

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



3

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



4

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**



5

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*



5

*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



9

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*



10

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 2019 Charges
<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*



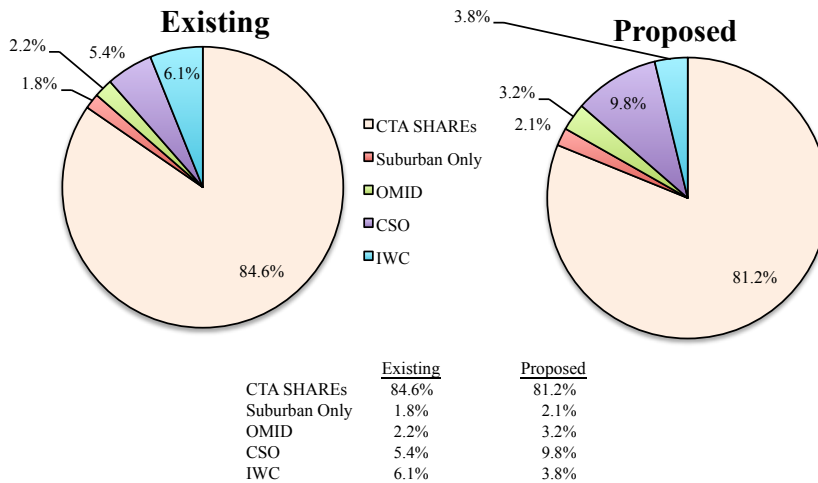
FY 2019 Sewer Cost of Service Results: *Cost Pool Allocations*

- 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

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*

FY 2019 Sewer Cost of Service Results: Cost Pool Allocations



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

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.



19

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



20

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.*



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



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



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*



27

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*



28

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*



29

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*



30

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*

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

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*



33

