revenue. FF Section F.42-46. As described in the Court's proposed findings of fact, the City uses the GLWA lease payment, which is deposited in an Improvement and Extension (I&E) Fund, to cover those costs. Furthermore, there is no indication the City is assessing capital-related costs that do not benefit the property owners at issue.

Capital improvements are major construction projects, including significant repairs and projects that include excavating the sewer system. (Pospiech Dep 65:19-66:59.) 114. The evidence

indicated that the vast majority of capital improvements to the City's CSS are paid for through DWSD'S I&E fund, which is funded by GLWA'S $50 million annual lease payment. (Hudson Dep 165:2-12, 165:22-166:5; Pospiech Dep 59:10-60:7, 144:20-23.) Capital improvements are also financed by proceeds from GLWA and/or DWSD revenue bonds issued after bifurcation. (Rahman Aff Ex O, 2018 CAFR, Note 4, p 17; Rahman Aff Ex P, 2019 CAFR Note 5, p 18.) Post-bifurcation debt service is generally paid for through the I&E fund. (Rahman Aff ¶6.) The drainage charge recovers a small percentage of revenue-financed CSS capital improvements, which consist of unanticipated repair projects. (Pospiech Dep 98:10-18, 113:24-25, 140:14-141:1.) Approximately 2% was allocated to revenue-financed capital ($3.3M/$123M). (Hudson Dep Ex 1, Rate Model Spreadsheets p 4.) Thus, drainage rate revenue is generally not used to pay for capital improvements or post-bifurcation debt. (Pospiech Dep 65:19-66:9.)

B. The City's drainage charge is proportionate: the charge reflects the actual cost of use, metered with relative precision in accordance with available technology, and property owners are paying their proportionate share of those costs.

A fee must be proportionate to the costs of the service rendered or the benefit conferred. *Bolt*, 459 Mich at 161-162; 587 NW2d 264. "Where the charge for either storm or sanitary sewers reflects the actual costs of use, metered with relative precision in accordance with available technology, including some capital investment component, sewerage may properly be viewed as a utility service for which usage-based charges are permissible, and not as a disguised tax." *Id* at 164-165. The presumption of reasonableness afforded to rates must be a part of any proportionality analysis under *Bolt*. *Youmans v Charter Tp of Bloomfield*, 336 Mich App 161, 226-227; 969 NW2d 570 (2021); *Shaw v City of Dearborn*, 329 Mich App 640, 654; 944 NW2d 153 (2019).

During oral argument, Plaintiffs alleged the following with respect to their argument that the charge is disproportionate: the benefits of stormwater drainage inure to the general public; use and cost of the CSS cannot be appropriately measured or allocated due to the combined nature of the system; runoff from pervious surfaces is not taken into account; specific parcel-based runoff flow is not measured; variation in annual precipitation is not taken into account; specific parcel-based pollution is not measured; city streets are not charged for drainage; county and state roads are undercharged for drainage; bad debt expenses fall disproportionately on those billed for drainage; and the City does not collect drainage charges from the Detroit Land Bank Authority.

Contrary to Plaintiffs' arguments, the evidence established that both the City's CSS and estimated drainage collections relative to overall CSS and estimated drainage costs and the allocation of CSS costs to the drainage change are reasonable. Furthermore, the apportionment of the drainage charge among property owners is reasonable and there is no evidence property owners are overcharged for the value of the service provided.

1. Both the City's CSS and estimated drainage collections relative to overall CSS and estimated drainage costs are reasonable.

As described in the Court's Findings of Fact, the CSS revenue requirement is the money required on an annual basis to cover the costs of operating the system. The CSS revenue

requirements covers the direct and indirect costs the City incurs to operate the CSS, including the City's share of GLWA-allocated costs (debt-service, CSO, and operations); the City's retail costs (including customer service, field operations and administrative and general costs); non-O&M costs; bad debt expense; and limited capital improvement costs. FF Section E.5. The CSS revenue requirements (i.e., costs) for fiscal years ending 2017 through 2022 as approved by the BOWC are $280,021,266 (FY 2017); $274,246,325 (FY 2018); $322,796,600 (FY 2019); $347,329,000 (FY 2020); $354,887,600 (FY 2021); $365,862,900 (FY 2022). FF Section E.6. Roughly 80% of these CSS-related expenses are fixed costs the City does not control. FF Section E.7. The CSS revenue requirement changes annually based on total system expenses, both fixed and variable. FF Section E.8. The Court also examined data produced by the City recording all system expenses.

