



Audit Committee

Friday, February 9, 2018 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. January 19, 2018 (Page 2)
5. PUBLIC PARTICIPATION
6. OLD BUSINESS
 - A. Status Report: FY 2017 Year End Financial Statements and Audit (verbal update)
 - B. Update: FY 2019 – FY 2020 Biennial Budget and FY 2019 – 2023 Financial Plan (Will be Binder #2)
 - C. Update on Cost of Service Studies for FY 2019 Charges and Related (Page 6) Charges Topics - The Foster Group
7. NEW BUSINESS
 - A. Review of the Proposed FY 2019 through FY 2023 Capital (Page 24) Improvement Plan
 - B. Construction Work-in-Progress Report Calendar for FY 2018 and Coordination with Capital Improvement Planning Committee (Will be Binder #2)
8. REPORTS
 - A. Monthly Revenue & Collections Report for December 2017 (Page 103)
 - B. Treasury Report: Cash Transfers through January 1, 2018 (Page 128)
 - C. CFO Update (verbal)
9. LOOK AHEAD

Next Audit Committee Meeting – March 16, 2018 at 8 am (Regular Meeting)
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, January 19, 2018

8:00 AM

Water Board Building 5th Floor

1. Call To Order

Chairman Baker called the meeting to order at 8:05 a.m.

2. Quorum Call

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

3. Approval of Agenda

Nicolette Bateson, Chief Financial Officer/Treasurer, requested to move New Business Item 7A (Annual Update & Financing Strategy with PFM - Part 1 of 2) before Old Business Item 6A.

Chairman Baker requested a Motion to approve the Agenda as Amended.

Motion By: Gary Brown

Support By: Robert Daddow

Action: Approved as Amended

The motion carried by a unanimous vote.

4. Approval of Minutes

[2018-584](#) Approval of Minutes of January 5, 2018

Indexes: Finance

Attachments: [Audit Committee Meeting Minutes January 5, 2018](#)

Chairman Baker requested a Motion to approve the January 5, 2018 Audit Committee Meeting Minutes.

Motion By: Robert Daddow

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

5. Public Comment

There were no public comments.

7. New Business

A. [2018-590](#) Annual Update & Financing Strategy with PFM (Part 1 of 2)

Indexes: Finance

Attachments: [Annual Update & Financing Strategy with PFM Part 1 of 2](#)
[GLWA Audit Presentation January 2018_FINAL](#)

Motion By: Robert Daddow
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

6. Old Business

- A. [2018-585](#) Status Report: FY 2017 Year End Financial Statements (verbal update)

Indexes: Finance

Nicolette Bateson, Chief Financial Officer/Treasurer, gave a verbal update regarding the 2017 Year End Financial Statements.

- B. [2018-586](#) Update: FY 2017 Audit Schedule (verbal update)

Indexes: Finance

Nicolette Bateson, Chief Financial Officer/Treasurer, gave a verbal update regarding the 2017 Audit Schedule.

- C. [2018-587](#) Update: FY 2019 - FY 2020 Biennial Budget and FY 2019 - FY 2023 Financial Plan

Indexes: Finance

Attachments: [Update Biennial Budget and FY 2019 - 2023 Financial Plan](#)

Chairman Baker requested a Motion to approve rescheduling of the February 16, 2018, 8:00 a.m. Audit Committee Meeting to February 9, 2018, at 8:00 a.m.

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

A Special Audit Committee Meeting will be held on Friday, February 9, 2018, at 8:00 a.m., and the February 16, 2018, 8:00 a.m. Regular Audit Committee Meeting is cancelled.

- D. [2018-588](#) Final Update: 2017 Wholesale Water Contract Reopeners

Indexes: Finance

Attachments: [Audit Committee Communication Contract Reopener Status 1.19.2018](#)

Motion By: Robert Daddow
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

- E. [2018-589](#) Update on Cost of Service Studies for FY 2019 Charges - The Foster Group

Indexes: Finance

Attachments: [Cost of Service Update by The Foster Group 1.19.2018](#)
[Process and Calendar FY 2019 and FY 2020 Biennial Budget 1.19.2018](#)
[Cost of Service Study Update 1.19.2018](#)
[Comparison of FY 2019 Unit Charge Adjustments 1.19.2018](#)

Motion By: Robert Daddow
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

7. New Business (Cont'd)

- B. [2018-591](#) Review of the FY 2017 Audit and Internal Control Reports for the City of Detroit General Retirement System

Indexes: Finance

Attachments: [Review of GRS Audit and Internal Control Reports FY 2017](#)
[General Employees Retirement System of the City of Detroit 0617Letter](#)
[General Employees Retirement System of the City of Detroit 0617Report](#)

Motion By: Gary Brown
Support By: Robert Daddow
Action: Received and Filed
The motion carried by a unanimous vote.

- C. [2018-592](#) Analysis of Retail and DWSD Receivable as of June 30, 2017

Indexes: Finance

Attachments: [Memo DWSD and Retail and DWSD Receivable as of June 30 2017 Final](#)
[DWSD and Retail and DWSD Receivable as of June 30 2017 Final](#)

Motion By: Robert Daddow
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

Note: Director Daddow Motioned to Receive and File, subject to further review.

- D. [2018-593](#) Capital Overhead Cost Allocation Project

Indexes: Finance

Attachments: [Capital Overhead Cost Allocation Project](#)

Motion By: Robert Daddow
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

8. Reports

- A. [2018-594](#) Monthly Revenue & Collections Report for December 2017

Indexes: Finance

Attachments: [Monthly Revenue and Collections Report 01.19.2018](#)
[AR Aging 12.31.17](#)

Motion By: Robert Daddow
Support By: Brian Baker
Action: Received and Filed
The motion carried by a unanimous vote.

- B. [2018-595](#) Treasury Report: Cash Transfers through December 1, 2017

Indexes: Finance

Attachments: [Memo DWSD & GLWA Cash Transfers January 2018](#)
[Monthly Transfers to DWSD January 2018](#)
[Monthly Transfers to GLWA January 2018](#)

Motion By: Robert Daddow
Support By: Brian Baker
Action: Received and Filed
The motion carried by a unanimous vote.

- C. [2018-596](#) GLWA and DWSD Shared Services True-Up Status

Indexes: Finance

Attachments: [Shared Services Agreement FY16-FY17 Update 1.19.2018](#)
[FY 2016 Shared Services True-up Financial Summary](#)

Motion By: Robert Daddow
Support By: Gary Brown
Action: Received and Filed
The motion carried by a unanimous vote.

Note: Director Daddow Motioned to Receive and File, subject to further review.

- D. [2018-598](#) CFO Update (verbal)

Indexes: Finance

There were no further CFO updates, other than Items 6A and 6B.

9. Look Ahead

A Special Audit Committee Meeting is scheduled for Friday, February 9, 2018 at 8:00 a.m.

The February 16, 2018, 8:00 a.m. Regular Audit Committee Meeting is cancelled.

10. Information

None

11. Other Matters

None

12. Adjournment

Chairman Baker requested a Motion to Adjourn.

Motion By: Robert Daddow

Support By: Gary Brown

Action: Approved

The motion carried by a unanimous vote.

There being no further business, the meeting was adjourned at 10:40 a.m.



Financial Services Audit Committee Communication

Date: February 9, 2018

To: Great Lakes Water Authority Audit Committee

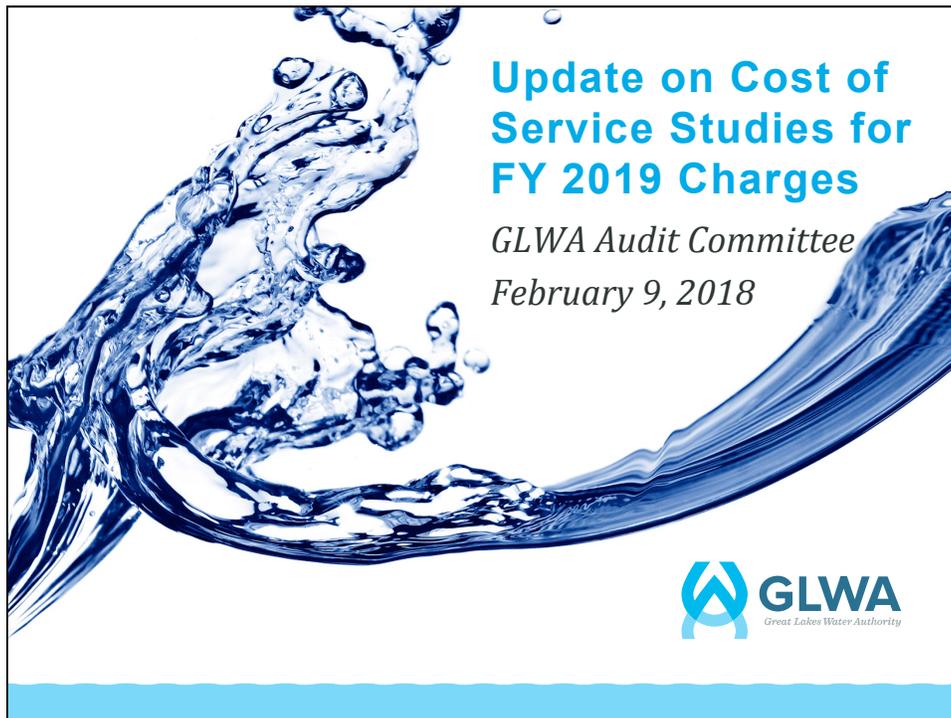
From: Nicolette N. Bateson, CPA, Chief Financial Officer/Treasurer

Re: Update on Cost of Service Studies for FY 2019 Charges - The Foster Group

Background: Each January, the Great Lakes Water Authority (GLWA) members receive a calculation of the Cost of Service Studies and the resulting proposed charges. This timing is defined by service contracts as further cited in the attached budget calendar. Those notices were distributed on January 25, 2018.

Analysis: GLWA's advisor, The Foster Group, prepares the Cost of Service Studies and charges based upon several inputs and analysis. Bart Foster, The Foster Group, will be in present at the Audit Committee meeting to address the status of the Cost of Service study and charge development as well as unique considerations in the development of the FY 2019 charges. Presentation materials are attached. In addition, the Cost of Services Study is online at <http://www.glwater.org/wholesale-customers/charges/>.

Proposed Action: Receive and file report.



Update on Cost of Service Studies for FY 2019 Charges

*GLWA Audit Committee
February 9, 2018*



Discussion Outline

- Proposed Charges Review Process Summary
- Executive Summary of Study Results – Key Issue Impacts
 - ✓ *Water Units of Service (UoS) Study*
 - ✓ *Sewer BUDGET Allocation*
- Perspectives on Implementation of Key Issues



Proposed Charges Have Emerged Through a Rigorous Review Process

- Audit Committee Meetings
 - ✓ 11/17/2017
 - ✓ 12/15/2017
 - ✓ 1/5/2018
 - ✓ 1/19/2018
- Full Board of Directors Meetings
 - ✓ 12/13/2017
 - ✓ 12/21/2017
 - ✓ 1/10/2018
 - ✓ 1/24/2018



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Proposed Charges Have Emerged Through a Rigorous Review Process

- Formal “Charge Rollout” Meetings
 - ✓ 12/12/2017 - Preliminary Water Units of Service
 - ✓ 12/19/2017 - Capital Improvement Program
 - ✓ 1/11/2018 - Proposed FY 2019 Revenue Requirements
 - ✓ 1/25/2018 - Proposed FY 2019 Service Charges
- One Water Partnering Meetings
 - ✓ 9/28/17 – Contract Demands Determination Process
 - ✓ 12/20/17 – Units of Service (UoS) Study



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FY 2019 Cost of Service Study / Charges Results: *Executive Summary*

- There are myriad elements that impact the cost of service allocations and proposed service charges for FY 2019, but there is a singular highlight for the Water Charges and another for the Sewer Charges
- **Today's discussion focuses on those highlights for each system**



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FY 2019 Cost of Service Study / Charges Results: *Executive Summary*

- The proposed Water Charges are materially impacted by implementation of the Units of Service (UoS) Study for non-master metered Customers
- The proposed Sewer Charges are materially impacted by the allocation of the BUDGET to Cost Pools, and specifically those Cost Pools that are solely or primarily allocated to specific Customers:
 - ✓ *Oakland Macomb Interceptor (OMID) – direct to OMID*
 - ✓ *Combined Sewer Overflow (CSO) – 83% to Detroit*



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*Key Issue Summary and
Results - Water*



**FY 2019 Water Cost of Service
Results: *Units of Service Study***

- Phase 1 of the UoS Study conducted by Black & Veatch establishes ***observed and estimated*** “units of service” for Detroit, Dearborn, and Highland Park, which do not have master “billing” meters
- The Phase 1 ***technical*** findings were accepted in a consensus manner by the One Water Partnering Group at its meeting on December 20, 2017
- Units of service include:
 - ✓ *Average daily demands*
 - ✓ *Maximum day demands*
 - ✓ *Peak hour demands*
 - ✓ *Distance & Elevation factors*



FY 2019 Water Cost of Service Results: *Units of Service Study*

- The GLWA Administrative recommendation to implement the UoS technical findings for the FY 2019 Charges includes modifications to the ***observed and estimated*** max day and peak hour demands
- This approach is designed to align demand determinations for non-master metered Customers with the process applied for all master metered Customers



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FY 2019 Water Cost of Service Results: *Units of Service Study*

- The GLWA Administrative recommendation:
 - ✓ *Increases max day and peak hour demands for Detroit and Highland Park by 10% - similar to the approach applied to **model** contract Customers who re-opened during 2017*
 - ✓ *Increases Dearborn's max day and peak hour demands by 20% - consistent with the manner that demands for other Customers under "old" contract formats are treated*



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FY 2019 Water Cost of Service Results: *Units of Service Study*

	Existing Data Prior to UoS Study	Technical Findings B&V UoS	GLWA UoS Administrative Adjustment	GLWA UoS Administrative Recommendation <i>2019 Charges</i>
<u>Detroit</u>				
Average Day Demand - mgd	91.5	98.1	NA	98.1
Max Day Demand - mgd	114.4	118.4	10%	130.2
Peak Hour Demand - mgd	118.1	145.7	10%	160.3
Distance Factor	16.9	16.8	NA	16.8
Elevation	632	629	NA	629
<u>Dearborn</u>				
Average Day Demand - mgd	12.7	14.7	NA	14.7
Max Day Demand - mgd	25.7	27.4	20%	32.9
Peak Hour Demand - mgd	33.8	35.9	20%	43.1
Distance Factor	20.3	20.1	NA	20.1
Elevation	605	597	NA	597
<u>Highland Park</u>				
Average Day Demand - mgd	2.3	3.1	NA	3.1
Max Day Demand - mgd	2.9	4.0	10%	4.4
Peak Hour Demand - mgd	3.1	4.2	10%	4.6
Distance Factor	16.9	17.3	NA	17.3
Elevation	632	639	NA	639



FY 2019 Water Cost of Service Results: *Units of Service Study*

- The UoS Study, and the GLWA Administrative recommendation to implement it, has the effect of:
 - ✓ *Increasing cost allocations to “non master metered” Customers (Detroit, Dearborn, Highland Park);*
 - ✓ *Decreasing cost allocations to master metered Customers*
- **Impact Summary (all else being equal) - \$ millions**

	Unadjusted Revenue Req	Technical Recommendations			GLWA Implementation Plan		
		Adjusted	Variance	% Variance	Adjusted	Variance	% Variance
<u>Non Master Metered Customers</u>							
1 Detroit	36.3	39.7	3.4	9.3%	41.9	5.5	15.3%
2 Dearborn	8.8	9.3	0.5	5.9%	10.8	2.0	22.2%
3 Highland Park	1.1	1.3	0.1	13.0%	1.4	0.2	20.1%
4 Total NMM Customers	46.3	50.3	4.1	8.8%	54.0	7.7	16.7%
5 Master Metered Customers	284.6	280.5	(4.1)	-1.4%	276.8	(7.7)	-2.7%
6 Total System	330.8	330.8	(0.0)	0.0%	330.8	(0.0)	0.0%



Key Issue Summary and Results - Sewer



FY 2019 Sewer Cost of Service Results: *Cost Pool Allocations*

- The vast majority of the Sewer BUDGET is allocated to Customers based on their relative SHARE of the assignment of costs allocated to the “common to all” (CTA) Cost Pool
- There are two major “Customer specific” Cost Pools that are solely or primarily allocated to specific Customers:
 - ✓ *Oakland Macomb Interceptor (OMID) – direct to OMID*
 - ✓ *Combined Sewer Overflow (CSO) – 83% to Detroit*



FY 2019 Sewer Cost of Service Results: *Cost Pool Allocations*

- Both of the “Customer specific” Cost Pools are experiencing “unique” circumstances with respect to the FY 2019 Cost of Service Study, that have the effect of increasing costs allocated to them
- The increase reflects a combination of refined budgetary awareness, new maintenance programs, and the the recognition of new information from the capital asset inventory and valuation project



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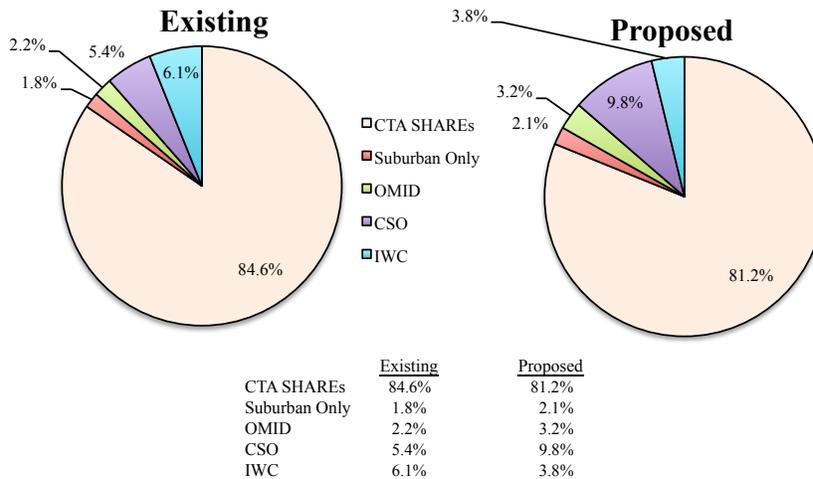
FY 2019 Sewer Cost of Service Results: *Cost Pool Allocations*

- A detailed review of the FY 2019 Sewer Operating Expense Budget indicates a variance between Common-to-All (“CTA”) costs allocated based on SHAREs and Customer specific Cost Pools
 - ✓ *CTA SHARE costs – Decrease of ~ \$7.1 million*
 - ✓ *OMID specific costs – Increase of ~ \$2.1 million*
 - ✓ *CSO program costs – Increase of ~ \$9.2 million*
 - ✓ *IWC program costs – Decrease of ~ \$4.7 million*



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FY 2019 Sewer Cost of Service Results: Cost Pool Allocations



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FY 2019 Sewer Cost of Service Results: OMID Cost Pool Allocations

- The OMID Cost Pool is experiencing an increased allocation of the FY 2019 BUDGET due primarily to a recognition that updated review indicates that the Northeast Sewer Lift Station is a larger proportional recipient of all Lift Station costs than prior cost of service study assumptions indicated
- This new awareness also impacts other indirect cost allocations that are based on direct operating expense allocations



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FY 2019 Sewer Cost of Service Results: OMID Cost Pool Allocations (\$ millions)

	FY 2018	FY 2019	Variance	% Variance
O&M Allocation				
Direct Lift Station Costs	0.42	0.93	0.51	123%
Indirect WW Operations	0.00	0.00	0.00	0%
Centralized Services	2.86	3.85	0.99	35%
Administrative Services	0.80	1.26	0.47	58%
Subtotal O&M (a)	4.08	6.05	1.97	48%
Debt Service	2.32	2.82	0.50	22%
Other MBO Req'ts	1.06	1.48	0.42	40%
Regional I&E (b)	0.13	0.16	0.02	18%
Total Revenue Req't	7.58	10.50	2.92	39%

(a) Relative (FY 2018 / FY 2019) cost assignment: lift station (15% / 25%); interceptor (5% / 3.5%)
 (b) Revenue Req't assigned based on capital asset allocation, not on intended "use of" I&E Funds.



