



CITY of NOVI CITY COUNCIL

Agenda Item C
June 4, 2018

SUBJECT: Approval of Proposed Water & Sewer Rate Resolutions for 2018 - 2019

SUBMITTING DEPARTMENT: Finance/Water and Sewer

CITY MANAGER APPROVAL:

BACKGROUND INFORMATION:

The Finance Department and Department of Public Services annually reviews and proposes water and sewer rates for City Council consideration. The City of Novi purchases treated water and sewer services from other governmental entities. The attached rate schedules incorporate the charges from the Great Lakes Water Authority ("GLWA"), formerly Detroit Water & Sewerage Department (DWSD), for water services and the combined pass-through partial increase from the Oakland County Water Resource Commission (OCWRC) for sewer services.

GLWA charges both a fixed rate and a variable rate to its customers. In fiscal years prior to 2016, DWSD fees were 70% based on volume (or consumption) and 30% fixed costs. Beginning in fiscal year 2015-2016, GLWA altered their fee structure with fixed costs accounting for 60% of the City's overall costs and the remaining 40% of costs based on volume or consumption. During fiscal year 2016, the City constructed a water storage facility to help alleviate peak hour usage charges from GLWA and ultimately decrease the City's overall water costs. In the first year of operating the storage facility (2017), the City's total water costs decreased 23% from the year before. In fiscal year 2018, water costs increased 9%. Estimated costs for fiscal year 2019 are estimated to stay consistent with those of fiscal year 2018.

Fiscal Year	Fixed Costs	Contract Volume Costs (Variable)	Total DWSD Costs (Revenue Requirement)	Percent Change from Previous yr.
2015-2016	\$6,727,200	\$16.99	\$11,212,560	7%
2016-2017	\$5,122,800	\$12.98	\$8,536,540	-23%
2017-2018	\$5,336,400	\$12.99	\$9,281,889	9%
2018-2019	\$5,557,000	\$12.57	\$9,261,379	0%

The Oakland County Water Resource Commission (OCWRC) has also moved from a former variable rate charged to users to a fixed rate. The Huron Rouge Sewage Disposal System ("HRSDS") (the largest of three systems within the City) has an estimated overall rate increase from the prior year of 24%. While the increase of 24% is substantial, the City has not received an increase in costs from HRSDS since December 2015. The rate for the Novi-Walled Lake Sewer System and OCWRC are estimated to increase 2.5% over the prior year.

Additional costs to be covered by the water and sewer user fees include annual operating costs such as salary and fringes, maintenance and cleaning costs, current equipment costs and vendor contracts for water installation fees.

The City sets water and sewer rates using a multi-year budget and capital plan which allows the substantial current year cost increase of 24% for sewer to be spread out over several years. Prior year's efficiencies in operations have also allowed the City to have a net overall decrease in rates over the past two fiscal years and will allow the current year proposed rates to be minimal compared to the actual cost increases. The proposed combined water and sewer rate increase to the average customer for the 2018-19 fiscal year will be approximately 3.2% or \$28 annually for residential 5/8" meter size and approximately 5.0% for industrial customers (depending on size of meter, consumption, etc.). The net increase in the overall rate includes no change to the water fixed fee, a 2.0% increase in the variable rate, no change to the fixed sewer rate and an 8.0% increase in the variable sewer rate. The City expects a net operating cash inflow in fiscal year 2019 of approximately \$2.1 million which will be used to help offset a portion of fiscal year 2019 budgeted capital costs of \$4.4 million with the balance of \$2.3 million coming from fund balance/cash reserves. While costs for sewer are projected to continue to increase in the coming years, the City will continue to work to minimize future rate increases.

The City of Novi Water & Sewer Fund, the Oakland County Water Resource Commission (OCWRC) and the Great Lakes Water Authority (GLWA) are all not-for-profit entities and therefore rates are intended and required to cover operating, maintenance, capital replacement and debt service costs. The American Water Works Association (AWWA) recommends government agencies be prudent in the computations of reserves, either through depreciation or through a future debt service reserve to cover current and future replacement infrastructure costs.

RECOMMENDED ACTION: Approval of Proposed Water & Sewer Rate Resolutions for 2018 – 2019.

