



Audit Committee

Friday, June 21, 2019 at 8:00 a.m.

5th Floor Board Room, Water Board Building
735 Randolph Street, Detroit, Michigan 48226
GLWater.org

AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF MINUTES
 - A. May 17, 2019 (Page 1)
 - B. May 29, 2019 (Page 5)
 - C. June 12, 2019 (Page 7)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
 - A. WRAP Reallocation Recommendation (Page 9)
7. NEW BUSINESS
 - A. FY 2020 State Revolving Fund (SRF) Project Plan Submittal for the Detroit Water and Sewerage Department Sewer Rehabilitation Project (Page 29)
 - B. Investment Market Update (Page 77)
8. REPORTS
 - A. Monthly Financial Report for March 2019 (Page 96)
 - B. FY 2019 Q3 Construction Work-in-Progress Report (Page 97)
 - C. Status Report: FY2019 Continuous Improvement Report (Page 151)
 - D. CFO Updates (verbal)
9. LOOK AHEAD
 - Next Audit Committee Meetings
 - A. Regular Meeting July 19, 2019 at 8 am
10. INFORMATION
11. OTHER MATTERS
12. ADJOURNMENT



Great Lakes Water Authority

735 Randolph Street
 Detroit, Michigan 48226
 glwater.legistar.com

Meeting Minutes - Draft

Audit Committee

Friday, May 17, 2019

8:00 AM

Water Board Building 5th Floor

1. Call To Order

Chairman Daddow called the meeting to order at 8:00 a.m.

2. Quorum Call

Present: 3 - Chairman Robert Daddow, Director Brian Baker, and Director Gary Brown

3. Approval of Agenda

Chairman Daddow requested a Motion to approve the Agenda.

Motion By: Gary Brown

Support By: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

4. Approval of Minutes

[2019-198](#) Approval of Minutes of April 24, 2019

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [April 24_2019 Audit Committee Meeting Minutes.pdf](#)

Chairman Daddow requested a Motion to approve the April 24, 2019 Audit Committee Meeting Minutes.

Motion By: Gary Brown

Support By: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

5. Public Comment

There were no public comments.

6. Old Business

None

7. New Business

A. [2019-199](#) WRAP Reallocation Recommendation

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [WRAP Reallocation Request 5.17.2019 Audit Committee.pdf](#)
[Table 2 and Table 3.pdf](#)
[Wayne Metro WRAP Reallocation Request 5.10.19.pdf](#)

Chairman Daddow requested a Motion to postpone Item 2019-199 (WRAP Reallocation Recommendation) to the June 21, 2019 Audit Committee Meeting.

Motion By: Gary Brown
Support By: Brian Baker
Action: Postponed
The motion carried by a unanimous vote.

B. [2019-202](#) The Foster Group Contract

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [Proposed Contract with The Foster Group.pdf](#)
[Proposed Contract - The Foster Group 5.17.2019.pdf](#)
[CS195 Status Report Proposal 051319.pdf](#)

Chairman Daddow requested a Motion to amend the Resolution to add a second resolve paragraph to include a transition plan with tasks and timelines, which will be presented at the June 12, 2019 Board of Directors Workshop Meeting.

Motion By: Brian Baker
Support By: Gary Brown
Action: Referred to the Board of Directors Workshop Meeting as Amended Agenda of June 12, 2019
The motion carried by a unanimous vote.

8. Reports

None

- A. [2019-200](#) Monthly Financial Report for February 2019
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [8A GLWA Monthly Financial Report February 2019.pdf](#)
- Motion By: Brian Baker**
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.
- B. [2019-201](#) Quarterly Investment Report through March 31, 2019
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [GLWA Audit Committee Memo_March 2019 Investment Report.pdf](#)
[GLWA Quarterly Report March 2019.pdf](#)
- Motion By: Gary Brown**
Support By: Brian Baker
Action: Received and Filed
The motion carried by a unanimous vote.
- C. [2019-203](#) May 6, 2019 Reconciliation Committee Meeting Update
- Sponsors:** Nicolette Bateson
- Indexes:** Finance
- Attachments:** [Reconciliation Committee Cover Memo 5.15.2019.pdf](#)
[Draft Reconciliation Committee Meeting Summary 5.6.2019_v2.pdf](#)
[DWSD Loan Receivable Amortization Schedule as of 2.13.2019_kg_4-30-2019.pdf](#)
[Draft DWSD Monthly Financial Report 5.6.2019.pdf](#)
[Draft DWSD Other Reports 5.6.2019 11x17.pdf](#)
- Motion By: Brian Baker**
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

D. [2019-204](#) CFO Updates

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [CFO Update 5.17.2019.pdf](#)

[FSA Strategic Resource Allocation 5.15.2019.pdf](#)

[Water Charge Initiatives 2019 Update 2.15.19.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Received and Filed

The motion carried by a unanimous vote.

9. Look Ahead

A Special Audit Committee Meeting regarding External Auditor RFP is scheduled for Wednesday, May 29, 2019 at 10:30 a.m.

The regular Audit Committee Meeting is scheduled for Friday, June 21, 2019 at 8:00 a.m .

10. Information

None

11. Other Matters

Chairman Daddow stated he attended the GLWA Vendor Outreach Event, which was well received and noted there were a series of questions regarding small business.

12. Adjournment

Chairman Daddow requested a Motion to Adjourn.

Motion By: Gary Brown

Support By: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 10:30 a.m.



Great Lakes Water Authority

735 Randolph Street
Detroit, Michigan 48226
glwater.legistar.com

Meeting Minutes - Draft

Audit Committee

Wednesday, May 29, 2019

10:30 AM

Water Board Building 5th Floor

Special Meeting

1. Call To Order

Chairman Daddow called the meeting to order at 10:35 a.m.

2. Quorum Call

Present: 3 - Chairman Robert Daddow, Director Brian Baker, and Director Gary Brown

3. Approval of Agenda

Chairman Daddow requested a Motion to approve the Agenda.

Motion By: Brian Baker

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

4. Approval of Minutes

None

5. Public Comment

There were no public comments.

6. Old Business

None

7. New Business

None

8. Reports

[2019-216](#) External Auditor Request for Proposal

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [GLWA Audit Committee Binder 5.29.2019.pdf](#)

No Action Taken

A. External Auditor Request for Proposal Process

B. External Auditor Interviews

Note: Chairman Daddow called the meeting into recess at 1:37 p.m., and called the meeting back to order at 1:41 p.m.

C. External Auditor Interview Deliberations

D. Review Tabulation of Hours and Fees

E. Next Steps

A Special Audit Committee Meeting will take place on Wednesday, June 12, 2019, at 12:30 p.m.

9. Look Ahead

Next Audit Committee Meetings
Special Meeting June 12, 2019 at 12:30 pm
Regular Meeting June 21, 2019 at 8:00 am

10. Information

None

11. Other Matters

None

12. Adjournment

Chairman Daddow requested a Motion to Adjourn.

Motion By: Brian Baker
Support By: Gary Brown
Action: Approved
The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 2:06 p.m.



Great Lakes Water Authority

735 Randolph Street
 Detroit, Michigan 48226
 glwater.legistar.com

Meeting Minutes - Draft

Audit Committee

Wednesday, June 12, 2019

12:30 PM

Water Board Building 5th Floor

Special Meeting

1. Call To Order

Chairman Daddow called the meeting to order at 12:30 p.m.

2. Quorum Call

Present: 3 - Chairman Robert Daddow, Director Brian Baker, and Director Gary Brown

3. Approval of Agenda

Director Daddow requested a Motion to approve the Agenda.

Motion By: Gary Brown

Support By: Brian Baker

Action: Approved

The motion carried by a unanimous vote.

4. Approval of Minutes

None

5. Public Comment

There were no public comments.

6. Old Business

A. [2019-244](#) Proposed Appointment of External Auditor

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [Proposed Appointment of External Auditor.pdf](#)

Motion By: Gary Brown

Support By: Brian Baker

Action: Recommended for Approval to the Board of Directors Workshop Meeting
 Agenda of June 12, 2019

The motion carried by a unanimous vote.

B. [2019-247](#) Proposed Resolution Related to FY 2017 Shared Services True Up

Sponsors: Nicolette Bateson

Indexes: Finance

Attachments: [FY 2017 Shared Services True-Up Completion.pdf](#)

Motion By: Gary Brown
Support By: Brian Baker
Action: Recommended for Approval to the Board of Directors Workshop Meeting
Agenda of June 12, 2019
The motion carried by a unanimous vote.

7. New Business

None

8. Reports

None

9. Look Ahead

The next Audit Committee Meeting is scheduled for Friday, June 21, 2019 at 8:00 a.m.

10. Information

None

11. Other Matters

None

12. Adjournment

Chairman Daddow requested a Motion to Adjourn.

Motion By: Brian Baker
Support By: Gary Brown
Action: Approved
The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 12:55 p.m.



Financial Services Audit Committee Communication

Date: June 21, 2019

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: Updated Water Residential Assistance Program- Uncommitted FY 2018 Funds
Reallocation Request

Background: The Water Residential Assistance Program (“WRAP”) provides sustainable funding for qualifying low-income residents served by the Great Lakes Water Authority’s (“GLWA”) customers. The program is funded by GLWA at an amount equal to 0.5 percent of budgeted revenues with the budgeted FY 2019 funding level of \$4.9 million combined for water and sewer services.

The scope of funding uses includes a) payment assistance and b) water audit and water conservation measures. Eligible residential customers with a past due bill and/or who are in active shut off can receive assistance with paying down arrears and receive \$25 toward monthly bill payment assistance annually up to \$1,000. High volume water users can receive a one-time home audit and home water conservation services up to \$1,000. Maximum annual assistance per household is \$2,000. To participate in WRAP, an applicant must have household gross incomes at or below 150% of the federal poverty income thresholds. Customers with water usage at or above 120% of the average residential usage are eligible to participate in a water audit and install water conservation measures. WRAP participants are also encouraged to participate in both financial coaching and water conservation workshops as well as other support services. The program is administered by Wayne Metro Community Action Agency (“Wayne Metro”), a nonprofit agency.

The WRAP began providing assistance to residents in the GLWA service area on March 1, 2016 and to date has committed almost \$13 million in assistance and conservation funds to qualified WRAP participants. WRAP has the potential to serve over 100 communities within the GLWA service area, but to assist qualified households, each community must opt into the program and sign a Memorandum of Agreement (MOA) with Wayne Metro. To date, 76 communities have opted into WRAP. A list of current participating communities is presented in **Table 1**.

Analysis: *WRAP Cashflow through June 30, 2018* **Table 2A** shows the WRAP cashflow of budgeted and committed funds in total and for each of the participating counties and the City of Detroit for the period of March 1,2016 to June 30, 2018. Through June 30, 2018, \$1,354,752 in assistance funds remain uncommitted and \$1,016,761 of conservation and repair dollars were unspent. Of the uncommitted amounts, \$929,733 in assistance funds and \$292,424 in conservation funds are related to the proposed FY 2018 funding reallocations, see Wayne Metro **Exhibit A**.

Table 1- WRAP Participating Communities

| | | |
|----------------------|--------------------------|-------------------------|
| Wayne County | Oakland County | Macomb County |
| Allen Park | Berkley | Centerline |
| Brownstown Township | Beverly Hills | Chesterfield Township |
| Canton Township | Bingham Farms | Clinton Township |
| Dearborn | Birmingham | Eastpointe |
| Dearborn Heights | Bloomfield Hills | Fraser |
| Detroit | Clawson | Macomb Township |
| Ecorse | Commerce Township | New Haven |
| Flat Rock | Farmington | Shelby Township |
| Garden City | Farmington Hills | St. Clair Shores |
| Gibraltar | Ferndale | Sterling Heights |
| Grosse Pointe Shores | Hazel Park | Utica |
| Hamtramck | Huntington Woods | Warren |
| Harper Woods | Keego Harbor | Washington Township |
| Inkster | Lathrup Village | |
| Lincoln Park | Madison Heights | Washtenaw County |
| Livonia | Oak Park | Augusta Township |
| Melvindale | Orchard Lake | Pittsfield Township |
| Northville | Orion Township | Superior Township |
| Plymouth | Oxford | Ypsilanti |
| Redford Township | Pleasant Ridge | Ypsilanti Township |
| River Rouge | Pontiac | |
| Romulus | Royal Oak | Lapeer County |
| Southgate | Royal Oak Township | Almont |
| Taylor | Southfield | Lapeer |
| Trenton | West Bloomfield Township | |
| Van Buren Township | | Genesee County |
| Wayne | Monroe County | Flint |
| Westland | Ash Township | |
| Woodhaven | | |

WRAP Cashflow through April 30, 2019 **Table 3A** shows the WRAP cashflow of budgeted and committed funds in total and for each of the participating counties and the City of Detroit for the period of March 1, 2016 to April 30, 2019. **Table 3A** includes the budgeted assistance and conservation funding allocations for FY 2019 in addition to the funding commitments for FY 2019. Through April 30, 2019, \$3,167,836 in assistance funds remain uncommitted and \$1,392,296 in conservation funds were unspent.

Wayne Metro Funding Recommendations

Based on the demonstrated usage of the WRAP funds since March 1, 2016 and the usage through the end of FY 2018, Wayne Metro is recommending reallocation of currently uncommitted FY 2018 suburban WRAP funds. Attached is Wayne Metro's letter (including referenced documents) dated June 14, 2019 which outlines their recommendations. Below is a summary of the recommendations:

1. *Reallocation of Uncommitted FY 2018 Assistance Funds:* WRAP utilization in FY 2018 for suburban Counties had uncommitted assistance dollars of \$929,733. This is down from the uncommitted funds from FY 2017 of \$1,063,519 as of June 30, 2018 (see **Exhibit A**). Wayne Metro is recommending the repurposing of \$254,732 in uncommitted assistance funds be used for conservation and repairs as noted in #2 below. The net amount resulting from this repurposing of funds is \$675,000 for reallocation consideration. From the \$675,000 in uncommitted FY 2018 Counties' funds, Wayne Metro is recommending a transfer to the City of Detroit in the amount of \$438,750 and to the City of Flint in the amount of \$236,250. **Table 2B** shows the effect of the proposed reallocation of these funds as of June 30, 2018.

2. *Reallocation of Uncommitted FY 2018 Conservation Funds:* In addition to the uncommitted assistance funds, \$292,424 remain from the suburban Counties' allocation of the conservation funds from FY 2018. Wayne Metro is recommending combining the \$254,732 of repurposed FY 2018 assistance funds (noted above) and the \$292,424 of unspent FY 2018 suburban Counties' conservation funds for a total of \$547,155. From the \$547,155, Wayne Metro is recommending the transfer of \$355,650 to the City of Detroit and \$191,505 to the City of Flint as shown in **Exhibit A. Table 2B** also shows the effect of the proposed reallocation of these funds as of June 30, 2018.

Table 3B shows the impact of the recommended reallocation of uncommitted FY 2018 assistance and conservation funds through April 30, 2019.

Budget Impact: None

Proposed Action: The GLWA Audit Committee recommends that the Great Lakes Water Authority Board approve the Wayne Metro recommendation to reallocate the net uncommitted FY 2018 assistance funds of \$675,000 (net of the \$254,732 repurposing of

uncommitted FY 2018 assistance funds); \$438,750 to Detroit and \$236,250 to Flint and approve the Wayne Metro recommendation to reallocate the uncommitted FY 2018 conservation funds of \$547,155 (including \$254,732 from uncommitted FY 2018 assistance funds); \$355,650 to Detroit and \$191,505 to Flint.

Table 2A

WRAP Fund Sources and Uses

(Unaudited)

TOTAL Activity March 1, 2016 to June 30, 2018

INCLUDES FY 2016, 2017 & 2018 FUNDING

INCLUDES REALLOCATION OF FY 2016 AND 2017 UNCOMMITTED FUNDS

| Row | | Detroit | Out-Wayne County | Oakland County | Macomb County | Washtenaw County | St. Clair County | Lapeer County | Monroe County | Genesee County | City of Flint | Total |
|-----|--|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|-------------------|----------------------|
| | Sources (Net Revenues) | | | | | | | | | | | |
| | FY 2016 Assistance Budget Allocation | | | | | | | | | | | |
| 1 | Bill and Arrearage Assistance | \$ 1,238,736 | \$ 748,629 | \$ 740,155 | \$ 379,764 | \$ 35,419 | \$ 3,051 | \$ 10,080 | \$ 5,093 | \$ 63,842 | \$ - | \$ 3,224,769 |
| 2 | Home Audit and Repairs | 288,022 | 174,066 | 172,096 | 88,300 | 8,235 | 709 | 2,344 | 1,184 | 14,500 | - | 749,457 |
| 3 | Total FY 2016 Assistance Budget Allocation | \$ 1,526,759 | \$ 922,695 | \$ 912,250 | \$ 468,064 | \$ 43,654 | \$ 3,760 | \$ 12,424 | \$ 6,277 | \$ 78,342 | \$ - | \$ 3,974,226 |
| | FY 2017 Assistance Budget Allocation | | | | | | | | | | | |
| 4 | Bill and Arrearage Assistance | \$ 1,278,103 | \$ 806,833 | \$ 774,825 | \$ 400,804 | \$ 37,998 | \$ 2,431 | \$ 10,059 | \$ 5,561 | \$ - | \$ - | \$ 3,316,615 |
| 5 | Home Audit and Repairs | 297,856 | 188,029 | 180,570 | 93,406 | 8,855 | 578 | 2,344 | 1,296 | - | - | 772,934 |
| 6 | Total FY 2017 Assistance Budget Allocation | \$ 1,575,960 | \$ 994,862 | \$ 955,395 | \$ 494,209 | \$ 46,853 | \$ 3,009 | \$ 12,403 | \$ 6,858 | \$ - | \$ - | \$ 4,089,549 |
| | FY 2018 Assistance Budget Allocation | | | | | | | | | | | |
| 7 | Bill and Arrearage Assistance | \$ 1,303,229 | \$ 848,676 | \$ 827,662 | \$ 429,388 | \$ 40,961 | \$ 2,604 | \$ 9,970 | \$ 5,908 | \$ 28,679 | \$ - | \$ 3,497,077 |
| 8 | Home Audit and Repairs | 303,712 | 197,780 | 192,883 | 100,067 | 9,546 | 607 | 2,323 | 1,377 | 6,684 | - | 814,978 |
| 9 | Total FY 2018 Assistance Budget Allocation | \$ 1,606,941 | \$ 1,046,457 | \$ 1,020,545 | \$ 529,454 | \$ 50,507 | \$ 3,211 | \$ 12,293 | \$ 7,285 | \$ 35,363 | \$ - | \$ 4,312,055 |
| 10 | TOTAL FY 2016, FY 2017 & FY 2018 Assistance Budget Allocation | \$ 4,709,660 | \$ 2,964,014 | \$ 2,888,190 | \$ 1,491,728 | \$ 141,014 | \$ 9,980 | \$ 37,120 | \$ 20,419 | \$ 113,705 | \$ - | \$ 12,375,830 |
| | Reallocation of Uncommitted Funds | | | | | | | | | | | |
| | Reallocation of Uncommitted Funds from FY 2016 (1) | | | | | | | | | | | |
| 11 | Bill and Arrearage Assistance Reallocated to Detroit | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 12 | Uncommitted FY 2016 Conservation Funds | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 13 | Bill and Arrearage Assistance Reallocated to Flint | - | - | - | - | (35,419) | (3,051) | (10,080) | (5,093) | (63,842) | 117,485 | - |
| 14 | Total Reallocation of Uncommitted Funds from FY 2016 | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ (35,419) | \$ (3,051) | \$ (10,080) | \$ (5,093) | \$ (63,842) | \$ 117,484 | \$ - |
| | Reallocation of Uncommitted Funds from FY 2017 (2) | | | | | | | | | | | |
| 15 | FY 2017 Reallocation of Assistance Funds | \$ 549,784 | \$ (486,355) | \$ (268,078) | \$ (262,634) | \$ (28,401) | \$ (2,431) | \$ (10,059) | \$ (5,561) | \$ - | \$ 307,535 | \$ (206,200) |
| 16 | FY 2017 Reallocation of Conservation Funds | 237,197 | (71,911) | (62,120) | (6,248) | (5,866) | (405) | (1,641) | (907) | - | 118,100 | 206,200 |
| 17 | Total Reallocation of Uncommitted Funds from FY 2017 | \$ 786,981 | \$ (558,266) | \$ (330,198) | \$ (268,882) | \$ (34,267) | \$ (2,836) | \$ (11,700) | \$ (6,468) | \$ - | \$ 425,635 | \$ - |
| 18 | Total Reallocation of Uncommitted FY 2016 and FY 2017 Funds | \$ 2,451,813 | \$ (1,276,619) | \$ (921,361) | \$ (624,198) | \$ (69,686) | \$ (5,887) | \$ (21,780) | \$ (11,561) | \$ (63,842) | \$ 543,120 | \$ - |
| 19 | NET FY 2016, FY 2017 & FY 2018 Assistance Available | \$ 7,161,473 | \$ 1,687,395 | \$ 1,966,830 | \$ 867,530 | \$ 71,328 | \$ 4,093 | \$ 15,340 | \$ 8,859 | \$ 49,862 | \$ 543,120 | \$ 12,375,830 |
| | Uses 3/01/2016 to 6/30/2018 | | | | | | | | | | | |
| 20 | Home Audits and Repair Paid to Date | 1,026,568 | 188,383 | 179,931 | 131,049 | 876 | - | - | - | - | - | 1,526,807 |
| 21 | Bill Assistance and Arrearages Paid to Date | 1,792,353 | 380,896 | 627,912 | 198,896 | 11,478 | - | - | - | - | - | 3,011,535 |
| 22 | Total Uses 3/01/2016 to 6/30/2018 | \$ 2,818,921 | \$ 569,279 | \$ 807,842 | \$ 329,945 | \$ 12,354 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 4,538,341 |
| | Committed Funds 3/01/2016 to 6/30/2018 | | | | | | | | | | | |
| 23 | Future Bill Assistance | \$ 3,054,364 | \$ 271,973 | \$ 270,277 | \$ 86,811 | \$ 4,186 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 3,687,611 |
| 24 | Future Arrearage Assistance | 1,187,968 | 247,787 | 272,146 | 64,537 | 5,928 | - | - | - | - | - | 1,778,365 |
| 25 | Total Committed Funds 3/01/2016 to 6/30/2018 | \$ 4,242,332 | \$ 519,760 | \$ 542,423 | \$ 151,347 | \$ 10,114 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 5,465,976 |
| 26 | Total Expenditures/Committed Funds | \$ 7,061,253 | \$ 1,089,038 | \$ 1,350,265 | \$ 481,292 | \$ 22,468 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 10,004,317 |
| 27 | Uncommitted Funds as of 6/30/2018 (line 23 - line 32) | \$ 100,220 | \$ 598,357 | \$ 616,565 | \$ 386,238 | \$ 48,860 | \$ 4,093 | \$ 15,340 | \$ 8,859 | \$ 49,862 | \$ 543,120 | \$ 2,371,513 |
| | Summary of Uncommitted Funds 6/30/2018 | | | | | | | | | | | |
| 28 | Uncommitted Conservation | \$ 100,220 | \$ 299,582 | \$ 303,498 | \$ 144,475 | \$ 19,894 | \$ 1,489 | \$ 5,370 | \$ 2,950 | \$ 21,184 | \$ 118,100 | \$ 1,016,761 |
| 29 | Uncommitted Assistance | 0 | 298,775 | 313,067 | 241,763 | 28,966 | 2,604 | 9,970 | 5,909 | 28,679 | 425,020 (3) | 1,354,752 |
| 30 | Total Uncommitted Funds as of 6/30/2018 | \$ 100,220 | \$ 598,357 | \$ 616,565 | \$ 386,238 | \$ 48,860 | \$ 4,093 | \$ 15,340 | \$ 8,859 | \$ 49,862 | \$ 543,120 | \$ 2,371,513 |

(1) Based on April 26, 2017 Board of Directors action
(2) Based on August 22, 2018 Board of Directors action
(3) Balance as of 4.30.19 is \$0.00

Table 2B

WRAP Fund Sources and Uses

(Unaudited)

TOTAL Activity March 1, 2016 to June 30, 2018

INCLUDES FY 2016, 2017 & 2018 FUNDING

INCLUDES REALLOCATION OF FY 2016, 2017 AND 2018 UNCOMMITTED FUNDS

| Row | | Detroit | Out-Wayne County | Oakland County | Macomb County | Washtenaw County | St. Clair County | Lapeer County | Monroe County | Genesee County | City of Flint | Total |
|-----|--|---------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|-------------------|----------------------|
| | Sources (Net Revenues) | | | | | | | | | | | |
| | FY 2016 Assistance Budget Allocation | | | | | | | | | | | |
| 1 | Bill and Arrearage Assistance | \$ 1,238,736 | \$ 748,629 | \$ 740,155 | \$ 379,764 | \$ 35,419 | \$ 3,051 | \$ 10,080 | \$ 5,093 | \$ 63,842 | \$ - | \$ 3,224,769 |
| 2 | Home Audit and Repairs | 288,022 | 174,066 | 172,096 | 88,300 | 8,235 | 709 | 2,344 | 1,184 | 14,500 | - | 749,457 |
| 3 | Total FY 2016 Assistance Budget Allocation | \$ 1,526,759 | \$ 922,695 | \$ 912,250 | \$ 468,064 | \$ 43,654 | \$ 3,760 | \$ 12,424 | \$ 6,277 | \$ 78,342 | \$ - | \$ 3,974,226 |
| | FY 2017 Assistance Budget Allocation | | | | | | | | | | | |
| 5 | Bill and Arrearage Assistance | \$ 1,278,103 | \$ 806,833 | \$ 774,825 | \$ 400,804 | \$ 37,998 | \$ 2,431 | \$ 10,059 | \$ 5,561 | \$ - | \$ - | \$ 3,316,615 |
| 6 | Home Audit and Repairs | 297,856 | 188,029 | 180,570 | 93,406 | 8,855 | 578 | 2,344 | 1,296 | - | - | 772,934 |
| 7 | Total FY 2017 Assistance Budget Allocation | \$ 1,575,960 | \$ 994,862 | \$ 955,395 | \$ 494,209 | \$ 46,853 | \$ 3,009 | \$ 12,403 | \$ 6,858 | \$ - | \$ - | \$ 4,089,549 |
| | FY 2018 Assistance Budget Allocation | | | | | | | | | | | |
| 9 | Bill and Arrearage Assistance | \$ 1,303,229 | \$ 848,676 | \$ 827,662 | \$ 429,388 | \$ 40,961 | \$ 2,604 | \$ 9,970 | \$ 5,908 | \$ 28,679 | \$ - | \$ 3,497,077 |
| 10 | Home Audit and Repairs | 303,712 | 197,780 | 192,883 | 100,067 | 9,546 | 607 | 2,323 | 1,377 | 6,684 | - | 814,978 |
| 11 | Total FY 2018 Assistance Budget Allocation | \$ 1,606,941 | \$ 1,046,457 | \$ 1,020,545 | \$ 529,454 | \$ 50,507 | \$ 3,211 | \$ 12,293 | \$ 7,285 | \$ 35,363 | \$ - | \$ 4,312,055 |
| 12 | NET FY 2016, FY 2017 & FY 2018 Assistance Available | \$ 4,709,660 | \$ 2,964,014 | \$ 2,888,190 | \$ 1,491,728 | \$ 141,014 | \$ 9,980 | \$ 37,120 | \$ 20,419 | \$ 113,705 | \$ - | \$ 12,375,830 |
| | Reallocation of Uncommitted Funds | | | | | | | | | | | |
| | Reallocation of Uncommitted Funds from FY 2016 (1) | | | | | | | | | | | |
| 13 | Bill and Arrearage Assistance Reallocated to Detroit | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 14 | Uncommitted FY 2016 Conservation Funds | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 15 | Bill and Arrearage Assistance Reallocated to Flint | - | - | - | - | (35,419) | (3,051) | (10,080) | (5,093) | (63,842) | 117,485 | - |
| 16 | Total Reallocation of Uncommitted Funds from FY 2016 | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ (35,419) | \$ (3,051) | \$ (10,080) | \$ (5,093) | \$ (63,842) | \$ 117,485 | \$ - |
| | Reallocation of Uncommitted Funds from FY 2017 (2) | | | | | | | | | | | |
| 18 | FY 2017 Reallocation of Assistance Funds | \$ 549,784 | \$ (486,355) | \$ (268,078) | \$ (262,634) | \$ (28,401) | \$ (2,431) | \$ (10,059) | \$ (5,561) | \$ - | \$ 307,535 | \$ (206,200) |
| 19 | FY 2017 Reallocation of Conservation Funds | 237,197 | (71,911) | (62,120) | (6,248) | (5,866) | (405) | (1,641) | (907) | - | 118,100 | 206,200 |
| 20 | Total Reallocation of Uncommitted Funds from FY 2017 | \$ 786,981 | \$ (558,266) | \$ (330,198) | \$ (268,882) | \$ (34,267) | \$ (2,836) | \$ (11,700) | \$ (6,468) | \$ - | \$ 425,635 | \$ - |
| | Proposed Reallocation of Uncommitted Funds from FY 2018 (3) | | | | | | | | | | | |
| 22 | FY 2018 Reallocation of Assistance Funds | \$ 438,750 | \$ (298,775) | \$ (313,067) | \$ (241,763) | \$ (28,966) | \$ (2,604) | \$ (9,970) | \$ (5,908) | \$ (28,679) | \$ 236,250 | \$ (254,732) |
| 23 | FY 2018 Reallocation of Conservation Funds | 355,650 | (96,982) | (116,197) | (59,108) | (9,145) | (607) | (2,323) | (1,377) | (6,684) | 191,505 | 254,732 |
| 24 | Total Proposed Reallocation of Uncommitted Funds from FY 2018 (3) | \$ 794,400 | \$ (395,757) | \$ (429,265) | \$ (300,871) | \$ (38,111) | \$ (3,211) | \$ (12,293) | \$ (7,285) | \$ (35,363) | \$ 427,755 | \$ - |
| 25 | Total Reallocation of Uncommitted Funds | \$ 3,246,213 | \$ (1,672,375) | \$ (1,350,626) | \$ (925,069) | \$ (107,797) | \$ (9,097) | \$ (34,073) | \$ (18,846) | \$ (99,205) | \$ 970,875 | \$ - |
| 26 | NET FY 2016, FY 2017 & FY 2018 Assistance Available | \$ 7,955,873 | \$ 1,291,638 | \$ 1,537,565 | \$ 566,659 | \$ 33,217 | \$ 882 | \$ 3,047 | \$ 1,574 | \$ 14,500 | \$ 970,875 | \$ 12,375,830 |
| | Uses 3/01/2016 to 6/30/2018 | | | | | | | | | | | |
| 28 | Home Audits and Repair Paid to Date | 1,026,567 | 188,383 | 179,931 | 131,049 | 876 | - | - | - | - | - | 1,526,807 |
| 29 | Bill Assistance and Arrearages Paid to Date | 1,792,353 | 380,896 | 627,912 | 198,896 | 11,478 | - | - | - | - | - | 3,011,534 |
| 30 | Total Uses 3/01/2016 to 6/30/2018 | \$ 2,818,921 | \$ 569,278 | \$ 807,843 | \$ 329,945 | \$ 12,355 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 4,538,341 |
| | Less: Committed Funds 3/01/2016 to 6/30/2018 | | | | | | | | | | | |
| 32 | Future Bill Assistance | \$ 3,054,364 | \$ 271,972 | \$ 270,277 | \$ 86,811 | \$ 4,186 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 3,687,610 |
| 33 | Future Arrearage Assistance | 1,187,968 | 247,786 | 272,146 | 64,537 | 5,928 | - | - | - | - | - | 1,778,365 |
| 34 | Total Committed Funds 3/01/2016 to 6/30/2018 | \$ 4,242,332 | \$ 519,759 | \$ 542,422 | \$ 151,347 | \$ 10,114 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 5,465,976 |
| 35 | Total Expenditures/Committed Funds | \$ 7,061,253 | \$ 1,089,037 | \$ 1,350,265 | \$ 481,292 | \$ 22,469 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 10,004,317 |
| 36 | Uncommitted Funds as of 4/30/2019 (line 26 - line 35) | \$ 894,620 | \$ 202,601 | \$ 187,300 | \$ 85,366 | \$ 10,748 | \$ 882 | \$ 3,047 | \$ 1,574 | \$ 14,500 | \$ 970,875 | \$ 2,371,513 |
| | Summary of Uncommitted Funds 6/30/2018 | | | | | | | | | | | |
| 38 | Uncommitted Conservation | \$ 455,870 | \$ 202,601 | \$ 187,300 | \$ 85,366 | \$ 10,748 | \$ 882 | \$ 3,047 | \$ 1,574 | \$ 14,500 | \$ 309,605 | \$ 1,271,493 |
| 39 | Uncommitted Assistance | 438,750 | - | - | - | - | - | - | - | 0 | 661,270 (4) | 1,100,020 |
| 40 | Total Uncommitted Funds as of 6/30/2018 | \$ 894,620 | \$ 202,601 | \$ 187,300 | \$ 85,366 | \$ 10,748 | \$ 882 | \$ 3,047 | \$ 1,574 | \$ 14,500 | \$ 970,875 | \$ 2,371,513 |

(1) Based on April 26, 2017 Board of Directors action
(2) Based on August 22, 2018 Board of Directors action
(3) Based on 6.13.19 Wayne Metro Recommendation
(4) As of 4.30.19, \$425,020 of this balance was committed

Table 3A

WRAP Fund Sources and Uses

(Unaudited)

TOTAL Activity March 1, 2016 to April 30, 2019

INCLUDES FY 2016- 2019 FUNDING

INCLUDES REALLOCATION OF FY 2016, 2017 AND 2018 UNCOMMITTED FUNDS

| Row | Detroit | Out-Wayne County | Oakland County | Macomb County | Washtenaw County | St. Clair County | Lapeer County | Monroe County | Genesee County | City of Flint | Total |
|---|---------------------|-----------------------|---------------------|---------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|----------------------|
| Sources (Net Revenues) | | | | | | | | | | | |
| FY 2016 Assistance Budget Allocation | | | | | | | | | | | |
| 1 | \$ 1,238,736 | \$ 748,629 | \$ 740,155 | \$ 379,764 | \$ 35,419 | \$ 3,051 | \$ 10,080 | \$ 5,093 | \$ 63,842 | \$ - | \$ 3,224,769 |
| 2 | 288,022 | 174,066 | 172,096 | 88,300 | 8,235 | 709 | 2,344 | 1,184 | 14,500 | - | 749,457 |
| 3 | \$ 1,526,759 | \$ 922,695 | \$ 912,250 | \$ 468,064 | \$ 43,654 | \$ 3,760 | \$ 12,424 | \$ 6,277 | \$ 78,342 | \$ - | \$ 3,974,226 |
| FY 2017 Assistance Budget Allocation | | | | | | | | | | | |
| 4 | \$ 1,278,103 | \$ 806,833 | \$ 774,825 | \$ 400,804 | \$ 37,998 | \$ 2,431 | \$ 10,059 | \$ 5,561 | \$ - | \$ - | \$ 3,316,615 |
| 5 | 297,856 | 188,029 | 180,570 | 93,406 | 8,855 | 578 | 2,344 | 1,296 | - | - | 772,934 |
| 6 | \$ 1,575,960 | \$ 994,862 | \$ 955,395 | \$ 494,209 | \$ 46,853 | \$ 3,009 | \$ 12,403 | \$ 6,858 | \$ - | \$ - | \$ 4,089,549 |
| FY 2018 Assistance Budget Allocation | | | | | | | | | | | |
| 7 | \$ 1,303,229 | \$ 848,677 | \$ 827,662 | \$ 429,388 | \$ 40,961 | \$ 2,604 | \$ 9,970 | \$ 5,908 | \$ 28,679 | \$ - | \$ 3,497,078 |
| 8 | 303,712 | 197,780 | 192,883 | 100,067 | 9,546 | 607 | 2,323 | 1,377 | 6,684 | - | 814,979 |
| 9 | \$ 1,606,941 | \$ 1,046,457 | \$ 1,020,545 | \$ 529,455 | \$ 50,507 | \$ 3,211 | \$ 12,294 | \$ 7,285 | \$ 35,363 | \$ - | \$ 4,312,057 |
| FY 2019 Assistance Budget Allocation | | | | | | | | | | | |
| 10 | \$ 1,405,432 | \$ 818,952 | \$ 866,319 | \$ 452,003 | \$ 39,783 | \$ 2,862 | \$ 11,131 | \$ 6,392 | \$ - | \$ 17,202 | \$ 3,620,075 |
| 11 | 327,530 | 190,853 | 201,892 | 105,337 | 9,271 | 667 | 2,594 | 1,490 | - | 4,009 | 843,643 |
| 12 | \$ 1,732,962 | \$ 1,009,805 | \$ 1,068,211 | \$ 557,340 | \$ 49,054 | \$ 3,529 | \$ 13,725 | \$ 7,882 | \$ - | \$ 21,211 | \$ 4,463,718 |
| 13 | \$ 6,442,621 | \$ 3,973,819 | \$ 3,956,402 | \$ 2,049,068 | \$ 190,069 | \$ 13,509 | \$ 50,846 | \$ 28,301 | \$ 113,705 | \$ 21,211 | \$ 16,839,550 |
| Reallocation of Uncommitted Funds | | | | | | | | | | | |
| Reallocation of Uncommitted Funds from FY 2016 (1) | | | | | | | | | | | |
| 14 | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 15 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 16 | - | - | - | - | (35,419) | (3,051) | (10,080) | (5,093) | (63,842) | 117,485 | - |
| 17 | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ (35,419) | \$ (3,051) | \$ (10,080) | \$ (5,093) | \$ (63,842) | \$ 117,485 | \$ - |
| Reallocation of Uncommitted Funds from FY 2017 (2) | | | | | | | | | | | |
| 18 | \$ 549,784 | \$ (486,355) | \$ (268,078) | \$ (262,634) | \$ (28,401) | \$ (2,431) | \$ (10,059) | \$ (5,561) | \$ - | \$ 307,535 | \$ (206,200) |
| 19 | 237,197 | (71,911) | (62,120) | (6,248) | (5,866) | (405) | (1,641) | (907) | - | 118,100 | 206,200 |
| 20 | \$ 786,981 | \$ (558,266) | \$ (330,198) | \$ (268,882) | \$ (34,267) | \$ (2,836) | \$ (11,700) | \$ (6,468) | \$ - | \$ 425,635 | \$ - |
| 21 | \$ 2,451,813 | \$ (1,276,619) | \$ (921,361) | \$ (624,198) | \$ (69,686) | \$ (5,887) | \$ (21,780) | \$ (11,561) | \$ (63,842) | \$ 543,120 | \$ - |
| 22 | \$ 8,894,434 | \$ 2,697,200 | \$ 3,035,041 | \$ 1,424,870 | \$ 120,383 | \$ 7,622 | \$ 29,065 | \$ 16,740 | \$ 49,863 | \$ 564,331 | \$ 16,839,550 |
| Uses 3/01/2016 to 4/30/2019 | | | | | | | | | | | |
| 23 | 1,424,100 | 219,255 | 205,082 | 142,750 | 3,730 | - | - | - | - | - | 1,994,917 |
| 24 | 3,798,431 | 631,330 | 921,890 | 316,340 | 14,485 | - | - | - | - | 86,312 | 5,768,789 |
| 25 | \$ 5,222,531 | \$ 850,586 | \$ 1,126,971 | \$ 459,090 | \$ 18,216 | \$ - | \$ - | \$ - | \$ - | \$ 86,312 | \$ 7,763,706 |
| Less: Committed Funds 3/01/2016 to 4/30/2019 | | | | | | | | | | | |
| 26 | \$ 1,195,137 | \$ 224,008 | \$ 85,680 | \$ 17,657 | \$ 6,130 | \$ - | \$ - | \$ - | \$ - | \$ 86,197 | \$ 1,614,809 |
| 27 | 1,961,468 | 397,697 | 184,573 | 74,654 | 12,799 | - | - | - | - | 269,713 | 2,900,902 |
| 28 | \$ 3,156,605 | \$ 621,704 | \$ 270,253 | \$ 92,311 | \$ 18,929 | \$ - | \$ - | \$ - | \$ - | \$ 355,910 | \$ 4,515,712 |
| 29 | \$ 8,379,136 | \$ 1,472,290 | \$ 1,397,224 | \$ 551,401 | \$ 37,145 | \$ - | \$ - | \$ - | \$ - | \$ 442,222 | \$ 12,279,418 |
| 30 | \$ 515,298 | \$ 1,224,910 | \$ 1,637,817 | \$ 873,470 | \$ 83,238 | \$ 7,622 | \$ 29,065 | \$ 16,740 | \$ 49,863 | \$ 122,109 | \$ 4,560,132 |
| Summary of Uncommitted Funds 4/30/2019 | | | | | | | | | | | |
| 31 | \$ 30,218 | \$ 459,563 | \$ 480,239 | \$ 238,112 | \$ 26,311 | \$ 2,156 | \$ 7,964 | \$ 4,440 | \$ 21,184 | \$ 122,109 | \$ 1,392,296 |
| 32 | 485,080 | 765,347 | 1,157,578 | 635,358 | 56,927 | 5,466 | 21,101 | 12,300 | 28,679 | 0 | 3,167,836 |
| 33 | \$ 515,298 | \$ 1,224,910 | \$ 1,637,817 | \$ 873,470 | \$ 83,238 | \$ 7,622 | \$ 29,065 | \$ 16,740 | \$ 49,863 | \$ 122,109 | \$ 4,560,132 |

(1) Based on April 26, 2017 Board of Directors action
(2) Based on August 22, 2018 Board of Directors action

Table 3B

WRAP Fund Sources and Uses

(Unaudited)

TOTAL Activity March 1, 2016 to April 30, 2019

INCLUDES FY 2016- 2019 FUNDING

INCLUDES REALLOCATION OF FY 2016 AND 2017 UNCOMMITTED FUNDS

| Row | | Detroit | Out-Wayne County | Oakland County | Macomb County | Washtenaw County | St. Clair County | Lapeer County | Monroe County | Genesee County | City of Flint | Total |
|-----|--|---------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|-------------------|----------------------|
| | Sources (Net Revenues) | | | | | | | | | | | |
| | FY 2016 Assistance Budget Allocation | | | | | | | | | | | |
| 1 | Bill and Arrearage Assistance | \$ 1,238,736 | \$ 748,629 | \$ 740,155 | \$ 379,764 | \$ 35,419 | \$ 3,051 | \$ 10,080 | \$ 5,093 | \$ 63,842 | \$ - | \$ 3,224,769 |
| 2 | Home Audit and Repairs | 288,022 | 174,066 | 172,096 | 88,300 | 8,235 | 709 | 2,344 | 1,184 | 14,500 | - | 749,457 |
| 3 | Total FY 2016 Assistance Budget Allocation | \$ 1,526,759 | \$ 922,695 | \$ 912,250 | \$ 468,064 | \$ 43,654 | \$ 3,760 | \$ 12,424 | \$ 6,277 | \$ 78,342 | \$ - | \$ 3,974,226 |
| | FY 2017 Assistance Budget Allocation | | | | | | | | | | | |
| 5 | Bill and Arrearage Assistance | \$ 1,278,103 | \$ 806,833 | \$ 774,825 | \$ 400,804 | \$ 37,998 | \$ 2,431 | \$ 10,059 | \$ 5,561 | \$ - | \$ - | \$ 3,316,615 |
| 6 | Home Audit and Repairs | 297,856 | 188,029 | 180,570 | 93,406 | 8,855 | 578 | 2,344 | 1,296 | - | - | 772,934 |
| 7 | Total FY 2017 Assistance Budget Allocation | \$ 1,575,960 | \$ 994,862 | \$ 955,395 | \$ 494,209 | \$ 46,853 | \$ 3,009 | \$ 12,403 | \$ 6,858 | \$ - | \$ - | \$ 4,089,549 |
| | FY 2018 Assistance Budget Allocation | | | | | | | | | | | |
| 9 | Bill and Arrearage Assistance | \$ 1,303,229 | \$ 848,677 | \$ 827,662 | \$ 429,388 | \$ 40,961 | \$ 2,604 | \$ 9,970 | \$ 5,908 | \$ 28,679 | \$ - | \$ 3,497,078 |
| 10 | Home Audit and Repairs | 303,712 | 197,780 | 192,883 | 100,067 | 9,546 | 607 | 2,323 | 1,377 | 6,684 | - | 814,979 |
| 11 | Total FY 2018 Assistance Budget Allocation | \$ 1,606,941 | \$ 1,046,457 | \$ 1,020,545 | \$ 529,455 | \$ 50,507 | \$ 3,211 | \$ 12,294 | \$ 7,285 | \$ 35,363 | \$ - | \$ 4,312,057 |
| | FY 2019 Assistance Budget Allocation | | | | | | | | | | | |
| 13 | Bill and Arrearage Assistance | \$ 1,405,432 | \$ 818,952 | \$ 866,319 | \$ 452,003 | \$ 39,783 | \$ 2,862 | \$ 11,131 | \$ 6,392 | \$ - | \$ 17,202 | \$ 3,620,075 |
| 14 | Home Audit and Repairs | 327,530 | 190,853 | 201,892 | 105,337 | 9,271 | 667 | 2,594 | 1,490 | - | 4,009 | 843,643 |
| 15 | Total FY 2019 Assistance Budget Allocation | \$ 1,732,962 | \$ 1,009,805 | \$ 1,068,211 | \$ 557,340 | \$ 49,054 | \$ 3,529 | \$ 13,725 | \$ 7,882 | \$ - | \$ 21,211 | \$ 4,463,718 |
| 16 | NET FY 2016-2019 Assistance Available | \$ 6,442,621 | \$ 3,973,819 | \$ 3,956,402 | \$ 2,049,068 | \$ 190,069 | \$ 13,509 | \$ 50,846 | \$ 28,301 | \$ 113,705 | \$ 21,211 | \$ 16,839,550 |
| | Reallocation of Uncommitted Funds | | | | | | | | | | | |
| | Reallocation of Uncommitted Funds from FY 2016 (1) | | | | | | | | | | | |
| 18 | Bill and Arrearage Assistance Reallocated to Detroit | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 19 | Uncommitted FY 2016 Conservation Funds | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| 20 | Bill and Arrearage Assistance Reallocated to Flint | \$ - | \$ - | \$ - | \$ - | \$ (35,419) | \$ (3,051) | \$ (10,080) | \$ (5,093) | \$ (63,842) | \$ 117,485 | \$ - |
| 21 | Total Reallocation of Uncommitted Funds from FY 2016 | \$ 1,664,833 | \$ (718,353) | \$ (591,163) | \$ (355,316) | \$ (35,419) | \$ (3,051) | \$ (10,080) | \$ (5,093) | \$ (63,842) | \$ 117,485 | \$ - |
| | Reallocation of Uncommitted Funds from FY 2017 (2) | | | | | | | | | | | |
| 23 | FY 2017 Reallocation of Assistance Funds | \$ 549,784 | \$ (486,355) | \$ (268,078) | \$ (262,634) | \$ (28,401) | \$ (2,431) | \$ (10,059) | \$ (5,561) | \$ - | \$ 307,535 | \$ (206,200) |
| 24 | FY 2017 Reallocation of Conservation Funds | 237,197 | (71,911) | (62,120) | (6,248) | (5,866) | (405) | (1,641) | (907) | - | 118,100 | 206,200 |
| 25 | Total Reallocation of Uncommitted Funds from FY 2017 | \$ 786,981 | \$ (558,266) | \$ (330,198) | \$ (268,882) | \$ (34,267) | \$ (2,836) | \$ (11,700) | \$ (6,468) | \$ - | \$ 425,635 | \$ - |
| | Proposed Reallocation of Uncommitted Funds from FY 2018 (3) | | | | | | | | | | | |
| 27 | FY 2018 Reallocation of Assistance Funds | \$ 438,750 | \$ (298,775) | \$ (313,067) | \$ (241,763) | \$ (28,966) | \$ (2,604) | \$ (9,970) | \$ (5,908) | \$ (28,679) | \$ 236,250 | \$ (254,732) |
| 28 | FY 2018 Reallocation of Conservation Funds | 355,650 | (96,982) | (116,197) | (59,108) | (9,145) | (607) | (2,323) | (1,377) | (6,684) | 191,505 | 254,732 |
| 29 | Total Proposed Reallocation of Uncommitted Funds from FY 2018 (3) | \$ 794,400 | \$ (395,757) | \$ (429,264) | \$ (300,871) | \$ (38,111) | \$ (3,211) | \$ (12,293) | \$ (7,285) | \$ (35,363) | \$ 427,755 | \$ - |
| 30 | Total Reallocation of Uncommitted Funds | \$ 3,246,213 | \$ (1,672,375) | \$ (1,350,625) | \$ (925,069) | \$ (107,797) | \$ (9,097) | \$ (34,073) | \$ (18,846) | \$ (99,205) | \$ 970,875 | \$ - |
| 31 | NET FY 2016-2019 Assistance Available | \$ 9,688,834 | \$ 2,301,444 | \$ 2,605,777 | \$ 1,123,999 | \$ 82,272 | \$ 4,411 | \$ 16,772 | \$ 9,455 | \$ 14,500 | \$ 992,086 | \$ 16,839,550 |
| | Uses 3/01/2016 to 4/30/2019 | | | | | | | | | | | |
| 33 | Home Audits and Repair Paid to Date | 1,424,100 | 219,255 | 205,082 | 142,750 | 3,730 | - | - | - | - | - | 1,994,917 |
| 34 | Bill Assistance and Arrearages Paid to Date | 3,798,431 | 631,330 | 921,890 | 316,340 | 14,485 | - | - | - | - | 86,312 | 5,768,789 |
| 35 | Total Uses 3/01/2016 to 4/30/2019 | \$ 5,222,531 | \$ 850,586 | \$ 1,126,971 | \$ 459,090 | \$ 18,216 | \$ - | \$ - | \$ - | \$ - | \$ 86,312 | \$ 7,763,706 |
| | Less: Committed Funds 3/01/2016 to 4/30/2019 | | | | | | | | | | | |
| 37 | Future Bill Assistance | \$ 1,195,137 | \$ 224,008 | \$ 85,680 | \$ 17,657 | \$ 6,130 | \$ - | \$ - | \$ - | \$ - | \$ 86,197 | \$ 1,614,809 |
| 38 | Future Arrearage Assistance | 1,961,468 | 397,697 | 184,573 | 74,654 | 12,799 | - | - | - | - | 269,713 | 2,900,902 |
| 39 | Total Committed Funds 3/01/2016 to 4/30/2019 | \$ 3,156,605 | \$ 621,704 | \$ 270,253 | \$ 92,311 | \$ 18,929 | \$ - | \$ - | \$ - | \$ - | \$ 355,910 | \$ 4,515,712 |
| 40 | Total Expenditures/Committed Funds | \$ 8,379,136 | \$ 1,472,290 | \$ 1,397,224 | \$ 551,401 | \$ 37,145 | \$ - | \$ - | \$ - | \$ - | \$ 442,222 | \$ 12,279,418 |
| 41 | Uncommitted Funds as of 4/30/2019 (line 31 - line 40) | \$ 1,309,698 | \$ 829,154 | \$ 1,208,552 | \$ 572,599 | \$ 45,127 | \$ 4,411 | \$ 16,772 | \$ 9,455 | \$ 14,500 | \$ 549,864 | \$ 4,560,132 |
| | Summary of Uncommitted Funds 4/30/2019 | | | | | | | | | | | |
| 43 | Uncommitted Conservation | \$ 385,868 | \$ 362,581 | \$ 364,042 | \$ 179,004 | \$ 17,166 | \$ 1,549 | \$ 5,641 | \$ 3,063 | \$ 14,500 | \$ 313,614 | \$ 1,647,028 |
| 44 | Uncommitted Assistance | 923,830 | 466,572 | 844,511 | 393,595 | 27,961 | 2,862 | 11,131 | 6,392 | - | 236,250 | 2,913,104 |
| 45 | Total Uncommitted Funds as of 4/30/2019 | \$ 1,309,698 | \$ 829,154 | \$ 1,208,552 | \$ 572,599 | \$ 45,127 | \$ 4,411 | \$ 16,772 | \$ 9,455 | \$ 14,500 | \$ 549,864 | \$ 4,560,132 |

(1) Based on April 26, 2017 Board of Directors action
(2) Based on August 22, 2018 Board of Directors action
(3) Based on 5.10.19 Wayne Metro Recommendation



Wayne Metropolitan
Community Action Agency
Established 1971



LHSA
A Community Action Agency



June 14, 2019

Great Lakes Water Authority & Chief Executive Officer
500 Randolph, 19th Floor
Detroit, MI 48202

RE: Water Residential Assistance Program Reallocation of Uncommitted FY 2018 Funds

Dear GLWA Board of Directors and Sue McCormick,

Community Action Agencies, America's anti-poverty network, carry out a shared promise to empower people and communities to be strong, healthy, and thriving. The Community Action Alliance for Southeast Michigan, through our role in WRAP, has made water assistance, conservation, and consumer education a leading priority in our community-based poverty fighting efforts.

Together we have enrolled more than 15,000 GLWA resident customers into WRAP assisting in the prevention of thousands of water service shut offs. With 76 of the eligible GLWA communities now offering WRAP services to residents and one additional MOA in process the reach and impact of WRAP continues to grow. **Even with an increase in community participation, an unspent balance of \$675,000 in uncommitted funds remain in Direct Assistance and \$547,155 in Conservation.**

The greatest need for WRAP services is from Detroit and Flint customers. 71 percent of all WRAP enrollments are Detroit and Flint residents. All available GLWA Detroit WRAP funding has been committed to service first year enrollments, second year re enrollments, home repairs, and conservation measures.

We respectfully request that GLWA Board of Directors:

1. **Approve a WRAP conservation and direct assistance funding reallocation as follows:**
 - a. **Conservation (\$547,155):**
 - i. **Reallocate unspent funds as follows:**
 1. **City of Detroit: Conservation: \$ 355,650**
 2. **Genesee county (Flint): Conservation: \$191,505**
 - b. **Direct Assistance (\$675,000):**
 - i. **Reallocate unspent funds as follows:**
 1. **City of Detroit New Enrollments: \$438,750**
 2. **Genesee County (Flint) New Enrollments: \$ 236,250**

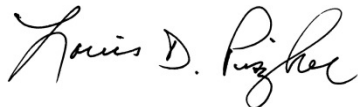
In advocating for this reallocation, it is worth noting:

- All allocated GLWA funding and additional funding raised for Detroit has been committed.
- All allocated GLWA funding for Flint has been committed and \$17,000 are allocated for FY 19-20.
- This request is consistent with the reallocation request made by the CAA Alliance in 2018.
- An additional \$4,138,000 has been raised and committed for WRAP Detroit - Wayne Metro contributing \$1M in Federal dollars and DWSD an additional \$3M for Departmental sources.
- \$3.2M has been leveraged to expand and advance WRAP services through technology, facilities, and increased staffing.
- \$400,000 of discretionary funding has been raised through events, grants, and donations to provide one-time assistance to individuals and communities ineligible for WRAP.

Please find attached:

1. A funding allocation request table

Sincerely,



Louis D. Piszker, CEO
Wayne Metro CAA

EXHIBIT A

Wayne Metropolitan Community Action Agency GLWA WRAP Reallocation Recommendation Uncommitted FY 2018 Funds

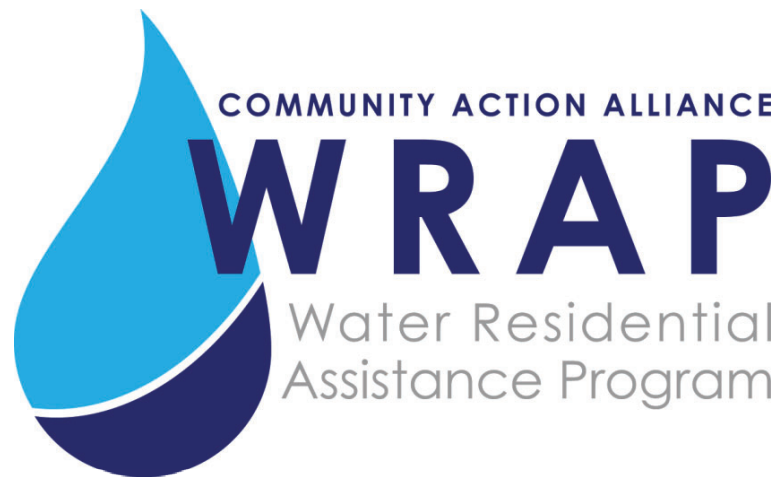
FY 2018 Direct Assistance Funds

| | Direct Assistance Budget | Direct Assistance Committed | Remaining Assistance Balance | Recommended Reallocation | Balance after Reallocation |
|-----------------|--------------------------|-----------------------------|------------------------------|--------------------------|----------------------------|
| City of Detroit | \$1,303,229 | \$1,303,229 | \$0 | \$438,750 | \$438,750 |
| Out-Wayne | 848,677 | 549,902 | 298,775 | (298,775) | - |
| Oakland | 827,662 | 514,595 | 313,067 | (313,067) | - |
| Macomb | 429,388 | 187,625 | 241,763 | (241,763) | - |
| Washtenaw | 40,961 | 11,995 | 28,966 | (28,966) | - |
| St. Clair | 2,604 | - | 2,604 | (2,604) | - |
| Lapeer | 9,970 | - | 9,970 | (9,970) | - |
| Monroe | 5,908 | - | 5,908 | (5,908) | - |
| Genesee | 28,679 | - | 28,679 | (28,679) | - |
| City of Flint | - | - | - | 236,250 | 236,250 |
| | <u>\$3,497,078</u> | <u>\$2,567,345</u> | <u>\$929,733</u> | <u>(\$254,732)</u> | <u>\$675,000</u> |

FY 2018 Conservation Funds

| | Conservation Assistance Budget | Conservation Assistance Spent | Remaining Assistance Balance | Recommended Reallocation | Balance after Reallocation |
|----------------------|--------------------------------|-------------------------------|------------------------------|--------------------------|----------------------------|
| City of Detroit | \$303,712 | \$303,712 | \$0 | \$355,650 | \$355,650 |
| Out-Wayne | 197,780 | 100,798 | 96,982 | (96,982) | - |
| Oakland | 192,883 | 76,686 | 116,197 | (116,197) | - |
| Macomb | 100,067 | 40,959 | 59,108 | (59,108) | - |
| Washtenaw | 9,546 | 401 | 9,145 | (9,145) | - |
| St. Clair | 607 | - | 607 | (607) | - |
| Lapeer | 2,323 | - | 2,323 | (2,323) | - |
| Monroe | 1,377 | - | 1,377 | (1,377) | - |
| Genesee | 6,684 | - | 6,684 | (6,684) | - |
| City of Flint | - | - | - | 191,505 | 191,505 |
| | <u>\$814,979</u> | <u>\$522,555</u> | <u>\$292,424</u> | <u>\$254,732</u> | <u>\$547,155</u> |
| FY 2018 Total | <u>\$4,312,057</u> | <u>\$3,089,901</u> | <u>\$1,222,156</u> | <u>\$0</u> | <u>\$1,222,155</u> |

REVISED 6.14.19



WRAP Update & Reallocation Presentation

June 21, 2019



Wayne Metropolitan
Community Action Agency
Established 1971



OLHSA
A Community Action Agency



Enrollments & Participation

As of April 30, 2019

- 15,000+ enrolled. 12,000+ are Detroiters
- Achieved 74% community participation rate
 - ✓ **76 of 103 eligible municipalities are opted in**
 - ✓ **10 municipalities have opted out**
- \$16.8M total funding has been committed
 - **\$12.3M GLWA Funding**
 - **\$4.5M Supplemental Funding**



Previously Reallocated Funds

FY 2016

- Detroit \$1,664,883
- Flint \$ 117,485

FY 2017

- Detroit \$786,981
 - Flint \$425,635
-
- Flint WRAP participation started in July 2018
 - 100% of previously reallocated assistance funds will be committed by 6/30/2018



Previous Reallocation Amounts

FY 2016

| County/City | March 1, 2016 - June 30, 2016 | | | | | |
|---------------------------|---------------------------------------|---------------------------------------|---|---|---|-------------------|
| | Allocated Assistance and Conservation | Committed Assistance and Conservation | Uncommitted Assistance and Conservation | Reallocated Assistance and Conservation | Committed Reallocated Assistance and Conservation Through 4.30.19 | Remaining Balance |
| Wayne County | | | | | | |
| City of Detroit | 1,526,759 | 1,526,759 | - | 1,664,832 | 1,664,832 | - |
| Out Wayne | 922,695 | 30,751 | 891,944 | (718,352) | - | 173,592 |
| Total Wayne County | 2,449,454 | 1,557,510 | 891,944 | 946,480 | 1,664,832 | 173,592 |
| Oakland County | 912,250 | 158,250 | 754,000 | (591,164) | - | 162,836 |
| Macomb County | 468,064 | 30,058 | 438,006 | (355,316) | - | 82,690 |
| Genesee County | 78,342 | - | 78,342 | (63,842) | - | 14,500 |
| City of Flint | - | - | - | 117,485 | 117,485 | - |
| Washtenaw County | 43,654 | - | 43,654 | (35,419) | - | 8,235 |
| Lapeer County | 12,424 | - | 12,424 | (10,080) | - | 2,344 |
| Monroe County | 6,277 | - | 6,277 | (5,093) | - | 1,184 |
| St. Clair County | 3,760 | - | 3,760 | (3,051) | - | 709 |
| Total | 3,974,225 | 1,745,818 | 2,228,407 | - | 1,782,317 | 446,090 |



Previous Reallocation Amounts

FY 2017

| County/City | July 1, 2016 - June 30, 2017 | | | | | |
|---------------------------|---------------------------------------|---------------------------------------|---|---|---|-------------------|
| | Allocated Assistance and Conservation | Committed Assistance and Conservation | Uncommitted Assistance and Conservation | Reallocated Assistance and Conservation | Committed Reallocated Assistance and Conservation Through 4.30.19 | Remaining Balance |
| Wayne County | | | | | | |
| City of Detroit | 1,575,960 | 1,575,960 | - | 786,981 | 686,762 | 100,219 |
| Out Wayne | 994,862 | 407,588 | 587,274 | (558,265) | - | 29,009 |
| Total Wayne County | 2,570,822 | 1,983,548 | 587,274 | 228,716 | 686,762 | 129,228 |
| Oakland County | 955,395 | 600,732 | 354,663 | (330,198) | - | 24,465 |
| Macomb County | 494,209 | 222,651 | 271,558 | (268,882) | - | 2,676 |
| Genesee County | - | - | - | - | - | - |
| City of Flint | - | - | - | 425,635 | 307,535 | 118,100 |
| Washtenaw County | 46,853 | 10,072 | 36,781 | (34,267) | - | 2,514 |
| Lapeer County | 12,403 | - | 12,403 | (11,700) | - | 703 |
| Monroe County | 6,857 | - | 6,857 | (6,468) | - | 389 |
| St. Clair County | 3,009 | - | 3,009 | (2,836) | - | 173 |
| Total | 4,089,548 | 2,817,003 | 1,272,545 | - | 994,297 | 278,248 |



FY 2018 Reallocation Request

- **Approve a WRAP funding reallocation of uncommitted FY 2018 Funds to assist GLWA residential customers with the greatest need, lowest income, and highest utility burden.**
- \$547,155 in conservation funds
- \$675,000 in direct assistance

TOTAL: \$1,222,155



Reallocation Request

- **Approve a WRAP Conservation and Direct Assistance funding reallocation as follows:**
- **Conservation - \$547,155**
 - ✓ Detroit - \$355,650
 - ✓ Flint - \$191,505
- **Direct Assistance - \$675,000**
 - ✓ Detroit- New enrollments: \$438,750
 - ✓ Flint- New enrollments: \$236,250



FY 2018 Reallocation Request

Wayne Metro Recommended Reallocations

| County/City | July 1, 2017 - June 30, 2018 | | | | | |
|---------------------------|---------------------------------------|---------------------------------------|---|--|---|-------------------|
| | Allocated Assistance and Conservation | Committed Assistance and Conservation | Uncommitted Assistance and Conservation | PROPOSED Reallocated Assistance and Conservation | Reallocated Assistance and Conservation Through 4.30.19 | Remaining Balance |
| Wayne County | | | | | | |
| City of Detroit | 1,606,941 | 1,606,941 | - | 794,400 | - | 794,400 |
| Out Wayne | 1,046,457 | 650,700 | 395,757 | (395,757) | - | - |
| Total Wayne County | 2,653,398 | 2,257,641 | 395,757 | 398,643 | - | 794,400 |
| Oakland County | 1,020,545 | 591,281 | 429,264 | (429,264) | - | - |
| Macomb County | 529,455 | 228,584 | 300,871 | (300,871) | - | - |
| Genesee County | 35,363 | - | 35,363 | (35,363) | - | - |
| City of Flint | - | - | - | 427,755 | - | 427,755 |
| Washtenaw County | 50,507 | 12,396 | 38,111 | (38,111) | - | - |
| Lapeer County | 12,293 | - | 12,293 | (12,293) | - | - |
| Monroe County | 7,285 | - | 7,285 | (7,285) | - | - |
| St. Clair County | 3,211 | - | 3,211 | (3,211) | - | - |
| Total | 4,312,057 | 3,089,902 | 1,222,155 | - | - | 1,222,155 |



Update on 2019 WRAP Program Changes

Direct Assistance

- Extended bill credit assistance to Senior and Disabled populations. (Effective 4/1/2019)
- Arrearage assistance to be provided at month one of program participation. (Effective 7/1/2019)
- Additional, focused outreach
- Program supplies to renters

Access to services

- Non-traditional hours and telephonic appointments available.