FY 2019 Sewer Cost of Service Results: CSO Cost Pool Allocations

- The CSO Cost Pool is experiencing an increased allocation of the FY 2019 BUDGET due primarily to introduction of new maintenance programs to responsibly address facilities that are entering (for some) their third decade of service
- The FY 2019 BUDGET also reflects refined awareness regarding allocation of existing GLWA operating costs
- The increased direct costs allocable to the CSO Cost Pool also results in increased indirect cost allocations



FY 2019 Sewer Cost of Service Results: CSO Cost Pool Allocations (\$ millions)

	FY 2018	FY 2019	Variance	% Variance
O&M Allocation				
Direct WW Operations	7.87	14.19	6.33	80%
Indirect WW Operations	0.31	0.66	0.35	113%
Centralized Services (a)	0.00	0.00	0.00	0%
Administrative Services	2.00	3.93	1.93	97%
Subtotal O&M	10.17	18.78	8.61	85%
Debt Service	29.80	33.04	3.24	11%
Other MBO Req'ts	4.34	6.13	1.79	41%
Regional I&E (b)	1.71	1.85	0.13	8%
Total Revenue Req't	46.02	59.80	13.78	30%
Allocable to Detroit Customers	38.20	49.64	11.44	30%
Allocable to Suburban Customers	7.82	10.17	2.34	30%

(a) No costs related to Centralized Services have been allocated to CSO cost pool in recent years.
 (b) Revenue Req't assigned based on capital asset allocation, not on intended "use of" I&E Funds.



FY 2019 Sewer Cost of Service Results: Cost Pool Allocations

- The nature of these two Customer specific Cost Pools are similar, and methods for assigning indirect costs to both are under review as part of the Cost Allocation Project
 - ✓ *Methods of assigning Centralized Services operating expenses, etc.*
- However there are unique circumstances for these two Cost Pools:
 - ✓ *OMID Cost Pool is related to facilities that entirely serve one GLWA Customer, and could arguably be defined as "local" facilities for that Customer;*
 - ✓ *CSO Cost Pool is related to regional facilities that (while predominantly allocated to service for one Customer) are still a "common to all" wholesale service*



FY 2019 Sewer Cost of Service Results: Cost Pool Allocations

- The increased allocation of costs to the OMID Cost Pool has the effect of increasing the OMID Wholesale Service Charge by approximately 2%
 - ✓ *This figure is net of the offsetting reduction in costs allocable to the CTA Cost Pool. It is difficult to accurately isolate specific impacts of multiple changing assumptions.*
- The increased allocation of costs to the CSO Cost Pool has the effect of increasing the total Detroit allocated wholesale sewer revenue requirement by approximately 3.5%
 - ✓ *This figure is net of the offsetting reduction in costs allocable to the CTA Cost Pool. Again, it is difficult to accurately isolate specific impacts of multiple changing assumptions.*



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Key Issue Perspectives



Key Issue Perspectives

- We have been asked to explore creative implementation options related to the two principal issues introduced in this presentation
- Our perspectives are offered in the spirit of embracing the stability and equity objectives of the GLWA Strategic Charge Methodology Initiatives
- This commentary is not intended to represent formal recommendations, nor GLWA Administrative positions, but rather to offer concepts for stakeholder consideration



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GLWA One Water Strategic Charge Methodology Initiatives – Potential Implementation Schedule

	FY 2019	FY 2020	FY 2021
1 Cost Allocation Project			
1.1 Admin and Centralized Services Cost Allocation Study	X	X	X
1.2 Refined Functional Cost Structure	X	X	X
1.3 Fixed Asset Project	X	x	x
2 Wastewater Charges / Methodology Update			
2.1 2nd year of phase in for FY 2018 SHARES	X		
2.2 SHARE Update - 3rd Fixed SHARE Period			X
2.3 Evaluation of Peak Wastewater Flows and Costs			X
2.4 Wastewater Strength of Flow Sampling Plan			X
2.5 Wastewater Strength of Flow Sampling			X
2.6 Wastewater Master Plan			X
2.7 West Side Modeling & Monitoring			X
2.8 Wet Weather Optimization Refinements			X
2.9 Leverage National Expertise and Benchmarks		x	X
3 Water Charges / Methodology Update			
3.1 Units of Service Study - Non-Master Metered Customers	X		
3.2 UoS Phase 2 - System Water Audit		X	
3.3 Water Model Contract Alignment Project		X	
3.4 Alternative Allocators for Pumping and Transmission			X
3.5 Reflection of NE WTP Repurposing			X
3.6 Leverage National Expertise and Benchmarks			X



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FY 2019 Water Cost of Service Perspectives: *Units of Service Study*

- During the review of the UoS Study, the concept of a phased approach to implementing the resulting impacts was introduced by Detroit and Dearborn
- From our perspective, an implementation approach that phases in the UoS impacts over a two year period may be worthy of consideration
- We believe that such an approach recognizes that stability is a valued objective, and that further unknown cost allocation impacts will occur in the near future related to:
 - ✓ *Phase 2 of the UoS Study;*
 - ✓ *Other initiatives that emerge from the Charge Methodology Review*



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FY 2019 Water Cost of Service Perspectives: *Units of Service Study*

- The two year phased period matches that implemented last year by the Board of Directors for the Sewer SHARES, a FY 2018 “key issue” that had (in broad terms) a directionally opposite impact on Sewer customer classes compared to the UoS impact on Water customer classes
- As part of the Charge notification process, GLWA notified Customers of two potential Scenarios of proposed Charges to Customers
 - ✓ *Scenario 1 = full implementation of UoS;*
 - ✓ *Scenario 2 = 2 year phased implementation*



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FY 2019 Sewer Cost of Service Perspectives: *Cost Pool Allocations*

- Both of the “Customer specific” Cost Pools are experiencing “unique” circumstances with respect to the FY 2019 Cost of Service Study, reflecting a combination of refined awareness, new programs, and the recognition of:
 - ✓ *A potential operating agreement between GLWA and OMID regarding the Northeast Sewer Pumping Station may change the cost dynamics;*
 - ✓ *The fact that the costs to operate and maintain the CSO facilities are “dynamic” and irregular*



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FY 2019 Sewer Cost of Service Persepectives: *Cost Pool Allocations*

- The nature of these two Customer specific Cost Pools are similar, and methods for assigning indirect costs to both are under review as part of the Cost Allocation Project
 - ✓ *Methods of assigning Centralized Services operating expenses, etc.*
- However there are unique circumstances for these two Cost Pools:
 - ✓ *OMID Cost Pool is related to facilities that entirely serve one GLWA Customer, and could arguably be defined as “local” facilities for that Customer;*
 - ✓ *CSO Cost Pool is related to regional facilities that (while costs are predominantly allocated to one Customer) are still a “common to all” wholesale service*



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FY 2019 Sewer Cost of Service Perspectives: *Cost Pool Allocations*

- We believe that both of these Customer class impacts may be well served by the concept of a potential ***“Charge Stability Adjustment”*** that embraces a notion of comparing actual Cost Pool expenditures to budgeted amounts
- Under this approach, Sewer Service Charges would be established at 100% of the BUDGET assigned to the Customer specific (OMID / CSO) Cost Pools, with the understanding that:
 - ✓ *Actual costs to these Cost Pools would be tracked and compared to original budgets;*
 - ✓ *Potentially, adjustments to future charges (for FY 2020 and/or beyond) would be made to reflect actual vs. budget performance in “Customer specific” Cost Pools*



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FY 2019 Sewer Cost of Service Perspectives: *Cost Pool Allocations*

- We believe that this ***“Charge Stability Adjustment”*** concept is consistent with the overall equity and stability strategy that is fundamental to the GLWA Strategic Charge Initiatives
- We further believe that the concept may provide a valuable tool for GLWA to address potentially volatile expenditures in these unique Cost Pools, and avoid unintended consequences to the directly impacted Customers
- We do NOT believe that the notion should be applied to budget/actual variances in revenues or “CTA SHARES” revenue requirements



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FY 2019 Sewer Cost of Service Perspectives: *Cost Pool Allocations*

- We believe any implementation of the “**Charge Stability Adjustment**” concept will require further analysis and policy development, including:
 - ✓ *Understanding that the OMID “Charge Stability Adjustment” (at least as referenced in this commentary) is suggested to be limited to the potential recognition of a successfully negotiated operating agreement for the Northeast Sewer Pump Station;*
 - ✓ *Acknowledging that OMID Cost Pool adjustments are applicable to the OMID Customer only, while CSO Cost Pool adjustments are subject to the 83 / 17 allocation agreement;*
 - ✓ *Establishing material thresholds for implementing “Charge Stability Adjustments”;*
 - ✓ *Understanding how I&E Funds are generated, included in charges, committed, and expended*



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Financial Services Audit Committee Communication

Date: February 9, 2018

To: Great Lakes Water Authority Audit Committee

From: Nicolette N. Bateson, CPA, Chief Financial Officer/Treasurer

Re: Review of the Proposed FY 2019 through FY 2023 Capital Improvement Plan

Background: The five-year capital improvement program (CIP) is developed simultaneously with the five-year financial plan. While the plan is reviewed by the Capital Improvement Planning Committee, it is also presented to the Audit Committee to ensure alignment of objectives across the Great Lakes Water Authority. In addition, the CIP is presented at various stages of development at the customer outreach Asset Management & CIP Work Group meetings.

Analysis: The proposed capital improvement plan is available online at <http://www.glwater.org/about-us/capital-improvement-planning-committee/>. Attached is the presentation presented to the Asset Management & CIP Work Group Meeting on Thursday, February 8, 2018. A similar presentation was provided to the GLWA Capital Improvement Planning Committee at its meeting on Tuesday, February 6, 2018. The attached presentation will also be reviewed with the Audit Committee.

Proposed Action: Receive and file report.

Asset Management & CIP Work Group Meeting

February 8, 2018

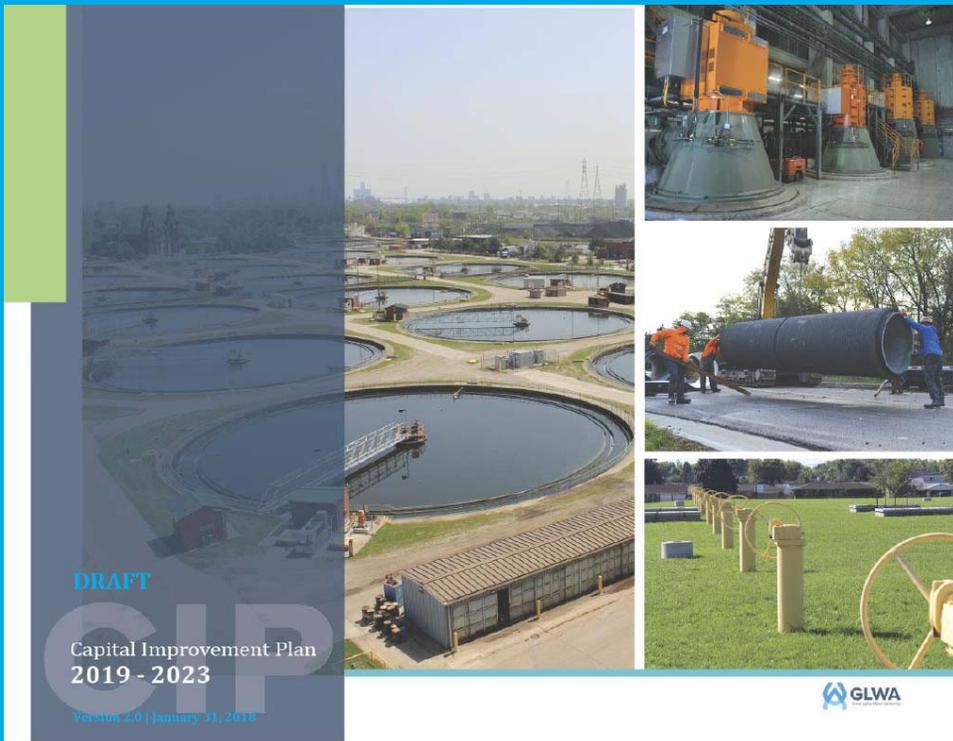
8:00 a.m. - 10:00 a.m.

Water Works Park



Agenda Review

Desired Outcomes:	<ul style="list-style-type: none"> • Ensure voice of stakeholders through stakeholder involvement in the Asset Management / CIP process.
8:00 a.m.	Welcome . . . Agenda Review . . . Introductions – Charlie Fleetham
8:05 a.m.	December 19, 2017 Meeting Summary – Charlie Fleetham <ul style="list-style-type: none"> • Meeting Results Form Actions
8:15 a.m.	2019 – 2023 CIP Version 2 – Jody Caldwell
8:45 a.m.	Highlighted Water Engineering Projects – Grant Gartrell
9:15 a.m.	Financial Alignment 2019-2023 CIP Version 2 – Nickie Bateson
9:35 a.m.	CIP Breakout Session – Group Discussion
9:55 a.m.	Closing Comments / Next Steps <ul style="list-style-type: none"> • Meeting Results Form
10:00 a.m.	Meeting Adjourns



GLWA's FY 2019 - 2023 Capital Improvement Plan

*AM/CIP Member Outreach Work Group
February 8, 2018*

8:00 a.m. – 10:00 a.m.



Revised: 2018-02-06

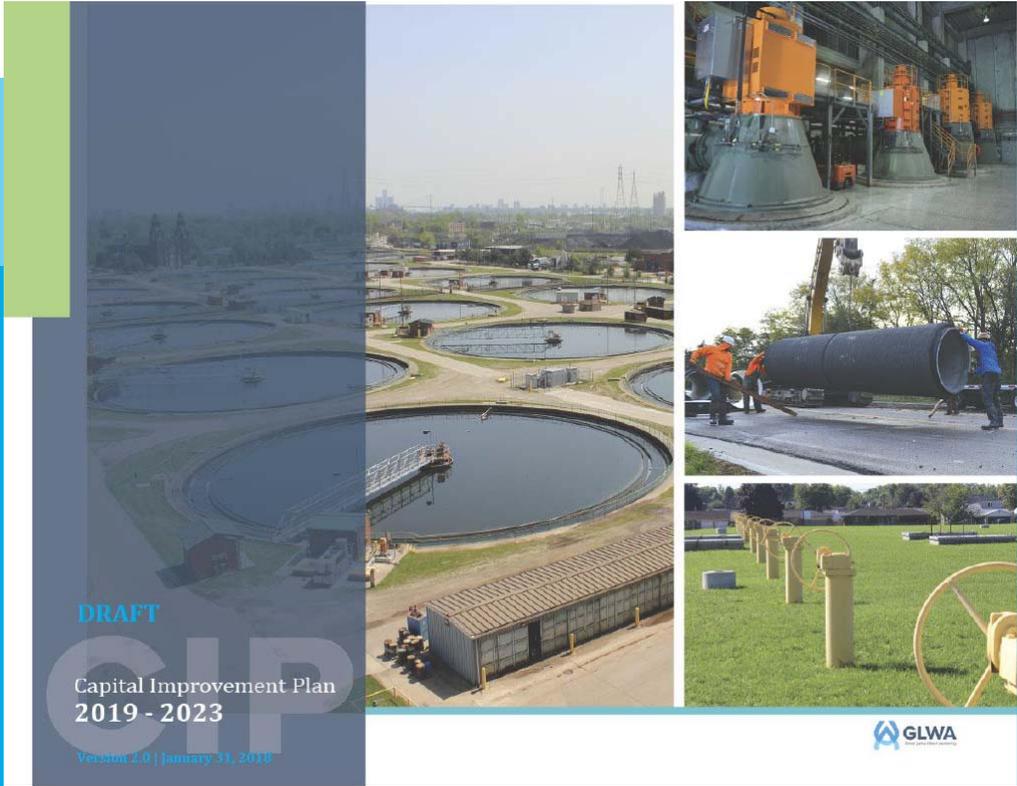
CIP Presentation Agenda

- **Introduction**
 - Major CIP Changes Since Version 1
 - Questions & Answers from CIP Version 1
- **Water Engineering**
 - General Strategy in Selecting Projects
 - Highlighted Projects
- **CIP Relationship to Financial Plan**
- **Next Steps & Closing Remarks**
 - Next Steps
 - Closing Remarks

What We Are Trying to Accomplish

- Increased redundancy, reliability & resiliency of water and wastewater systems
- Adherence with long-term planning document recommendations
- Provide opportunity for Board, Authority Members and stakeholders to provide input
- Best-in-class planning and execution of capital program
 - Efficient spending
 - Planning of human resource needs
 - Planning of financial resource needs

Major CIP Changes Since V1



New To The Plan – Chapter IV: Project Location Summary

- Projects By Jurisdiction
- Once Approved – Project Information (Location & BCE) To Be Provided in the CIP Viewer
- For Access & Instructions Email:
 - WAMR@glwater.org
 - GDRSS@glwater.org

Jurisdiction		CIP Projects			
City of Detroit					
112001	122003	211004	212005	213007	216006
112002	122009	211005	212006	213008	216007
112003	122010	211006	212007	213009	222002
112004	122015	211007	212008	214001	222007
115001	132009	211008	213001	215001	232001
115002	171100	211009	213002	216001	232002
115003	171300	212001	213003	216002	232003
115004	211001	212002	213004	216003	361001
116001	211002	212003	213005	216004	361002
116002	211003	212004	213006	216005	380600
Lapeer County					
132007	132021				
Macomb County					
122001					
Oakland County					
122013	132004	132011	132014	132017	
132003	132010	132013	132016	132020	
Saint Clair County					
111001	111003	111005	111007	171000	
111002	111004	111006	111008		
Wayne County - Outside Detroit					
113001	114001	114009	122005	132001	132022
113002	114002	114010	122006	132002	171200
113003	114004	114011	122007	132006	
113004	114005	114012	122011	132012	
113005	114006	114013	122012	132015	
113006	114007	114014	122014	132018	
113007	114008	114015	122016	132019	

Jurisdiction		CIP Projects			
Multiple Counties					
114003	132024	170700	222005	260400	380500
116003	161001	170800	222006	260500	380700
116004	170100	170900	233001	260600	380800
122002	170200	171400	233002	331001	380900
122004	170300	171500	251002	331002	381000
132005	170400	222001	260100	351001	
132008	170500	222003	260200	361003	
132023	170600	222004	260300	380400	



New To The Plan – 19 New Water Projects

- 10 Booster Pump Station Projects
- 4 Water Treatment Plant Sanitary Survey Related Improvements
- 2 Reservoir Rehabilitation
- 1 Energy Management
- 1 Roof Replacement
- 1 NE WTP Service Line Replacement

Projects Added Since Version 1			(\$1,000's)	
NEW CIP #	Title	Significance	5 Year CIP	Project Total
112004	NE - WTP Relocation of 12" service line at front of plant	Plant service water is currently fed off of a DWSD owned 12" water main along 8 Mile Road in front of the plant. GLWA is charged by DWSD for use of this water which represents a substantial long term cost. Project involves disconnecting from the DWSD 12"	2,460	2,460
132013	Adams Road Pumping Booster VFD & Gate Valves to Optimize Service Delivery	Provide new VFDs to meet viable system demands with respect to pressure (improve customer service) and replace gate valves with new more reliable valves.	1,558	1,558
132014	Adams Road Pumping Booster Pumping & Switch Gear Improvements	Existing pumps, motors and electrical gear for station power are beyond useful service life and requires replacement to keep station reliable.	1,051	5,676
132015	Newburgh BPS - Pumping System & Building Upgrades	Existing pumps, motors and electrical gear are beyond useful service life. Replacement will provide new equipment that is more reliable, energy efficient and optimally sized for system demands. Other improvements involve building mechanical equipment rep	7,795	12,170
132016	North Service Center BPS Improvements	Recondition line pumps L-2 through L-6, add VFD, replace existing valves and electrical gear with new due to equipment being past useful service life in order to provide more reliable equipment.	4,526	24,920
132017	North Service Center BPS - On-Site & Off-Site Yard Piping & Valve Replacement	Yard piping and valves are original to the facility and are beyond useful service life. New valves and yard piping are needed to improve reliable operation; and in order to provide reliable shutoff and water tightness during the subsequent station upgrade	5,076	5,076
132018	Schoolcraft BPS - Pumps, Yard Piping, Valves & Reservoir Pumps & Underdrain System	Existing pumps, yard piping and station valves are past their useful service life and require replacement to maintain reliable operation. Existing belt drain underdrain system protects reservoir from floating when empty so underdrain system must perform t	4,011	10,564
132019	Wick Road BPS - Switchgear, Control Valves & Hydropneumatic Tank Replacement	Existing switchgear, control valves and hydropneumatic tank at station is beyond useful service life and requires replacement to maintain station reliability	1,015	5,570
132020	Franklin BPS - Isolation Gate Valves & Electrical Actuator Improvements	Existing gate valves, pumps, motors, and valve operators are beyond useful service life and require replacement to maintain reliable station.	2,855	10,170
132021	Imlay BPS - Replace VFDs, Pumps, Motors and HVAC	Existing pumps, motors, VFDs and HVAC system need replacement in order to maintain reliability in the station's operation.	5	12,107
132022	Joy Road BPS - Replace Reservoir Pumps, Motors and Isolation Valves	Existing pumps, motors, and valves are past their useful service life and require replacement to maintain reliable station operation. Existing header has suffered corrosion and needs replacement.	6	6,109
132023	Reservoir Inspection & Rehabilitation @ Water Works Park and Northeast Water Treatment Plants; and Wick, Schoolcraft, Northwest, North Service Center, and Michigan Avenue Pumping Stations	Existing reservoirs need to be inspected and any necessary rehabilitation conducted every 5 years according to MDEQ guidelines; and in order to assure that reservoirs are protective of drinking water quality.	1,003	19,109
132024	Reservoir Inspection and Rehabilitation @ Adams, East-side, Farmington, Ford Road, Franklin, Haggerty and Joy Road	Existing reservoirs need to be inspected and any necessary rehabilitation conducted every 5 years according to MDEQ guidelines; and in order to assure that reservoirs are protective of drinking water quality.	1,003	19,109
171000	LH - WTP Sanitary Survey Improvements	Address the sanitary survey needs that are identified by the MDEQ as part of its 3-year rotation of plant sanitary surveys where regulatory needs are identified.	241	488
171100	NE - WTP Sanitary Survey Improvements	Address the sanitary survey needs that are identified by the MDEQ as part of its 3-year rotation of plant sanitary surveys where regulatory needs are identified.	391	796
171200	SW-WTP Sanitary Survey Improvements	Address the sanitary survey needs that are identified by the MDEQ as part of its 3-year rotation of plant sanitary surveys where regulatory needs are identified.	318	717
171300	WWP - WTP Sanitary Survey Improvements	Address the sanitary survey needs that are identified by the MDEQ as part of its 3-year rotation of plant sanitary surveys where regulatory needs are identified.	241	488
171400	Energy Management Program @ All Water Facilities	Existing lighting systems at most facilities are energy inefficient. Replacement with new, modern LED lighting type systems will reduce electrical usage and costs.	1,906	7,000
171500	Roof Replacement - Various Water Facilities	These existing roofs are leaking and are beyond repair. Replacement is needed to protect building interiors and most importantly sensitive electrical equipment.	2,490	27,246