**RESOLUTION
WATER RATES**

WHEREAS, the City of Novi through the Code of Ordinance, Section 34 has empowered itself to acquire, Construct, and operate a water supply system; and,

WHEREAS, by Section 34-19 the City of Novi may establish rates to operate said system; and,

WHEREAS, certain rates must reflect actual costs of usage and consumption; and,

WHEREAS, certain rates must cover the costs related to administration, construction, maintenance and replacements to the system; and,

WHEREAS, the cost to finance said system demonstrates a need to increase the water rates.

NOW, THEREFORE BE IT RESOLVED that the following rates shall be implemented as the rates of the Water Supply System pursuant to Section 34-19 for all bills rendered after August 1, 2018.

WATER RATES	
<u>Minimum (Fixed) Rate Schedule:</u>	
<u>Meter Size</u>	<u>Minimum Rate per Quarter</u>
5/8"	\$ 56.00
1"	80.00
1.5"	174.00
2"	232.00
3"	665.00
4"	850.00
6"	1,778.00
8"	2,114.00
10"	2,425.00
<u>Consumption Rate:</u> \$3.26 per Thousand Gallons	

NOW, THEREFORE BE IT RESOLVED that the rates related to water fees will be established as follows:

▪ **EQUIPMENT FEES**

<u>Service Size</u>	<u>Meter Size</u>	<u>Public Street Copper</u>	<u>Private Street Copper</u>
1"	5/8"	\$1,725	\$1,340
1"	1"	\$1,865	\$1,480
1.5"	1"	\$2,670	\$1,865
1.5"	1.5"	\$2,865	\$2,060
2"	1.5"	\$3,440	\$2,520
2"	2"	\$3,580	\$2,660

- Service on Public Roads over 60 feet, there will be an additional fee per Right of Way foot of:

<u>SERVICE SIZE</u>	<u>FEE/PER RIGHT OF WAY FOOT COPPER</u>
1"	\$17.00
1.5"	\$18.00
2"	\$21.00

An additional \$ 1,500 fee will be assessed for taps into a concrete water main. A separate additional fee will be assessed if a directional bore is needed (please contact the Water & Sewer Department).

▪ **METERING EQUIPMENT FEES**

<u>SIZE</u>	<u>METER</u>	<u>METER HORN</u>	<u>FLANGES</u>	<u>STRAINER</u>	<u>RADIO REMOTE</u>
5/8"	\$ 150	\$ 40	N/A	N/A	\$ 86
1"	260	70	N/A	N/A	86
1.5"	450	N/A	70	N/A	86
2"	575	N/A	90	N/A	86
3" (Compound)	2,085	N/A	90	735	86
4" (Compound)	2,980	N/A	130	890	86
6" (Compound)	3,790	N/A	210	1,665	86

8" and larger Compound and Turbine meters and equipment will be actual costs plus 15% City of Novi Administrative Fee

MISCELLANEOUS CHARGES

Miscellaneous Inspection Fee	\$ 90
Turn-off or Turn-on Service (regular hours)	90
Turn-off or Turn-on Service (Saturdays or Evenings)	175
Turn-off or Turn-on Service (Sundays or Holidays)	250
Water Meter Test	85
Unmetered Water – Single Family Residential Construction	105
Unmetered Water – Non-Single Family Residential Construction	365
Permits to Use Fire Hydrant Fees:	
Backflow Preventer & Meter Deposit: 1" meter	500
Backflow Preventer & Meter Deposit: 2" meter	800
Backflow Preventer & Meter Deposit: 3" meter	1200
Hydrant Deposit	200
Permit Fee	60
Inspection Fee	60
Rental Fee	\$3.00/per day, \$20/per month

WATER TAP FEES

For the privilege of tapping into the Water Supply System, there shall be a charge of One Thousand Eight Hundred Fifty Dollars (\$1,850.00), multiplied by the unit factor set forth in the Unit Factor Chart as adopted by the City Council. With the exception of those users served directly by the water main constructed and financed by Special Assessment District Number 126 who will be charged Five Hundred Dollars (\$ 500.00) multiplied by the factor set forth in the Unit Factor Chart.

SPECIAL RATES

For miscellaneous services for which, in the judgment of the City Council a special rate should be established, such rates shall be established and charged in accordance with the schedule of rates adopted by resolution of the City Council.