Financial Services Audit Committee Communication

Date: June 21, 2019

To: Great Lakes Water Authority Audit Committee

From: Jon Wheatley, Public Finance Manager

Re: FY 2020 State Revolving Fund (SRF) Project Plan Submittal for the Detroit Water and Sewerage Department Sewer Rehabilitation Project

Background: The Detroit Water & Sewerage Department (DWSD) has identified two (2) sewer system rehabilitation projects in its FY 2020 to 2024 Capital Improvement Plan (CIP) for submittal to the Michigan Department of Environment, Great Lakes, and Energy (MDEGLE) for the SRF financing program for funding in the state's 2020 fiscal year. The deadline for submitting all SRF project plans to MDEGLE is July 1, 2019, but prior to submitting the project plans, a public hearing must be held for the affected area.

The two (2) projects are comprised of the rehabilitation with some limited replacement of aging sewers in nine (9) neighborhoods within the City of Detroit. Construction will include rehabilitation of sewers and manhole structures, and in limited instances, excavation of existing sewers for replacement. The impact of the projects will be improved customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility (WRRF). The estimated cost of these projects is \$25,628,000.

The FY 2020 SRF Project Plan and public hearing notice for these combined DWSD Sewer Rehabilitation Projects has been posted on the DWSD website and can be found at: <https://detroitmi.gov/events/public-hearing-sewer-rehabilitation>. This project plan was presented at the DWSD Capital Improvement Program and Operations Committee on June 5, 2019. These documents are subject to review and approval by the DWSD Board of Water Commissioners following the Public Hearing on June 19, 2019.

Analysis: Pursuant to Section 7.2(b) of the Regional Sewage Disposal System Lease between the City of Detroit and GLWA, the Authority shall cooperate fully with the City in the implementation of the Detroit Capital Improvement Plan, including financing through the Authority. Therefore, GLWA will submit the local project plan as it will be the SRF loan applicant. Per notification, from MDEGLE, GLWA does not need to hold a separate public hearing on the local project, however, the GLWA Board of Directors will need to act on the included resolution at its regularly scheduled meeting on June 26, 2019. The resolution must be approved and signed to ensure that the finalized Project Plan is assembled, printed, and submitted to the MDEGLE by the deadline of July 1, 2019.

GLWA concurs with the DWSD Sewer Rehabilitation project plan adoption, and as the SRF applicant, is seeking low interest loan assistance through the SRF program.

Although the MDEGLE interest rate for FY 2020 will not be determined until October 2019, the current year's interest rate of 2.25% for 30-year loans is less than the present conventional bond rate. Based on the estimated project amount, DWSD could save an estimated \$11.2 million in interest costs and avoided issuance costs, based on a similar market revenue bond with a 30-year and 4.50% interest rate. This will afford saving to DWSD and its customers.

Budget Impact: GLWA is the loan applicant on the SRF loans issued on behalf of DWSD, and DWSD will be the SRF loan recipient as determined by MDEGLE. All project costs financed by GLWA, on behalf of DWSD, through the SRF program bonds and resulting principal and interest payments on the bonds will be directly allocable to the DWSD local system. Debt service is anticipated to begin in FY 2021 for this project and will be included as part of the FY 2021 financial plan.

Proposed Action: The Audit Committee recommends that the Great Lakes Water Authority Board approves the Resolution to Adopt the Detroit Water and Sewerage Department Sewer Rehabilitation – FY 2020 SRF Project Plan.

**DETROIT WATER AND SEWERAGE DEPARTMENT
NOTICE
PUBLIC HEARING FOR SEWER REHABILITATION
FY20 STATE REVOLVING FUND (SRF) PROJECT**

The Detroit Water and Sewerage Department (DWSD) announces a Public Hearing regarding its Project Plan for proposed Sewer Rehabilitation in the city of Detroit. DWSD will be seeking low interest State Revolving Fund (SRF) loan assistance for FY2020. The project is comprised of rehabilitating/limited replacement of aging sewers in multiple areas located within the city. Construction will include in place rehabilitation of sewers and manhole structures, and in limited instances, excavation of existing sewers for replacement. Right-of-way restoration will be performed on any disrupted areas. The impact of the project will be improved customer satisfaction and safe reliable service delivery of sewage sewer conveyance to the Water Resource Recovery Facility. The temporary impact of construction activities will be minimized largely through extensive use of trenchless technologies, along with mitigation measures specified in the contract documents. Adverse impacts on historical, archaeological, geographic, or cultural areas are not expected. This project is necessary to ensure that DWSD will consistently and reliably provide sewer conveyance to the Water Resource Recovery Facility. The total cost of the loan eligible portions of these two (2) projects is currently estimated at approximately \$25,628,000, which is being sought through the SRF low interest loan program. The Sewer Rehabilitation projects are eligible for participating under the State of Michigan low interest SRF loan program.

The Public Hearing will present a description of the recommended project, estimated costs, as well as the estimated cost per household impact for customers for the loan eligible loan. The typical residential customer bill for sewer disposal in the city of Detroit is expected to increase by no more than 0.64% assuming that low interest loans can be obtained through the SRF loan program. The purpose of the hearing is not only to inform, but to seek and gather input from people that will be affected. Comments and viewpoints from the public are encouraged.

THE PUBLIC HEARING WILL BE HELD:

DATE: WEDNESDAY, JUNE 19, 2019

PLACE: UNITY BAPTIST CHURCH

7500 TIREMAN AVENUE

DETROIT, MI 48204

TIME: 6 P.M.

Information on the Project Plan will be available at the following locations:

- www.detroitmi.gov/dwsd
- Detroit Water and Sewerage Department
Water Board Building
735 Randolph, 1st Floor – Permits
Detroit, Michigan 48226

If you have questions or want to submit written statements for the Public Hearing Record, call (313) 964-9269 or write:

Monica Daniels

Detroit Water and Sewerage Department

735 Randolph, 7th Floor

Detroit, MI 48226

Written comments will be accepted at the above address if received prior to 1 p.m. EST, Tuesday, June 18, 2019.

Detroit Water and Sewerage Department
Gary A. Brown, Director

Great Lakes Water Authority
Resolution

RE: Resolution to Adopt the Detroit Water and Sewerage Department (DWSD) Sewer Rehabilitation
Final Project Plan
FY 2020 State Revolving Fund (SRF) Project Plan

- Whereas: The City of Detroit through its Detroit Water and Sewerage Department (DWSD), and The Great Lakes Water Authority (GLWA), both jointly recognize the need to rehabilitate and/or replace aging sewers in multiple areas within the City of Detroit; and
- Whereas: Pursuant to Section 7.3(b) of the Regional Sewage Disposal System Lease between the City of Detroit and GLWA, the Authority shall cooperate fully with the City in the implementation of the Detroit Capital Improvement Program, including financing through the Authority; and
- Whereas: The DWSD prepared a State Revolving Fund (SRF) Project Plan, which recommends rehabilitation of sewers and manhole structures, and in limited instances, excavation of existing sewers for replacement in multiple areas within the City of Detroit; and
- Whereas: The Project Plan was presented by DWSD at a Public Hearing held on June 19, 2019 at 6:00 p.m. at Unity Baptist Church 7500 Tireman Avenue, Detroit, MI 48204, and all public comments were considered and addressed;
- Whereas: The DWSD formally adopted said Project Plan and agreed to implement the identified selected sewer rehabilitation as described in said document at its meeting on June 19, 2019;
- Whereas: It is the desire of the GLWA Board of Directors to secure low interest loan assistance through the SRF program; and

Now Therefore Be It:

- Resolved: The GLWA Board hereby accepts and approves the DWSD Sewer Rehabilitation SRF Project Plan as approved by the DWSD BOWC at its June 19, 2019 meeting; and Be It Further
- Resolved: GLWA concurs with the SRF Project Plan adoption and agrees to serve as the SRF loan applicant on behalf of the City of Detroit, the loan recipient, for all activities required by SRF financing, and in accordance with local and state intergovernmental agreement; and Be It Further
- Resolved: The GLWA Resolution identifying Designated Representatives adopted on April 26, 2017 established the GLWA authorized representatives for all SRF program activities, and no updates to these designations are necessary at this time and Be It Further
- Resolved: The Chief Executive Officer (CEO) is authorized to transmit the final FY 2020 SRF Project Plan for the Sewer Rehabilitation project to the Michigan Department of Environment, Great Lakes, and Energy on behalf of the GLWA Board of Directors and take all appropriate steps to secure approval of a low interest loan in accordance with the State of Michigan's SRF procedures so that the project can proceed expeditiously to construction.

CITY OF DETROIT
Water and Sewerage Department



**Sewer Rehabilitation
Project**

**DRAFT
Streamlined Project Plan**

April 2019

**Mike Duggan
Mayor**

Gary Brown
Director

Michael Einheuser
Chairperson
Board of Water Commissioners



City of Detroit
Mike Duggan, Mayor
Detroit City Council

Brenda Jones, President

Mary Sheffield, President Pro Tem

Janeé Ayers

Scott Benson

Raquel Castañeda-López

Gabe Leland

Roy McCalister, Jr.

André L, Spivey

James Tate

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Item 1 - Project Definition and Overview

A task being performed by AECOM under the Detroit Water and Sewerage Department (DWSD) contract CS-1812, Capital Improvement Program Management Organization (CIPMO), is the assessment and evaluation of existing sewer collection mains and manholes in targeted locations within the City of Detroit. The primary criterion being used to determine if sewer collection mains and manholes will be scheduled for either rehabilitation or replacement is the structural integrity of the assets based upon National Association of Sewer Service Companies (NASSCO) PACP CCTV and MACP ratings respectively.

Work planned for FY2020 (07/01/2019 – 06/30/2020) through FY 2023 capital expenditure is derived from the assessments/evaluations performed in the five City of Detroit neighborhoods known as the Five High Priority Neighborhoods of Brewster Homes, Brewster-Douglass, New Center Commons, Virginia Park and Piety Hills (Project A) and the Four Westside Neighborhoods of Riverdale, Miller Grove, Minock Park and South Rosedale Park (Project B). It is anticipated that construction will commence in May 2020 and be completed by October 2022.

Project A – Five High Priority Neighborhoods

Project Status

All CCTV and manhole inspections have been completed in the project area and preliminary intervention recommendations have been provided to DWSD. It is expected that minor changes will be made to the proposed interventions as project design begins.

Full Project

From the assessments/evaluations in these neighborhoods, AECOM has recommended to DWSD the rehabilitation or replacement of approximately 51,281 feet of sewer collection mains ranging in size from 10-inch through 54-inch in diameter in addition to 82 manhole repairs. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, pointing of brick sewers, cementitious lining of manholes and specialized cleaning. The total estimated cost of these repairs is approximately \$7,750,000.

Loan-Eligible Portion of the Project

As only repairs to address defects that had a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5) are eligible for loan funding, 23,125 feet of sewer collection mains ranging in size from 10-inch through 54-inch in diameter and 23 manhole repairs appear to meet these criteria. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, cementitious lining of manholes but does not include any type of specialized cleaning or pointing of brick sewers. The total estimated cost of these repairs is approximately \$5,000,000.

Project B – Four Westside Neighborhoods

Project Status

CCTV inspection and manhole surveys are currently being performed by an inspection company through an existing contract with DWSD. 53% of CCTV inspections and no manhole inspections in the project area have been provided to AECOM. As a result, no preliminary intervention recommendations have been provided to DWSD. The available CCTV data collected to-date in the last 18 months for the Pilot Project

areas of North Rosedale Park and Cornerstone Village, the Five High Priority Neighborhoods (Project A), and the Westside Four (Project B) Neighborhoods indicates an average percentage of CCTV with Grade 4 or 5 Defects of 30%. As the total footage is 250,000 LF in Project B and the cost per inch per foot was available based upon the analyzed data in Project A, it was possible to extrapolate estimated repairs and costs from the available data.

Full Project

From the assessments/evaluations in these neighborhoods, AECOM expects to recommend to DWSD the rehabilitation or replacement of approximately 150,000 feet of sewer collection mains ranging in size from 8-inch through 180-inch in diameter in addition to 330 manhole repairs. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, pointing of brick sewers, cementitious lining of manholes, and specialized cleaning. The total estimated cost of these repairs is approximately \$32,000,000.

Loan-Eligible Portion of the Project

As only repairs to address defects that have a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5) are eligible for loan funding, approximately 59,000 feet of sewer collection mains ranging in size from 8-inch through 180-inch in diameter in addition to over 100 manhole repairs are expected to meet these criteria. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, cementitious lining of manholes but does not include any type of specialized cleaning or pointing of brick sewers. The total estimated cost of these repairs is approximately \$21,000,000.

Item 2 - Study Area and Project Zone

The locations of the proposed projects are provided in the general map below (Figure 1).

Location

Project A – Five High Priority Neighborhoods

These neighborhoods comprise:

1. Piety Hill
2. New Center Commons
3. Virginia Park
4. Brewster Douglass
5. Brewster Homes

Project B – Four Westside Neighborhoods

These neighborhoods comprise:

1. Riverdale
2. Miller Grove
3. Minock Park
4. South Rosedale Park

Population

The population projections presented in the 2015 Water Master Plan Update report prepared by CDM/Smith for DWSD indicate a forecasted decline in population for the City of Detroit. The City of Detroit population is expected to decrease from 713,777 (2010 Census) to 613,709 by the year 2035. The July 1, 2017 estimated population on the U.S. Census website is 673,104. The estimated 2018 population is not available on this website. The report also indicates a forecasted decline in the overall population in the DWSD service area in the suburban communities.

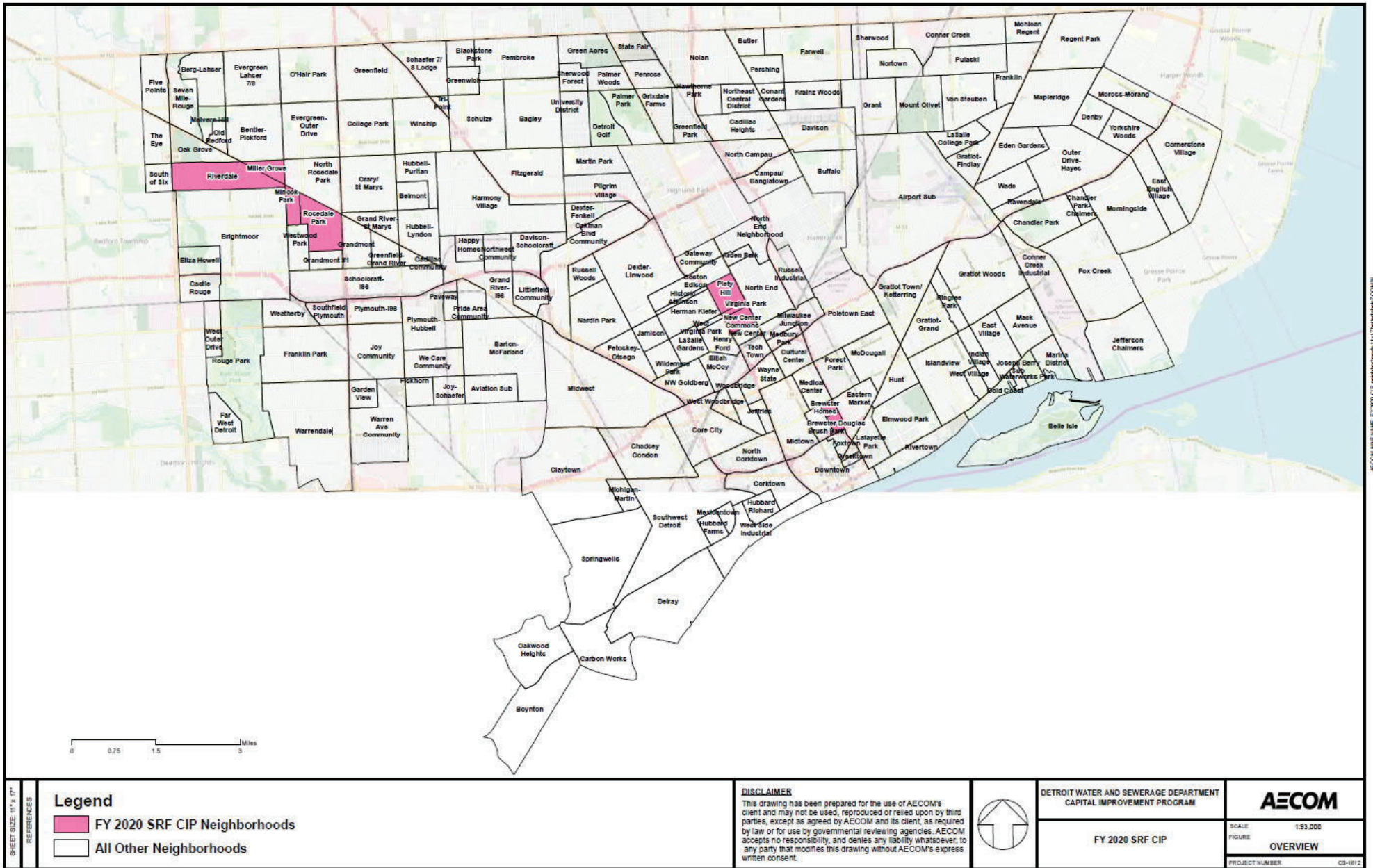


Figure 1 – CIP Neighborhoods

3 - Existing Facilities

General

The gravity and force main system managed by DWSD comprises approximately 2,819 miles of pipe, of which nearly 15 percent has been rehabilitated or reconstructed by lining. 2,424 miles of Detroit’s sewers were constructed prior to the 1940s. This infrastructure has an average age of 95 years. Cementitious material represents the largest portion of inventory. The number of reports for sinkholes and cave-ins associated with defects in the sewer infrastructure has averaged about 200 per year over the last 5 years. The structural condition of this infrastructure requires significant rehabilitation to prevent even more costly repairs and claims due to possible collapses.

Project A – Five High Priority Neighborhoods

There are approximately 21 miles of pipe in Project A neighborhoods in total ranging in size from 10-inch to 54-inch. The pipe material includes brick, concrete, crock, PVC, reinforced concrete, vitrified clay, unknown and CIPP lined. Figure 2 identifies pipe mileage by material type in Project A neighborhoods. Figure 3 is a map of the sewer assets in the northern three neighborhoods of Project A. Figure 4 is a map of the sewer assets in the southern two neighborhoods of Project A.

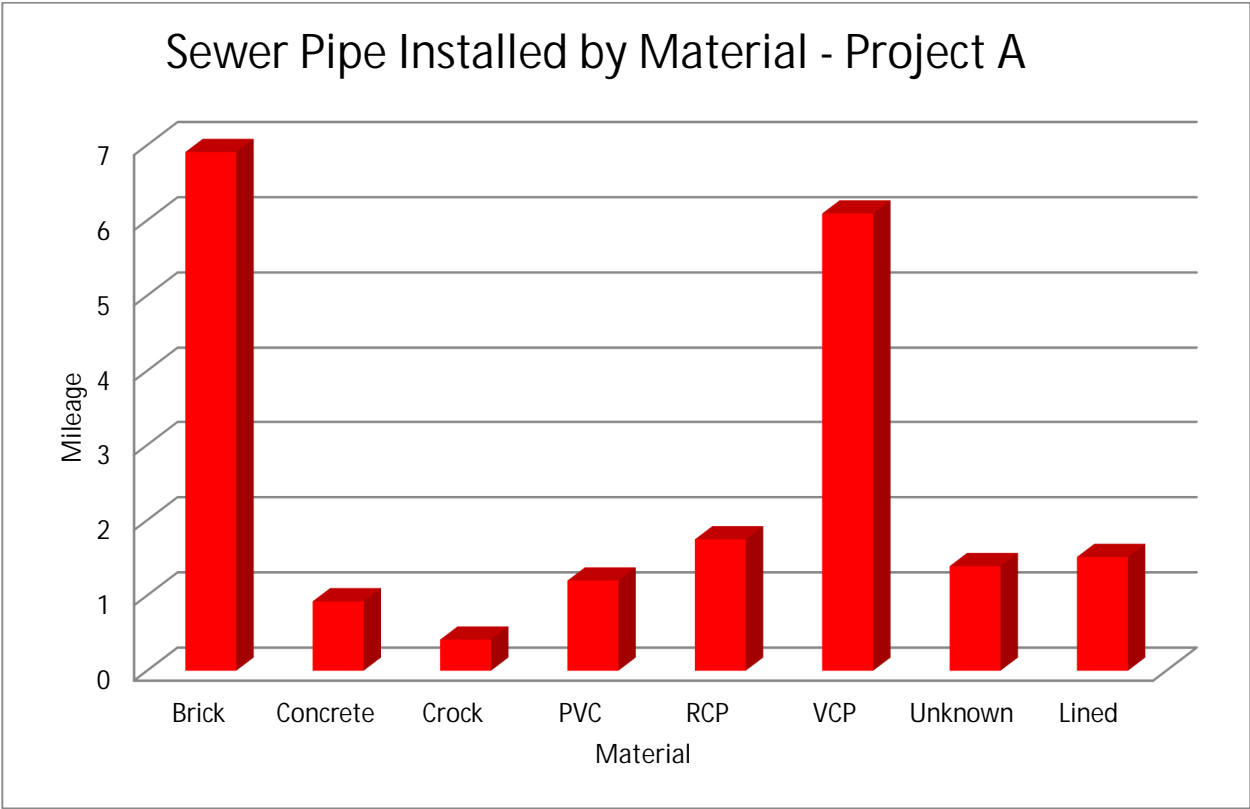


Figure 2 – Pipe Mileage by Material – Project A Neighborhoods

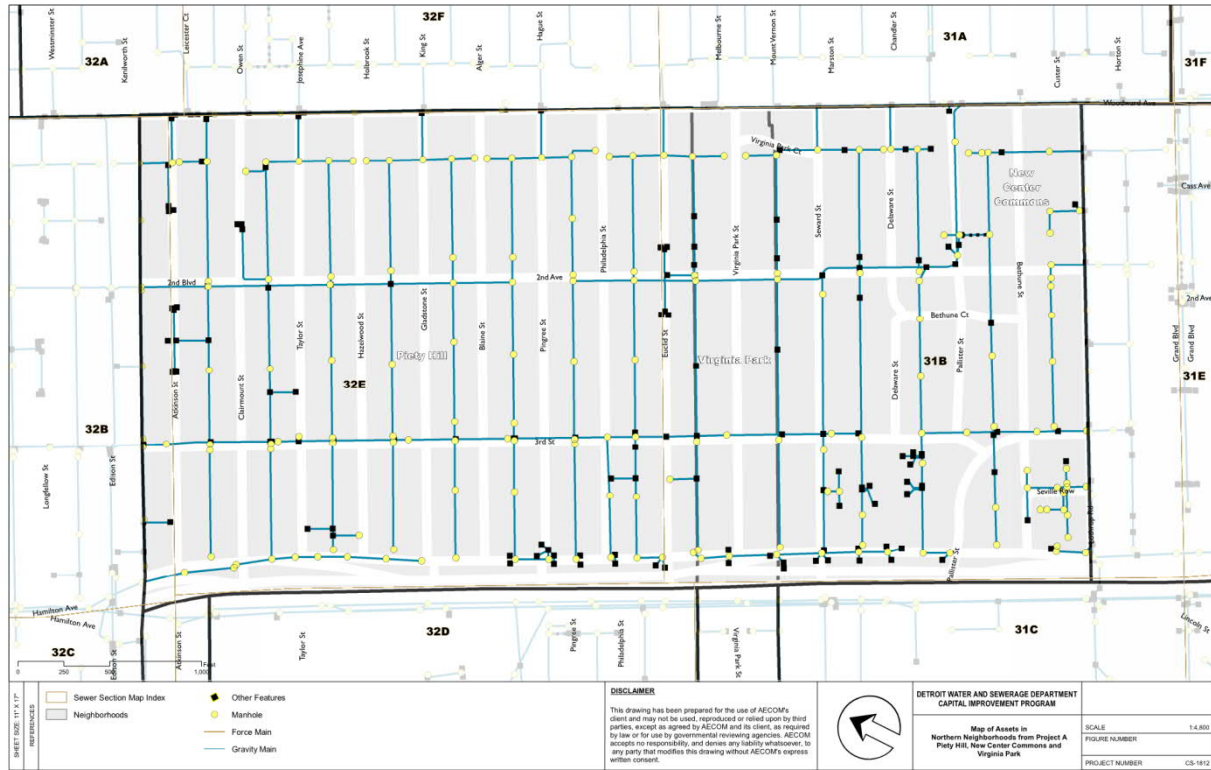


Figure 3 – Map of Assets in Northern Neighborhoods from Project A – Piety Hill, New Center Commons and Virginia Park

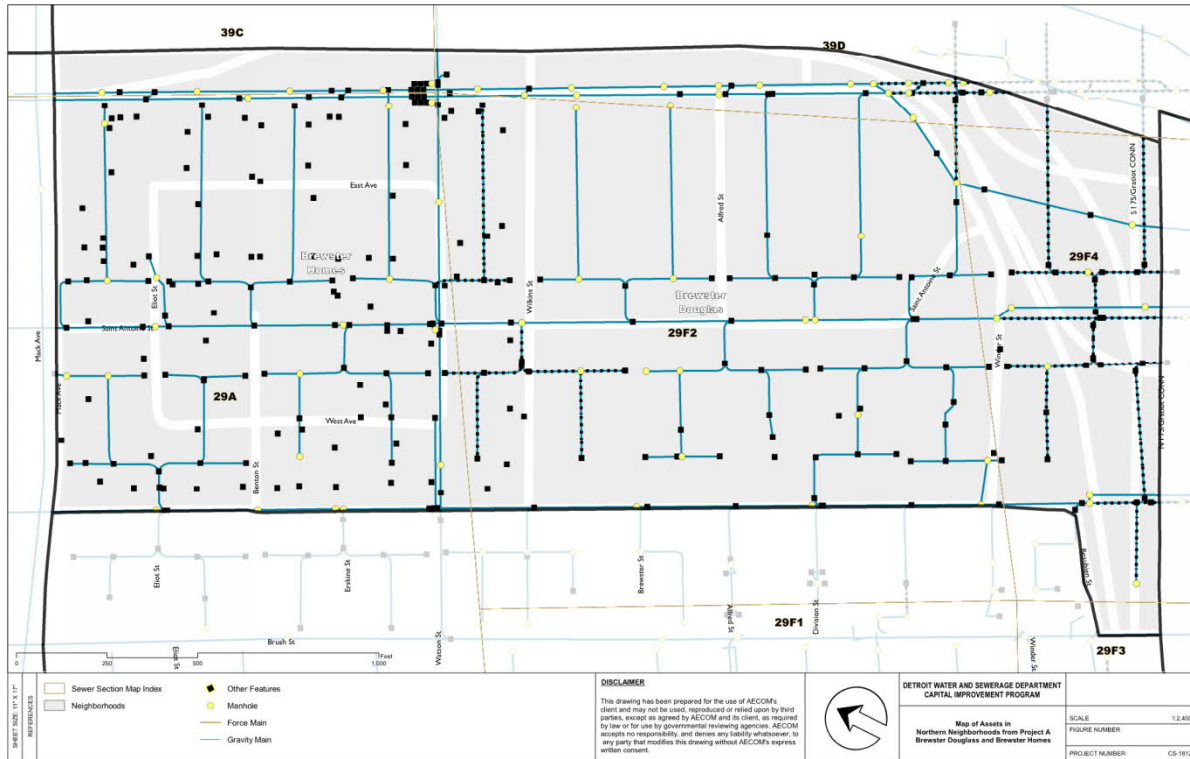


Figure 4 – Map of Assets in Southern Neighborhoods from Project A – Brewster Douglass and Brewster Homes

Project B – Four Westside Neighborhoods

There are approximately 47 miles of pipe in Project B neighborhoods in total ranging in size from 8-inch to 180-inch. The pipe material includes brick, concrete, crock, PVC, vitrified clay, unknown and CIPP lined. Figure 5 identifies pipe mileage by material type in Project B neighborhoods. Not all of the pipe in Project B has been televised, so it is expected that the unknown quantity identified in Figure 5 will reduce once inspection is complete. Figure 6 is a map of the sewer assets in the neighborhoods of Project B.

Sewer Pipe Installed by Material - 4 Westside

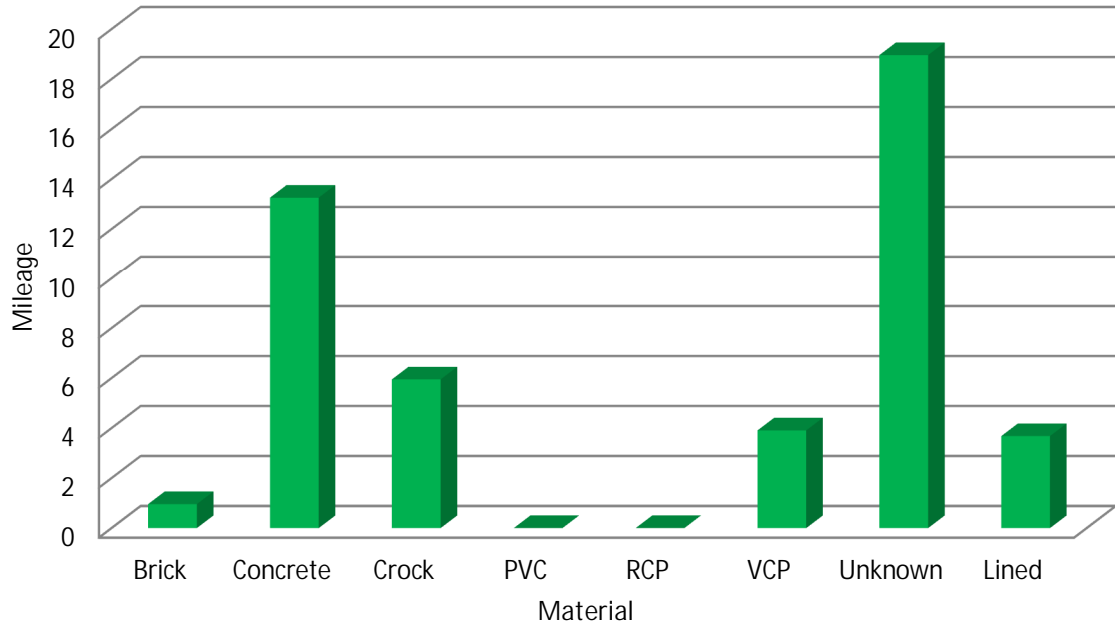


Figure 5 – Pipe Mileage by Material – Four Westside Neighborhoods

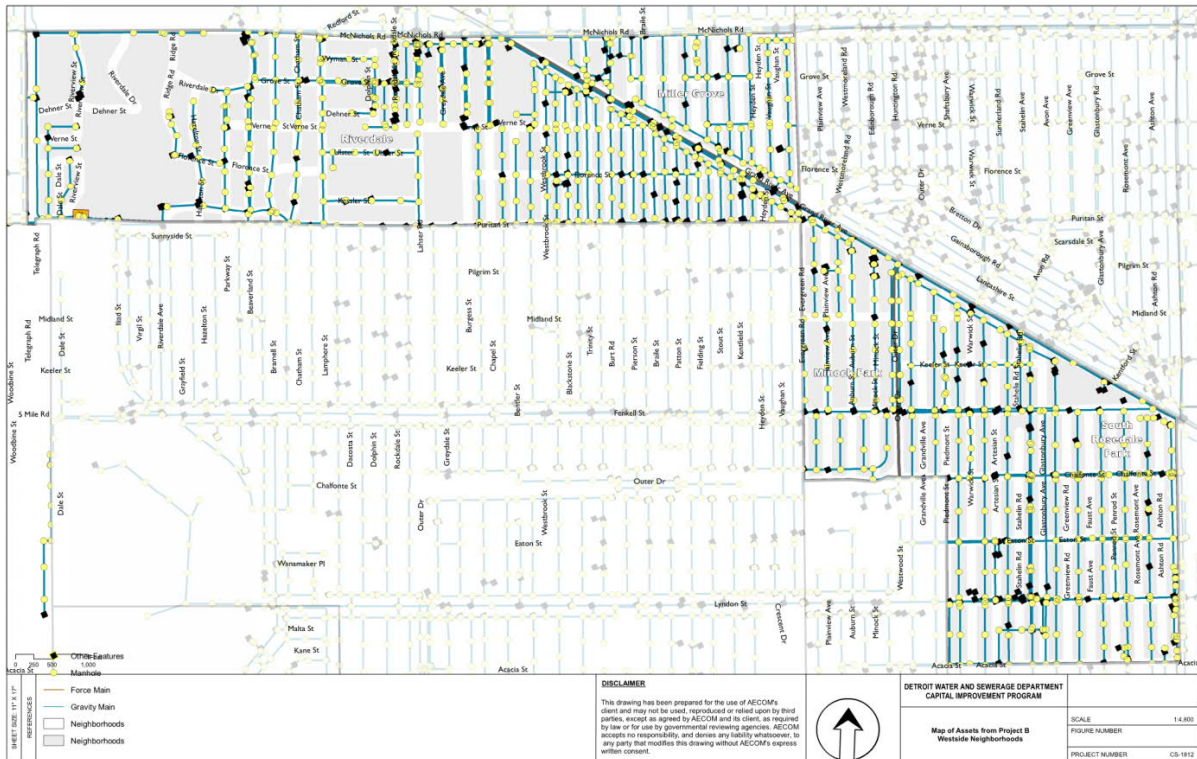


Figure 6 – Map of Assets from Project B - Four Westside Neighborhoods

Item 4 – Project Need

General

As a result of the CCTV and manhole inspection performed to-date, multiple defects requiring intervention have been identified. The primary structural defects encountered are fractures (spiral, hinge, longitudinal and circumferential), holes, continuous cracks, voids outside the pipe and deformation. Some of the defects have a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5). To avoid sinkholes, back-ups in buildings and disruption to customers, it is recommended that interventions be made to prevent asset failure. Furthermore, based on the average age of the infrastructure at 95 years, the observed condition and the risk to public health, it is felt that the selected pipes and manholes are defensible candidates for intervention.

Project A – Five High Priority Neighborhoods

53% of the pipes televised have defects requiring interventions with 24% of these having a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5). An example of one of these (a deformation with a Grade 5 structural rating) is shown in Figure 7. A significant crack in a manhole is shown in Figure 8.

The screenshot shows a software window titled "CCTV survey : WWMH0000033216A_U_20181010_1351". It features a "Defects" tab and an "Internal View" sub-tab. A table lists various defects with columns for Distance (ft), PACP Code, Continuous, Value %, Value 1st Dim, Value 2nd Dim, Clock At/From, Clock to, Band, Material, Joint, Remarks, O and M Grade, Structural Grade, Video file, and Counter. A video player is embedded below the table, showing a pipe inspection with the following text: "Observation:TFA(Tap Factory Activity)", "From: 02", "Counter:113.9", "Remarks:", "15:31 10.10.18 LC1: +0118.16 ft", and "738/3147".

| Distance (ft) | PACP Code | Continuous | Value % | Value 1st Dim | Value 2nd Dim | Clock At/From | Clock to | Band | Material | Joint | Remarks | O and M Grade | Structural Grade | Video file | Counter |
|---------------|-----------|------------|---------|---------------|---------------|---------------|----------|------|----------|-------------------------------------|---------|---------------|------------------|------------|---------|
| 82.40 | DAE | | 5 | | | 7 | | | | <input checked="" type="checkbox"/> | | 2.00 | 0.00 | | 565.1 |
| 86.30 | DAE | | 5 | | | 7 | 5 | | | <input checked="" type="checkbox"/> | | 2.00 | 0.00 | | 576.1 |
| 89.00 | CL | | | | | | 12 | | | <input checked="" type="checkbox"/> | AECOM | 0.00 | 2.00 | | 587.1 |
| 90.60 | DAE | | 5 | | | 12 | 5 | | | <input checked="" type="checkbox"/> | | 2.00 | 0.00 | | 598.1 |
| 102.30 | DAE | | 5 | | | 7 | 10 | | | <input checked="" type="checkbox"/> | | 2.00 | 0.00 | | 623.1 |
| 108.80 | DAE | | 5 | | | 7 | 12 | | | <input checked="" type="checkbox"/> | | 2.00 | 0.00 | | 637.1 |
| 113.20 | DAE | | 5 | | | 7 | 5 | | | <input checked="" type="checkbox"/> | | 2.00 | 0.00 | | 656.1 |
| 113.90 | TFA | | | 6 | | 2 | | | | <input type="checkbox"/> | | 0.00 | 0.00 | | 667.1 |
| 120.00 | DR | | 20 | | | | | | | <input type="checkbox"/> | | 0.00 | 5.00 | | 849.1 |
| 121.20 | B | | | | | 12 | 12 | | | <input type="checkbox"/> | | 0.00 | 4.00 | | 710.1 |

Figure 7. Sample CCTV Data from a Pipe in the Five High Priority Neighborhoods



Figure 8. Sample Manhole Defect from a Manhole in the Five High Priority Neighborhoods

Project B – Four Westside Neighborhoods

While the CCTV inspections for the Project B area is approximately 50% completed, this data along with the 100% completed CCTV data for the Pilot Project areas of North Rosedale Park, Cornerstone Village and the Project A - Five High Priority neighborhoods indicates an average percentage of CCTV with Grade 4 or 5 Defects of 30% as shown in Table 1.

Table 1 - Cost Summary - Wastewater Interventions by Type for 4 Westside Neighborhoods

| Area | Total Televised Footage (LF) | Footage with Grade 4 or 5 Structural Defects (LF) | Percentage with Grade 4 or 5 Structural Defects | Actual Repair Footage of Just Structural Interventions (LF) |
|--|------------------------------|---|---|---|
| North Rosedale | 125,669 | 42,813 | 34% | 31,379 |
| Cornerstone Village | 163,154 | 68,815 | 42% | 54,530 |
| Project A - Five High Priority | 108,053 | 26,399 | 24% | 23,125 |
| Westside Four (As of 03/28/2019) | 133,070 | 20,771 | 16% | 16,855 |
| | | | | |
| Total/Average | 529,946 | 158,798 | 30% | 125,443 |
| | | | | |
| Westside Four (When inspections completed) | 249,979 | 74,906 | 30% | 59,172 |

While only 53% of pipes in the Four Westside Neighborhoods have been televised thus far with 16% having a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5), it has been assumed based on the completed inspections of all surveyed neighborhoods that the average percentage of footage with Grade 4 or 5 defects of 30% will be allocated to the Four Westside Neighborhoods. An external point repair (EPR) or trenchless point repair (TPR) will be shorter than the entire length of pipe where Grade 4 or 5 defects were observed hence the actual repair length of interventions is estimated to be 59,172 LF.

Item 5 - Alternatives Analysis

General

There are three options for addressing the problems associated with aged sewer mains. DWSD can either continue to repair the old pipes (Alternative 1), selected replace or rehabilitate the old pipes (Alternative 2), or replace the pipes using standard open-cut replacement (Alternative 3). As a part of Alternative 2, rehabilitation through CIPP lining of a majority of sewer main will be incorporated.

A. Alternative 1 – Repair of Existing Sewer Mains

Sewer main repair is conducted throughout the system, particularly in those areas where problems have not escalated to the point which would warrant replacement. Nevertheless, sewer main repairs are time consuming, costly, constitute a drain on DWSD resources needed to carry out the repairs, and pose a potential increase in public health risk. Sewer main repairs can require shutting off sewer service to multiple customers while the defect is repaired and returned to service. Repair activities cannot be pre-scheduled, and field crews must respond on an “as needed” basis at any time of year. As typically only point repairs are performed during emergency repairs, other locations along the same pipe may also be at risk of failure but are not repaired. Hence this alternative should not be considered as a viable alternative.

B. Alternative 2 – Sewer Main Selected Replacement/Rehabilitation

Sewer main replacement/rehabilitation of aged sewer main pipes is based on the criteria described under Item 4 - Project Need. The replacement pipe is sized to meet the service area needs, which may in some cases result in an increase of pipe size, depending on the changes in flow, customer base, including commercial, business and residential demographics. Rehabilitation of aged sewer mains also provides for the use of CIPP lining, which is considered superior because it has an expected useful life greater than that of damaged vitrified clay pipe and deteriorated concrete pipe and can be installed by trenchless means.

In addition to full replacement and full rehabilitation through CIPP lining, both external and trenchless point repairs are recommended as appropriate if the defects are localized and the remainder of the pipe is in generally good condition.

C. Alternative 3 – Sewer Main Replacement Only

Full sewer main replacement of aged sewer main pipes is based on the criteria described under Project Need. The replacement pipe is sized to meet the service area needs, which may in some cases result in an increase of pipe size, depending on the changes in flow, customer base, including commercial, business and residential demographics. This methodology suggests standard open-cut replacement of mains and not rehabilitation of the mains through the use of trenchless methodologies such as CIPP lining. Alternative 3 may be considered extreme but represents a viable alternative.

Based upon the alternative that can be most easily implemented with the least disruption to the utility and the rate payers, and the cost analysis that will be discussed below, Alternative 2, selected replacement and rehabilitation is the recommended alternative.

Item 6 - Proposed Project

Project A – Five High Priority Neighborhoods

Full Project – Alternative 2

From the assessments/evaluations in these neighborhoods, AECOM has recommended to DWSD, the rehabilitation or replacement of approximately 51,281 feet of sewer collection mains ranging in size from 10-inch through 54-inch in diameter in addition to 82 manhole repairs. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, pointing of brick sewers, cementitious lining of manholes and specialized cleaning. The total estimated cost of these repairs is approximately \$7,750,000. Maps of the proposed improvements for Project A are shown in Figures 9 to 20, and are separated by neighborhoods, and by intervention type (O&M and structural). It should be noted that the Virginia Park neighborhood is a narrow strip of land included in the New Center Commons and Piety Hill neighborhood maps. As design is commencing on these projects and hydraulic modeling results are being reviewed, it is possible that some upsizing of pipes may be recommended that would increase these costs.

Cost Summary – Full Project – Alternative 2

Rehabilitation and replacement cost estimates have been developed, based on previous work completed to date. The pre-design total capital cost estimates and costs with contingencies for pipes and manholes in all Five High Priority Neighborhoods areas are shown in Table 2.

Table 2 - Cost Summary – Full Project A Interventions for Alternative 2

| Intervention | Type | Asset | Count | Length | Estimated Cost |
|-------------------------------------|------------|---------|-------|--------|----------------|
| External Point Repair | Structural | Pipe | 15 | 122 | \$134,735 |
| CIPP Lining | Structural | Pipe | 170 | 31,462 | \$4,842,987 |
| Full Segment Replacement | Structural | Pipe | 3 | 241 | \$197,457 |
| TPR-Liner | Structural | Pipe | 21 | 103 | \$139,362 |
| TPR-Pointing | Structural | Pipe | 12 | 28 | \$70,780 |
| TPR-Tyger | Structural | Pipe | 7 | 23 | \$43,855 |
| Clean | O&M | Pipe | 93 | 19,263 | \$366,003 |
| Cutting/grinding of Taps | O&M | Pipe | 18 | 39 | \$17,334 |
| Replace Adjusters | Structural | Manhole | 2 | | \$1,522 |
| Replace Chimney Only | Structural | Manhole | 4 | | \$12,120 |
| Manhole Cleaning | O&M | Manhole | 40 | | \$15,200 |
| General and/or Spot Repairs | Structural | Manhole | 32 | | \$16,800 |
| Benching and Channel Reconstruction | Structural | Manhole | 2 | | \$3,276 |
| Structural Spray Lining | Structural | Manhole | 2 | | \$4,992 |
| | | | | | |
| Total Intervention Cost | | | | | \$5,866,423 |
| | | | | | |
| 10% Contingency | | | | | \$586,642 |
| Sub-total | | | | | \$6,453,065 |
| 20% Design Contingency | | | | | \$1,290,613 |
| | | | | | |
| Total | | | | | \$7,743,678 |

Loan-Eligible Portion of the Project – Alternative 2

As only repairs to address defects that had a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5) are eligible for loan funding, 23,125 feet of sewer collection mains ranging in size from 10-inch through 42-inch in diameter in addition to 23 manhole repairs appear to meet these criteria. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, cementitious lining of manholes but does not include any type of specialized cleaning or pointing of brick sewers. The total estimated cost of these repairs is approximately \$5,000,000. Again, maps of the proposed improvements for Project A are shown in Figures 9 to 20, and are separated by neighborhoods, and by intervention type. It should be noted that the Virginia Park neighborhood is a narrow strip of land included in the New Center Commons and Piety Hill neighborhood maps. As design is commencing on these projects and hydraulic modeling results are being reviewed, it is possible that some upsizing of pipes may be recommended that would raise these costs.

Cost Summary – Loan Eligible Portion – Alternative 2

Rehabilitation and replacement cost estimates have been developed, based on previous work completed to date. The pre-design total capital cost estimates and costs with contingencies for pipes and manholes in Project A Five High Priority Neighborhoods areas are shown in Table 3.

Table 3 - Cost Summary – Loan Eligible - Project A Interventions for Alternative 2

| Intervention | Type | Asset | Count | Length | Estimated Cost |
|-------------------------------------|------------|---------|-------|--------|----------------|
| External Point Repair | Structural | Pipe | 15 | 122 | \$134,735 |
| CIPP Lining | Structural | Pipe | 100 | 22,729 | \$3,391,361 |
| Full Segment Replacement | Structural | Pipe | 3 | 241 | \$197,457 |
| TPR-Liner | Structural | Pipe | 5 | 23 | \$33,855 |
| TPR-Tyger | Structural | Pipe | 3 | 10 | \$18,850 |
| General and/or Spot Repairs | Structural | Manhole | 20 | | \$10,500 |
| Benching and Channel Reconstruction | Structural | Manhole | 1 | | \$1,638 |
| Structural Spray Lining | Structural | Manhole | 2 | | \$4,992 |
| | | | | | |
| Total Intervention Cost | | | | | \$3,793,388 |
| | | | | | |
| 10% Contingency | | | | | \$379,339 |
| Sub-total | | | | | \$4,172,727 |
| 20% Design Contingency | | | | | \$834,545 |
| | | | | | |
| Total | | | | | \$5,007,273 |

Cost Summaries – Alternative 3 – Full Replacement

To illustrate the expected increase in cost if full replacement (Alternative 3) is assumed instead of rehabilitation (Alternative 2) of pipes using trenchless methodologies, Tables 4 and 5 were developed. The CIPP and TPR lining items have been removed and full replacement and EPR quantities have been increased accordingly. As shown, the costs for Alternative 3 are significantly higher than those for Alternative 2.

Table 4 - Cost Summary – Full Project – Project A for Alternative 3

| Intervention | Type | Asset | Count | Length | Estimated Cost |
|-------------------------------------|------------|---------|-------|--------|----------------|
| External Point Repair | Structural | Pipe | 43 | 248 | \$387,014 |
| Full Segment Replacement | Structural | Pipe | 173 | 31,702 | \$14,374,646 |
| TPR-Pointing | Structural | Pipe | 12 | 28 | \$70,780 |
| Clean | O&M | Pipe | 93 | 19,263 | \$366,003 |
| Cutting/grinding of Taps | O&M | Pipe | 18 | 39 | \$17,334 |
| Replace Adjusters | Structural | Manhole | 2 | | \$1,522 |
| Replace Chimney Only | Structural | Manhole | 4 | | \$12,120 |
| Manhole Cleaning | O&M | Manhole | 40 | | \$15,200 |
| General and/or Spot Repairs | Structural | Manhole | 32 | | \$16,800 |
| Benching and Channel Reconstruction | Structural | Manhole | 2 | | \$3,276 |
| Structural Spray Lining | Structural | Manhole | 2 | | \$4,992 |
| | | | | | |
| Total Intervention Cost | | | | | \$15,269,687 |
| | | | | | |
| 10% Contingency | | | | | \$1,526,969 |
| Sub-total | | | | | \$16,796,656 |
| 20% Design Contingency | | | | | \$3,359,331 |
| | | | | | |
| Total | | | | | \$20,155,987 |

Table 5 - Cost Summary – Loan Eligible – Project A for Alternative 3

| Intervention | Type | Asset | Count | Length | Estimated Cost |
|-------------------------------------|------------|---------|-------|--------|----------------|
| External Point Repair | Structural | Pipe | 23 | 155 | \$192,207 |
| Full Segment Replacement | Structural | Pipe | 103 | 22,970 | \$10,224,569 |
| General and/or Spot Repairs | Structural | Manhole | 20 | | \$10,500 |
| Benching and Channel Reconstruction | Structural | Manhole | 1 | | \$1,638 |
| Structural Spray Lining | Structural | Manhole | 2 | | \$4,992 |
| | | | | | |
| Total Intervention Cost | | | | | \$10,433,906 |
| | | | | | |
| 10% Contingency | | | | | \$1,043,391 |
| Sub-total | | | | | \$11,477,297 |
| 20% Design Contingency | | | | | \$2,295,459 |
| | | | | | |
| Total | | | | | \$13,772,756 |