The City's estimated CSS collections for fiscal years ending 2017-2022 are $266,180,948 (FY 2017); $238,132,356 (FY 2018); $261,313,954 (FY 2019); $267,708,388 (FY 2020); $280,984,991 (FY 2021); $218,566,216 (through Apr 2022). For the relevant period the City's cash/ rate collections for its CSS operations have always been less than its annual revenue requirement to operate the system. FF Section G.9. Shortfalls are covered through non-rate sources of revenue (e.g., the lease payment, borrowing, and/or the City's general fund). FF Section G.8.

The City has provided undisputed evidence that for each fiscal year since the uniform drainage charge was first implemented in October 2016, DWSD's estimated cash collections through its drainage charges have been less than what it billed its customers and not enough to cover the estimated annual revenue requirement for drainage, as indicated below:

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2021
Estimated drainage collections less net billing	-$15,491,685	-$18,199,224	-$16,317,931	-$23,982,438	-$18,259,319	-$14,135,529
Implied drainage collection rate	87.7%	82.6%	87.7%	83.4%	88.6%	89.4%

(Pospiech Dep Exs 5, 8.)[12]

Due to its phase-in, DWSD experienced a budget shortfall in its Sewage Disposal Fund for 2017 ($29.3 million) and 2018 ($24.1 million). (Rahman Aff Ex N, 2017 CAFR pp 3-4; Rahman Aff Ex O, 2018 CAFR pp 3-5; Rahman Aff Ex P, 2019 CAFR Note 6, p 21; Pospiech Dep 57:25-58:22.)

2. <u>The City's allocation of CSS costs for recovery through the drainage charge is reasonable and there is no evidence property owners are overcharged for the service provided</u>.

In considering whether the amount of the fee is reasonably related to the cost of the use of the CSS (i.e., whether, under the drainage charge, a parcel is assessed its proportionate share of the entire cost in relation to the benefit to the parcel), this Court has analyzed (1) whether there is

[12] Drainage costs and collections are estimates because DWSD has a single CSS and therefore a single stream of CSS costs and collections. FF Section F.

a rational relationship between the amount of the fee and the contribution of a parcel to the use of the CSS, and (2) whether the amount of the fee is reasonably related to the cost of the use of the CSS.

a. There is a rational relationship between the amount of the fee and the contribution of a parcel to the use of the CSS (which is metered with relative precision, based on available technology), because the amount of Impervious Area (IA) is the most important factor influencing the cost of stormwater management services.

Defendants presented convincing evidence that impervious cover is a well-accepted proxy for actual surface water runoff from a parcel. (Rothstein Dep 96:10-97:2; Aldrich Dep 16:4-9, 82:11-24; Aldrich Report at 8; Pospiech Aff Ex C, p 34.) Whereas impervious surface runoff is a material driver of system costs, the use of *pervious* area is an EPA-recognized source control for *mitigating* CSOs. (Aldrich Report at Aldrich Dep 168:13-25; Wilczynski Dep Ex 6, 1995 EPA CSO Guidance for Long-Term Control Plan p 3-31.)

Plaintiffs argue that the impervious acreage subject to the drainage charge comprises only 27.8% of the surface area of Detroit, "which uses only (non-exempt) impervious acreage as the sole proxy for 100% of the stormwater runoff in the entire City of Detroit, and yet is presumed to reflect a particular parcel's impervious area's contribution of storm water runoff to the combined sewer system...". Plaintiffs contend that this "effectively obliges the owner of the non-exempt impervious acreage to contribute to subsidizing the cost of collecting and treating all storm water runoff generated by the other 62.2% of the surface area of the City of Detroit." At the heart of Plaintiffs' argument is the position that pervious acreage should also be charged for drainage, based on the opinion of their expert geologist, Michael Wilczynski, that (1) groundwater infiltration through pervious soil enters the CSS and contributes to CSOs, and (2) Detroit has large areas of clay soil that should not be considered pervious.

Plaintiffs' expert was unable to provide meaningful support for the position that groundwater infiltration resulting from pervious surfaces substantially contributes to CSOs. Mr. Wilcynski, acknowledged during his deposition that such infiltration has never been quantified or addressed in any studies he was aware of. (Wilczynski Dep at 99:16-25-100:1-5.) Mr. Wilczynski cited a study (the Hoard report) as support for his opinion regarding groundwater infiltration, but the study, which monitored groundwater flow within a 1.6-acre area of Detroit from 2015-2016, was limited, as acknowledged by Mr. Wilczynski:

Q: And just to clarify, the Hoard report actually talks about increased groundwater infiltration that happens due to storm events?
A: It was just a study of unexpected flow of a 40 percent base flow, and it mentions how raising the water table from storm events could increase the flow into the sewers.
Q Does he quantify what that possible increase could be?
A No. It was in his conclusions (Zoom Disruption) recommendation for further study.