Cost Estimate Classifications - WATER

Water	Cost Estimate Class	Project Definition	Method	5-Year CIP Amount (\$1,000's)	% of Total CIP	# of Phases
	1	50% to 100%	Deterministic	\$ 15,877	2%	19
	2	30% to 70%	Primarily deterministic	\$ 3,872	1%	3
	3	10% to 40%	Combinations of detailed, unit cost, activity-based + class 4 & 5 methods	\$ 116	0%	1
	4	1% to 15%	Expert opinion, trend analysis, more parametric	\$ 84,415	12%	8
	5	0% to 2%	Judgement, trend analysis, parametric	\$ 245,054	34%	20
	Currently Unidentified			\$ 363,495	51%	128
Total 5-Year CIP Amount			\$ 712,829	100%	179	

Cost Estimate Classifications - WASTEWATER

Wastewater	Cost Estimate Class	Project Definition	Method	5-Year CIP Amount (\$1,000's)	% of Total CIP	# of Phases
	1	50% to 100%	Deterministic	\$ 80,452	13%	14
	2	30% to 70%	Primarily deterministic	\$ 82,581	13%	12
	3	10% to 40%	Combinations of detailed, unit cost, activity-based + class 4 & 5 methods	\$ 51,989	8%	8
	4	1% to 15%	Expert opinion, trend analysis, more parametric	\$ 234,142	37%	44
	5	0% to 2%	Judgement, trend analysis, parametric	\$ 101	0%	1
	Currently Unidentified				\$ 183,894	29%
Total 5-Year CIP Amount				\$ 633,159	100%	118

WATER Changes Between Version 1 & Version 2

WATER: 2019-2023 CIP Summary Table

\$1,000's

WATER	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	2019-2023 CIP Total	Project Total
2018 Water	270,130	137,655	194,089	197,259	141,305	130,300	98,640	-		
2019 V1 Water	160,710	77,486	142,703	199,931	202,483	214,946	223,880	449,517	983,943	1,671,656
2019 V2 Water	160,918	40,043	66,038	137,583	155,734	178,300	175,174	789,815	712,829	1,703,605
V1 to V2 Change:	208	(37,443)	(76,665)	(62,348)	(46,749)	(36,646)	(48,706)	340,298	(271,114)	31,949

- Reduction of \$271 Million over the five-year plan from Version 1
- Realistic look at sequencing & implementation
- Evaluation of project contingencies and allowances
- Allowances decreased by \$33.5 Million

WASTEWATER Changes Between Version 1 & Version 2

WASTEWATER: 2019-2023 CIP Summary Table

\$1,000's

WASTEWATER	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	2019-2023 CIP Total	Project Total
2018 Wastewater	338,753	160,746	197,493	189,794	115,442	89,250	23,739	-		
2019 V1 Wastewater	234,829	102,389	191,866	183,556	158,866	144,788	105,203	77,643	784,279	1,199,140
2019 V2 Wastewater	235,026	70,632	105,183	111,155	111,952	136,411	168,458	162,428	633,159	1,101,245
V1 to V2 Change:	197	(31,757)	(86,683)	(72,401)	(46,914)	(8,377)	63,255	84,785	(151,120)	(97,895)

- Reduction of \$151 Million over the five-year plan from Version 1
- Realistic look at sequencing & implementation
- Evaluation of project contingencies and allowances
- Allowances decreased by \$52.4 Million



Questions & Answers From CIP Version 1

The thumbnail shows the cover page of the 'GLWA 2019-2023 Capital Improvement Plan Version 1.0'. It features the GLWA logo at the top left, followed by the title 'GLWA 2019-2023 Capital Improvement Plan Version 1.0' and the subtitle 'Comments, Questions and Answers Date: January 31, 2018'. Below this is a 'Summary' section with a small grid of images showing various water infrastructure projects. The text in the thumbnail provides a detailed overview of the plan's development process, including the release of Version 1.0, the involvement of the Capital Improvement Planning Committee and the Customer Outreach Workgroup, and the collection of comments and questions from stakeholders. It also mentions that one written response was received from Oakland County and that the plan is being reviewed for Version 2.0.

Questions & Answers From CIP Version 1

- One written response was received
 - Overarching comment:

“Overall, I think the plan looks really good with an amazing amount of detail. It shows that a lot of thought, time and effort has been put into developing the plan.”
 - Official responses to questions are available in hard copy.

Questions & Answers From CIP Version 1

- 13 Comments and Questions:
 - Prioritization Threshold
 - Ability to Execute
 - Status of Energy Management Type Projects
 - Study Type Projects (Possible Reclassification to O&M)
 - Revision of CIP Numbering System
 - Minor Variation in Projected Expenses Between Tables
 - Suggestions: Lower Project Thresholds in Chapter 1 & Remove Canceled, Closed-Out and Reclassified Projects from Summary Tables
 - Errors: Spelling of a Road Name Spelling & CIP Table Header mislabeled
 - Project Specific Questions: 114007, SPW Activated Carbon System & 132011, West Service Center – Energy Management: VFD Installation
 - Programs & Allowances with Project Roll-ups



Highlighted Water CIP Projects

Grant Gartrell



Criteria Used to Select Highlighted Water Projects

1. Decommissioning treatment at Northeast Water Plant
2. Right-sizing system capacity vs. water demands
3. Improving water transmission system redundancy
4. Addressing water system reliability

Highlighted Water Projects

CIP #	Project	Project Driver
116002	Raw Water Tunnel Rehabilitation	System Reliability
122004	96" Water Main Relocation	Transmission Redundancy
122016	Downriver Transmission Main Loop	Transmission Redundancy
122013	14 Mile Road Transmission Loop	Transmission Redundancy
122003	Water Works Park to Northeast Transmission System	Decommissioning NE
114013	Springwells Reservoir Fill Line Construction	Decommissioning NE
114002	Springwells Low-High Pump Station Improvements	System Reliability
132010	West Service Center Division Valve & Reservoir Upgrades	Decommissioning NE
132012	Ypsilanti Booster Station Improvements	System Reliability
115003	Water Works Park Condition Assessment	System Reliability

Projects Necessary to Decommission Treatment at Northeast WTP

- 122003 New Water Main Water Works Park to Northeast Water Plant
- 114013 Springwells Reservoir Fill Line Construction
- 116002 Raw Water Tunnel Rehabilitation
- 132010 West Service Center Division Valves Replacement
- 115003 Water Works Park Condition Assessment
- 115001 Water Works Park Yard Piping Replacement

Highlighted Water Projects



CIP 116002

CIP Number:	116002	
Old CIP No.:	1327	
Project Title:	Pennsylvania, Springwells and Northeast Raw Water Supply Tunnel Improvements	
Project Status:	Active	<input type="checkbox"/> Innovation
Budget:	Water	<input type="checkbox"/> Water MP Right Sizing
Classification Lvl 1:	Water	<input type="checkbox"/> Reliability/Redundancy
Classification Lvl 2:	Treatment Plants & Facilities	
Classification Lvl 3:	General Purpose	
Project Location:	City of Detroit	Project Score
Project Significance:	Project critical to production at Springwells WTP during repurposing of Northeast WTP as recommended by the 2015 WMPU. Contract CS-1623 identified problem areas on the raw water supply system that compromised the system's ability to meet demands during the repurposing of Northeast WTP.	
Project Engineer/Manager:	Todd King	
Manager:	Grant Gartrell	
Scope of Work:	The scope of work is to conduct supplemental investigations to design the repairs for the sections of tunnel identified in CS-1623 as having structural concerns. Three areas were identified with the highest concern being a portion of the Springwells Tunnel near the Springwells WTP.	
Challenges:	The tunnels are approximately 80 feet below the surface of the Detroit River. This poses challenges for assessing the extent of damage to the structures, as well as repair. Dewatering the tunnels to repair them will create extensive stresses that must be considered prior to performing the work. Maintaining a supply of raw water to Springwells, Northeast and Water Works Park throughout construction to meet finished water production requirements/demands of the system. Specialized/complicated construction.	



Crown cracks are especially concerning in the Springwells Raw Water Tunnel

CIP 116002 Raw Water Tunnel Rehabilitation

Project Information

- Active
- Phase: construction
- Project Delivery: progressive design-build
- Contract: DB-150
- Initial Contract Amount: \$10-million
- Estimated to finish at \$34-million
- GLWA Project Manager: Todd King

Project Significance and Scope

Project Significance:

- Severe cracking and tunnel ovality were discovered during a recent condition assessment
- Severity of cracks raises concern of tunnel collapse

Scope of Work:

- Rehabilitate the stressed and severely cracked segments of the Northeast, Pennsylvania and Springwells raw water tunnels

CIP 116002 Raw Water Tunnel Rehabilitation

Springwells Tunnel Crack



Springwells Tunnel Cracking



CIP 116002 Raw Water Tunnel Rehabilitation

Cracking in Northeast Tunnel



Pennsylvania Tunnel Invert Crack



CIP 122004

CIP Number: 122004
Old CIP No.: 1321
Project Title: 96-inch Main Relocation, Isolation Valves Installations, and New Parallel Main

Project Status: Active
Budget: Water
Classification Lvl 1: Water
Classification Lvl 2: Field Services
Classification Lvl 3: Transmission System
Project Location: Multiple Counties

- Innovation
- Water MP Right Sizing
- Reliability/Redundancy

Project Score 65.2



Map of the 96-inch main relocation away from the landfill

Project Significance: Project critical to providing redundancy to Lake Huron WTP supply and protection of water supply from potential contamination. Project includes relocation around existing landfill and addition of a parallel main with interconnection to meters between Romeo and 24 Mile Road.

Project Engineer/Manager: Grant Gartrell
Manager: Grant Gartrell

Scope of Work: Relocate 2.5 miles of 96-inch transmission main currently located in an EPA NPL landfill, a portion of which is submerged in landfill leachate. Relocation includes crossing the Clinton River, coordination with many various authorities having jurisdiction and easement acquisition. Isolation valve installation portion of the project provides the ability to isolate segments of the 96-inch main between Imlay Station and North Service Center for maintenance while maintaining customer expected level of service.

Challenges: Shutdown, isolation and live tapping of the 96" main while maintaining the Lake Huron WTP supply and operations of Rochester Station. Routing and possible property acquisition for both the parallel main and relocation around the landfill.

CIP 122004 96” Water Main Relocation

Project Information

- Active
- Phase: study
- Project Delivery: design-bid-build
- Contract: CS-165
- Contract Amount: \$139-million (est.)
- GLWA Project Manager: Grant Gartrell

Project Significance & Scope

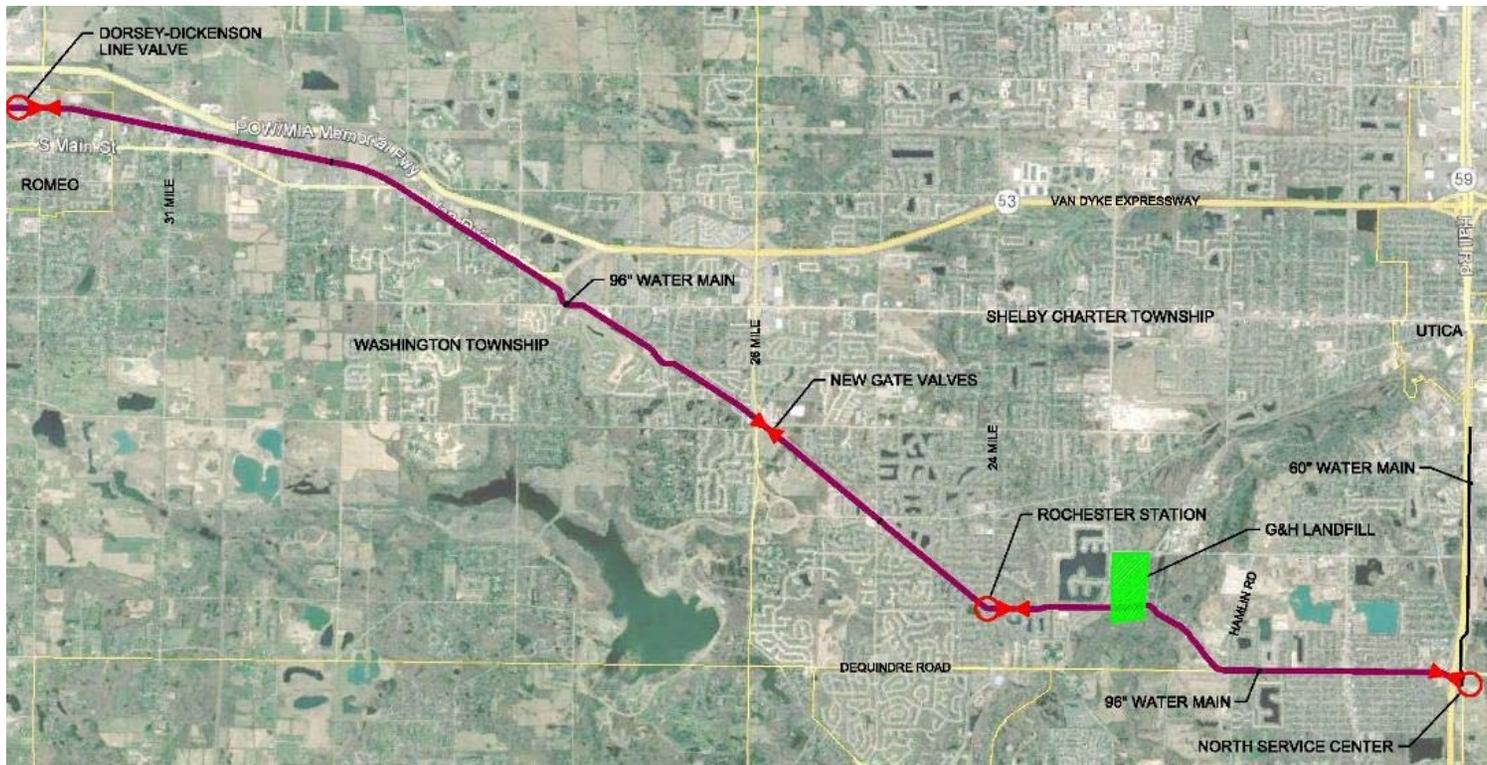
Project Significance:

- Relocate main out of closed landfill
- Provide redundancy to customers served by 96” water main

Scope:

- Install 13,500 feet of new 96” water main
- Install 4 new isolation valves with large by-passes at master meter locations and at North Service Center Pumping Station
- Upsize suction feed to Rochester Booster Pumping Station

CIP 122004 96" Water Main Relocation



CIP 122004 96" Water Main Relocation



CIP 122016

CIP Number: 122016
Old CIP No.:
Project Title: Downriver Transmission Main Loop
Project Status: New
Budget: Water Innovation
Classification Lvl 1: Water Water MP Right Sizing
Classification Lvl 2: Facilities Reliability/Redundancy
Classification Lvl 3: Transmission System
Project Location: Wayne County - Outside Detroit **Project Score** 58.4



Example transmission main

Project Significance: The Downriver Transmission Main that currently serves Brownstown, Riverview, Woodhaven, Trenton, Flat Rock, Gibraltar, Rockwood, South Rockwood, and Berlin Township is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. This project would provide a transmission main loop to the Downriver system to increase redundancy on this branch of the system.

Project Engineer/Manager: Timothy Kuhns
Manager: Grant Gartrell

Scope of Work: Install approximately 6 Miles of 16-inch transmission main and 3 Miles of 24-inch transmission main from along the Electric Avenue corridor to parallel the existing transmission system in this branch of the system.

Challenges: Assuming ownership of the 24-inch transmission main through the City of Trenton may require condition assessment of this portion of pipeline.

CIP 122016 Downriver Transmission Main Loop

Project Information

- Upcoming
- Phase: design
- Project Delivery: design-bid-build
- Contract: TBD
- Contract Amount: \$34-million (est.)
- GLWA Project Manager: Tim Kuhns
- Project Significance: Downriver transmission system is single feed system with no transmission redundancy.

Scope of Work

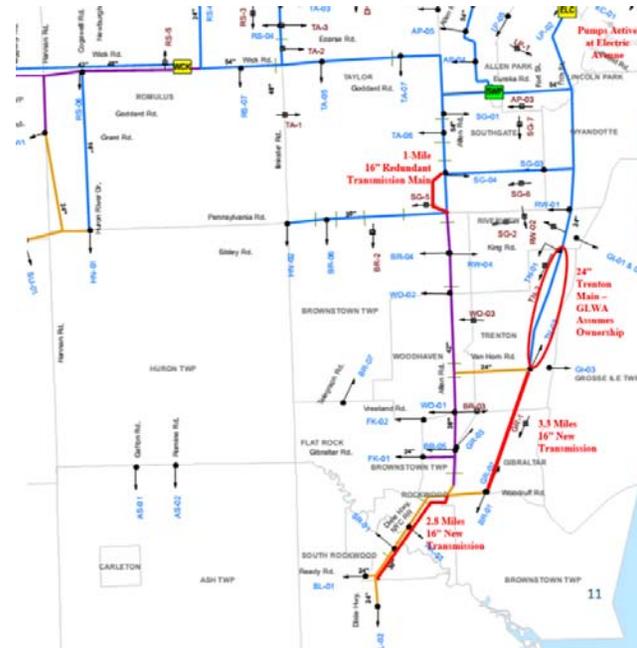
- Pump replacement at Electric Avenue
- 16-inch transmission main - Allen Road
- GLWA to inspect/rehab/assume ownership of 24-inch transmission through Trenton
- 16-inch transmission main between Van Horn and Woodruff
- 16-inch transmission between Woodruff and Ready Road

CIP 122016 Downriver Transmission Main Loop

Existing System



Proposed Loop



CIP 122013

CIP Number:	122013
Old CIP No.:	1405
Project Title:	14 Mile Transmission Main Loop
Project Status:	Future Planned
Budget:	Water
Classification Lvl 1:	Water
Classification Lvl 2:	Facilities
Classification Lvl 3:	Transmission System
Project Location:	Oakland County
	<input type="checkbox"/> Innovation
	<input type="checkbox"/> Water MP Right Sizing
	<input checked="" type="checkbox"/> Reliability/Redundancy
	Project Score 58.4
Project Significance:	The 14 Mile Transmission Main that currently serves West Bloomfield Township, Farmington Hills, Commerce Township, Novi, Walled Lake, and Wixom is a single feed transmission system. If a disruption to service were to occur on this transmission main, many of the users along this main would experience a complete loss of pressure and flow. This project would provide a transmission main loop to the 14 Mile system to increase redundancy on this branch of the system.
Project Engineer/Manager:	Timothy Kuhns
Manager:	Grant Gartrell
Scope of Work:	Install approximately 6 Miles of 48-inch transmission main from 8 Mile Road to 14 Mile Road along Haggerty Road. The work will also include connections to the yard piping and reservoir fill line at the Haggerty Booster Station as well as a control valve to regulate flows along the transmission main.
Challenges:	Routing and construction staging for the proposed piping in the vicinity of the Haggerty and 8 Mile Intersection appears to be a significant challenge as this intersection is one of the highest traffic volume intersections in Southeast Michigan.