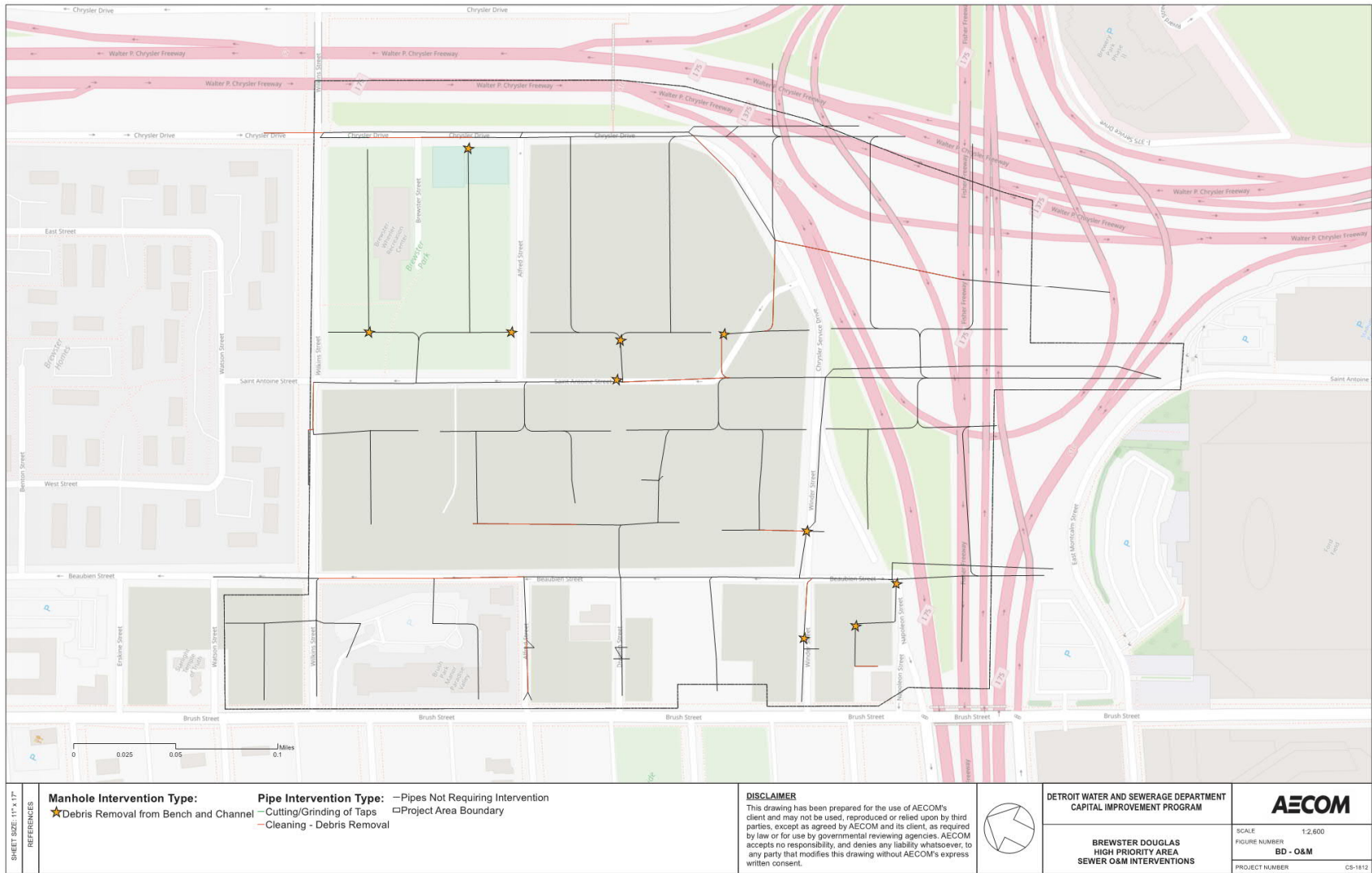


Figure 9 – Brewster – Douglas Sewer O&M Repairs

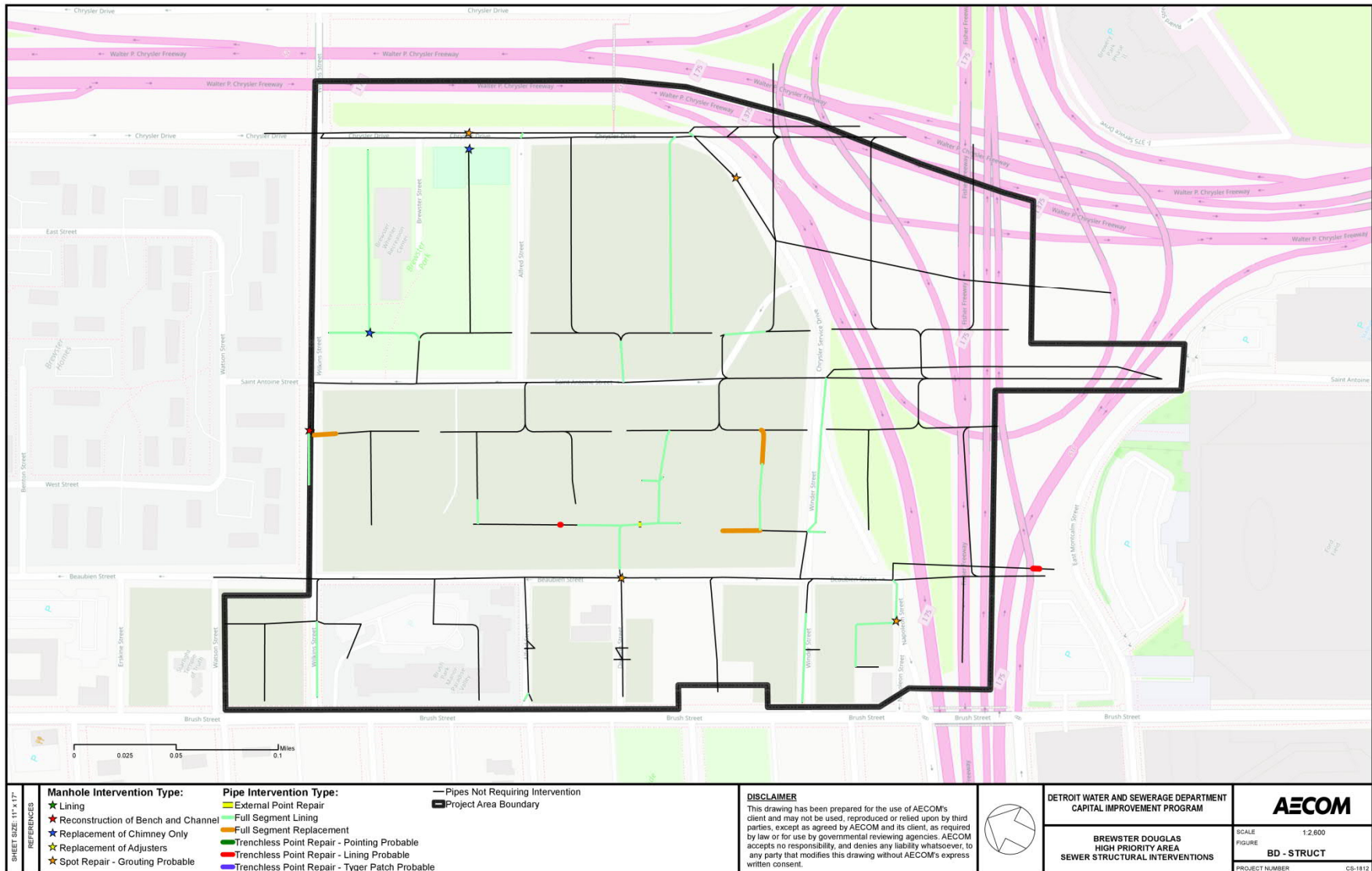


Figure 10 – Brewster – Douglas Sewer Structural Repairs

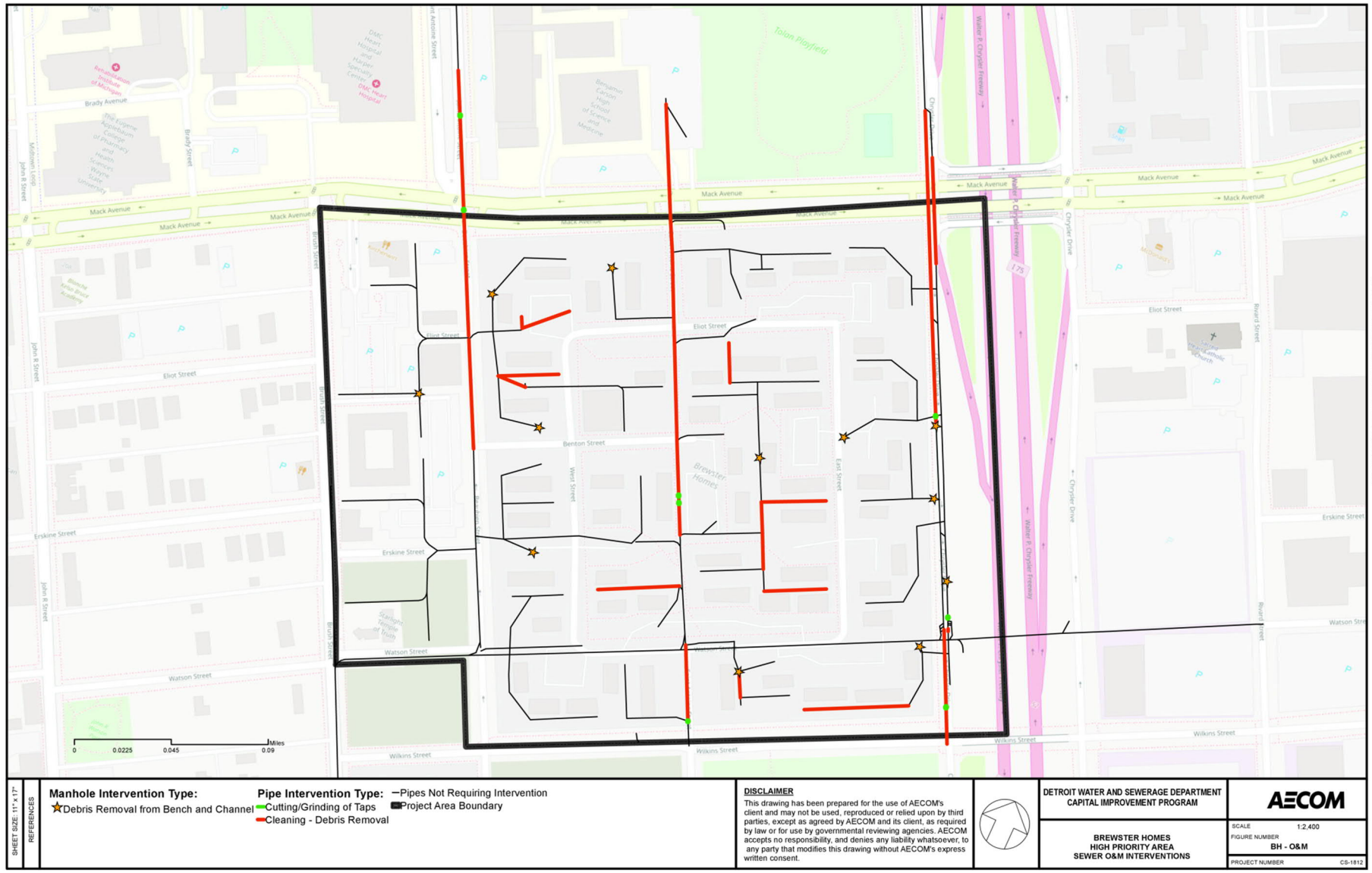


Figure 11 – Brewster Homes Sewer O&M Repairs



Figure 12 – Brewster Homes Sewer Structural Repairs

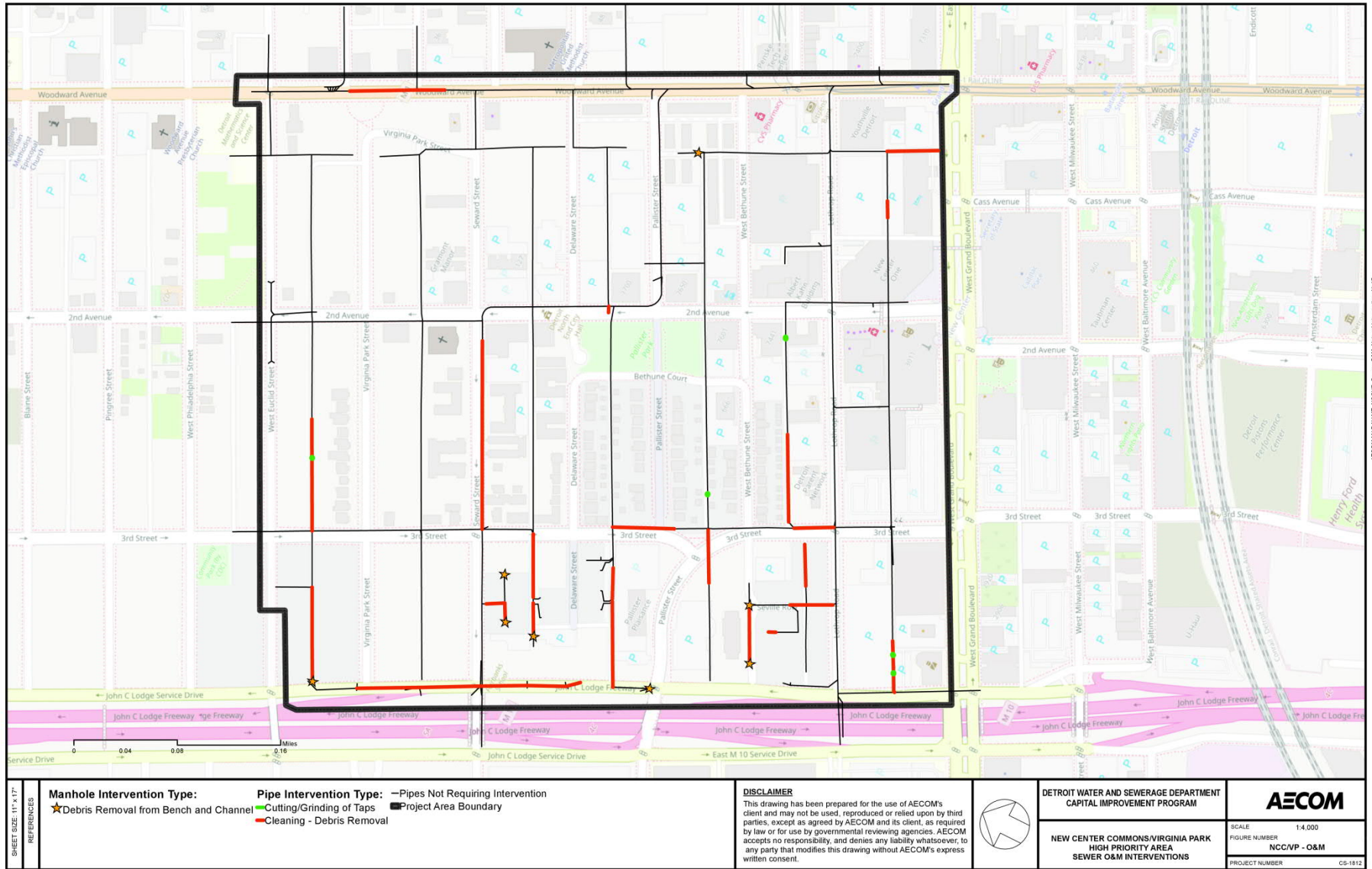


Figure 13 – New Common Center/Virginia Park Sewer O&M Repairs

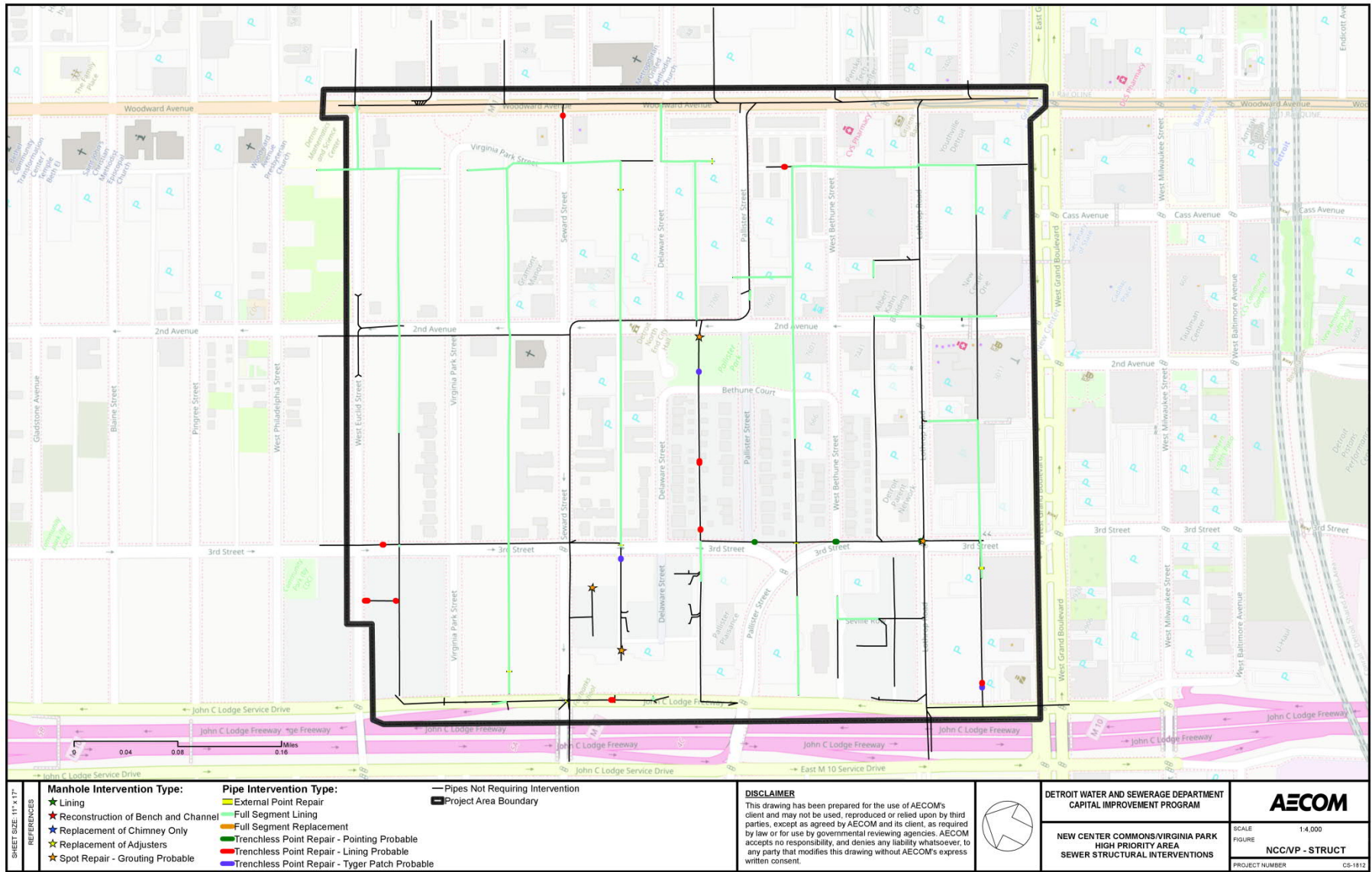


Figure 14 – New Common Center/Virginia Park Sewer Structural Repairs

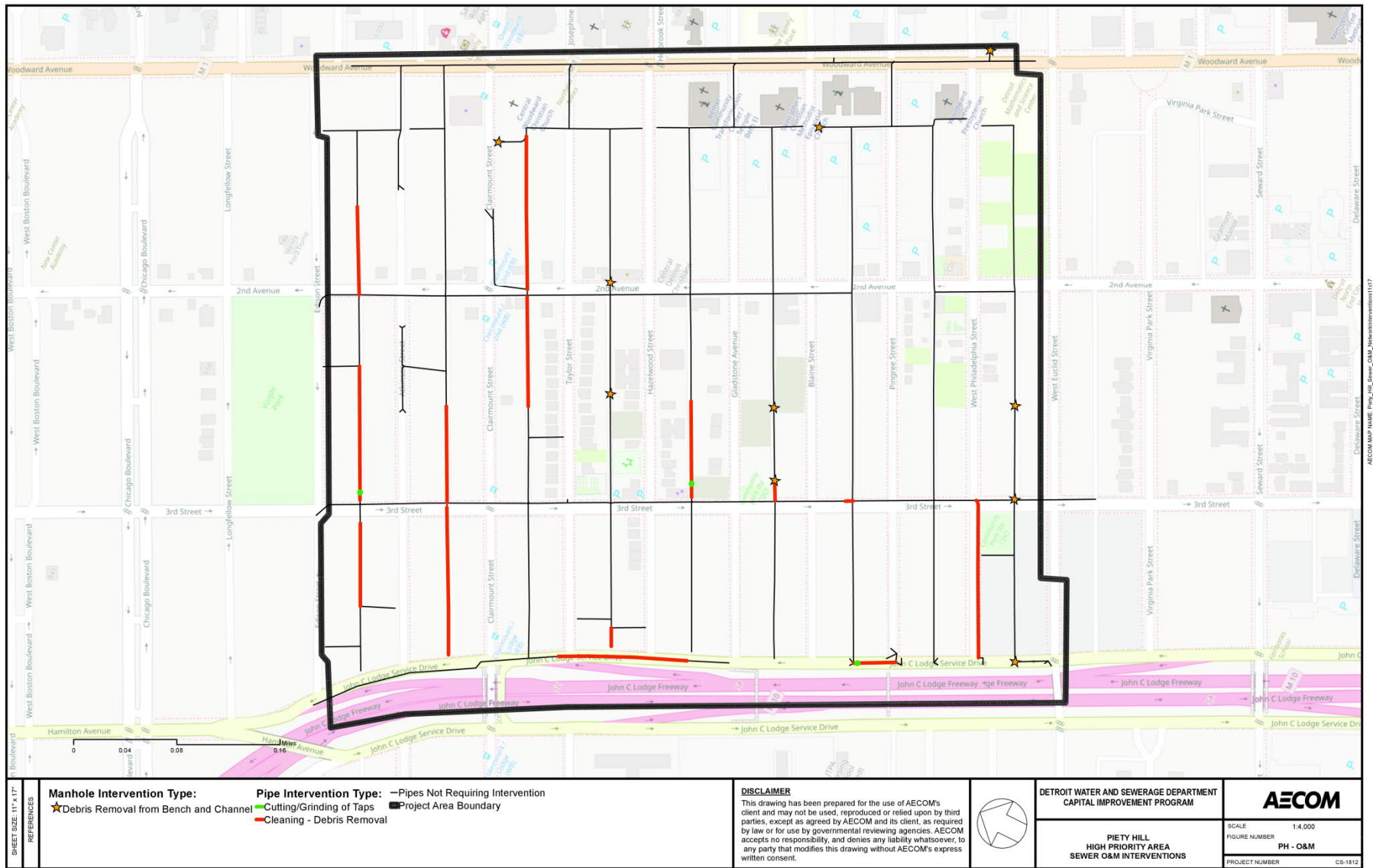


Figure 15 – Piety Hill Sewer O&M Repairs

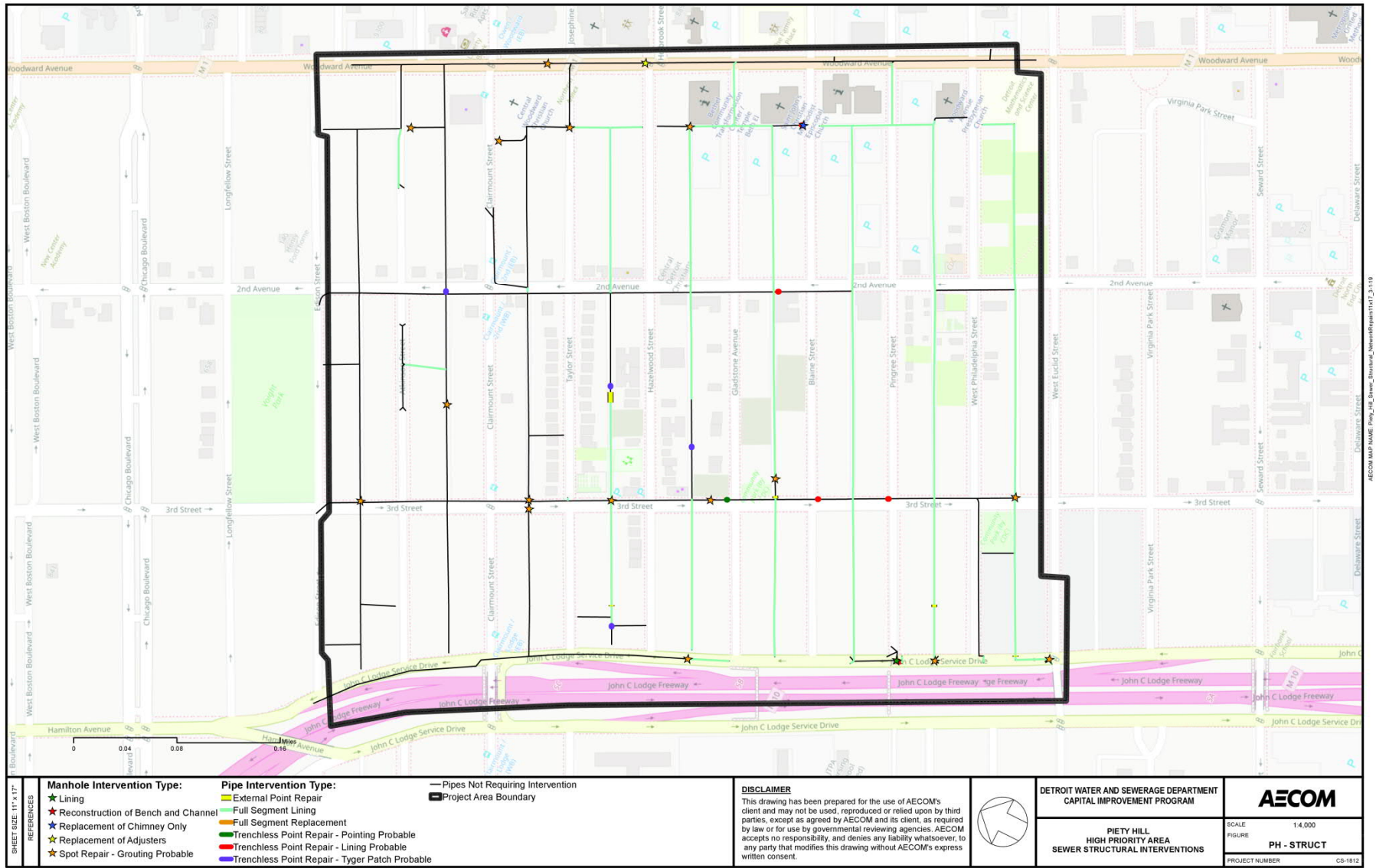


Figure 16 – Piety Hill Sewer Structural Repairs

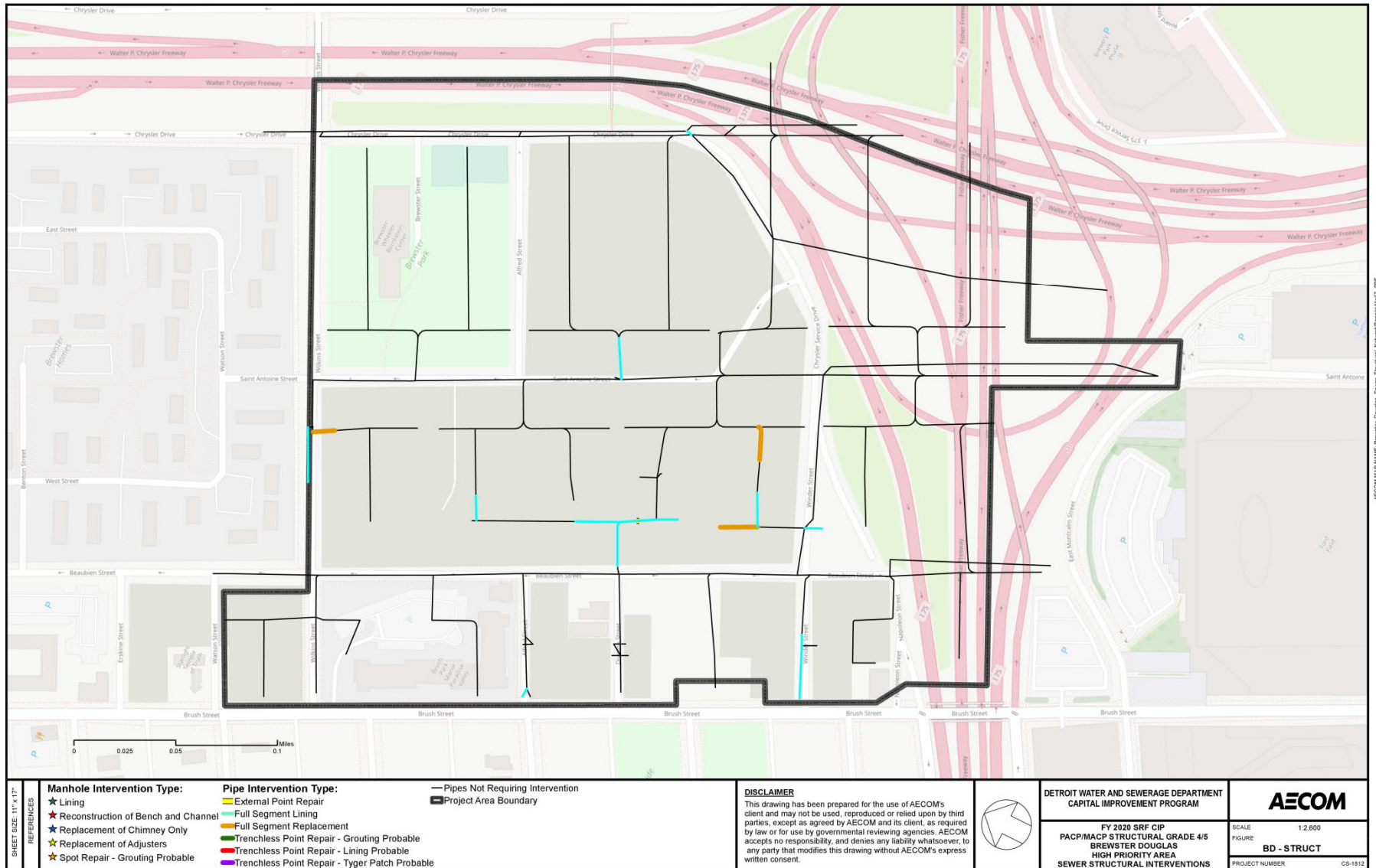


Figure 17 – Brewster – Douglas Sewer Structural Network Repairs



Figure 18 – Brewster Homes Sewer Structural Network Repairs

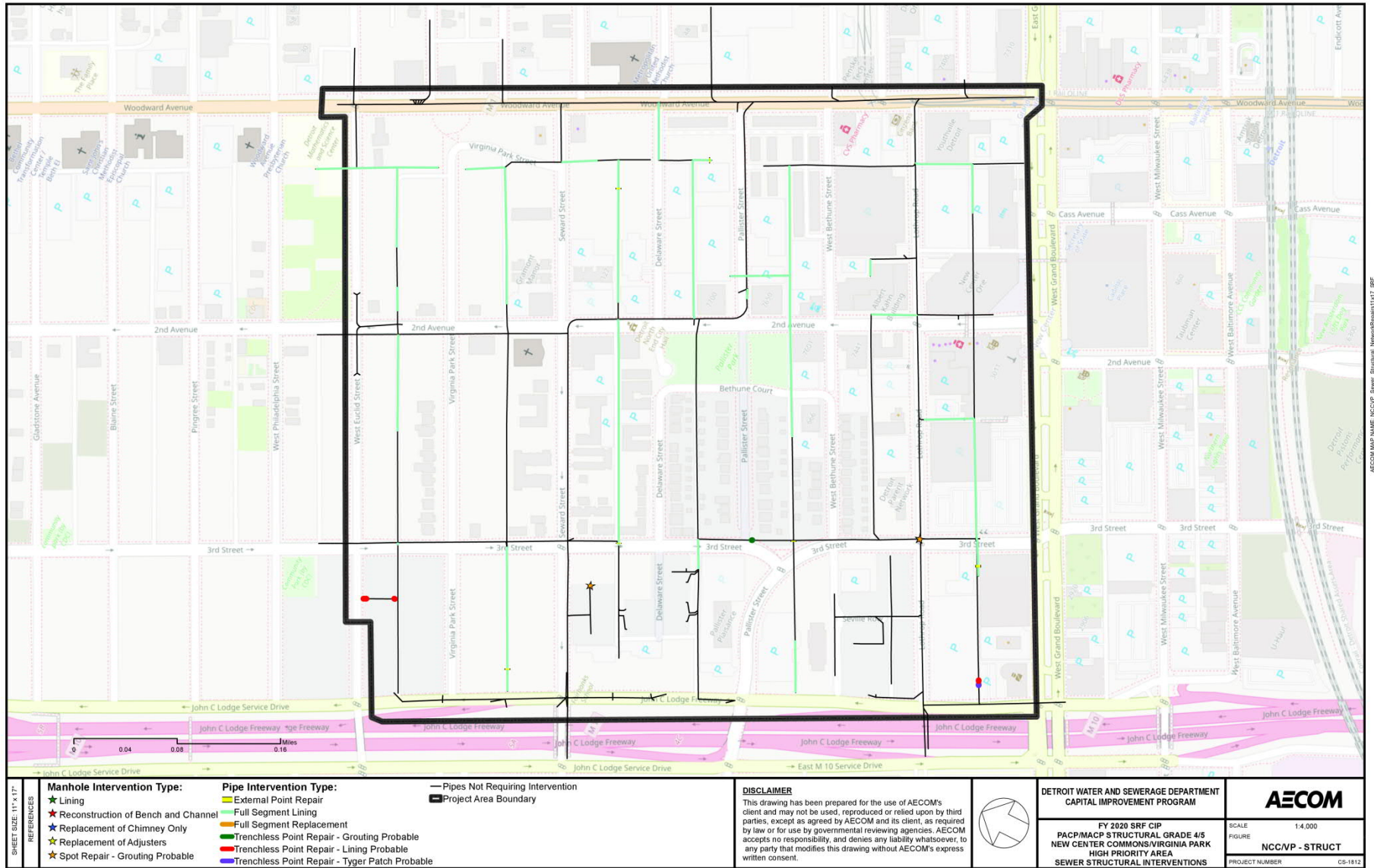


Figure 19 – New Center Commons/Virginia Park Sewer Structural Network Repairs 11x17

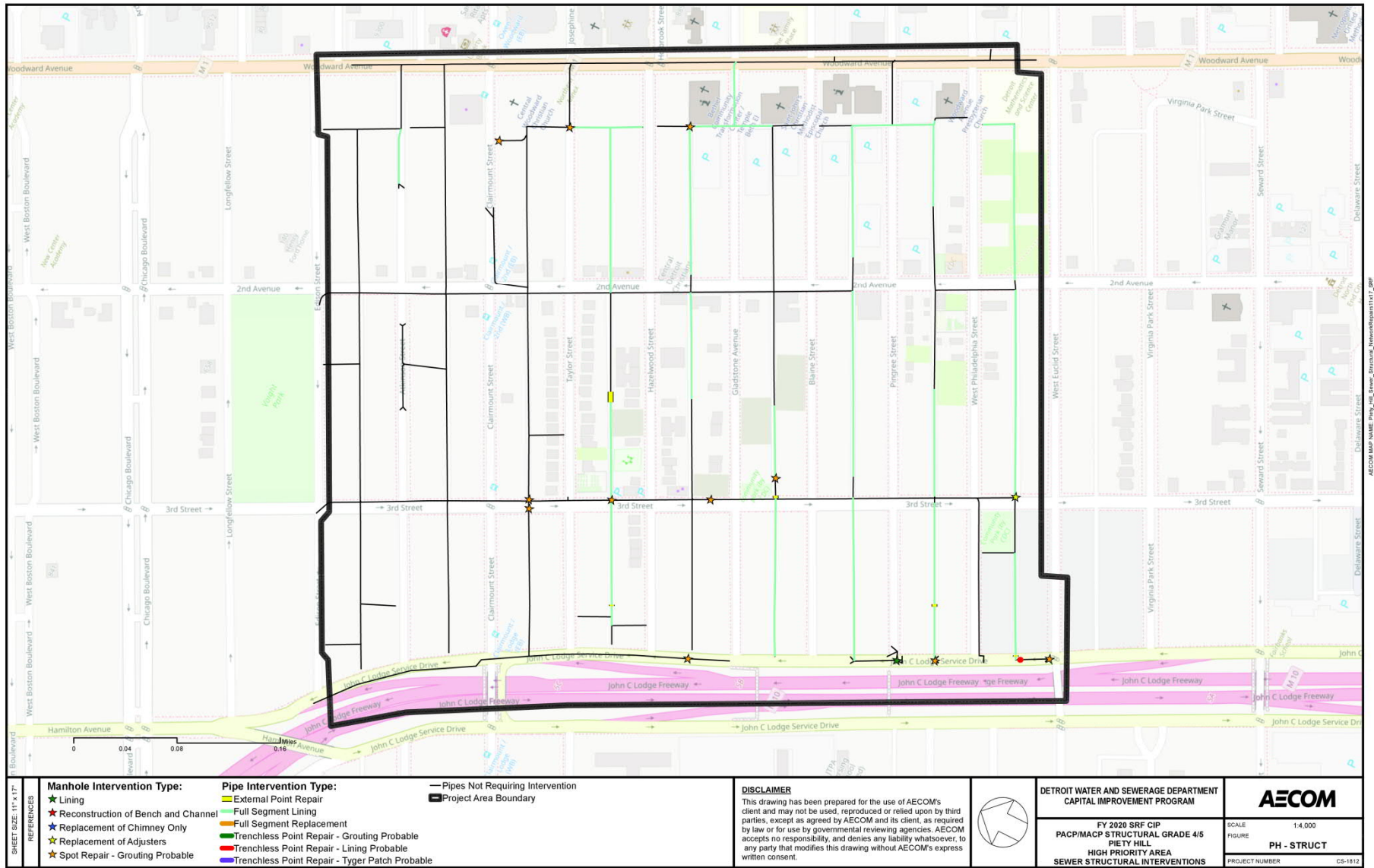


Figure 20 – Piety Hill Sewer Structural Network Repairs

Project B – Four Westside Neighborhoods

Data Interpolation – Alternative 2

The available CCTV data for the Pilot Project areas of North Rosedale Park, Cornerstone Village in addition to the Project A - Five High Priority and the Project B - Westside Four Neighborhoods indicates an average percentage of CCTV with grade 4 or 5 defects of 30%. Table 1 indicated that the actual repair length of interventions is estimated to be 59,172 LF for the Westside Four Neighborhoods.

As Table 6 below indicates, the available data also indicates that the cost per inch per foot to repair the grade 4 or 5 defects for Project A is estimated to be approximately \$10.80. This includes manhole repair costs. The average diameter of repairs was 15-inches for Project A, while for Project B based on the defects identified thus far it is 24-inches.

As the total footage is 250,000 LF in Project B and the cost per inch per foot is available based upon the analyzed data in Project A, it is possible to extrapolate estimated repairs and costs from the available data. As some upsizing of pipes is possible due to hydraulic capacity issues in the Project B area, the cost per inch per foot was rounded to \$11. Hence, for an estimated 59,172 LF of repairs with an average diameter of 24-inches, the expected repair cost is estimated to be \$15.6 MM as shown in Table 6. Adding a general 10% contingency and 20% for design/administration, the expected cost for the grade 4/5 defects is approximately \$21 MM as shown in Table 7.

Table 6 - Cost Interpolation – Loan Eligible – Project B for Alternative 2

| Area | Total Televised Footage (LF) | Actual Repair Footage of Just Structural Interventions (LF) | Average Diameter of Repaired Pipes (Inches) | Cost per Inch per Foot | Cost per Foot | Estimated Repair Cost |
|------------------------|------------------------------|---|---|------------------------|---------------|-----------------------|
| Project A Estimate | 108,053 | 23,125 | 15 | \$10.8 | \$164 | \$3,793,388 |
| Project B Interpolated | 249,979 | 59,172 | 24 | \$11.0 | \$264 | \$15,621,447 |

Table 7 - Cost Summary – Loan Eligible – Project B for Alternative 2

| Intervention | Estimated Cost |
|-----------------------------------|----------------|
| Total Estimated Intervention Cost | \$15,621,447 |
| 10% Contingency | \$1,562,145 |
| Sub-total | \$17,183,592 |
| 20% Design Contingency | \$3,436,718 |
| Total | \$20,620,310 |

Loan-Eligible Portion of the Project Summary – Alternative 2

As only repairs to address defects that have a NASSCO structural rating of either Significant (Grade 4) or Most Significant (Grade 5) are eligible for loan funding, 59,172 feet of sewer collection mains ranging in size from 8-inch through 180-inch in diameter in addition to over 100 manhole repairs are expected to meet these criteria. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, cementitious lining of manholes but does not include any type of specialized cleaning or pointing of brick sewers. The total estimated cost of these repairs is approximately \$21,000,000 from Table 7 above. As full analysis of the infrastructure has not begun yet, maps of the proposed interventions for Project B cannot be provided in this Project Plan.

Full Project Summary – Alternative 2

As shown in Table 8, the ratio of grade 4/5 repair costs to the total cost of the project is 1.55. Applying the same ratio to the Westside Four yields a total repair cost of \$24 MM for the Westside Four. Applying the same contingency figures as before, the total expected cost of the full project is estimated to be just under \$32 MM.

From the assessments/evaluations in these neighborhoods and the ratio of grade 4/5 defects to full interventions for Project A, AECOM expects to recommend to DWSD, the rehabilitation or replacement of approximately 150,000 feet of sewer collection mains ranging in size from 8-inch through 180-inch in diameter in addition to 330 manhole repairs. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, pointing of brick sewers, cementitious lining of manholes and specialized cleaning. The total estimated cost of these repairs is approximately \$32,000,000 as detailed in Table 9. As full analysis of the infrastructure has not begun yet, maps of the proposed interventions cannot be provided.

Table 8 – Ratio between Grade 4/5 Costs and Full Project Costs

| Area | Grade 4/5 Defect Cost | Estimated Full Project Total Cost | Ratio |
|-----------|-----------------------|-----------------------------------|-------|
| Project A | \$3,793,388 | \$5,866,423 | 1.55 |
| Project B | \$15,621,447 | \$24,158,356 | 1.55 |

Table 9 - Cost Summary – Full Project – Project B for Alternative 2

| Intervention | Estimated Cost |
|-------------------------|----------------|
| Total Intervention Cost | \$24,158,356 |
| 10% Contingency | \$2,415,836 |
| Sub-total | \$26,574,191 |
| 20% Design Contingency | \$5,314,838 |
| Total | \$31,889,030 |

Cost Summaries – Alternative 3 – Full Replacement

As tables 4 and 5 showed earlier for Project A - Five High Priority Neighborhoods, the costs for Alternative 3 are significantly higher than those for Alternative 2. As minimal data is available for the Project B - Westside Four Neighborhoods, it can be assumed that Alternative 3 - full replacement would also be significantly higher for Project B than would Alternative 2, which utilizes trenchless methodologies for much of the recommended pipe interventions.

Monetary Evaluation of Alternative 2 and 3

A monetary evaluation of the feasible alternatives, Alternatives 2 and 3 was prepared using MDEQ guidelines for SRF Project Plans, including the present worth formulas and discount interest rate of 0.200%. Under this analysis, the useful life is assumed to be 50 years for pipelines. The salvage value of pipes at the end of the 20 or 30-year planning period was computed on the basis of a straight-line depreciation over the useful life of the item. Therefore, the salvage value of the pipes at the end of the 20 or 30-year planning period is estimated to be 60% or 40%, respectively, of the initial cost.

The present worth of salvage value was then computed by multiplying the salvage at the end of the 20 or 30 years by the conversion factor 0.9608 or 0.9418, respectively, based on the following formula:

$PW = F \times 1/(1 + i)^n$, Where:

PW = Present Worth (Salvage)

F = Future Value (Salvage)

i = Discount Interest Rate (0.200%)

n = Number of Years (20 or 30)

$1/(1 + i)^n$ = Conversion Factor

Interest during the construction period was computed using the formula:

$I = i \times 0.5 \times P \times C$

Where:

I = Interest Value

i = Discount Interest Rate (0.200%)

P = Period of Construction in Years (assumed to be two and a half years)

C = Capital Cost of the Project

For each of Alternatives 2 and 3, the total Present Worth was computed from the estimated cost (including construction, engineering, and administrative costs), salvage value, and interest during construction. This equates to the amount which would be needed at the start of the project to cover design and construction costs over the 20 or 30-year planning period if interest were to accrue at the discount rate 0.200% annually.

The Present Worth of each alternative was then converted to an Equivalent Annual Cost, which is the amount which would be paid uniformly over a 20 or 30-year period based on the Present Worth value. This amount was obtained by the using the following formula and capital recovery factor of 0.0511 or 0.0344, respectively:

$$A = PW \times [(i(1 + i)^n)/((1 + i)^n - 1)]$$

Where:

A = Equivalent Annual Cost PW = Present Worth

i = Discount Interest Rate (0.200%) n = Number of Years (20 or 30)

$[(i(1 + i)^n)/((1 + i)^n - 1)]$ = Capital Recovery Factor

The cost effective analysis and present worth determination for Alternatives 2 and 3 for Project A is presented in Table 10. From the equivalent annual cost below, Alternative 2 minimizes the impact to the users more than does Alternative 3. This analysis has not been performed for Project B as those results would yield a similar outcome with Alternative 2 being more favorable.

Table 10 – Cost Effective Analysis/Present Worth Determination – Project A Loan Eligible

| | Project A Alternative 2 Rehabilitation/Limited Section Replacement for Loan Eligible Grade 4/5 | Project A Alternative 3 Full Replacement for Loan Eligible Grade 4/5 | Comments |
|------------------------------|---|---|------------------|
| Initial Cost | \$5,007,272 | \$13,772,756 | |
| O&M Costs | \$0 | \$0 | |
| Replacement Costs | \$0 | \$0 | |
| Salvage Value 20-year Anal. | \$2,186,876 | \$6,015,113 | 50 year asset |
| Salvage Value 30-year Anal. | \$1,429,077 | \$3,930,748 | 50 year asset |
| Interest during Construction | \$10,015 | \$27,546 | 2 year const. |
| Total Present Worth | \$2,830,411 | \$7,785,189 | 20 year analysis |
| Total Present Worth | \$3,588,210 | \$9,869,553 | 30 year analysis |
| | | | |
| Equivalent Annual Cost | \$144,511 | \$397,486 | 20 year analysis |
| Equivalent Annual Cost | \$123,351 | \$339,282 | 30 year analysis |

Total Cost and Loan-Eligible Cost for Project A and B, Alternative 2

From Tables 2 and 9 the combined total cost for the full project for Alternative 2 for Projects A and B is \$39,632,708.

From Tables 3 and 7 above, the combined total loan eligible cost for Alternative 2 for Projects A and B is \$25,627,583.

Alternative 2 is recommended and DWSD anticipates paying for the entire Projects A and B Alternative 2 with SRF loan for the loan eligible portion, and cash and bonds for the non-loan eligible portion.

User Cost

Repayment of the SRF loan through annual debt retirement payments will impact the residential customer rates resulting in increased user costs. The annualized equivalent costs for the loan eligible portions of Projects A and B are:

- Project A = \$144,511 (20-year); \$123,351 (30-year)
- Project B = \$595,108 (20-year); \$507,967 (30-year)
- Total Annualized Equivalent Cost for Projects A and B = \$739,619 (20-year); \$631,317 (30-year)

This impact to customer rates is generally determined by dividing the additional expenses among the users in the service area as summarized in Table 11. The annualized cost of the loan eligible portion of the project was calculated using the capital recovery factor 0.0511(20-year) or 0.0344 (30-year) following formula:

$$A = PW \times [(i(1 + i)^n)/((1 + i)^n - 1)]$$

Where:

A = Equivalent Annual Cost PW = Present Worth

i = Interest Rate through SRF Loan (2.0%)

n = Number of Years (20 or 30)

$[(i(1 + i)^n)/((1 + i)^n - 1)]$ = Capital Recovery Factor

Table 11 – Loan Eligible User Cost Impact for Alternative 2 (Sewer Rehabilitation/Limited Replacement)

Projects A and B

| Item | Sewer Rehabilitation/Limited Replacement | |
|---|---|---|
| | 20-year Analysis | 30-year Analysis |
| Total Cost of Projects A and B | \$25,628,000 | \$25,628,000 |
| Annualized Cost of Projects A and B (Assuming SRF interest rate 2.0%) | \$739,619 | \$631,317 |
| Number of User Accounts (households) in City of | 178,791 | 178,791 |
| Average Sewage Disposal Based upon Water Consumption per Household (industry average) | 7,333 gallons/month (approx. 980 ft ³ /month) | 7,333 gallons/month (approx. 980 ft ³ /month) |
| Current DWSD Sewage Disposal Rate | \$54.84 per 1,000 ft ³ | \$54.84 per 1,000 ft ³ |
| Current Estimated Monthly DWSD Sewage | \$53.74 | \$53.74 |
| Current Estimated Annual DWSD Sewage Disposal Rate per Household | \$644.92 | \$644.92 |
| Estimated Increase in Cost per Household (Year 1) | \$4.14 | \$3.53 |
| Proposed Estimated Annual DWSD Sewage Disposal Rate per Household (Year 1) | \$649.06 | \$648.45 |
| Proposed Percent Increase in Cost per Household per Year | 0.64% | 0.55% |

Non-Monetary Evaluation of Alternative 2 and 3

The end result of constructing either Alternative 2 or 3 will provide the end user the same level of service. Constructing Alternative 2, rehabilitation/limited replacement, can achieve that level of service more efficiently and with the least disruption to the user, natural or cultural features and the environment by the extensive use of trenchless technologies for a majority of the piping work. Rehabilitating manholes will also be less disruptive as opposed to excavations required for replacement. By use of trenchless technologies, restoration of the visible landscape is also minimized. It is also anticipated that Alternative 2 can be constructed in a shorter time period than Alternative 3.

Disadvantaged Community Status

The SRF program includes provisions for qualifying the applicant community as a disadvantaged community. The benefits for communities with a population of 10,000 or more that qualify for the disadvantaged community status consist of:

- Award of 30 additional priority points.
- Possible extension of the loan term to 30 years or the useful life of the components funded, whichever is earlier. The estimated useful life of the sewer rehabilitation/limited replacement is 50 years. DWSD is aware that the SRF program offers both 20 and 30 year loan terms and will evaluate which term is the most appropriate for DWSD and its customers.

MDEQ requires submittal of a Disadvantaged Community Status Determination Worksheet to determine if the community qualifies for this status. A completed worksheet will be included in the final plan.

Item 7 – Environmental Preview/ Review

The environmental setting for the proposed project is within the city limits and will be done in local urban neighborhoods. There is minimal environmental impact as the majority of work will occur within the public right-of-way, where multiple utilities and infrastructure already exists. This work includes interventions such as cured-in-place lining (CIPP), trenchless point repairs, external point repairs, full section replacements, pointing of brick sewers, and cementitious lining of manholes and specialized cleaning. Trenchless technologies will be used extensively on a majority of this project. The proposed project will not detrimentally affect the water quality of the area, air quality, wetlands, endangered species, wild and scenic rivers or unique agricultural lands.

The anticipated environmental impacts resulting from implementing the recommendations of this Project Plan include beneficial and adverse; short and long-term; and irreversible and irretrievable. The following is a brief discussion of the anticipated environmental impacts of the selected alternative.

Beneficial and Adverse

The proposed improvements will significantly improve DWSD's capability to operate a reliable sewer collection system, reducing sewer backups into homes, avoiding catastrophic sinkholes from sewer collapses and increase efficiency at Detroit WRRF. Implementation of the improvements will also generate construction-related jobs, and local contractors will have an opportunity to bid contract work. The majority of the work to be constructed with this project will be performed by use of trenchless technologies; minimizing disruption to the existing natural and cultural features, and to the end users.

Noise and dust will be generated during construction of the proposed improvements. The contractor will be required to implement efforts to minimize noise, dust and related temporary construction byproducts. Street congestion and disruption of vehicular movement may occur for short periods of time on the roads where work is actively being done. For work resulting in the need to have open trenches, and spoils from open trenches will be subject to erosion; the contractor will thereby be required to implement a Soil Erosion and Sedimentation Control (SESC) Program as described and regulated under Michigan's Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act (NREPA). Underground utility service inside the project area may be interrupted occasionally for short periods of time. The aesthetics of the area will be temporarily affected until restoration is complete.

Short and Long Term

The short-term adverse impacts associated with construction activities will be minimal, and will be mitigated, in comparison to the resulting long-term beneficial impacts. Short-term impacts include traffic disruption, dust, noise and site aesthetics. No adverse long-term impacts are anticipated.

Irreversible and Irretrievable

The impact of the proposed project on irreversible and irretrievable commitment of resources includes materials utilized during construction and fossil fuels utilized to implement project construction.

Item 8 – Other Impacts or Concerns

Direct Impacts

Construction of the proposed project is not expected to have an adverse effect on historical, archaeological, geographic or cultural areas, as the construction activities will occur underground and will require minimal disturbance of the project area soils due to much of the work being performed by use of trenchless technologies. The proposed project will not detrimentally affect the water quality of the area, air quality, wetlands, endangered species, wild and scenic rivers or unique agricultural lands. The construction activities associated with this project will not permanently impact the visible landscape.

User Rates

As discussed in Item 6 above, the impact of financing the Projects A and B, Alternative 2 through the SRF loan program is expected to increase by no more than 0.64% the cost of sewer disposal to a typical City of Detroit customer due to the impact of construction cost. However, the actual rate determination will be based on factors that encompass the delivery of comprehensive services by DWSD to its customers. The increase is based on repayment of the SRF loan over a 20-year period.

Indirect Impacts

It is not anticipated that DWSD's proposed improvements to the sewer collection system will alter the ongoing pattern of growth and development in the study area as these neighborhoods are fully developed. Growth patterns in the service area are subject to local use and zoning plans, thus providing further opportunity to minimize indirect impacts.

Cumulative Impacts

Improved reliability, efficiency and the ability to safely convey storm water and sanitary flows to the WRRF are the primary cumulative beneficial impacts anticipated from the implementation of the proposed project.

Item 9 – Mitigation

Where adverse impacts cannot be avoided, mitigation methods will be implemented. Mitigating measures for the projects such as soil erosion control, if required, will be utilized as necessary and in accordance with applicable laws. Details will be further specified in the construction contract documents used for the project.

Mitigation of Short Term Impacts

Short-term impacts due to construction activities such as noise, dust and minor traffic disruption cannot be avoided. However, efforts will be made to minimize the adverse impacts by use of thorough design and well planned construction sequencing. Noise from equipment cannot be avoided, but hours of work can be controlled. Dust and soil deposits on the streets can be controlled through watering and construction area sweeping. Construction area footprints will be minimized, and traffic control measures can be utilized. Site restoration will minimize the adverse impacts of construction, and adherence to the Soil Erosion and Sedimentation Act will minimize the impacts due to disturbance of the soil structure, if such disturbance is found to be necessary. Specific techniques will be specified in the construction contract documents.

Mitigation of Long Term Impacts

Adverse long term impacts due to the proposed project are not anticipated. The aesthetic impacts of construction within the boundaries of the project area will be mitigated by site restoration.

Mitigation of Indirect Impacts

In general, it is not anticipated that mitigative measures to address indirect impacts will be necessary for the recommended improvements addressed in this Project Plan. The proposed improvements are located within the project area so they do not promote growth in areas not currently served by DWSD. Therefore, indirect impacts are not likely to be a concern for these improvements.

Item 10 – Public Involvement

The project team has pursued contact with the neighborhoods in the Project A and B areas during the initial planning and condition assessment phases leading up to the project plan development. Several of the techniques that have been progressively incorporated include: door-to-door outreach; door hangers; movable lawn signs while condition assessment work was being performed; informational meeting with neighborhood association presidents; information provided to the City's Department of Neighborhoods, Detroit Economic Growth Corporation District Liaisons and Detroit City Council. A key, required component of this public involvement will be a public hearing outlined in the following sections. Notice for the public hearing will be advertised in local publications and will be posted electronically on various websites, social media and through email.

Public Hearing Advertisement and Notice

A notice will be published no less than 30 days in advance to alert parties interested in this Project Plan and request input at a public hearing prior to its adoption. In addition, a direct mail notification of the notice will be sent to the potentially interested local and federal agencies. This direct mail notice includes an invitation to comment.

Public Hearing Transcript

A formal public hearing on the draft Project Plan will be held before the DWSD Board of Water Commissioners at 1:00 PM on June 5, 2019. The hearing will include a presentation on the project, as well as an opportunity for public comment. The hearing transcript will be provided with the submission, along with a list of attendees.

Public Hearing Comments Received and Answered

Comments from the public during the Public Hearing will be addressed and answered by the project team.

Adoption of the Project Plan

Upon approval and certification of resolution by the DWSD Board of Water Commissioners, the GLWA Board of Water Commissioners will certify a resolution at its regular monthly meeting in June 2019, authorizing GLWA to proceed with official filing of the Project Plan for purposes of securing low interest loan assistance under the SRF Program. Executed copies of both Boards of Water Commissioners' Resolutions and certifications for the Project Plan will be provided with the submission.



Financial Services Audit Committee Communication

Date: June 21, 2019

To: Great Lakes Water Authority Audit Committee

From: Deirdre Henry, Treasury Manager

Re: Investment Market Update

Background: The current economic and political environment has caused a shift in the capital markets. Changes in the forecast for U.S. economic growth, the global growth outlook, and trade tensions has moved the market to project that the federal reserve will cut rates.

Analysis: The investment advisor for the Great Lakes Water Authority, PFM Asset Management LLC, has provided the attached report give a synopsis of the changes in current market environment and the potential impact on the GLWA portfolio.

Proposed Action: Receive and file report.

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Market Update

June 2019

PFM Asset
Management LLC

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Suite 333
Ann Arbor, MI 48108

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Current Market Themes



Capital markets – interest rates plummet

- Interest rates trended significantly lower amid slowing growth and trade concerns, with the 10-year dropping close to 2.00%, a level that has not been breached since the Q4 2016. The 3-month to 10-year part of the yield curve inverted further, renewing concerns about a possible recession in coming months.
- Equity markets, credit spreads, and volatility all reversed their sharp moves from the 4th quarter, ending the 1st quarter nearly back to where they were 6 months prior. The S&P 500 returned 13.6% in the first quarter, the best quarterly return since the 3rd quarter of 2009, and moved to new all-time highs in April. But, escalating trade tensions sent stocks 7% lower in May.

The Fed pivots from “patient” to dovish

- At the January, March, and May meetings, the FOMC kept the Fed Funds target rate unchanged at 2.25% to 2.50% and its formal projections show no rate changes in 2019.
- At a conference in early June, Federal Reserve Chair Powell acknowledged the consequences of escalating trade tensions and affirmed that the Fed will “act as appropriate to sustain the expansion.”
- As a result of slowing growth expectations and increasing risks, the market now expects two to three rate cuts by the end of 2019.



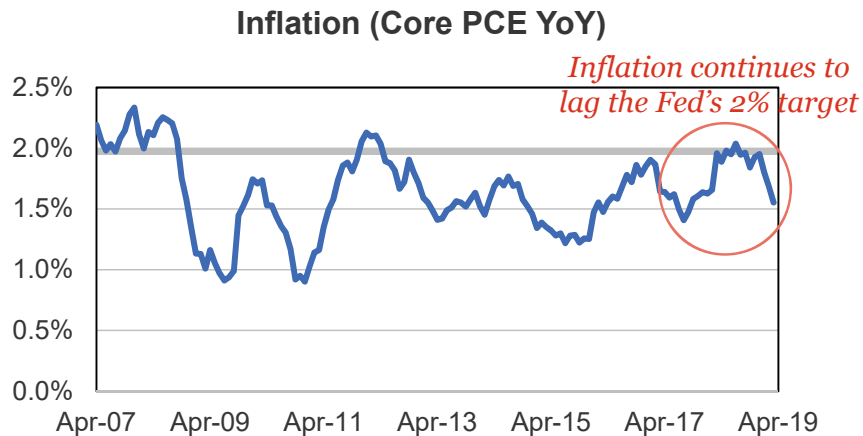
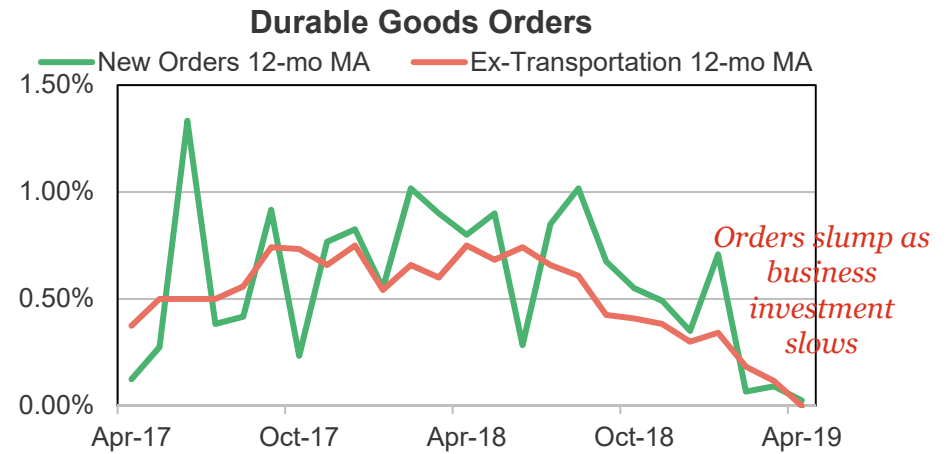
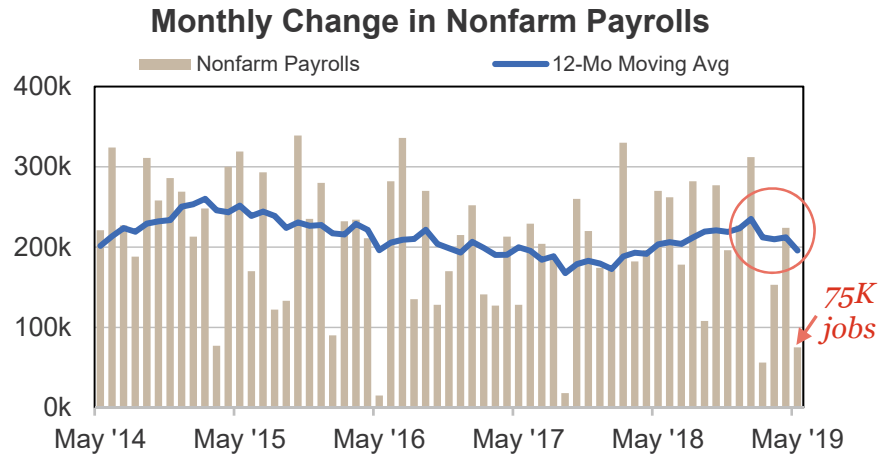
U.S. economic growth expected to slow



- U.S. GDP grew 3.1% in Q1 of 2019, up from 2.2% in the 4th quarter; however, the headline number may mask underlying weakness. Growth was driven in large part by an unusual improvement in net exports and outsized growth in inventories, both factors which are likely unsustainable. Forecasts for Q2 are substantially lower, with the New York and Atlanta Federal Reserve Banks projecting growth of just 1.0% and 1.4%, respectively.
- Recent economic data has been softening, highlighted by a disappointing May jobs report, a decrease in durable goods orders, and declines in several manufacturing indices.
- The International Monetary Fund recently estimated that the retaliatory tariffs proposed and already in place between the U.S. and China, if implemented, could cost approximately \$455 billion in global GDP over the next 12 months, cutting global economic output by 0.5% in 2020.



Market Jitters over Weakening Economic Data

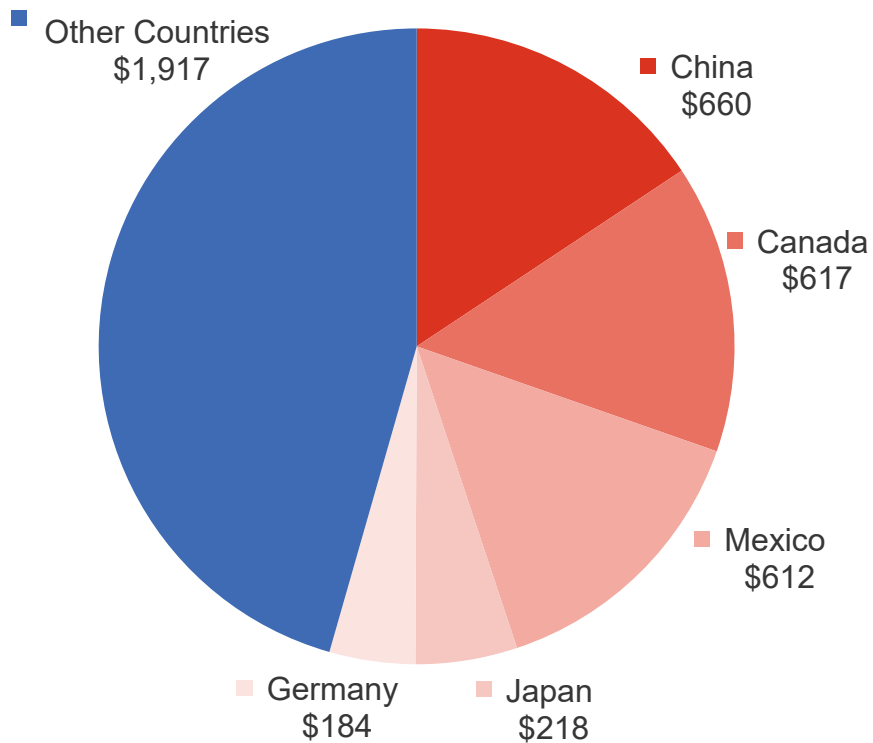


Source: Bloomberg, as of 6/10/2019.

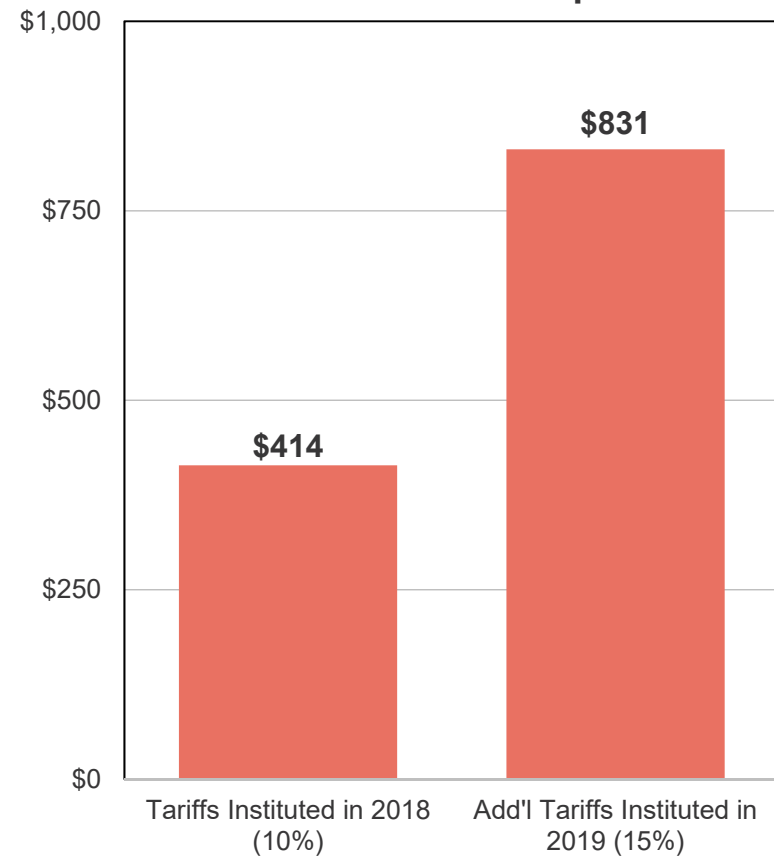


Trade Tensions with the U.S.'s Largest Trading Partners Increases

2018 U.S. Imports & Exports
(Billions)



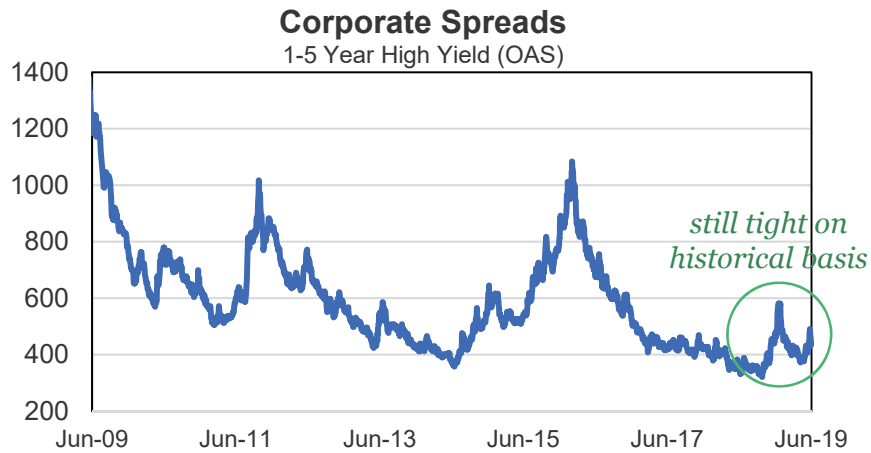
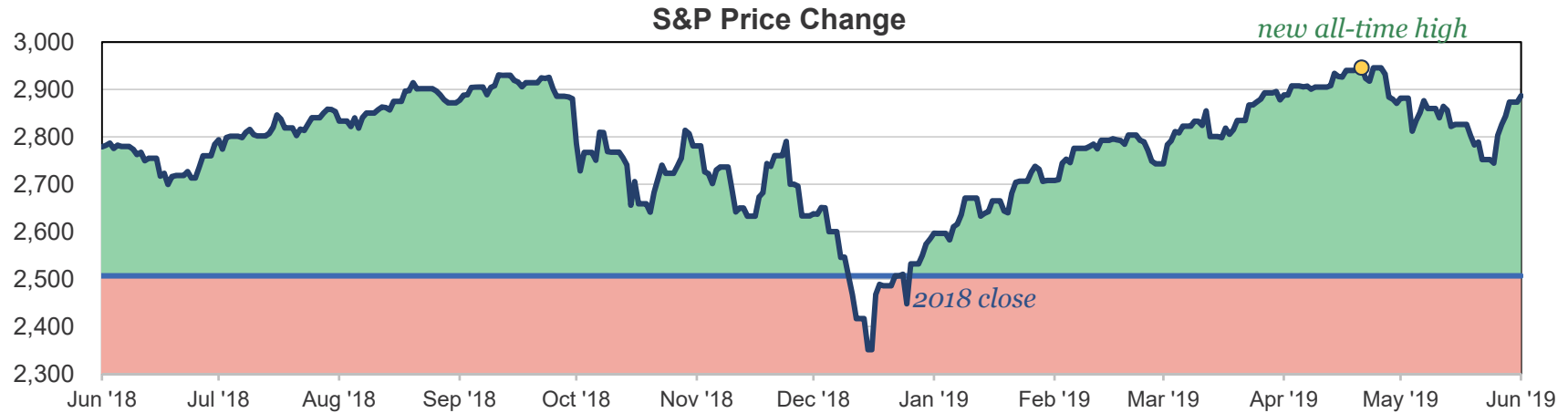
Total Annual Cost per Household
of Tariffs on Chinese Imports



Source: U.S. Census Bureau.



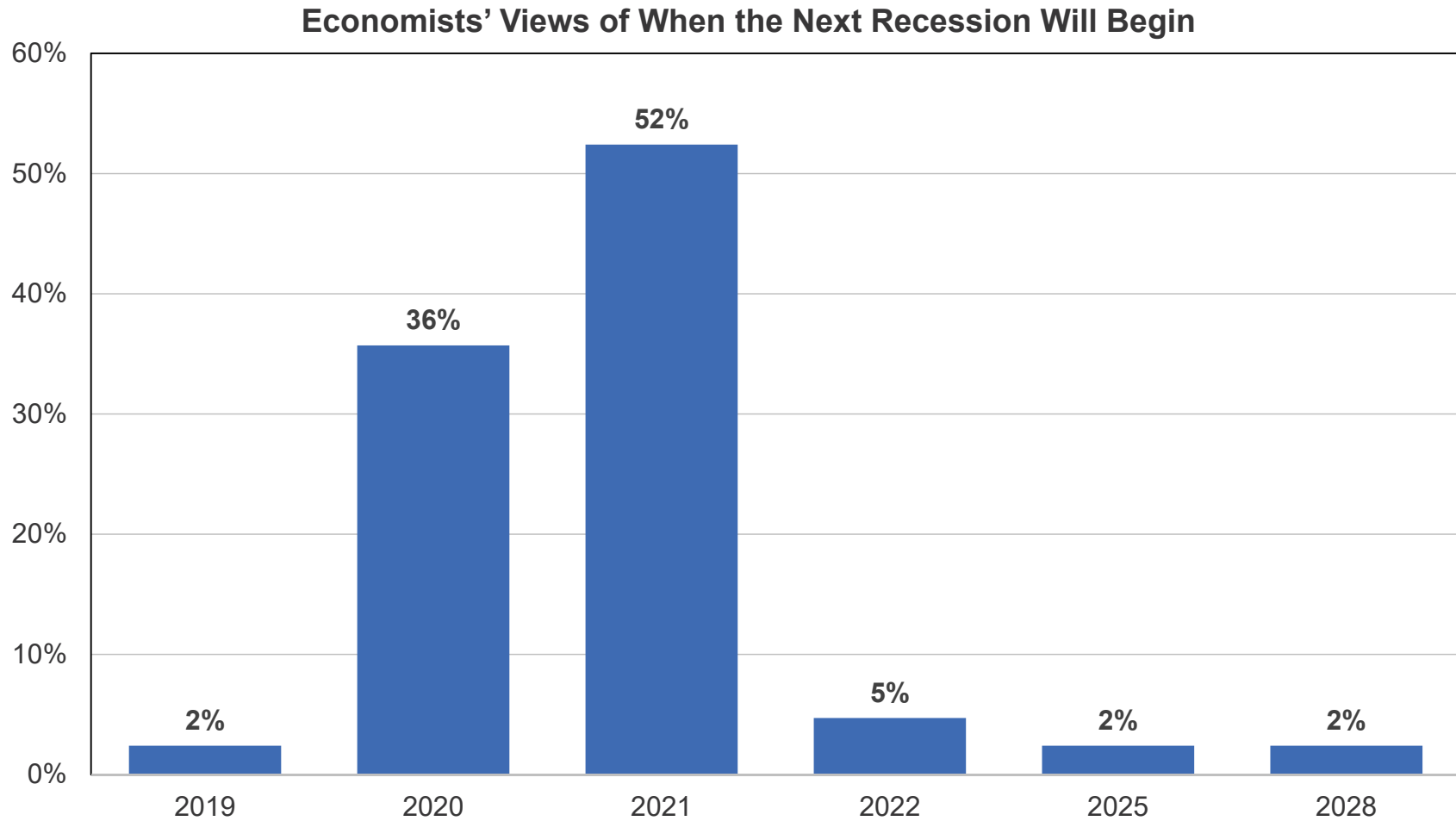
On the Other Hand, Key Economic Metrics Remain Strong



Source: Bloomberg, as of 6/10/2019.



When is the Next Recession?



Source: Wall Street Journal, as of 5/31/19.



Global Growth Outlooks Weaker

World Bank GDP Growth Projections
June 2019

| Region | 2019 | 2020 |
|------------------|--------|--------|
| World | 3.3% ↓ | 3.6% |
| U.S. | 2.3% ↓ | 1.9% ↑ |
| Euro area | 1.3% ↓ | 1.5% ↓ |
| China | 6.3% ↑ | 6.1% ↓ |
| Emerging Markets | 4.4% ↓ | 4.8% ↓ |

IMF GDP Growth Projections
April 2019

| Region | 2019 | 2020 |
|------------------|--------|--------|
| World | 2.6% ↓ | 2.7% ↓ |
| U.S. | 1.7% ↓ | 1.5% ↓ |
| Euro area | 1.2% ↓ | 1.4% ↓ |
| China | 6.2% | 6.1% ↓ |
| Emerging Markets | 4.0% ↓ | 4.6% |

“Emerging and developing economy growth is constrained by **sluggish investment**, and risks are tilted to the downside. These risks include rising **trade** barriers, renewed **financial stress**, and sharper-than-expected **slowdowns** in several major economies...”