As Defendant points out, the GLWA measures groundwater flow. (GLWA 2021 Flow Report, Smalley Aff Ex G, p ES-1.) Groundwater infiltration is either categorized as dry weather

inflow and infiltration (DWII) or included in the overall calculation of wet weather flow (WWF) (which includes wet flow and associated sanitary and DWII). (DWII-related costs are allocated to CSS customers as part of the sewer charge while WWF-related costs are allocated to the drainage charge.) Mr. Wilczynski testified that he did not know whether the GLWA takes sources of infiltration into account. He testified that the DWSD does not take infiltration into account in its rate structure. However, evidence submitted by Defendant indicated that wet weather and dry weather infiltration costs are allocated as part of its rate structure, and those costs are based on GLWA flow measurements. (9/18/17 Hudson Aff ¶¶11-12; Pospiech Dep Ex 6, Rate Model Diagram pp 1-3; Hudson Dep 39:12-23, 59:23-60:10; Pospiech Dep 95:12-14, 96:3-97:1 GLWA 2021 Flow Report, Smalley Aff Ex G, p ES-1.) Mr. Wilczynski did not offer any opinions regarding GLWA's wet weather flow measurements.

Mr. Wilczynski opined that clay surfaces classified by the City as pervious actually should be considered impervious because clay contributes a substantial amount of stormwater runoff, particularly during extreme weather events, but stated that the issue had not been studied very well. (Wilczynski Dep 105:3-25-106:6-10.) At the same time, Mr. Wilczynski testified that sand and clay are present in Detroit and can exist side by side, with horizontal and vertical boundaries: "So when the sand ends, the clay picks up, and when the clay ends, the sand picks up." (Wilczynski Dep 80:15-23.)

Plaintiffs argue that because pervious surfaces become saturated with water and generate runoff during heavy rain events, which contributes to CSOs, a charge that does not take pervious acreage into account is disproportionate. Defendant's hydrology expert produced data showing that precipitation events in metro Detroit are about ¼ inch per event on average (based on data showing 32.42 inches of precipitation per year with precipitation occurring 125 days per year). (Aldrich Report at 6.) Because almost all precipitation volume during a typical year occurs during storms generating less than 1 inch of rainfall, most of the cost to operate a CSS is related to the capture and treatment of small storms during a typical year of precipitation. (Aldrich Dep 92:23-24, 94:17-23, 97:15-21, 108:16-18, 111:21-23.)

Overall, while Mr. Wilczynski disagreed with Defendant's expert that runoff from impervious surfaces drives CSO control costs, he failed to provide relevant support for his opinion. In contrast, Defendant submitted the testimony and opinion of a hydrologist with extensive knowledge of stormwater charges. Defendant supplemented expert testimony with government publications and industry guidebooks that confirmed the use of IA as a reasonable proxy for measuring a parcel's contribution to runoff, and there is no meaningful precision gained by relying on pervious area to allocate costs. (Aldrich Report at 8.)

Plaintiffs argue that the City's drainage charge does not account for a parcel's contribution of pollution to the CSS. However, Defendant provided evidence that IA is directly related to pollution in runoff. Defendant's expert testified, "the conclusion of [studies analyzing pollutants in stormwater] is that what drives the differences in pollutants is largely the impervious area [and] the concentrations [of pollutants] are roughly the same across different land use categories." (Aldrich Dep 138:12-16; see also Aldrich Dep 139:10-19.)

Moreover, a parcel's IA is measured with relative precision, in accordance with available technology. FF Section F.11-12. As Plaintiffs' expert pointed out, there are different ways to assess stormwater fees than measuring IA. In particular, Plaintiffs' expert referenced the use of runoff coefficients as a more accurate means of assessing a parcel's contribution to stormwater runoff. The EPA recognizes Intensity of Development (ID) as an alternative method of assessing stormwater service fees. (Brown Dep Ex 22, EPA Funding Stormwater Programs pp 3-4.) The ID method applies an ID factor (also called a runoff coefficient) to a parcel's gross area to approximate the percentage of IA, and often bills these parcels on a sliding rate scale, but the EPA has recognized that the ID method does not bill parcels in direct proportion to their relative stormwater discharges. (Brown Dep Ex 22, EPA Funding Stormwater Programs pp 3-4; Aldrich Aff Ex J, Guidance for Municipal Stormwater Funding pp 2-45 to 2-47.) In sum, an IA-based charge is a widely used best practice. (Brown Dep Ex 22, EPA Funding Stormwater Programs pp 3-4; Aldrich Aff Ex K-l, WEF Manual of Practice Fin & Charges for Wastewater Sys (4th ed), Ch 8 §5.4, p 193.)

b. The amount of the fee is reasonably related to the cost of the use of the CSS.