CIP 122013 14 Mile Transmission Loop

Project Information

- Upcoming
- Phase: design
- Project Delivery: design-bid-build
- Contract: TBD
- Contract Amount: \$49-million (est.)
- GLWA Project Manager: Tim Kuhns
- Project Significance: 14 Mile transmission system is single feed system with no transmission redundancy.

Scope of Work

- Transmission Main Loop from 8 Mile to 14 Mile along Halsted/Haggerty Corridor
- Transmission Main reinforcement from west of M-5 to Decker Road along 14 Mile.

CIP 122013 14 Mile Transmission Loop

Existing System

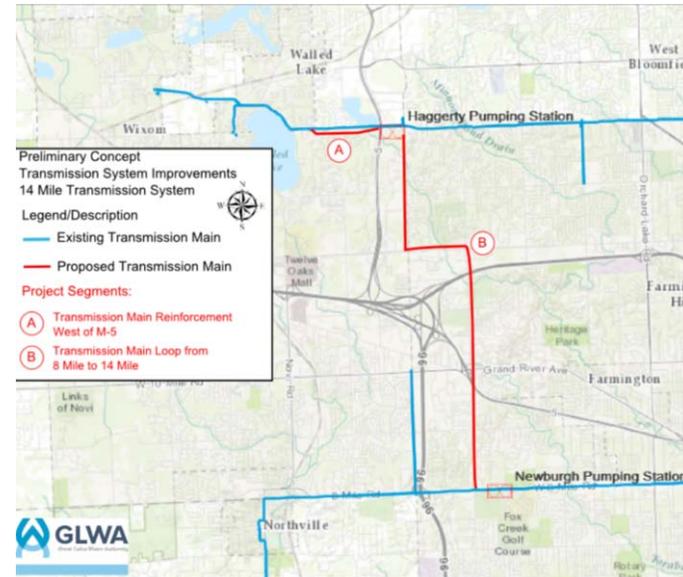


Service Management Plan - Section 7

Table 7-13: Wholesale Customers Served by Single Transmission Mains

High Priority Master Meters*	All Master Meters on the Single Line	Single Main	Whole 2035 Population Served	Whole Average Day Demand 2035 (MGD)	Master Plan Conclusion
WAMR_CM02, WAMR_CM01, WAMR_WA01, WAMR_NV04, WAMR_CM03, WAMR_NV05,W AMR_WX01	WAMR_FT08, WAMR_WB03, WAMR_FT09, WAMR_WB02, WAMR_FT10, WAMR_WB06, WAMR_WB07, WAMR_CM02, WAMR_CM01, WAMR_WA01, WAMR_NV04, WAMR_CM03, WAMR_NV05,W AMR_WX01	From Haggerty Station To Wixom	150,256	18.5	Investigate the use of adjacent community water systems during an emergency along 14 Mile Road west of the Franklin Station. The emergency plan should include the Haggerty and Franklin reservoir supplies.
	WAMR_BR06,				

Proposed Loop



CIP 122013 14 Mile Transmission Loop

Project Information

- Upcoming
- Phase: design
- Project Delivery: design-bid-build
- Contract: TBD
- Contract Amount: \$49-million (est.)
- GLWA Project Manager: Tim Kuhns
- Project Significance: 14 Mile transmission system is single feed system with no transmission redundancy.

Scope of Work

- Transmission Main Loop from 8 Mile to 14 Mile along Halsted/Haggerty Corridor
- Transmission Main reinforcement from west of M-5 to Decker Road along 14 Mile.

CIP 122013 14 Mile Transmission Loop

Existing System

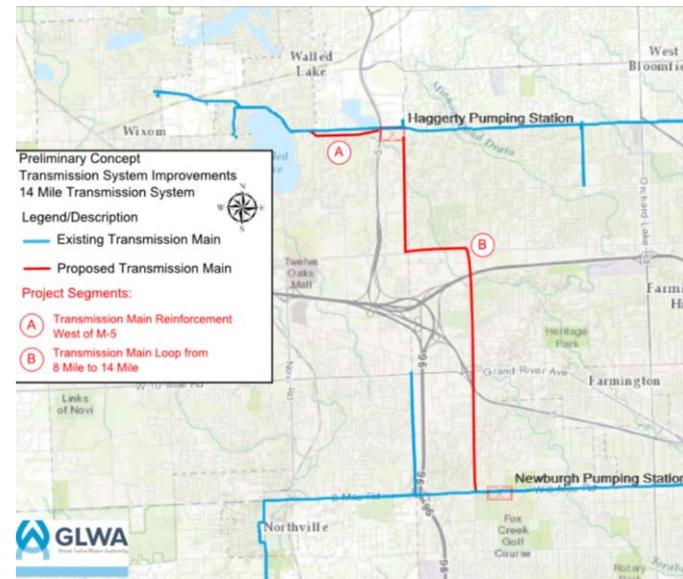


Service Management Plan - Section 7

Table 7-13: Wholesale Customers Served by Single Transmission Mains

High Priority Master Meters*	All Master Meters on the Single Line	Single Main	Whole 2035 Population Served	Whole Average Day Demand 2035 (MGD)	Master Plan Conclusion
WAMR_CM02, WAMR_CM01, WAMR_WA01, WAMR_NV04, WAMR_CM03, WAMR_NV05,W AMR_WX01	WAMR_FT08, WAMR_WB03, WAMR_FT09, WAMR_WB02, WAMR_FT10, WAMR_WB06, WAMR_WB07, WAMR_CM02, WAMR_CM01, WAMR_WA01, WAMR_NV04, WAMR_CM03, WAMR_NV05,W AMR_WX01	From Haggerty Station To Wixom	150,256	18.5	Investigate the use of adjacent community water systems during an emergency along 14 Mile Road west of the Franklin Station. The emergency plan should include the Haggerty and Franklin reservoir supplies.
	WAMR_BR06,				

Proposed Loop



CIP 122003

CIP Number: 122003
Old CIP No.: 1305
Project Title: Waterworks Park WTP to Northeast WTP Transmission Main
Project Status: Active
Budget: Water
Classification Lvl 1: Water
Classification Lvl 2: Field Services
Classification Lvl 3: Transmission System
Project Location: City of Detroit

- Innovation
- Water MP Right Sizing
- Reliability/Redundancy

Project Score 62.4



NONE

Project Significance: New Transmission System needed to convey finish water to re-purposed Northeast WTP.
Project Engineer/Manager: Timothy Kuhns
Manager: Grant Gartrell
Scope of Work: GLWA system has excess treatment capacity. In order to right-size system capacity and avoid future treatment upgrade, treatment is to be discontinued at the Northeast WTP. In order to discontinue treatment at Northeast, a new finish water supply from Waterworks Park to Northeast is needed.
Challenges: Route determination, utility conflicts and connections to yard piping at Northeast and Water Works Park WTPs. The large new main will cross I-94 and run through 7 miles of residential/commercial streets.

CIP 122003 Water Works Park to Northeast Transmission System

Project Information

- Active
- Phase: Study
- Project Delivery: TBD
- Contract: TBD
- Contract Amount: \$128-million (est.)
- GLWA Project Manager: Tim Kuhns
- Project Significance: A new finished water transmission main is needed from Water Works Park to Northeast to decommission treatment at Northeast

Scope of Work

- Approximately 37,000 feet of 72-84” Transmission Main from Water Works Park to Northeast.

CIP 122003 Water Works Park to Northeast Transmission System

Route Alternatives



Route Challenges

ITEM NO. 1
ROUTE ISSUE: Connections to Water Works Park WTP must be compatible with existing piping and pumping
CHDM TEAMS POTENTIAL SOLUTION: Coordinate pipeline layout, size, and hydraulic performance with GLWA's current CS-055 yard piping project, compare system hydraulics to existing pump curves, and provide flow and head regulation and other modifications needed for compatibility.

ITEM NO. 2
ROUTE ISSUE: Route selection in the neighborhoods between Water Works Park WTP and I-94 involves a complex set of trade-offs
CHDM TEAMS POTENTIAL SOLUTION: Existing water line congestion, limited available space, and potential community impacts require carefully selected route alternatives that are sensitive to each viewpoint. A multi-parameter route analysis supported by a public involvement strategy involving impacted neighborhoods, input from GLWA staff, and our knowledge of the area will facilitate selection of the best route.

ITEM NO. 3
ROUTE ISSUE: Interconnections with existing mains has the potential to reduce capital costs and increase redundancy
CHDM TEAMS POTENTIAL SOLUTION: Work with GLWA to determine if any existing water mains are reasonable candidates for interconnections to provide long-term, parallel transmission capacity. Our team will consider applicable incentives and potentially reduce the size of the new main and improve the reliability of some of the older infrastructure.

ITEM NO. 4
ROUTE ISSUE: Manage risk and minimize community impacts while providing adequate work space for I-94 depressed crossing
CHDM TEAMS POTENTIAL SOLUTION: We will employ a risk register to help mitigate GLWA's risk and consider opportunities to use City-owned parcels adjacent to I-94 for freeway tunneling operation. Use of these parcels can reduce access issues for residents, minimize existing utility conflicts, reduce project cost, and streamline crossing configurations.

ITEM NO. 5
ROUTE ISSUE: Significant urban congestion exists along routes following the existing Garland Main
CHDM TEAMS POTENTIAL SOLUTION: As illustrated by the potential alternative routes, our team will develop alternative routes that utilize less congested corridors. We will consider using new easements and City-owned parcels to reduce cost, minimize construction impacts, and improve O&M access to the new pipeline.

ITEM NO. 6
ROUTE ISSUE: Use of direct routes along Grabot Avenue requires MDOT approval
CHDM TEAMS POTENTIAL SOLUTION: Early coordination with MDOT will facilitate a clear understanding by all parties of potential to use Grabot Avenue (M-3) for the pipeline route and the conditions for its use to reduce pipeline length and cost with a more direct route along Grabot.

ITEM NO. 7
ROUTE ISSUE: The Conner Creek Enclosure facility poses a formidable challenge for large-diameter pipeline crossings
CHDM TEAMS POTENTIAL SOLUTION: Double-barrel, 12-foot-by-18-foot (approximate) box conduits require careful consideration for crossing. We suggest that the linear park along Conner Street between Harper and Grabot Avenues may be a good choice because it provides the space needed, away from traffic and other utility conflicts, to facilitate an undercrossing of this large sewer to minimize cost.

ITEM NO. 8
ROUTE ISSUE: Detroit City Airport poses FAA permitting challenges and will likely require tunneled crossings
CHDM TEAMS POTENTIAL SOLUTION: Coordination with airport staff and FAA permitting limitations early in the process will allow the full suite of mitigation requirements. We will use this information to determine the locations where open cut construction or tunneled construction can be used. This understanding will facilitate selection of the best route and definition of preliminary design requirements.

ITEM NO. 9
ROUTE ISSUE: Criteria are needed for use of the existing raw water tunnel corridor
CHDM TEAMS POTENTIAL SOLUTION: The existing raw water tunnel corridor is an attractive pipeline route because the presence of the tunnel limited the installation of other major infrastructure in this location. Therefore, some of the best potential route alternatives are those that share the tunnel corridor. We will coordinate early with GLWA staff to determine the criteria to use for this corridor. Given its depth, the raw water tunnel will not likely be impacted by pipeline construction, however, offsets and access will be considered.

ITEM NO. 10
ROUTE ISSUE: The North Interceptor-East Arm (NI-EA) alignment limits route opportunities in the same corridor
CHDM TEAMS POTENTIAL SOLUTION: The NI-EA is a large diameter interceptor sewer along a portion of Outer Drive, as well as State Fair and Van Dyle M-333 Avenues in the project vicinity. During the route analysis, our team will determine its location and define available space in the same corridor while providing adequate separation between the new pipeline water pipeline and existing interceptor sewer. Given the size and complexity of this facility, alternative routes are needed in case this corridor proves to be too congested.

ITEM NO. 11
ROUTE ISSUE: Multiple railroad crossings impact cost and community impacts of alternative routes
POTENTIAL SOLUTION: Our extensive experience with railroad crossings suggests that early meetings with the affected railroads will allow us to determine their specific crossing requirements and incorporate applicable cost and non-cost issues into our alternative route evaluation.

ITEM NO. 12
ROUTE ISSUE: Connections to the Northeast (NE) WTP are critical for project flexibility and effective water delivery
CHDM TEAMS POTENTIAL SOLUTION: Our team has extensive experience at the NE WTP and will evaluate the issues related to direct delivery to the NE WTP pump station, delivery into the existing clear well, or a combination of both. The key is to develop an effective operating strategy with operations staff, select a suitable location for the new facilities on the plant site, and configure the new facilities to accomplish desired operational flexibility.

CIP 114013

CIP Number: 114013
Old CIP No.: 1389
Project Title: SPW WTP Reservoir Fill Line Improvements

Project Status: Active	<input type="checkbox"/> Innovation
Budget: Water	<input checked="" type="checkbox"/> Water MP Right Sizing
Classification Lvl 1: Water	<input checked="" type="checkbox"/> Reliability/Redundancy
Classification Lvl 2: Treatment Plants & Facilities	
Classification Lvl 3: Springwells	
Project Location: Wayne County - Outside Detroit	Project Score 77.2



Springwells WTP

Project Significance: Reservoir fill line to Springwells is needed to provide finished water to the Springwells high service area from Southwest and Waterworks Park while the Springwells raw water tunnel is out of service for repairs and during times when the Springwells Low Lift Station is taken offline for inspections, repairs or maintenance.

Project Engineer/Manager: Erich Klun
Manager: Grant Gartrell

Scope of Work: Reservoir fill line to Springwells is needed to provide finished water to the Springwells high service area from Southwest and Waterworks Park while the Springwells raw water tunnel is out of service for repairs.

Challenges: Very complicated sequence of construction, and coordination with wholesale customers is required.

CIP 114013 Springwells Reservoir Fill Line Improvements

Project Information

- Active
- Phase: Bidding for Construction
- Project Delivery: design-bid-build
- Contract: CS-038
- Contract Amount: \$298,871.00
- Percent Complete: 60%
- GLWA Project Manager: Erich Klun
- Review Committee Score:
- Project Significance: allows Springwells high pressure demands to be maintained when raw water supply or low lift pumping is out of service

Scope of Work

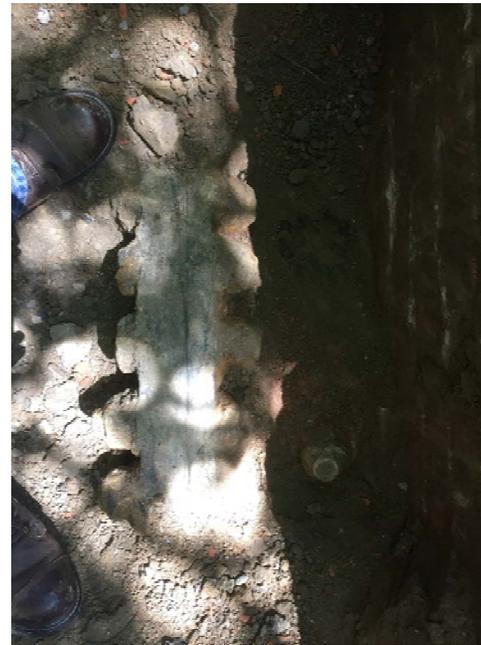
- Construction of valve vault housing energy dissipating valves (plunger type)
- Isolation and connection to original 1930s-era riveted steel piping in Warren Ave. right-of-way
- Isolation and connection to Reservoir No. 1
- Rigorous field acceptance/performance testing to ensure system reliability
- Finished water to be supplied from the intermediate pressure system from Southwest and Water Works Park WTPs

CIP 114013 Springwells Reservoir Fill Line Improvements

*Condition of Rivets and Coating on
1930s-Era Buried Piping*



*Condition of Existing 1930s-Era
Connecting Flange*



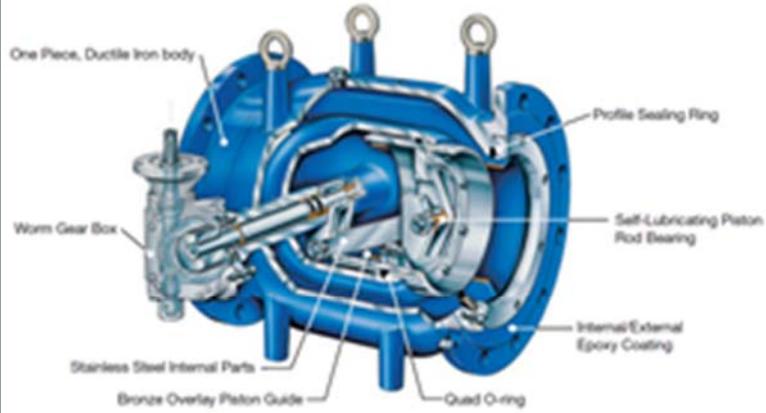
CIP 114013 Springwells Reservoir Fill Line Improvements

*Typical GLWA Reservoir Fill
(Energy Dissipating) Valve*



Cone Valve

Proposed Plunger Valve



Plunger Valve

CIP 114002

CIP Number: 114002
Old CIP No.: 1071
Project Title: SPW WTP Low Lift and High Lift Pump Station
Project Status: Active
Budget: Water
Classification Lvl 1: Water
Classification Lvl 2: Treatment Plants & Facilities
Classification Lvl 3: Springwells
Project Location: Wayne County - Outside Detroit

- Innovation
- Water MP Right Sizing
- Reliability/Redundancy

Project Score 69.2



High Lift Station viewed from Low Lift Station operating floor showing high lift pump pits and windows to be replaced.

Project Significance: Existing low & high lift pumping system electrical is original, unsafe, not reliable, and is oversized for current & projected demands. New and/or rehabilitated pumping system equipment is needed.

Project Engineer/Manager: Erich Klun
Manager: Grant Gartrell

Scope of Work: The electrical gear at the Springwells WTP high and low lift stations is old and parts are no longer available. The outdated equipment also poses safety issues. Furthermore, the pumps may be right-sized to provide more efficient pumping systems.

Challenges: Extremely complicated sequence of construction required to replace electrical gear while maintaining system demands throughout construction. During construction, new costly equipment will be operating next to existing equipment/facilities to be demolished

CIP 114002 Springwells Low-High Pump Improvements

Project Information

- Active
- Phase: Design
- Project Delivery: design-bid-build
- Contract: TBD
- Contract Amount: \$85-million (est.)
- GLWA Project Manager: Erich Klun
- Project Significance: replacement of obsolete medium voltage electrical gear, right-sizing of pumping systems and architectural improvements

Scope of Work

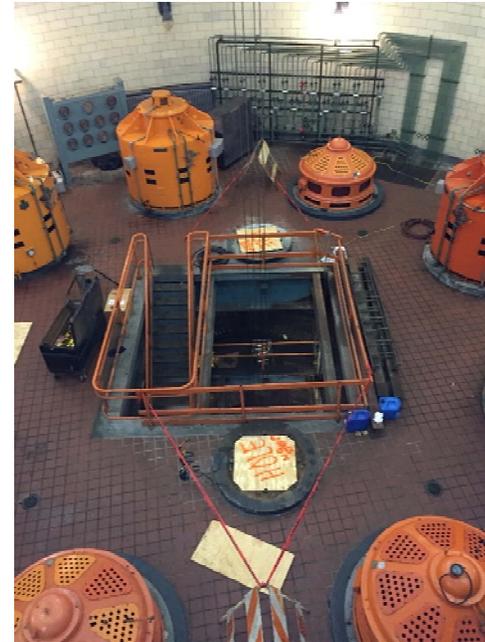
- Investigate alternative pump types, arrangements and rehab options
- Replace medium voltage switchgear
- Investigate and apply variable speed pumping, if appropriate
- Replace exterior windows and doors to protect new equipment and buildings
- Improve Pump House ventilation and atmospheric conditions
- Modernize and provide most efficient pumping systems possible

CIP 114002 Springwells Low-High Pump Improvements

*Interior of the Pump House
Showing Eight High Lift Pump Pits*



*View of Low Lift Station Motor
Floor Showing Floor Access to Low
Lift Pumps Below*



CIP 114002 Springwells Low-High Pump Improvements

View of High Lift Pump with Top Half of Casing Removed



View of Same Pump From Above Showing Pump Internals and Possible Pump Rehabilitation



CIP 114002 Springwells Low-High Pump Improvements

View of Inside of Top Half of High Lift Pump Casing



View of Existing High Lift Pump Impeller Removed for Repairs



CIP 132010

CIP Number:	132010
Old CIP No.:	1336
Project Title:	West Service Center PS - Duval Rd Division Valve Upgrades
Project Status:	Future Planned
Budget:	Water
Classification Lvl 1:	Water
Classification Lvl 2:	SCC
Classification Lvl 3:	Pump Station/Reservoir
Project Location:	Oakland County
	Project Score 54
Project Significance:	Construction of West Service Center Division Valves is needed to convey Lake Huron flows through the West Service Center to the Springwells high service area while the Springwells raw water tunnel is out of service for repairs. Construction of active bypass around the Newburgh Pump Station.
Project Engineer/Manager:	Timothy Kuhns
Manager:	Grant Gartrell
Scope of Work:	Lake Huron WTP needs to provide flows to the Springwells high service area while the Springwells raw water tunnel is out of service for repair.
Challenges:	Coordination with operations critical meet testing of existing valves. Isolation, shutdown and operation of Lake Huron and Springwells WTPs, North Service Center, and other facilities.