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a regular meeting held the 4th day of June 2018.

By: Cortney Hanson
Its: City Clerk

RESOLUTION
Huron-Rouge Sewer Rates

WHEREAS, the City of Novi through the Code of Ordinance, Section 34-145 has established that the rates are to be sufficient to provide for the payment of the expenses of administration and operation and such expenses for the maintenance of the system as are necessary to preserve the same in good repair and working order, to provide for the payment of the sewage disposal charge required to be paid to the county, to provide for the annual payments required to be made to the county in connection with the Huron-Rouge System, to provide for the payment and interest as required by the contract with the county, and to provide for the payment of such other expenditures and funds for the system as this division may require. Such rates shall be fixed and revised from time to time as may be necessary to produce these amounts.

WHEREAS, Oakland County has notified the City of Novi that their charge to us for sewage disposal has increased by 24% for 2018-2019,

WHEREAS, the cost to finance said system demonstrates that the sewer rates will be increasing,

NOW, THEREFORE BE IT RESOLVED, that the following rates shall be implemented as the rates of the sewer system pursuant to Section 34-145 for all bills rendered after August 1, 2018.

<u>Base Sewer Rates</u>	
<u>Minimum (Fixed) Rate Schedule</u>	
<u>Meter Size</u>	<u>Minimum Rate Per Quarter</u>
5/8"	\$30.00
1"	50.00
1.5"	85.00
2"	105.00
3"	320.00
4"	410.00
6"	850.00
8" or larger	995.00

\$3.89 per thousand gallons for metered consumption, and
\$96.92 per quarter/per tap unit for un-metered consumption

INSPECTION FEE

Sewer Inspection Fee.....\$90.00

High Strength Pollutants (HSP) and for Industrial Waste Control (IWC)

WHEREAS, the pass-through surcharges from the Great Lakes Water Authority for High Strength Pollutants (HSP) and for Industrial Waste Control (IWC) which are regulated by the Clean Water Act and may change every year.

NOW, THEREFORE BE IT RESOLVED, the City of Novi will collect the HSP and IWC surcharges as determined by the Great Lakes Water Authority.

SEWER TAP FEES

For the privilege of tapping into the Sanitary Sewer System, there shall be a charge of Two Thousand Seven Hundred Twenty Dollars (\$2,720.00), multiplied by the unit factor set forth in the Unit Factor Chart as adopted by the City Council.

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a regular meeting held the 4th day of June 2018.

By: Cortney Hanson
Its: City Clerk

RESOLUTION
Novi-Walled Lake Sewer System

WHEREAS, the Oakland County Drain Commission (OCDC) operates the Novi-Walled Lake Treatment Plant for the Cities of Novi and Walled Lake; and

WHEREAS, certain rates must reflect actual costs of providing services;

USAGE FEE

NOW, THEREFORE BE IT RESOLVED that the new rate to the user of this system is established at \$93.85 per unit per quarter for all bills rendered after August 1, 2018.

SEWER INSPECTION FEE

WHEREAS, OCDC operates and maintains the Novi-Walled Lake Treatment Plant, and all sewer infrastructures for effluent to the plant;

NOW, THEREFORE BE IT RESOLVED, the City of Novi will collect the pass-through OCDC sewer inspection fee as determined by the OCDC.

INDUSTRIAL PRETREATMENT PROGRAM (IPP)

WHEREAS, the pass-through IPP surcharges from OCDC are regulated by the Clean Water Act and change every year;

NOW, THEREFORE BE IT RESOLVED, the City of Novi will collect the IPP surcharge as determined by the OCDC.

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a regular meeting held the 4th day of June 2018.

By: Cortney Hanson
Its: City Clerk

Example of Water and Sewer charges using Huron Rouge Metered Rate

	<u>2017-2018</u>	<u>2018-2019</u>	<u>Increase</u>
Quarterly:			
Water			
Fixed rate	\$ 56.00	\$ 56.00	
20,000 gallons	\$ 64.00	\$ 65.28	
Sewer			
Fixed rate	\$ 30.00	\$ 30.00	
20,000 gallons	<u>\$ 72.00</u>	<u>\$ 77.76</u>	
Quarterly	<u>\$ 222.00</u>	<u>\$ 229.04</u>	\$ 7.04
Annually	\$ 888.00	\$ 916.16	\$ 28.16
		Estimated increase	3.2%

Note:

Example of Water and Sewer Charges using Huron Rouge Metered Rate Department and Oakland County Water Resource Commission.