Here, the City provided evidence regarding the process by which DWSD allocated drainage-related costs for recovery through the drainage charge (i.e., the drainage revenue requirement). Those drainage-related costs include the allocation of CSO costs, the 33% of operational-related costs allocated to drainage; the cost of transition credits associated with the phase-in of the uniform drainage charge; and allocable bad debt.

The final version of the rate model developed by Hudson, the former CFO, was not available because of accidental water damage to his laptop. (10/26/21 Hudson Aff ¶¶7-10), but spreadsheets and additional evidence was provided regarding how costs were modeled and allocated. FF Section F.54.

Allocation of CSO and operational costs

The City allocated 100% of CSO costs to drainage and 33% of operational costs to drainage. Based on the evidence described below, the Court finds that the City's apportionment of costs ascribed to stormwater versus sanitary sewer are reasonable.

Plaintiffs argue that the allocation of 100% of CSO costs to drainage is disproportionate. Defendant presented evidence that CSO control costs are driven by wet weather events; more specifically, CSOs are generated almost entirely by impervious surface runoff from small to moderate rain events. See FF, Section C.

Marcus Hudson, DWSD's former CFO, testified as follows regarding why DWSD allocated 33% of CSS costs to drainage:

Q. How did you arrive at 33 percent?

A. So what we did was we calculated the total amount of flow. There's three components. There's DWII, Dry Weather Inflow and Infiltration. There's WWII, which is Wet Weather Inflow and

Infiltration. Those two numbers we got from The Foster Group, who was the same consultant that GLWA uses. The third component is the sanitary flow component which had to be estimated. We used a statistical model, an exponential smoothing model, to forecast the... sanitary flow. The 33 percent represents the wet weather inflow as a percentage of the - of the total fl[ow].

(Hudson Dep 39:12-23.)[13]

DWSD forecasted that sanitary sewage volume was going down, but storms were increasing, and therefore adjusted the GLWA data to reflect projected City demand. (Pospiech Dep 96:16-18, 97:8-10; Rothstein Dep 30:13-24.)

Plaintiffs allege that the allocation of 33% imposes a disproportionate burden on those subject to the drainage charge. They contend that the expense of stormwater management is much less than one third of DWSD's total system cost. More specifically, Plaintiffs claim that "stormwater flow volume in Detroit's combined sewer represents only 21% of the combined total flow…". Plaintiffs appear to have extrapolated this figure from the Foster Group Memorandum dated February 12, 2018, which appears to address regional flows. During Hudson's deposition, Plaintiffs' counsel explained that when she divided the volume of Net Wet Weather flow from Detroit by the Net Contributed flow, the resulting percentage was around 22%. Hudson subsequently explained why that calculation would not, in fact, represent the percentage of stormwater flow volume in the CSS. (Hudson Dep, pp 41:8-42:5.)

Plaintiffs note that in a memorandum dated November 22, 2013, The Foster Group stated that flow modeling and flow balancing efforts indicated that 28% of the flow from the Detroit class was related to storm flows. As Defendant points out, that figure mirrors the wet weather flows in the GLWA flow reports for FY 2013-2016 cited by Hudson and Pospiech in their deposition testimony. The 28% takes into account WWF processed by the WRRF, but does not take into account WWF processed by the RTB/CSO, which are also part of the CSS. As described by Hudson, GLWA figures and statistical modeling were used to determine an allocation of 33% of CSS operational costs to drainage, and current and historical flow data support that allocation as reasonable and proportionate. According to the 2021 GLWA Flow Report, WWF for FY 2017 through FY 2021 have met or exceeded 33%:

	WWF
FY 2017	33%
FY 2018	40%
FY 2019	39%
FY 2020	34%

[13] As part of their argument that the 33% allocation is inappropriate, Plaintiffs question how Hudson could have received flow data from the Foster Group to inform his modeling, because the memo produced to Plaintiffs was dated February, 2017. However, Hudson never testified that his data was based on the 2017 memo. The evidence indicates that The Foster Group prepared multiple documents for DWSD and also communicated with DWSD through correspondence outside of official memoranda, as referenced in the first paragraph of the memo dated February 12, 2017.

FY 2021	36%
Average	36%

(2021 GLWA Flow Report, Smalley Aff Ex G., Attach 4, p 14.)