CIP 132010 West Service Center Division Valve and Reservoir Upgrades

Project Information

- Active
- Phase: Study
- Project Delivery: TBD
- Contract: TBD
- Contract Amount: \$37-million (est.)
- GLWA Project Manager: Tim Kuhns
- Project Significance: Division valve upgrades are needed to provide service to Springwells high pressure system from Lake Huron. Reservoir replacement is needed to rapidly deteriorating reservoirs.

Scope of Work

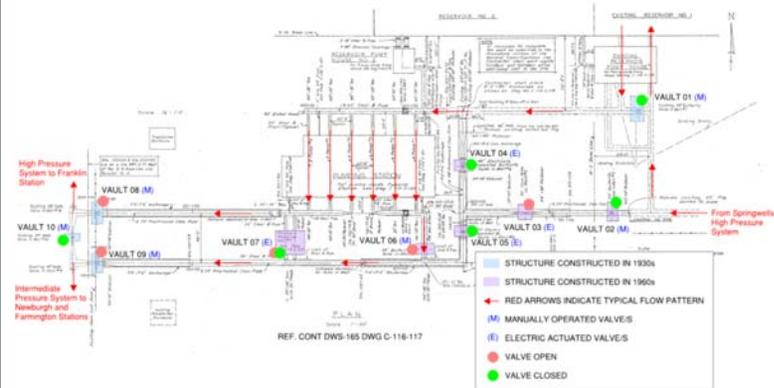
- 10-million gallon reservoir
- Upgrades to all yard division valves
- Reservoir Pump House

CIP 132010 West Service Center Division Valve and Reservoir Upgrades

Existing Site



Division Valves



CIP 132012

CIP Number: 132012

Old CIP No.:

Project Title: Ypsilanti PS Improvements

Project Status: New

Budget: Water

Classification Lvl 1: Water

Classification Lvl 2: SCC

Classification Lvl 3: Pump Station/Reservoir

Project Location: Wayne County - Outside Detroit

- Innovation
- Water MP Right Sizing
- Reliability/Redundancy

Project Score 61.2



Ypsilanti Pump Station

Project Significance: Ypsilanti does not have a generator and needs one in the event of a power outage in order to help maintain pressures. The pumps, motors and electrical system are original to the facility and are past their useful service life. The electrical system requires substantial maintenance to keep it in service. Replacement of the motors and electrical system will improve the reliability of the station. In addition, the station does not have a sewer discharge, which is required in order to enable any underground construction due to dewatering discharges.

Project Engineer/Manager: Eric Kramp

Manager: Grant Gartrell

Scope of Work: Replace pumps, motors, drive, switchgear with new. Install a new discharge sewer, backup generator and bypass for the station.

Challenges: Contaminated groundwater at the site. No existing sanitary, storm or combined sewer at the site. A NPDES permit will be required to discharge treated groundwater to a surface water of the state for all construction dewatering operations.

CIP 132012 Ypsilanti Pump Station Improvements

Project Information

- Not started
- Project Delivery: design-bid-build
- Contract: to be determined
- Contract Amount: \$9-million (est.)
- GLWA Project Manager: Eric Kramp
- Project Significance: Existing station lacks backup power generator and its mechanical and electrical equipment are beyond their useful service life. New equipment will improve station reliability

Scope of Work

- Install new backup power generator
- Replace existing pumps, motors, valves, valve operators, and variable speed drives with variable frequency drives
- Replace existing electrical switchgear and motor control centers
- Replace existing 36-inch diameter yard valve and install 400 feet of yard piping for passive bypass
- Install new septic system

CIP 132012 Ypsilanti Pump Station Improvements

Switchgear & Pumping Units



CIP 115003

CIP Number: 115003
Old CIP No.: 1301
Project Title: WWP WTP Comprehensive Condition Assessment
Project Status: Active
Budget: Water
Classification Lvl 1: Water
Classification Lvl 2: Treatment Plants & Facilities
Classification Lvl 3: Water Works Park
Project Location: City of Detroit

- Innovation
- Water MP Right Sizing
- Reliability/Redundancy

Project Score 35.6



Waterworks Park WTP

Project Significance: A condition assessment of Waterworks Park Water Treatment Plant has not been completed since the 2004 reconstruction. Condition assessment is needed to identify critical assets in need of repair or replacement.

Project Engineer/Manager: Grant Gartrell
Manager: Grant Gartrell

Scope of Work: A condition assessment of Waterworks Park Water Treatment Plant has not been completed since the 2004 reconstruction. Continued and periodic inspection of the Water Treatment Plant is needed to maintain a reliable production system, especially given the reliance on Waterworks Park to provide finish water to the Northeast Service Area.

Challenges: Coordinating shutdowns required for condition assessment inspections.

CIP 115003 Water Works Park Water Plant (WWP) Condition Assessment

Project Information

- Active
- Phase: study
- Contract: CS-147
- Contract Amount: \$546,482
- GLWA Project Manager: Grant Gartrell
- Project Significance: WWP has been in service for 15 years and is the most technically advanced and complicated GLWA water plant.

Scope of Work

- Project Significance – continued: Its average day demand will be nearly doubled in the coming years as treatment is decommissioned and reduced at other facilities. Therefore, this assessment will identify possible needed improvements so that it will reliably treat greater average day flows in the future.
- Scope of Work: multi-disciplinary assessment of the entire facility.

CIP 115003 Water Works Park Water Plant (WWP) Condition Assessment

Screen House



Raw Water Screens



Low-Lift Pumping Units



CIP 115003 Water Works Park Water Plant (WWP) Condition Assessment

*Electrical Switchgear for Low
Lift Motors*



*Chemical Storage Tanks &
Feed Pumps*

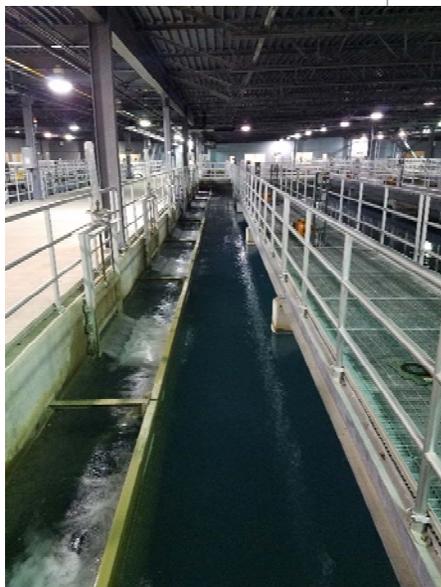


Chemical Flash Mixing Units



CIP 115003 Water Works Park Water Plant (WWP) Condition Assessment

Flocculation Units



Filter Gallery Piping



High-Lift Pumping Station



CIP 115003 Water Works Park Water Plant (WWP) Condition Assessment

High Lift Pumping Units



Interior of High Lift Pumping Station



CIP Alignment With The Financial Plan



Cost Allocation

Cost Allocation	Projected Capital Expenditures					Total FYs 2019-2023	Percent of Five Year Total
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Water							
Common-to-all	\$ 61,425	\$ 133,893	\$ 152,044	\$ 174,303	\$ 171,074	\$ 692,739	97%
Suburban Only	4,613	3,690	3,690	3,997	4,100	20,090	3%
Grand Total	\$ 66,038	\$ 137,583	\$ 155,734	\$ 178,300	\$ 175,174	\$ 712,829	100%

Cost Allocation	Projected Capital Expenditures					Total FYs 2019-2023	Percent of Five Year Total
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Wastewater							
Common-to-all	\$ 91,905	\$ 97,173	\$ 95,193	\$ 109,140	\$ 143,107	\$ 536,518	85%
OMID	-	-	13,408	22,920	16,000	52,328	8%
CSO 83/17	9,277	6,218	2,351	4,351	9,351	31,548	5%
Industrial Waste Control	4,001	7,764	1,000	-	-	12,765	2%
Grand Total	\$ 105,183	\$ 111,155	\$ 111,952	\$ 136,411	\$ 168,458	\$ 633,159	100%

Capital Outlay vs. Capital Improvement Plan

Category	Capital Outlay < \$5,000	Capital Outlay > \$5,000	Capital Outlay > \$5,000 – Specific I&E	Capital Improvement Plan – Strategic I&E	Capital Improvement Plan - Bonds
Funding Source	Operations & Maintenance	Operations & Maintenance	Improvement & Extension Fund	Improvement & Extension Fund	Construction Bond Fund
Rationale	Tagged and tracked for internal asset control purposes (not capitalized)	Efficiencies in budget control and procurement	Isolate items that cause variability in the annual financial plan that do not meet the criteria for CIP	Lower the cost of capital by funding the CIP with Revenue Financed Capital versus bond financing	Constructed Assets
Frequency	Recurring in nature	Recurring in nature	Unique, nonrecurring, purchases, and/or large dollar assets on a replacement program	Project specific	Project Specific
Life	> One Year	> One Year	> One Year	> 20 years	> 20 years
Examples	Tools, Smartboards, Small Equipment	Pumps, motors, and equipment	Vehicles, large equipment, security and information technology systems	Infrastructure, plant, and facility upgrade, rehabilitation, and/or replacement	Infrastructure, plant, and facility upgrade, rehabilitation, and/or replacement
Justification	Internal review panel	Internal review panel, prioritization, replacement validation with asset records	Internal review panel, prioritization, replacement validation with asset records	Business Case Evaluation; Internal Review Panel; Customer Outreach; GLWA Board Committee	Business Case Evaluation; Internal Review Panel; Customer Outreach; GLWA Board Committee
Procurement Impact	Low – recurring in nature; shorter lead time to bid	Low – recurring in nature; shorter lead time to bid	Medium – specialized resources; additional lead time for RFx; may need evaluation panel	High - specialized resources; additional lead time for RFx; evaluation panel required	High - specialized resources; additional lead time for RFx; evaluation panel required

Life of Asset – Basis for Optimizing Resources

Asset Life Range	Projected Capital Expenditures					Total FYs 2019-2023	Percent of Five Year Total
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Water							
<20 years	\$ 13,172	\$ 11,209	\$ 12,565	\$ 11,280	\$ 12,007	\$ 60,233	8%
>20 years	52,866	126,374	143,169	167,020	163,167	652,596	92%
Grand Total	\$ 66,038	\$ 137,583	\$ 155,734	\$ 178,300	\$ 175,174	\$ 712,829	100%

Asset Life Range	Projected Capital Expenditures					Total FYs 2019-2023	Percent of Five Year Total
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Wastewater							
<20 years	\$ 8,312	\$ 10,882	\$ 13,659	\$ 10,852	\$ 12,280	\$ 55,985	8.8%
>20 years	96,871	100,273	98,293	125,559	156,178	577,174	91%
Grand Total	\$ 105,183	\$ 111,155	\$ 111,952	\$ 136,411	\$ 168,458	\$ 633,159	100%

Estimating Likelihood of Spend

Phase Status	Projected Capital Expenditures FY 2019	Status as % of Capital Expenditures FY 2019	Projected Capital Expenditures				Total FYs 2019-2023
			FY 2020	FY 2021	FY 2022	FY 2023	
Water							
Active	\$ 36,933	56%	\$ 25,032	\$ 14,954	\$ 7,991	\$ 9,215	\$ 94,125
New	3,910	6%	7,667	9,444	15,744	31,786	68,551
Future Planned	25,192	38%	104,884	131,336	154,565	134,173	550,150
Pending Closeout	3	0%	-	-	-	-	3
Closed	-	0%	-	-	-	-	-
Grand Total	\$ 66,038	100%	\$ 137,583	\$ 155,734	\$ 178,300	\$ 175,174	\$ 712,829

Phase Status	Projected Capital Expenditures FY 2019	Status as % of Capital Expenditures FY 2019	Projected Capital Expenditures				Total FYs 2019-2023
			FY 2020	FY 2021	FY 2022	FY 2023	
Wastewater							
Active	\$ 61,040	58%	\$ 40,386	\$ 12,902	\$ 2,250	\$ 2,057	\$ 118,635
New	-	0%	230	1,141	6,569	5,767	13,707
Future Planned	44,120	42%	70,539	97,909	127,592	160,634	500,794
Pending Closeout	23	0%	-	-	-	-	23
Grand Total	\$ 105,183	100%	\$ 111,155	\$ 111,952	\$ 136,411	\$ 168,458	\$ 633,159

Construction vs. Soft Costs (Water)

Phase Status	Projected Capital Expenditures					Total FYs 2019-2023	Category as a Percent of Total FYs 2019-2023
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Water							
C	\$ 35,713	\$ 93,456	\$ 92,188	\$ 76,011	\$ 95,451	\$ 392,819	55%
CA	398	110	97	10	-	615	0%
D	396	150	200	200	200	1,146	0%
D/C	1,000	1,000	3,000	3,000	3,000	11,000	2%
D/CA	5,140	6,986	5,783	7,256	4,717	29,882	4%
DB	16,012	28,871	49,770	88,673	68,527	251,853	35%
S	2,759	153	-	-	-	2,912	0%
S/D/C	-	188	229	1,064	1,682	3,163	0%
S/D/CA	4,620	6,669	4,467	2,086	1,597	19,439	3%
Grand Total	\$ 66,038	\$ 137,583	\$ 155,734	\$ 178,300	\$ 175,174	\$ 712,829	100%

Construction vs. Soft Costs (Sewer)

Phase Status	Projected Capital Expenditures					Total FYs 2019-2023	Category as a Percent of Total FYs 2019-2023
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023		
Wastewater							
C	\$ 69,322	\$ 73,691	\$ 78,227	\$ 111,216	\$ 141,659	\$ 474,115	75%
CM	597	156	-	-	-	753	0%
D	137	892	2,936	1,288	908	6,161	1%
D/C	2,456	4,951	2,351	4,351	9,351	23,460	4%
D/CA	597	543	494	-	-	1,634	0%
DB	16,327	12,053	10,187	10,187	10,187	58,941	9%
S	-	-	1,110	340	90	1,540	0%
S/D/C	9,100	9,160	1,760	1,255	1,439	22,714	4%
S/D/CA	6,647	9,709	14,887	7,774	4,824	43,841	7%
Grand Total	\$ 105,183	\$ 111,155	\$ 111,952	\$ 136,411	\$ 168,458	\$ 633,159	100%

Strategic vs Specific Use of I&E Funds

- ✓ Striking the balance between bond proceeds and revenue financed capital will lower the cost of capital over the long-term.
- ✓ Revenue financed capital is budgeted for use only after it is received to minimize financial plan risk.
- ✓ When I&E funds are assigned to offset a portion of the costs of specific capital expenses, a transfer is made from the I&E Fund to the Construction Bond Fund.
- ✓ “Transfers from I&E Transfers” are labeled as specific or strategic.
 - “Specific” transfers relate to specifically identified projects (general soft costs for services at the study or design phase).
 - “Strategic” relates to outlining the potential use of Revenue Financed Capital to lower the amount of revenue bonds.
- ✓ Measuring this effort over time will inform stakeholders of the effectiveness of this approach.

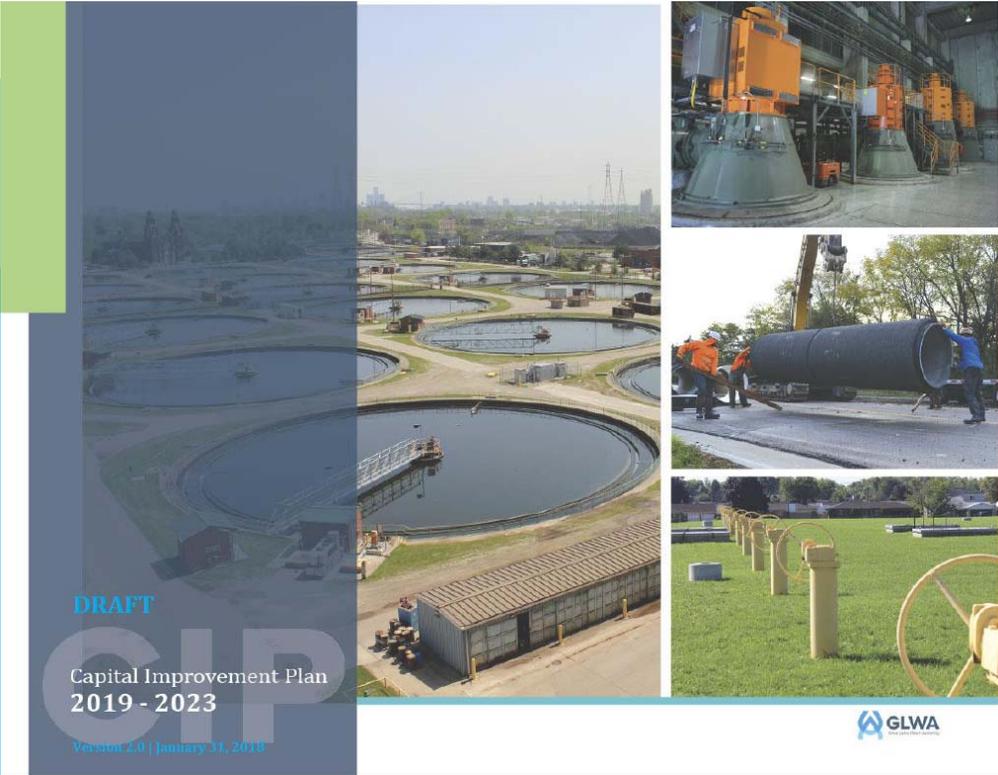
Water CIP - Financial Plan

Category	Financial Plan - Sources and Uses of Capital Spending					
	FY 2018 Projected	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Water Construction Bond Fund						
Revenue (Sources)						
Bond Proceeds	\$ -	\$ -	\$ 145,000	\$ -	\$ 140,000	\$ 145,000
Investment Earnings	-	743	462	408	252	500
Transfer In from I&E - Specific	10,315	13,172	11,209	12,565	11,280	12,007
Transfer In from I&E - Strategic	-	-	-	80,000	20,000	-
Total Revenue (Sources)	10,315	13,915	156,671	92,973	171,532	157,507
Expenses (Uses)						
Construction	30,231	52,431	123,229	143,924	167,582	167,665
Engineering Services	8,871	11,885	12,580	10,074	9,220	6,115
Internal Costs	941	1,722	1,774	1,736	1,498	1,394
Total Expenses (Uses)	40,043	66,038	137,583	155,734	178,300	175,174
Increase/(Decrease) in Reserves	(29,728)	(52,123)	19,088	(62,761)	(6,768)	(17,667)
Beginning Net Position	173,000	143,272	91,149	110,237	47,476	40,708
Ending Net Position	\$ 143,272	\$ 91,149	\$ 110,237	\$ 47,476	\$ 40,708	\$ 23,041

Sewer System – Financial Plan

Financial Plan - Sources and Uses of Capital Spending						
Category	FY 2018 Projected	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Wastewater (Sewage Disposal) Construction Bond Fund						
Revenue (Sources)						
Bond Proceeds	\$ -	\$ -	\$ 75,000	\$ 135,000	\$ -	\$ 140,000
Investment Earnings	429	299	633	361	194	300
Revolving Fund and Other Loans	45,965	42,197	30,923	20,799	10,187	10,187
Transfer In from I&E - Specific	3,380	8,312	10,882	13,659	10,852	12,280
Transfer In from I&E - Strategic	-	-	5,000	-	5,000	5,000
Total Revenue (Sources)	49,774	50,808	122,438	169,819	26,233	167,767
Expenses (Uses)						
Construction	60,465	88,803	89,479	76,916	97,688	136,274
Engineering Services	4,953	8,001	13,290	15,639	9,184	6,630
Internal Costs	5,214	8,379	8,386	5,989	6,619	9,554
Other	-	-	-	13,408	22,920	16,000
Total Expenses (Uses)	70,632	105,183	111,155	111,952	136,411	168,458
Increase/(Decrease) in Reserves	(20,858)	(54,375)	11,283	57,867	(110,178)	(691)
Beginning Net Position	136,000	115,142	60,767	72,050	129,917	19,739
Ending Net Position	\$ 115,142	\$ 60,767	\$ 72,050	\$ 129,917	\$ 19,739	\$ 19,048

Next Steps & Closing Remarks



Next Steps

Comments and questions are accepted throughout the remainder of this process. All feedback, comments and suggestions are welcomed!