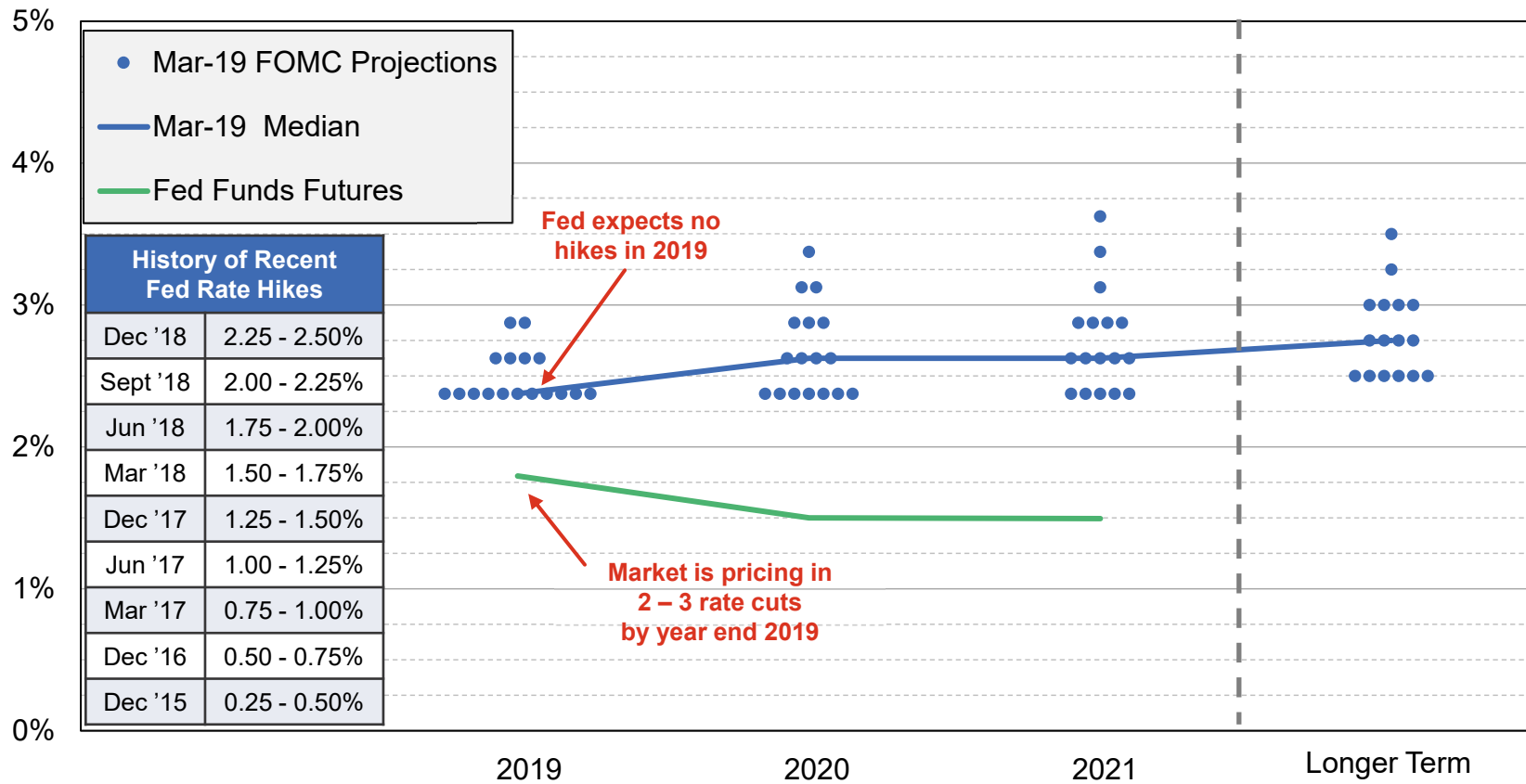
-The World Bank, June 2019 *Global Economic Prospects: Heightened Tensions, Subdued Investment*

Source: World Bank and IMF. Arrows indicate change from prior projection.



Market Now Projecting Multiple Rate Cuts by Year End

Fed Participants' Assessments of 'Appropriate' Monetary Policy

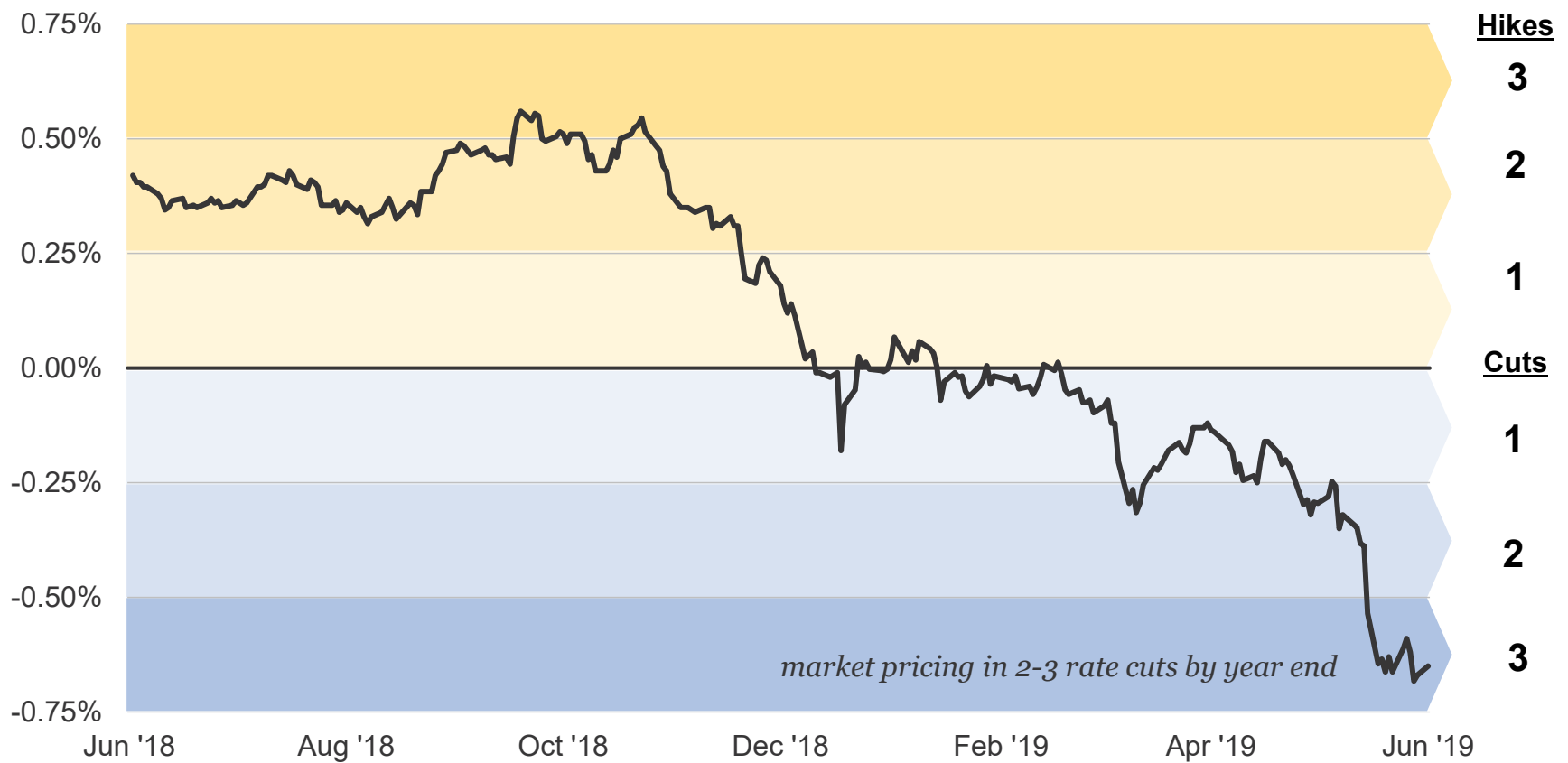


Source: Federal Reserve and Bloomberg. Individual dots represent each Fed members' judgement of the midpoint of the appropriate target range for the Federal Funds rate at each year-end. Fed funds futures as of 6/10/19.



The Market Expects 2-3 Rate Cuts by Year End

2019 Rate Moves
Priced into the Futures Market



Source: Bloomberg, as of 6/17/2019.



Treasury Yields Continue to Plummet

2-Year Treasury



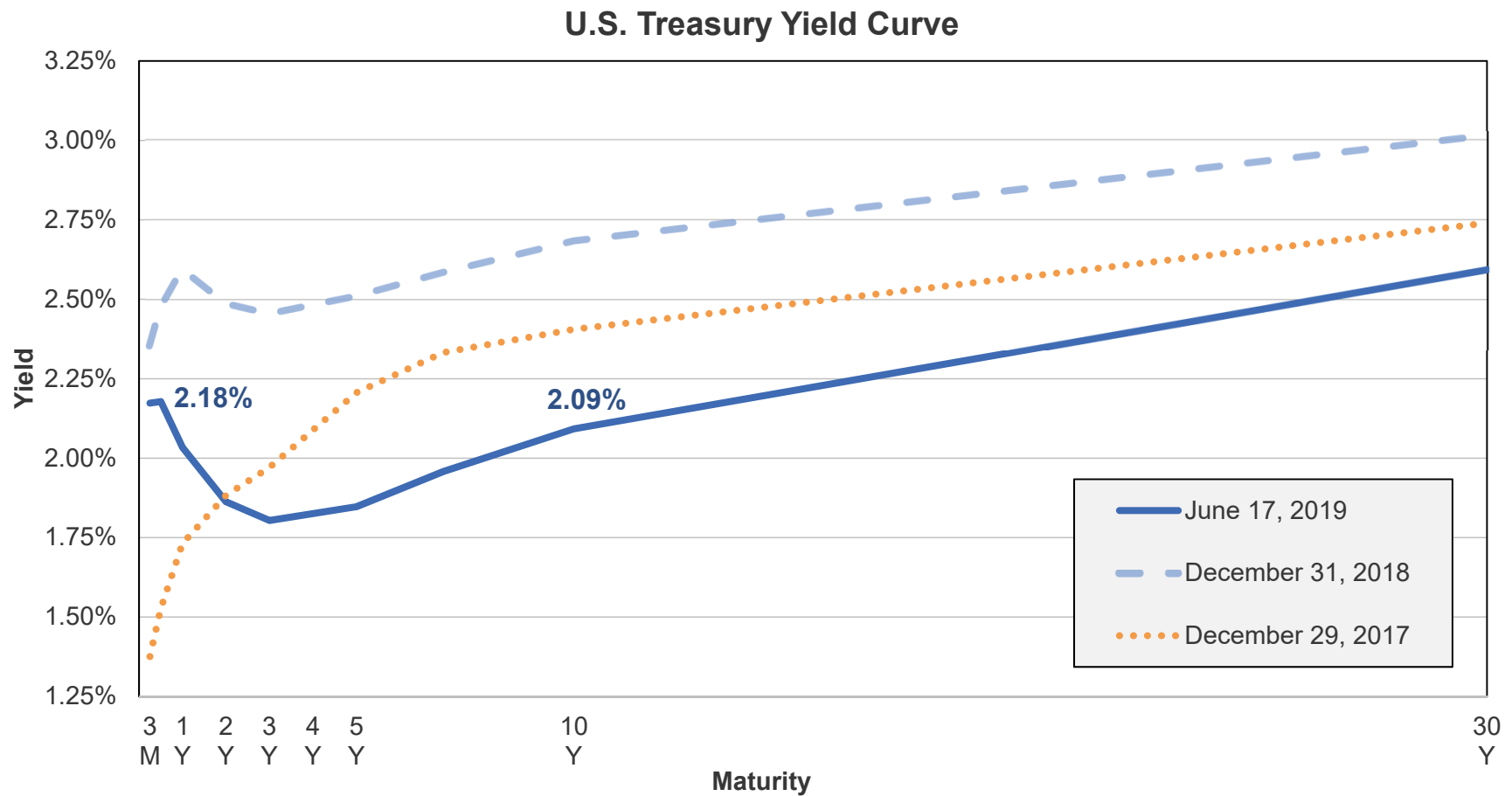
10-Year Treasury



Source: Bloomberg, as of 6/10/19.



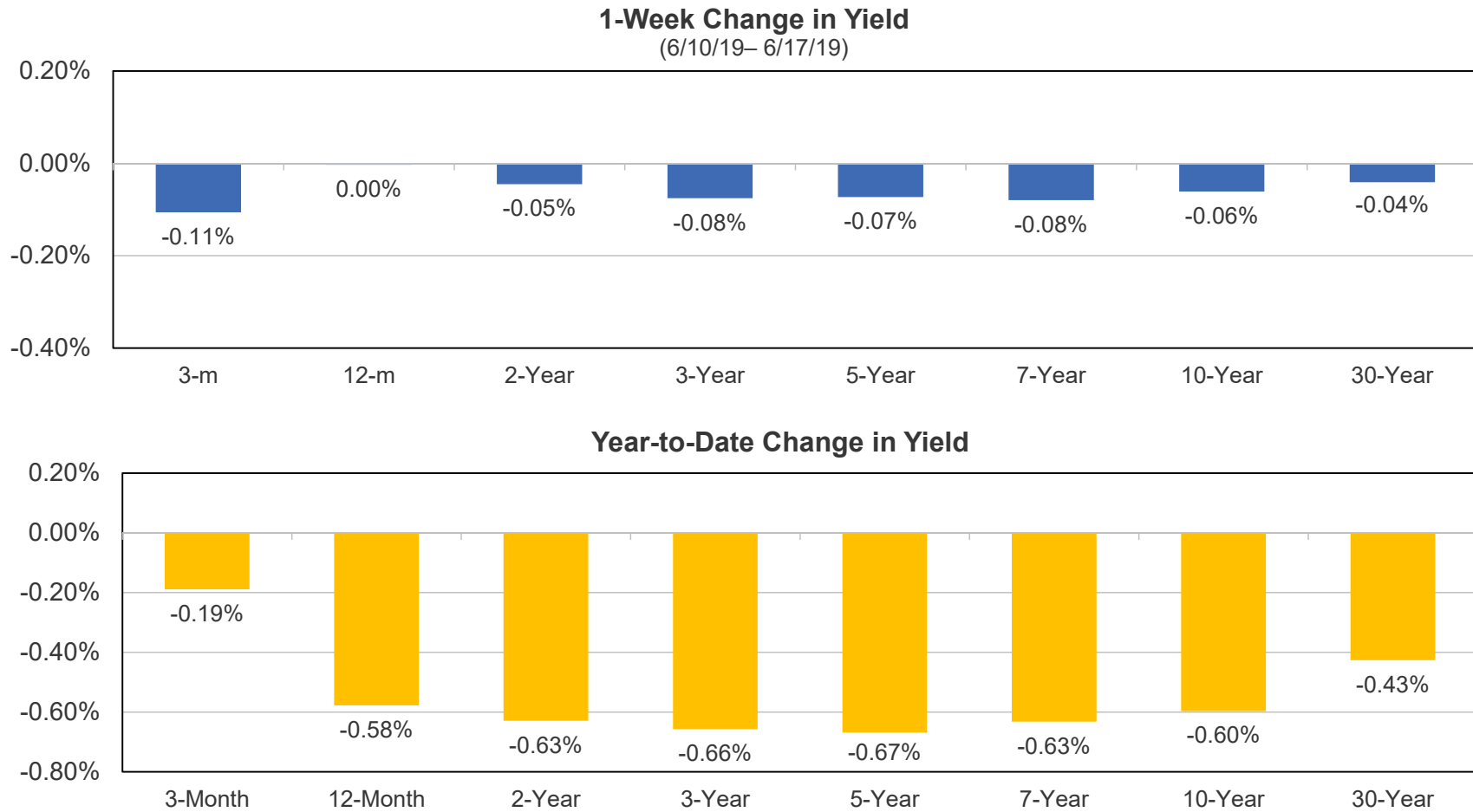
U.S. Treasury Yield Curve Still Inverted



Source: Bloomberg, as of 6/17/2019.



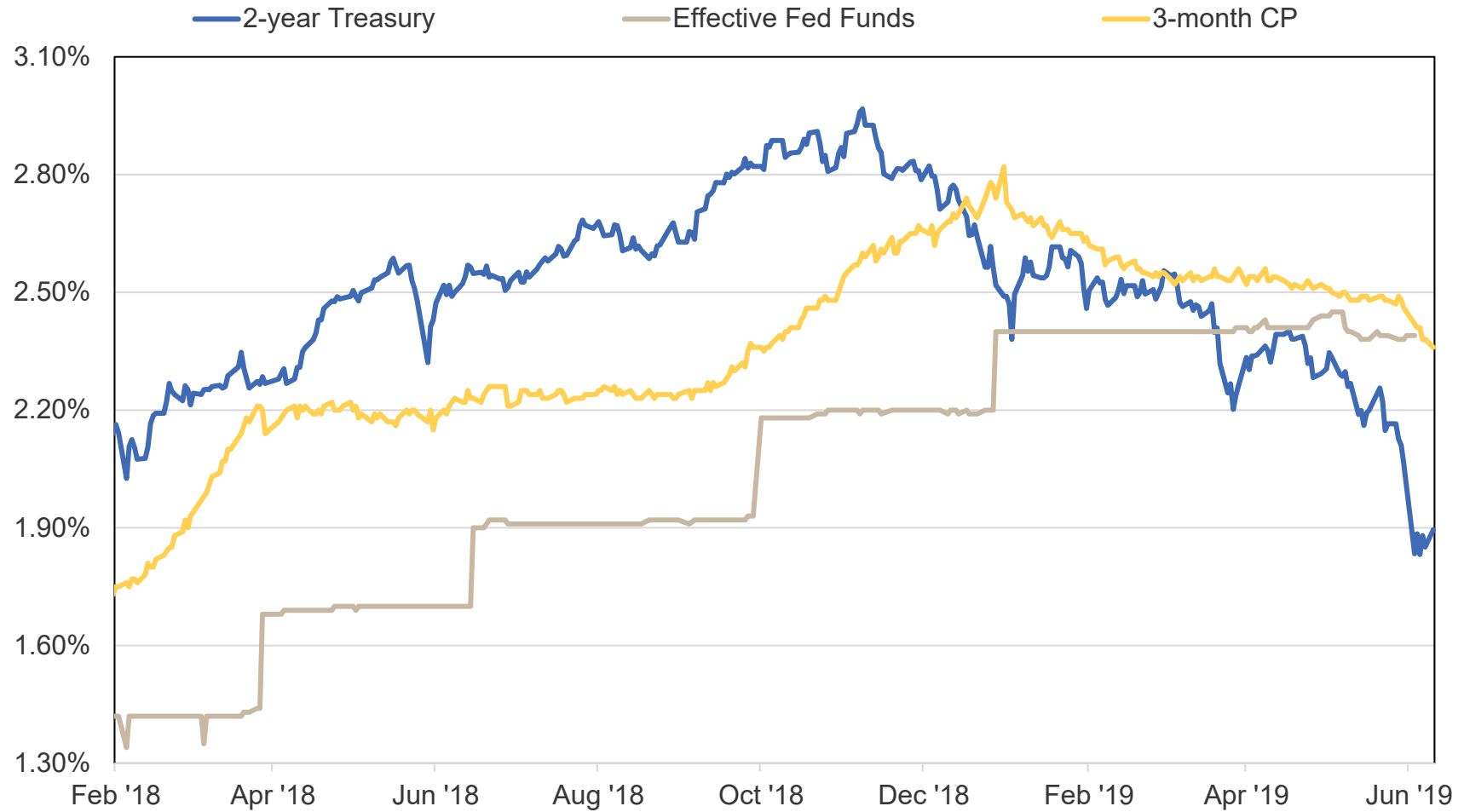
Treasury Yields Have Fallen



Source: Bloomberg, as of 6/17/2019.



Short-Term Yield Relationships Reflect Inverted Curve

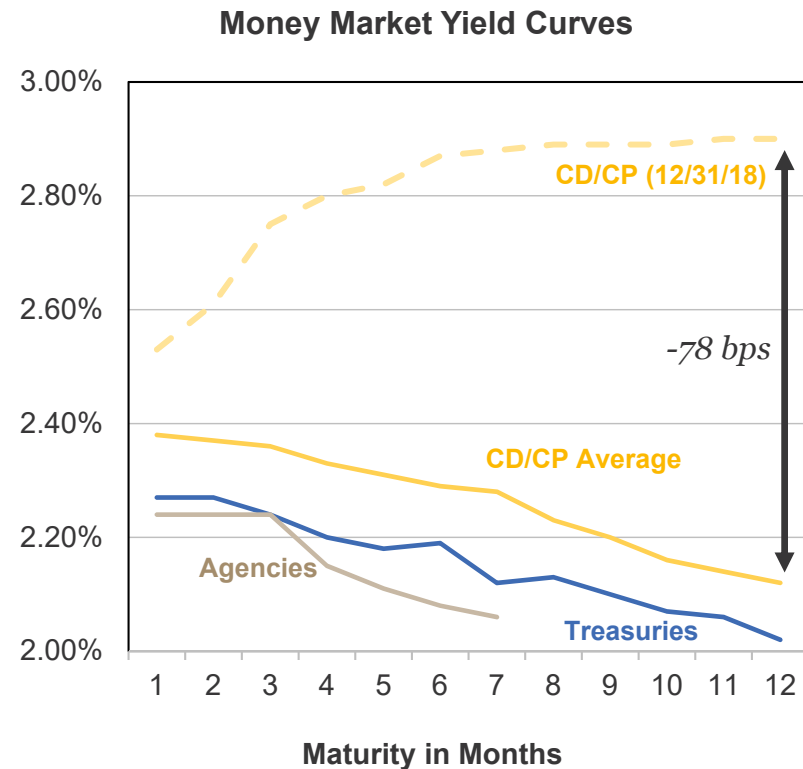
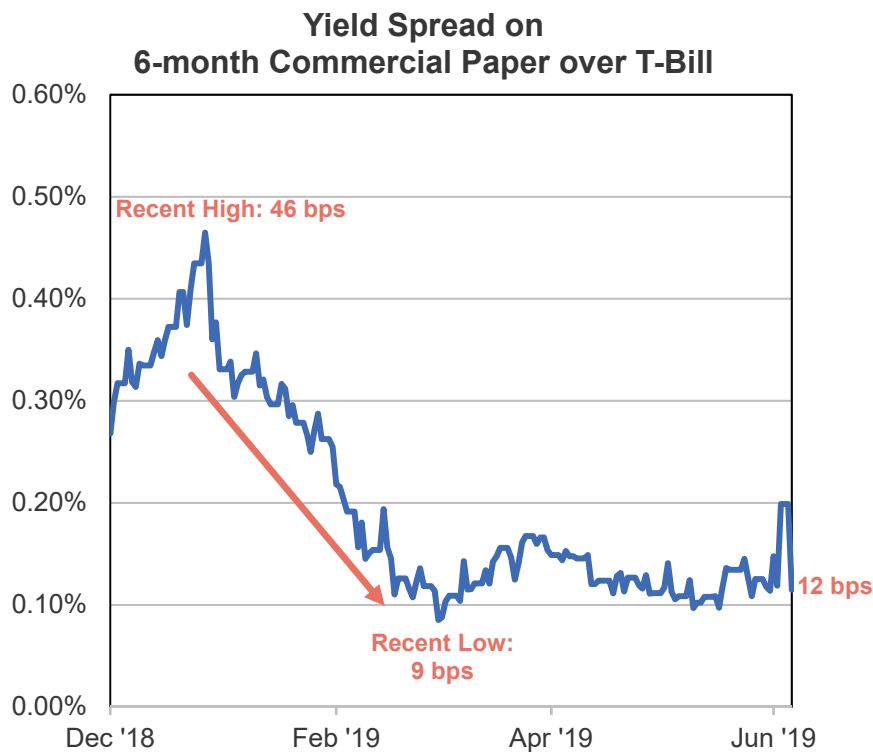


Source: Bloomberg, PFM Trading Desk, as of 6/10/2019. Not a specific recommendation. 3-mo CP yield spread based on A1/P1 rated CP index.



Credit Spreads Remain Tight as Rates Continue to Fall

- After widening significantly in December, credit spreads contracted in the 1st quarter; spreads have stayed tight while the short-term credit curve has flattened further



Source: Bloomberg, as of 6/10/2019. Yields are for indicative purposes only; actual yields may vary by issue.



Interest Earnings Forecast

- To illustrate the impact of the current market conditions to the GLWA portfolio, the January 2019 average yield forecast and the current yield forecast were applied to the 12-month average balances.
- In January of 2019, the average projected yield for Fiscal Year 2020 ranged from 2% to 2.5% based on the investment type. Using the 12-month average balances, the overall yield for the portfolio would have been 2.2% with estimated earnings of \$23.2 million.
- The current yield projection now ranges from 1.5% to 1.75%. Using the same 12-month average balances, the overall yield forecast is now 1.64% with estimated earnings of \$17.4 million.
- The estimated earnings have decreased by \$5.8 million, or 25%.
- For Fiscal Year 2020, GLWA has budgeted interest income of \$19.3 million. A 25% reduction would result in estimated earnings of \$14.5 million.

Earnings Estimate with Original Interest Rate Forecast

| <u>Investment Type</u> | <u>Average 12-Month Balance</u> | <u>Average Yield (FY 2020)</u> | <u>Approximate Earnings</u> |
|--------------------------------|---------------------------------|--------------------------------|-----------------------------|
| Cash / Money Market | \$447,777,915 | 2.00% | \$8,955,558 |
| Cash-Flow Driven Managed Funds | \$392,714,691 | 2.25% | \$8,836,081 |
| Benchmarked Managed Funds | \$216,863,701 | 2.50% | \$5,421,593 |
| Total | \$1,057,356,307 | 2.20% | \$23,213,231 |

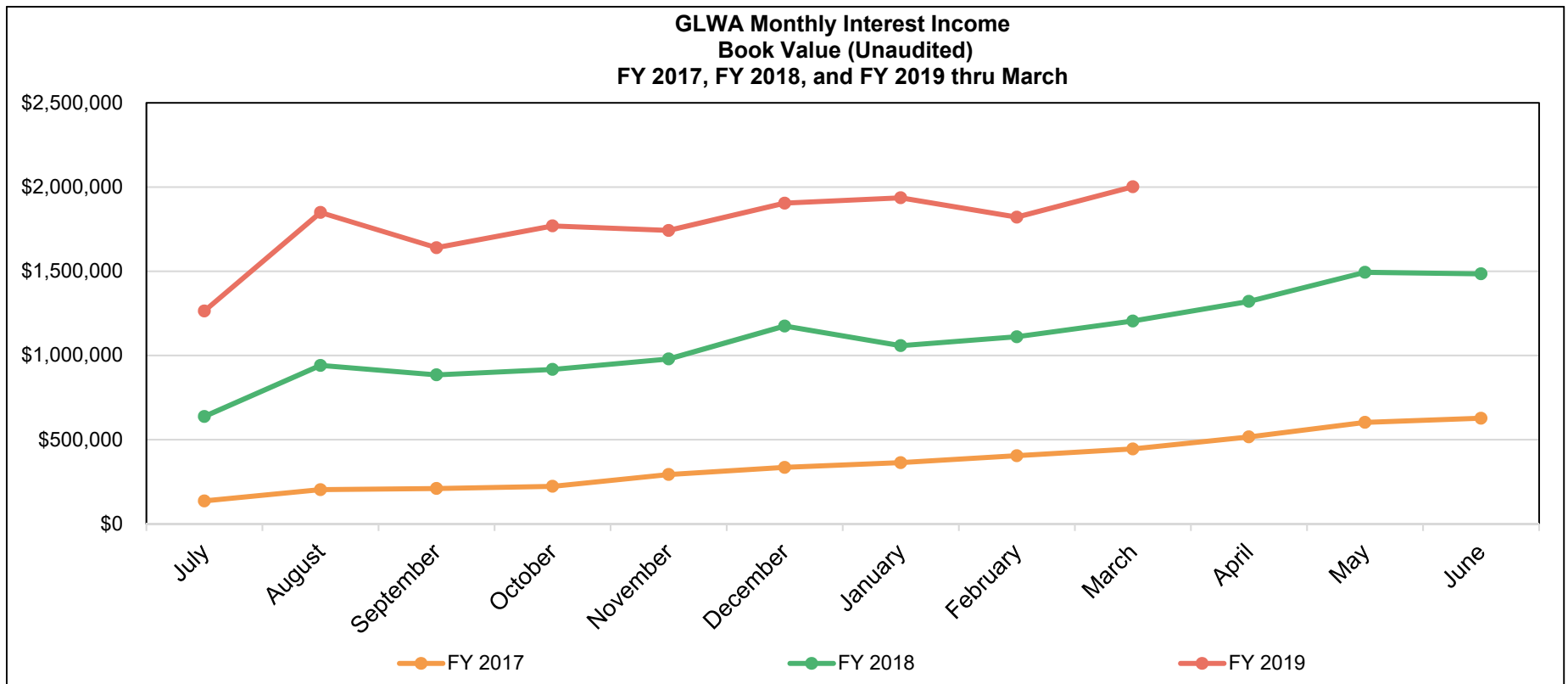
Earnings Estimate with Current Interest Rate Forecast

| <u>Investment Type</u> | <u>Average 12-Month Balance</u> | <u>Average Yield (FY 2020)</u> | <u>Approximate Earnings</u> |
|--------------------------------|---------------------------------|--------------------------------|-----------------------------|
| Cash / Money Market | \$447,777,915 | 1.50% | \$6,716,669 |
| Cash-Flow Driven Managed Funds | \$392,714,691 | 1.75% | \$6,872,507 |
| Benchmarked Managed Funds | \$216,863,701 | 1.75% | \$3,795,115 |
| Total | \$1,057,356,307 | 1.64% | \$17,384,291 |



Great Lakes Water Authority Monthly Investment Income

- The Authority has earned \$15,928,947 in investment income through March for fiscal year 2019 on a book value basis compared to \$8,907,945 for the first nine months of fiscal year 2018.
- The monthly investment earnings continue on an upward trend. Investment earnings for both April and May 2019 were over \$2 million.
- Despite the current market outlook, GLWA investment strategy has yielded positive results year over year. GLWA and PFM will continue to work together to identify strategies to maximize future investment income while meeting the objectives of safety and liquidity.





Important Disclosures

This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.

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pfm

GLWA

Great Lakes Water Authority



Monthly Financial Report Binder

March 2019

**Presented to the
Great Lakes Water Authority
Audit Committee on June 21, 2019**

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Revenue and Expense Budget to Actual¹ – Pro-rata Benchmark of 75%

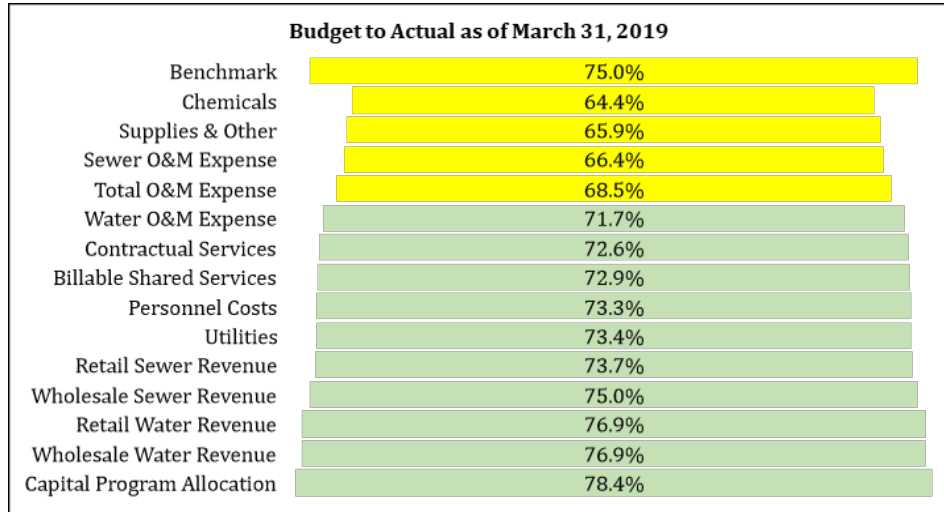
Most categories are within 5% of the pro-rata benchmark.

Chemicals:
Expected variance as usage does not follow a consistent monthly budget pattern.

Supplies & Other:
Due to timing of one-time or annual purchases in this category, expenses will not occur evenly throughout the fiscal year.

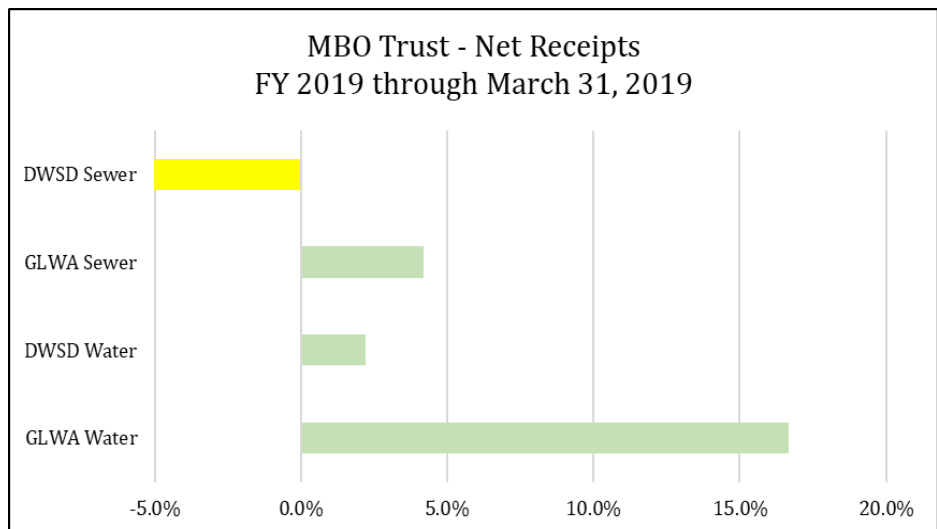
Sewer Operations & Maintenance (O&M) Expense: The positive variances in Supplies & Other and Chemicals, noted above, also positively impact the overall Sewer O&M Expense.

Total Operations & Maintenance (O&M) Expense: The positive variances in Sewer O&M and the close management of Water O&M Expense is contributing to an overall positive variance to Total O&M Expense.



Master Bond Ordinance (MBO) Trust Net Receipts

Overall net cash flow (receipts) is positive. This means that all legal commitments of the MBO Trust and the lease payment are fully funded to date. The net positive variance contributes to an improving financial position. As of June 1, 2019, DWSD has reduced



Sewer O&M transfers in May and June to support the goal of a positive, net cash flow for FY 2019.

Questions? Contact the Office of the Chief Financial Officer at CFO@glwater.org

¹ All amounts are GLWA entity-wide unless noted as water, sewer, and/or retail.

The Monthly Budget to Actual Analysis report includes the following three sections.

1. Revenue Requirement Budget Basis Analysis
2. Operations & Maintenance Budget – Major Budget Categories
3. Alignment of Operations & Maintenance Budget Priorities – Expense Variance Analysis

Revenue Requirement Budget Basis Analysis

GLWA's annual revenue requirement represents the basis for calculating Member Partner charges and also aligns with the Master Bond Ordinance flow of funds categories. The budget basis is not the same as the full accrual basis used for financial reporting although the revenues and operations and maintenance expense are largely reported on an accrual basis. The primary difference between the revenue requirement budget basis to the financial reporting basis is the treatment of debt service, legacy pension obligations, and lease related activities. The Revenue Requirement Basis is foundational to GLWA's daily operations, financial plan, and of most interest to key stakeholders.

Table 1A – Water Revenue Requirement Budget and **Table 1B – Sewer Revenue Requirement Budget** presents a year-over-year budget to actual performance report. The revenue requirement budget is accounted for in the operations and maintenance fund for each system. Since this report is for March 2019, the pro-rata benchmark is 75.0% (9 of 12 months of the fiscal year).

Items noted below are highlighted in gold on Tables 1A (Water) and 1B (Sewer).

1. **Revenues:** For *both* systems, FY 2019 revenues are above target and are consistent with the prior year (FY 2018) at the same time. Detailed schedules related to revenues are provided in the *Wholesale Billings, Collections, and Receivables* section of this financial report binder.
2. **Investment Earnings:** For *both* systems, investment earnings are above target for FY 2019. Detailed analysis of investment earnings activity to date can be found in the *Cash & Investment Income* section of this financial report binder.
3. **Other Revenues:** These are one-time and unusual items that do not fit an established revenue category. Both the *water* and *sewer* systems actual amount will vary from budget due to the nature of the items recorded in this category. For example, in FY 2018 the variance reported for the *sewer* system was due, in large part, to fire remediation insurance proceeds received.

4. **Operations & Maintenance Expense:** Actual expenses¹ for *both* systems are less than the pro-rata benchmark; the *water* system is slightly under the pro-rata benchmark for FY 2019 at 71.7%, while the *sewer* system O&M expense is at 66.4%.
5. **Debt Service:** *Both* systems are on target with the pro-rata benchmark; the *water* system is at 74.8%, while the *sewer* system is at 74.9%. The activity is based on the payment schedules that have been adjusted for the State Revolving Fund loans that are still being drawn down. In October 2018, the GLWA had a successful bond sale which will provide a positive budget variance for *both* systems. The budget amendment for this transaction was recorded in January 2019.
6. **DWSD Budget Shortfall Pending:** To the extent that the local (DWSD) system experiences budgetary shortfalls as defined by the Water & Sewer Services Agreement, the GLWA budget is impacted.² Steps to proactively detect, and ideally prevent, this shortfall scenario were put into place with the 2018 Memorandum of Understanding (dated June 27, 2018). For FY 2018 DWSD *sewer* shortfall through March 31, 2018, was \$18.9 million (the ending shortfall for FY 2018 was \$18.2 million). A plan for payment of this shortfall is under discussion with the outer boundary of payment terms being paid over three years plus interest at the three-year treasury rate plus 1.5%. For FY 2019, while the DWSD *water* system has positive budgetary cash flow, through March 31, 2019, the DWSD *sewer* system budgetary shortfall is approximately \$10.0 million. It is anticipated that this shortfall will be cured by June 30, 2019 based upon discussion at the May 2019 Reconciliation Committee meeting and related discussions at the administration level. As of June 2019, DWSD has reduced its sewer system O&M transfers in May and June to assist in achieving a goal of positive, net cash flows for FY 2019. The transfers reduced were \$5,676,792 each for a total of \$11,353,584 .
7. **Improvement & Extension (I&E) Fund Transfer Pending:** The contribution to the I&E Fund is for improvements, enlargements, extensions or betterment of the Water System. Transfers to the I&E Fund from net revenues typically occur later in the year or after year end close when final net revenues is validated.
8. **Other Revenue Requirements:** The remaining revenue requirements for *both* systems are funded on a 1/12th basis each month in accordance with the Master Bond Ordinance.
9. **Overall:** Total revenue requirements for *both* systems are in line with the benchmark.

¹The tables in this analysis reflect actual amounts spent. If this analysis was on a master bond ordinance (MBO) basis, like that used for calculating debt service coverage, O&M “expense” would equal the pro-rata budget because 1/12 of the O&M budget is transferred monthly outside the MBO trust to an O&M bank account.

² As a reminder, the monthly O&M transfer for MBO purposes are at 1/12 of the budget to a DWSD O&M bank account outside the trust. Actual budget may be, and often is, less than that amount providing an actual positive variance for DWSD.

Table 1A – Water Revenue Requirement Budget (year-over-year) – (\$000)

| | FY 2018 BOARD ADOPTED BUDGET | FY 2018 THRU 3/31/2018 | Percent Year-to- Date | FY 2019 BOARD ADOPTED BUDGET | FY 2019 AMENDED BUDGET | FY 2019 THRU 3/31/2019 | Percent Year-to- Date |
|---------------------------------------|---------------------------------------|------------------------------|-----------------------------|---------------------------------------|------------------------------|------------------------------|-----------------------------|
| Water System | | | | | | | |
| Revenues | | | | | | | |
| Wholesale Customer Charges | \$ 310,020 | \$ 244,632 | 78.9% | \$ 307,383 | \$ 307,383 | \$ 232,136 | 75.5% |
| Retail Services Agreement | 15,131 | 11,348 | 75.0% | 20,181 | 20,181 | 15,245 | 75.5% |
| Investment Earnings | 2,969 | 2,931 | 98.7% | 3,802 | 9,425 | 7,228 | 76.7% |
| Other Revenues | - | 49 | 0.0% | 34 | - | 25 | 0.0% |
| Total Revenues | \$ 328,119 | \$ 258,960 | 78.9% | \$ 331,401 | \$ 336,989 | \$ 254,634 | 75.6% |
| Revenue Requirements | | | | | | | |
| Operations & Maintenance Expense | \$ 121,563 | \$ 90,702 | 74.6% | \$ 121,563 | \$ 121,563 | \$ 87,173 | 71.7% |
| O&M Legacy Pension | 6,048 | 4,536 | 75.0% | 6,048 | 6,048 | 4,536 | 75.0% |
| Debt Service | 135,464 | 100,154 | 73.9% | 134,215 | 131,242 | 98,121 | 74.8% |
| Accelerated Legacy Pension | 6,268 | 4,701 | 75.0% | 6,268 | 6,268 | 4,701 | 75.0% |
| Extraordinary Repair & Replacement | | | | | | | |
| Deposit | 646 | 484 | 75.0% | - | - | - | 0.0% |
| Lease Payment | 22,500 | 16,875 | 75.0% | 22,500 | 22,500 | 16,875 | 75.0% |
| Operating Reserve Deposit | 1,098 | 823 | 75.0% | - | - | - | 0.0% |
| Water Residential Assistance Program | 1,711 | 1,283 | 75.0% | 1,673 | 1,673 | 1,255 | 75.0% |
| Improvement & Extension Fund | | | | | | | |
| Transfer Pending | 32,821 | 24,616 | 75.0% | 39,134 | 47,695 | 35,771 | 75.0% |
| Total Revenue Requirements | \$ 328,119 | \$ 244,175 | 74.4% | \$ 331,401 | \$ 336,989 | \$ 248,432 | 73.7% |
| Net Difference | | \$ 14,784 | | | | \$ 6,202 | |
| <i>Recap of Net Positive Variance</i> | | | | | | | |
| Revenue Variance | | \$ 12,870 | | | | \$ 1,892 | |
| Revenue Requirement Variance | | 1,914 | | | | 4,310 | |
| Overall Variance | | \$ 14,784 | | | | \$ 6,202 | |

Table 1B – Sewer Revenue Requirement Budget (year-over-year) – (\$000)

| | FY 2018 BOARD ADOPTED BUDGET | FY 2018 THRU 3/31/2018 | Percent Year-to- Date | FY 2019 BOARD ADOPTED BUDGET | FY 2019 AMENDED BUDGET | FY 2019 THRU 3/31/2019 | Percent Year-to- Date |
|---------------------------------------|---------------------------------------|------------------------------|-----------------------------|---------------------------------------|------------------------------|------------------------------|-----------------------------|
| Sewer System | | | | | | | |
| Revenues | | | | | | | |
| Wholesale Customer Charges | \$ 267,034 | \$ 203,574 | 76.2% | \$ 271,296 | \$ 271,296 | \$ 206,215 | 76.0% |
| Retail Services Agreement | 178,969 | 134,227 | 75.0% | 181,159 | 181,159 | 137,256 | 75.8% |
| Industrial Waste Control Charges | 14,458 | 10,747 | 74.3% | 15,006 | 15,001 | 6,853 | 45.7% |
| Pollutant Surcharges | 5,099 | 4,584 | 89.9% | - | - | 4,264 | 0.0% |
| Investment Earnings | 2,751 | 3,012 | 109.5% | 4,086 | 6,879 | 7,292 | 106.0% |
| Other Revenues | - | 3,727 | 0.0% | 480 | - | 349 | 0.0% |
| Total Revenues | \$ 468,311 | \$ 359,871 | 76.8% | \$ 472,027 | \$ 474,335 | \$ 362,228 | 76.4% |
| Revenue Requirements | | | | | | | |
| Operations & Maintenance Expense | \$ 191,079 | \$ 118,854 | 62.2% | \$ 191,079 | \$ 191,079 | \$ 126,957 | 66.4% |
| O&M Legacy Pension | 10,824 | 8,118 | 75.0% | 10,824 | 10,824 | 8,118 | 75.0% |
| Debt Service | 207,616 | 151,756 | 73.1% | 214,601 | 208,389 | 156,072 | 74.9% |
| Accelerated Legacy Pension | 11,621 | 8,716 | 75.0% | 11,621 | 11,621 | 8,716 | 75.0% |
| Extraordinary Repair & Replacement | | | | | | | |
| Deposit | 814 | 610 | 75.0% | - | - | - | 0.0% |
| Lease Payment | 27,500 | 20,625 | 75.0% | 27,500 | 27,500 | 20,625 | 75.0% |
| Operating Reserve Deposit | 1,733 | 1,300 | 75.0% | - | - | - | 0.0% |
| Water Residential Assistance Program | 2,392 | 1,794 | 75.0% | 2,374 | 2,374 | 1,781 | 75.0% |
| DWSD Budget Shortfall Pending | - | 18,924 | 0.0% | - | - | 9,998 | 0.0% |
| Improvement & Extension Fund | | | | | | | |
| Transfer Pending | 14,733 | 11,050 | 75.0% | 14,028 | 22,548 | 16,911 | 75.0% |
| Total Revenue Requirements | \$ 468,311 | \$ 341,746 | 73.0% | \$ 472,027 | \$ 474,335 | \$ 349,177 | 73.6% |
| Net Difference | | \$ 18,125 | | | | \$ 13,051 | |
| <i>Recap of Net Positive Variance</i> | | | | | | | |
| Revenue Variance | | \$ 8,638 | | | | \$ 6,477 | |
| Revenue Requirement Variance | | 9,487 | | | | 6,575 | |
| Overall Variance | | \$ 18,125 | | | | \$ 13,051 | |

Operations & Maintenance Budget – Major Budget Categories

The year-over-year benchmark ratio as of March 31, 2019, is 75.0% (nine months). When comparing FY 2019 to FY 2018 in **Table 2 – Operations & Maintenance Budget – Major Budget Categories**, it appears spending has increased. This is true in some instances; however, the greater impact is that the Financial Reporting & Accounting Team has implemented a full accrual basis for interim financial statements during the latter half of FY 2018. This variance anomaly has decreased as we approach the final quarter of FY 2019.

In addition to the four major budget categories, an internal charge cost center for employee benefits is shown in the table below. If the number is positive, it indicates that the internal cost allocation rate charges to other cost centers is not sufficient. A negative number indicates a surplus in the internal cost center. A moderate surplus is preferred as it provides a hedge for mid-year benefit program cost adjustments (premiums adjust on January 1 each year) as well as managing risk as the program is partially self-insured.

Table 2 – Operations & Maintenance Budget – Major Budget Categories – (\$000)

| Major Budget Categories | FY 2018 AMENDED BUDGET | FY 2018 ACTIVITY THRU 3/31/2018 | Percent Year-to-Date | FY 2019 BOARD ADOPTED BUDGET | FY 2019 AMENDED BUDGET | FY 2019 ACTIVITY THRU 3/31/2019 | Percent Year-to-Date |
|-----------------------------|------------------------|---------------------------------|----------------------|------------------------------|------------------------|---------------------------------|----------------------|
| Water | \$ 73,511 | \$ 46,984 | 63.9% | \$ 66,596 | \$ 66,596 | \$ 53,746 | 80.7% |
| Sewer | 124,106 | 82,302 | 66.3% | 118,319 | 118,319 | 82,058 | 69.4% |
| Centralized | 82,629 | 63,253 | 76.6% | 99,045 | 99,045 | 62,071 | 62.7% |
| Administrative | 32,305 | 18,843 | 58.3% | 28,682 | 28,682 | 18,769 | 65.4% |
| Employee Benefits | - | (1,826) | 0.0% | - | - | (2,514) | 0.0% |
| Total O&M Budget | \$ 312,551 | \$ 209,556 | 67.0% | \$ 312,642 | \$ 312,642 | \$ 214,129 | 68.5% |

Alignment of Operations & Maintenance Budget Priorities – Expense Variance Analysis

The purpose of **Table 3 – Operations & Maintenance Expense Variance Analysis** is to evaluate whether the actual spend rate within a natural cost category is in alignment with the budget. Given the effort to develop an accurate budget, a variance is a red flag of a *potential* budget amendment or misalignment of priorities.

Total: In total, the O&M expenses are at 68.5% which is reasonably within the pro-rata benchmark of 75.0%. This positive variance equates to a dollar amount of \$20.4 million. The expense category commentary is provided below for items highlighted on Table 3.

Personnel Costs: The overall category is slightly lower than the benchmark; coming in at 73.3% through March 2019.

Utilities: The overall category is slightly lower than the benchmark; coming in at 73.4% through March 2019. In comparing FY 2019 to FY 2018 the expenses appear more in line with the budget in FY 2019. This is due in large part to the month-end closing process improvements implemented during the latter half of FY 2018.

Chemicals: This category is lower than the benchmark; coming in at 64.4% through March 2019. This variance is not unexpected as usage varies throughout the year. Staff is working on enhancements to future monthly financial and operational reports to correlate spending with operational metrics.

Supplies & Other: This category is lower than the benchmark; coming in at 65.9% through March 2019. Given that the nature of the items in this category are subject to one-time expenses that do not occur evenly throughout the year, this variance is not a concern at this time.

Contractual Services: The overall category is slightly lower than the benchmark; coming in at 72.6% through March 2019.

Capital Program Allocation: This category is higher than the benchmark; coming in at 78.4% through March 2019. In July 2018, GLWA launched a time keeping software (including an app), BigTime, to make it easier for team members to report their time spent on direct capital delivery.

Shared Services: This category is slightly lower than the benchmark; coming in at 72.9% through March 2019. The shared services reimbursement is comprised of both labor (tracked via BigTime) and expenses, such as annual fees for software licensing. Staff from both GLWA and DWSD have been working together to evaluate and refine the budget for the shared services agreements. In December 2018, adjustments were made to both the billings and accounting accruals to bring them in line with the amended shared services budget.

Table 3 – Operations & Maintenance Expense Variance Analysis – (\$000)

| Expense Categories Entity-wide | FY 2018 | FY 2018 | Percent | FY 2018 | Percent | FY 2019 | FY 2019 | Percent | FY 2019 | |
|-----------------------------------|-------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|-------------------|---|-------------------------------|------------------|--|
| | AMENDED BUDGET | ACTIVITY THRU 3/31/2018 | Year-to- Date at 3/31/2018 | ACTIVITY THRU 6/30/2018 | Year-to- Date at 6/30/2018 | AMENDED BUDGET | PRORATED AMENDED BUDGET (9 MONTHS) | ACTIVITY THRU 3/31/2019 | Year-to- Date | PRORATED BUDGET LESS FY 2019 ACTIVITY |
| Salaries & Wages | \$ 57,114 | \$ 40,231 | 70.4% | \$ 55,174 | 72.9% | \$ 62,935 | \$ 47,201 | \$ 44,594 | 70.9% | \$ 2,607 |
| Workforce Development | 662 | 435 | 65.7% | 605 | 71.8% | 723 | 542 | 563 | 77.8% | (20) |
| Overtime | 6,517 | 4,709 | 72.3% | 6,162 | 76.4% | 7,199 | 5,399 | 5,730 | 79.6% | (331) |
| Employee Benefits | 20,999 | 17,115 | 81.5% | 20,432 | 83.8% | 22,282 | 16,711 | 18,517 | 83.1% | (1,805) |
| Transition Services | 13,865 | 7,795 | 56.2% | 13,153 | 59.3% | 6,568 | 4,926 | 6,202 | 94.4% | (1,276) |
| Personnel Transition | | | | | | | | | | |
| Adjustment | (1,557) | - | 0.0% | - | 0.0% | - | - | - | 0.0% | - |
| Employee Benefits Fund | - | (1,826) | 0.0% | - | 0.0% | - | - | (2,514) | 0.0% | 2,514 |
| Personnel Costs | <u>97,599</u> | <u>68,458</u> | <u>70.1%</u> | <u>95,526</u> | <u>71.7%</u> | <u>99,707</u> | <u>74,780</u> | <u>73,091</u> | <u>73.3%</u> | <u>1,689</u> |
| Electric | 42,324 | 30,676 | 72.5% | 40,874 | 75.0% | 39,801 | 29,851 | 30,330 | 76.2% | (480) |
| Gas | 7,030 | 4,897 | 69.7% | 6,612 | 74.1% | 6,620 | 4,965 | 5,390 | 81.4% | (425) |
| Sewage Service | 2,031 | 1,155 | 56.9% | 1,716 | 67.3% | 2,502 | 1,877 | 1,599 | 63.9% | 277 |
| Water Service | 4,588 | 3,232 | 70.5% | 4,493 | 71.9% | 5,717 | 4,288 | 2,782 | 48.7% | 1,506 |
| Utilities | <u>55,972</u> | <u>39,959</u> | <u>71.4%</u> | <u>53,694</u> | <u>74.4%</u> | <u>54,639</u> | <u>40,979</u> | <u>40,101</u> | <u>73.4%</u> | <u>879</u> |
| Chemicals | 13,341 | 9,700 | 72.7% | 12,878 | 75.3% | 14,765 | 11,073 | 9,505 | 64.4% | 1,568 |
| Supplies & Other | 46,971 | 20,910 | 44.5% | 34,950 | 59.8% | 34,221 | 25,666 | 22,542 | 65.9% | 3,123 |
| Contractual Services | 108,480 | 77,110 | 71.1% | 99,877 | 77.2% | 107,611 | 80,708 | 78,090 | 72.6% | 2,619 |
| Capital Program Allocation | (2,013) | (967) | 48.0% | (1,683) | 57.5% | (3,110) | (2,332) | (2,438) | 78.4% | 106 |
| Shared Services | (10,110) | (5,615) | 55.5% | (9,908) | 56.7% | (9,272) | (6,954) | (6,762) | 72.9% | (192) |
| Unallocated Reserve | 2,311 | - | 0.0% | - | 0.0% | 14,081 | 10,561 | - | 0.0% | 10,561 |
| Total Expenses | <u>\$ 312,551</u> | <u>\$ 209,556</u> | <u>67.0%</u> | <u>\$ 285,333</u> | <u>73.4%</u> | <u>\$ 312,642</u> | <u>\$ 234,482</u> | <u>\$ 214,129</u> | <u>68.5%</u> | <u>\$ 20,352</u> |

The Basic Financial Statements report includes the following four tables.

1. Statement of Net Position - All Funds Combined
2. Statement of Revenues, Expenses and Changes in Net Position – All Funds Combined
3. Supplemental Schedule of Operations & Maintenance Expenses -All Funds Combined
4. Supplemental Schedule of Nonoperating Expenses – All Funds Combined

At a macro level GLWA has two primary funds for financial reporting purposes: *Water Fund* and *Sewage Disposal Fund*. These funds represent the combined total of four sub-funds for each system that are used internally to properly account for sources and uses of funds. Those sub-funds for each system are: *Operations & Maintenance Fund, Improvement & Extension Fund, Construction Bond Fund, and Capital Asset Fund*.

Statement of Net Position – All Funds Combined

Explanatory notes follow the Statement of Net Position shown in Table 1 below.

**Table 1 – Statement of Net Position - All Funds Combined
 As of March 31, 2019
 (\$000)**

| | Water | Sewage Disposal | Total Business- type Activities | Comparative June 30, 2018 |
|-------------------------------------|--------------------|---------------------|------------------------------------|------------------------------|
| Assets | | | | |
| Cash (a) | \$ 181,671 | \$ 197,024 | \$ 378,695 | \$ 671,753 |
| Investments (a) | 390,389 | 307,813 | 698,202 | 343,235 |
| Accounts Receivable | 113,603 | 95,032 | 208,635 | 191,359 |
| Due from Other Funds (b) | 3,458 | - | 3,458 | 32,255 |
| Other Assets (c) | 607,427 | 465,501 | 1,072,928 | 985,888 |
| Cash Held FBO DWSD Advance (d) | - | 28,466 | 28,466 | 18,468 |
| Capital Assets, net of Depreciation | 1,706,515 | 2,485,649 | 4,192,165 | 4,402,212 |
| Construction Work in Process | 169,837 | 204,398 | 374,235 | 288,052 |
| Total assets | 3,172,902 | 3,783,883 | 6,956,785 | 6,933,222 |
| Deferred Outflows (e) | 88,537 | 170,804 | 259,341 | 332,992 |
| Liabilities | | | | |
| Liabilities - Short-Term (f) | 150,304 | 160,179 | 310,483 | 270,446 |
| Due to Other Funds (b) | - | 3,458 | 3,458 | 32,255 |
| Other Liabilities (g) | 2,826 | 6,277 | 9,103 | 8,638 |
| Cash Held FBO DWSD | 10,830 | - | 10,830 | 8,902 |
| Liabilities - Long-Term (h) | 3,099,124 | 3,840,098 | 6,939,222 | 6,998,296 |
| Total liabilities | 3,263,083 | 4,010,012 | 7,273,095 | 7,318,537 |
| Deferred Inflows (e) | 65,833 | 56,853 | 122,687 | 126,432 |
| Total net position | \$ (67,478) | \$ (112,178) | \$ (179,656) | \$ (178,755) |

Totals may be off due to rounding

In general, the Statement of Net Position reflects a mature organization with no unexpected trends. Cash balances as of March 31, 2019 are lower when compared to June 30, 2018 (highlighted in gold on Table 1). This is because of the high liquidity needs at June 30, 2018 to meet annual debt and interest payments, legacy pension obligation payments, and annual operational requirements whereas more funds are being invested as of March 31, 2019.

An ongoing challenge is the Net Position Deficit. The underlying causes took years to build (largely heavy use of debt to finance capital asset investment versus a strategic blend of debt, state revolving funds, and cash). The effect is reflected in GLWA's high debt interest expense. The GLWA is regularly updating the FY 2030 forecast which helps to provide a pathway to a positive Net Position in the future.

Footnotes to Statement of Net Position

- a. *Cash and Investments* include restricted amounts and are reported at book value. Investments at June 30, 2018 are reported at market value.
- b. *Due from Other Funds* and *Due to Other Funds* is shown at the gross level for sub-fund activity.
- c. *Other Assets* primarily consists of the contractual obligation receivable from DWSD related to reimbursement of bonded indebtedness for local system improvements.
- d. *Cash Held FBO Advance (for benefit of) DWSD* and *Cash Held FBO DWSD* represents the net difference between DWSD retail cash received from customers and net financial commitments as outlined in the Master Bond Ordinance.
- e. *Deferred Inflow* and *Deferred Outflow* relate to financing activity and GLWA's share of the legacy General Retirement System (GRS) pension obligation.
- f. *Liabilities - Short-term* include accounts payable, retainage payable, and certain accrued liabilities. Some items, such as compensated absences and worker's compensation, are reviewed periodically but are only adjusted on an interim basis if there is a material change.
- g. *Other Liabilities* account for the cash receipts set aside for the Budget Stabilization Fund and the Water Residential Assistance Program.
- h. *Liabilities - Long-term* include bonds payable, lease payable, and legacy General Retirement System pension liabilities.
- i. *Net Position Deficit* is defined by accounting standards as the residual of all other elements presented in a statement of financial position. It is the difference between (a) assets and deferred outflows of resources and (b) liabilities and deferred inflows of resources. A net deficit occurs when the liabilities and deferred inflows exceed assets and deferred outflows. GLWA's net deficit is largely driven by an increase in depreciation expense as a result of the increase in the acquisition valuation approach for recording capital asset values in the opening Statement of Net Position on January 2016. Efforts are underway to evaluate the net operating effect of this matter over the long term.

Statement of Revenues, Expenses and Changes in Net Position - All Funds Combined

This statement, shown in Table 2, is presented in summary format. The accrual basis of revenues and operations and maintenance expense vary from the revenue requirement basis presented in the *Budget to Actual Analysis* and the *Wholesale Billings, Receivables & Collections* sections of the March 2019 Financial Report Binder. Prior year ending balances are provided in the June 30, 2018 column as a reference for comparative purposes. Explanatory notes follow this statement.

**Table 2 - Statement of Revenues, Expenses and Changes in Net Position
- All Funds Combined
For the Nine Months ended March 31, 2019
(\$000)**

| | Water | Percent of Revenue | Sewage Disposal | Percent of Revenue | Total Business- type Activities | Comparative June 30, 2018 |
|---|---------------------------|--------------------------|----------------------------|--------------------------|--|---------------------------------|
| Revenue | | | | | | |
| Wholesale customer charges | \$ 237,563 | 94.0% | \$ 206,215 | 58.1% | \$ 443,778 | \$ 592,096 |
| Local system charges | 15,245 | 6.0% | 137,256 | 38.7% | 152,500 | 194,100 |
| Industrial waste charges | - | 0.0% | 6,853 | 1.9% | 6,853 | 14,335 |
| Pollutant surcharges | - | 0.0% | 4,264 | 1.2% | 4,264 | 6,908 |
| Other revenues | 25 | 0.0% | 349 | 0.1% | 375 | 4,455 |
| Total Revenues | \$ 252,833 | 100% | \$ 354,936 | 100% | \$ 607,769 | \$ 811,894 |
| Operating expenses | | | | | | |
| Operations and Maintenance | 87,173 | 34.5% | 126,957 | 35.8% | 214,129 | 284,910 |
| Depreciation | 106,827 | 42.3% | 129,131 | 36.4% | 235,958 | 331,242 |
| Total operating expenses | 194,000 | 76.7% | 256,087 | 72.2% | 450,088 | 616,152 |
| Operating income | 58,833 | 23.3% | 98,849 | 27.8% | 157,681 | 195,742 |
| Total Nonoperating (revenue) expense | 65,875 | 26.1% | 92,707 | 26.1% | 158,583 | 271,662 |
| Increase/(Decrease) in Net Position | (7,043) | -2.8% | 6,141 | 1.7% | (901) | (75,920) |
| Net position (deficit), beginning of year | <u>(60,435)</u> | | <u>(118,319)</u> | | <u>(178,755)</u> | <u>(102,835)</u> |
| Net position (deficit), end of year | <u>\$ (67,478)</u> | | <u>\$ (112,178)</u> | | <u>\$ (179,656)</u> | <u>\$ (178,755)</u> |

Totals may be off due to rounding

Water Fund

- ✓ Operating income is positive at 23.3% of revenue.
- ✓ The decrease in Water Fund Net Position is \$7.0 million despite an overall positive cashflow.
- ✓ Wholesale water customer charges of \$237.5 million account for 94.0% of Water System revenues.
- ✓ Operating expenses of \$194.0 million represent 76.7% of total operating revenue. Depreciation is the largest operating expense at \$106.8 million or 55.1% of operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$58.8 million or 23.3% of operating revenue. This represents an increase of \$3.1 million over February year-to-date.
- ✓ The largest category within nonoperating activities is interest expense of \$85.2 million (this equates to the bonded debt interest less the offset from DWSD contractual obligation income).

Sewage Disposal Fund

- ✓ Operating income is positive at 27.8% of revenue.
- ✓ The increase in the Sewage Disposal Fund Net Position was \$6.1 million.
- ✓ Wholesale customer charges of \$206.2 million account for 58.1% of Sewer System revenues. Wholesale customer charges are billed one-twelfth each month based on an agreed-upon historical average “share” of each customer’s historical flows which are formally revisited on a periodic basis. The result is no revenue shortfall or overestimation.
- ✓ Local system (DWSD) charges of \$137.2 million account for 38.7% of total operating revenues. These are also billed at one-twelfth of the annual revenue requirement.
- ✓ Operating expenses of \$256.0 million represent 72.2% of total operating revenue. Depreciation is the largest operating expense at \$129.1 million or 50.4% of total operating expense.
- ✓ Operating income after operating expenses (including depreciation) equals \$98.8 million or 27.8% of operating revenue. This represents an increase of \$13.8 million over February year-to-date.
- ✓ The largest category within nonoperating activities is interest expense of \$106.8 million (this equates to the bonded debt interest less the offset from DWSD contractual obligation income).

Supplemental Schedule of Operations & Maintenance Expenses - All Funds Combined

This Supplemental Schedule of Operations & Maintenance Expenses (O&M) schedule is shown below in Table 3. This accrual basis of operations and maintenance expense may vary from the revenue requirement basis presented in the *Budget to Actual Analysis* section of the March 2019 Financial Report Binder. Explanatory notes follow this schedule.

**Table 3 – Supplemental Schedule of Operations & Maintenance Expenses
- All Funds Combined
For the Nine Months ended March 31, 2019
(\$000)**

| | Water | Percent of Total | Sewage Disposal | Percent of Total | Total Business- type Activities | Percent of Total |
|--|-------------------------|----------------------|--------------------------|----------------------|--|----------------------|
| Operating expenses | | | | | | |
| Personnel | | | | | | |
| Salaries & Wages | 17,899 | 20.5% | 33,459 | 26.4% | 51,358 | 24.0% |
| Overtime | 3,182 | 3.6% | 2,548 | 2.0% | 5,730 | 2.7% |
| Benefits | 8,929 | 10.2% | 7,075 | 5.6% | 16,003 | 7.5% |
| Total Personnel | <u>\$ 30,009</u> | <u>34.4%</u> | <u>\$ 43,082</u> | <u>33.9%</u> | <u>\$ 73,091</u> | <u>34.1%</u> |
| Utilities | | | | | | |
| Electric | 19,661 | 22.6% | 10,669 | 8.4% | 30,330 | 14.2% |
| Gas | 960 | 1.1% | 4,429 | 3.5% | 5,389 | 2.5% |
| Sewage | 563 | 0.6% | 1,036 | 0.8% | 1,599 | 0.7% |
| Water | 1 | 0.0% | 2,780 | 2.2% | 2,782 | 1.3% |
| Total Utilities | <u>\$ 21,185</u> | <u>24.3%</u> | <u>\$ 18,915</u> | <u>14.9%</u> | <u>\$ 40,100</u> | <u>18.7%</u> |
| Chemicals | 3,737 | 4.3% | 5,768 | 4.5% | 9,505 | 4.4% |
| Supplies and other | 7,502 | 8.6% | 15,041 | 11.8% | 22,543 | 10.5% |
| Contractual services | 32,605 | 37.4% | 45,485 | 35.8% | 78,090 | 36.5% |
| Capital program allocation | (1,427) | -1.6% | (1,012) | -0.8% | (2,438) | -1.1% |
| Shared services allocation | (6,439) | -7.4% | (323) | -0.3% | (6,762) | -3.2% |
| Operations and Maintenance Expenses | <u>\$ 87,173</u> | <u>100.0%</u> | <u>\$ 126,957</u> | <u>100.0%</u> | <u>\$ 214,129</u> | <u>100.0%</u> |

Totals may be off due to rounding.