Phase-in of the uniform drainage charge

Plaintiffs assert that "[a]rbitrary rate reductions and disparately phased implementation of the 2016 drainage charge produced patently disproportionate rates that compounded the inherent disproportionality of the 2016 drainage charge." Plaintiffs essentially argue that a program implemented to phase-in the drainage rate resulted in different classes of property owners being charged different rates, rendering the 2016 drainage charge disproportionate. Contrary to Plaintiffs' assertion, the phase-in did not raise the rate for some customers while lowering it for others. Rather, the City assessed a uniform rate during the phase-in and temporarily lowered the charge (using transition credits) for customers who were experiencing "rate shock." During the initial phase-in period, DWSD had a shortfall in its sewer fund for 2017 and 2018. The shortfalls were covered with a loan from GLWA, which was repaid using non-rate revenue. As such, DWSD, not ratepayers, paid for the phase-in and covered the cost of transition credits while customers became acclimated to the uniform drainage charge.

Plaintiffs note that different classes of property were charged at varying levels during the phase-in, with NTW "Faith Based" customers enjoying a suspension of drainage charges during FY 2017 and FY 2018. However, nothing prohibits a municipality from providing a service at less than its cost to property owners. For the period of the phase-in, some categories of customers paid less for the cost of drainage service than other categories, but there is no evidence that any category of drainage customers has been paying more than the reasonable cost of the service conferred.

Bad debt expense

Plaintiffs argue that the inclusion of bad debt in the in the formula applied annually to determine the 2016 drainage charge shifts the cost of drainage service to those who pay and renders the charge disproportionate. They allege that "a 47% bad debt expense means DWSD effectively billed property owners double the amount of the actual attributable cost of drainage service to their parcels simply because it expected to only collect on roughly half those bills it issued." Plaintiffs further contend that "47% of all uncollectible bills issued by DWSD for any service" is allocated to drainage.

Defendant has presented evidence that Plaintiffs are mischaracterizing the calculation and allocation of bad debt expense. Bad debt expense is the cost associated with uncollectible accounts and is a universally recognized component of a utility's operation and maintenance expenses. Plaintiffs are correct that bad debt expense represents a cost incurred to operate the CSS and must be built into the cost of the service offered in order for the system to sustain itself and continue operations. DWSD calculated bad debt expense by using estimated bad debt expense for various customer classes and historical accounts receivable data to project total bad debt across the CSS at roughly 8-10% of total CSS billings. Based on that same data, the City allocated 47% of this CSS bad debt expense for recovery through the drainage charge. The City allocates 47% of the

uncollectible total CSS billings (both sewer and drainage) to drainage and the remaining 53% to sewer because those are the amounts estimated to be attributable to drainage and sewage customers, respectively, who do not pay their bills. Contrary to Plaintiffs' claims, however, only 8-10% of total CSS billings are deemed uncollectible. [14]

Plaintiffs allege that properties owned by the DLBA receive special treatment, the effect of which forces owners of the City's remaining BIA to subsidize drainage services to DLBA-owned properties.[15] The evidence indicates that DLBA is billed for drainage fees like any other owner of parcels with BIA. (Rahman Dep 25:2-6; Hudson Dep 49:18-25; Duggan Dep 97:10-14.) The evidence also established that estimated bad debt expense associated with parcels owned by the DLBA was excluded from the drainage charge formula and calculations. (Pospiech Dep 118:10-119:4.)

Nevertheless, while there is no evidence the DLBA receives special treatment from the City, the DLBA refuses to pay its drainage bills. In response to the City's demand for payment of the drainage bills, the DLBA argued that it is exempt from payment of drainage fees as a result of in-kind services it provides to the City. (Pospiech Aff ¶13, Ex A, Demand Letter to DLBA, and Ex B, DLBA Response Letter.) Moreover, when the DLBA quiets title to property, the judgment quieting title discharges any past-due drainage charges, pursuant to MCL 124.759(11).[16]

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[14] The assumptions used to calculate bad debt expenses are "locked in" for FY 2017 – FY 2022. (Pospiech Dep 134:14-23.) As described in greater detail herein, *infra*, estimated bad debt expense associated with parcels owned by the DLBA was excluded from the drainage charge formula and calculations.

[15] The DLBA is an independent authority created pursuant to the Land Bank Fast Track Act via an intergovernmental agreement between the Michigan Land Bank Fast Track Authority and the City. (2d Am & Restated Articles of Incorporation of DLBA (Def PFF Ex 3); Duggan Dep 98:19-22.)

Pursuant to Wayne County Circuit Court LAO 2023-04, cases brought by the DLBA are assigned to the Chief Judge. The Court takes judicial notice of its files to note that there are essentially two branches of the DLBA – (1) nuisance abatement, and (2) quiet title. Nuisance abatement cases are filed with respect to blighted properties within the City of Detroit. If nuisance issues are not addressed by a property owner, the DLBA can obtain title to the property. Anecdotally, and based on observation of its own docket, as property values in Detroit have increased, an increasing percentage of property owners are opting to abate nuisance properties in order to retain title to them. The percentage of property owners opting to abate nuisance properties in Land Bank cases has increased from approximately 17% to over 50% over the past 5 years.