Office of the Chief Executive
735 Randolph Street, Suite 1900
Detroit, Michigan 48226

January 26, 2018

To Our Water Member:

On behalf of the Great Lakes Water Authority (GLWA), we invite you to the Board of Directors' Public Hearing on the proposed FY 2019 wholesale water service charges scheduled for **2:00 p.m. on Wednesday, February 28, 2018 at 735 Randolph, 5th Floor Board Room, Detroit, Michigan 48226.**

This hearing will provide GLWA an opportunity to present the Authority's budget which encompasses the Capital Improvement Program (CIP), estimated sales volume and other factors that serve as the basis for the proposed revenue requirements and schedule of charges for FY 2019. This hearing also provides an opportunity for our member partners to comment or submit questions in writing related to the proposed charges. All comments or questions raised during the hearing will receive a written response.

The Memorandum of Understanding (MOU), signed in September 2014, and which created GLWA, established a fundamental goal to limit annual budget ("BUDGET")¹ increases to no more than 4 percent for each of the first 10 years of the Authority's operation. This commitment was carried forward into the subsequent 40-year lease agreement (Lease) between the City of Detroit and GLWA. **The FY 2019 Water BUDGET honors this 4 percent commitment with a proposed increase of 2 percent from FY 2018.** The percentage change for your community will vary from two percent based on your calculated revenue requirement.

In preparation for the FY 2019 charges, Black & Veatch conducted a non-master metered customer Units of Service Study (USS). The effect of the USS results in a reallocation of units of service among all GLWA water members. The GLWA is considering two approaches to implement the results of the USS. As a result, attached are two alternative charge sheets for your organization's proposed service charges for FY 2019. The difference between the two alternatives is a one-year versus a two-year phase-in implementation of the USS findings. The final implementation of the USS will be determined by the GLWA Board as part of the charges approval process. Changes in service charges among member partners may vary in order to meet their unique revenue requirements.

GLWA staff is available to answer any questions by contacting the Financial Services Group at (313) 224-4771, or via email at Jonathan.Wheatley@glwater.org. Please note that the

¹ The annual BUDGET (i.e. "revenue requirement") includes operation and maintenance expense, debt service, non-operating expenses and revenue financed capital

proposed charges are subject to change after the public hearing and subsequent deliberation by the GLWA Board.

Below are links to three videos GLWA has produced which are designed to inform local elected officials, staff and residents on GLWA's budget and service charges:

Introduction to GLWA Charges and Community Rates:

<http://bit.ly/2Eg4f6J>

The ABC's of Water Charges:

<http://bit.ly/2DFWnlh>

From Budgets to Customer Sewer and Water Charges:

<http://bit.ly/2DCDkyy>

Our primary objective continues to be one of providing our member partners with wholesale water and wastewater services of unquestionable quality at fair and equitable charges. We are committed to exceeding our member partners' expectations. We thank you for working collaboratively with GLWA in the wholesale member engagement process, and look forward to seeing you at the public hearing on February 28, 2018.