Date	Description
October 2017	Review Committee Meetings
October 12, 2017	Executive Leadership Team Reviews BCE's & Modifications to CIP
October 24, 2017	Introduce New BCE's & Major CIP Modifications to AM/CIP Customer Outreach Work Group
November 2017	Executive Leadership Team Reviews BCE's & Modifications to CIP
December 15, 2017	First GLWA CIP Committee Review of CIP – Version 1
December 19, 2017	First Customer Review of CIP – Version 1 at Customer Charges Rollout Meeting #1
February 6, 2018	Second GLWA CIP Committee Review of CIP – Version 2
February 8, 2018	Second Customer Review of CIP – Version 2 at AM/CIP Customer Outreach Work Group
February 14, 2018	First GLWA Board Workshop for Review of CIP – Introduction
February 28, 2018	Second GLWA Board Meeting – Proposed CIP Adoption
March 14, 2018	Proposed Alternate GLWA Board Meeting for CIP Adoption
July 1, 2018	Effective Date of 2019-2023 CIP

Closing Remarks

- It's all about Continuous Improvement
- It's a work in progress.....Your feedback is greatly appreciated!
- THANK YOU Karen Mondora, City of Farmington Hills and Sam Smalley, City of Detroit for actively participating in the Water and Wastewater Review Committees, respectively.
- THANK YOU to the Authorities Members for your comments, feedback and assistance in visualizing and identification of needed improvements!
- THANK YOU Team Members (Engineers, Finance Partners, etc.) for all of your hard work and effort you put into improving this document. We truly appreciate your patience with our continuously changing practices, targets and improvements.

Questions



CIP Break-Out Session



Meeting Results Form





GLWA
Great Lakes Water Authority

Have a Great Day!



Financial Services Audit Committee Communication

Date: February 9, 2018
To: Great Lakes Water Authority Audit Committee
From: Jon Wheatley, Public Finance Manager
Re: Monthly Revenue & Collections Report for December 2017

The *Monthly Revenue & Collections Report* includes the following.

1. FY 2018 Retail and Wholesale Sewer Revenue
2. FY 2018 Retail and Wholesale Water Revenue
3. City of Highland Park Billings and Collections
4. City of Flint Billings and Collections
5. Water & Sewer System Wholesale Accounts Receivable Aging Report

Note: Wholesale customer revenues are billed by the Great Lakes Water Authority (GLWA). Pursuant to the terms of the lease agreement between the City of Detroit and the Great Lakes Water Authority, the Detroit Water & Sewerage Department (DWSD) serves as GLWA's agent for billing activities for the City of Detroit retail customer class. All revenues collected by both GLWA and DWSD are deposited in a trust account in accordance with the GLWA Master Bond Ordinance.

1. FY 2018 Retail and Wholesale Sewer Revenue Report

Table 1 summarizes the unaudited FY 2018 billed revenues through December 31, 2017 and do not reflect collections of those revenues. It should also be noted that the revenues are shown in the month that the billed flow was accrued and not the following month when the bills are usually sent out to customers.

Table 1 – Combined DWSD and GLWA Wholesale FY 2018 Sewer Revenue

RETAIL SEWER CUSTOMERS						
<u>Month</u>	<u>FY 2018 - Budget</u>		<u>FY 2018 - Actual</u>		<u>Variance</u>	
	<u>Volume</u>	<u>Revenue</u>	<u>Volume</u>	<u>Revenue</u>	<u>Volume</u>	<u>Revenue</u>
	<i>Mcf</i>	\$	<i>Mcf</i>	\$	<i>Mcf</i>	\$
July	260,000	24,615,100	244,512	24,624,820	(15,488)	9,720
August	260,600	24,754,400	239,911	24,348,011	(20,689)	(406,389)
September	222,800	22,752,800	228,122	23,517,204	5,322	764,404
October	205,500	22,717,800	224,159	23,573,505	18,659	855,705
November	189,900	21,987,300	188,312	22,084,385	(1,588)	97,085
December	204,400	22,774,800	-	-	-	-
January	195,300	22,296,100	-	-	-	-
February	198,300	23,060,600	-	-	-	-
March	203,000	23,026,900	-	-	-	-
April	189,300	22,215,900	-	-	-	-
May	219,400	23,798,700	-	-	-	-
June	251,500	24,635,500	-	-	-	-
Total	2,600,000	278,635,900	1,125,016	118,147,925	(13,784)	1,320,525
<i>Subtotals ytd</i>	<i>1,138,800</i>	<i>116,827,400</i>	<i>1,125,016</i>	<i>118,147,925</i>	<i>(13,784)</i>	<i>1,320,525</i>
<i>Achievement of Budget</i>			<i>98.79%</i>	<i>101.13%</i>		

WHOLESALE SEWER CUSTOMERS						
<u>Month</u>	<u>FY 2018 - Budget</u>		<u>FY 2018 - Actual</u>		<u>Variance</u>	
	<u>Volume</u>	<u>Revenue</u>	<u>Volume</u>	<u>Revenue</u>	<u>Volume</u>	<u>Revenue</u>
	<i>Mcf</i>	\$	<i>Mcf</i>	\$	<i>Mcf</i>	\$
July	N/A	22,619,300	N/A	22,619,300	N/A	-
August	N/A	22,619,300	N/A	22,619,300	N/A	-
September	N/A	22,619,300	N/A	22,619,300	N/A	-
October	N/A	22,619,300	N/A	22,619,300	N/A	-
November	N/A	22,619,300	N/A	22,619,300	N/A	-
December	N/A	22,619,300	N/A	22,619,300	N/A	-
January	N/A	22,619,300	N/A	-	N/A	-
February	N/A	22,619,300	N/A	-	N/A	-
March	N/A	22,619,300	N/A	-	N/A	-
April	N/A	22,619,300	N/A	-	N/A	-
May	N/A	22,619,300	N/A	-	N/A	-
June	N/A	22,619,300	N/A	-	N/A	-
Total		271,431,600		135,715,800		0
<i>Subtotals ytd</i>		<i>135,715,800</i>		<i>135,715,800</i>		<i>0</i>
<i>Achievement of Budget</i>				<i>100.00%</i>		

TOTAL - ALL CUSTOMERS						
<u>Month</u>	<u>FY 2018 - Budget</u>		<u>FY 2018 - Actual</u>		<u>Variance</u>	
	<u>Volume</u>	<u>Revenue</u>	<u>Volume</u>	<u>Revenue</u>	<u>Volume</u>	<u>Revenue</u>
	<i>Mcf</i>	\$	<i>Mcf</i>	\$	<i>Mcf</i>	\$
July	260,000	47,234,400	244,512	47,244,120	(15,488)	9,720
August	260,600	47,373,700	239,911	46,967,311	(20,689)	(406,389)
September	222,800	45,372,100	228,122	46,136,504	5,322	764,404
October	205,500	45,337,100	224,159	46,192,805	18,659	855,705
November	189,900	44,606,600	188,312	44,703,685	(1,588)	97,085
December	204,400	45,394,100	-	22,619,300	-	-
January	195,300	44,915,400	-	-	-	-
February	198,300	45,679,900	-	-	-	-
March	203,000	45,646,200	-	-	-	-
April	189,300	44,835,200	-	-	-	-
May	219,400	46,418,000	-	-	-	-
June	251,500	47,254,800	-	-	-	-
Total	2,600,000	550,067,500	1,125,016	253,863,725	(13,784)	1,320,525
<i>Subtotals ytd</i>	<i>1,343,200</i>	<i>275,318,000</i>	<i>1,125,016</i>	<i>253,863,725</i>	<i>(218,184)</i>	<i>(21,454,275)</i>
<i>Achievement of Budget</i>			<i>98.79%</i>	<i>92.21%</i>		

DWSD Retail Billings: Due to the earlier than normal date of this month's Audit Committee meeting, updated DWSD billed usage and billed revenue information for December 2017 were not available. The December 2017 numbers will be included in next report provided at the March 2018 Audit Committee meeting.

GLWA Wholesale Customer Billings: **Table 1** shows the FY 2018 sewer billed revenue. As a result of the sewer rate simplification which provides a more stable revenue stream, the wholesale sewer customers are billed a fixed monthly fee. The results of this effort can be seen as the billed revenue is at 100.0% of budget through December 2017.

Total System Billings: **Table 1** shows the FY 2018 combined DWSD and GLWA Wholesale sewer billed usage and billed revenue. Based on the combined billings available at the time of this report, the GLWA Sewer System had billed revenues of 92.21% of budget without the December 2017 DWSD billings.

2. FY 2018 Retail and Wholesale Water Revenue Report

Table 2 summarizes the unaudited FY 2018 wholesale customer water revenues billed by GLWA and the retail water revenues billed by DWSD. Please note these are billed revenues and do not reflect collections of those revenues. It should also be noted that the revenues are shown in the month that the billed flow was accrued and not the following month when the bills are usually sent out.

Table 2 – Combined DWSD and GLWA Wholesale FY 2018 Water Revenue Report

RETAIL WATER CUSTOMERS								
Month	FY 2018 - Budget			FY 2018 - Actual			Variance	
	Volume	Revenue	Unit Revenue	Volume	Revenue	Unit Revenue	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	295,700	9,332,300	31.56	274,267	8,813,936	32.14	(21,433)	(518,364)
August	303,100	9,517,000	31.40	269,802	8,631,595	31.99	(33,298)	(885,405)
September	248,900	8,393,900	33.72	259,341	8,463,041	32.63	10,441	69,141
October	236,100	7,947,500	33.66	247,700	8,187,943	33.06	11,600	240,443
November	218,400	7,585,100	34.73	208,783	7,276,521	34.85	(9,617)	(308,579)
December	238,500	8,008,200	33.58	-	-	-	-	-
January	224,700	7,673,100	34.15	-	-	-	-	-
February	224,700	7,813,100	34.77	-	-	-	-	-
March	235,700	7,944,800	33.71	-	-	-	-	-
April	217,700	7,529,200	34.59	-	-	-	-	-
May	256,700	8,946,300	34.85	-	-	-	-	-
June	284,800	9,089,900	31.92	-	-	-	-	-
Total	2,985,000	99,780,400	33.43	1,259,893	41,373,035	32.84	(42,307)	(1,402,765)
<i>Subtotals ytd</i>	<i>1,302,200</i>	<i>42,775,800</i>	<i>32.85</i>	<i>1,259,893</i>	<i>41,373,035</i>	<i>32.84</i>	<i>(42,307)</i>	<i>(1,402,765)</i>
<i>Achievement of Budget</i>				<i>0.00%</i>	<i>96.72%</i>			

WHOLESALE WATER CUSTOMERS*								
Month	FY 2018 - Budget			FY 2018 - Actual			Variance	
	Volume	Revenue	Unit Revenue	Volume	Revenue	Unit Revenue	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	1,712,100	31,705,800	18.52	1,721,500	32,819,241	19.06	9,400	1,113,441
August	1,615,000	30,914,600	19.14	1,573,478	31,520,853	20.03	(41,522)	606,253
September	1,420,900	28,619,700	20.14	1,421,715	29,686,522	20.88	815	1,066,822
October	1,064,900	25,002,100	23.48	1,158,883	26,949,856	23.26	93,983	1,947,756
November	892,000	23,038,000	25.83	958,686	25,146,717	26.23	66,686	2,108,717
December	946,600	23,392,700	24.71	1,024,164	24,434,241	23.86	77,564	1,041,541
January	972,400	23,676,000	24.35	-	-	-	-	-
February	893,000	23,017,200	25.78	-	-	-	-	-
March	988,100	23,781,500	24.07	-	-	-	-	-
April	997,900	23,859,300	23.91	-	-	-	-	-
May	1,155,100	25,576,800	22.14	-	-	-	-	-
June	1,472,900	28,727,800	19.50	-	-	-	-	-
Total	14,130,900	311,311,500	22.03	7,858,426	170,557,429	21.70	206,926	7,884,529
<i>Subtotals ytd</i>	<i>7,651,500</i>	<i>162,672,900</i>	<i>21.26</i>	<i>7,858,426</i>	<i>170,557,429</i>	<i>21.70</i>	<i>206,926</i>	<i>7,884,529</i>
<i>Achievement of Budget</i>				<i>102.70%</i>	<i>104.85%</i>			

* Includes Revenues and Usage from the City of Flint.

TOTAL - ALL CUSTOMERS								
Month	FY 2018 - Budget			FY 2018 - Actual			Variance	
	Volume	Revenue	Unit Revenue	Volume	Revenue	Unit Revenue	Volume	Revenue
	Mcf	\$	\$/Mcf	Mcf	\$	\$/Mcf	Mcf	\$
July	2,007,800	41,038,100	20.44	1,995,768	41,633,177	20.86	(12,032)	595,077
August	1,918,100	40,431,600	21.08	1,843,280	40,152,447	21.78	(74,820)	(279,153)
September	1,669,800	37,013,600	22.17	1,681,056	38,149,562	22.69	11,256	1,135,962
October	1,301,000	32,949,600	25.33	1,406,583	35,137,799	24.98	105,583	2,188,199
November	1,110,400	30,623,100	27.58	1,167,469	32,423,237	27.77	57,069	1,800,137
December	1,185,100	31,400,900	26.50	1,024,164	24,434,241	23.86	(160,936)	(6,966,659)
January	1,197,100	31,349,100	26.19	-	-	-	-	-
February	1,117,700	30,830,300	27.58	-	-	-	-	-
March	1,223,800	31,726,300	25.92	-	-	-	-	-
April	1,215,600	31,388,500	25.82	-	-	-	-	-
May	1,411,800	34,523,100	24.45	-	-	-	-	-
June	1,757,700	37,817,700	21.52	-	-	-	-	-
Total	17,115,900	411,091,900	24.02	9,118,320	211,930,464	23.24	(73,880)	(1,526,436)
<i>Subtotals ytd</i>	<i>9,192,200</i>	<i>213,456,900</i>	<i>23.22</i>	<i>9,118,320</i>	<i>211,930,464</i>	<i>23.24</i>	<i>(73,880)</i>	<i>(1,526,436)</i>
<i>Achievement of Budget</i>				<i>99.20%</i>	<i>99.28%</i>			

* Figures are stated as "Service Months"; i.e. July figures represent bills issued in August, etc.

DWSD Retail Billings: Due to the earlier than normal date of this month's Audit Committee meeting, updated DWSD billed usage and billed revenue information for December 2017 were not available. The December 2017 numbers will be included in next report provided at the March 2018 Audit Committee meeting.

GLWA Wholesale Customer Billings: **Table 2** shows the FY 2018 water billed usage and billed revenues. Starting FY 2016, wholesale water charges were re-structured to create a more stable revenue stream by using a historical rolling average to project customer volumes and allocating 60% of the customer revenue requirement to the monthly fixed charge. As of December 2017, the billed usage was at 102.7% of budget and billed revenue at 104.9% of budget. As noted in **Table 2**, revenues and usage from the City of Flint *are* included as they were assumed in the FY 2018 Budget.

Total System Billings: **Table 2** shows the FY 2018 combined DWSD and GLWA Wholesale water billed usage and billed revenue. Based on the combined Retail and Wholesale Water billings, the GLWA Water System had billed usage of 99.2% of budget and billed revenues of 99.28% of budget without the December 2017 DWSD billings.

3. City of Highland Park Billings and Collections

As of January 31, 2018, Highland Park had a delinquent balance of \$36.9 million, including \$29.7 million for wastewater treatment services, almost \$1.6 million for industrial waste control services, and almost \$5.6 million for water supply services. **Table 3** provides a summary of the billing and collection history for Highland Park from June 30, 2012 to January 31, 2018 in the table below. Please note the numbers below reflect the month the invoice was sent and not the month the service was provided.

Payment in the amount of \$1,216,572.12 was received on January 22, 2018 and posted to the Sewer account.

Table 3 - 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 (7 Months)	763,082	3,306,100	47,662	4,116,844
FY 2018 Payments (7 Months)	<u>-</u>	<u>(3,111,091)</u>	<u>-</u>	<u>(3,111,091)</u>
Balance as of January 31, 2018	<u>\$ 5,598,152</u>	<u>\$ 29,743,343</u>	<u>\$ 1,591,212</u>	<u>\$ 36,932,707</u>

4. City of Flint Billings and Collections

On October 16, 2015, the City of Flint (“City”) re-joined the regional water system pursuant to a short-term agreement which was extended several times through November 30, 2017. That agreement provided for a prepayment fund. In total, GLWA has received over \$28.4 million to the prepayment fund, and **as of January 31, 2017, all prepayment funds have been used and the balance in the fund is \$0, as shown in Table 4.**

Beginning December 1, 2017, GLWA is now providing water service to Flint in accordance with a new 30-year water service agreement. The terms of this agreement provides for the funding of a \$3,750,000 Security Deposit account by the City of Flint, which was received by GLWA on January 11, 2018. The Security Deposit Account may only be drawn down if Flint fails to make full and timely payments. The agreement also provides for a monthly credit to Flint for its previous month’s debt service payment to KWA and a pass-through charge to Flint for monthly service provided by GCDC. All monthly payments by Flint will be deposited with the Trustee, US Bank GLWA, KWA and GCDC per the provisions of the Baseline Trust.

Table 4 - City of Flint Billings and Collections

Invoice Month	Usage Mcf	Commodity Charge	Fixed Charge	KWA Debt Service Credit	GCDC Pass Through Charge	Total Invoice	Prepayment Fund Deposits	Prepayment Fund Balance
October 2015 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000.00	\$ 10,000,000.00
November 2015	26,875.0	\$ 8.93	\$ 341,729.00	\$ -	\$ -	\$ 581,722.75	\$ -	\$ 9,418,277.25
December 2015	47,576.9	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,086,961.72	\$ -	\$ 8,331,315.53
January 2016	48,067.4	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,091,341.88	\$ -	\$ 7,239,973.65
February 2016	52,606.4	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,131,875.15	\$ -	\$ 6,108,098.50
March 2016	51,787.4	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,124,561.84	\$ -	\$ 4,983,536.66
April 2016	51,490.5	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,121,910.52	\$ -	\$ 3,861,626.14
May 2016	48,496.8	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,095,176.07	\$ -	\$ 2,766,450.07
June 2016	51,410.7	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,121,197.82	\$ -	\$ 1,645,252.25
July 2016 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,900,000.00	\$ 7,545,252.25
July 2016	53,884.4	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,143,287.33	\$ -	\$ 6,401,964.92
August 2016	56,368.7	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,165,472.22	\$ -	\$ 5,236,492.69
September 2016	57,283.3	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,173,640.05	\$ -	\$ 4,062,852.65
October 2016 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,900,000.00	\$ 7,962,852.65
October 2016	49,587.3	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,104,914.86	\$ -	\$ 6,857,937.79
November 2016	52,665.3	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,132,401.31	\$ -	\$ 5,725,536.48
December 2016	43,857.1	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,053,743.99	\$ -	\$ 4,671,792.49
January 2017	47,101.3	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,082,714.34	\$ -	\$ 3,589,078.15
February 2017 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,465,700.00	\$ 6,054,778.15
February 2017	52,183.1	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,128,095.44	\$ -	\$ 4,926,682.71
March 2017	45,690.3	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,070,114.11	\$ -	\$ 3,856,568.60
April 2017	48,707.3	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,097,056.28	\$ -	\$ 2,759,512.32
May 2017	45,658.1	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,069,826.48	\$ -	\$ 1,689,685.84
June 2017	47,915.0	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,089,980.86	\$ -	\$ 599,704.98
June 2017 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,802,750.00	\$ 2,402,454.98
July 2017 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,203,045.02	\$ 3,605,500.00
July 2017 Prepayment Deposit	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 599,704.98	\$ 4,205,204.98
July 2017	47,734.7	\$ 8.93	\$ 662,100.00	\$ -	\$ -	\$ 1,088,370.42	\$ -	\$ 3,116,834.56
August 2017	49,522.0	\$ 9.35	\$ 693,200.00	\$ -	\$ -	\$ 1,156,230.33	\$ -	\$ 1,960,604.23
September 2017	46,114.6	\$ 9.35	\$ 693,200.00	\$ -	\$ -	\$ 1,124,371.23	\$ -	\$ 836,233.00
October 2017 Prepayment	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,453,500.00	\$ 2,289,733.00
October 2017	43,357.0	\$ 9.35	\$ 693,200.00	\$ -	\$ -	\$ 1,098,588.04	\$ -	\$ 1,191,144.96
October 2017 Prepayment	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,100,000.00	\$ 2,291,144.96
November 2017	42,691.8	\$ 9.35	\$ 693,200.00	\$ -	\$ -	\$ 1,092,368.52	\$ -	\$ 1,198,776.44
December 2017	40,582.5	\$ 9.35	\$ 693,200.00	\$ -	\$ -	\$ 1,072,646.09	\$ -	\$ 126,130.35
January 2018	43,366.5	\$ 7.39	\$ 545,500.00	\$ (444,006.00)	\$ 67,917.40	\$ 489,890.02	\$ -	\$ -
Total						\$ 28,298,569.65	\$ 28,424,700.00	

5. Water & Sewer System Wholesale Accounts Receivable Aging Report

Table 5 is a summary of the total, current and non-current receivables by category as of January 31, 2018. Table 6 is the same summary *without* the past due balances for the City of Highland Park. The detailed accounts receivable aging is attached to this report. This report reflects the wholesale receivables only and do not include DWSD. (Note: percentages vary from 100% due to rounding.)