[16] Neither party provided the Court with information regarding the amount of billable impervious acreage (BIA) held by the DLBA. Debra Pospiech testified that since 2016, DLBA has filed quiet title actions on 8,319 parcels, resulting in the discharge of approximately $7,494,415.63 in drainage fees as of June 6, 2022. (Pospiech Dep 114:8-118:9; Pospiech Dep Ex 11, Land Bank Write-Off Spreadsheet.) However, that discharged amount includes drainage fees for an indeterminate number of years, including prior to 2016, as evidenced by write-off amounts applicable to parcels with less than .02 IA. Approximately 1,600 parcels included in the

The DLBA is not exempt from payment of drainage bills. *See City of Highland Park v State Land Bank Auth*, 340 Mich App 593; 986 NW2d 638 (2022). Given that the City bills the DLBA for drainage, the DLBA's decision not to pay those bills cannot change the character of the drainage charge as a proportionate fee charged to cover the City's costs of treating and disposing of stormwater entering the CSS. The Court has not been presented with any evidence that the City accepts the DLBA's position that it should not be required to pay drainage fees. Notably, enforcement of the drainage charge has been limited and deferred in general as a result of this litigation; it will presumably resume and apply equally (including to the DLBA) once this matter is resolved.[17]

The City's roads are part of the stormwater conveyance system and provide in-kind services to DWSD

The 2016 drainage charge does not apply to approximately 10,880 acres of impervious City-owned streets and alleyways. While Plaintiffs argue that the exemption for City-owned streets impermissibly shifts drainage costs onto those who are subject to the drainage charge, Defendant submitted substantial evidence that supports the City's decision not to charge its roads for drainage because (1) the roads convey stormwater conveyance as part of the CSS, and (2) the City's roads provide in-kind services to DWSD. During oral argument, Plaintiffs argued that the roads also convey stormwater runoff from pervious acreage that gets saturated during heavy rains. As previously discussed herein, Plaintiffs failed to establish that runoff from pervious surfaces contributes runoff to the CSS to a meaningful degree. Plaintiffs further argued that, even assuming the roads have a symbiotic relationship with the CSS, only drainage customers (as opposed to sewer) pay for any such in-kind benefits. However, the evidence indicated that the roads specifically provide a benefit with respect to stormwater drainage.

The City's roads are a component of the City's CSS because they are designed to convey stormwater first to the City's CSS pipes and then to the WRRF for treatment. (Brown Aff Ex E, Drainage Charge Q&A p 9; Brown Dep 35:7-13, 35:21-36:2, 113:2-16; Rothstein Dep 103:12-22; Mobley Dep 76:20-77:1; Smalley Dep 32:7-10, 34:12-16; Aldrich Report at 9-12; Pospiech Aff Ex C, p 44.) As explained by Ronald Brundidge, director of the Department of Public Works (DPW), facilitating the conveyance of stormwater is a central concern in every design and maintenance decision made by the DPW, which maintains the City's roads (Duggan Dep 34:13-20; Brundidge Dep 15:7-12.). For example, City roads are designed to conform with DPW specifications so that the highest point is at the center of the road and the road then slopes back down to a 4-inch or higher curb to direct stormwater to the sewer system. (Brundidge Dep 13:2-11.) When DPW repaves the road, the curb is rebuilt to a minimum height of four inches to make sure that the road effectively conveys stormwater into the sewer system. (Duggan Dep 33:23-

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aforementioned spreadsheet had less acreage than would be billable under the 2016 drainage charge. (Pospiech Dep 115:13-118:3.)

[17] The Court takes judicial notice of foreclosure proceedings pending before it in Case No. 22-006263-CH, in which the Wayne County Treasurer deferred proceedings with respect to commercial properties with drainage charge liens. Residential properties with outstanding drainage charges were never sent to the tax rolls. (Pospiech Dep at 190:12-14.)

34:49.) DPW decides where to locate sidewalks and curbs based on how the roads function as part of the stormwater conveyance system. (Duggan Dep 51:3-20. Stormwater inlets along roadways are designed to (1) keep the road passable to traffic during moderate stormwater events, and (2) prevent stormwater backups into basements during larger events. (Aldrich Report, p 10.)