- ✓ Core expenses for water and sewage disposal systems are utilities (18.7% of total O&M expenses) and chemicals (4.4%).
- ✓ Personnel costs (34.1% of total O&M expenses) include all salaries, wages, and benefits for employees as well as staff augmentation contracts that fill a vacant position (contractual transition services).
- ✓ Contractual services (36.5%) includes:
 - Water System costs of sludge removal and disposal services at the Northeast, Southwest and Springwells Water Treatment Plants (approximately \$9.3 million);
 - Sewage Disposal System costs for the operation and maintenance of the biosolids dryer facility (approximately \$11.7 million); and
 - Centralized and administrative contractual costs allocated to both systems for information technology, building maintenance, field, planning and other services.

Supplemental Schedule of Nonoperating Expenses – All Funds Combined

The Supplemental Schedule of Nonoperating Expenses – All Funds Combined is shown in Table 4. Explanatory notes follow this schedule.

Table 4 – Supplemental Schedule of Nonoperating Expenses – All Funds Combined
For the Nine Months ended March 31, 2019
 (\$000)

| | Water | Sewage Disposal | Total Business-type Activities | Comparative June 30, 2018 |
|---|------------------|------------------|--------------------------------|---------------------------|
| Nonoperating (Revenue)/Expense | | | | |
| Interest income contractual obligation | \$ (17,163) | \$ (12,630) | \$ (29,793) | \$ (38,857) |
| Interest income DWSD Shortfall | - | (811) | (811) | - |
| Investment earnings | (9,583) | (8,181) | (17,764) | (11,396) |
| Other nonoperating revenue | (342) | 5,983 | 5,641 | (430) |
| Interest expense | | | | |
| Bonded debt | 85,729 | 102,674 | 188,403 | 255,868 |
| Lease obligation | 13,271 | 16,220 | 29,490 | 39,702 |
| Other obligations | 3,459 | 624 | 4,083 | 4,825 |
| Total interest expense | 102,459 | 119,518 | 221,977 | 300,395 |
| Other capital / non-capital expense | 303 | 302 | 606 | 1,684 |
| Amortization, issuance costs, debt | (7,226) | (1,238) | (8,464) | (8,684) |
| Amortization, raw water rights | 2,675 | - | 2,675 | 2,081 |
| (Gain) loss on disposal of capital assets | 381 | 5 | 386 | (2,463) |
| Loss on impairment of capital assets | - | - | - | 654 |
| Water Residential Assistance Program | 385 | 524 | 909 | 3,756 |
| Legacy pension expense | (6,014) | (10,764) | (16,778) | 24,922 |
| Total Nonoperating (Revenue)/Expense | \$ 65,875 | \$ 92,707 | \$ 158,583 | \$ 271,662 |

Totals may be off due to rounding.

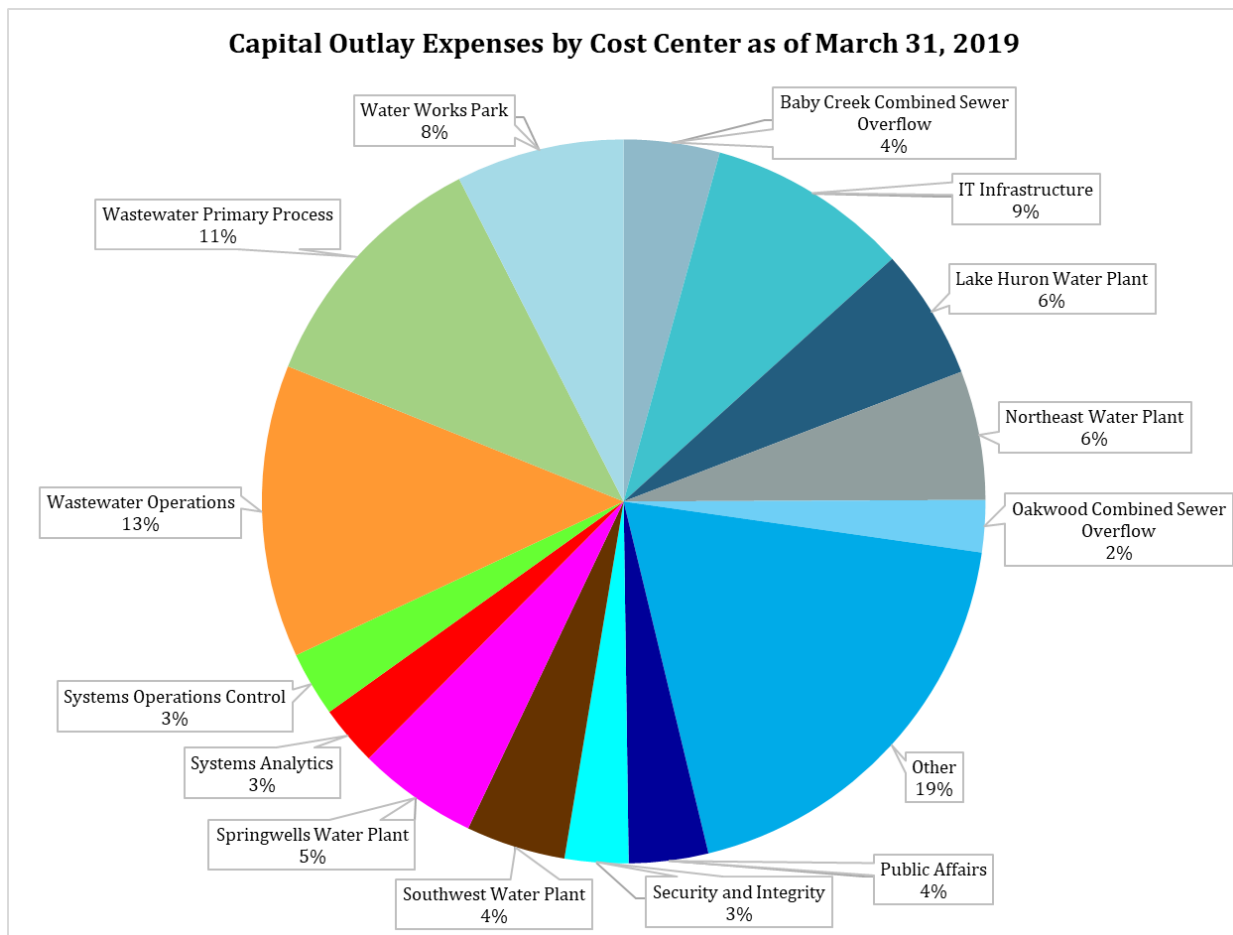
- ✓ Interest income on contractual obligation relates to the portion of the total GLWA debt obligation attributable to DWSD. This interest income offsets the total debt interest expense paid by GLWA on behalf of both entities monthly.
- ✓ Interest income DWSD shortfall represents interest from a budgetary shortfall loan from fiscal years 2016 and 2017 and is in accordance to the April 2018 MOU. The repayment of the shortfall will last for three years.
- ✓ Investment earnings in this report are reflected at book value and may therefore not agree with the Cash and Investment Income section of this Financial Report Binder and the Quarterly Debt Report which present balances at market value.
- ✓ Interest expense, the largest category of nonoperating expenses, is made up of three components:

- Bonded debt;
 - Lease obligation for the regional assets from the City of Detroit; and
 - Other obligations such as an obligation payable to the City of Detroit for an allocation BC Notes related to assumed DWSD liabilities; acquisition of raw water rights related to the KWA Pipeline.
- ✓ Legacy Pension expense for FY 2019 is currently reflected as income due to changes in actuarial assumptions and rates from the June 30, 2018 City of Detroit General Retirement System Component II audited financial statement.
 - ✓ Sewer Other Non-operating expense includes the 2018 Memorandum of Understanding (MOU) Item 8 a from June 27, 2018 for a final bad debt lookback adjustment for DWSD of \$6.5 million.

Financial Activity Charts

Chart 1 – Capital Outlay – Water and Sewer System Combined

Capital Outlay represents purchases of equipment, software, and small facility improvement projects. It *excludes* any capital investment which is included in the monthly construction work-in-progress report related to the Capital Improvement Program. Some items span several months so the entire cost may not have been incurred yet. In addition, items are capitalized only if they meet GLWA’s capitalization policy.



Note: Due to rounding totals may not equal 100%.

Through March 31, 2019, total capital outlay spend is \$11.1 million. Below is a sample list of projects and purchases from the total spend of \$11.1 million.

Water Operations: filter upgrade at Water Works Park (\$124k) and gas scrubber (\$95k)

Wastewater Operations: chiller replacement at Water Resource Recovery Facility (WRRF) (\$756k); grit crane (\$563k); WRRF engineering offices design (\$280k); pump pull-out assembly (\$197k); booster pump and expansion tank for Scum building (\$196k) and screw conveyor (\$114k)

Information Technology: software (\$747k) and low voltage wiring (\$305k)

Security: security infrastructure (\$265k)

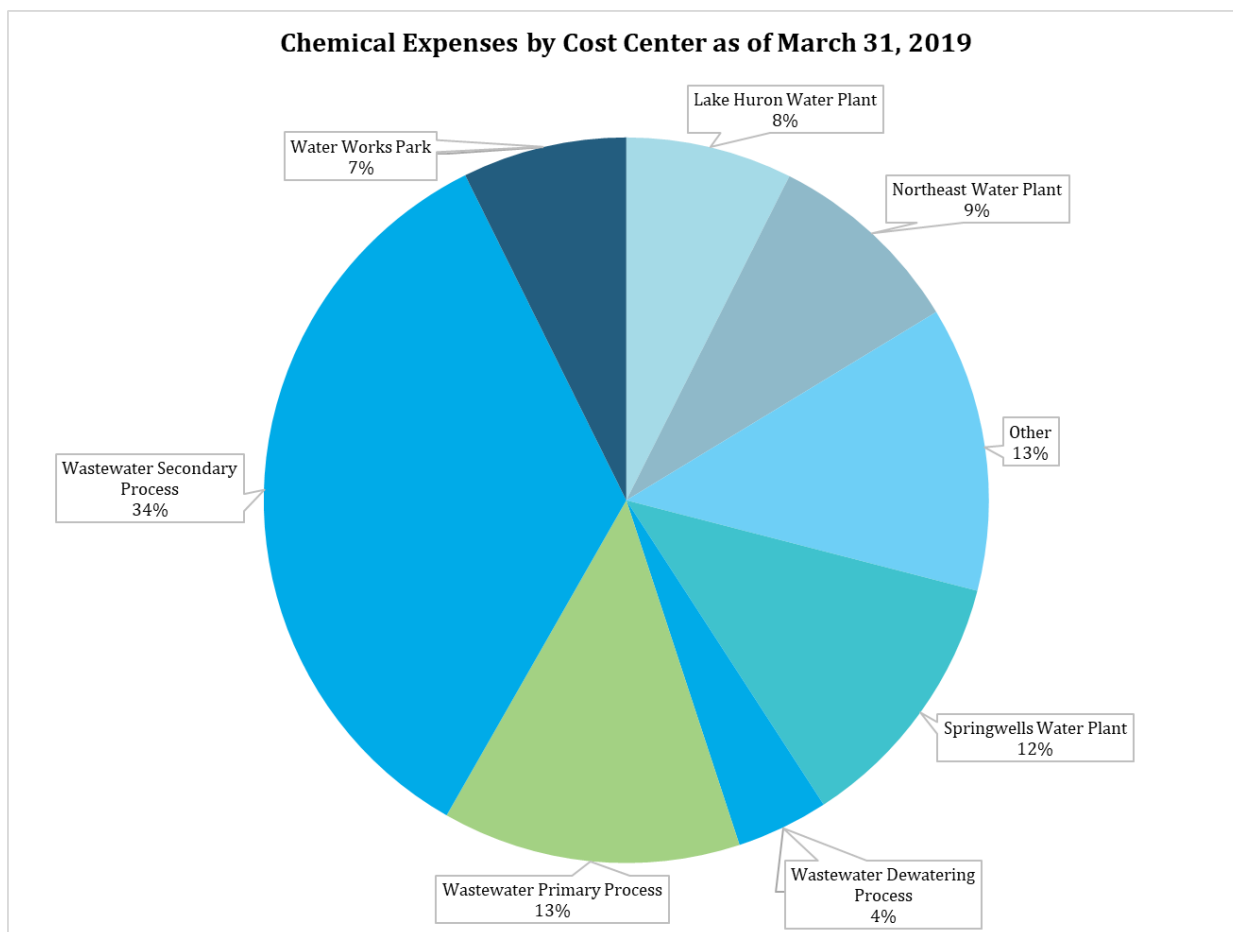
System Analytics: flow meters (\$193k)

CSO Facilities: channel meters (\$470k); chemical feed pump (\$178k); submersible sewage pump (\$144k); chopper pump (\$125k) and chemical induction unit (\$124k)

Centralized & Administrative Facilities: underground storage tanks, dispenser and management system (\$3.0M); Public Affairs & 13th floor renovation and furniture (\$367k); variable feed drives (\$113k) and VFD upgrade (\$106k)

Chart 2 – Chemical Spend – Water and Sewer System Combined

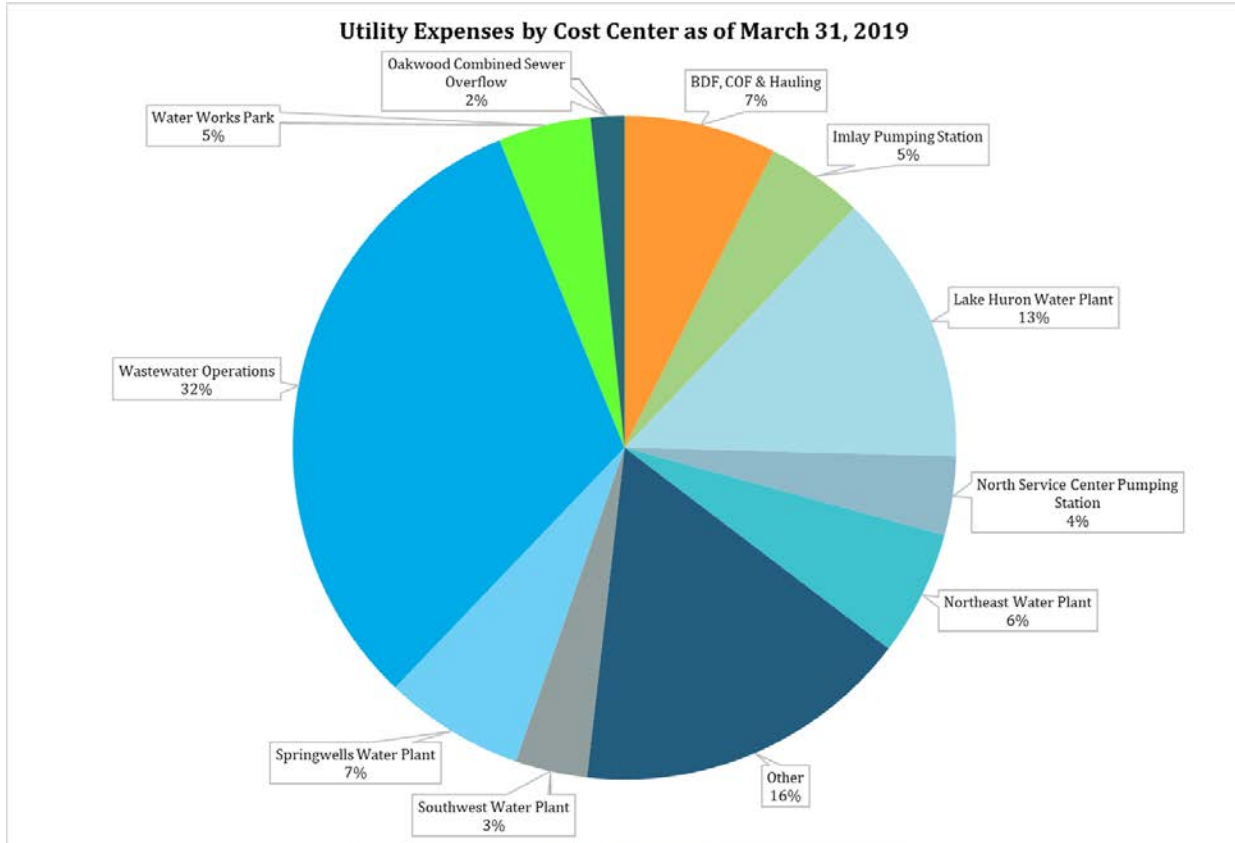
Chemical spend is \$9.5 million through March 31, 2019. The allocation is shown in the chart below.



Note: “Other” includes Combined Sewer Overflow (CSO), portions of the Wastewater process and two departments from Water. Due to rounding totals may not equal 100%.

Chart 3 – Utility Spend – Water and Sewer System Combined

Utility spend is \$40.1 million through March 31, 2019. The allocation is shown in the chart below.



Note: Due to rounding totals may not equal 100%.

Financial Operations KPI

This key performance indicator shown in Chart 1 below provides a measure of the progress made in the month-end close process which includes bank reconciliations with a completed status at month end.

There were no changes in accounts from February 2019.

Chart 1 - Bank Reconciliation Completion Status

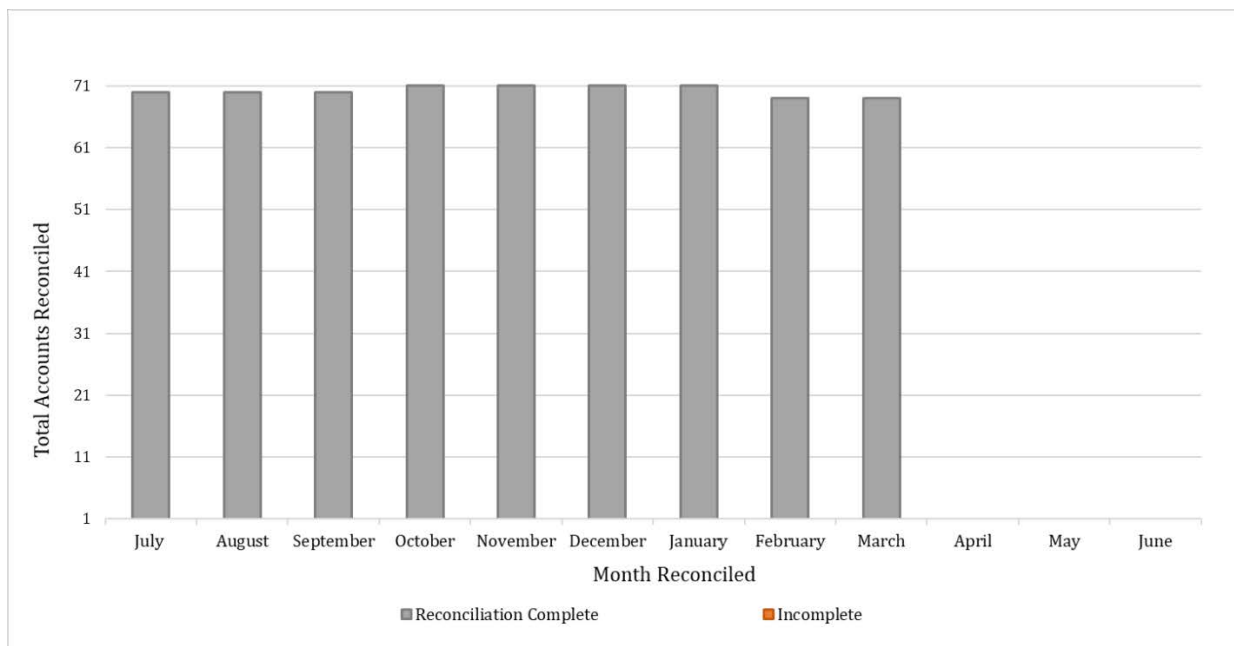


Table 1 - Fiscal Year 2019 Bank Account Rollforward

| | |
|-------------------------------------|------------------|
| Total accounts as of July 1, 2018 | 70 |
| Bank accounts opened | 2 |
| Bank accounts closed | <u>(3)</u> |
| Total accounts as of March 31, 2019 | <u><u>69</u></u> |

The monthly Budget to Financial Statements Crosswalk includes the following.

1. Crosswalk Budget Basis to Financial Reporting Basis
2. Explanatory Notes for Crosswalk

Purpose for Crosswalk: The Great Lakes Water Authority establishes a “Revenue Requirements” budget for the purposes of establishing charges for services. The financial report is prepared in accordance with Generally Accepted Accounting Policies for enterprise funds of a local government. Because the budget and the financial statements are prepared using different basis of accounting, the crosswalk reconciles the “Net Revenue Requirement Basis” from the Budget to Actual Analysis (Table 1A and Table 1B) to the “Increase/(Decrease) in Net Position” in Table 2 of the Basic Financial Statements in the monthly Financial Report.

The Authority has a Water Master Bond Ordinance and a Sewer Master Bond Ordinance (MBO). The Ordinances provide additional security for payment of the bonds. All revenues of the system are deposited into Revenue Receipts Funds which are held in trust by a trustee. The cash is moved to multiple bank accounts monthly based on 1/12th of the budget as defined in the MBO (“the flow of funds”) for all revenue requirements except for the Debt Service monthly transfer. The Debt Service monthly requirement is computed by the trustee, U.S. Bank. The cash transfer for debt is net of investment earnings that remain in the debt service accounts to be used for debt service.

The budget is prepared on a modified cash basis budget. The revenue requirements are determined based upon the cash needed to meet the financial commitments as required by the Master Bond Ordinance.

- Operation & Maintenance (O&M) expenses based on an accrual basis
- O&M Legacy Pension Allocation (includes administrative fee) and Accelerated Legacy Pension Allocation (includes B&C notes obligation) based on a cash basis
- Debt Service Allocation based on a cash set aside basis to provide the cash for the debt payments on the due dates
- Lease payments based on a cash basis
- Water Residential Assistance Program based on a percentage of budgeted revenue
- Regional System Improvement & Extension Fund Allocation on a cash basis

Budget: In Table 1A and Table 1B of the Budget to Actual Analysis the ‘Revenues’ section is the accrual basis revenues that are available to meet the ‘Revenue Requirements’. The “Revenue Requirements’ section budget column indicates the annual cash transfers to be made.

Financial Reporting: The Authority’s financial statements are prepared in conformity with generally accepted accounting principles (GAAP) as applied to government units. The Authority maintains its records on the accrual basis of accounting to conform to GAAP.

Revenues from operations, investments and other sources are recorded when earned. Expenses (including depreciation) are recorded when incurred.

Table 1 – Crosswalk Budget Basis to Financial Reporting Basis provides a reconciliation of the “Net Difference” in Table 1A and Table 1B in the Budget to Actual Analysis report to the “Increase/(Decrease) in Net Position” in Table 2 of the Basic Financial Statements in this monthly Financial Report. Explanatory notes follow the Crosswalk shown in Table 1 below.

**Table 1 – Crosswalk Budget Basis to Financial Reporting Basis (\$000)
For the Nine Months Ended March 31, 2019**

| | Water | Sewer | Total |
|--|-------------------|-----------------|-----------------|
| Net Revenue Requirement Budget Variance (a) | \$ 6,202 | \$ 13,051 | \$ 19,253 |
| Budgetary categories adjustments to financial reporting basis | | | |
| Pension delayed accounting election adjustments | | | |
| Current year pension transfers/payments recorded as deferral (c) | 8,581 | 15,357 | 23,938 |
| Prior year pension contribution accounted for in current year (d) | 6,014 | 10,764 | 16,778 |
| Administrative prepaid adjustment (e) | - | - | - |
| Debt service (f) | 29,555 | 66,028 | 95,583 |
| Accelerated pension B&C notes obligation portion (g) | 379 | 853 | 1,232 |
| Lease payment (h) | 3,604 | 4,405 | 8,009 |
| WRAP (i) | 870 | 1,257 | 2,127 |
| DWSD short term allocation (j) | - | 9,998 | 9,998 |
| Improvement & Extension Fund (j) | 35,771 | 16,911 | 52,682 |
| Nonbudgeted financial reporting categories adjustments | | | |
| Depreciation (k) | (106,827) | (129,131) | (235,958) |
| Amortization (k) | 4,551 | 1,238 | 5,789 |
| Other nonoperating income (k) | 340 | (5,983) | (5,643) |
| Other nonoperating expense (k) | (303) | (302) | (605) |
| Gain(loss) on disposal of capital assets (k) | (381) | (5) | (386) |
| Raw water rights (l) | 2,246 | - | 2,246 |
| Investment earnings construction fund (m) | 2,355 | 1,700 | 4,055 |
| Net Position Increase/(Decrease) per Financial Statements (b) | <u>\$ (7,043)</u> | <u>\$ 6,141</u> | <u>\$ (902)</u> |

Table 2- Explanatory Notes for Crosswalk

- (a) Source: Budget to Actual Table 1A and Table 1B in Monthly Financial Binder
- (b) Source: Basic Financial Statements Table 2 in Monthly Financial Binder
- (c) Current year pension payments are an expense for budget purposes but not for financial reporting purposes.
- (d) Prior year pension payments are accounted for in the current year financial statements.
- (e) The administrative fee is part of the O&M Legacy Pension shown as an expense for budget purposes. For financial reporting purposes part of the administrative fee is considered prepaid based on the prior year General Retirement System audit information and therefore not an expense for the current year financial reporting. The prepaid portion is adjusted in June each year.
- (f) Debt service (principal and interest payments) are shown as an expense for budget purposes. Most of the adjustment relates to principal payments which

are not an expense for financial reporting purposes. A portion of the adjustment relates to interest expense variances on state revolving fund debt due to the timing of payment draws. The cash set aside basis for interest expense generally is the same as the accrual basis for financial reporting.

- (g) The accelerated pension payment includes the obligation payable for the B&C notes. The pension portion is included in item (c) above. This adjustment relates to the B&C note obligation payments. The principal and interest cash basis payments are treated as an expense for budget purposes. The principal portion is not an expense for financial reporting purposes. For financial reporting purposes interest is expensed on an accrual basis which is different from the cash basis.
- (h) The lease payment is included as an expense for budget and includes both principal and interest payments. Most of the adjustment relates to the principal payments which are not an expense for financial reporting purposes. A portion of the adjustment relates to interest expense which is recorded on an accrual basis for financial reporting which is different from the cash basis.
- (i) WRAP is shown as an expense for budget purposes. For financial reporting purposes the expense is not recognized until the funds have been transferred to the WRAP administrator. The adjustment shown is the amount of current year transfers that have not been transferred to the WRAP administrator. Note that there are funds from the prior year that have not been transferred to the WRAP administrator.
- (j) The DWSD short term allocation and Improvement & Extension Fund transfers are shown as an expense for budget purposes but not for financial reporting purposes.
- (k) Certain nonoperating income and expenses are reported in financial statements only.
- (l) The water service contract with Flint includes a license for raw water rights which has been recorded as an asset and liability by the Authority. The contract provides a credit to Flint as Flint satisfies its monthly bond payment obligation to KWA. This KWA credit is treated as a noncash payment of principal and interest on the liability recorded for the raw water rights. For budget, wholesale customer charges are net of the anticipated KWA credits to Flint as that is the cash that will be received and available to meet the budgeted revenue requirements. For financial reporting basis the Flint wholesale charges are recorded at the total amount billed. When the KWA credit is issued, the receivable from Flint is reduced and the principal and interest payments on the liability for the raw water rights are recorded as a noncash transaction. Most of the adjustment shown relates to the principal reduction made for the credits applied which are not an expense for financial reporting basis.
- (m) Investment earnings from the construction fund are not shown as revenue in the budget and are shown as revenue in the financial statements. Construction fund investment earnings are excluded from the definition of revenue for budget purposes as they are used for construction costs and are not used to meet the revenue requirements in the budget.

The Monthly Construction Work in Progress (CWIP) Summary includes the following.

1. Water System Construction Work in Progress costs incurred to date
2. Sewer System Construction Work in Progress costs incurred to date

Construction Work in Progress

Great Lakes Water Authority (GLWA) capital improvement projects generally span two or more years due to size and complexity. Therefore, the GLWA Board of Directors adopts a biennial budget that establishes allowable amounts for construction spending during that period to support a five-year capital improvement plan (CIP). The CIP is a five-year, rolling plan which is updated annually, reviewed, and formally adopted by the GLWA Board of Directors.

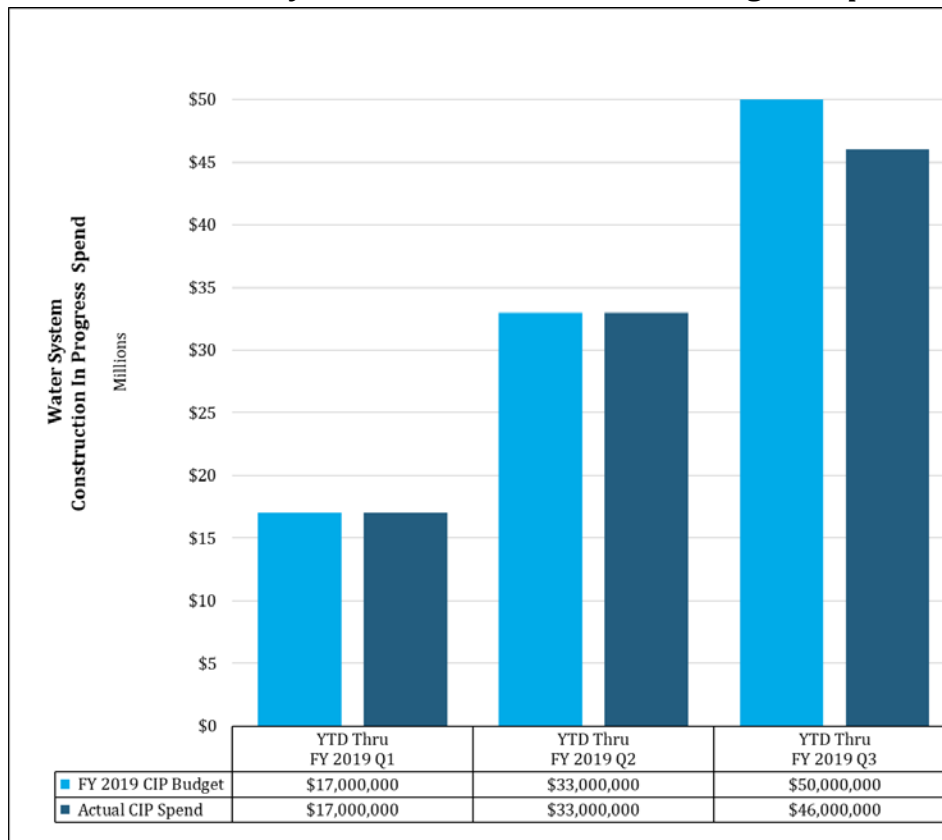
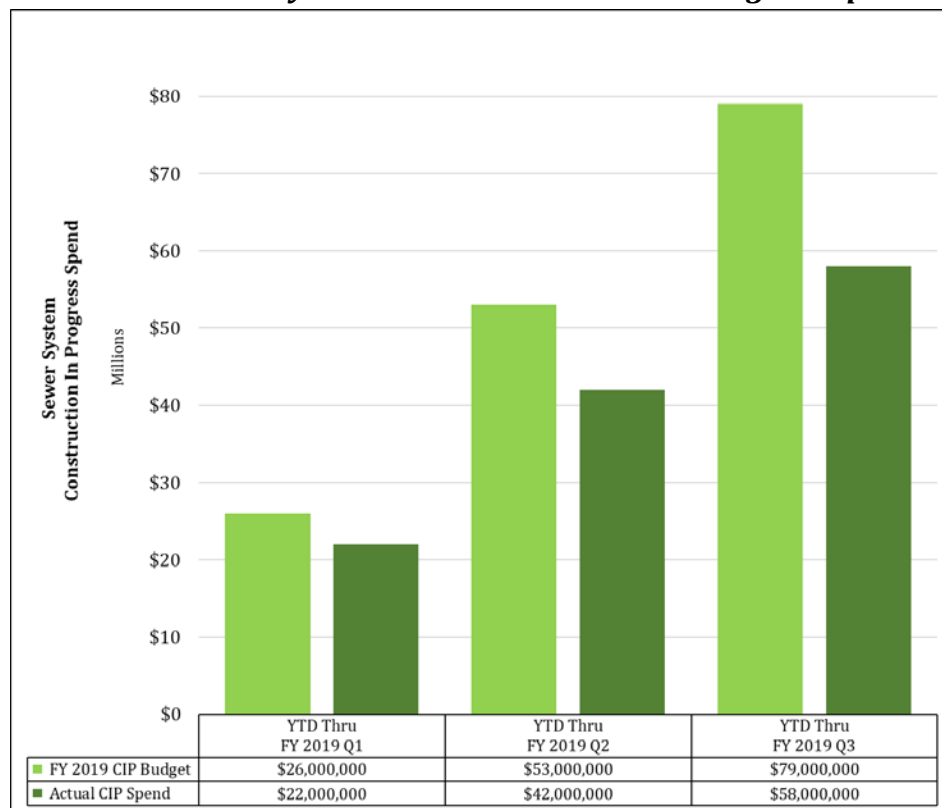
This report presents quarterly and monthly CWIP spending trends against a prorated spending plan. The prorated spending plan is calculated by dividing the total fiscal year 2019 board-approved CIP plan by twelve equal months. It should be noted that these interim reports are prepared on a modified cash basis. Known expenses, where material in nature, have been accrued.

Chart 1 – Water System Construction in Work in Progress Spend

As of March 2019, the Water system incurred nearly \$46 million of construction costs to date. This is 92% of the total fiscal year 2019 prorated, spending plan and continues a trend of on-target spend.

Chart 2 – Sewer System Construction in Work in Progress Spend

As of March 2019, the Sewer system incurred over \$58 million of construction costs to date. This is 73% of the total fiscal year 2019 prorated, spending plan and a slight decrease over the prior period.

Chart 1 – Water System Construction Work in Progress Spend

Chart 2 – Sewer System Construction Work in Progress Spend


This report includes the following.

1. Master Bond Ordinance (MBO) Required Transfers to Accounts Held by GLWA
2. Master Bond Ordinance (MBO) Required Transfers to Accounts Held by DWSD

MBO Transfers to Accounts Held by GLWA

GLWA Transfers: The Treasury team completes required MBO transfers on the first business day of each month. These transfers are completed in accordance with the Great Lakes Water Authority (GLWA) and Detroit Water & Sewerage Department (DWSD) budgets as approved and adopted by the GLWA Board of Directors and DWSD Board of Water Commissioners annually.

Monthly transfers for Operations & Maintenance (O&M), Pension, and Water Residential Assistance Program (WRAP) are one-twelfth of the annual, budgeted amount. Budget stabilization should not require additional funding due to new, baseline funding levels established as part of the April 2018 Memorandum of Understanding but is included to reflect historical activity. Transfers to the Extraordinary Repair & Replacement (ER&R) fund are completed annually based on budget and year-end fund status.

Table 1 - GLWA FY 2019 Water MBO Transfers reflects the required transfers for FY 2019 completed through March 1, 2019. The December O&M transfer amount is less than the other months due to correction to bring fiscal year to date transfers to the approved FY 2019 year to date budget. For FY 2019, through March 1, 2019, MBO transfers for Water totaling \$105.2 million have been transferred to accounts held by GLWA.

Table 2 - GLWA FY 2019 Sewer MBO Transfers reflects the required transfers for FY 2019 completed through March 1, 2019. The December O&M transfer amount is less than the other months due to correction to bring fiscal year to date transfers to the approved FY 2019 year to date budget. For FY 2019, through March 1, 2019, MBO transfers for Water totaling \$164.6 million have been transferred to accounts held by GLWA.

Table 3 - GLWA MBO Transfer History reflects historical transfers for FY 2016, FY 2017, FY 2018 and FY 2019 to date.

Table 1 – GLWA FY 2019 Water MBO Transfers

| WATER | | | | | | | |
|----------------------|--------------------------|---------------------|--------------------|------------------|--|---|--------------------|
| | Operations & Maintenance | Pension Sub Account | Pension Obligation | WRAP | Budget Stabilization (For Benefit of DWSD) | Extraordinary Repair & Replacement (ER&R) | Total Water |
| FY 2019 | | | | | | | |
| July 2018 | 10,393,475 | 504,000 | 891,308 | 171,683 | - | - | 11,960,466 |
| August 2018 | 10,393,475 | 504,000 | 891,308 | 171,683 | - | - | 11,960,466 |
| September 2018 | 10,393,475 | 504,000 | 891,308 | 171,683 | - | - | 11,960,466 |
| October 2018 | 10,393,475 | 504,000 | 891,308 | 171,683 | - | - | 11,960,466 |
| November 2018 | 10,393,475 | 504,000 | 891,308 | 171,683 | - | - | 11,960,466 |
| December 2018 | 8,813,927 | 504,000 | 891,308 | 171,683 | - | - | 10,380,918 |
| January 2019 | 10,130,217 | 504,000 | 891,308 | 171,683 | - | - | 11,697,208 |
| February 2019 | 10,130,217 | 504,000 | 891,308 | 171,683 | - | - | 11,697,208 |
| March 2019 | 10,130,217 | 504,000 | 891,308 | 171,683 | - | - | 11,697,208 |
| Total FY 2019 | 91,171,953 | 4,536,000 | 8,021,772 | 1,545,147 | \$0 | \$0 | 105,274,872 |

Table 2 – GLWA FY 2019 Sewer MBO Transfers

| SEWER | | | | | | | |
|----------------------|--------------------------|---------------------|--------------------|------------------|--|---|--------------------|
| | Operations & Maintenance | Pension Sub Account | Pension Obligation | WRAP | Budget Stabilization (For Benefit of DWSD) | Extraordinary Repair & Replacement (ER&R) | Total Water |
| FY 2019 | | | | | | | |
| July 2018 | 16,093,500 | 902,000 | 1,223,958 | 238,483 | - | - | 18,457,941 |
| August 2018 | 16,093,500 | 902,000 | 1,223,958 | 238,483 | - | - | 18,457,941 |
| September 2018 | 16,093,500 | 902,000 | 1,223,958 | 238,483 | - | - | 18,457,941 |
| October 2018 | 16,093,500 | 902,000 | 1,223,958 | 238,483 | - | - | 18,457,941 |
| November 2018 | 16,093,500 | 902,000 | 1,223,958 | 238,483 | - | - | 18,457,941 |
| December 2018 | 15,072,198 | 902,000 | 1,223,958 | 238,483 | - | - | 17,436,639 |
| January 2019 | 15,923,283 | 902,000 | 1,223,958 | 238,483 | - | - | 18,287,724 |
| February 2019 | 15,923,283 | 902,000 | 1,223,958 | 238,483 | - | - | 18,287,724 |
| March 2019 | 15,923,283 | 902,000 | 1,223,958 | 238,483 | - | - | 18,287,724 |
| Total FY 2019 | 143,309,547 | \$8,118,000 | 11,015,622 | 2,146,347 | \$0 | \$0 | 164,589,516 |

Table 3 – GLWA MBO Transfer History

| GLWA MBO Transfer History | | | | | | | |
|---------------------------|--------------------------|---------------------|---------------------|---------------------|--|---|----------------------|
| WATER | | | | | | | |
| | Operations & Maintenance | Pension Sub Account | Pension Obligation | WRAP | Budget Stabilization (For Benefit of DWSD) | Extraordinary Repair & Replacement (ER&R) | Total Water |
| Total FY 2016 | \$71,052,000 | \$6,037,100 | \$10,297,200 | \$1,983,300 | \$2,326,900 | \$606,000 | \$92,302,500 |
| Total FY 2017 | 111,879,600 | 6,037,200 | 10,297,200 | 2,077,200 | 360,000 | - | 130,651,200 |
| Total FY 2018 | 121,562,604 | 6,048,000 | 10,695,696 | 2,159,400 | - | - | 140,465,700 |
| Total FY 2019 (9 months) | 91,171,953 | 4,536,000 | 8,021,772 | 1,545,147 | - | - | 105,274,872 |
| Life to Date | \$395,666,157 | \$22,658,300 | \$39,311,868 | \$7,765,047 | \$2,686,900 | \$606,000 | \$468,694,272 |
| SEWER | | | | | | | |
| | Operations & Maintenance | Pension Sub Account | Pension Obligation | WRAP | Budget Stabilization (For Benefit of DWSD) | Extraordinary Repair & Replacement (ER&R) | Total Water |
| Total FY 2016 | \$100,865,600 | \$10,838,400 | \$14,025,800 | \$2,523,400 | \$5,591,700 | \$779,600 | \$134,624,500 |
| Total FY 2017 | 175,858,800 | 10,838,400 | 14,026,800 | 2,654,400 | 2,654,400 | - | 206,032,800 |
| Total FY 2018 | 191,079,396 | 10,824,000 | 14,687,496 | 2,760,804 | - | - | 219,351,696 |
| Total FY 2019 (9 months) | 143,309,547 | 8,118,000 | 11,015,622 | 2,146,347 | - | - | 164,589,516 |
| Life to Date | \$611,113,343 | \$40,618,800 | \$53,755,718 | \$10,084,951 | \$8,246,100 | \$779,600 | \$724,598,512 |

MBO Required and Lease Payment Transfers to DWSD

DWSD Transfers: The GLWA Treasury team completes the required MBO transfers on the first business day of each month. These transfers are completed in accordance with the GLWA and DWSD budgets as approved and adopted by the GLWA Board of Directors and DWSD Board of Water Commissioners annually. Transfers are coordinated with other areas of GLWA Financial Services in advance of the first business day of each month. GLWA Treasury sends confirmation of transfers made to DWSD Treasury.

Monthly transfers for O&M and O&M Pension are one-twelfth of the annual, budgeted amount. The annual lease payment, as stated in the Water & Sewer Lease Agreements, is \$22,500,000 for Water and \$27,500,000 for Sewer. The monthly lease transfer is one-twelfth of the amount as stated in the Lease agreements unless otherwise designated by DWSD. Per Section 3.5 of the Lease, the Lease payment may be used for (a) bond principal and interest for Local System Improvements, (b) bond principal and interest for the City's share of common-to-all System Improvements, and (c) Local System improvements.

Table 4 - DWSD FY 2019 Water MBO Transfers reflects the required transfers for FY 2019 completed through March 1, 2019. MBO transfers for Water totaling \$43.8 million have been transferred to accounts held by DWSD. For FY 2019, DWSD has requested \$3,972,200 of the lease payment be utilized to offset a portion of debt service. (Note: the original FY 2019 request was for \$3,949,200; the net impact of the revision in the requested amount is reflected in the March - June 2019 transfers.)

Table 5 - DWSD FY 2019 Sewer MBO Transfers reflects the required transfers for FY 2019 completed through March 1, 2019. MBO transfers for Sewer totaling \$69.9 million have been transferred to accounts held by DWSD. For FY 2019, DWSD has requested \$4,415,000 of the lease payment be utilized to offset a portion of debt service. (Note: the original FY 2019 request was for \$4,864,000; the net impact of the revision in the requested amount is reflected in the March - June 2019 transfers.)

Table 6 - DWSD MBO and Lease Payment Transfer History reflects historical transfers for FY 2016, FY 2017, FY 2018 and FY 2019 to date.

Table 4 – DWSD FY 2019 Water MBO Transfers

| WATER | | | | |
|----------------|-------------------------------------|----------------|-------------------------------------|--------------------|
| | <u>Operations & Maintenance</u> | <u>Pension</u> | <u>Lease Payment (I&E Fund)</u> | <u>Total Water</u> |
| FY 2019 | | | | |
| July 2018 | \$ 2,957,025 | \$ 356,000 | \$ 1,545,900 | \$ 4,858,925 |
| August 2018 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| September 2018 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| October 2018 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| November 2018 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| December 2018 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| January 2019 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| February 2019 | 2,957,025 | 356,000 | 1,545,900 | 4,858,925 |
| March 2019 | 2,957,025 | 356,000 | 1,594,200 | 4,907,225 |
| Total FY 2019 | \$ 26,613,225 | \$ 3,204,000 | \$ 13,961,400 | \$ 43,778,625 |

Table 5 – DWSD FY 2019 Sewer MBO Transfers

| SEWER | | | | |
|----------------|-------------------------------------|----------------|-------------------------------------|--------------------|
| | <u>Operations & Maintenance</u> | <u>Pension</u> | <u>Lease Payment (I&E Fund)</u> | <u>Total Sewer</u> |
| FY 2019 | | | | |
| July 2018 | \$ 5,676,792 | \$ 238,000 | \$ 1,886,333 | \$ 7,801,125 |
| August 2018 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| September 2018 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| October 2018 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| November 2018 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| December 2018 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| January 2019 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| February 2019 | 5,676,792 | 238,000 | 1,886,333 | 7,801,125 |
| March 2019 | 5,676,792 | 238,000 | 1,538,734 | 7,453,526 |
| Total FY 2019 | \$ 51,091,128 | \$ 2,142,000 | \$ 16,629,398 | \$ 69,862,526 |

Table 6 – DWSD MBO and Lease Payment Transfer History

| Transfers to DWSD | | | | |
|---------------------------|-----------------------------|--|-----------------------------|-----------------------|
| WATER | | | | |
| | Operations & Maintenance | Operations & Maintenance Pension | Lease Payment (I&E Fund) | Total Water |
| FY 2016 * | | | | |
| MBO/Lease Requirement | \$ 26,185,600 | \$ 4,262,700 | \$ 22,500,000 | \$ 73,121,400 |
| Offset to Debt Service | - | - | (2,326,900) | (2,326,900) |
| Net MBO Transfer | 26,185,600 | 4,262,700 | 20,173,100 | 70,794,500 |
| FY 2017 | | | | |
| MBO/Lease Requirement | 33,596,400 | 4,262,400 | 22,500,000 | 60,358,800 |
| Offset to Debt Service | - | - | - | - |
| Net MBO Transfer | 33,596,400 | 4,262,400 | 22,500,000 | 60,358,800 |
| FY 2018 | | | | |
| MBO/Lease Requirement | 35,059,704 | 4,272,000 | 22,500,000 | 61,831,704 |
| Offset to Debt Service | - | - | (1,875,000) | (1,875,000) |
| Net MBO Transfer | 35,059,704 | 4,272,000 | 20,625,000 | 59,956,704 |
| FY 2019 (9 months) | | | | |
| MBO/Lease Requirement | 26,613,225 | 3,204,000 | 16,875,000 | 46,692,225 |
| Offset to Debt Service | - | - | (2,913,600) | (2,913,600) |
| Net MBO Transfer | 26,613,225 | 3,204,000 | 13,961,400 | 43,778,625 |
| Life-to-Date | | | | |
| MBO/Lease Requirement | 121,454,929 | 16,001,100 | 84,375,000 | 242,004,129 |
| Offset to Debt Service | - | - | (7,115,500) | (7,115,500) |
| Total Water | \$ 121,454,929 | \$ 16,001,100 | \$ 77,259,500 | \$ 234,888,629 |
| SEWER | | | | |
| | Operations & Maintenance | Operations & Maintenance Pension | Lease Payment (I&E Fund) | Total Sewer |
| FY 2016 * | | | | |
| MBO/Lease Requirement | \$ 19,774,300 | \$ 2,861,800 | \$ 27,500,000 | \$ 50,136,100 |
| Offset to Debt Service | - | - | (19,991,500) | (19,991,500) |
| Total MBO Transfer | 19,774,300 | 2,861,800 | 7,508,500 | 30,144,600 |
| FY 2017 | | | | |
| MBO/Lease Requirement | 41,535,600 | 2,862,000 | 27,500,000 | 71,897,600 |
| Offset to Debt Service | - | - | - | - |
| Total MBO Transfer | 41,535,600 | 2,862,000 | 27,500,000 | 71,897,600 |
| FY 2018 | | | | |
| MBO/Lease Requirement | 60,517,992 | 2,856,000 | 27,500,000 | 90,873,992 |
| Offset to Debt Service | - | - | (9,166,664) | (9,166,664) |
| Total MBO Transfer | 60,517,992 | 2,856,000 | 18,333,336 | 81,707,328 |
| FY 2019 (9 months) | | | | |
| MBO/Lease Requirement | 51,091,128 | 2,142,000 | 20,625,000 | 73,858,128 |
| Offset to Debt Service | - | - | (3,995,602) | (3,995,602) |
| Total MBO Transfer | 51,091,128 | 2,142,000 | 16,629,398 | 69,862,526 |
| Life-to-Date | | | | |
| MBO/Lease Requirement | 172,919,020 | 10,721,800 | 103,125,000 | 286,765,820 |
| Offset to Debt Service | - | - | (33,153,766) | (33,153,766) |
| Total Sewer | \$ 172,919,020 | \$ 10,721,800 | \$ 69,971,234 | \$ 253,612,054 |

* **Note:** FY 2016 lease transfer amounts shown do not include prepayment on the lease amount for the 6 month period before bifurcation.

This report includes the following:

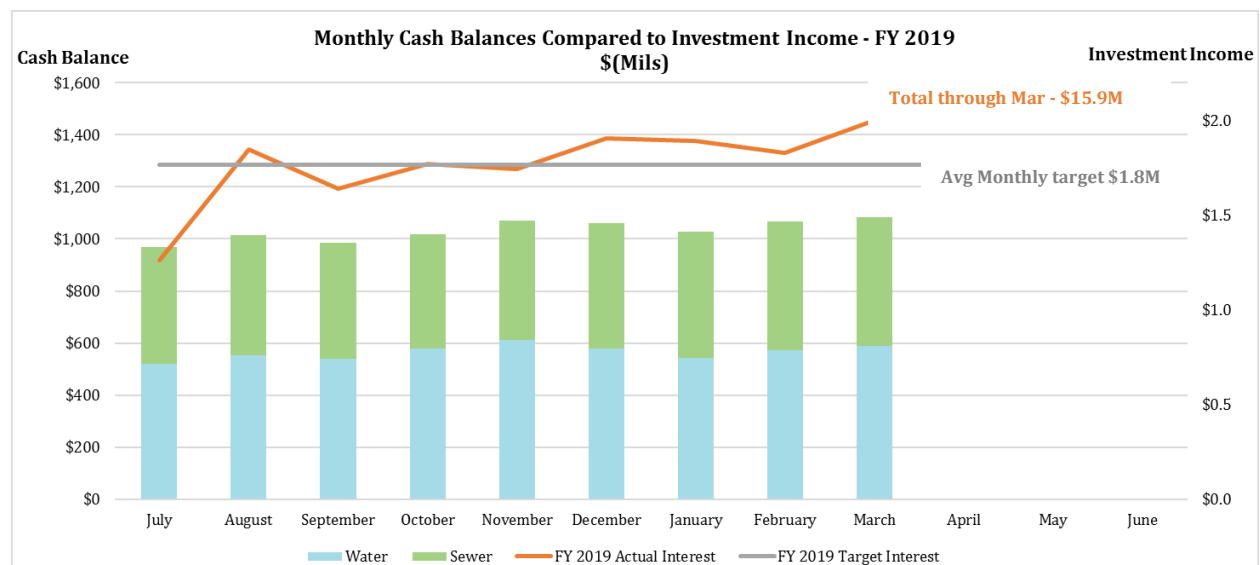
1. Monthly Cash Balances Compared to Investment Income
2. Cash Balance Detail

Monthly Cash Balances Compared to Investment Income

GLWA's investment holdings comply with the requirements of Public Act 20 of 1948, as amended and the GLWA Investment Policy. The cash balances shown in this report include bank deposits, money market funds, a local government investment pool, U.S. Treasuries, Federal Agencies, and commercial paper.

Cash and investment balances change each month based on Master Bond Ordinance (MBO) funding requirements, operational needs, capital spending pace, and mandatory debt payments. Investment income fluctuates monthly based on cash and investment balances as well as market conditions and investment strategy. The cumulative investment earnings through March 2019 of \$15.9 million is 75% of the FY 2019 target of \$21.2 million.

Chart 1 - Monthly Cash Balances Compared to Investment Income - Through March 2019.



| \$(Mils) | July | August | September | October | November | December | January | February | March | April | May | June |
|-------------------|-------|---------|-----------|---------|----------|----------|---------|----------|---------|-------|-----|------|
| Water | \$521 | \$553 | \$539 | \$579 | \$611 | \$579 | \$544 | \$573 | \$589 | | | |
| Sewer | 447 | 462 | 445 | 440 | 459 | 481 | 484 | 495 | 495 | | | |
| Total | \$968 | \$1,015 | \$984 | \$1,018 | \$1,071 | \$1,060 | \$1,028 | \$1,068 | \$1,084 | | | |
| Investment Income | \$1.3 | \$1.8 | \$1.6 | \$1.8 | \$1.7 | \$1.9 | \$1.9 | \$1.8 | \$2.0 | | | |

Cash Balance Detail

Funds Held By GLWA: GLWA cash balances are held in accounts as defined by the Master Bond Ordinance. The accounts are funded by monthly transfers, as stipulated in the MBO, on the first business day of each month. The “operations and maintenance” (O&M) fund transfer amounts are based upon the annual O&M budget approved by the GLWA Board of Directors for the regional systems and by the Board of Water Commissioners for the Detroit Water & Sewerage Department (DWSD) local system budgets. The water and sewer funds held by GLWA and their purpose, as defined by the MBO, are listed below.

Funds Held Within Trust:

- Receiving – all retail and wholesale revenues collected which are distributed in subsequent month(s)
- Debt Service – funds set aside for debt service and debt reserve requirements
- Pension Obligation – funds set aside to meet GLWA’s annual funding requirements for the legacy General Retirement System Pension Plan
- Water Residential Assistance Program (WRAP) – funds set aside to be used to provide financial assistance to qualified residents throughout the local and regional water system as directed by program guidelines
- Budget Stabilization – funds held by GLWA on behalf of DWSD that can be applied against shortfalls in retail revenues
- Emergency Repair & Replacement (ER&R) – funds set aside to pay the costs for major unanticipated repairs and replacements of the local and regional systems
- Improvement & Extension (I&E) – funds set aside to be used for the improvements, enlargements and extensions of the regional system

Funds Held Outside Trust:

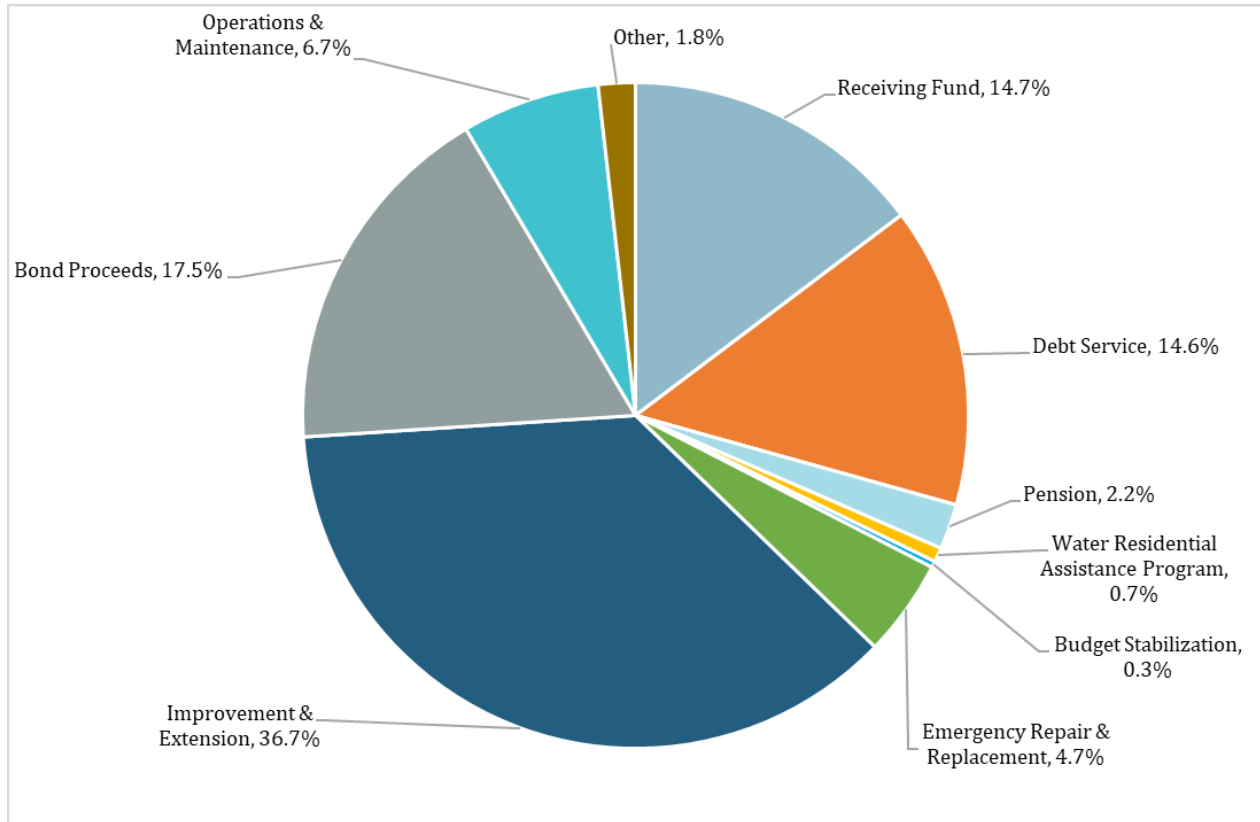
- Bond Proceeds – funds raised from debt issuance used for costs of repairs, construction, and improvements of the regional system
- Operations & Maintenance (O&M) – funds used to meet the operational and maintenance requirements of the regional system
- Other – retainage funds held on behalf of contractors and security deposit funds held on behalf of the City of Flint

A [chart](#) depicting the follow of funds is online at glwater.org as well as the [MBO](#) documents.

Chart 2 – Cash Balances - Water Funds as of March 31, 2019

The chart below shows the allocation of the balance among the different categories defined in the section above. The total cash balance for Water Funds as of March 31, 2019 is \$589 million. The allocation of balances among the I&E, bond proceeds, and debt service reserve funds reflects GLWA’s commitment to funding capital improvements and meeting debt reserve requirements while simultaneously increasing I&E resources to fund pay-as-you-go capital funding to reduce long-term debt in the future.

Chart 2 – Cash Balances - Water Funds as of March 31, 2019

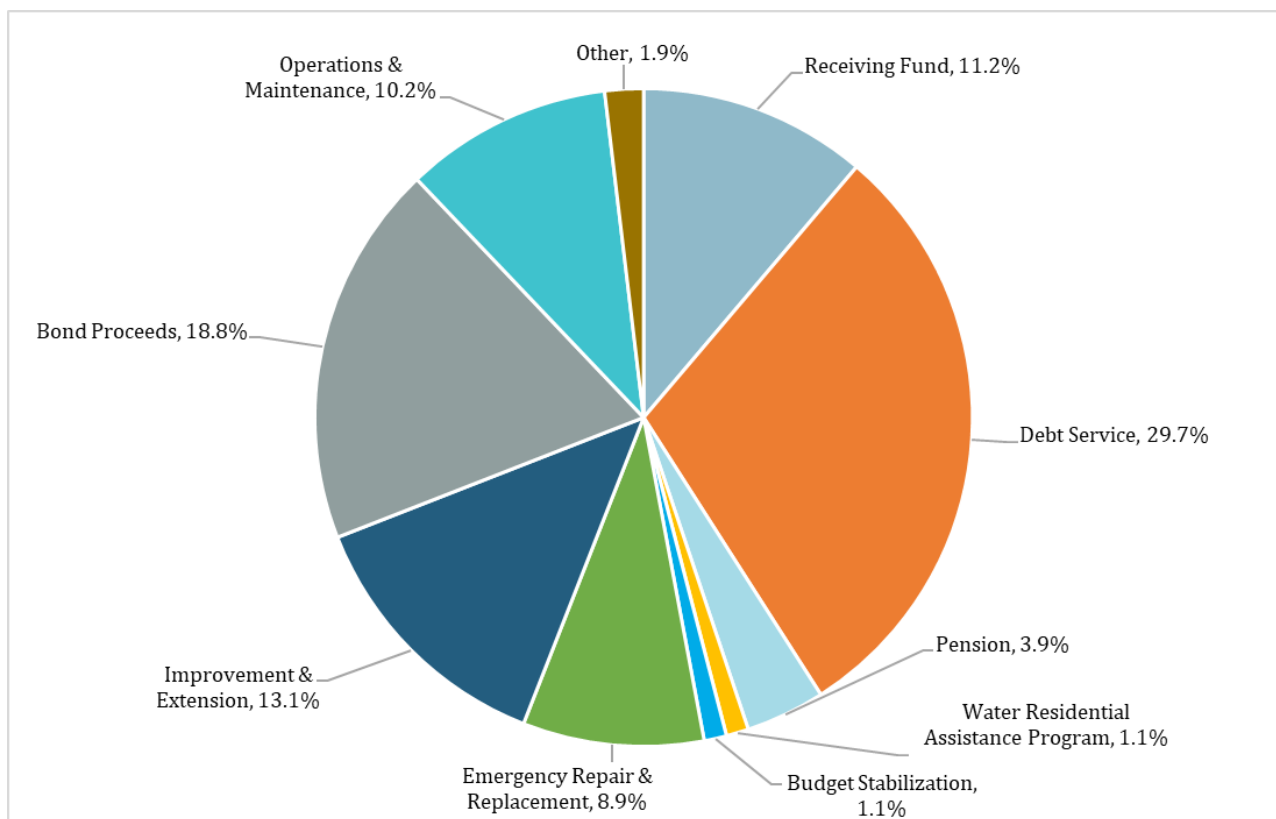


Note: Due to rounding totals may not equal 100%.

Chart 3 – Cash Balances - Sewer Funds as of March 31, 2019

The chart below shows the allocation of the balance among the different funds defined in the section above. The total cash balance for Sewer Funds as of March 31, 2019 is \$495 million. Like the Water Funds, the allocation of balances among the I&E, bond proceeds, and debt service reserve funds reflects GLWA’s commitment to funding capital improvements and meeting debt reserve requirements while simultaneously increasing I&E resources to fund pay-as-you-go capital funding to reduce long-term debt in the future. The pace for Sewer Funds I&E deposits has been less than budget to address a budget shortfall over multiple years by DWSD. Beginning in February 2019, DWSD began making payments on the FY 2017 shortfall note which will replenish the I&E Fund.

Chart 3 – Cash Balances - Sewer Funds as of March 31, 2019



Note: Due to rounding totals may not equal 100%.

Retail Revenues, Receivables, and Collections: Pursuant to the terms of the lease agreement between the City of Detroit and the Great Lakes Water Authority (GLWA), the Detroit Water & Sewerage Department (DWSD) serves as GLWA's agent for billing activities for the City of Detroit retail customer class. All water and sewer service collections from DWSD customers are deposited in a trust account and are administered in accordance with the GLWA Master Bond Ordinance.

The Monthly Retail Revenues, Receivables, & Collections Report includes the following.

1. DWSD Retail Water Revenue Billings and Collections
2. DWSD Retail Sewer Revenue Billings and Collections
3. DWSD Retail Water & Sewer System Accounts Receivable Aging Report

Note: Wholesale customer revenues are billed by the Great Lakes Water Authority.

DWSD Retail Water Billings and Collections

Retail Billing Basis: DWSD bills retail customers monthly. Customers are billed throughout the month in cycles based on a meter reading schedule beginning with residential accounts and ending with commercial and industrial customers.

Table 1 - DWSD Retail Billings shows the FY 2019 water usage and billed revenue which are provided by DWSD staff. As of March 31, 2019, the DWSD usage was at 100.92% of the budget and billed revenue was at 103.35% of budget.

DWSD Retail Water Collections: The collections represent payments made by DWSD retail customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA's Master Bond Ordinance.

Table 2 - Retail Water Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods.

Note: DWSD shared with the Reconciliation Committee the additional, billings to collections rolling average report requested by the GLWA Audit Committee at the December 21, 2018 meeting. That report was part of the Reconciliation Committee update in the May packet. We will continue to work with DWSD to determine if a monthly format could be included in this report.