Table 5 - Wholesale Accounts Receivable Aging Report

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 36,991,252.51	\$ 31,191,788.90	\$ 517,579.36	\$ 115,445.26	\$ 5,166,438.99
Sewer	50,835,543.78	21,562,399.50	470,200.00	470,200.00	28,332,744.28
IWC	2,778,496.01	772,145.78	281,323.10	64,848.56	1,660,178.57
Pollutant Surcharge	795,279.08	521,124.06	46,420.94	133,250.76	94,483.32
Total	<u>\$ 91,400,571.38</u>	<u>\$ 54,047,458.24</u>	<u>\$ 1,315,523.40</u>	<u>\$ 783,744.58</u>	<u>\$ 35,253,845.16</u>
	<u>100.00%</u>	<u>59.13%</u>	<u>1.44%</u>	<u>0.86%</u>	<u>38.57%</u>

Table 6 - Wholesale Accounts Receivable Aging Report, Net of Highland Park

	Total	Current	46-74 Days	75-104 Days	>105 Days
Water	\$ 31,393,099.90	\$ 30,984,199.69	\$ 408,900.21	\$ -	\$ -
Sewer	21,092,199.50	21,092,199.50	-	-	-
IWC	1,187,284.00	765,485.98	267,946.70	58,109.24	95,742.08
Pollutant Surcharge	795,279.08	521,124.06	46,420.94	133,250.76	94,483.32
Total	<u>\$ 54,467,862.48</u>	<u>\$ 53,363,009.23</u>	<u>\$ 723,267.85</u>	<u>\$ 191,360.00</u>	<u>\$ 190,225.40</u>
	<u>100.00%</u>	<u>97.97%</u>	<u>1.33%</u>	<u>0.35%</u>	<u>0.35%</u>

GLWA Aged Accounts Receivable- Water Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$212,823.27	\$212,823.27	\$0.00	\$0.00	\$0.00
ASH TOWNSHIP	\$61,535.15	\$61,535.15	\$0.00	\$0.00	\$0.00
BELLEVILLE	\$24,754.30	\$24,754.30	\$0.00	\$0.00	\$0.00
BERLIN TOWNSHIP	\$56,443.49	\$56,443.49	\$0.00	\$0.00	\$0.00
BROWNSTOWN TOWNSHIP	\$270,129.54	\$270,129.54	\$0.00	\$0.00	\$0.00
BRUCE TOWNSHIP	\$12,755.18	\$12,755.18	\$0.00	\$0.00	\$0.00
BURTCHVILLE TOWNSHIP	\$20,145.96	\$20,145.96	\$0.00	\$0.00	\$0.00
CANTON TOWNSHIP	\$1,019,385.58	\$1,019,385.58	\$0.00	\$0.00	\$0.00
CENTER LINE	\$38,501.28	\$38,501.28	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$305,099.49	\$305,099.49	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$621,881.65	\$621,881.65	\$0.00	\$0.00	\$0.00
COMMERCE TOWNSHIP	\$376,075.33	\$376,075.33	\$0.00	\$0.00	\$0.00
DEARBORN	\$2,441,971.64	\$1,537,437.82	\$904,533.82	\$0.00	\$0.00
DEARBORN HEIGHTS	\$303,524.19	\$303,524.19	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$257,494.89	\$257,494.89	\$0.00	\$0.00	\$0.00
ECORSE	\$110,623.13	\$110,623.13	\$0.00	\$0.00	\$0.00
FARMINGTON	\$76,985.59	\$76,985.59	\$0.00	\$0.00	\$0.00
FARMINGTON HILLS	\$681,513.61	\$681,513.61	\$0.00	\$0.00	\$0.00
FERNDALE	\$80,905.50	\$80,905.50	\$0.00	\$0.00	\$0.00
FLAT ROCK	\$95,965.22	\$95,965.22	\$0.00	\$0.00	\$0.00
FLINT	\$295,842.27	\$794,694.00	\$(498,851.73)	\$0.00	\$0.00
FRASER	\$103,818.91	\$103,818.91	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$133,366.34	\$133,366.34	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Water Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
GIBRALTAR	\$37,488.75	\$37,488.75	\$0.00	\$0.00	\$0.00
GREENWOOD TOWNSHIP	\$30,665.95	\$30,665.95	\$0.00	\$0.00	\$0.00
GROSSE ILE TOWNSHIP	\$98,562.86	\$98,562.86	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$216,054.56	\$216,054.56	\$0.00	\$0.00	\$0.00
GROSSE POINTE SHORES	\$61,209.99	\$61,209.99	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$102,655.65	\$102,655.65	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$56,297.99	\$56,297.99	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$69,964.22	\$69,964.22	\$0.00	\$0.00	\$0.00
HARRISON TWP	\$116,592.15	\$116,592.15	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$57,348.79	\$57,348.79	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$5,598,152.61	\$207,589.21	\$108,679.15	\$115,445.26	\$5,166,438.99
HURON TOWNSHIP	\$113,202.87	\$113,202.87	\$0.00	\$0.00	\$0.00
IMLAY CITY	\$62,000.88	\$62,000.88	\$0.00	\$0.00	\$0.00
IMLAY TOWNSHIP	\$1,487.69	\$1,487.69	\$0.00	\$0.00	\$0.00
INKSTER	\$148,231.58	\$148,231.58	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$23,738.94	\$23,738.94	\$0.00	\$0.00	\$0.00
LAPEER	\$110,706.49	\$110,706.49	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$47,061.61	\$47,061.61	\$0.00	\$0.00	\$0.00
LINCOLN PARK	\$194,841.89	\$194,841.89	\$0.00	\$0.00	\$0.00
LIVONIA	\$1,043,050.20	\$1,043,050.20	\$0.00	\$0.00	\$0.00
MACOMB TWP	\$837,792.56	\$837,792.56	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$156,803.75	\$156,803.75	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Water Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MAYFIELD TOWNSHIP	\$8,489.64	\$8,489.64	\$0.00	\$0.00	\$0.00
MELVINDALE	\$62,494.06	\$62,494.06	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$45,159.74	\$45,159.74	\$0.00	\$0.00	\$0.00
NOCWA	\$3,521,064.60	\$3,521,064.60	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$58,052.24	\$58,052.24	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$454,709.82	\$454,709.82	\$0.00	\$0.00	\$0.00
NOVI	\$866,798.56	\$866,798.56	\$0.00	\$0.00	\$0.00
OAK PARK	\$219,328.65	\$216,110.53	\$3,218.12	\$0.00	\$0.00
OAKLAND CO DR COM	\$3,296.27	\$3,296.27	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$82,585.14	\$82,585.14	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$340,450.92	\$340,450.92	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$555,333.75	\$555,333.75	\$0.00	\$0.00	\$0.00
RIVER ROUGE	\$49,616.82	\$49,616.82	\$0.00	\$0.00	\$0.00
RIVERVIEW	\$76,613.08	\$76,613.08	\$0.00	\$0.00	\$0.00
ROCKWOOD	\$23,555.24	\$23,555.24	\$0.00	\$0.00	\$0.00
ROMEO	\$18,112.28	\$18,112.28	\$0.00	\$0.00	\$0.00
ROMULUS	\$295,767.98	\$295,767.98	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$219,397.12	\$219,397.12	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$18,188.83	\$18,188.83	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$937,213.18	\$937,213.18	\$0.00	\$0.00	\$0.00
SOCWA	\$3,492,180.46	\$3,492,180.46	\$0.00	\$0.00	\$0.00
SOUTH ROCKWOOD	\$8,587.85	\$8,587.85	\$0.00	\$0.00	\$0.00
SOUTHGATE	\$175,400.16	\$175,400.16	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Water Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ST. CLAIR SHORES	\$249,909.91	\$249,909.91	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$1,185,474.34	\$1,185,474.34	\$0.00	\$0.00	\$0.00
SUMPTER TOWNSHIP	\$52,333.01	\$52,333.01	\$0.00	\$0.00	\$0.00
SYLVAN LAKE	\$18,717.76	\$18,717.76	\$0.00	\$0.00	\$0.00
TAYLOR	\$734,861.54	\$734,861.54	\$0.00	\$0.00	\$0.00
TRENTON	\$174,362.12	\$174,362.12	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$1,038,726.22	\$1,038,726.22	\$0.00	\$0.00	\$0.00
UTICA	\$48,755.62	\$48,755.62	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$232,206.37	\$232,206.37	\$0.00	\$0.00	\$0.00
VILLAGE OF ALMONT	\$17,826.02	\$17,826.02	\$0.00	\$0.00	\$0.00
WALLED LAKE	\$75,611.39	\$75,611.39	\$0.00	\$0.00	\$0.00
WARREN	\$785,772.11	\$785,772.11	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$146,354.11	\$146,354.11	\$0.00	\$0.00	\$0.00
WAYNE	\$231,906.80	\$231,906.80	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,475,829.90	\$1,475,829.90	\$0.00	\$0.00	\$0.00
WESTLAND	\$988,093.01	\$988,093.01	\$0.00	\$0.00	\$0.00
WIXOM	\$191,542.00	\$191,542.00	\$0.00	\$0.00	\$0.00
WOODHAVEN	\$158,544.37	\$158,544.37	\$0.00	\$0.00	\$0.00
YCUA	\$866,576.03	\$866,576.03	\$0.00	\$0.00	\$0.00
TOTAL Water Accounts	\$36,991,252.51	\$31,191,788.90	\$517,579.36	\$115,445.26	\$5,166,438.99

GLWA Aged Accounts Receivable- Sewer Accounts

Balances as of 1/31/2018

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	\$82,199.50	\$82,199.50	\$0.00	\$0.00	\$0.00
DEARBORN	\$1,635,700.00	\$1,635,700.00	\$0.00	\$0.00	\$0.00
EVERGREEN-FARMINGTON	\$2,811,100.00	\$2,811,100.00	\$0.00	\$0.00	\$0.00
FARMINGTON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$0.00	\$0.00	\$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	\$19,300.00	\$19,300.00	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$29,743,344.28	\$470,200.00	\$470,200.00	\$470,200.00	\$28,332,744.28
MELVINDALE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OAKLAND COUNTY GWK DD	\$3,812,600.00	\$3,812,600.00	\$0.00	\$0.00	\$0.00
OMID	\$6,068,000.00	\$6,068,000.00	\$0.00	\$0.00	\$0.00
REDFORD TOWNSHIP	\$21,200.00	\$21,200.00	\$0.00	\$0.00	\$0.00
ROUGE VALLEY	\$4,585,200.00	\$4,585,200.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY N.E.	\$2,053,100.00	\$2,053,100.00	\$0.00	\$0.00	\$0.00
WAYNE COUNTY-AREA #3	\$3,800.00	\$3,800.00	\$0.00	\$0.00	\$0.00
TOTAL Sewer Accounts	\$50,835,543.78	\$21,562,399.50	\$470,200.00	\$470,200.00	\$28,332,744.28

GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ALLEN PARK	\$2,575.88	\$2,575.88	\$0.00	\$0.00	\$0.00
AUBURN HILLS (C-O)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AUBURN HILLS (E-F)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BERKLEY	\$4,632.04	\$4,632.04	\$0.00	\$0.00	\$0.00
BEVERLY HILLS	\$1,596.08	\$1,596.08	\$0.00	\$0.00	\$0.00
BINGHAM FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BIRMINGHAM (E-F)	\$3,797.08	\$3,797.08	\$0.00	\$0.00	\$0.00
BIRMINGHAM (SEOC)	\$17,707.40	\$8,857.96	\$8,849.44	\$0.00	\$0.00
BLOOMFIELD HILLS	\$136.32	\$45.44	\$90.88	\$0.00	\$0.00
BLOOMFIELD TOWNSHIP	\$10,099.04	\$10,209.80	\$ (110.76)	\$0.00	\$0.00
CANTON TOWNSHIP	\$182,634.72	\$30,461.84	\$60,923.68	\$30,461.84	\$60,787.36
CENTER LINE	\$5,884.48	\$5,884.48	\$0.00	\$0.00	\$0.00
CHESTERFIELD TOWNSHIP	\$19,294.96	\$19,294.96	\$0.00	\$0.00	\$0.00
CITY OF FARMINGTON (E-F)	\$445.88	\$445.88	\$0.00	\$0.00	\$0.00
CITY OF ROCHESTER	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLARKSTON	\$491.32	\$491.32	\$0.00	\$0.00	\$0.00
CLAWSON	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLINTON TOWNSHIP	\$40,211.56	\$40,211.56	\$0.00	\$0.00	\$0.00
DEARBORN	\$174,804.84	\$58,268.28	\$116,536.56	\$0.00	\$0.00
DEARBORN HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETROIT METRO WC AIRPORT	\$170.40	\$170.40	\$0.00	\$0.00	\$0.00
EASTPOINTE	\$10,144.48	\$10,144.48	\$0.00	\$0.00	\$0.00
FARMINGTON	\$5,289.93	\$5,289.93	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
FARMINGTON HILLS	\$5,127.78	\$5,127.78	\$0.00	\$0.00	\$0.00
FERNDALE	\$ (73.53)	\$ (73.53)	\$0.00	\$0.00	\$0.00
FRASER	\$7,923.60	\$7,923.60	\$0.00	\$0.00	\$0.00
GARDEN CITY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE FARMS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE PARK	\$3,777.20	\$1,888.60	\$1,888.60	\$0.00	\$0.00
GROSSE POINTE SHORES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GROSSE POINTE WOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HAMTRAMCK	\$7,105.68	\$7,105.68	\$0.00	\$0.00	\$0.00
HARPER WOODS	\$5,884.48	\$3,024.60	\$2,859.88	\$0.00	\$0.00
HARRISON TWP	\$5,012.60	\$5,012.60	\$0.00	\$0.00	\$0.00
HAZEL PARK	\$5,373.28	\$5,373.28	\$0.00	\$0.00	\$0.00
HIGHLAND PARK	\$1,591,212.01	\$6,659.80	\$13,376.40	\$6,739.32	\$1,564,436.49
HUNTINGTON WOODS	\$457.24	\$457.24	\$0.00	\$0.00	\$0.00
INDEPENDENCE	\$7,412.40	\$7,412.40	\$0.00	\$0.00	\$0.00
INKSTER	\$8,883.52	\$8,883.52	\$0.00	\$0.00	\$0.00
KEEGO HARBOR	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LAKE ORION	\$1,198.48	\$1,198.48	\$0.00	\$0.00	\$0.00
LATHRUP	\$2,246.44	\$2,246.44	\$0.00	\$0.00	\$0.00
LENOX TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
LIVONIA	\$63,644.40	\$63,644.40	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MACOMB TWP	\$329.44	\$329.44	\$0.00	\$0.00	\$0.00
MADISON HEIGHTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MELVINDALE	\$5,799.28	\$5,799.28	\$0.00	\$0.00	\$0.00
NEW HAVEN	\$639.00	\$639.00	\$0.00	\$0.00	\$0.00
NORTHVILLE	\$2,916.68	\$2,916.68	\$0.00	\$0.00	\$0.00
NORTHVILLE TOWNSHIP	\$43,843.92	\$7,307.32	\$14,614.64	\$7,307.32	\$14,614.64
NOVI	\$27,573.56	\$27,573.56	\$0.00	\$0.00	\$0.00
OAK PARK	\$10,982.28	\$10,982.28	\$0.00	\$0.00	\$0.00
OAKLAND TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ORCHARD LAKE VILLAGE	\$ (238.38)	\$0.00	\$ (238.38)	\$0.00	\$0.00
ORION TOWNSHIP (C-O)	\$8,568.28	\$8,568.28	\$0.00	\$0.00	\$0.00
OXFORD TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OXFORD VILLAGE	\$2,010.72	\$2,010.72	\$0.00	\$0.00	\$0.00
PLEASANT RIDGE	\$431.68	\$431.68	\$0.00	\$0.00	\$0.00
PLYMOUTH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PLYMOUTH TOWNSHIP	\$101,700.40	\$20,340.08	\$40,680.16	\$20,340.08	\$20,340.08
REDFORD TOWNSHIP	\$39,352.08	\$19,738.00	\$19,614.08	\$0.00	\$0.00
ROCHESTER HILLS	\$29,047.52	\$29,047.52	\$0.00	\$0.00	\$0.00
ROMULUS	\$1,479.64	\$1,479.64	\$0.00	\$0.00	\$0.00
ROSEVILLE	\$22,487.12	\$22,487.12	\$0.00	\$0.00	\$0.00
ROYAL OAK	\$21,595.36	\$21,595.36	\$0.00	\$0.00	\$0.00
ROYAL OAK TOWNSHIP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SHELBY TOWNSHIP	\$18,976.88	\$18,976.88	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- IWC Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
SOUTHFIELD (E-F)	\$44,996.96	\$44,996.96	\$0.00	\$0.00	\$0.00
SOUTHFIELD (SEOC)	\$5,995.24	\$5,995.24	\$0.00	\$0.00	\$0.00
ST. CLAIR SHORES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
STERLING HEIGHTS	\$49,606.28	\$49,606.28	\$0.00	\$0.00	\$0.00
TROY (E-F)	\$613.44	\$613.44	\$0.00	\$0.00	\$0.00
TROY (SEOC)	\$58,830.60	\$58,830.60	\$0.00	\$0.00	\$0.00
UTICA	\$4,694.52	\$4,694.52	\$0.00	\$0.00	\$0.00
VAN BUREN TOWNSHIP	\$550.96	\$550.96	\$0.00	\$0.00	\$0.00
VILLAGE OF FRANKLIN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WASHINGTON TOWNSHIP	\$4,475.84	\$2,237.92	\$2,237.92	\$0.00	\$0.00
WATERFORD TOWNSHIP	\$19,718.12	\$19,718.12	\$0.00	\$0.00	\$0.00
WAYNE	\$8,017.32	\$8,017.32	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (C-O)	\$1,508.04	\$1,508.04	\$0.00	\$0.00	\$0.00
WEST BLOOMFIELD TWP (E-F)	\$10,047.92	\$10,047.92	\$0.00	\$0.00	\$0.00
WESTLAND	\$36,843.32	\$36,843.32	\$0.00	\$0.00	\$0.00
TOTAL IWC Accounts	\$2,778,496.01	\$772,145.78	\$281,323.10	\$64,848.56	\$1,660,178.57