Defendant provided evidence that DPW provides in-kind services to DWSD that offset any drainage costs attributable to the roads. Changing a roadway without moving or ensuring connectivity with the sewer system would result in roadway flooding and other issues. (Brundidge Dep 56:23-57:49.) Thus, when DPW makes a change to City roads that impacts sewer system infrastructure, DPW also relocates the existing sewer system infrastructure, at a cost of approximately $1,000,000/mile. (Brundidge Dep 46:18-47:13, 56:4-8, 60:22-61:69.) DPW does not charge for the cost of maintaining roads and/or making improvements to roads and curbs to facilitate the conveyance of stormwater to the system. (Duggan Dep 32:22-24, 33:10-19; Brundidge Dep 41:13-43:6, 44:6-17, 45:2-14.) If DPW did not consider stormwater conveyance when maintaining and repairing City roads, DWSD would be required to reconnect and relocate sewer infrastructure to ensure connectivity with the roads, which would cost millions of dollars annually. (Duggan Dep 49:6-21.)

Essentially, DWSD and DPW share the cost of providing drainage services to customers in the City: DWSD'S costs are those recovered via a drainage fee, and DPW bears the costs of the drainage functions performed by the roads. (Aldrich Dep 50:9-17, 50:23-51:3; Pospiech Dep 46:22-23.) It is extremely common for a municipality's roads department not to be charged a monetary fee for drainage services because the roads provide in-kind services. (Aldrich Dep 67:9-24.) In addition, for ratemaking purposes, it is well-accepted for municipalities to treat municipal roads as part of the stormwater conveyance system. (Rothstein Dep 40:25-41:11.)

In March, 2021, after the City settled issues related to bifurcation with the GLWA, the City initiated a cost-of-service study with Stantec, a rate consultant, and Stantec finalized the post-bifurcation study setting FY 2023 rates on September 19, 2022. (Pospiech Aff ¶6, Ex C.) The Stantec conducted two analyses comparing the benefits provided by public rights of way (ROW) against the costs of providing drainage services to the ROW. It concluded that DWSD gains no net benefit from charging the ROW for drainage. The report stated that ROW "serve as vital components of the DWSD drainage system…[w]ithout these key assets DWSD would be required to develop alternative infrastructure to convey runoff and therefore the ROW are considered integral to the drainage conveyance network. It is important to take these benefits into account as part of the drainage rate calculations." (Pospiech Dep ¶6, Ex C pp 44-45, 117-118.)

Plaintiffs note that while the City does not charge its own roads for drainage, county and state roads are charged, but at a lower rate than other parcel-based acreage subject to the drainage charge. They point out that MDOT and Wayne County now pay $93.28 per acre per month for stormwater control, rather than the $139.53 monthly rate charged prior to 2016. Both sides agree that MDOT and Wayne County charges are governed by consent orders and settlement agreements negotiated in litigation. Specifically, those agreements govern the rates and IA allocable to those roads. (Brown Aff Ex E, Drainage Charge Q&A p 6; Pospiech Dep 151:9-13; Hudson Dep 24:2-18, 88:5-8; Brown Dep 32:19-33:5; Def PFF, Ex 1 & Ex 2.)

C. The fee is voluntary because property owners can limit use of the drainage system.

Pursuant to *Bolt*, a third criterion of a fee, as opposed to a tax, is voluntariness, which is when property owners are able to refuse or limit their use of the commodity or service. *Bolt* at 162.

The City essentially provides three types of credits to drainage customers. Parcels that drain directly into rivers (such as the Detroit River or Rouge River) are provided a 100% drainage credit. (Facaneau Aff ¶¶13-14.) Drainage customers can offset up to 80% of their charges using green credits, and thereby limit use of the system. Finally, residential parcels are provided a 25% credit because residential parcels with a lower percent imperviousness contribute proportionately less stormwater than non-residential properties with higher percentages of imperviousness. (Aldrich Report at 7.) (This is because within properties with a smaller percentage of imperviousness, stormwater from some of the impervious area flows onto pervious surfaces. Aldrich Report at 7.)

Other jurisdictions are split on whether a stormwater fee is voluntary. In *Dennehy v City of Gresham*, 12 Or. Tax 194, 196–98 (T.C.1992), the court concluded that the available choice to have undeveloped land did not make the stormwater fee voluntary. However, that ordinance did not provide for credits to offset or eliminate the fee. *Id* at 195–97. In a case where the ordinance did provide for credits, the court upheld the stormwater fee, concluding that it was voluntary. *Church of Peace v City of Rock Island*, 357 Ill.App.3d 471, 293 Ill.Dec. 784, 828 N.E.2d 1282, 1284 (2005). In *City of Lewiston v Gladu*, 2012 ME 42, ¶ 22, 40 A.3d 964, 970, the Court concluded that the stormwater fee was voluntary, but only because it offered the opportunity to receive a 100% credit.