Table 1 – DWSD Retail Water Billings

| RETAIL WATER CUSTOMERS | | | | | | | | |
|------------------------------|-----------------------|--------------------|--------------|------------------|-------------------|--------------|--------------------|------------------|
| Month (1) | FY 2019 - Budget/Goal | | | FY 2019 - Actual | | | FY 2019 - Variance | |
| | Volume | Revenue | Unit Revenue | Volume | Revenue (2) | Unit Revenue | Volume | Revenue |
| | Mcf | \$ | \$/Mcf | Mcf | \$ | \$/Mcf | Mcf | \$ |
| July | 269,000 | 9,424,500 | 35.04 | 300,613 | 10,203,409 | 33.94 | 31,613 | 778,909 |
| August | 273,100 | 9,377,700 | 34.34 | 302,476 | 9,833,149 | 32.09 | 29,376 | 455,449 |
| September | 270,500 | 8,494,300 | 31.40 | 221,531 | 8,996,692 | 40.61 | (48,969) | 502,392 |
| October | 233,800 | 8,165,900 | 34.93 | 215,104 | 8,010,524 | 37.24 | (18,696) | (155,376) |
| November | 224,500 | 7,750,100 | 34.52 | 232,770 | 8,325,013 | 35.76 | 8,270 | 574,913 |
| December | 206,500 | 8,224,900 | 39.83 | 202,686 | 7,659,930 | 37.79 | (3,814) | (564,970) |
| January | 226,600 | 7,978,800 | 35.21 | 227,697 | 8,250,078 | 36.23 | 1,097 | 271,278 |
| February | 216,400 | 7,980,200 | 36.88 | 232,094 | 8,649,072 | 37.27 | 15,694 | 668,872 |
| March | 213,300 | 8,163,900 | 38.27 | 218,435 | 8,165,904 | 37.38 | 5,135 | 2,004 |
| April | 223,100 | 7,856,900 | 35.22 | | | | | |
| May | 211,000 | 9,109,200 | 43.17 | | | | | |
| June | 240,200 | 9,063,600 | 37.73 | | | | | |
| Total | 2,808,000 | 101,590,000 | 36.18 | 2,153,406 | 78,093,771 | 36.27 | 19,706 | 2,533,471 |
| <i>Subtotals ytd</i> | <i>2,133,700</i> | <i>75,560,300</i> | <i>35.41</i> | <i>2,153,406</i> | <i>78,093,771</i> | <i>36.27</i> | <i>19,706</i> | <i>2,533,471</i> |
| <i>Achievement of Budget</i> | | | | <i>100.92%</i> | <i>103.35%</i> | | | |

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

(2) Retail Revenues include Miscellaneous Revenues and Penalties

Table 2 – DWSD Retail Water Collections

| Water | | | | |
|----------------------------------|--------------------|-------------------|-----------|---------|
| Month | Current Year | Prior Year | Variance | Ratio |
| April | 9,226,675 | 6,977,199 | 2,249,477 | 32.24% |
| May | 8,969,019 | 8,568,632 | 400,387 | 4.67% |
| June | 7,940,939 | 7,141,568 | 799,371 | 11.19% |
| July | 7,375,402 | 8,357,505 | (982,103) | -11.75% |
| August | 8,692,784 | 9,509,488 | (816,704) | -8.59% |
| September | 9,766,449 | 8,949,906 | 816,543 | 9.12% |
| October | 9,015,400 | 9,528,528 | (513,128) | -5.39% |
| November | 7,938,517 | 8,049,328 | (110,811) | -1.38% |
| December | 7,297,698 | 8,265,636 | (967,938) | -11.71% |
| January | 8,158,817 | 8,066,448 | 92,369 | 1.15% |
| February | 7,927,299 | 6,432,245 | 1,495,054 | 23.24% |
| March | 8,707,578 | 8,280,635 | 426,943 | 5.16% |
| Rolling, 12-Month Total | 101,016,577 | 98,127,117 | | |
| Rolling, 12-Month Average | 8,418,048 | 8,177,260 | | |

DWSD Retail Sewer Billings and Collections

Retail billing basis: DWSD bills retail customers monthly. Customers are billed throughout the month in cycles based on a meter reading schedule beginning with residential accounts and ending with commercial and industrial customers.

Table 3 - DWSD Retail Sewer Billings shows the FY 2019 sewer billed revenue which are provided by DWSD staff. As of March 31, 2019, the DWSD usage was at 104.82% of the budget and billed revenue was at 98.55% of budget.

DWSD Retail Sewer Collections: The collections represent payments made by DWSD retail customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA's Master Bond Ordinance.

Table 4 - DWSD Retail Sewer Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods.

Note: DWSD shared with the Reconciliation Committee the additional, billings to collections rolling average report requested by the GLWA Audit Committee at the December 21, 2018 meeting. That report was part of the Reconciliation Committee update in the May packet. We will continue to work with DWSD to determine if a monthly format could be included in this report.

Table 3 - DWSD Retail Sewer Billings

| RETAIL SEWER CUSTOMERS | | | | | | |
|-----------------------------------|-----------------------|--------------------|------------------|--------------------|--------------------|--------------------|
| Month (1) | FY 2019 - Budget/Goal | | FY 2019 - Actual | | FY 2019 - Variance | |
| | Volume | Revenue | Volume | Revenue (2) | Volume | Revenue |
| | Mcf | \$ | Mcf | \$ | Mcf | \$ |
| July | 242,100 | 27,423,400 | 273,862 | 27,711,606 | 31,762 | 288,206 |
| August | 244,200 | 27,232,200 | 262,525 | 27,263,163 | 18,325 | 30,963 |
| September | 239,600 | 25,367,500 | 221,660 | 25,413,790 | (17,940) | 46,290 |
| October | 211,000 | 25,177,200 | 205,267 | 24,092,209 | (5,733) | (1,084,991) |
| November | 197,600 | 23,861,000 | 205,806 | 24,176,849 | 8,206 | 315,849 |
| December | 182,400 | 25,293,500 | 193,791 | 23,787,394 | 11,391 | (1,506,106) |
| January | 198,600 | 24,852,800 | 201,171 | 24,269,509 | 2,571 | (583,291) |
| February | 191,600 | 25,329,400 | 220,021 | 25,455,499 | 28,421 | 126,099 |
| March | 191,000 | 25,474,500 | 205,424 | 24,510,043 | 14,424 | (964,457) |
| April | 197,300 | 24,789,700 | | | | |
| May | 187,300 | 26,205,200 | | | | |
| June | 210,300 | 26,730,700 | | | | |
| Total | 2,493,000 | 307,737,100 | 1,989,527 | 226,680,062 | 91,427 | (3,331,438) |
| <i>Subtotals ytd</i> | <i>1,898,100</i> | <i>230,011,500</i> | <i>1,989,527</i> | <i>226,680,062</i> | <i>91,427</i> | <i>(3,331,438)</i> |
| <i>Achievement of Budget/Goal</i> | | | <i>104.82%</i> | <i>98.55%</i> | | |

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

(2) Retail Revenues include Miscellaneous Revenues and Penalties

Table 4 – DWSD Retail Sewer Collections

| Sewer | | | | |
|----------------------------------|--------------------|--------------------|-------------|---------|
| Month | Current Year | Prior Year | Variance | Ratio |
| April | 16,159,844 | 17,219,106 | (1,059,262) | -6.15% |
| May | 18,341,298 | 20,046,357 | (1,705,059) | -8.51% |
| June | 27,591,834 | 18,005,548 | 9,586,286 | 53.24% |
| July | 21,461,926 | 18,582,964 | 2,878,962 | 15.49% |
| August | 21,746,714 | 24,263,141 | (2,516,427) | -10.37% |
| September | 23,727,505 | 21,320,358 | 2,407,147 | 11.29% |
| October | 23,938,933 | 23,786,903 | 152,030 | 0.64% |
| November | 20,624,039 | 19,485,270 | 1,138,769 | 5.84% |
| December | 19,612,154 | 19,522,952 | 89,203 | 0.46% |
| January | 21,140,835 | 18,308,458 | 2,832,377 | 15.47% |
| February | 20,758,852 | 17,495,563 | 3,263,289 | 18.65% |
| March | 22,111,691 | 23,015,525 | (903,834) | -3.93% |
| Rolling 12-Month Total | 257,215,625 | 241,052,144 | | |
| Rolling, 12-Month Average | 21,434,635 | 20,087,679 | | |

DWSD Retail Water and Sewer Accounts Receivable Aging Report

The DWSD detailed accounts receivable aging is categorized by customer category.

Table 5 is a summary of the total, current and non-current Water and Sewer receivables by category as of March 31, 2019. As requested, DWSD will begin including prior year activity beginning with their April 2019 Aging Report.

Table 5 – DWSD Retail Accounts Receivable Aging Report – Water & Sewer Combined

| Sales Class | # of Accounts | Avg. Balance | Current | > 30 Days | > 60 Days | > 180 Days | Accounts Receivable Balance |
|-----------------------------------|----------------|------------------|-------------------------------|------------------------------|-------------------------------|-------------------------------|---------------------------------|
| Residential | 287,163 | \$ 333.95 | \$ 13,086,000 13.6% | \$ 6,964,000 7.3% | \$ 18,015,000 18.8% | \$ 57,832,000 60.3% | \$ 95,897,000 100.0% |
| Commercial | 28,170 | 1,214.26 | 8,200,000 24.0% | 2,646,000 7.7% | 6,774,000 19.8% | 16,585,000 48.5% | 34,205,000 100.0% |
| Industrial | 4,797 | 3,213.76 | 5,018,000 32.5% | 1,076,000 7.0% | 2,635,000 17.1% | 6,688,000 43.4% | 15,417,000 100.0% |
| Tax Exempt Entities | 8,396 | 1,535.14 | 2,289,000 17.8% | 1,163,000 9.0% | 2,514,000 19.5% | 6,923,000 53.7% | 12,889,000 100.0% |
| Government Entities | 2,604 | 2,072.27 | 721,000 13.4% | 511,000 9.5% | 1,043,000 19.3% | 3,121,000 57.8% | 5,396,000 100.0% |
| Subtotal - Active Accounts | 331,130 | \$ 494.68 | \$ 29,314,000 17.9% | \$ 12,360,000 7.5% | \$ 30,981,000 18.9% | \$ 91,149,000 55.6% | \$ 163,804,000 100.0% |
| Inactive Accounts | 259,464 | 75.56 | 326,000 1.7% | 160,000 0.8% | 982,000 5.0% | 18,138,000 92.5% | 19,606,000 100.0% |
| Total | 590,594 | \$ 310.55 | \$ 29,640,000 | \$ 12,520,000 | \$ 31,963,000 | \$ 109,287,000 | \$ 183,410,000 |
| <i>% of Total A/R</i> | | | 16.2% | 6.8% | 17.4% | 59.6% | 100.0% |
| Water Fund | 211,500 | 188.63 | \$ 7,040,000 | \$ 2,461,000 | \$ 5,717,000 | \$ 24,675,000 | \$ 39,893,000 |
| Sewer Fund | 268,019 | 535.47 | \$ 22,600,000 | \$ 10,059,000 | \$ 26,246,000 | \$ 84,612,000 | \$ 143,517,000 |
| Total | 590,594 | 310.55 | \$ 29,640,000 | \$ 12,520,000 | \$ 31,963,000 | \$ 109,287,000 | \$ 183,410,000 |



The Monthly Wholesale Billings, Receivables, & Collections Report includes the following.

1. Wholesale Water Billings and Collections
2. Wholesale Sewer Billings and Collections
3. City of Highland Park Billings and Collections
4. Wholesale Water & Sewer Accounts Receivable Aging Report

Wholesale Water Billings and Collections

Wholesale Water Contracts: Great Lakes Water Authority (GLWA) provides wholesale water service to 87 member-partners through a variety of service arrangements.

Service Arrangement Type

| | |
|-----------------|-----------|
| Model Contract | 82 |
| Emergency | 1 |
| Older Contracts | <u>4</u> |
| Total | <u>87</u> |

Note: Services are provided to the Detroit Water & Sewerage Department (DWSD) via a Water and Sewer Services Agreement (WSSA). See the "Retail Revenues, Receivables, and Collections Report" section of this monthly report.

Wholesale Water Billing Basis: Beginning with FY 2016, wholesale water charges were restructured to create a more stable revenue stream by using a historical rolling average to project customer volumes which accounts for 40% of the monthly charges and 60% of the annual customer revenue requirement as a monthly fixed charge.

Table 1 - Wholesale Water Billings shows the FY 2019 water billed usage and revenues. As of March 31, 2019, the billed usage was at 101.69% of budget and billed revenue at 103.14% of budget. Billings and usage from the City of Flint are included as they were assumed in the FY 2019 Budget.

Wholesale Water Collections: The collections represent payments made by wholesale customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA's Master Bond Ordinance.

Table 2 - Wholesale Water Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods. The difference in rolling average from current year to prior year reflects the gentle downward trend in water usage over time. The variability in collections month-to-month are associated with timing of the billing cycle. While at times unavoidable, the GLWA billing team is identifying steps to prevent delays wherever possible.

Table 1 - FY 2019 Wholesale Water Billings Report

| WHOLESALE WATER CUSTOMERS (2) | | | | | | | | |
|-------------------------------|-----------------------|--------------------|--------------|-------------------|--------------------|--------------|--------------------|------------------|
| Month (1) | FY 2019 - Budget/Goal | | | FY 2019 - Actual | | | FY 2019 - Variance | |
| | Volume | Revenue | Unit Revenue | Volume | Revenue | Unit Revenue | Volume | Revenue |
| | Mcf | \$ | \$/Mcf | Mcf | \$ | \$/Mcf | Mcf | \$ |
| July | 1,632,120 | 30,347,500 | 18.59 | 1,800,256 | 32,754,760 | 18.19 | 168,136 | 2,407,260 |
| August | 1,518,130 | 29,405,800 | 19.37 | 1,490,896 | 29,776,242 | 19.97 | (27,234) | 370,442 |
| September | 1,354,440 | 27,424,800 | 20.25 | 1,380,514 | 28,039,719 | 20.31 | 26,074 | 614,919 |
| October | 1,091,580 | 24,826,000 | 22.74 | 1,027,086 | 24,866,975 | 24.21 | (64,494) | 40,975 |
| November | 912,260 | 23,273,500 | 25.51 | 938,511 | 24,145,548 | 25.73 | 26,251 | 872,048 |
| December | 1,002,110 | 23,912,600 | 23.86 | 997,281 | 24,545,455 | 24.61 | (4,829) | 632,855 |
| January | 1,019,240 | 24,133,400 | 23.68 | 1,001,885 | 24,622,107 | 24.58 | (17,355) | 488,707 |
| February | 885,170 | 23,021,600 | 26.01 | 927,982 | 23,986,734 | 25.85 | 42,812 | 965,134 |
| March | 1,000,060 | 23,933,100 | 23.93 | 1,027,131 | 24,778,252 | 24.12 | 27,071 | 845,152 |
| April | 952,450 | 23,568,200 | 24.74 | | | | | |
| May | 1,116,620 | 25,296,500 | 22.65 | | | | | |
| June | 1,557,060 | 29,624,900 | 19.03 | | | | | |
| Total | 14,041,240 | 308,767,900 | 21.99 | 10,591,542 | 237,515,792 | 22.43 | 176,432 | 7,237,492 |
| Subtotals ytd | 10,415,110 | 230,278,300 | 22.11 | 10,591,542 | 237,515,792 | 22.43 | 176,432 | 7,237,492 |
| Achievement of Budget | | | | 101.69% | 103.14% | | | |

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

Table 2 - Wholesale Water Collections

| Water | | | | |
|----------------------------------|--------------------|--------------------|--------------|---------|
| Month | Current Year | Prior Year | Variance | Ratio |
| April | 18,489,754 | 24,583,235 | (6,093,480) | -24.79% |
| May | 30,447,581 | 22,312,189 | 8,135,392 | 36.46% |
| June | 21,815,013 | 24,337,730 | (2,522,716) | -10.37% |
| July | 21,923,590 | 28,138,726 | (6,215,136) | -22.09% |
| August | 31,920,586 | 25,280,453 | 6,640,133 | 26.27% |
| September | 26,037,313 | 26,757,992 | (728,038) | -2.72% |
| October | 27,827,722 | 38,336,777 | (10,509,055) | -27.41% |
| November | 29,238,260 | 27,261,391 | 1,976,869 | 7.25% |
| December | 27,720,646 | 22,125,972 | 5,594,674 | 25.29% |
| January | 23,430,974 | 32,002,334 | (8,533,044) | -26.66% |
| February | 26,147,082 | 21,352,903 | 4,794,179 | 22.45% |
| March | 24,967,335 | 27,715,696 | (2,748,361) | -9.92% |
| Rolling 12-Month Total | 309,965,857 | 320,205,398 | | |
| Rolling, 12-Month Average | 25,830,488 | 26,683,783 | | |

Wholesale Sewer Billings and Collections

Wholesale Sewer Contracts: GLWA provides wholesale sewer service to 18 member-partners via multiple service arrangements.

Service Arrangement Type

| | |
|-----------------|------------------|
| Model Contract | 11 |
| Emergency | 0 |
| Older Contracts | <u>7</u> |
| Total | <u><u>18</u></u> |

Note: Services are provided to the Detroit Water & Sewerage Department via a Water and Sewer Services Agreement (WSSA). See the “Retail Revenues, Receivables, and Collections Report” section of the monthly report.

Wholesale Sewer Billing Basis: Beginning in FY 2015, the “sewer rate simplification” initiative was applied which provides for a stable revenue stream and predictability for our member partners. Wholesale sewer customers are billed a fixed monthly fee based upon the annual revenue requirement.

Table 3 - Wholesale Sewer Billings shows the FY 2019 sewer billed revenue. Consistent with expectations as a result of sewer rate simplification, billed revenue is at 100.00% of budget through March 31, 2019.

Wholesale Sewer Collections: The collections represent payments made by wholesale customers. These receipts are deposited directly into a lockbox with a trustee for administration of the flow of funds defined by GLWA’s Master Bond Ordinance.

Table 4 - Wholesale Sewer Collections shows collections by month for the past 12 months compared to collections for the prior year as well as the calculated difference between the periods. The year-over-year rolling average has rebounded after a slight dip in February.

The shift in wholesale sewer collection patterns is largely attributable to the timing of payments received. There are several large accounts whose payments swing between the end of the current month and the beginning of the next month. Table 6 confirms that these payments are not delinquent as Sewer past due balances relate in full to Highland Park. This pattern is a change from the prior twelve months when payments timing was more consistent.

Table 3 – FY 2019 Wholesale Sewer Billings Report

| WHOLESALE SEWER CUSTOMERS | | | | | | |
|----------------------------------|-----------------------|-------------|------------------|-------------|--------------------|---------|
| Month (1) | FY 2019 - Budget/Goal | | FY 2019 - Actual | | FY 2019 - Variance | |
| | Volume (2) | Revenue | Volume (2) | Revenue | Volume (2) | Revenue |
| | <i>Mcf</i> | \$ | <i>Mcf</i> | \$ | <i>Mcf</i> | \$ |
| July | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| August | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| September | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| October | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| November | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| December | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| January | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| February | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| March | N/A | 22,912,800 | N/A | 22,912,800 | N/A | - |
| April | N/A | 22,912,800 | N/A | | N/A | |
| May | N/A | 22,912,800 | N/A | | N/A | |
| June | N/A | 22,912,800 | N/A | | N/A | |
| Total | | 274,953,600 | | 206,215,200 | | - |
| <i>Subtotals ytd</i> | | 206,215,200 | | 206,215,200 | | 0 |
| <i>Achievement of Budget</i> | | | | 100.00% | | |

(1) Figures are stated as "Service Months"; that is, July figures represent bills issued in August, etc.

(2) Not tracked as part of the wholesale sewer charges.

Table 4 - Wholesale Sewer Collections

| Sewer | | | | |
|----------------------------------|--------------|-------------|--------------|---------|
| Month | Current Year | Prior Year | Variance | Ratio |
| April | 27,812,417 | 22,502,725 | 5,309,692 | 23.60% |
| May | 15,342,700 | 21,620,300 | (6,277,600) | -29.04% |
| June | 28,810,500 | 21,645,500 | 7,165,000 | 33.10% |
| July | 16,179,117 | 22,732,006 | (6,552,889) | -28.83% |
| August | 28,384,600 | 21,949,300 | 6,435,300 | 29.32% |
| September | 22,672,400 | 21,040,913 | 1,631,487 | 7.75% |
| October | 16,105,200 | 21,902,800 | (5,797,600) | -26.47% |
| November | 28,633,300 | 22,662,700 | 5,970,600 | 26.35% |
| December | 24,440,000 | 23,643,400 | 796,600 | 3.37% |
| January | 26,874,927 | 22,057,972 | (8,162,872) | -37.01% |
| February | 13,895,100 | 30,280,800 | (16,385,700) | -54.11% |
| March | 22,388,600 | 15,552,000 | 6,836,600 | 43.96% |
| Rolling 12-Month Total | 271,538,861 | 267,590,415 | | |
| Rolling, 12-Month Average | 22,628,238 | 22,299,201 | | |

City of Highland Park Billings and Collections

The City of Highland Park is provided water service pursuant to an emergency service basis. Sewer service is provided pursuant to a 1982 amended contract which indicates that the parties are guided in their legal relationship by a Michigan Supreme Court decision from 1949.

As of March 31, 2019, Highland Park had a delinquent balance of \$41.3 million, including \$32.6 million for wastewater treatment services, \$1.7 million for industrial waste control services, and \$7.0 million for water supply services. Highland Park did make a payment of \$1.09 million on April 24, 2019. This will be reflected in next month's financial reports.

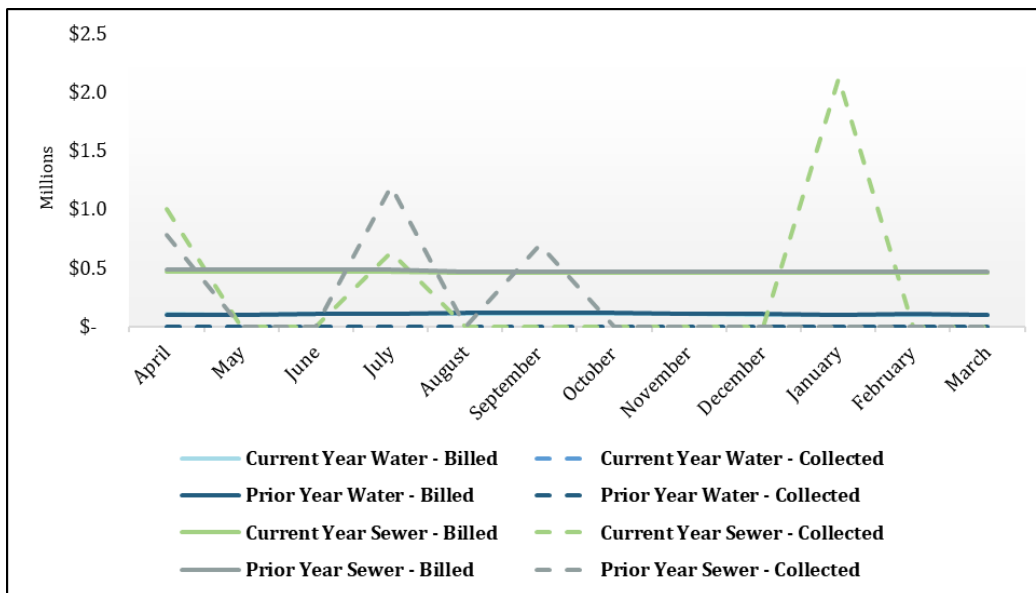
Table 5 - City of Highland Park Billings and Collections provides a life-to-date balance summary of the billing and collection history for Highland Park with detail provided for fiscal year 2019 through March 31, 2019. Please note the numbers below reflect the month the billing was sent and not the month the service was provided. A life-to-date summary is provided as an appendix to this monthly financial report.

Chart 1 - City of Highland Park Billings and Collections - Past Twelve Months is provided to depict Highland Park's most current performance specific to Water and Sewer. Payments received-to-date are applied to Sewer at this time.

Table 5 - City of Highland Park Billings and Collections

| | Water | Sewer | IWC | Total |
|----------------------------|--------------|---------------|--------------|---------------|
| June 30, 2018 Balance | \$ 6,112,248 | \$ 31,097,327 | \$ 1,624,023 | \$ 38,833,598 |
| July 2018 Billing | \$ 109,568 | \$ 470,200 | \$ 6,754 | 586,521 |
| July 2018 Payments | - | (629,017) | - | (629,017) |
| July 31, 2018 Balance | 6,221,815 | 30,938,511 | 1,630,776 | 38,791,102 |
| August 2018 Billing | 108,651 | 467,900 | 4,233 | 580,784 |
| August 2018 Payments | - | - | - | - |
| August 31, 2018 Balance | 6,330,467 | 31,406,411 | 1,635,009 | 39,371,887 |
| September 2018 Billing | 109,780 | 467,900 | 4,261 | 581,941 |
| September 2018 Payments | - | - | - | - |
| September 30, 2018 Balance | 6,440,247 | 31,874,311 | 1,639,270 | 39,953,828 |
| October 2018 Billing | 109,298 | 467,900 | 4,281 | 581,479 |
| October 2018 Payments | - | - | - | - |
| October 31, 2018 Balance | 6,549,545 | 32,342,211 | 1,643,551 | 40,535,307 |
| November 2018 Billing | 104,007 | 467,900 | 3,963 | 575,869 |
| November 2018 Payments | - | - | - | - |
| November 30, 2018 Balance | 6,653,552 | 32,810,111 | 1,647,514 | 41,111,176 |
| December 2018 Billing | 101,944 | 467,900 | 3,961 | 573,805 |
| December 2018 Payments | - | - | - | - |
| December 31, 2018 Balance | \$ 6,755,496 | \$ 33,278,011 | \$ 1,651,474 | 41,684,981 |
| January 2019 Billing | 98,430 | 467,900 | 3,961 | 570,290 |
| January 2019 Payments | - | (2,116,727) | - | (2,116,727) |
| January 31, 2019 Balance | \$ 6,853,926 | \$ 31,629,183 | \$ 1,655,435 | 40,138,544 |
| February 2019 Billing | 98,898 | 467,900 | 3,932 | 570,731 |
| February 2019 Payments | - | - | - | - |
| February 28, 2019 Balance | \$ 6,952,824 | \$ 32,097,083 | \$ 1,659,368 | 40,709,275 |
| March 2019 Billing | 98,353 | 467,900 | 3,881 | 570,134 |
| March 2019 Payments | - | - | - | - |
| March 31, 2019 Balance | \$ 7,051,177 | \$ 32,564,983 | \$ 1,663,248 | 41,279,409 |

Chart 1 - City of Highland Park Water & Sewer Billings and Collections - Past Twelve Months



Note: Current and prior year water billing amounts are very close so the two lines are nearly overlapping when reviewed at this high-level.

Wholesale Water & Sewer Accounts Receivable Aging Report

The detailed accounts receivable aging is in the Appendix to this monthly report. This report reflects the wholesale receivables only and does not include DWSD. (Note: percentages vary from 100% due to rounding.)

Table 6 - Wholesale Accounts Receivable Aging Report Summary is a summary of the total, current and non-current receivables by category as of March 31, 2019.

Table 7 - Wholesale Accounts Receivable Aging Report, Net of Highland Park is the same summary *without* the past due balances for the City of Highland Park.

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA is a summary *without* the past due balances for the City of Highland Park and net of pending credits for certain Western Township Utilities Authority (WTUA). Credits for billed services are pending receipt of a final agreement from Wayne County to effectuate a transfer retroactive to July 1, 2018.

Table 6 - Wholesale Accounts Receivable Aging Report Summary

| | Total | Current | 46-74 Days | 75-104 Days | >105 Days |
|---------------------|-------------------------|-------------------------|----------------------|----------------------|-------------------------|
| Water | \$ 35,742,462.82 | \$ 28,888,537.20 | \$ 98,429.60 | \$ 101,944.01 | \$ 6,653,552.01 |
| Sewer | \$ 52,482,082.87 | \$ 20,384,999.50 | \$ 467,900.00 | \$ 467,900.00 | \$ 31,161,283.37 |
| IWC | \$ 3,154,338.03 | \$ 583,497.70 | \$ 40,332.57 | \$ 40,332.57 | \$ 2,490,175.19 |
| Pollutant Surcharge | \$ 1,148,203.00 | \$ 539,702.73 | \$ 60,842.38 | \$ 43,697.23 | \$ 503,960.66 |
| Total | \$ 92,527,086.72 | \$ 50,396,737.13 | \$ 667,504.55 | \$ 653,873.81 | \$ 40,808,971.23 |
| | 100.00% | 54.47% | 0.72% | 0.71% | 44.10% |

Table 7 - Wholesale Accounts Receivable Aging Report, Net of Highland Park

| | Total | Current | 46-74 Days | 75-104 Days | >105 Days |
|---------------------|-------------------------|-------------------------|---------------------|---------------------|------------------------|
| Water | \$ 28,691,285.61 | \$ 28,691,285.61 | \$ - | \$ - | \$ - |
| Sewer | \$ 19,917,099.50 | \$ 19,917,099.50 | \$ - | \$ - | \$ - |
| IWC | \$ 1,491,089.64 | \$ 575,684.52 | \$ 36,371.76 | \$ 36,371.76 | \$ 842,661.60 |
| Pollutant Surcharge | \$ 1,148,203.00 | \$ 539,702.73 | \$ 60,842.38 | \$ 43,697.23 | \$ 503,960.66 |
| Total | \$ 51,247,677.75 | \$ 49,723,772.36 | \$ 97,214.14 | \$ 80,068.99 | \$ 1,346,622.26 |
| | 100.00% | 97.03% | 0.19% | 0.16% | 2.63% |

Table 8 - Wholesale Accounts Receivable Aging Report, Net of Highland Park and WTUA

| | Total | Current | 46-74 Days | 75-104 Days | >105 Days |
|---------------------|-------------------------|-------------------------|---------------------|---------------------|----------------------|
| Water | \$ 28,691,285.61 | \$ 28,691,285.61 | \$ - | \$ - | \$ - |
| Sewer | \$ 19,917,099.50 | \$ 19,917,099.50 | \$ - | \$ - | \$ - |
| IWC | \$ 502,941.00 | \$ 502,941.00 | \$ - | \$ - | \$ - |
| Pollutant Surcharge | \$ 1,148,203.00 | \$ 539,702.73 | \$ 60,842.38 | \$ 43,697.23 | \$ 503,960.66 |
| Total | \$ 50,259,529.11 | \$ 49,651,028.84 | \$ 60,842.38 | \$ 43,697.23 | \$ 503,960.66 |
| | 100.00% | 98.79% | 0.12% | 0.09% | 1.00% |

The Monthly Trust Receipts & Disbursements Report includes the following.

1. GLWA Trust Receipts & Disbursements – Net Cash Flows and Receipts
2. DWSD Trust Receipts & Disbursements – Net Cash Flows, Receipts & Loan Receivable
3. Combined System Trust Receipts & Disbursements – Net Cash Flows

GLWA Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e. Great Lakes Water Authority or GLWA) and local retail (i.e. Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

This report provides an ongoing status of the net cash flow of both organizations (GLWA and DWSD) to fund their allocated share of Master Bond Ordinance requirements in accordance with the leases for the regional systems.

Table 1 – GLWA Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year as well as a total of all activity for GLWA since inception at January 1, 2016. Fiscal year 2019 reflects nine months of activity to date.

Water fund cash receipts exceeded MBO disbursements by 20% through March 31, 2019 with a historical ratio of cash receipts exceeding MBO disbursements at 13% since January 1, 2016.

Sewer fund cash receipts exceeded MBO disbursements by 4% through March 31, 2019 with a historical ratio of cash receipts exceeding MBO disbursements at 3% since January 1, 2016.

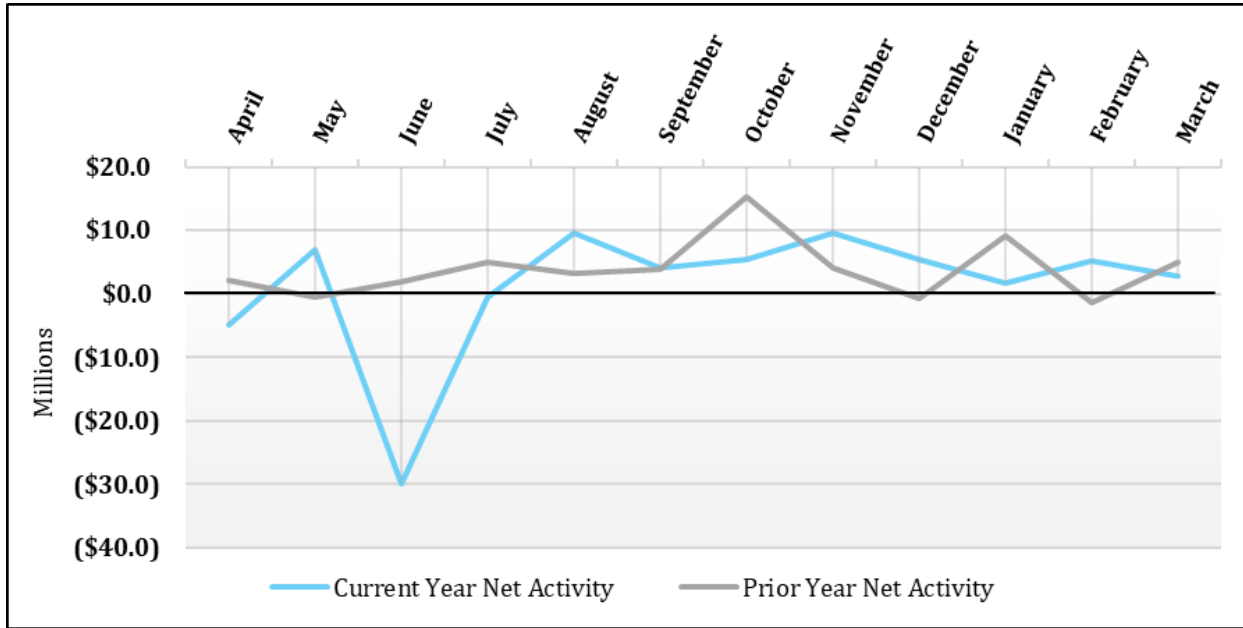
Chart 1 – GLWA 12-Month Net Receipts – Water outlines monthly cash receipt trends across two points of reference for the regional water system—current year and prior year. The black line at the zero highlights the minimum goal for net receipts.

Chart 2 – GLWA 12-Month Net Receipts – Sewer outlines monthly cash receipt trends across two points of reference for the regional sewer system—current year and prior year. The black line at the zero highlights the minimum goal for net receipts.

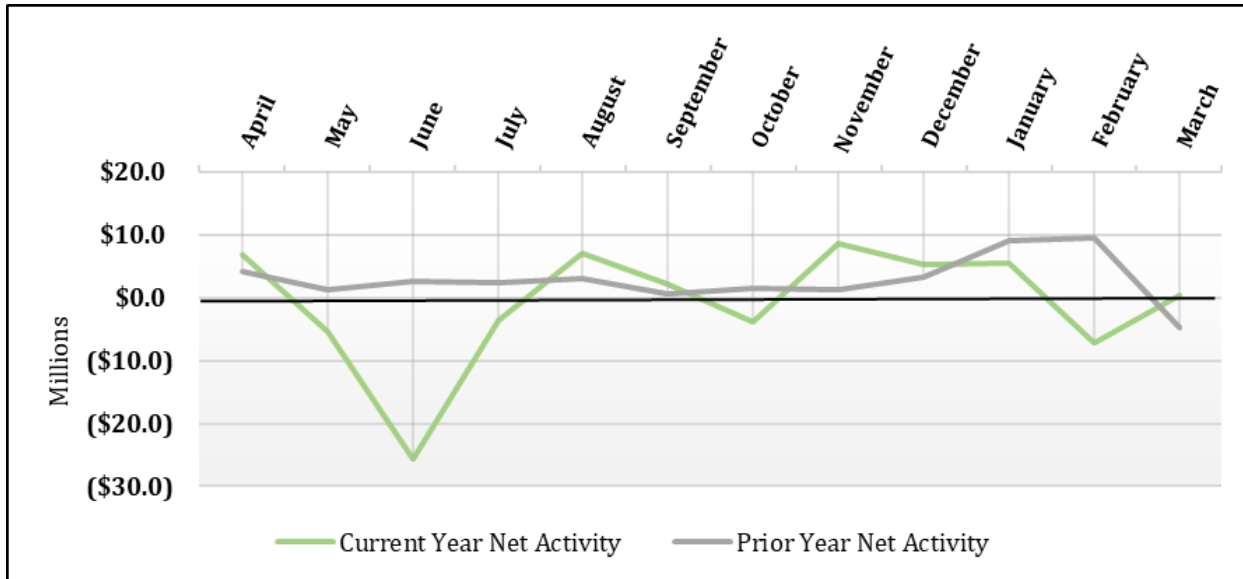
Table 1 – GLWA Net Cash Flows from Trust Receipts & Disbursements

| | FY 2016 | FY 2017 | FY 2018 | FY 2019-to-Date | Life-to-Date Total |
|--|----------------|----------------|----------------|-----------------|--------------------|
| Water | | | | | |
| 1 Receipts | \$ 149,688,711 | \$ 352,941,909 | \$ 338,452,001 | \$ 260,007,466 | \$1,101,090,087 |
| 2 MOU Adjustments | - | - | - | - | - |
| 3 Adjusted Receipts | 149,688,711 | 352,941,909 | 338,452,001 | 260,007,466 | 1,101,090,087 |
| 4 Disbursements | 146,256,185 | 288,777,985 | 322,804,510 | 216,660,047 | 974,498,727 |
| 5 Net Receipts | \$ 3,432,526 | \$ 64,163,924 | \$ 15,647,491 | \$ 43,347,419 | \$ 126,591,360 |
| 6 <i>Ratio of Receipts to Disbursements</i> | 102% | 122% | 105% | 120% | 113% |
| Sewer | | | | | |
| 7 Receipts | \$ 232,377,715 | \$ 469,788,882 | \$ 476,269,761 | \$ 353,473,540 | \$1,531,909,898 |
| 8 MOU Adjustments | 0 | - | - | - | - |
| 9 Adjusted Receipts | 232,310,973 | 469,205,156 | 476,269,761 | 353,473,540 | 1,531,259,430 |
| 10 Disbursements | 219,538,325 | 441,443,340 | 481,601,435 | 338,620,827 | 1,481,203,927 |
| 11 Net Receipts | \$ 12,839,390 | \$ 28,345,543 | \$ (5,331,674) | \$ 14,852,713 | \$ 50,705,972 |
| 12 <i>Ratio of Receipts to Disbursements</i> | 106% | 106% | 99% | 104% | 103% |
| Combined | | | | | |
| 13 Receipts | \$ 382,066,426 | \$ 822,730,791 | \$ 814,721,762 | \$ 613,481,006 | \$2,632,999,985 |
| 14 MOU Adjustments | - | - | - | - | - |
| 15 Adjusted Receipts | 382,066,426 | 822,730,791 | 814,721,762 | 613,481,006 | 2,632,999,985 |
| 16 Disbursements | 365,794,510 | 730,221,325 | 804,405,945 | 555,280,874 | 2,455,702,654 |
| 17 Net Receipts | \$ 16,271,916 | \$ 92,509,466 | \$ 10,315,817 | \$ 58,200,132 | \$ 177,297,331 |
| 18 <i>Ratio of Receipts to Disbursements</i> | 104% | 113% | 101% | 110% | 107% |

MOU Adjustments applies to DWSD and is shown here for consistency.

Chart 1 - GLWA 12-Month Net Receipts - Water


Note: June 2018 net activity reflects a year-end improvement and extension fund transfer.

Chart 2 - GLWA 12-Month Net Receipts - Sewer


DWSD Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e. Great Lakes Water Authority or GLWA) and local retail (i.e. Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

This report provides an ongoing status of the net cash flow of both organizations (GLWA and DWSD) to fund their allocated share of Master Bond Ordinance requirements in accordance with the leases for the regional systems.

Table 2 – DWSD Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year as well as a total of all activity for DWSD since inception at January 1, 2016. Fiscal year 2019 reflects nine months of activity to date.

Water fund cash receipts exceeded MBO disbursements by 2% through March 31, 2019 with a historical ratio of cash receipts exceeding MBO disbursements at 3% since January 1, 2016.

Sewer fund cash receipts fell short of MBO disbursements by 5% through March 31, 2019 with a historic shortfall of 7% since January 1, 2016. FY 2019 activity to date reflects a \$6.5 million sewer lookback adjustment completed in December 2018. This was due from GLWA to DWSD as part of the April 2018 MOU. As of the time of this report preparation, DWSD has communicated a plan to reduce expenses in May and June to improve net receipt status.

The Reconciliation Committee also monitors this balance and repayment progress as part of its quarterly meetings.

Table 3 – DWSD Loan Receivable - Sewer provides an activity summary of loan receivable established under the terms of the April 2018 MOU addressing the cash shortfall from FY 2016 and FY 2017. At the time of this report preparation, DWSD has reduced O&M transfers in May and June to assist in achieving a goal of positive, sewer net cash flows for FY 2019.

Chart 3 – DWSD 12-Month Net Receipts – Water outlines monthly activity trends across two points of reference for the local water system—current year and prior year. The black line at the zero highlights the breakeven goal for net receipts.

Chart 4 – DWSD 12-Month Net Receipts – Sewer outlines monthly activity trends across two points of reference for the local sewer system—current year and prior year. The black line at the zero highlights the breakeven goal for net receipts.

Table 2 – DWSD Net Cash Flows from Trust Receipts & Disbursements

| | FY 2016 | FY 2017 | FY 2018 | FY 2019-to-Date | Life-to-Date Total |
|---------------------------------------|----------------|-----------------|-----------------|-----------------|--------------------|
| Water | | | | | |
| 1 Receipts | \$ 26,201,881 | \$ 96,451,105 | \$ 101,716,017 | \$ 74,926,943 | \$ 299,295,946 |
| 2 MOU Adjustments | 18,446,100 | - | - | - | 18,446,100 |
| 3 Adjusted Receipts | 44,647,981 | 96,451,105 | 101,716,017 | 74,926,943 | 317,742,046 |
| 4 Disbursements | 47,809,552 | 93,066,144 | 93,049,457 | 73,271,050 | 307,196,203 |
| 5 Net Receipts | \$ (3,161,571) | \$ 3,384,961 | \$ 8,666,560 | \$ 1,655,893 | \$ 10,545,843 |
| 6 Ratio of Receipts to Disbursements | 93% | 104% | 109% | 102% | 103% |
| Sewer | | | | | |
| 7 Receipts | \$ 65,256,734 | \$ 233,723,367 | \$ 247,975,470 | \$ 195,296,507 | \$ 742,252,078 |
| 8 MOU Adjustments | 55,755,100 | - | - | 6,527,200 | 62,282,300 |
| 9 Adjusted Receipts | 121,011,834 | 233,723,367 | 247,975,470 | 201,823,707 | 804,534,378 |
| 10 Disbursements | 122,297,300 | 261,963,973 | 266,217,825 | 211,821,368 | 862,300,466 |
| 11 Net Receipts | \$ (1,285,466) | \$ (28,240,606) | \$ (18,242,355) | \$ (9,997,661) | \$ (57,766,088) |
| 12 Ratio of Receipts to Disbursements | 99% | 89% | 93% | 95% | 93% |
| Combined | | | | | |
| 13 Receipts | \$ 91,458,615 | \$ 330,174,472 | \$ 349,691,487 | \$ 270,223,450 | \$1,041,548,024 |
| 14 MOU Adjustments | 74,201,200 | 0 | - | 6,527,200 | 80,728,400 |
| 15 Adjusted Receipts | 165,659,815 | 330,174,472 | 349,691,487 | 276,750,650 | 1,122,276,424 |
| 16 Disbursements | 170,106,852 | 355,030,117 | 359,267,282 | 285,092,418 | 1,169,496,669 |
| 17 Net Receipts | \$ (4,447,037) | \$ (24,855,645) | \$ (9,575,795) | \$ (8,341,768) | \$ (47,220,245) |
| 18 Ratio of Receipts to Disbursements | 97% | 93% | 97% | 97% | 96% |

Note 1: The \$29,300,000 for the DWSD loan receivable balance is calculated as follows.

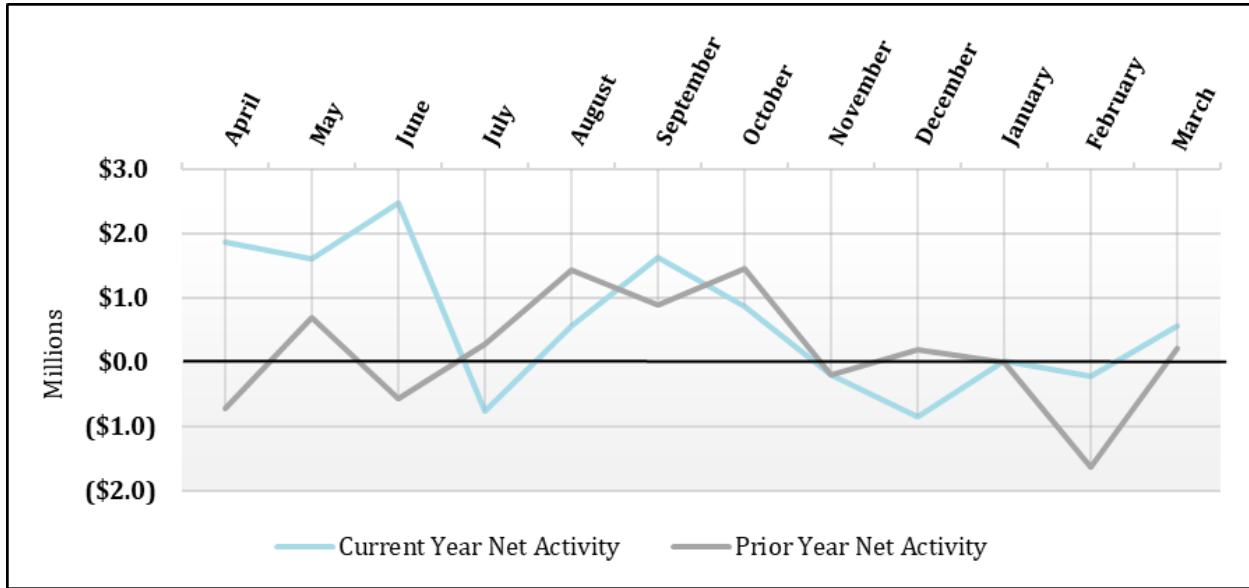
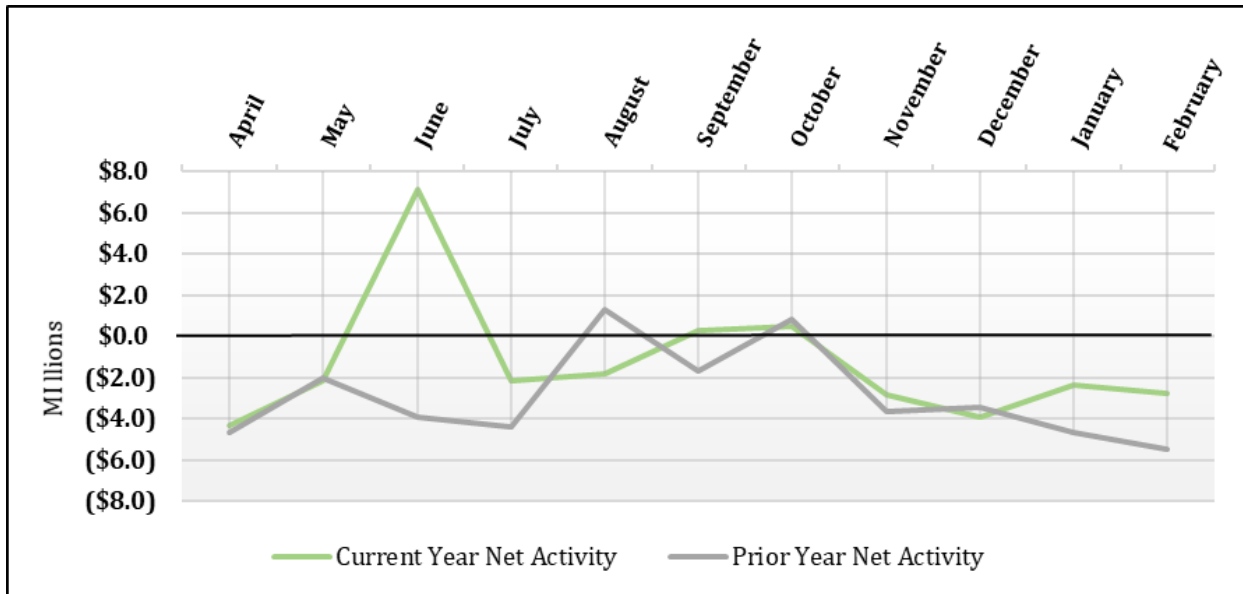
| | |
|--------------|-----------------------------|
| (1,285,466) | FY 2016 Shortfall |
| (28,240,606) | FY 2017 Shortfall |
| (29,526,072) | Subtotal |
| 238,264 | June IWC not due until July |
| (29,287,808) | FY 2017 Shortfall-to-Date |

29,300,000 FY 2017 Shortfall-to-Date, Rounded

Table 3 – DWSD Loan Receivable - Sewer

| Date | Transaction | Principal | Interest | Total Paid |
|-----------|---|------------------|----------------|------------------|
| 2/8/2019 | Loan Receivable Payment (for the months of Jul - Dec) | 4,635,462 | 564,636 | 5,200,098 |
| 2/22/2019 | Loan Receivable Payment (for the months of Jan - Mar) | 2,353,768 | 246,280 | 2,600,049 |
| | | 6,989,230 | 810,916 | 7,800,147 |

Note 2: DWSD has made additional, scheduled loan receivable payments in April, May and June which will be reflected in Table 3 above in each respective month.

Chart 3 – DWSD 12-Month Net Receipts - Water

Chart 4 – DWSD 12-Month Net Receipts – Sewer


Combined System Trust Receipts & Disbursements

Net Cash Flows and Receipts Basis: The trusts established pursuant to the Master Bond Ordinance (MBO) outline a flow of funds that governs the priority of the application of cash receipts from both the regional wholesale (i.e. Great Lakes Water Authority or GLWA) and local retail (i.e. Detroit Water & Sewerage Department or DWSD) activities which are further separated by the water system and the sewage disposal system.

Table 4 – Combined Net Cash Flows from Trust Receipts & Disbursements provides a summary of cash receipt collections and required MBO transfers by fiscal year as well as a total of all activity for GLWA since inception at January 1, 2016. Fiscal year 2019 reflects nine months of activity to date.

Water fund cash receipts exceeded MBO disbursements by 16% through March 31, 2019 with a ratio of 11% since January 1, 2016. Sewer fund cash receipts exceeded MBO disbursements by 1% through March 31, 2019 and is functioning at a breakeven status since January 1, 2016.

Table 4 – Combined Net Cash Flows from Trust Receipts & Disbursements

| | FY 2016 | FY 2017 | FY 2018 | FY 2019-to-Date | Life-to-Date Total |
|--|----------------|-----------------|-----------------|-----------------|--------------------|
| Water | | | | | |
| 1 Receipts | \$ 175,826,163 | \$ 448,883,201 | \$ 440,168,018 | \$ 334,934,409 | \$1,399,811,791 |
| 2 MOU Adjustments | 18,446,100 | 0 | 0 | 0 | 18,446,100 |
| 3 Adjusted Receipts | 194,272,263 | 448,883,201 | 440,168,018 | 334,934,409 | 1,418,257,891 |
| 4 Disbursements | 194,001,308 | 381,334,316 | 415,853,967 | 289,931,097 | 1,281,120,688 |
| 5 Net Receipts | \$ 270,955 | \$ 67,548,885 | \$ 24,314,051 | \$ 45,003,312 | \$ 137,137,203 |
| 6 <i>Ratio of Receipts to Disbursements</i> | 100% | 118% | 106% | 116% | 111% |
| Sewer | | | | | |
| 7 Receipts | \$ 297,567,707 | \$ 702,928,523 | \$ 724,245,231 | \$ 548,770,047 | \$2,273,511,508 |
| 8 MOU Adjustments | 55,755,100 | 0 | 0 | 6,527,200 | 62,282,300 |
| 9 Adjusted Receipts | 353,322,807 | 702,928,523 | 724,245,231 | 555,297,247 | 2,335,793,808 |
| 10 Disbursements | 341,768,883 | 702,823,586 | 747,819,260 | 550,442,195 | 2,342,853,924 |
| 11 Net Receipts | \$ 11,553,924 | \$ 104,937 | \$ (23,574,029) | \$ 4,855,052 | \$ (7,060,116) |
| 12 <i>Ratio of Receipts to Disbursements</i> | 103% | 100% | 97% | 101% | 100% |
| Combined | | | | | |
| 13 Receipts | \$ 473,525,041 | \$1,152,905,263 | \$1,164,413,249 | \$ 883,704,456 | \$3,674,548,009 |
| 14 MOU Adjustments | 74,201,200 | 0 | 0 | 6,527,200 | 80,728,400 |
| 15 Adjusted Receipts | 547,726,241 | 1,152,905,263 | 1,164,413,249 | 890,231,656 | 3,755,276,409 |
| 16 Disbursements | 535,901,362 | 1,085,251,442 | 1,163,673,227 | 840,373,292 | 3,625,199,323 |
| 17 Net Receipts | \$ 11,824,879 | \$ 67,653,821 | \$ 740,022 | \$ 49,858,364 | \$ 130,077,086 |
| 18 <i>Ratio of Receipts to Disbursements</i> | 102% | 106% | 100% | 106% | 104% |

APPENDIX

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|-----------------------|----------------|----------------|--------------|---------------|-----------|
| ALLEN PARK | \$176,837.92 | \$176,837.92 | \$0.00 | \$0.00 | \$0.00 |
| ASH TOWNSHIP | \$65,485.70 | \$65,485.70 | \$0.00 | \$0.00 | \$0.00 |
| BELLEVILLE | \$25,263.30 | \$25,263.30 | \$0.00 | \$0.00 | \$0.00 |
| BERLIN TOWNSHIP | \$58,255.01 | \$58,255.01 | \$0.00 | \$0.00 | \$0.00 |
| BROWNSTOWN TOWNSHIP | \$275,119.93 | \$275,119.93 | \$0.00 | \$0.00 | \$0.00 |
| BRUCE TOWNSHIP | \$12,144.66 | \$12,144.66 | \$0.00 | \$0.00 | \$0.00 |
| BURTCHVILLE TOWNSHIP | \$22,276.65 | \$22,276.65 | \$0.00 | \$0.00 | \$0.00 |
| CANTON TOWNSHIP | \$739,704.69 | \$739,704.69 | \$0.00 | \$0.00 | \$0.00 |
| CENTER LINE | \$36,179.56 | \$36,179.56 | \$0.00 | \$0.00 | \$0.00 |
| CHESTERFIELD TOWNSHIP | \$315,815.20 | \$315,815.20 | \$0.00 | \$0.00 | \$0.00 |
| CLINTON TOWNSHIP | \$627,866.77 | \$627,866.77 | \$0.00 | \$0.00 | \$0.00 |
| COMMERCE TOWNSHIP | \$276,557.76 | \$276,557.76 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN | \$1,474,482.28 | \$1,474,482.28 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN HEIGHTS | \$287,237.54 | \$287,237.54 | \$0.00 | \$0.00 | \$0.00 |
| EASTPOINTE | \$255,831.28 | \$255,831.28 | \$0.00 | \$0.00 | \$0.00 |
| ECORSE | \$129,378.50 | \$129,378.50 | \$0.00 | \$0.00 | \$0.00 |
| FARMINGTON | \$78,497.32 | \$78,497.32 | \$0.00 | \$0.00 | \$0.00 |
| FARMINGTON HILLS | \$686,117.44 | \$686,117.44 | \$0.00 | \$0.00 | \$0.00 |
| FERNDALE | \$167,603.66 | \$167,603.66 | \$0.00 | \$0.00 | \$0.00 |
| FLAT ROCK | \$96,618.24 | \$96,618.24 | \$0.00 | \$0.00 | \$0.00 |
| FLINT | \$373,694.86 | \$373,694.86 | \$0.00 | \$0.00 | \$0.00 |
| FRASER | \$91,225.87 | \$91,225.87 | \$0.00 | \$0.00 | \$0.00 |
| GARDEN CITY | \$131,818.12 | \$131,818.12 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|----------------------|----------------|----------------|--------------|---------------|----------------|
| GIBRALTAR | \$26,584.14 | \$26,584.14 | \$0.00 | \$0.00 | \$0.00 |
| GREENWOOD TOWNSHIP | \$42,329.38 | \$42,329.38 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE ILE TOWNSHIP | \$113,425.32 | \$113,425.32 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE PARK | \$97,147.03 | \$97,147.03 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE SHORES | \$47,563.06 | \$47,563.06 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE WOODS | \$113,382.56 | \$113,382.56 | \$0.00 | \$0.00 | \$0.00 |
| HAMTRAMCK | \$57,185.39 | \$57,185.39 | \$0.00 | \$0.00 | \$0.00 |
| HARPER WOODS | \$66,820.04 | \$66,820.04 | \$0.00 | \$0.00 | \$0.00 |
| HARRISON TWP | \$118,544.07 | \$118,544.07 | \$0.00 | \$0.00 | \$0.00 |
| HAZEL PARK | \$58,622.09 | \$58,622.09 | \$0.00 | \$0.00 | \$0.00 |
| HIGHLAND PARK | \$7,051,177.21 | \$197,251.59 | \$98,429.60 | \$101,944.01 | \$6,653,552.01 |
| HURON TOWNSHIP | \$115,365.52 | \$115,365.52 | \$0.00 | \$0.00 | \$0.00 |
| IMLAY CITY | \$95,169.75 | \$95,169.75 | \$0.00 | \$0.00 | \$0.00 |
| IMLAY TOWNSHIP | \$1,048.69 | \$1,048.69 | \$0.00 | \$0.00 | \$0.00 |
| INKSTER | \$228,632.36 | \$228,632.36 | \$0.00 | \$0.00 | \$0.00 |
| KEEGO HARBOR | \$24,636.71 | \$24,636.71 | \$0.00 | \$0.00 | \$0.00 |
| LAPEER | \$115,007.16 | \$115,007.16 | \$0.00 | \$0.00 | \$0.00 |
| LENOX TOWNSHIP | \$25,460.79 | \$25,460.79 | \$0.00 | \$0.00 | \$0.00 |
| LINCOLN PARK | \$194,161.75 | \$194,161.75 | \$0.00 | \$0.00 | \$0.00 |
| LIVONIA | \$1,053,523.18 | \$1,053,523.18 | \$0.00 | \$0.00 | \$0.00 |
| MACOMB TWP | \$793,457.90 | \$793,457.90 | \$0.00 | \$0.00 | \$0.00 |
| MADISON HEIGHTS | \$155,775.29 | \$155,775.29 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|---------------------|----------------|----------------|--------------|---------------|-----------|
| MAYFIELD TOWNSHIP | \$4,410.88 | \$4,410.88 | \$0.00 | \$0.00 | \$0.00 |
| MELVINDALE | \$113,031.81 | \$113,031.81 | \$0.00 | \$0.00 | \$0.00 |
| NEW HAVEN | \$29,515.95 | \$29,515.95 | \$0.00 | \$0.00 | \$0.00 |
| NOCWA | \$1,789,185.79 | \$1,789,185.79 | \$0.00 | \$0.00 | \$0.00 |
| NORTHVILLE | \$60,619.60 | \$60,619.60 | \$0.00 | \$0.00 | \$0.00 |
| NORTHVILLE TOWNSHIP | \$401,863.71 | \$401,863.71 | \$0.00 | \$0.00 | \$0.00 |
| NOVI | \$673,887.63 | \$673,887.63 | \$0.00 | \$0.00 | \$0.00 |
| OAK PARK | \$111,420.94 | \$111,420.94 | \$0.00 | \$0.00 | \$0.00 |
| OAKLAND CO DR COM | \$12,030.57 | \$12,030.57 | \$0.00 | \$0.00 | \$0.00 |
| PLYMOUTH | \$84,886.45 | \$84,886.45 | \$0.00 | \$0.00 | \$0.00 |
| PLYMOUTH TOWNSHIP | \$327,947.27 | \$327,947.27 | \$0.00 | \$0.00 | \$0.00 |
| REDFORD TOWNSHIP | \$245,455.16 | \$245,455.16 | \$0.00 | \$0.00 | \$0.00 |
| RIVER ROUGE | \$57,595.82 | \$57,595.82 | \$0.00 | \$0.00 | \$0.00 |
| RIVERVIEW | \$70,354.78 | \$70,354.78 | \$0.00 | \$0.00 | \$0.00 |
| ROCKWOOD | \$24,300.74 | \$24,300.74 | \$0.00 | \$0.00 | \$0.00 |
| ROMEO | \$19,197.94 | \$19,197.94 | \$0.00 | \$0.00 | \$0.00 |
| ROMULUS | \$324,236.76 | \$324,236.76 | \$0.00 | \$0.00 | \$0.00 |
| ROSEVILLE | \$213,491.52 | \$213,491.52 | \$0.00 | \$0.00 | \$0.00 |
| ROYAL OAK TOWNSHIP | \$17,760.94 | \$17,760.94 | \$0.00 | \$0.00 | \$0.00 |
| SHELBY TOWNSHIP | \$993,735.11 | \$993,735.11 | \$0.00 | \$0.00 | \$0.00 |
| SOCWA | \$3,607,862.12 | \$3,607,862.12 | \$0.00 | \$0.00 | \$0.00 |
| SOUTH ROCKWOOD | \$8,434.80 | \$8,434.80 | \$0.00 | \$0.00 | \$0.00 |
| SOUTHGATE | \$180,523.34 | \$180,523.34 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- WATER ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|-----------------------------|------------------------|------------------------|--------------------|---------------------|-----------------------|
| ST. CLAIR SHORES | \$237,014.50 | \$237,014.50 | \$0.00 | \$0.00 | \$0.00 |
| STERLING HEIGHTS | \$2,235,590.43 | \$2,235,590.43 | \$0.00 | \$0.00 | \$0.00 |
| SUMPTER TOWNSHIP | \$55,589.47 | \$55,589.47 | \$0.00 | \$0.00 | \$0.00 |
| SYLVAN LAKE | \$18,498.45 | \$18,498.45 | \$0.00 | \$0.00 | \$0.00 |
| TAYLOR | \$706,791.85 | \$706,791.85 | \$0.00 | \$0.00 | \$0.00 |
| TRENTON | \$175,833.13 | \$175,833.13 | \$0.00 | \$0.00 | \$0.00 |
| TROY (SEOC) | \$1,043,639.36 | \$1,043,639.36 | \$0.00 | \$0.00 | \$0.00 |
| UTICA | \$41,953.47 | \$41,953.47 | \$0.00 | \$0.00 | \$0.00 |
| VAN BUREN TOWNSHIP | \$292,178.13 | \$292,178.13 | \$0.00 | \$0.00 | \$0.00 |
| VILLAGE OF ALMONT | \$23,689.66 | \$23,689.66 | \$0.00 | \$0.00 | \$0.00 |
| WALLED LAKE | \$74,602.09 | \$74,602.09 | \$0.00 | \$0.00 | \$0.00 |
| WARREN | \$826,979.35 | \$826,979.35 | \$0.00 | \$0.00 | \$0.00 |
| WASHINGTON TOWNSHIP | \$153,905.35 | \$153,905.35 | \$0.00 | \$0.00 | \$0.00 |
| WAYNE | \$250,284.21 | \$250,284.21 | \$0.00 | \$0.00 | \$0.00 |
| WEST BLOOMFIELD TWP (C-O) | \$1,622,124.29 | \$1,622,124.29 | \$0.00 | \$0.00 | \$0.00 |
| WESTLAND | \$496,239.91 | \$496,239.91 | \$0.00 | \$0.00 | \$0.00 |
| WIXOM | \$182,454.20 | \$182,454.20 | \$0.00 | \$0.00 | \$0.00 |
| WOODHAVEN | \$123,360.89 | \$123,360.89 | \$0.00 | \$0.00 | \$0.00 |
| YCUA | \$810,952.80 | \$810,952.80 | \$0.00 | \$0.00 | \$0.00 |
| TOTAL WATER ACCOUNTS | \$35,742,462.82 | \$28,888,537.20 | \$98,429.60 | \$101,944.01 | \$6,653,552.01 |