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
A & R PACKING CO., LLC	\$5,030.80	\$5,030.80	\$0.00	\$0.00	\$0.00
AACTRON	\$49.80	\$49.80	\$0.00	\$0.00	\$0.00
ACADEMY PACKING CO.	\$253.81	\$253.81	\$0.00	\$0.00	\$0.00
ACME RUSTPROOF	\$40.07	\$40.07	\$0.00	\$0.00	\$0.00
ADVANCED RESOURCE RECOVERY	\$480.11	\$480.11	\$0.00	\$0.00	\$0.00
AEVITAS SPECIALITY SERVICES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ALEXANDER & HORNING	\$17,263.78	\$11,166.99	\$0.00	\$6,096.79	\$0.00
ALEXANDER & HORNING	\$55,749.44	\$31,099.92	\$0.00	\$24,649.52	\$0.00
ALEXANDER & HORNING	\$2,366.86	\$1,465.74	\$0.00	\$901.12	\$0.00
ALGAL SCIENTIFIC CORPORATION	\$7,458.62	\$1,989.80	\$906.80	\$1,970.58	\$2,591.44
ALL CHEM CORP, LLC.	\$ (183.11)	\$ (183.11)	\$0.00	\$0.00	\$0.00
ALPHA STAMPING COMPANY	\$314.44	\$314.44	\$0.00	\$0.00	\$0.00
AMERICAN WASTE TECH INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ATWATER BREWERY	\$62.84	\$62.84	\$0.00	\$0.00	\$0.00
ATWATER BREWERY	\$1,495.61	\$1,495.61	\$0.00	\$0.00	\$0.00
AUTOMOTIVE FINISH	\$9.01	\$9.01	\$0.00	\$0.00	\$0.00
AXLE BREWING COMPANY, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BAFFIN BREWING COMPANY	\$305.23	\$0.00	\$0.00	\$305.23	\$0.00
BARABOO BREWING COMPANY	\$ (2,568.34)	\$0.00	\$0.00	\$0.00	\$ (2,568.34)
BARON INDUSTRIES	\$957.61	\$957.61	\$0.00	\$0.00	\$0.00
BARTZ BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BASTONE BREWERY	\$24.11	\$24.11	\$0.00	\$0.00	\$0.00
BATCH BREWING COMPANY	\$ (803.43)	\$0.00	\$0.00	\$0.00	\$ (803.43)

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
BAYS MICHIGAN CORPORATION	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BEIRUT BAKERY, INC.	\$65.41	\$65.41	\$0.00	\$0.00	\$0.00
BETTER MADE SNACK FOOD	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BLACK LOTUS BREWING CO.	\$ (43.69)	\$0.00	\$0.00	\$0.00	\$ (43.69)
BOZEK'S MARKET	\$62.06	\$62.06	\$0.00	\$0.00	\$0.00
BREW DETROIT	\$1,793.05	\$1,793.05	\$0.00	\$0.00	\$0.00
BROADWAY MKT CORNED BEEF	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
BROOKS BREWING, LLC.	\$52.95	\$52.95	\$0.00	\$0.00	\$0.00
CANTON BREW WORKS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CAPITAL REPRODUCTIONS	\$ (90.12)	\$0.00	\$ (90.12)	\$0.00	\$0.00
CF BURGER CREAMERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CHILANGO'S BAKERY	\$1,661.24	\$108.49	\$52.65	\$614.23	\$885.87
CINTAS CORP. - MACOMB TWP.	\$103,489.05	\$54,186.60	\$0.00	\$49,302.45	\$0.00
CINTAS CORPORATION	\$37,340.72	\$37,340.72	\$0.00	\$0.00	\$0.00
CINTAS CORPORATION	\$11,963.17	\$11,963.17	\$0.00	\$0.00	\$0.00
CITY LAUNDRY, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CLASSIC CONTAINER CORP.	\$380.30	\$380.30	\$0.00	\$0.00	\$0.00
COCA-COLA REFRESHMENTS USA,	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$3,859.32	\$3,859.32	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$583.08	\$583.08	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$2,928.44	\$2,928.44	\$0.00	\$0.00	\$0.00
COSTCO WHOLESALE STORE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
COUNTRY FRESH DAIRY CO.	\$35,970.64	\$35,970.64	\$0.00	\$0.00	\$0.00
CROSS CHEMICAL COMPANY, INC.	\$966.73	\$966.73	\$0.00	\$0.00	\$0.00
DARLING INGREDIENTS, INC.	\$15,301.83	\$15,301.83	\$0.00	\$0.00	\$0.00
DAVE'S SAUSAGE FACTORY 2	\$376.50	\$376.50	\$0.00	\$0.00	\$0.00
DEARBORN BREWING	\$32.34	\$32.34	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE	\$3,797.78	\$3,797.78	\$0.00	\$0.00	\$0.00
DEARBORN SAUSAGE CO., INC.	\$12,839.68	\$12,839.68	\$0.00	\$0.00	\$0.00
DETROIT BEER	\$111.43	\$111.43	\$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 SAUSAGES CO INC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DETRONIC INDUSTRIES, INC.	\$86.48	\$86.48	\$0.00	\$0.00	\$0.00
DIFCO LABORATORIES, INC.	\$14,481.72	\$14,481.72	\$0.00	\$0.00	\$0.00
DIVERSIFIED CHEM TECH. INC.	\$71.20	\$71.20	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
DOMESTIC UNIFORM RENTAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
E.W. GROBBEL'S SONS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
ENVIROSOLIDS, L.L.C.	\$27,631.15	\$27,631.15	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$(2,656.50)	\$(2,656.50)	\$0.00	\$0.00	\$0.00
EQ DETROIT, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
EQ RESOURCES RECOVERY, INC.	\$963.40	\$963.40	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ETON ST BREWERY- GRIFFIN CLP	\$2,376.15	\$2,376.15	\$0.00	\$0.00	\$0.00
EXTRUDE HONE CORPORATION	\$152.13	\$152.13	\$0.00	\$0.00	\$0.00
EXTRUDEHODE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FARMINGTON BREWING COMPANY	\$64.43	\$64.43	\$0.00	\$0.00	\$0.00
FAYGO BEVERAGES, INC.	\$151,707.34	\$27,682.83	\$31,404.99	\$32,521.63	\$60,097.89
FORD NEW MODEL PROGRAM	\$577.27	\$577.27	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
FRESH-PAK	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GENERAL LINEN SUPPLY CO.	\$46,877.99	\$11,010.37	\$11,802.74	\$10,915.76	\$13,149.12
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GLOBAL TITANIUM, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$98.40	\$98.40	\$0.00	\$0.00	\$0.00
GRANITE CITY FOOD & BREWERY	\$143.11	\$91.92	\$0.00	\$51.19	\$0.00
GRANITE CITY FOOD & BREWERY	\$212.02	\$110.26	\$0.00	\$101.76	\$0.00
HACIENDA MEXICAN FOODS	\$2,570.81	\$570.81	\$660.80	\$736.72	\$602.48
HENKEL CORPORATION	\$504.45	\$134.47	\$139.03	\$0.00	\$230.95
HOME STYLE FOOD INC.	\$3,857.07	\$3,857.07	\$0.00	\$0.00	\$0.00
HOOD CLEANERS	\$199.60	\$7.81	\$6.84	\$6.84	\$178.11
HOUGHTON INTERNATIONAL INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HOUGHTON INTERNATIONAL INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
HUNTINGTON CLEANERS	\$850.44	\$850.44	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
INDUSTRIAL METAL COATING	\$804.38	\$804.38	\$0.00	\$0.00	\$0.00
ISLAMIC SLAUGHTER HOUSE	\$705.57	\$705.57	\$0.00	\$0.00	\$0.00
ITALIAN BUTTER BREAD STICKS	\$ (9.57)	\$ (9.57)	\$0.00	\$0.00	\$0.00
J & G FOOD PRODUCTS, INC.	\$56.42	\$56.42	\$0.00	\$0.00	\$0.00
KAR NUT PRODUCTS	\$1,073.12	\$1,073.12	\$0.00	\$0.00	\$0.00
KOWALSKI SAUSAGES, CO.	\$760.05	\$760.05	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$629.86	\$629.86	\$0.00	\$0.00	\$0.00
LA MICHOACANA FLOUR TORTILLA	\$70.30	\$70.30	\$0.00	\$0.00	\$0.00
LEAR CORPORATION DBA EAGLE C	\$5,080.89	\$5,080.89	\$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	\$ (0.52)	\$0.00	\$ (0.52)	\$0.00	\$0.00
MACDERMID, INC.	\$2,198.54	\$2,198.54	\$0.00	\$0.00	\$0.00
MCNICHOLS POLISHING & ANODIZ	\$32.35	\$32.35	\$0.00	\$0.00	\$0.00
MELLO MEATS INC, - KUBISCH S	\$112.83	\$112.83	\$0.00	\$0.00	\$0.00
METROPOLITAN BAKERY	\$397.26	\$397.26	\$0.00	\$0.00	\$0.00
MIBA HYDRAMECHANICA CORP.	\$360.89	\$360.89	\$0.00	\$0.00	\$0.00
MICHIGAN DAIRY	\$111,660.33	\$111,660.33	\$0.00	\$0.00	\$0.00
MICHIGAN PROD. MACHINING	\$1,799.77	\$1,799.77	\$0.00	\$0.00	\$0.00
MICHIGAN SOY PRODUCTS CO.	\$632.68	\$632.68	\$0.00	\$0.00	\$0.00
MIDWEST WIRE PRODUCTS, INC.	\$ (2.94)	\$0.00	\$0.00	\$0.00	\$ (2.94)
MILANO BAKERY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MILTON CHILI CO.	\$53.43	\$53.43	\$0.00	\$0.00	\$0.00
MINNIE MARIE BAKERS, INC	\$3,600.94	\$3,600.94	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
MISTER UNIFORM & MAT RENTALS	\$338.20	\$32.12	\$32.47	\$39.38	\$234.23
MOTOR CITY BREWING WORKS	\$ (213.00)	\$0.00	\$0.00	\$0.00	\$ (213.00)
NATIONAL CHILI COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NATIONAL CHILI COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTH CENTER BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
NORTHERN LAKES SEAFOOD & MEAT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OAKWOOD BAKERY	\$ (385.33)	\$ (385.33)	\$0.00	\$0.00	\$0.00
PELLERITO FOODS INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PEPSI COLA, INC.	\$14,846.05	\$14,846.05	\$0.00	\$0.00	\$0.00
PERSONAL UNIFORM SERVICE, IN	\$236.90	\$236.90	\$0.00	\$0.00	\$0.00
PETRO ENVIRON TECH, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PINE TREE ACRES, INC.	\$13,483.66	\$13,483.66	\$0.00	\$0.00	\$0.00
PLATING SPEC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
POWER VAC OF MICHIGAN, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
PREMIER PLATING, LLC	\$1,546.31	\$1,546.31	\$0.00	\$0.00	\$0.00
PRODUCTION SPRING, LLC.	\$721.05	\$536.04	\$0.00	\$185.01	\$0.00
QUALA SERVICES, LLC	\$146.29	\$146.29	\$0.00	\$0.00	\$0.00
RAY'S ICE CREAM CO.	\$59.66	\$59.66	\$0.00	\$0.00	\$0.00
RED SPOT PAINT #409139	\$18.92	\$18.92	\$0.00	\$0.00	\$0.00
RIVER ROUGE BREWING COMPANY	\$741.52	\$741.52	\$0.00	\$0.00	\$0.00
ROAK BREWING CO. LLC	\$1,294.77	\$1,294.77	\$0.00	\$0.00	\$0.00
ROCHESTER MILLS BEER COMPANY	\$323.12	\$323.12	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
ROCHESTER MILLS BREWERY	\$4,907.84	\$1,286.54	\$0.00	\$1,913.59	\$1,707.71
RTT	\$20,919.52	\$0.00	\$1,416.39	\$2,851.80	\$16,651.33
SEAFARE FOODS, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SHERWOOD BREWING COMPANY	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SPRAYTEK, INC.	\$3,922.05	\$70.07	\$29.81	\$23.78	\$3,798.39
SWEETHEART BAKERY, INC.	\$188.70	\$66.26	\$59.06	\$63.38	\$0.00
THE CROWN GROUP-LIVONIA PLAN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
THE ROYAL OAK BREWERY	\$(1,951.56)	\$0.00	\$0.00	\$0.00	\$(1,951.56)
TOM LAUNDRY CLEANERS	\$12.69	\$12.69	\$0.00	\$0.00	\$0.00
TRAFFIC JAM & SNUG	\$(61.24)	\$0.00	\$0.00	\$0.00	\$(61.24)
TURRI'S ITALIAN FOODS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TURRI'S ITALIAN FOODS	\$22,010.56	\$22,010.56	\$0.00	\$0.00	\$0.00
U-METCO, INC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$26,275.27	\$26,275.27	\$0.00	\$0.00	\$0.00
UNCLE RAYS SNACKS, LLC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNIQUE LINEN SERVICES, INC.	\$69.61	\$69.61	\$0.00	\$0.00	\$0.00
UNITED FISH DISTRIBUTORS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED LINEN SERVICE, LLC.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
UNITED MEAT & DELI	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
US ECOLOGY MICHIGAN	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
USHER OIL SERVICES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS	\$(13,679.18)	\$(13,679.18)	\$0.00	\$0.00	\$0.00
VERNDALE PRODUCTS, INC.	\$(3,828.77)	\$(3,828.77)	\$0.00	\$0.00	\$0.00

GLWA Aged Accounts Receivable- Pollutant Surcharge Accounts

Balances as of 1/31/2018

Customer Name	Total Due	Current	46 - 74 Days	75 - 104 Days	>105 Days
VERNOR FOOD PRODUCTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WIGLEY'S MEAT PROCESS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$716.44	\$716.44	\$0.00	\$0.00	\$0.00
WINTER SAUSAGE MFG. CO.	\$84.62	\$84.62	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WOLVERINE PACKING CO.	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
WOODWARD AVENUE BREWERS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL Pollutant Surcharge Accounts	\$795,279.08	\$521,124.06	\$46,420.94	\$133,250.76	\$94,483.32



Financial Services Audit Committee Communication

Date: February 9, 2018

To: Great Lakes Water Authority Audit Committee

From: Deirdre Henry, Treasury Manager

Re: Master Bond Ordinance Monthly Cash Transfers to Detroit Water & Sewerage Department (DWSD) and Great Lakes Water Authority (GLWA)

Background: The Master Bond Ordinances for the water and sewer systems prescribe monthly distributions of cash receipts.

Analysis: The attached documents summarize the monthly cash transfers to DWSD and GLWA as stipulated by the Master Bond Ordinances for the period January 2016 – February 2018.

Proposed Action: Receive and file report.

**Great Lakes Water Authority
Funds Transferred to DWSD per Master Bond Ordinance
Through February 1, 2018**

DWSD WATER				
	Operations & Maintenance	Pension	Lease Payment (I&E Fund)	Total Water
Total FY 2016	\$ 26,185,600	\$ 4,262,700	\$ 20,173,100	\$ 50,621,400
Total FY 2017	\$ 33,596,400	\$ 4,262,400	\$ 22,500,000	\$ 60,358,800
FY 2018				
July 2017	\$ 2,799,700	\$ 356,000	\$ 1,875,000	\$ 5,030,700
August 2017	2,921,642	356,000	1,875,000	5,152,642
August 2017	121,942	-	-	121,942 ¹⁾
September 2017	2,921,642	356,000	1,875,000	5,152,642
October 2017	2,921,642	356,000	1,875,000	5,152,642
November 2017	2,921,642	356,000	1,875,000	5,152,642
December 2017	2,921,642	356,000	1,875,000	5,152,642
January 2018	2,921,642	356,000	1,875,000	5,152,642
February 2018	2,921,642	356,000	1,875,000	5,152,642
March 2018				-
April 2018				-
May 2018				-
June 2018				-
Total FY 2018	\$ 23,373,136	\$ 2,848,000	\$ 15,000,000	\$ 41,221,136
Total Water Since Jan 1 2016	\$ 83,155,136	\$ 11,373,100	\$ 57,673,100	\$ 152,201,336

DWSD SEWER				
	Operations & Maintenance	Pension	Lease Payment (I&E Fund)	Total Sewer
Total FY 2016	\$ 19,774,300	\$ 2,861,800	\$ 7,508,500	\$ 30,144,600
Total FY 2017	\$ 41,535,600	\$ 2,862,000	\$ 27,500,000	\$ 71,897,600
FY 2018				
July 2017	\$ 3,461,300	\$ 238,000	\$ 2,291,667	\$ 5,990,967
August 2017	5,043,166	238,000	2,291,667	7,572,833
August 2017	1,581,866	-	-	1,581,866 ¹⁾
September 2017	5,043,166	238,000	2,291,667	7,572,833
October 2017	5,043,166	238,000	2,291,667	7,572,833
November 2017	5,043,166	238,000	2,291,667	7,572,833
December 2017	5,043,166	238,000	2,291,667	7,572,833
January 2018	5,043,166	238,000	2,291,667	7,572,833
February 2018	5,043,166	238,000	2,291,667	7,572,833
March 2018				-
April 2018				-
May 2018				-
June 2018				-
Total FY 2018	\$ 40,345,328	\$ 1,904,000	\$ 18,333,336	\$ 60,582,664
Total Sewer Since Jan 1 2016	\$ 101,655,228	\$ 7,627,800	\$ 53,341,836	\$ 162,624,864
Total FY 2016 Water & Sewer	\$ 45,959,900	\$ 7,124,500	\$ 27,681,600	\$ 80,766,000
Total FY 2017 Water & Sewer	\$ 75,132,000	\$ 7,124,400	\$ 50,000,000	\$ 132,256,400
Total FY 2018 Water & Sewer	\$ 63,718,464	\$ 4,752,000	\$ 33,333,336	\$ 101,803,800

Note 1: 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 paid from the lease payment deposited to the Improvement & Extension (I&E) Fund.

Note 2: For FY 2016, \$22,318,500 million of the lease payment was directed by the City of Detroit to offset a portion of its FY 2016 water and sewer debt service in lieu of a cash transfer.

¹⁾ Additional Transfer in August to adjust July O&M to DWSD FY18 requested budget amount.

Great Lakes Water Authority
Funds Transferred to Accounts Held by GLWA per Master Bond Ordinance
Through February 1, 2018

WATER							
	<u>Operations & Maintenance</u>	<u>Pension Sub Account</u>	<u>Pension Obligation</u>	<u>WRAP</u>	<u>Budget Stabilization (For Benefit of DWSD)</u>	<u>Extraordinary Repair & Replacement (ER&R)</u>	<u>Total Water</u>
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	\$0	\$130,651,200
FY 2018							
July 2017	\$10,130,217	\$504,000	\$891,308	\$179,950	-	-	\$11,705,475
August 2017	10,130,217	504,000	891,308	179,950	-	-	11,705,475
September 2017	10,130,217	504,000	891,308	179,950	-	-	11,705,475
October 2017	10,130,217	504,000	891,308	179,950	-	-	11,705,475
November 2017	10,130,217	504,000	891,308	179,950	-	-	11,705,475
December 2017	10,130,217	504,000	891,308	179,950	-	-	11,705,475
January 2018	10,130,217	504,000	891,308	179,950	-	-	11,705,475
February 2018	10,130,217	504,000	891,308	179,950	-	-	11,705,475
March 2018							-
April 2018							-
May 2018							-
June 2018							-
Total FY 2018	\$81,041,736	\$4,032,000	\$7,130,464	\$1,439,600	\$0	\$0	\$93,643,800
Total Water Since Jan 1 2016	\$263,973,336	\$12,074,300	\$20,594,400	\$4,060,500	\$2,686,900	\$606,000	\$222,953,700

SEWER							
	<u>Operations & Maintenance</u>	<u>Pension Sub Account</u>	<u>Pension Obligation</u>	<u>WRAP</u>	<u>Budget Stabilization (For Benefit of DWSD)</u>	<u>Extraordinary Repair & Replacement (ER&R)</u>	<u>Total Water</u>
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	\$0	\$206,032,800
FY 2018							
July 2017	\$15,923,283	\$902,000	\$1,223,958	\$230,067	-	-	\$18,279,308
August 2017	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
September 2017	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
October 2017	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
November 2017	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
December 2017	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
January 2018	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
February 2018	15,923,283	902,000	1,223,958	230,067	-	-	18,279,308
March 2018							-
April 2018							-
May 2018							-
June 2018							-
Total FY 2018	\$127,386,264	\$7,216,000	\$9,791,664	\$1,840,536	\$0	\$0	\$146,234,464
Total Sewer Since Jan 1 2016	\$404,110,664	\$21,676,800	\$28,052,600	\$5,177,800	\$8,246,100	\$779,600	\$340,657,300
Total FY 2016 Water & Sewer	\$171,917,600	\$16,875,500	\$24,323,000	\$4,506,700	\$7,918,600	\$1,385,600	\$226,927,000
Total FY 2017 Water & Sewer	\$287,738,400	\$16,875,600	\$24,324,000	\$4,731,600	\$3,014,400	\$0	\$336,684,000
Total FY 2018 Water & Sewer	\$208,428,000	\$11,248,000	\$16,922,128	\$3,280,136	\$0	\$0	\$239,878,264