In the present case, unless a property drains directly to a river, the maximum credit available for GSI is 80%. Based on the foregoing, the Court of Appeals concluded that the drainage charge is compulsory, but the discussion of voluntariness in *Bolt* referred to the ability to *limit* use of a service, without specifying the degree to which use must be limited to render a charge voluntary. The fact that property owners can substantially offset the drainage charge through GSI indicates that the charge is voluntary under *Bolt*.

II. Judge Gillis' opinion is not binding on this Court.

In supplemental briefs filed in June, 2023, Plaintiffs note that in an opinion and order issued June 30, 2022, in *City of Highland Park v Wayne County Land Bank Corporation*, Case No. 19-010949-CZ, appeal pending, Michigan Court of Appeals Case No. 362158, Judge John J. Gillis, Jr., concluded that the City of Highland Park's drainage ordinance violates the Headlee Amendment. Plaintiffs argue that Judge Gillis' decision should be considered by this Court as highly persuasive authority. Defendant responded to Plaintiffs' supplemental brief, arguing that (1) the charge at issue in *Highland Park* is allegedly for costs unrelated to drainage or sewer, (2) it is not clear that MCR 2.112(M) authorizes Plaintiffs' submission, and (3) the facts in *Highland Park* are distinguishable.

Upon review of the parties' supplemental briefs, the Court declines to consider Judge Gillis' opinion as persuasive authority. As Defendant points out, Judge Gillis concluded that "there

is evidence 100% of the capital improvement dollars in the single fund were intended to fund an entirely different system and infrastructure, without any funding for the stormwater system. Further, there is evidence that the charges are used to defray portions of the cost of other water utility services for which the City is billed by the GLWA." In the present case, there is no evidence the City of Detroit uses capital improvement dollars from the drainage charge to fund a different system. In addition, there is no evidence the drainage charge in this case is used to defray portions of the cost of other water utility services. The aforementioned critical distinctions render Judge Gillis' decision inapplicable to this case.

III. The Court need not reach Defendant's arguments the (1) federal law preempts application of Headlee, and (2) the drainage charge is pre-authorized under the Revenue Bond Act.

In its proposed conclusions of law, Defendant argued that (1) federal law requires the City to charge for drainage services and preempts application of the Headlee Amendment, and (2) the Revenue Bond Act (RBA) serves as pre-Headlee authorization for the City's drainage charge. Because the Court's proposed conclusion of law is that the drainage charge is a valid user fee under *Bolt*, the Court need not address Defendant's alternative arguments.

Conclusion

The evidence submitted by the parties supports the conclusion that the City of Detroit's drainage charge is regulatory, proportionate, and voluntary under *Bolt*. In accordance with Bolt, the drainage charge is regulatory because it seeks to defray the mandatory costs of a regulatory activity – the management, treatment, and disposal of stormwater. Moreover, the charge is recovered from the property owners who burden the CSS with stormwater via impervious acreage, which Defendant established is the best proxy and most proportionate, available method for measuring how much stormwater a parcel contributes to the CSS. There is no perfectly precise means of measuring stormwater runoff, just as there is no perfectly precise means of allocating costs between the sewer and drainage components of a CSS. But Defendant has established that the estimates and assumptions it relied upon in determining and allocating costs are reasonable, data-informed, and based on standard practices.

As described in detail herein, Defendants have demonstrated that the charge is proportional to the benefit being conferred. Plaintiffs' sense of disproportionality stems from the fact that the charge is not recovered from large portions of acreage – pervious area and City streets are not charged, and the DLBA has not been paying its bills. Charging pervious acreage for drainage would likely lower Plaintiffs' drainage rate, but there is no persuasive evidence that pervious acreage contributes to stormwater runoff. Charging City streets for drainage would likely result in higher rates for Plaintiffs, based on evidence that DPW would begin charging for drainage system maintenance it currently provides in lieu of cash payments for drainage fees. The evidence established that not charging pervious acreage and city roads for drainage is extremely common in communities that maintain a CSS.

The issue of the DLBA is more unique. The legislation that requires discharge of liens on property acquired by the DLBA is outside of the City's control, but the City does have a measure

of agency with respect to the collection of drainage charges billed to those properties held by the DLBA after it quiets title. In order to establish credibility with respect to those paying the uniform charge, it is critical that the City resolve its drainage charge collection impasse with the DLBA.

Finally, the evidence established that those subject to the drainage charge can significantly limit charges by implementing GSI, which suggests the charge is voluntary.

In accordance with the Court of Appeals' order dated March 2, 2021, in Case No. 337609, the Court respectfully submits this report on its proposed findings of fact and conclusions of law.

/s/ Patricia Fresard 8/8/2023

Hon. Patricia Perez Fresard
Circuit Court Judge