GLWA Aged Accounts Receivable- SEWER ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|-----------------------------|------------------------|------------------------|---------------------|---------------------|------------------------|
| ALLEN PARK | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| CENTER LINE | \$85,599.50 | \$85,599.50 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| EVERGREEN-FARMINGTON | \$2,881,500.00 | \$2,881,500.00 | \$0.00 | \$0.00 | \$0.00 |
| FARMINGTON | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE | \$74,100.00 | \$74,100.00 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE FARMS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE PARK | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| HAMTRAMCK | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| HARPER WOODS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| HIGHLAND PARK | \$32,564,983.37 | \$467,900.00 | \$467,900.00 | \$467,900.00 | \$31,161,283.37 |
| MELVINDALE | \$126,900.00 | \$126,900.00 | \$0.00 | \$0.00 | \$0.00 |
| OAKLAND COUNTY GWK DD | \$3,747,700.00 | \$3,747,700.00 | \$0.00 | \$0.00 | \$0.00 |
| OMID | \$6,461,100.00 | \$6,461,100.00 | \$0.00 | \$0.00 | \$0.00 |
| REDFORD TOWNSHIP | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ROUGE VALLEY | \$4,480,100.00 | \$4,480,100.00 | \$0.00 | \$0.00 | \$0.00 |
| WAYNE COUNTY N.E. | \$2,056,000.00 | \$2,056,000.00 | \$0.00 | \$0.00 | \$0.00 |
| WAYNE COUNTY-AREA #3 | \$4,100.00 | \$4,100.00 | \$0.00 | \$0.00 | \$0.00 |
| TOTAL SEWER ACCOUNTS | \$52,482,082.87 | \$20,384,999.50 | \$467,900.00 | \$467,900.00 | \$31,161,283.37 |

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|--------------------------|--------------|-------------|--------------|---------------|--------------|
| ALLEN PARK | \$1,612.35 | \$1,612.35 | \$0.00 | \$0.00 | \$0.00 |
| AUBURN HILLS (C-O) | \$18,610.66 | \$18,610.66 | \$0.00 | \$0.00 | \$0.00 |
| AUBURN HILLS (E-F) | \$357.41 | \$357.41 | \$0.00 | \$0.00 | \$0.00 |
| BERKLEY | \$2,901.33 | \$2,901.33 | \$0.00 | \$0.00 | \$0.00 |
| BEVERLY HILLS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| BINGHAM FARMS | \$1,066.57 | \$1,066.57 | \$0.00 | \$0.00 | \$0.00 |
| BIRMINGHAM (E-F) | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| BIRMINGHAM (SEOC) | \$5,592.29 | \$5,592.29 | \$0.00 | \$0.00 | \$0.00 |
| BLOOMFIELD HILLS | \$1,539.41 | \$1,539.41 | \$0.00 | \$0.00 | \$0.00 |
| BLOOMFIELD TOWNSHIP | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| CANTON TOWNSHIP | \$517,937.44 | \$38,132.92 | \$19,066.46 | \$19,066.46 | \$441,671.60 |
| CENTER LINE | \$3,683.10 | \$3,683.10 | \$0.00 | \$0.00 | \$0.00 |
| CHESTERFIELD TOWNSHIP | \$12,118.72 | \$12,118.72 | \$0.00 | \$0.00 | \$0.00 |
| CITY OF FARMINGTON (E-F) | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| CITY OF FERNDALE | \$3,581.42 | \$3,581.42 | \$0.00 | \$0.00 | \$0.00 |
| CITY OF ROCHESTER | \$3,725.23 | \$3,725.23 | \$0.00 | \$0.00 | \$0.00 |
| CLARKSTON | \$220.18 | \$220.18 | \$0.00 | \$0.00 | \$0.00 |
| CLAWSON | \$2,763.45 | \$2,763.45 | \$0.00 | \$0.00 | \$0.00 |
| CLINTON TOWNSHIP | \$25,328.54 | \$25,328.54 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN | \$73,939.92 | \$73,939.92 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN HEIGHTS | \$9,480.49 | \$9,480.49 | \$0.00 | \$0.00 | \$0.00 |
| DETROIT METRO WC AIRPORT | \$106.64 | \$106.64 | \$0.00 | \$0.00 | \$0.00 |
| EASTPOINTE | \$12,863.13 | \$12,863.13 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|----------------------|----------------|-------------|--------------|---------------|----------------|
| FARMINGTON | \$4,046.54 | \$4,046.54 | \$0.00 | \$0.00 | \$0.00 |
| FARMINGTON HILLS | \$24,055.17 | \$24,055.17 | \$0.00 | \$0.00 | \$0.00 |
| FRASER | \$4,960.88 | \$4,960.88 | \$0.00 | \$0.00 | \$0.00 |
| GARDEN CITY | \$7.10 | \$7.10 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE | \$1,580.76 | \$1,580.76 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE FARMS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE PARK | \$1,182.65 | \$1,182.65 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE SHORES | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GROSSE POINTE WOODS | \$2,608.01 | \$2,608.01 | \$0.00 | \$0.00 | \$0.00 |
| HAMTRAMCK | \$4,175.13 | \$4,175.13 | \$0.00 | \$0.00 | \$0.00 |
| HARPER WOODS | \$1,892.64 | \$1,892.64 | \$0.00 | \$0.00 | \$0.00 |
| HARRISON TWP | \$3,166.76 | \$3,166.76 | \$0.00 | \$0.00 | \$0.00 |
| HAZEL PARK | \$3,118.78 | \$3,118.78 | \$0.00 | \$0.00 | \$0.00 |
| HIGHLAND PARK | \$1,663,248.39 | \$7,813.18 | \$3,960.81 | \$3,960.81 | \$1,647,513.59 |
| HUNTINGTON WOODS | \$572.36 | \$572.36 | \$0.00 | \$0.00 | \$0.00 |
| INDEPENDENCE | \$ (220.18) | \$ (220.18) | \$0.00 | \$0.00 | \$0.00 |
| INKSTER | \$5,559.87 | \$5,559.87 | \$0.00 | \$0.00 | \$0.00 |
| KEEGO HARBOR | \$686.05 | \$686.05 | \$0.00 | \$0.00 | \$0.00 |
| LAKE ORION | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| LATHRUP | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| LENOX TOWNSHIP | \$325.36 | \$325.36 | \$0.00 | \$0.00 | \$0.00 |
| LIVONIA | \$39,630.07 | \$39,630.07 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|----------------------|--------------|-------------|--------------|---------------|--------------|
| MACOMB TWP | \$206.29 | \$206.29 | \$0.00 | \$0.00 | \$0.00 |
| MADISON HEIGHTS | \$ (37.34) | \$ (37.34) | \$0.00 | \$0.00 | \$0.00 |
| MELVINDALE | \$7,259.98 | \$7,259.98 | \$0.00 | \$0.00 | \$0.00 |
| NEW HAVEN | \$567.00 | \$567.00 | \$0.00 | \$0.00 | \$0.00 |
| NORTHVILLE | \$2,095.20 | \$2,095.20 | \$0.00 | \$0.00 | \$0.00 |
| NORTHVILLE TOWNSHIP | \$124,280.08 | \$9,148.06 | \$4,574.03 | \$4,574.03 | \$105,983.96 |
| NOVI | \$17,375.72 | \$17,375.72 | \$0.00 | \$0.00 | \$0.00 |
| OAK PARK | \$13,663.92 | \$13,663.92 | \$0.00 | \$0.00 | \$0.00 |
| OAKLAND TOWNSHIP | \$440.84 | \$440.84 | \$0.00 | \$0.00 | \$0.00 |
| ORCHARD LAKE VILLAGE | \$382.19 | \$382.19 | \$0.00 | \$0.00 | \$0.00 |
| ORION TOWNSHIP (C-O) | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| OXFORD TOWNSHIP | \$1,043.46 | \$1,043.46 | \$0.00 | \$0.00 | \$0.00 |
| OXFORD VILLAGE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PLEASANT RIDGE | \$273.77 | \$273.77 | \$0.00 | \$0.00 | \$0.00 |
| PLYMOUTH | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PLYMOUTH TOWNSHIP | \$345,931.12 | \$25,462.54 | \$12,731.27 | \$12,731.27 | \$295,006.04 |
| REDFORD TOWNSHIP | \$12,492.82 | \$12,492.82 | \$0.00 | \$0.00 | \$0.00 |
| ROCHESTER HILLS | \$18,280.05 | \$18,280.05 | \$0.00 | \$0.00 | \$0.00 |
| ROMULUS | \$926.07 | \$926.07 | \$0.00 | \$0.00 | \$0.00 |
| ROSEVILLE | \$14,856.81 | \$14,856.81 | \$0.00 | \$0.00 | \$0.00 |
| ROYAL OAK | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ROYAL OAK TOWNSHIP | \$880.00 | \$880.00 | \$0.00 | \$0.00 | \$0.00 |
| SHELBY TOWNSHIP | \$12,414.74 | \$12,414.74 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- IWC ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|---------------------------|-----------------------|---------------------|--------------------|--------------------|-----------------------|
| SOUTHFIELD (E-F) | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| SOUTHFIELD (SEOC) | \$3,770.45 | \$3,770.45 | \$0.00 | \$0.00 | \$0.00 |
| ST. CLAIR SHORES | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| STERLING HEIGHTS | \$31,372.27 | \$31,372.27 | \$0.00 | \$0.00 | \$0.00 |
| TROY (E-F) | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| TROY (SEOC) | \$37,349.43 | \$37,349.43 | \$0.00 | \$0.00 | \$0.00 |
| UTICA | \$3,010.88 | \$3,010.88 | \$0.00 | \$0.00 | \$0.00 |
| VAN BUREN TOWNSHIP | \$2,092.18 | \$2,092.18 | \$0.00 | \$0.00 | \$0.00 |
| VILLAGE OF FRANKLIN | \$65.69 | \$65.69 | \$0.00 | \$0.00 | \$0.00 |
| WASHINGTON TOWNSHIP | \$2,762.20 | \$2,762.20 | \$0.00 | \$0.00 | \$0.00 |
| WATERFORD TOWNSHIP | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| WAYNE | \$5,017.87 | \$5,017.87 | \$0.00 | \$0.00 | \$0.00 |
| WEST BLOOMFIELD TWP (C-O) | \$1,893.36 | \$1,893.36 | \$0.00 | \$0.00 | \$0.00 |
| WEST BLOOMFIELD TWP (E-F) | \$12,623.08 | \$12,623.08 | \$0.00 | \$0.00 | \$0.00 |
| WESTLAND | \$23,023.28 | \$23,023.28 | \$0.00 | \$0.00 | \$0.00 |
| TOTAL IWC ACCOUNTS | \$3,154,338.03 | \$583,497.70 | \$40,332.57 | \$40,332.57 | \$2,490,175.19 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|-------------|-------------|--------------|---------------|-------------|
| 3M COMPANY | \$5,479.10 | \$5,479.10 | \$0.00 | \$0.00 | \$0.00 |
| A & R PACKING CO., LLC | \$3,567.12 | \$3,567.12 | \$0.00 | \$0.00 | \$0.00 |
| AACTRON | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ACADEMY PACKING CO. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ACME RUSTPROOF | \$94.02 | \$94.02 | \$0.00 | \$0.00 | \$0.00 |
| ADVANCED RESOURCE RECOVERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| AEVITAS SPECIALITY SERVICES | \$22,015.49 | \$13,825.49 | \$8,190.00 | \$0.00 | \$0.00 |
| ALEXANDER & HORNUNG | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ALEXANDER & HORNUNG | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ALEXANDER & HORNUNG | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ALGAL SCIENTIFIC CORPORATION | \$16,533.05 | \$0.00 | \$0.00 | \$0.00 | \$16,533.05 |
| ALL CHEM CORP, LLC. | \$ (89.96) | \$0.00 | \$0.00 | \$0.00 | \$ (89.96) |
| ALPHA STAMPING COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| AMERICAN WASTE TECH INC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| AMERITI MFG. CO. | \$7,078.25 | \$7,078.25 | \$0.00 | \$0.00 | \$0.00 |
| ATWATER IN THE PARK | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| AUTOMOTIVE FINISH | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| AXLE BREWING COMPANY, LLC | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| B. NEKTAR MEADERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| BAFFIN BREWING COMPANY | \$108.95 | \$0.00 | \$108.95 | \$0.00 | \$0.00 |
| BARON INDUSTRIES | \$1,152.11 | \$1,152.11 | \$0.00 | \$0.00 | \$0.00 |
| BARTZ BAKERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| BASTONE BREWERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|-----------------------------|-------------|-------------|--------------|---------------|-------------|
| BATCH BREWING COMPANY | \$ (121.94) | \$0.00 | \$0.00 | \$0.00 | \$ (121.94) |
| BAYS MICHIGAN CORPORATION | \$651.91 | \$651.91 | \$0.00 | \$0.00 | \$0.00 |
| BEIRUT BAKERY, INC. | \$99.69 | \$99.69 | \$0.00 | \$0.00 | \$0.00 |
| BETTER MADE SNACK FOOD | \$14,925.72 | \$14,925.72 | \$0.00 | \$0.00 | \$0.00 |
| BLACK LOTUS BREWING CO. | \$228.69 | \$0.00 | \$54.24 | \$0.00 | \$174.45 |
| BOZEK'S MARKET | \$55.95 | \$55.95 | \$0.00 | \$0.00 | \$0.00 |
| BREW DETROIT | \$4,994.38 | \$4,994.38 | \$0.00 | \$0.00 | \$0.00 |
| BROADWAY MKT CORNED BEEF | \$ (172.77) | \$0.00 | \$ (172.77) | \$0.00 | \$0.00 |
| BROOKS BREWING, LLC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| BROWN IRON BREWHOUSE | \$41.69 | \$0.00 | \$41.69 | \$0.00 | \$0.00 |
| CANTON BREW WORKS | \$199.03 | \$0.00 | \$56.40 | \$0.00 | \$142.63 |
| CAPITAL REPRODUCTIONS | \$1.62 | \$1.62 | \$0.00 | \$0.00 | \$0.00 |
| CF BURGER CREAMERY | \$13,522.14 | \$13,522.14 | \$0.00 | \$0.00 | \$0.00 |
| CHILANGO'S BAKERY | \$2,287.45 | \$49.05 | \$25.32 | \$22.15 | \$2,190.93 |
| CINTAS CORP. - MACOMB TWP. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| CINTAS CORPORATION | \$26,074.75 | \$26,074.75 | \$0.00 | \$0.00 | \$0.00 |
| CINTAS CORPORATION | \$13,496.41 | \$13,496.41 | \$0.00 | \$0.00 | \$0.00 |
| CITY LAUNDRY, INC. | \$14.79 | \$14.79 | \$0.00 | \$0.00 | \$0.00 |
| CLASSIC CONTAINER CORP. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| COCA-COLA REFRESHMENTS USA, | \$3,152.41 | \$3,152.41 | \$0.00 | \$0.00 | \$0.00 |
| COSTCO WHOLESALE STORE | \$2,154.56 | \$2,154.56 | \$0.00 | \$0.00 | \$0.00 |
| COSTCO WHOLESALE STORE | \$739.68 | \$739.68 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|-------------|-------------|--------------|---------------|------------|
| COSTCO WHOLESALE STORE | \$2,481.59 | \$2,481.59 | \$0.00 | \$0.00 | \$0.00 |
| COSTCO WHOLESALE STORE | \$317.43 | \$317.43 | \$0.00 | \$0.00 | \$0.00 |
| COUNTRY FRESH DAIRY CO. | \$1,831.74 | \$1,831.74 | \$0.00 | \$0.00 | \$0.00 |
| CROSS CHEMICAL COMPANY, INC. | \$3,047.40 | \$985.11 | \$0.00 | \$1,033.49 | \$1,028.80 |
| DARLING INGREDIENTS, INC. | \$7,926.73 | \$7,926.73 | \$0.00 | \$0.00 | \$0.00 |
| DAVE'S SAUSAGE FACTORY 2 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN BREWING | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN SAUSAGE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DEARBORN SAUSAGE CO., INC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DETROIT BEER | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DETROIT LINEN SERVICE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DETROIT METRO WC AIRPORT | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DETROIT RIVERTOWN BREWERY CC | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| DETROIT SAUSAGES CO INC | \$53.15 | \$25.18 | \$11.19 | \$16.78 | \$0.00 |
| DETRONIC INDUSTRIES, INC. | \$51.60 | \$51.60 | \$0.00 | \$0.00 | \$0.00 |
| DIFCO LABORATORIES, INC. | \$22,934.33 | \$22,934.33 | \$0.00 | \$0.00 | \$0.00 |
| DIVERSIFIED CHEM TECH. INC. | \$170.85 | \$170.85 | \$0.00 | \$0.00 | \$0.00 |
| DOMESTIC UNIFORM RENTAL | \$1,078.03 | \$1,078.03 | \$0.00 | \$0.00 | \$0.00 |
| DOMESTIC UNIFORM RENTAL | \$1,744.29 | \$1,744.29 | \$0.00 | \$0.00 | \$0.00 |
| DOWNEY BREWING COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| E.W. GROBBEL'S SONS, INC. | \$4,059.24 | \$4,059.24 | \$0.00 | \$0.00 | \$0.00 |
| EASTERN MARKET BREWING COMPF | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ENVIROSOLIDS, L.L.C. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|--------------|-------------|--------------|---------------|--------------|
| EQ DETROIT, INC. | \$680.28 | \$680.28 | \$0.00 | \$0.00 | \$0.00 |
| EQ DETROIT, INC. | \$4,454.16 | \$4,454.16 | \$0.00 | \$0.00 | \$0.00 |
| EQ DETROIT, INC. | \$(1,238.68) | \$0.00 | \$0.00 | \$0.00 | \$(1,238.68) |
| EQ DETROIT, INC. | \$(4,588.68) | \$0.00 | \$0.00 | \$0.00 | \$(4,588.68) |
| ETON ST BREWERY- GRIFFIN CLF | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| EXTRUDE HONE CORPORATION | \$129.19 | \$129.19 | \$0.00 | \$0.00 | \$0.00 |
| EXTRUDEHODE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| FARMINGTON BREWING COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| FAYGO BEVERAGES, INC. | \$583,887.79 | \$87,662.88 | \$40,594.87 | \$33,547.38 | \$422,082.66 |
| FORD NEW MODEL PROGRAM | \$635.05 | \$635.05 | \$0.00 | \$0.00 | \$0.00 |
| FOUNDERS BREWING COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| FRESH-PAK | \$357.73 | \$357.73 | \$0.00 | \$0.00 | \$0.00 |
| FRESH-PAK | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| G2O ENERGY, LLC | \$7,079.62 | \$2,487.77 | \$2,361.81 | \$738.11 | \$1,491.93 |
| GENERAL LINEN SUPPLY CO. | \$62,155.66 | \$11,264.08 | \$6,309.89 | \$5,748.09 | \$38,833.60 |
| GLOBAL TITANIUM, INC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GRANITE CITY FOOD & BREWERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GRANITE CITY FOOD & BREWERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| GRANITE CITY FOOD & BREWERY | \$331.98 | \$0.00 | \$86.66 | \$0.00 | \$245.32 |
| GREAT BARABOO BREWING CO. | \$(2,054.91) | \$0.00 | \$0.00 | \$0.00 | \$(2,054.91) |
| HACIENDA MEXICAN FOODS | \$6,988.48 | \$1,243.82 | \$621.91 | \$2,487.62 | \$2,635.13 |
| HENKEL CORPORATION | \$178.95 | \$178.95 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|------------|------------|--------------|---------------|-----------|
| HOME STYLE FOOD INC. | \$4,743.12 | \$4,743.12 | \$0.00 | \$0.00 | \$0.00 |
| HOMEGROWN BREWING COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| HOOD CLEANERS | \$211.33 | \$0.00 | \$0.97 | \$0.00 | \$210.36 |
| HOUGHTON INTERNATIONAL INC. | \$138.91 | \$138.91 | \$0.00 | \$0.00 | \$0.00 |
| HOUGHTON INTERNATIONAL INC. | \$110.31 | \$110.31 | \$0.00 | \$0.00 | \$0.00 |
| HOUGHTON INTERNATIONAL INC. | \$2,541.15 | \$2,541.15 | \$0.00 | \$0.00 | \$0.00 |
| HUNTINGTON CLEANERS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| INDUSTRIAL METAL COATING | \$624.78 | \$624.78 | \$0.00 | \$0.00 | \$0.00 |
| ISLAMIC SLAUGHTER HOUSE | \$3,070.91 | \$3,070.91 | \$0.00 | \$0.00 | \$0.00 |
| ITALIAN BUTTER BREAD STICKS | \$7.91 | \$7.91 | \$0.00 | \$0.00 | \$0.00 |
| J & G FOOD PRODUCTS, INC. | \$114.69 | \$114.69 | \$0.00 | \$0.00 | \$0.00 |
| JAMEX BREWING CO. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| KAR NUT PRODUCTS | \$1,112.96 | \$1,112.96 | \$0.00 | \$0.00 | \$0.00 |
| KOWALSKI SAUSAGES, CO. | \$540.20 | \$540.20 | \$0.00 | \$0.00 | \$0.00 |
| KUHNHENN BREWING | \$118.88 | \$0.00 | \$118.88 | \$0.00 | \$0.00 |
| LA MICHOACANA FLOUR TORTILLA | \$964.93 | \$964.93 | \$0.00 | \$0.00 | \$0.00 |
| LA MICHOACANA FLOUR TORTILLA | \$105.98 | \$105.98 | \$0.00 | \$0.00 | \$0.00 |
| LEAR CORPORATION DBA EAGLE C | \$4,617.81 | \$4,617.81 | \$0.00 | \$0.00 | \$0.00 |
| LIBERTY STREET PROD. BREWERY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| LILY'S SEAFOOD GRILL & BREWE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| MACDERMID, INC. | \$1,746.40 | \$1,746.40 | \$0.00 | \$0.00 | \$0.00 |
| MCNICHOLS POLISHING & ANODIZ | \$20.93 | \$20.93 | \$0.00 | \$0.00 | \$0.00 |
| MELLO MEATS INC, - KUBISCH S | \$55.95 | \$55.95 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|-------------------------------|-------------|-------------|--------------|---------------|-----------|
| METROPOLITAN BAKERY | \$384.50 | \$384.50 | \$0.00 | \$0.00 | \$0.00 |
| MIBA HYDRAMECHANICA CORP. | \$163.85 | \$163.85 | \$0.00 | \$0.00 | \$0.00 |
| MICHIGAN DAIRY | \$88,152.38 | \$88,152.38 | \$0.00 | \$0.00 | \$0.00 |
| MICHIGAN PROD. MACHINING | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| MICHIGAN SOY PRODUCTS CO. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| MIDWEST WIRE PRODUCTS, INC. | \$ (2.94) | \$0.00 | \$0.00 | \$0.00 | \$ (2.94) |
| MILANO BAKERY | \$642.31 | \$642.31 | \$0.00 | \$0.00 | \$0.00 |
| MILTON CHILI CO. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| MINNIE MARIE BAKERS, INC | \$4,902.32 | \$4,902.32 | \$0.00 | \$0.00 | \$0.00 |
| MISTER UNIFORM & MAT RENTALS | \$103.77 | \$0.00 | \$0.00 | \$0.00 | \$103.77 |
| MOTOR CITY BREWING WORKS | \$606.55 | \$606.55 | \$0.00 | \$0.00 | \$0.00 |
| NATIONAL CHILI COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| NORTH CENTER BREWING COMPANY | \$57.69 | \$0.00 | \$57.69 | \$0.00 | \$0.00 |
| NORTHERN LAKES SEAFOOD & MEAT | \$35.59 | \$35.59 | \$0.00 | \$0.00 | \$0.00 |
| OAKWOOD BAKERY | \$173.96 | \$173.96 | \$0.00 | \$0.00 | \$0.00 |
| PARKER'S HILLTOP BREWER & SE | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PELLERITO FOODS INC. | \$663.58 | \$663.58 | \$0.00 | \$0.00 | \$0.00 |
| PEPSI COLA, INC. | \$27,044.87 | \$27,044.87 | \$0.00 | \$0.00 | \$0.00 |
| PERSONAL UNIFORM SERVICE, IN | \$59.70 | \$59.70 | \$0.00 | \$0.00 | \$0.00 |
| PETRO ENVIRON TECH, INC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| PINE TREE ACRES, INC. | \$50,573.97 | \$50,573.97 | \$0.00 | \$0.00 | \$0.00 |
| PLATING SPEC | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|------------------------------|---------------|------------|--------------|---------------|---------------|
| POWER VAC OF MICHIGAN, INC. | \$29.61 | \$29.61 | \$0.00 | \$0.00 | \$0.00 |
| PREMIER PLATING, LLC | \$2,111.53 | \$2,111.53 | \$0.00 | \$0.00 | \$0.00 |
| PRODUCTION SPRING, LLC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| QUALA SERVICES, LLC | \$1,524.71 | \$1,524.71 | \$0.00 | \$0.00 | \$0.00 |
| RAY'S ICE CREAM CO. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| RED SPOT PAINT #409139 | \$17.63 | \$17.63 | \$0.00 | \$0.00 | \$0.00 |
| RIVER ROUGE BREWING COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ROAK BREWING CO. LLC | \$1,161.12 | \$0.00 | \$1,161.12 | \$0.00 | \$0.00 |
| ROCHESTER MILLS BEER COMPANY | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| ROCHESTER MILLS PROD BREWERY | \$3,083.05 | \$0.00 | \$1,077.32 | \$0.00 | \$2,005.73 |
| RTT | \$23,842.21 | \$0.00 | \$0.00 | \$0.00 | \$23,842.21 |
| SEAFARE FOODS, INC. | \$61.35 | \$61.35 | \$0.00 | \$0.00 | \$0.00 |
| SHERWOOD BREWING COMPANY | \$908.84 | \$89.76 | \$0.00 | \$0.00 | \$819.08 |
| SMITH-WATKINS, LLC | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| SPRAYTEK, INC. | \$33.83 | \$33.83 | \$0.00 | \$0.00 | \$0.00 |
| SWEETHEART BAKERY, INC. | \$1,168.95 | \$151.44 | \$77.14 | \$75.72 | \$864.65 |
| THE CROWN GROUP-LIVONIA PLAN | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| THE ROYAL OAK BREWERY | \$ (1,400.20) | \$0.00 | \$0.00 | \$0.00 | \$ (1,400.20) |
| TOM LAUNDRY CLEANERS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| TRAFFIC JAM & SNUG | \$31.21 | \$0.00 | \$31.21 | \$0.00 | \$0.00 |
| TURRI'S ITALIAN FOODS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| TURRI'S ITALIAN FOODS | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| U-METCO, INC. | \$1,290.68 | \$1,290.68 | \$0.00 | \$0.00 | \$0.00 |

GLWA Aged Accounts Receivable- POLLUTANT SURCHARGE ACCOUNTS

Balances as of 03/31/19

| Customer Name | Total Due | Current | 46 - 74 Days | 75 - 104 Days | >105 Days |
|---|-----------------------|---------------------|--------------------|--------------------|---------------------|
| UNCLE RAYS SNACKS, LLC | \$41,894.00 | \$41,894.00 | \$0.00 | \$0.00 | \$0.00 |
| UNCLE RAYS SNACKS, LLC | \$4,771.16 | \$4,771.16 | \$0.00 | \$0.00 | \$0.00 |
| UNIQUE LINEN SERVICES, INC. | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| UNITED FISH DISTRIBUTORS | \$9.72 | \$9.72 | \$0.00 | \$0.00 | \$0.00 |
| UNITED LINEN SERVICE, LLC. | \$277.59 | \$277.59 | \$0.00 | \$0.00 | \$0.00 |
| UNITED MEAT & DELI | \$674.21 | \$674.21 | \$0.00 | \$0.00 | \$0.00 |
| US ECOLOGY MICHIGAN | \$ (38.40) | \$0.00 | \$0.00 | \$0.00 | \$ (38.40) |
| US ECOLOGY ROMULUS, INC. | \$2,886.52 | \$2,886.52 | \$0.00 | \$0.00 | \$0.00 |
| USHER OIL SERVICES | \$4,097.25 | \$4,097.25 | \$0.00 | \$0.00 | \$0.00 |
| VERNDALE PRODUCTS | \$9,063.04 | \$9,063.04 | \$0.00 | \$0.00 | \$0.00 |
| VERNDALE PRODUCTS, INC. | \$2,722.12 | \$2,722.12 | \$0.00 | \$0.00 | \$0.00 |
| VERNOR FOOD PRODUCTS | \$153.41 | \$25.11 | \$27.89 | \$27.89 | \$72.52 |
| WIGLEY'S MEAT PROCESS | \$696.58 | \$696.58 | \$0.00 | \$0.00 | \$0.00 |
| WINTER SAUSAGE MFG. CO. | \$772.12 | \$772.12 | \$0.00 | \$0.00 | \$0.00 |
| WINTER SAUSAGE MFG. CO. | \$111.90 | \$111.90 | \$0.00 | \$0.00 | \$0.00 |
| WOLVERINE PACKING CO | \$6,028.26 | \$6,028.26 | \$0.00 | \$0.00 | \$0.00 |
| WOLVERINE PACKING CO. | \$2,612.91 | \$2,612.91 | \$0.00 | \$0.00 | \$0.00 |
| WOODWARD AVENUE BREWERS | \$219.55 | \$0.00 | \$0.00 | \$0.00 | \$219.55 |
| TOTAL POLLUTANT SURCHARGE ACCOUNTS | \$1,148,203.00 | \$539,702.73 | \$60,842.38 | \$43,697.23 | \$503,960.66 |

City of Highland Park Billings and Collections

| | <u>Water</u> | <u>Sewer</u> | <u>IWC</u> | <u>Cumulative Total</u> |
|-------------------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|
| June 30, 2012 Balance | \$ - | \$ 10,207,956 | \$ 852,987 | \$ 11,060,943 |
| FY 2013 Billings | 485,887 | 4,987,635 | 154,444 | 5,627,966 |
| FY 2013 Payments | <u>(65,652)</u> | <u>(2,206,211)</u> | <u>-</u> | <u>(2,271,863)</u> |
| | | | | - |
| June 30, 2013 Balance | \$ 420,235 | \$ 12,989,380 | \$ 1,007,431 | \$ 14,417,046 |
| FY 2014 Billings | 1,004,357 | 6,980,442 | 161,951 | 8,146,750 |
| FY 2014 Payments | <u>-</u> | <u>(1,612,633)</u> | <u>-</u> | <u>(1,612,633)</u> |
| | | | | - |
| June 30, 2014 Balance | \$ 1,424,592 | \$ 18,357,189 | \$ 1,169,382 | \$ 20,951,163 |
| FY 2015 Billings | 1,008,032 | 5,553,123 | 165,739 | 6,726,894 |
| FY 2015 Payments | <u>-</u> | <u>(1,444,623)</u> | <u>-</u> | <u>(1,444,623)</u> |
| | | | | - |
| June 30, 2015 Balance | \$ 2,432,625 | \$ 22,465,689 | \$ 1,335,121 | \$ 26,233,435 |
| FY 2016 Billings | 1,157,178 | 5,612,167 | 106,431 | 6,875,776 |
| FY 2016 Payments | <u>-</u> | <u>(2,022,335)</u> | <u>-</u> | <u>(2,022,335)</u> |
| | | | | - |
| June 30, 2016 Balance | \$ 3,589,803 | \$ 26,055,521 | \$ 1,441,551 | \$ 31,086,875 |
| FY 2017 Billings | 1,245,267 | 5,802,000 | 101,999 | 7,149,265 |
| FY 2017 Payments | <u>-</u> | <u>(2,309,186)</u> | <u>-</u> | <u>(2,309,186)</u> |
| | | | | - |
| June 30, 2017 Balance | \$ 4,835,070 | \$ 29,548,335 | \$ 1,543,550 | \$ 35,926,954 |
| FY 2018 Billings | 1,277,179 | 5,657,101 | 80,472 | 7,014,752 |
| FY 2018 Payments | <u>-</u> | <u>(4,108,108)</u> | <u>-</u> | <u>(4,108,108)</u> |
| | | | | - |
| June 30, 2018 Balance | \$ 6,112,248 | \$ 31,097,327 | \$ 1,624,022 | \$ 38,833,597 |
| FY 2019 Billings (9 Months) | 938,929 | 4,213,400 | 39,226 | 5,191,555 |
| FY 2019 Payments (9 Months) | <u>-</u> | <u>(2,745,744)</u> | <u>-</u> | <u>(2,745,744)</u> |
| | | | | - |
| Balance as of March 31, 2019 | <u>\$ 7,051,177</u> | <u>\$ 32,564,983</u> | <u>\$ 1,663,248</u> | <u>\$ 41,279,409</u> |



Financial Services Audit Committee Communication

Date: June 21, 2019

To: Great Lakes Water Authority Audit Committee

From: Andrew Sosnoski, Manager, Construction Accounting & Financial Reporting

Re: FY 2019 Q3 Construction Work-in-Progress Report through March 31, 2019

Background: The quarterly construction work-in-progress (CWIP) provides information and analysis related to the execution of the Great Lakes Water Authority capital improvement program (CIP).

Analysis: The attached documents summarize the FY 2019 Q3 CWIP activity and provides a detailed snapshot to inform decision makers and stakeholders.

Proposed Action: Receive and file report.



**Construction Work-in-Progress Quarterly Report
(Unaudited)**

As of March 31, 2019

For questions, please contact:

Andrew Sosnoski
Construction Accounting and Financial Reporting Manager
Phone: 313.999.2585
Email: Andrew.Sosnoski@glwater.org

Issued 6.07.2019

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June 21st, 2019

To Our Stakeholders:

The contents of this report represent the financial presentation of construction work-in-progress activity for the Great Lakes Water Authority (GLWA) as of March 31, 2019. The information in this report presents a detailed snapshot and is important as we track the execution of the FY 2020–2024 Capital Improvement Plan (CIP) and look to inform decision makers as we prepare the FY 2021–2025 CIP.

As we continue to refine this report to better communicate pertinent information to inform decision makers and stakeholders, content and formatting may be changed. With the Board approval of the FY 2020–2024 CIP after the preparation of the last quarterly report, updates have been made to this report replacing FY 2019–2023 CIP project screenshots, values and other pertinent information with those of the current plan.

Report Contents and Organization

This report is divided into two sections: one for the Water System and one for the Wastewater System as identified in the table of contents. Each section includes analysis and reporting of the following:

Executive Summary: Presentation of spend information is necessary to report our progress on CIP projects.

Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects: A combination of commentary and analysis provides further insight into risk factors and project status. An excerpt from the CIP for each of the selected projects follows the commentary as further background information.

Construction Work-in-Progress Rollforward: This table provides a list of all projects in the CIP along with financial activity. This table may be used to revisit priorities, workload, and phasing.

Spending Plan Amendment Summary: The award of CIP contracts and the related execution thereof may result in deviations from the amount and timing of planned spend. Spending plan amendments are prepared to fund the related increase or decrease with either an adjustment to Capital Reserve or Program / Allowance accounts to amend the board approved fiscal year planned spend accordingly and to inform decision makers in the development of future Capital Improvement Plans.

Financial Information

All project amounts are unaudited. This means that direct contractor costs are generally included in these totals with most pay estimates entered through March 31, 2019. There may, however, be some pay estimates that lag. The totals do not include indirect overhead.

Budget vs. Plan

Generally, GLWA's CIP projects span two or more fiscal years. The GLWA Board of Directors adopts a biennial "budget" and a five-year capital improvement "plan".

- ✓ The adopted **budget** relates to operations and maintenance expense, annual fixed commitments such as debt service, and incremental adjustments to reserves. The budget provides authority to spend within defined amounts. The budget is also referred to as the "revenue requirement" for the utility.
- ✓ The CIP "budget" for the same biennial budget period above is based on the first two years of the CIP. Funding for these projects are established in the financial plan through a combination of bond proceeds and Improvement & Extension fund reserves
- ✓ After contracts are awarded at amounts variant from the CIP plan and more reliable anticipated spend data becomes available, the amended budget for the current fiscal year may increase or decrease by way of "Capital Reserve" budget amendments.
- ✓ The five-year capital improvement **plan** is a rolling plan that is updated at an administrative tracking level as projects move from estimated to actual bid numbers. An updated mid-cycle CIP would be presented to the Board for approval if the prioritization strategy was revised and/or the plan was in need of material revisions.

Future Enhancements

This report presents information that is readily available. Currently under development are enhancements that will provide the opportunity for improved CWIP reporting.

Monthly Capital Spend Projections – Implementation of an integrated master schedule of projects utilizing Primavera P6 is underway. The integrated master schedule, which is intended to be updated monthly, will provide a monthly snapshot of cost and schedule information related to the execution of projects as compared to our plan. In addition to an increased visibility to project status and spend, this joint effort with our engineering partners will also allow for improved accuracy of our Key Performance Indicator on rate of spending and more reliable communication with Treasury regarding monthly capital spend projections to allow for investment optimization.

Look Ahead Reporting – By way of the integrated master schedule, communication of planned scope development timing, planned durations for RFB/RFP solicitations as well as any planned design or construction starts/finish dates may be presented for a desired look ahead period.

WATER SYSTEM

Executive Summary

The rate of spend is a key performance indicator. The development of the FY 2019-2023 and related CIP budget for FY 2019 were based on anticipation of FY 2019 activity resulting in 100% of planned spend. The Water System spend for the period ending March 31, 2019 is 92.3% of the FY 2019 prorated board approved CIP spend and 82.7% of the FY 2019 amended spend. Detailed analysis behind the reasons and projects for which planned spend is amended from \$66,038,000 to \$73,707,885 is provided in the subsequent Spending Plan Amendment Summary section of this report. Numerous project designs have already and or will soon complete that will allow for the increased rate of construction spend to continue in FY 2019 and beyond.

| Water System Projects | FY 2018 Amended Budget | FY 2018 Activity | FY 2018 as a Percent of Budget | FY 2019 Budget | FY 2019 Prorated (Nine Months) | FY 2019 Activity (Nine Months) (Unaudited) | FY 2019 as a Percent of Prorated Budget (Nine Months) (Unaudited) |
|--|------------------------------|---------------------|--------------------------------------|-------------------|--------------------------------------|---|---|
| FY 2018 CIP Project Requests | \$ 137,655,000 | \$ 37,013,482 | 26.9% | | | | |
| FY 2018 CIP Realigned Forecast as per 2019 CIP | 40,043,000 | 37,013,482 | 92.4% | | | | |
| FY 2019 Board Approved CIP Spend | | | | \$ 66,038,000 | \$ 49,528,500 | \$ 45,692,978 | 92.3% |
| FY 2019 Amended Spend | | | | 73,707,885 | 55,280,914 | 45,692,978 | 82.7% |

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Projects

Of the total Water System Construction Bond spend for FY 2019 to date, **four projects account for \$20.7 million or 45.3% of the total spend.** Those projects are summarized in the following table. An analysis of each project and its related CIP summary follow the table. Note that the last page of this report provides a Glossary of Acronyms.

| Water System Projects | Total Project Budget Estimate From FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|--|--|--------------------------|------------------------------------|--|
| Project 111002 - LH WTP Miscellaneous Mechanical HVAC Improvements | \$ 8,324,000 | \$ 1,864,811 | \$ 3,666,000 | \$ 4,203,246 | 9.2% |
| Project 114001- Springwells WTP 1958 Filter Rehabilitation | 97,288,000 | 89,309,574 | 4,452,000 | 6,176,972 | 13.5% |
| Project 115004- Water Works Park Water Treatment Plant Chlorine System Upgrade | 8,771,000 | 2,526,753 | 3,124,000 | 2,871,088 | 6.3% |
| Project 116002- PA, SW and NE Raw Water Tunnel Improvements | 30,090,000 | 2,177,985 | 9,042,000 | 7,461,553 | 16.3% |
| Selected Projects as a Percentage of the Total | \$ 144,473,000 | \$ 95,879,123 | \$ 20,284,000 | \$ 20,712,859 | 45.3% |
| Total | | | \$ 73,707,885 | \$ 45,692,978 | 100.0% |

The following analysis provides brief highlights related to these projects.

Project 111002 – LH WTP Miscellaneous Mechanical HVAC Improvements

| Water System Projects | Total Project Budget Estimate From FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|--|--|--------------------------|------------------------------------|--|
| Project 111002 - LH WTP Miscellaneous Mechanical HVAC Improvements | \$ 8,324,000 | \$ 1,864,811 | \$ 3,666,000 | \$ 4,203,246 | 9.2% |

Project Engineer/Manager: Brian VanHall

Manager: Grant Gartrell

Total Budget: \$8,324,000

Timeline: May 2020

FY 2019 Last Pay Estimate Processed: March 20, 2019

Key Contracts/Vendors: CON-212 Detroit Contracting, Inc.

Project Description: Replacement of existing heating, ventilating and air-conditioning systems with new, energy efficient mechanical HVAC systems.

Purpose: The existing heating and cooling systems at Lake Huron are beyond their life expectancy and no longer cost effective to maintain and are not energy efficient. The new heating and cooling systems will be optimized based on plant use and using new energy efficient equipment. The existing dehumidifiers are no longer effective at removing moisture from the pipe gallery and the environment has ideal conditions for increasing the rate of corrosion of the process water piping. The new dehumidifier will be more efficient and will control humidity below conditions ideal for corrosion and the new technology is easier to service. New fans will be installed in the filter gallery to reduce the humidity levels during the summer.

Status: The project is proceeding in accordance with the established schedule. The rooftop fans in the filter gallery and FRP ducting have been installed. Three rollup doors have been installed. Construction work over the summer includes installation of new dehumidifiers, boilers, water-cooled heat pump, stair enclosures and remaining hydronic piping and is on track to be finished before the 2019-2020 winter. The new

Project 111002 – LH WTP Miscellaneous Mechanical HVAC Improvements

HVAC units for the VFD room (RTU-3), Chlorine rooms (GH&V-1A/B) and high-lift electrical room (RTU-1/2) have been installed and will be commissioned this summer.


Additional Project Manager Comments: There are no additional comments to provide at this time.

Additional Construction Accounting & Financial Reporting Team Comments: The construction phase projected FY 19 spend of \$4,825,000.00 with a planned budgeted spend of \$3,666,000.00 creates a \$1,159,000.00 variance due to project acceleration. This project has been fully budgeted for in total over the life of the project.

FY 2020-2024 CIP Page VIII-3 for Project 111002 – LH WTP Miscellaneous Mechanical HVAC Improvements

CIP Number: 111002

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

| | | | |
|---|--|---|--|
| <p>Project Status Active</p> <p>Class Lvl 1 Water</p> <p>Class Lvl 2 Treatment Plants and Facilities</p> <p>Class Lvl 3 Lake Huron</p> <p>Location Saint Clair County</p> <p>Project Engineer/Manager Todd King</p> <p style="text-align: center;">Manager Grant Gartrell</p> <p>Project Significance Existing heating, ventilating and air-conditioning systems Lake Huron are 40 years old and are either not operable or energy-inefficient. Thus, replacement with new, energy efficient mechanical HVAC systems is needed.</p> <p>Scope of Work The work includes replacement of the existing Natural Gas-Fired hot water boilers, back flow preventers, and dehumidification units with related accessories.</p> <p>Challenges Heating system modifications will be seasonally dependent.</p> | <input type="checkbox"/> Innovation <input type="checkbox"/> Water MP Right Sizing <input type="checkbox"/> Reliability/Redundancy <input type="checkbox"/> NEWTP Repurposing <input type="checkbox"/> Project New To CIP |  | <p>Project Score 77</p> <p>The photo shows the condition of the heating system hot water piping.</p> |
|---|--|---|--|

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|------|-------|-------|-------|------|------|------|------|------|-------|
| 2018 | | 270 | 1,030 | 3,130 | 3,050 | 422 | | | 0 | 0 | 7,902 |
| 2019 | 0 | 309 | 781 | 3,666 | 3,873 | 13 | | | | 0 | 8,642 |
| 2020 | 0 | 0 | 2,020 | 4,422 | 1,882 | 0 | 0 | 0 | 0 | 0 | 8,324 |

Project 114001 – Springwells Water Treatment Plant 1958 Filter Rehabilitation

| Water System Projects | Total Project Budget Estimate From FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|--|--|--------------------------|------------------------------------|--|
| Project 114001- Springwells WTP 1958 Filter Rehabilitation | 97,288,000 | 89,309,574 | 4,452,000 | 6,176,972 | 13.5% |

Project Engineer/Manager: Grant Gartrell

Manager: Grant Gartrell

Total Project Budget: \$97,288,000

Timeline: To be completed by November 2019

FY 2019 Last Pay Estimate Processed: March 2019

Key Contracts/Vendors: SP-563 Walsh Construction; CS-1425 & CS-200 CDM Michigan

Project Description: Installation of new filter media, underdrains, filter valves and rate controllers; replace the existing filter control console and hydraulic controls at Springwells Water Treatment Plant.

Purpose: Rehabilitation of both filter trains to restore filtration capacity and sustain the useful service life of the process treatment infrastructure.

Status: Construction nears completion for the renovation of the laboratory and offices in the administration building, including installation of new heating, ventilation and air-conditioning equipment, the 1958 breezeway, constant-level washwater reservoir fill control valves, and the replacement of the phosphoric acid feed system. The installation began on the vertical turbine high-pressure water boosting pump and 8 hours continuous operation was accomplished, successfully. The booster pump’s performance operation test is to be scheduled, shortly. Work on the upgrade of the plant’s distribution control system and related instrumentation serving both the 1930 and 1958 filters and chemical feed systems already began and is forecasted to be completed up to/in September 2019. The sampling pumps have been replaced requiring some minor modifications to enhance their operability and alleviate the maintenance requirements. The compressed air systems have been implemented and tested and again some final slight modifications are required. The key final steps include startup and commissioning of the

Project 114001 – Springwells Water Treatment Plant 1958 Filter Rehabilitation

dehumidification, ventilation and heating systems for the 1930 and 1958 filter bays and galleries are ongoing. The overall operation demonstration testing of the reconstructed 1958 filters will be performed right after completion of the control systems' upgrade.


Additional Project Manager Comments: There are no additional comments to provide at this time.

Additional Construction Accounting & Financial Reporting Team Comments: There are no additional comments to provide at this time.

FY 2020-2024 CIP Page VIII-21 for Project 114001 – Springwells WTP 1958 Filter Rehabilitation and Auxiliary Facilities

CIP Number: 114001

Project Title Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements

| | | | |
|---|---|---|--|
| Project Status Active | <input type="checkbox"/> Innovation <input type="checkbox"/> Water MP Right Sizing <input type="checkbox"/> Reliability/Redundancy <input type="checkbox"/> NEWTP Repurposing <input type="checkbox"/> Project New To CIP | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> Project Score 62.2 </div> |  Springwells filter building |
| Class Lvl 1 Water | | | |
| Class Lvl 2 Treatment Plants and Facilities | | | |
| Class Lvl 3 Springwells | | | |
| Location Wayne County - Outside Detroit | | | |
| Project Engineer/Manager Khader Hamad | | | |
| Manager Grant Gartrell | | | |
| | | | |
| Project Significance Reconstruction of the 40 filters and 19 filters at the Springwells 1958 and 1930 filter plants, respectively has provided 295 MGD of reliable filtration capacity at the Springwells Water Treatment Plant. The existing mechanical HVAC, dehumidification, electrical, instrumentation, and controls systems serving the 1958 filters have also been upgraded to make them more reliable and efficient. Likewise, the existing mechanical HVAC and dehumidification system serving the 1930 filter building was replaced with new again to provide reliability and efficiency. The existing elevators at the facility have been replaced with new and upgraded to bring them into compliance with current building codes and safety standards. The administration building offices and laboratory have been improved architecturally, including new HVAC and lighting systems. | | | |
| Scope of Work This project includes the study, design (CS-1425) and construction assistance (CS-1425 and CS-200) of improvements to the Springwells WTP that includes the replacement of Phosphoric Acid Feed System, rehabilitation of the 1958 Filters, rehabilitation of failed 1930s Filters, Update of Operation and Maintenance Manuals, and addition of polymer systems and controls. Provide construction services to furnish and install new filter media, underdrains, filter valves, and rate controllers; replace the existing filter control consoles, hydraulic control valves with electric control valves, enclosures; add appurtenances to enable automatic backwashing of the filters; provide a Filter Aid Polymer System to the 1930 and 1958 filter complexes; Programmable Logic Controller-based controls for automatic control of the polymer system; install a local instrumentation and controls system. | | | |
| Challenges Completion of the | | | |

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|--------|--------|-------|-------|------|------|------|------|------|------|--------|
| 2018 | 56,759 | 20,353 | 310 | | | | | | 0 | 0 | 77,422 |
| 2019 | 0 | 82,682 | 7,281 | 3,501 | | | | | | 0 | 93,464 |

FY 2020-2024 CIP Page VIII-22 for Project 114001 – Springwells WTP 1958 Filter Rehabilitation and Auxiliary Facilities

CIP Number: 114001

Project Title Springwells Water Treatment Plant, 1958 Filter Rehabilitation and Auxiliary Facilities Improvements

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|------|--------|-------|------|------|------|------|------|------|--------|
| 2020 | 0 | 0 | 89,310 | 7,978 | 0 | 0 | 0 | 0 | 0 | 0 | 97,288 |

Project 115004 – Water Works WTP Chlorine System Upgrade

| Water System Projects | Total Project Budget Estimate From FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|--|--|--------------------------|------------------------------------|--|
| Project 115004- Water Works Park Water Treatment Plant Chlorine System Upgrade | 8,771,000 | 2,526,753 | 3,124,000 | 2,871,088 | 6.3% |

Project Engineer/Manager: Michael Dunne

Manager: Grant Gartrell

Total Budget: \$8,771,000

Timeline: Summer 2020

FY 2019 Last Pay Estimate Processed: March 31, 2019

Key Contracts/Vendors: CON-208 Detroit Contracting Inc.

Project Description: Replace gas chlorine evaporators, feeders, and related electrical, instrumentation and controls as well as install new heating and ventilation equipment in an adjacent electrical room.

Purpose: The existing gas chlorine evaporators and feeders required replacement with new.

Status: The new evaporators, feeders, electrical, instrumentation, and controls equipment are installed, started and are currently in the performance demonstration testing period. Record documentation such as as-constructed documentation and operation and maintenance manuals are being prepared.

Additional Project Manager Comments: There are no additional comments to provide at this time.

Additional Construction Accounting & Financial Reporting Team Comments: There are no additional comments to provide at this time.

FY 2020-2024 CIP Page VIII-40 for Project 115004 – WWP WTP Chlorine System Upgrade

CIP Number: 115004

Project Title Water Works Park Water Treatment Plant Chlorine System Upgrade

Project Status Active

Class Lvl 1 Water

Class Lvl 2 Treatment Plants and Facilities

Class Lvl 3 Water Works Park

Location City of Detroit

- Innovation
- Water MP Right Sizing
- Reliability/Redundancy
- NEWTP Repurposing

Project New To CIP

Project Score 84



The Water Works Park Chlorine System has experienced several leaks and requires complete replacement. The Water Works Park storage room will have an updated scrubber system to neutralize up to 4000 lbs. of chlorine gas

Project Engineer/Manager Todd King

Manager Grant Gartrell

Project Significance WWP Chlorine System has experienced numerous leaks and has compromised the safety of plant

Scope of Work Demolition and replacement of all mechanical systems, equipment and piping related to chlorine transport, vaporization and application. New chlorine system will be able to meet current dose rates and be able to meet future loadings estimated for WWP after the Northeast WTP treatment system is taken off line.

Challenges It will be critical for the contractor to phase the work to provide ongoing chlorine application during the retrofit.

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|------|-------|-------|-------|------|------|------|------|------|-------|
| 2018 | | 290 | 700 | 8,700 | | | | | 0 | 0 | 9,690 |
| 2019 | 0 | 371 | 672 | 3,124 | 2,878 | 4 | | | | 0 | 7,049 |
| 2020 | 0 | 0 | 2,527 | 4,196 | 2,047 | 1 | 0 | 0 | 0 | 0 | 8,771 |

Project 116002 – PA, SW and NE Raw Water Tunnel Improvements

| Water System Projects | Total Project Budget Estimate From FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|--|--|--|--------------------------|------------------------------------|--|
| Project 116002- PA, SW and NE Raw Water Tunnel Improvements | 30,090,000 | 2,177,985 | 9,042,000 | 7,461,553 | 16.3% |

Project Engineer/Manger: Nicholas Hoffman

Manager: Grant Gartrell

Total Budget: \$33,090,000

Timeline: Remote operated vehicle (ROV) and diver inspection on the raw water tunnels was completed December 2018, as part of the contractors detailed investigation and preliminary design task. These results were presented to GLWA at the 30% design workshop in January 2019. Workshop included results of geotechnical, ROV and diver inspections as well as conceptual alternatives and conceptual costs for each of the three (3) respected alternatives. Basis of design report and 30% design will be submitted May 3, 2019 as part of Task 8, the vendor will then submit a guaranteed maximum price (GMP) for the construction of the raw water tunnels rehabilitation and improvement work which is tentatively scheduled to be complete 2021.

FY 2019 Last Pay Estimate Processed: March 31, 2019

Key Contracts/Vendors: DB-150 / Ballard Marine Construction

Project Description: This is a progressive design build project delivery that involves the detailed inspection, design and construction of the improvements to the Pennsylvania, Northeast and Springwells raw water tunnels.

Purpose: Rehabilitate sections of the Pennsylvania, Northeast and Springwells raw water tunnels where cracking, sediment infiltration or any degree of ovality has been observed by ROV or diver operations.

Project 116002 – PA, SW and NE Raw Water Tunnel Improvements

Status:

DB-150 started in January 2018. The geotechnical investigation for the repair areas for all three tunnels has been completed. The supplemental diver inspection, coring, and crack mapping for the Pennsylvania, Springwells and Northeast tunnels has been completed. Three conceptual alternatives were developed that included: (1) repair in the wet; (2) dewatering and repair in the dry; and (3) construct bypass tunnels to facilitate repair. Based on the presented results at the 30% design workshop, GLWA collectively selected alternative 1- repair in the wet, referencing minimal water plant production restrictions, risk mitigation and order-of-magnitude cost for the selected alternative. Basis of design report and 30% repair in the wet design will be delivered in May, with construction scheduled for low demand season in October 2019.

Additional Project Manager Comments: Independent support is being provided to GLWA by FK Engineers (CS-187). Basis of design report and 30% design deliverable will be made available to the Board upon request after submission.

Additional Construction Accounting & Financial Reporting Team Comments: There are no additional comments to provide at this time.

FY 2020-2024 CIP Page VIII-41 for Project 116002 – PA, SW and NE Raw Water Tunnel Improvements

CIP Number: 115005

Project Title WWP WTP Building Ventilation Improvements

| | |
|---|--|
| Project Status Active | <input type="checkbox"/> Innovation <input type="checkbox"/> Water MP Right Sizing <input type="checkbox"/> Reliability/Redundancy <input type="checkbox"/> NEWTP Repurposing |
| Class Lvl 1 Water | |
| Class Lvl 2 Treatment Plants and Facilities | |
| Class Lvl 3 Water Works Park | |
| Location City of Detroit | <input checked="" type="checkbox"/> Project New To CIP |
| Project Score 76 | |
| Project Engineer/Manager Mike Dunn Manager Terry Daniel | |
| <p>Project Significance Design and construction of ventilation system improvements for certain chemical storage rooms and the ozone generator and destruct rooms at the Water Works Park Water Treatment Plant to improve employee and visitor safety.</p> | |

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|------|------|------|------|-------|------|------|------|------|-------|
| 2020 | 0 | 0 | | 7 | 507 | 3,907 | 650 | 0 | 0 | 0 | 5,071 |

Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

As part of our project life cycle review the CA&FR team identifies when it is appropriate for projects to be capitalized. Projects are to be capitalized when they have been completed in totality or are inclusive of identifiable assets that have been placed in service. Five projects have been 2019 capitalized in Q3. The following projects have been identified and planned for Q4 capitalization:

| <u>Project</u> | <u>Contract</u> | <u>Description</u> |
|----------------|-----------------|---|
| 113004 | CON-247 | Raw Water Sampling Modifications at Southwest WTP |
| 114001 | SP-563 | Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities |
| 114003 | CON-133 | Water Production Flow Metering Improvements at NE, SW, and SPW WTP |
| 122001 | WS-681 | Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road |

\$**167.3** million is in CWIP as of March 31, 2019 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is in ascending order by CIP project number.

Great Lakes Water Authority
Water System Construction Work-in-Progress (CWIP) FY 2019 Rollforward
Unaudited Activity For the Fiscal Year Ended March 31, 2019

| Project | Project Name | Total Project Budget | | FY 2019 | | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|--|-------------------------------------|------------------------------|-----------------------------|--------------------------|---|--|---|---|--|
| | | Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | Board Approved CIP Spend | FY 2019 Amended Spend | | | | | |
| 4430 | DWSD: Contract Replacement Water Main | \$ - | \$ 75,804 | \$ - | \$ - | \$ (75,804) | \$ - | \$ - | \$ - | 0% |
| 7412 | SRF WS-693 Water System Improvements | - | 3,390,974 | - | - | - | 3,390,974 | - | 3,390,974 | 0% |
| 111001 | Energy Management: Lake Huron Water Treatment Plant Low Lift Pumping Improvements | 52,388,000 | - | - | - | 11,794 | 11,794 | - | 11,794 | 0% |
| 111002 | LHWTP Backflow Replacement | 8,324,000 | 1,864,811 | 3,666,000 | 3,666,000 | 4,203,246 | 6,068,057 | 155,348 | 6,223,405 | 75% |
| 111004 | Electrical Tunnel Rehabilitation at Lake Huron WTP | 4,749,000 | 62,685 | 414,000 | 2,728,786 | 1,980,876 | 2,043,561 | - | 2,043,561 | 43% |
| 111006 | Replacement of Filter Instrumentation and Raw Water Flow Metering Improvements at Lake | 10,789,000 | 734,756 | 43,000 | 43,000 | 42,433 | 777,189 | - | 777,189 | 7% |
| 111007 | Lake Huron WTP-Raw Sludge Clarifier and Raw Sludge Pumping System Improvements | 9,799,000 | 283,989 | 212,000 | 212,000 | 345,649 | 629,639 | - | 629,639 | 6% |
| 111008 | LHWTP Architectural Programming - Lab | 300,000 | - | - | - | - | - | - | - | 0% |
| 111009 | Lake Huron WTP-35 MGD HLP, Flow Meters | 26,106,000 | - | - | - | 13,112 | 13,112 | - | 13,112 | 0% |
| 112002 | Low Lift Pumping Plant Caisson Rehabilitation at Northeast WTP | 1,565,000 | 472,953 | 831,000 | 831,000 | 526,550 | 999,503 | - | 999,503 | 64% |
| 112003 | NE WTP High Lift Pumping Electrical | 62,234,000 | - | - | - | - | - | - | - | 0% |
| 112005 | Northeast Water Treatme | 813,000 | - | - | - | 9,200 | 9,200 | - | 9,200 | 1% |

Water System Construction Work-in-Progress Quarterly Report

As of March 31, 2019

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date | Life to Date | Life to Date |
|---------|--|---|------------------------------|--|--------------------------|---|--|---|-----------------------------------|--|
| | | | | | | | | Capitalization through March 31, 2019 | Activity through March 31 2019 | Activity / Total Project Estimate |
| 112006 | Northeast Water Treatment Southwest Water Treatment Plant, Sludge Treatment & Waste Wash water Treatment | 2,718,000 | - | - | - | - | - | - | - | 0% |
| 113001 | Facilit | - | 39,885 | - | - | (39,885) | - | - | - | 0% |
| 113002 | High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP | 5,432,000 | 249,447 | 1,157,000 | 1,238,000 | 1,202,052 | 1,451,498 | - | 1,451,498 | 27% |
| 113003 | Replacement of Butterfly Valves | 148,286,000 | - | - | - | 108 | 108 | - | 108 | 0% |
| 113004 | Residual Handling Facility's Decant Flow Modifications at Southwest WTP | 898,000 | 198,431 | 1,054,000 | 1,054,000 | 612,025 | 810,456 | - | 810,456 | 90% |
| 113006 | SW WTP Chloring Scrubber | 7,032,000 | - | - | - | - | - | - | - | 0% |
| 113007 | Architectural and Building Mechanical | 37,336,000 | - | - | - | - | - | - | - | 0% |
| 114001 | Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities | 97,288,000 | 66,571,119 | 3,501,000 | 4,452,000 | 6,176,972 | 72,748,091 | 22,738,455 | 95,486,546 | 98% |
| 114002 | Springwells Water Treatment Plant - Low Lift and High Lift Pump Station | 114,816,000 | 498,042 | 1,433,000 | 1,433,000 | 1,388,847 | 1,886,889 | - | 1,886,889 | 2% |
| 114003 | Water Production Flow Metering Improvements at NE, SW, and SPW WTP | 7,105,000 | 3,444,814 | 2,506,000 | 2,813,000 | 2,346,236 | 5,791,051 | - | 5,791,051 | 82% |
| 114005 | Springwells WTP Admin Building Improvements | 8,125,000 | - | 30,000 | 26,610 | 8,635 | 8,635 | - | 8,635 | 0% |

Water System Construction Work-in-Progress Quarterly Report

As of March 31, 2019

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|--|---|------------------------------|--|--------------------------|---|--|---|---|--|
| | Replacement of Rapid Mix Units at Springwells | | | | | | | | | |
| 114006 | WTP 1958 Process Train | 1,124,000 | 176,992 | 1,284,000 | 1,284,000 | 763,525 | 940,517 | - | 940,517 | 84% |
| | Powder Activated Carbon Systems | 3,938,000 | - | - | - | - | - | - | - | 0% |
| | 1930 Sedimentation Basin Sluice Gates, Guides & Hoists Improvements at Springwells WTP | 17,125,000 | - | 424,000 | 424,000 | 39,717 | 39,717 | - | 39,717 | 0% |
| 114008 | | | | | | | | | | |
| | Springwells Water Treatment Plant Service Area Redundancy Study | 311,000 | 311,129 | - | - | - | 311,129 | - | 311,129 | 100% |
| 114009 | | | | | | | | | | |
| | Yard Piping Improvements | 110,650,000 | - | - | - | 1,128 | 1,128 | - | 1,128 | 0% |
| 114010 | | | | | | | | | | |
| | Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP | 24,989,000 | 473,029 | 1,406,000 | 3,066,452 | 28,352 | 501,381 | - | 501,381 | 2% |
| 114011 | | | | | | | | | | |
| | Springwells Water Treatment Plant 1930 Filter Building-Roof Replacement | 3,912,000 | 1,123,542 | 2,420,000 | 2,420,000 | 2,787,606 | - | 3,911,148 | 3,911,148 | 100% |
| 114012 | | | | | | | | | | |
| | Springwells Reservoir Fill Line Improvements | 4,732,000 | 332,385 | 2,469,000 | 2,469,000 | 867,121 | 1,199,506 | - | 1,199,506 | 25% |
| 114013 | | | | | | | | | | |
| | Springwells WTP Underground Fire Protection Loop Improvements | - | - | - | - | 315 | 315 | - | 315 | 0% |
| 114014 | | | | | | | | | | |
| | Emergency Grating Replacement at Springwells WTP | 3,466,000 | 203,833 | 11,000 | 556,186 | 628,907 | (2,533,164) | 3,365,903 | 832,740 | 24% |
| 114015 | | | | | | | | | | |
| | Springwells Water Treatm | 862,000 | - | - | - | - | - | - | - | 0% |
| 114016 | | | | | | | | | | |
| | Springwells Water Treatm | 2,328,000 | - | - | - | - | - | - | - | 0% |
| 114017 | | | | | | | | | | |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|--|---|---------------------------|----------------------------------|-----------------------|---|--|--|---|--|
| 115001 | Yard Piping, Valves and Venturi Meters Replacement at Water Works Park | 53,580,000 | 681,626 | 968,000 | 968,000 | 763,625 | 1,445,251 | - | 1,445,251 | 3% |
| 115003 | Comprehensive Condition Assessment at Waterworks Park WTP | 855,000 | 439,606 | 262,000 | 262,000 | 36,168 | 475,774 | - | 475,774 | 56% |
| 115004 | Water Works Park WTP Chlorine System Upgrade | 8,771,000 | 2,526,753 | 3,124,000 | 3,124,000 | 2,871,088 | 5,397,841 | - | 5,397,841 | 62% |
| 115005 | WWP WTP Building Ventil | 5,071,000 | - | - | - | - | - | - | - | 0% |
| 116002 | Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements based on Parallel 42-Inch Main in 24 Mile Road from Rochester Station to Romeo Plank Road | 30,090,000 | 2,177,985 | 9,042,000 | 9,042,000 | 7,461,553 | 9,639,538 | - | 9,639,538 | 32% |
| 122001 | Replacement of Five (5) PRV Pits of Treated Water Transmission System | 33,566,000 | 33,565,809 | - | - | (324,592) | 33,241,216 | - | 33,241,216 | 99% |
| 122002 | New Waterworks Park to Northeast Transmission Main | 2,648,000 | 1,844,499 | - | 641,494 | 940,863 | 362 | 2,785,001 | 2,785,362 | 105% |
| 122003 | 96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main | 133,272,000 | 1,655,004 | 1,372,000 | 1,882,701 | 825,009 | 2,480,013 | - | 2,480,013 | 2% |
| 122004 | Replacement Schoolcraft Watermain | 132,666,000 | 1,129,751 | 1,797,000 | 1,797,000 | 646,717 | 1,776,468 | - | 1,776,468 | 1% |
| 122005 | | 18,062,000 | 3,960 | 50,000 | 50,000 | 96,222 | 100,182 | - | 100,182 | 1% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|--|---|------------------------------|--|--------------------------|---|--|---|---|--|
| 122006 | Transmission System Water Main Work-Wick Road Parallel Water Main | 31,918,000 | 126,146 | 1,743,000 | 1,743,000 | 234,553 | 360,699 | - | 360,699 | 1% |
| 122007 | Design and Construction of a new Newburgh Road 24" Main along Newburgh Road between Ch | 5,239,000 | - | 653,000 | 653,000 | - | - | - | - | 0% |
| 122009 | Water System Improvements in Joy Road from Southfield Road to Trinity | 107,000 | 106,881 | - | - | - | 106,881 | - | 106,881 | 100% |
| 122011 | Park-Merriman Water Main-Final Phase | 8,203,000 | 156,338 | 955,000 | 1,055,000 | 145,377 | 301,715 | - | 301,715 | 4% |
| 122012 | 36-inch Water Main in Telegraph Road | 9,573,000 | 9,418,001 | 3,000 | 130,187 | 568,283 | - | 9,986,284 | 9,986,284 | 104% |
| 122013 | Lyon Township Transmission Main Extension Project | 54,426,000 | - | - | - | 12,262 | 12,262 | - | 12,262 | 0% |
| 122016 | Downriver Transmission Loop | 37,197,000 | - | - | - | 19,786 | 19,786 | - | 19,786 | 0% |
| 122017 | 7 Mile/Nevada Transmissi | 20,500,000 | - | - | - | - | - | - | - | 0% |
| 132001 | Wick Road Station Rehabilitation | 165,000 | 130,253 | - | - | - | 130,253 | - | 130,253 | 79% |
| 132003 | Isolation Gate Valves for Line Pumps for West Service Center Pumping Station | 1,814,000 | 138,390 | 1,229,000 | 1,576,744 | 75,036 | 213,426 | - | 213,426 | 12% |
| 132004 | Hydraulic Surge Control for North Service Center Pumping Station | 215,000 | 214,771 | - | - | - | 214,771 | - | 214,771 | 100% |
| 132006 | Pressure and Control Improvements at the Electric, Ford Road, Michigan, and West Chica | 2,929,000 | 161,460 | 245,000 | 245,000 | 121,190 | 282,651 | - | 282,651 | 10% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life To Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|---|--|
| 132007 | Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station | 2,160,000 | 9,170 | 38,000 | 44,800 | 77,423 | 86,593 | - | 86,593 | 4% |
| 132008 | Needs Assessment Study for all Water Booster Pumping Stations | 1,677,000 | 912,550 | 1,178,000 | 1,178,000 | 525,173 | 1,437,722 | - | 1,437,722 | 86% |
| 132009 | Study Phase Services for Proposed East Service Center Booster Pumping Station and Rese | - | 10,313 | - | - | (10,313) | - | - | - | 0% |
| 132010 | West Service Center/Duval Rd Division Valve Upgrades | 37,136,000 | - | - | 240,890 | 286,864 | 286,864 | - | 286,864 | 1% |
| 132012 | Ypsilanti PS Improvements | 9,861,000 | 3,648 | 93,000 | 93,000 | 12,044 | 15,692 | - | 15,692 | 0% |
| 132014 | Adams Road Booster Pumping Improvements | 5,674,000 | - | - | - | - | - | - | - | 0% |
| 132015 | Newburgh BPS | 12,169,000 | - | - | - | - | - | - | - | 0% |
| 132016 | North Service Center BPS Improvements | 24,920,000 | - | - | - | - | - | - | - | 0% |
| 132017 | North Service Center BPS - On-Site & Off | 5,076,000 | - | - | - | - | - | - | - | 0% |
| 132018 | Schoolcraft BPS | 10,564,000 | - | - | - | - | - | - | - | 0% |
| 132019 | Wick Road BPS - Switchgear | 5,569,000 | - | - | - | - | - | - | - | 0% |
| 132020 | Franklin BPS - Isolation Gate Valves | 10,109,000 | - | - | - | - | - | - | - | 0% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date | Life To Date | Life to Date |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|------------------------------------|--|
| | | | | | | | | Capitalization through March 31, 2019 | Activity through March 31, 2019 | Activity / Total Project Estimate |
| 132021 | Inlay BPS - Replace VFDs, Pumps & Motors | 12,109,000 | - | - | - | - | - | - | - | 0% |
| 132022 | Joy Road BPS - Replace Reservoir Pumps | 6,109,000 | - | - | - | - | - | - | - | 0% |
| 132023 | Project Cancelled | - | - | - | - | 326 | 326 | - | 326 | 0% |
| 132024 | Project Cancelled | - | - | - | - | 654 | 654 | - | 654 | 0% |
| 132025 | Northwest Booster Station | 5,500,000 | - | - | - | 971 | 971 | - | 971 | 0% |
| 170100 | Allowance: WTP/Pump Station | 39,811,000 | - | 4,296,000 | - | - | - | - | - | 0% |
| 170102 | Water Production Plant Flow Metering Improvements at NE, SP & SW WTP | - | 335,197 | - | - | 19,168 | 354,365 | - | 354,365 | 0% |
| 170103 | Belle Isle Water Supply Intake and Ice Boom Improvements | - | - | - | - | 3,278 | 3,278 | 286,596 | 289,874 | 0% |
| 170104 | Orion and Newburgh Pumping Stations Improvements | - | 364,343 | - | 2,167,000 | 1,490,890 | 1,855,233 | - | 1,855,233 | 0% |
| 170108 | DWS-063 Adams Road | - | 625 | - | - | - | 625 | - | 625 | 0% |
| 170109 | Inspection of Raw Water Intakes and Tunnels | - | 3,054,241 | - | 3,000 | 43,567 | 3,097,808 | - | 3,097,808 | 0% |
| 170110 | Raw Water Sampling Improvements | - | 2,926 | - | - | - | 2,926 | - | 2,926 | 0% |
| 170117 | Instrument Air Compressor Systems Replacement at NE-WTP | - | 226,483 | - | - | - | - | 226,483 | 226,483 | 0% |
| 170120 | Phosphoric Acid Feed System Improvements at Southwest WTP | - | 130,688 | - | 460,000 | 410,321 | 541,009 | - | 541,009 | 0% |
| 170121 | Franklin PS Valve Rehab | - | - | - | 1,000,000 | 13,607 | 13,607 | - | 13,607 | 0% |
| 170122 | Meter Pit at Brownstown Township | - | - | - | 159,000 | 133,306 | 133,306 | - | 133,306 | 0% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|---|--|
| | As Needed Construction Materials, Environmental Media and Special | | | | | | | | | |
| 170200 | Allowance | 1,618,000 | - | 472,000 | 472,000 | - | - | - | - | 0% |
| 170201 | Construction & Environmental Testing | - | 1,609 | - | 93,310 | 79,624 | 81,233 | - | 81,233 | 0% |
| | Water Treatment Plant | | | | | | | | | |
| 170300 | Automation Program | 7,740,000 | - | 61,000 | - | - | - | - | - | 0% |
| 170301 | Water Plant Automation | - | 1,376,747 | - | 296,225 | 20,448 | 1,397,194 | - | 1,397,194 | 0% |
| | Water Transmission | | | | | | | | | |
| 170400 | Improvement Program | 110,656,000 | - | 1,000,000 | 1,000,000 | - | - | - | - | 0% |
| | Emergency Bypass | | | | | | | | | |
| 170401 | Around Ypsilanti Station | - | - | - | - | 77,659 | 77,659 | - | 77,659 | 0% |
| | Emergency Manned | | | | | | | | | |
| 170402 | Visual Inspection 84-Inch Transmission Main | - | 156,020 | - | - | - | 156,020 | - | 156,020 | 0% |
| | Transmission System | | | | | | | | | |
| 170500 | Valve Assessment and Rehabilitation/Replacem ent Program | 36,704,000 | - | 4,000,000 | - | - | - | - | - | 0% |
| | Transmission System | | | | | | | | | |
| 170502 | Valve Assessment and Rehabilitation/Replacem e | - | 248,175 | - | 4,000,000 | 3,356,109 | 3,604,284 | 3,182,318 | 6,786,602 | 0% |
| | Water Transmission | | | | | | | | | |
| 170600 | Main Asset Assessment Program | 48,500,000 | - | 2,501,000 | 2,501,000 | - | - | - | - | 0% |
| | Reservoir Inspection, Design and | | | | | | | | | |
| 170800 | Rehabilitation Program | 59,164,000 | - | 472,000 | - | - | - | - | - | 0% |
| | Reservoir Inspection, Design and | | | | | | | | | |
| 170801 | Rehabilitation | - | - | - | 489,500 | 210,076 | 210,076 | - | 210,076 | 0% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|---|--|
| 170900 | Suburban Water Meter Pit Rehabilitation and Meter Replacement Program | 43,797,000 | - | 4,613,000 | - | - | - | - | - | 0% |
| 170901 | Suburban Water Meter Pit Rehabilitation and Meter Replacement | - | - | - | 4,613,000 | 438,880 | 438,880 | - | 438,880 | 0% |
| 171000 | LH - WTP Sanitary Improvements Program | - | - | 45,000 | 45,000 | - | - | - | - | 0% |
| 171100 | NE - WTP Sanitary Improvements | - | - | 75,000 | 75,000 | - | - | - | - | 0% |
| 171200 | SW - WTP Sanitary Survey Improvements Program | - | - | 6,000 | 6,000 | - | - | - | - | 0% |
| 171300 | WWP - WTP Sanitary Improvements Program | - | - | 45,000 | 45,000 | - | - | - | - | 0% |
| 171400 | Energy Management Program | 5,787,000 | - | - | - | - | - | - | - | 0% |
| 171500 | Roof Replacement - Var Water Facilities Program | 6,707,000 | - | - | - | - | - | - | - | 0% |
| 171501 | Roof Replacement - Var Water Facilities | - | 50,420 | 111,000 | 111,000 | 63,275 | 113,695 | - | 113,695 | 0% |
| 331001 | Roof Replacement - Var Water Facilities | 5,425,000 | - | - | - | - | - | - | - | 0% |
| 351001 | Water Facility Lighting Renovations | 500,000 | - | 1,172,000 | 1,172,000 | 5,941 | 5,941 | - | 5,941 | 1% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|--------------|--|---|------------------------------|--|--------------------------------------|---|--|---|---|--|
| 361002 | Data Center Reliability/Availability Improvements | - | 16,080 | - | - | - | 16,080 | - | 16,080 | 0% |
| 380400 | As-needed CIP Implementation Assistance and Related Services | - | - | 803,000 | 803,000 | - | - | - | - | 0% |
| 380600 | General Engineering Services Allowance | 95,000 | - | 276,000 | 276,000 | - | - | - | - | 0% |
| 380601 | Alfred Benesh:General Engineer | - | 674 | - | - | - | 674 | - | 674 | 0% |
| 380700 | As-needed Engineering Services for Concrete Testing, Geotechnical Soil Borings, other Testing Services, and Related Services Allowance | 620,000 | - | 477,000 | 477,000 | - | - | - | - | 0% |
| 380701 | Engineering Svc Concrete Testing, Soil Borings | - | - | - | - | 71,830 | 71,830 | - | 71,830 | 0% |
| 381000 | Energy Management: Electric Metering Improvement Program | 2,500,000 | - | - | - | - | - | - | - | 0% |
| Total | | \$ 1,888,664,000 | \$ 141,885,761 | \$ 66,038,000 | \$ 73,707,885 | \$ 45,692,978 | \$ 167,303,920 | \$ 74,799,006 | \$ 242,102,926 | 13% |
| | | | | | Net FY 2019 Spending Plan Amendments | \$ 7,669,885 | | | | |

FY 2019 Spending Plan Amendment Summary

The purpose of the Spending Plan Amendment Summary is to illustrate the amendments to the current fiscal year spend for each project with a spending plan amendment resulting in an amended spend amount or the use of allowance and program funding for a specific project necessitated by contract award.

The award of CIP contracts and the related execution thereof may result in deviation from the amount and timing of planned spend. Acknowledging the aforementioned deviation, spending plan amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the board approved fiscal year planned spend accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the spending plan amendments prepared for the Capital Reserve, spending plan amendments are also prepared for contracts that are planned or funded by way of the CIP Program and Allowance accounts. As additional contracts are awarded and other project information becomes available additional spending plan amendments to the Capital Reserve will be prepared to amend the planned spend for FY 2019.

\$7.67 million of Capital Reserve spending plan amendments have been prepared as of March 31, 2019 as shown in the table on the next page along with spending plan amendments detailing the assignment of funding within Program and Allowance accounts.

The order of the report on the subsequent page is in ascending order by CIP project number.

Great Lakes Water Authority
Water System FY 2019 Spending Plan Amendment Summary - Due to Changes in Project Cost and/or Timing
Unaudited Activity For the Fiscal Year Ended March 31, 2019

| Project | Project Name | Capital Reserve | Program / Allowance | Grand Total |
|--------------------|---|------------------------|----------------------------|---------------------|
| 111004 | Electrical Tunnel Rehabilitation at Lake Huron WTP | \$ 2,314,786 | \$ - | \$ 2,314,786 |
| 113002 | High Lift Pump Discharge Valve Actuators Replacement at Southwest WTP | 81,000 | - | 81,000 |
| 114001 | Springwells Water Treatment Plant 1958 Filter Rehabilitation and Auxiliary Facilities | 951,000 | - | 951,000 |
| 114003 | Water Production Flow Metering Improvements at NE, SW, and SPW WTP | - | 307,000 | 307,000 |
| 114005 | Springwells WTP Admin Building Improvements | (3,390) | - | (3,390) |
| 114011 | Steam, Condensate Return, and Compressed Air Piping Improvements at Springwells WTP | 1,660,452 | - | 1,660,452 |
| 114015 | Emergency Grating Replacement at Springwells WTP | - | 545,186 | 545,186 |
| 122002 | Replacement of Five (5) PRV Pits of Treated Water Transmission System | 641,494 | - | 641,494 |
| 122003 | New Waterworks Park to Northeast Transmission Main | 510,701 | - | 510,701 |
| 122011 | Park-Merriman Water Main-Final Phase | 100,000 | - | 100,000 |
| 122012 | 36-inch Water Main in Telegraph Road | 127,187 | - | 127,187 |
| 132003 | Isolation Gate Valves for Line Pumps for West Service Center Pumping Station | 347,744 | - | 347,744 |
| 132007 | Energy Management: Freeze Protection Pump Installation at Imlay Pumping Station | - | 6,800 | 6,800 |
| 132010 | West Service Center/Duval Rd Division Valve Upgrades | - | 240,890 | 240,890 |
| 170100 | Allowance: WTP/Pump Station | 686,186 | (4,982,186) | (4,296,000) |
| 170104 | Orion and Newburgh Pumping Stations Improvements | - | 2,167,000 | 2,167,000 |
| 170109 | Inspection of Raw Water Intakes and Tunnels | - | 3,000 | 3,000 |
| 170120 | Phosphoric Acid Feed System Improvements at Southwest WTP | - | 460,000 | 460,000 |
| 170121 | Franklin PS Valve Rehab | - | 1,000,000 | 1,000,000 |
| 170122 | Meter Pit at Brownstown Township | - | 159,000 | 159,000 |
| 170201 | Construction & Environmental Testing | - | 93,310 | 93,310 |
| 170300 | Water Treatment Plant Automation Program | 235,225 | (296,225) | (61,000) |
| 170301 | Water Plant Automation | - | 296,225 | 296,225 |
| 170500 | Transmission System Valve Assessment and Rehabilitation/Replacement Program | - | (4,000,000) | (4,000,000) |
| 170502 | Transmission System Valve Assessment and Rehabilitation/Replacement | - | 4,000,000 | 4,000,000 |
| 170800 | Reservoir Inspection, Design and Rehabilitation Program | - | (472,000) | (472,000) |
| 170801 | Reservoir Inspection, Design and Rehabilitation | 17,500 | 472,000 | 489,500 |
| 170900 | Suburban Water Meter Pit Rehabilitation and Meter Replacement Program | - | (4,613,000) | (4,613,000) |
| 170901 | Suburban Water Meter Pit Rehabilitation and Meter Replacement | - | 4,613,000 | 4,613,000 |
| Grand Total | | \$ 7,669,885 | \$ - | \$ 7,669,885 |

WASTEWATER SYSTEM

Executive Summary

The rate of spend is a key performance indicator. The development of the FY 2019-2023 and related CIP budget for FY 2019 were based on anticipation of FY 2019 activity resulting in 100% of planned spend. The Wastewater System spend for the period ending March 31, 2019 is 73.6% of the FY 2019 prorated board approved CIP spend and 72.9% of the FY 2019 amended spend. Detailed analysis behind the reasons and projects for which planned spend is amended from \$105,183,000 to \$106,081,010 is provided in the subsequent Spending Plan Amendment Summary section of this report. Numerous project designs have already and or will soon complete that will allow for the increased rate of construction spend to continue in FY 2019 and beyond.

| Wastewater System Projects | FY 2018 Amended Budget | FY 2018 Activity | FY 2018 as a Percent of Budget | FY 2019 Budget | FY 2019 Prorated (Nine Months) | FY 2019 Activity (Nine Months) (Unaudited) | FY 2019 as a Percent of Prorated Budget (Nine Months) (Unaudited) |
|--|---------------------------|---------------------|--------------------------------------|-------------------|--------------------------------------|---|---|
| FY 2018 CIP Project Requests | \$ 160,746,000 | 69,567,318 | 43.3% | | | | |
| FY 2018 CIP Realigned Forecast as per 2019 CIP | 70,632,000 | 69,567,318 | 98.5% | | | | |
| FY 2019 Board Approved CIP Spend | | | | \$ 105,183,000 | 78,887,250 | 58,038,019 | 73.6% |
| FY 2019 Amended Spend | | | | 106,081,010 | 79,560,758 | 58,038,019 | 72.9% |

It should be noted that these interim reports have been prepared on a modified cash basis. This means that expenses may lag in vendor invoice receipt and posting. Known expenses, material in nature, have been accrued.

Analysis of Projects with Largest Percent of Spend and Otherwise Noteworthy Project

Of the total Wastewater System Construction Bond spend for FY 2019 to date, **four projects account for \$38.2 million or 65.9% of the total spend**. Those projects are summarized in the following table. An analysis of each project and its related CIP summary follow the table. Note that the last page of this report provides a Glossary of Acronyms.

| Wastewater System Projects | Total Project Budget Estimate per FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|---|--|--------------------------|------------------------------------|--|
| Project 211001: Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery | \$ 54,858,000 | \$ 25,098,344 | \$ 16,308,000 | \$ 12,525,981 | 21.6% |
| Project 212006: PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract | 48,033,000 | 26,440,608 | 15,817,000 | 13,845,800 | 23.9% |
| Project 213007: WRRF Modification to Incinerator Sludge Systems at Complex-II | 20,049,000 | 2,329,474 | 6,883,404 | 6,659,314 | 11.5% |
| Project 222002: Detroit River Interceptor (DRI) Evaluation and Rehabilitation | 49,071,000 | 2,647,174 | 3,508,010 | 5,232,607 | 9.0% |
| Selected Projects as a Percentage of the Total | \$ 172,011,000 | \$ 56,515,600 | \$ 42,516,414 | \$ 38,263,702 | 65.9% |
| Total | | | \$ 106,081,010 | \$ 58,038,019 | 100% |

The following analysis provides brief highlights related to these projects.

Project 211001—Rehabilitation of Primary Rectangular Clarifiers

| Wastewater System Projects | Total Project Budget Estimate per FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|---|--|--------------------------|------------------------------------|--|
| Project 211001: Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery | \$ 54,858,000 | \$ 25,098,344 | \$ 16,308,000 | \$ 12,525,981 | 21.6% |

Project Engineer/Manager: Nicolas Nicolas

Manager: Philip Kora

Total Project Budget: \$54,858,000

Timeline: To be completed by May 2020 (Final Completion)

FY 2019 Last Pay Estimate Processed: March 31, 2019

Key Contracts/Vendors: PC-757 Toolles Contracting Group; CS-1484 Wade Trim; CS-1432A Alfred Benesch

Project Description: The Rehabilitation of Primary Rectangular Clarifiers Tanks, Drain Lines, Electrical/Mechanical Building, Pipe Gallery, and Replacement of Rake Arm assembly for Circular Primary Clarifiers 15 and 16 at the Water Resource Recovery Facility (WRRF).

Purpose: To improve the operating and maintenance efficiencies that meets the regulatory National Pollution Discharge Elimination (NPDES) Permit and National Electrical code (NEC) requirements.


Status: Rehabilitation of primary rectangular clarifiers 9 through 12 and circular clarifiers 15 and 16 have been completed, commissioned and returned to operation. Rectangular primary clarifiers 7 and 8 were released for contract work on September 11, 2018. Rectangular primary clarifiers 5 and 6 were released for contract work on November 9, 2018. Rectangular primary clarifiers 5,6,7 and 8 are projected to be completed and commissioned by June of 2019.

Additional Project Manager Comments: As of March 31, 2019, 70.43% of contract time (Final Completion) has elapsed and 67% of funds have been spent (\$34,830,500 out of \$51,905,000).

FY 2020-2024 CIP Page VIII-98 for Project 211001 – Rehabilitation of Primary Rectangular Clarifiers

CIP Number: 211001

Project Title WRRF Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and

| | | |
|--|---|---|
| Project Status Active | <input type="checkbox"/> Innovation <input type="checkbox"/> Water MP Right Sizing <input checked="" type="checkbox"/> Reliability/Redundancy <input type="checkbox"/> NEWTP Repurposing |  <p>Pipe Gallery</p> |
| Class Lvl 1 Wastewater | | |
| Class Lvl 2 WRRF | | |
| Class Lvl 3 Primary Treatment | | |
| Location City of Detroit | | |
| Project Engineer/Manager Nicolas Nicolas | | Project Score |
| Manager Philip Kora | | |
| Project Significance Rehabilitation for meeting NPDES Permit and NEC requirements | | |
| Scope of Work The work to be completed under this project will include installing ventilation and atmospheric control for the pipe gallery; providing new lights and emergency lights, etc.. This work also includes rehabilitation of 12 drain lines from rectangular clarifiers 3-12, circular clarifiers 16 and 16, installation of large manhole with sump pumps to collect drainage and discharge to clarifier, and concrete crack repairs, and rehabilitation work in Electrical/Mechanical Building. | | |
| Challenges N/A - Active | | |

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|--------|--------|--------|-------|-------|------|------|------|------|--------|
| 2018 | | 10,848 | 12,097 | 20,990 | 7,968 | | | | 0 | 0 | 51,903 |
| 2019 | 0 | 10,243 | 12,983 | 16,107 | 8,671 | 6,033 | | | | 0 | 54,037 |
| 2020 | 0 | 0 | 25,098 | 18,724 | 7,982 | 3,054 | 0 | 0 | 0 | 0 | 54,858 |

Project 212006-Rouge River Outfall Project

| Wastewater System Projects | Total Project Budget Estimate per FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|---|---|--|--------------------------|------------------------------------|--|
| Project 212006: PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract | \$ 48,033,000 | \$ 26,440,608 | \$ 15,817,000 | \$ 13,845,800 | 23.9% |

Project Engineer/ Manager: Philip Kora and Darrel Field (PMA)

Manager: Philip Kora

Total Project Budget: \$48,033,000

Timeline: Substantial Completion was required by April 1, 2019 but has not yet been achieved.

FY 2019 Last Pay Estimate Processed: March 31, 2019

Key Contracts/Vendors: CS-1781- PMA Consultants and PC-797-CDM Construction

Project Description/Purpose: The Rouge River Outfall Disinfection Project (Phase 2) is MDEQ approved to provide chlorination and dechlorination to the Rouge River Outfall (RRO) effluent during wet weather events.

Status: The project was placed into full operation by March 29, 2019, meeting the NPDES permit requirement to provide disinfection and dechlorination of flows to the Rouge River Outfall by April 1, 2019. Initial operating results indicate satisfactory treatment of both dry and wet weather flows. Nevertheless, the project has not yet reached the Substantial Completion contract milestone because several items of work remain to be completed and demonstration testing has not yet been completed. The Contractor is working to complete these items with the intent of reaching Substantial Completion in the near future.

Additional Project Manager Comments: Excluding allowances, PC-797 base contract work was over 96.3% complete at the end of March 2019. Approximately \$4.136 million remains in Contract allowances after funding authorized Construction Change Directives (CCDs). The Contractor has provided notice of several additional change requests which have not yet been finalized or included in CCDs.

Additional Construction Accounting & Financial and Reporting Team Comments: There are no additional comments to provide at this time.

FY 2020-2024 CIP Page VIII-112 for 212006 – Rouge River Outfall Project

CIP Number: 212006
Project Title WRRF Rouge River Outfall (RRO) Disinfection (Alternative)

| | |
|---|--|
| Project Status Active | <input type="checkbox"/> Innovation |
| Class Lvl 1 Wastewater | <input type="checkbox"/> Water MP Right Sizing |
| Class Lvl 2 WRRF | <input checked="" type="checkbox"/> Reliability/Redundancy |
| Class Lvl 3 Secondary Treatment & Disinfection | <input type="checkbox"/> NEWTP Repurposing |
| Location City of Detroit | <input type="checkbox"/> Project New To CIP |

Project Score

Project Engineer/Manager Darrel Field
Manager Philip Kora

Project Significance Provide project oversight and design build services for alternative disinfection services to meet NPDES Permit requirements at existing Rouge River Outfall

Scope of Work The consultant shall provide comprehensive professional services for project oversight and Owner's representation for the PC-797 RRO Disinfection Progressive Design-Build Contract. The scope of work consists of completing basis of design, design and construction services to develop and implement a solution that will result in 100% disinfection of wet weather flow discharged from WRRF to Detroit River outfall and Rouge River Outfall in order to meet NPDES Permit requirements.

Challenges N/A - Under Procurement



Plan view of RRO location

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|-------|--------|--------|-------|------|------|------|------|------|--------|
| 2018 | 729 | 6,530 | 15,800 | 15,520 | 9,020 | | | | 0 | 0 | 47,599 |
| 2019 | 0 | 6,873 | 20,619 | 15,817 | 4,157 | | | | | 0 | 47,466 |
| 2020 | 0 | 0 | 26,441 | 17,009 | 4,583 | 0 | 0 | 0 | 0 | 0 | 48,033 |

Project 213007–Modifications to Incinerator Sludge Feed Systems in Complex II at WRRF

| Wastewater System Projects | Total Project Budget Estimate per FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|--|---|--|--------------------------|------------------------------------|--|
| Project 213007: WRRF Modification to Incinerator Sludge Systems at Complex-II | \$ 20,049,000 | \$ 2,329,474 | \$ 6,883,404 | \$ 6,659,314 | 11.5% |

Project Engineer/Manager: Chris Breinling

Manager: Philip Kora

Total Project Budget: \$20,049,000

Timeline: To be substantially complete in July 2020

FY 2019 Last Pay Estimate Processed: March 31, 2019

Key Contract/Vendor: GLWA-CON-197 Weiss Construction; CS-060 Black & Veatch; CS-291 Alfred Benesch

Project Description: Modifications to Incinerator Sludge Feed Systems in Complex II at the Water Resource Recovery Facility (WRRF).

Purpose: The project purpose is to replace the belt conveyors that were significantly damaged during the March 2016 fire event. The project also includes replacement of a unit substation, motor control centers, and incinerator induced draft fan starters. New VFD-controlled dual shaft screw conveyors will replace outdated screw conveyors installed on all existing Complex II Incinerators, significantly improving incinerator feed control. Internal painting, instrumentation improvements, SFE strainers, and plumbing upgrades will improve sludge processing operations.

Status: Major restorative painting is approximately three quarters completed within Dewatering Complex II and Incineration Complex II. Structural steel placement for belt conveyor H is nearing completion, with belt conveyor K structural steel placement underway. The new unit substation went into service this month, with only the power factor cabinets needing to be connected. The remaining motor control centers, belt conveyors, auto strainers, and screw conveyors are planned for the remaining portion of calendar year 2019.


Additional Project Manager Comments: As of March 31, 2019, 35% of contract time (Final Completion) has elapsed and 38% of funds have been spent (\$6,646,723.10 out of \$18,631,083.00).

Additional Construction Accounting & Financial and Reporting Team Comments: There are no additional comments to provide at this time.

FY 2020-2024 CIP Page VIII-121 for 213007 – WRRF Modification to Incinerator Sludge Feed Systems at Complex-II

CIP Number: 213007

Project Title WRRF Modification to Incinerator Sludge Feed Systems at Complex -II

| | | |
|---|---|---|
| Project Status Active | <input type="checkbox"/> Innovation <input type="checkbox"/> Water MP Right Sizing <input checked="" type="checkbox"/> Reliability/Redundancy <input type="checkbox"/> NEWTP Repurposing |  |
| Class Lvl 1 Wastewater | | |
| Class Lvl 2 WRRF | | |
| Class Lvl 3 Residuals Management | | |
| Location City of Detroit | | |
| Project Engineer/Manager Chris Breinling | Project Score 87.2 | <p align="center">Picture from left to right Sludge Conveyer G Damaged by Fire and Conveyer B in the Complex – II Dewatering Building and Fire Damaged Conveyer H in Complex-II Incinerators Building</p> |
| Manager Philip Kora | | |
| Project Significance GLWA have an ongoing study and design of sludge cake conveyance system improvements project after the March 4, 2016 fire incident in Complex –II Incinerators building. The construction of this project will provide a cleaner, fire resistant, reliable and safe sludge feed to the incinerators. | | |
| Scope of Work The restoration of sludge conveying capacity, which was lost due to the fire damage and to provide improved sludge conveyance from each dewatering facility to the incinerators. Replacement of 19 MCCs and Replacement of the Unit Substation EB-26 in Incineration Complex II. | | |
| Challenges Maintaining the sludge conveyance capacity to meet permit requirements during the construction of these improvements, will be the most significant challenge on this project. | | |

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|-------|-------|-------|--------|-------|------|------|------|------|--------|
| 2018 | | 1,500 | 9,600 | 7,822 | | | | | 0 | 0 | 18,922 |
| 2019 | 0 | | 567 | 6,787 | 11,356 | 3,477 | | | | 0 | 22,187 |
| 2020 | 0 | 0 | 871 | 7,159 | 8,711 | 3,308 | 0 | 0 | 0 | 0 | 20,049 |

Project 222002–Detroit River Interceptor (DRI) Evaluation and Rehabilitation

| Wastewater System Projects | Total Project Budget Estimate per FY 2020 - 2024 CIP | Life-to-Date Through June 30, 2018 | FY 2019 Amended Spend | FY 2019 Activity (Unaudited) | FY 2019 as a Percent of Spend (Unaudited) |
|--|---|--|--------------------------|------------------------------------|--|
| Project 222002: Detroit River Interceptor (DRI) Evaluation and Rehabilitation | 49,071,000 | 2,647,174 | 3,508,010 | 5,232,607 | 9.0% |

Project Engineer/Manager: Mini Panicker

Manager: Biren Saparia

Total Project Budget: \$49,071,000

Timeline: To be substantially complete in July 2020

FY 2019 Last Pay Estimate Processed: February 28, 2019

Key Contract/Vendor: CON-183 Inland Waters Pollution Control (IWPC); DB-226 Jay Dee Contractors

Project Description/Purpose: There are two projects for the rehabilitation of Detroit River Interceptor (DRI) to bring back the structural integrity to acceptable levels.

- CON-183 for the Emergency Rehabilitation of DRI in the Downtown area under the Ren-Cen Center
- DB-226 for the rehabilitation of DRI from Alter Rd. to the WRRF

Status:


- CON-183 is in the final stages with the construction to be completed by May 31, 2019. The revised final completion date of February 28, 2019 had to be extended since asphalt was not available until the plants reopened in the spring for the surface restoration of the Manholes.
- DB-226 is an SRF funded Design/Build project. The Guaranteed Maximum Price (GMP) is negotiated for Reach 1, Reach 2, and for the construction of 3 permanent shafts in Reach 3. The construction started on November 13, 2018 as per the SRF schedule. Debris removal, Connor Creek access shaft construction, and manhole modification are in progress currently in the Reach 1 area.

Additional Project Manager Comments: CON-183 final completion date was September 15, 2018, but actual field conditions and unavailability of DRI for work due to the system conditions including wet weather events, delayed the project. New final completion date is May 31, 2019.

FY 2020-2024 Pages VIII-131 for 222002 – Detroit River Interceptor (DRI) Evaluation and Rehabilitation

CIP Number: 222002

Project Title Detroit River Interceptor (DRI) Evaluation and Rehabilitation

| | | |
|--|---|---|
| <p>Project Status Active</p> <p>Class Lvl 1 Wastewater</p> <p>Class Lvl 2 Field Services</p> <p>Class Lvl 3 Interceptors</p> <p>Location City of Detroit</p> <p>Project Engineer/Manager Mini Panicker</p> <p style="padding-left: 40px;">Manager Biren Saparia</p> | <input type="checkbox"/> Innovation <input type="checkbox"/> Water MP Right Sizing <input checked="" type="checkbox"/> Reliability/Redundancy <input type="checkbox"/> NEWTP Repurposing |  |
| | <input type="checkbox"/> Project New To CIP <p>Project Score 65.4</p> | |

Visual inspection of a large sewer

Project Significance Evaluation of the existing condition of the Detroit River interceptor (DRI), and rehabilitation/replacement of portions based on the evaluation results are essential to optimize the transportation capacity of the GLWA collection system and to increase its service life.

Scope of Work Preliminary Scope of Work of the Project is as follows: Review the existing records, investigate the existing conditions , provide the necessary cleaning/rehabilitation/replacement to optimize the design capacity of the collection system and to minimize the inflow and infiltration into the collection system.

Challenges DRI may have flow control challenges for both inspection and rehabilitation. Recommendations from these inspections may reveal further need for cleaning, rehabilitation or replacement.

Project Expenses Compared to Previous CIP Versions (All figures are in \$1,000's)

| CIP | FY16 | FY17 | FY18 | FY19 | FY20 | FY21 | FY22 | FY23 | FY24 | FY25 | Total |
|------|------|------|--------|-------|--------|--------|--------|--------|-------|-------|--------|
| 2018 | | 321 | 10,000 | 5,000 | 5,000 | | | | 0 | 0 | 20,321 |
| 2019 | 0 | 5 | 2,232 | 1,084 | 8,052 | 10,187 | 10,187 | 10,187 | 2,491 | 0 | 44,425 |
| 2020 | 0 | 0 | 2,647 | 9,424 | 10,000 | 10,000 | 10,000 | 1,000 | 1,000 | 5,000 | 49,071 |

Construction Work-in-Progress Rollforward

The purpose of the construction work-in-progress (CWIP) rollforward is to analyze the current year activity for each project in relation to the overall capital improvement program as well as the project portfolio overall.

As part of our project life cycle review, the CA&FR team identifies when it is appropriate for projects to be capitalized. Projects are to be capitalized when they have been completed in totality or are inclusive of identifiable assets that have been placed in service. No projects have been identified for Q3 FY 2019 capitalization, but the following projects have been identified for Q4 capitalization:

| <u>Project</u> | <u>Contract</u> | <u>Description</u> |
|----------------|-----------------|--|
| 260113 | Multiple POs | WRRF Fire Remediation |
| 260203 | CON-068 | Inspection of Collection System – Conner Creek |
| 260301 | CON-143 | Roof Replacement of Complex II |

Project 213002 - Rehabilitation of Central Offload Facility has been canceled and related project expenses have been expensed in April, 2019.

\$204.2 million is in CWIP as of March 31, 2019 as shown in the table beginning on the next page.

The order of the report on the subsequent pages is in ascending order by CIP project number.

Great Lakes Water Authority
Wastewater System Construction Work-in-Progress (CWIP) FY 2019 Rollforward
Unaudited, Pre-Close Activity For the Fiscal Year Ended March 31, 2019

| Project | Project Name | Total Project Budget | | FY 2019 | | FY 2019 | | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date | Life to Date Activity through March 31 2019 | Life to Date |
|---------|--|-------------------------------------|------------------------------|-----------------------------|--------------------------|------------------------------------|---|--|--|---|--------------|
| | | Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | Board Approved CIP Spend | FY 2019 Amended Spend | Activity through March 31, 2019 | Capitalization through March 31, 2019 | | Activity / Total Project Estimate | | |
| 4824 | DWSD- Rehab/Replacement Existing Sewer | \$ - | \$ 56,280 | \$ - | \$ - | \$ - | \$ - | \$ 56,280 | \$ - | 56,280 | 0% |
| 211001 | Rehabilitation of Primary Clarifiers Rectangular Tanks, Drain Lines, Electrical/Mechanical Building and Pipe Gallery | 54,858,000 | 25,098,344 | 16,308,000 | 16,308,000 | 12,525,981 | 37,624,325 | - | 37,624,325 | 69% | |
| 211002 | Pump Station No. 2 Pumping Improvments | 3,812,000 | 322,436 | 2,454,000 | 2,454,000 | 744,127 | 1,066,563 | - | 1,066,563 | 28% | |
| 211004 | Pump Station 1 Rack & Grit and MPI Sampling Station 1 Improvements | 27,198,000 | 24,505,435 | 2,752,000 | 2,752,000 | 1,676,086 | 26,181,521 | - | 26,181,521 | 96% | |
| 211005 | Pump Station No. 2 Improvements | 21,599,000 | - | - | - | 817 | 817 | - | 817 | 0% | |
| 211006 | Pump Station No. 1 Improvements | 22,315,000 | 88 | 500,000 | 500,000 | 5,800 | 5,888 | - | 5,888 | 0% | |
| 211007 | Replacement of Bar Racks and Grit Collection System at Pump Station No. 2 | 17,836,000 | - | 7,000 | 7,000 | 293 | 293 | - | 293 | 0% | |
| 211008 | Rehabilitation of Ferric Chloride Feed systems at the Pump Station -1 and Complex B Sludge Lines | 10,566,000 | 12,386 | 7,000 | 7,000 | 32,884 | 45,270 | - | 45,270 | 0% | |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|---|--|
| 211009 | Rehabilitation of the Circular Primary Clarifier Scum Removal System | 11,394,000 | - | - | - | 30 | 30 | - | 30 | 0% |
| 212002 | Study, Design, & Construction, Managemen t Services for Modified Detroit River Outfall No. 2 - WRRF | - | 10,818,870 | - | - | - | 10,818,870 | - | 10,818,870 | 0% |
| 212003 | Aeration System Improvements | 16,682,000 | 11,850,544 | 2,719,000 | 2,569,000 | 4,086,229 | 15,936,773 | - | 15,936,773 | 96% |
| 212004 | Project Chlorination/Dechl orination Process Equipment Improvements | 5,045,000 | 116,927 | 2,101,000 | 2,101,000 | 45,266 | 162,192 | - | 162,192 | 3% |
| 212006 | PC-797 Rouge River Outfall Disinfection and CS-1781 Oversight Consulting Services Contract | 48,033,000 | 26,440,608 | 15,817,000 | 15,817,000 | 13,845,800 | 40,286,408 | - | 40,286,408 | 84% |
| 212007 | Rehabilitation of the Secondary Clarifiers | 30,118,000 | - | - | - | - | - | - | - | 0% |
| 212008 | WRRF Rehabilitation of Intermediate Lift | 20,833,000 | - | - | - | - | - | - | - | 0% |
| 213002 | Rehabilitation of Central Offload Facility* | 16,179,000 | 982,301 | 6,447,000 | 4,947,000 | 60,384 | 1,042,685 | - | 1,042,685 | 6% |
| 213004 | Biosolids Dryer Facility at WRRF | - | - | 23,000 | 23,000 | 25,747 | 25,747 | 2,408,470 | 2,434,216 | 0% |
| 213005 | Complex I Incinerators Decommissioning and Reusability | 4,452,000 | 42,950 | - | - | 153,862 | 196,812 | - | 196,812 | 4% |
| 213006 | Improvements to Sludge Feed Pumps at Dewatering Facilities | 3,726,000 | 4,856 | - | - | - | 4,856 | - | 4,856 | 0% |

Wastewater System Construction Work-in-Progress Quarterly Report

As of March 31, 2019

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date | Life to Date | Life to Date |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|-----------------------------------|--|
| | | | | | | | | Capitalization through March 31, 2019 | Activity through March 31 2019 | Activity / Total Project Estimate |
| 213007 | Construction of the Improved Sludge Conveyance and Lighting System at the WWTP | 20,049,000 | 2,329,474 | 6,787,000 | 6,883,404 | 6,659,314 | 8,988,788 | - | 8,988,788 | 45% |
| 213008 | Rehabilitation of the Wet and Dry Ash Handling Systems | 18,505,000 | - | - | - | 85 | 85 | - | 85 | 0% |
| 213009 | Phosphorous Recovery Facility at the WWRF | - | 3,536 | - | - | - | 3,536 | - | 3,536 | 0% |
| 214001 | Relocation of Industrial Waste Division and Analytical Laboratory Operations | 10,968,000 | 572,845 | 4,001,000 | 4,001,000 | 1,639,272 | 2,212,117 | - | 2,212,117 | 20% |
| 216004 | Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP | 5,576,000 | 439,040 | 551,000 | 784,000 | 63,881 | 502,920 | - | 502,920 | 9% |
| 216006 | Rehabilitation of the Screened Final Effluent (SFE) Pump Station and Secondary Water System | 24,853,000 | - | - | - | 2,555 | 2,555 | - | 2,555 | 0% |
| 216007 | DTE Primary Electric 3rd Feed Supply Line to the WRRF | 7,447,000 | 40,186 | 2,002,000 | 2,002,000 | - | 40,186 | 543,500 | 583,686 | 8% |
| 216008 | Rehabilitation of Screened Final Effluent (SFE) Pump Station | 24,948,000 | - | - | - | - | - | - | - | 0% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|---|--|
| 222001 | Intercommunity Relief Sewer Modifications in Detroit Oakwood District | 38,031,000 | - | - | - | - | - | - | - | 0% |
| 222002 | Detroit River Interceptor Evaluation and Rehabilitation | 49,071,000 | 2,647,174 | 1,084,000 | 3,508,010 | 5,232,607 | 7,879,780 | - | 7,879,780 | 16% |
| 222003 | North Interceptor East Arm (NIEA) Evaluation and Rehabilitation | 30,000,000 | - | - | - | - | - | - | - | 0% |
| 222004 | Collection System Valve Remote Operation Structures Improvements | 87,033,000 | - | 1,019,000 | 1,019,000 | - | - | - | - | 0% |
| 222005 | Collection System Access Hatch Improvements | - | - | 1,000,000 | 1,000,000 | - | - | - | - | 0% |
| 222007 | North Interceptor East Arm (NIEA) Evaluation and Rehabilitation from WRRF to Gratiot Ave. and Sylvester St. | - | - | 4,000 | 4,000 | - | - | - | - | 0% |
| 232001 | Fairview Pumping Station - Replace Four Sanitary Pumps | 30,442,000 | 1,550,604 | 12,094,000 | 11,985,000 | 213,352 | 1,763,956 | - | 1,763,956 | 6% |
| 232002 | Freud and Connor Creek Pump Station Improvements | 162,429,000 | 5,052,490 | 1,192,000 | 1,192,000 | 446,224 | 5,498,715 | 57,734 | 5,556,449 | 3% |
| 232003 | Northeast Pump Station Improvements | 31,500,000 | - | - | - | - | - | - | - | 0% |
| 233002 | Collection System In System Storage Devices(ISDs) Improvements | - | - | 82,000 | 82,000 | 235 | 235 | - | 235 | 0% |

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date | Life to Date | Life to Date |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|-----------------------------------|--|
| | | | | | | | | Capitalization through March 31, 2019 | Activity through March 31 2019 | Activity / Total Project Estimate |
| | Wastewater System Wide Instrumentation & Controls Software and Hardware Upgrade | - | - | 877,000 | 877,000 | 71 | 71 | - | 71 | 0% |
| | Water Resource Recovery Facility (WRRF), Lift Station & Wastewater Collection System | | | | | | | | | |
| 260100 | Allowance | 34,038,000 | - | 1,100,000 | 1,003,596 | - | - | - | - | 0% |
| 260113 | Fire Remediation | - | 19,233,711 | - | - | - | 19,233,711 | - | 19,233,711 | 0% |
| | Sewer and Interceptor Evaluation and Rehabilitation Program | 192,164,000 | - | 10,601,000 | 2,000,000 | - | - | - | - | 0% |
| 260201 | Interceptor Rehab Conveyance System | - | 8,912,692 | - | 8,601,000 | 3,596,616 | 12,509,308 | - | 12,509,308 | 0% |
| 260202 | Interceptor Rehab Conveyance System | - | - | - | - | 11,392 | 11,392 | - | 11,392 | 0% |
| 260203 | Inland: Sewer Inspection | - | 4,642,066 | - | - | - | 4,642,066 | - | 4,642,066 | 0% |
| | Sewage Meter Design, Installation, Replacement and Rehabilitation Program | - | - | 1,700,000 | 1,700,000 | - | - | - | - | 0% |
| 260500 | CSO Outfall Rehab | 89,188,000 | - | 507,000 | - | - | - | - | - | 0% |
| 260502 | CSO Outfall Rehab Collection System | - | 8,799 | - | 507,000 | 3,233,639 | 3,242,437 | - | 3,242,437 | 0% |
| 260503 | Backwater Gates | - | - | - | - | 760 | 760 | - | 760 | 0% |

Wastewater System Construction Work-in-Progress Quarterly Report As of March 31, 2019

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date | Life to Date | Life to Date |
|---------|---|---|------------------------------|--|--------------------------|---|--|---|-----------------------------------|--|
| | | | | | | | | Capitalization through March 31, 2019 | Activity through March 31 2019 | Activity / Total Project Estimate |
| 260600 | CSO Facilities Improvements | 63,591,000 | 191,848 | 9,277,000 | 2,456,000 | 9,308 | 201,156 | - | 201,156 | 0% |
| 260601 | Oakwood Drain Valve Improvements | - | - | - | - | 362,739 | 362,739 | - | 362,739 | 0% |
| 260602 | CSO Fire Alarm System Improvements | - | - | - | - | 547,058 | 547,058 | - | 547,058 | 0% |
| 260603 | Conner Creek CSO Basin Rehab | - | 243,224 | - | 6,821,000 | 2,637,262 | 2,880,486 | - | 2,880,486 | 0% |
| 260604 | Baby Creek CSO Rehab | - | 45,791 | - | - | 141,669 | 187,460 | - | 187,460 | 0% |
| 260605 | CSO Facilities CA | - | - | - | - | 14,511 | 14,511 | - | 14,511 | 0% |
| 260606 | Puritan Fenkell Roof Replacement | - | - | - | - | 1,337 | 1,337 | - | 1,337 | 0% |
| 260607 | Lieb SDF Electrical Improvements | - | - | - | - | 3,717 | 3,717 | - | 3,717 | 0% |
| 260608 | Seven Mile RTB - Roof Replacement | - | - | - | - | 76 | 76 | - | 76 | 0% |
| 260609 | Seven Mile RTB - Parking Lot / Sitework | - | - | - | - | 3,030 | 3,030 | - | 3,030 | 0% |
| 260610 | Baby Creek MAU Replacement | - | - | - | - | 569 | 569 | - | 569 | 0% |
| 260611 | HVAC Improvements At Lieb SDF | - | - | - | - | 4,424 | 4,424 | - | 4,424 | 0% |
| 331002 | Roofing Systems Replacement at GLWA Wastewater Treatment Plant, CSO Retention Treatment Basins (RTB) and Screening Disinfection Facilities (SDF) | 9,709,000 | - | 286,000 | 286,000 | 5,177 | 5,177 | - | 5,177 | 0% |
| 380400 | As-needed CIP Implementation Assistance and Related Services | - | - | 803,000 | 803,000 | - | - | - | - | 0% |

Wastewater System Construction Work-in-Progress Quarterly Report

As of March 31, 2019

| Project | Project Name | Total Project Budget Estimate From FY 2020 - 2024 CIP | CWIP Balance July 1, 2018 | FY 2019 Board Approved CIP Spend | FY 2019 Amended Spend | FY 2019 Activity through March 31, 2019 | CWIP Balance, March 31, 2019 (Unaudited) | Life To Date Capitalization through March 31, 2019 | Life to Date Activity through March 31 2019 | Life to Date Activity / Total Project Estimate |
|--------------|---|---|------------------------------|--|--------------------------------------|---|--|---|---|--|
| 380500 | Department-wide General Engineering Services on an As-needed Basis | - | - | 114,000 | 114,000 | - | - | - | - | 0% |
| 380600 | General Engineering Services Allowance | 1,000 | - | 51,000 | 51,000 | - | - | - | - | 0% |
| 380601 | Alfred Benesh:General Engineer | - | 632 | - | - | 3,832 | 4,464 | - | 4,464 | 0% |
| 380900 | General Engineering Services Allowance | - | - | 916,000 | 916,000 | - | - | - | - | 0% |
| 381000 | Energy Management: Electric Metering Improvement Program | 2,500,000 | - | - | - | - | - | - | - | 0% |
| Total | | \$ 1,246,689,000 | \$ 146,166,135 | \$ 105,183,000 | \$ 106,081,010 | \$ 58,038,019 | \$ 204,204,154 | \$ 153,093,645 | 357,297,799 | 29% |
| | | | | | Net FY 2019 Spending Plan Amendments | \$ 898,010 | | | | |

* Project 213002 has been cancelled; project costs have been removed from Construction Work in Progress (CWIP) in April, 2019.

FY 2019 Spending Plan Amendment Summary

The purpose of the Spending Plan Amendment Summary is to illustrate the amendments to the current fiscal year spend for each project with a spending plan amendment resulting in an amended spend amount or the use of allowance and program funding for a specific project necessitated by contract award.

The award of CIP contracts and the related execution thereof may result in deviation from the amount and timing of planned spend. Acknowledging the aforementioned deviation, spending plan amendments are prepared to fund the related increase or decrease either to or from the Capital Reserve to amend the board approved fiscal year planned spend accordingly and to inform decision makers in the development of future Capital Improvement Plans. Similar to the spending plan amendments prepared for the Capital Reserve, spending plan amendments are also prepared for contracts that are planned or funded by way of the CIP Program and Allowance accounts. As additional contracts are awarded, and other project information becomes available additional spending plan amendments to the Capital Reserve will be prepared to amend the planned spend for FY 2019.

\$.89 million of Capital Reserve spending plan amendments have been prepared as of March 31, 2019 as shown in the table on the next page along with spending plan amendments detailing the assignment of funding within Program and Allowance accounts.

The order of the report on the subsequent page is in ascending order by CIP project number.

Great Lakes Water Authority
Wastewater System FY 2019 Spending Plan Amendment Summary - Due to Changes in Project Cost and/or Timing
Unaudited Activity For the Fiscal Year Ended March 31, 2019

| Project | Project Name | Capital Reserve | Program / Allowance | Grand Total |
|--------------------|--|------------------------|----------------------------|--------------------|
| 212003 | Aeration System Improvements | \$ (150,000) | \$ - | \$ (150,000) |
| 213002 | Rehabilitation of Central Offload Facility | (1,500,000) | - | (1,500,000) |
| 213007 | Construction of the Improved Sludge Conveyance and Lighting System at the WWTP | - | 96,404 | 96,404 |
| 216004 | Rehabilitation of Various Sampling Sites and PS# 2 Ferric Chloride System at WWTP | 233,000 | - | 233,000 |
| 222002 | Detroit River Interceptor Evaluation and Rehabilitation | 2,424,010 | - | 2,424,010 |
| 232001 | Fairview Pumping Station - Replace Four Sanitary Pumps | (109,000) | - | (109,000) |
| 260100 | Water Resource Recovery Facility (WRRF), Lift Station & Wastewater Collection System Allowance | - | (96,404) | (96,404) |
| 260200 | Sewer and Interceptor Evaluation and Rehabilitation Program | - | (8,601,000) | (8,601,000) |
| 260201 | Conveyance System Interceptor Rehab | - | 8,601,000 | 8,601,000 |
| 260500 | CSO Outfall Rehab | - | (507,000) | (507,000) |
| 260502 | CSO Outfall Rehab | - | 507,000 | 507,000 |
| 260600 | CSO Facilities Improvements | - | (6,821,000) | (6,821,000) |
| 260603 | Conner Creek CSO Basin Rehab | - | 6,821,000 | 6,821,000 |
| Grand Total | | \$ 898,010 | \$ - | \$ 898,010 |

Glossary of Acronyms

| ACRONYM | DEFINITION | ACRONYM | DEFINITION |
|----------------|--|----------------|---|
| CCD | Construction Change Directive | NPDES | National Pollution Discharge Elimination System |
| CSO | Combined Sewer Overflow | RAS | Return Activated Sludge |
| CIPP | Cured in Place Pipe Lining | RRO | River Rouge Outfall |
| DCB | Detailed Cost Breakdown | RTB | Retention Treatment Basin |
| ESR | Equipment Shutdown Request | SDF | Screening and Disinfection Facility |
| HPO | High Purity Oxygen | SFE | Screened Final Effluent |
| ISDs | In System Storage Devices | SPW | Springwells Water Treatment Plant |
| IWC | Industrial Waste Control | VFD | Variable Frequency Drive |
| MCC | Motor Control Centers | WRRF | Water Resource Recovery Facility |
| MDEQ | Michigan Department of Environmental Quality | WTP | Water Treatment Plant |
| NAB | New Administration Building | | |
| NIEA | North Interceptor East Arm | | |



Financial Services Audit Committee Communication

Date: June 21, 2019

To: Great Lakes Water Authority Audit Committee

From: Jill Kosters, Financial Reporting & Accounting Director

Re: Status Report: FY2019 Continuous Improvement Report

Background: The Continuous Improvement Report provides information related to process improvement programs currently under development and/or facilitation by the Financial Reporting and Accounting Group as of May 23, 2019.

Analysis: There are 13 initiatives that range from 11% complete to those that are close to completion. Also included is a listing of 10 projects completed within the past 12 months.

All projects are critical to an effective financial and reporting function. Those that will have the most visible outcomes to the Board and other stakeholders include the following.

- 1. Finance Automation Solution (FAS):** This project encompasses the selection through implementation of a cloud-based Software as a Solution (SaaS) business intelligence and workflow management tool to integrate with BS&A software. This Business Intelligence tool will close the gap between the financial system (BS&A) and other systems, to increase the timeliness and quality of reports, analysis, key performance indicators, and dashboards. **Note:** We have selected Tagetik, through a request for proposal, evaluation, and oral interview/live demo process, and are currently scheduling meetings for Joint Application Design beginning in June 2019.
- 2. E-Payables:** The goal of this project is to provide an interface between BS&A and Comerica Bank for electronic vendor payments. **Note:** After preliminary testing, additional programming changes are being performed by Comerica. However, we remain on target for rollout in June 2019.
- 3. Utility Billing:** The purpose of this project was to research and select a utility management service to assist in the processing of GLWA utility payments. The selected vendor is Capturis. **Note:** Phase 1 launched December 3, 2018 for payment processing via electronic transfer of data files and electronic posting of payments by DTE and Consumer's energy. Phase 2 provides training for employees to manage and report data related to energy consumption since January 1, 2016 by meter and location. This will be instrumental in accurately calculating energy savings in the future. Initial training will be completed organization wide by June 30, 2019.



Financial Services Audit Committee Communication

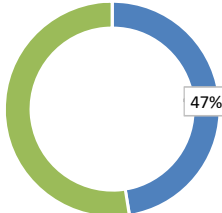
4. **ERP Replacement:** This project encompasses the selection through implementation of an ERP system to replace the current ERP and Payroll Systems (BS&A and Ceridian) to meet the needs of the organization. **Note:** We are currently gathering requirements necessary to create a request for proposal.

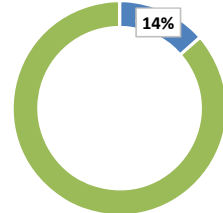
Proposed Action: Receive and file report.

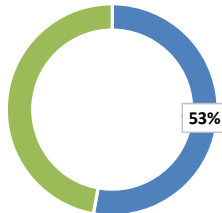
FY 2019 Continuous Improvement Summary Report: Q4

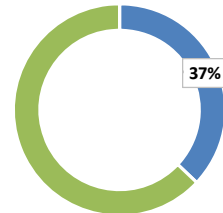
Legend

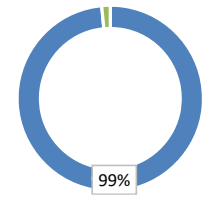
| | | |
|---------------------------------|-------------|---|
| Proceeding as planned | ● Complete | ● |
| PMO/Program Advisors mitigating | ▲ On-Hold | ● |
| Executive Sponsors to address | ◆ | |
| To be Completed % | Completed % | |

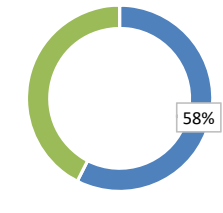
| Record Retention | Status | Current Progress |
|--|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Create FSA Retention Policy in conformity with State of Michigan, Records Management Service requirements * Research and Create Matrix of FSA document retention requirements, research and select disposal schedule maintenance options. <p>Partner Team: Information Technology (IT)</p> | ● |  <p>47%</p> |

| ERP RFP Process | Status | Current Progress |
|---|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Create a Request for Proposal (RFP) for a new ERP system for the organization *Develop Financial requirements for the RFP to ensure best solution is selected. <p>Partner Team: Information Technology (IT)</p> | ● |  <p>14%</p> |

| Procurement Process Documentation | Status | Current Progress |
|---|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Create Procedures in line with established Policies. *Document Workflows for procurement processes *Document Procedures for Procurement Process. *Create desktop procedure documents for future training and new employee onboarding | ● |  <p>53%</p> |

| Finance Automation Solution | Status | Current Progress |
|--|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Develop RFP to provide an Automated Finance Software Solution to improve the efficiency and effectiveness of the FSA operations and increase the timeliness and quality of reports, analysis& KPI *Selection, Implementation, Configuration and Delivery of SaaS Project <p>Partner Team: IT and Procurement</p> | ● |  <p>37%</p> |

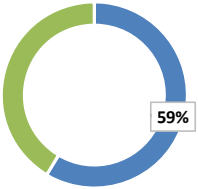
| Utility Billing Implementation | Status | Current Progress |
|---|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> * Evaluate for and Partner with a utility information management service to process utility payments in order to obtain and provide Energy Management with timely , energy consumption and rate information. <p>Partner Teams: Energy Management and IT</p> | ● |  <p>99%</p> |

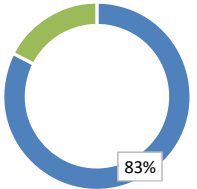
| e-Payables Implementation | Status | Current Progress |
|---|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Evaluate and Partner with a financial institution to provide the vendor community electronic payment options (credit card, wire and ACH) * Create procedures, processes, documentation and training material in line with our internal control structure. <p>Partner Team: Treasury</p> | ● |  <p>58%</p> |

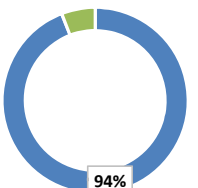
FY 2019 Continuous Improvement Summary Report:Q4

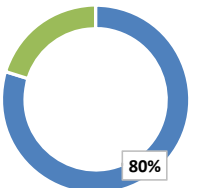
Legend

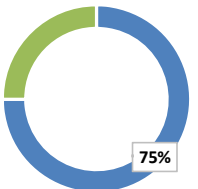
| | | | |
|---------------------------------|---|-------------|---|
| Proceeding as planned | ● | Complete | ● |
| PMO/Program Advisors mitigating | ▲ | On-Hold | ● |
| Executive Sponsors to address | ◆ | | |
| To be Completed % | | Completed % | |

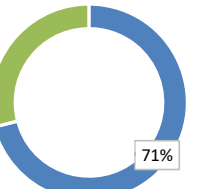
| SRF Loan Process | Status | Current Progress |
|--|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> * Create procedures and documentation in conformity with Single Audit requirements * Create desktop procedures for future training and new hires. * Create and execute processes surrounding SRF loan distributions to our Sub -Recipient: DWSD | ● |  <p>59%</p> |

| BS&A AP Module Reconfiguration | Status | Current Progress |
|---|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *To accommodate Utility Billing and e-Payables, business process must be recalibrated and BS&A software settings reconfigured. There are three new processes that need to be coordinated *Document changes to workflows and procedures. <p>Partner Team : IT</p> | ● |  <p>83%</p> |

| Construction Accounting & Financial Reporting Process Mapping | Status | Current Progress |
|--|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Document Workflows for the CWIP Process, inclusive of touchpoints with other processes and departments. * Review and Document procedures in line with established Policies. *Create desktop procedure documents for future training and new employees onboarding | ● |  <p>94%</p> |

| Payroll Process Mapping | Status | Current Progress |
|---|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Document Payroll Process Workflows. * Creating procedures in line with established Policies. * Creating desktop procedures for future training and new employee onboarding. | ● |  <p>80%</p> |

| Financial Reporting Process Mapping | Status | Current Progress |
|--|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> * Create Procedures in line with established Policies. *Document Workflows for Financial Reporting *Document Procedures for Financial Reporting Process. *Create desktop procedure documents for future training and new employee onboarding | ● |  <p>75%</p> |

| Accounts Payable(AP) Process Mapping | Status | Current Progress |
|--|--------|--|
| <p>Project Focus:</p> <ul style="list-style-type: none"> *Document AP Process Workflows. * Creating procedures in line with established Policies. * Creating desktop procedures for future training and new employee onboarding. | ● |  <p>71%</p> |

FY 2019 Continuous Improvement Summary Report: Q4

| Legend | | | |
|---------------------------------|---|----------|---|
| Proceeding as planned | ● | Complete | ● |
| PMO/Program Advisors mitigating | ▲ | On-Hold | ● |
| Executive Sponsors to address | ◆ | | |
| To be Completed % | | | |

| FP&A O&M (Process Mapping) | Status | Current Progress |
|--|--------|------------------|
| <p>Project Focus:</p> <ul style="list-style-type: none"> * Document O&M Process Workflows. * Creating procedures in line with established Policies. * Creating desktop procedures for future training and new employee onboarding. | ● | <p>94%</p> |

| Projects Managed by other departments where FSA is the Partner Team |
|---|
| <p>Capital Work Processes (Sponsor: AMLT) Coordination of Business, Asset Management and FSA capital discovery for process improvement: Superseded by Strategic Asset Management Planning program (CS-198) and EAM requirements gathering program (CS-271)</p> <p>Ceridian Payroll System Reimplementation and ERP Requirements Gathering(Sponsor: IT) : Review and reset of system settings and hierarchy to better reflect current GLWA organizational structure , reporting and process. Develop requirements for new combined ERP and Payroll software system</p> |

Future Projects

- BS&A Employee Reimbursement Process Development
- Emergency Response Plan

Completed Projects (within 12 months)

- Tracker GL JE for Investment Activity
- Excel Based Project Accounting Timesheets replaced with BigTime
- Procure to Pay : Investigative process review
- HR-PR Assessment Survey
- WAM approval route and title reconfiguration
- Capital Delivery and Shared Service Timekeeping
- FP&A WRRF ScoreCard
- Month End Close
- Capitalization Policy
- BS&A to WAM GL Account Interface Improvement