Sincerely,



Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

FY 2019 Suburban Wholesale Water Service Charge Schedule Calculation *
Novi

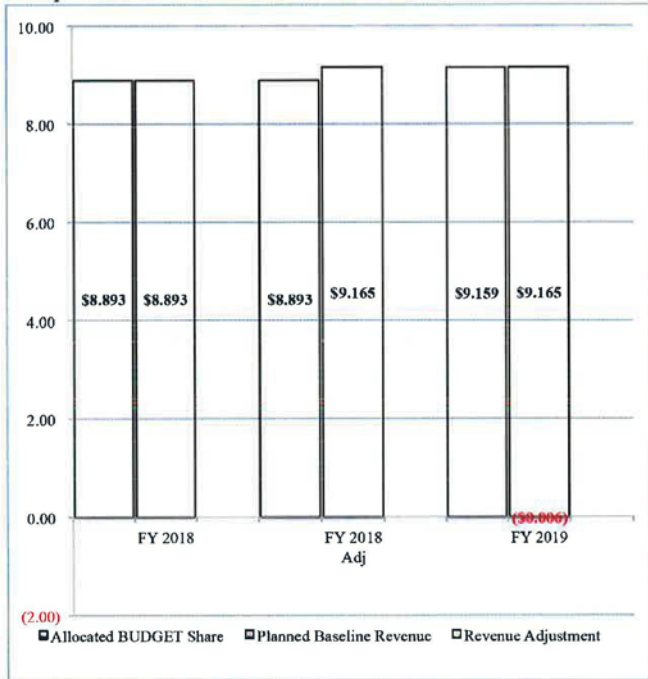
Scenario 1	(1)	(2)	(3)	(4)
	Total	Novi SHARE		Charge Schedule
	Cost Pool	% Share	Allocation	
	\$	(a)	\$	
<u>BUDGET Categories</u>				
1	Commodity	8,870,300	1.633%	144,900
2	Max Day Usage	144,157,600	2.280%	3,287,100
3	Peak Hour Increment	4,343,500	0.000%	0
4	Peak Hour Distance	66,035,600	2.355%	1,555,400
5	Commodity Distance-Elevation	23,713,600	3.220%	763,600
6	Max Day Distance-Elevation	10,386,800	4.294%	446,100
7	Peak Hour Distance-Elevation	58,080,900	3.534%	2,052,400
8	Peak Hour Increment Distance-Elevation	11,856,700	0.000%	0
9	Subtotal Common-To-All	327,445,000	2.519%	8,249,500
10	Suburban Only - Meter Related	3,399,900	2.713%	92,200
11	Subtotal FY 2019 BUDGET	330,844,900	2.521%	8,341,700
12	Detroit / Suburban Capital Adjustment	20,700,000	2.897%	599,600
13	Subtotal Adjusted FY 2019 BUDGET			8,941,300
14	KWA / Flint Contract Adjustment	6,874,000	2.601%	178,800
15	Highland Park Bad Debt Adjustment	1,530,900	2.528%	38,700
16	Total Amount for Net Charges	330,844,900	2.768%	9,158,800
<u>FY 2019 Service Charge Schedule</u>				
17	Fixed Monthly Charges @	60%		5,495,300
18	Commodity Charges @	40%	294,700	3,663,500
				\$457,900 per month \$12.43 per Mcf
<u>(a) Units / SHARE Calculations</u>				
	<u>Basis</u>	<u>Units</u>	<u>Applied Units</u>	
		<i>Mcf/day</i>	<i>Mcf/day -</i>	
19	Annual Sales - Mcf	294,700	807.4	Sales = 36 mo "hybrid" - 9/17
20	Allocated Non-Revenue Water		165.5	Allocated share @ 20.3% of sales
21	Commodity Units		972.9	Ln 19 + Ln 20
22	Max Day Units - mgd	19.00	2,539.9	2,705.4 Contract or proxy + Ln 20
23	Peak Hour Units - mgd	19.00	2,539.9	2,705.4 Contract or proxy + Ln 20
24	Distance - miles	31.4		
25	Elevation - feet	936.0		
26	Dist-Elev Factor - miles	62.3		[Ln 25-610]/10.56 + Ln 24
	<u>Cost Pool / Usage Category</u>	<u>Novi</u>	<u>System</u>	<u>SHARE</u>
27	Commodity Units - Mcf	972.9	59,577	1.633% Ln 21
28	Max Day Units - Mcf/Day	2,705.4	118,648	2.280% Ln 22
29	Peak Hour Increment - Mcf/Day	0.0	28,577	0.000% Ln 23 - Ln 22
30	Peak Hour Distance - Mcf-miles/Day	84,950.5	3,606,538	2.355% Ln 23 x Ln 24
31	Commodity Distance-Elevation - Mcf-miles/Day	60,611.7	1,882,259	3.220% Ln 21 x Ln 26
32	Max Day Distance-Elevation - Mcf-miles/Day	168,548.3	3,924,765	4.294% Ln 22 x Ln 26
33	Peak Hour Distance-Elevation - Mcf-miles/Day	168,548.3	4,769,700	3.534% Ln 23 x Ln 26
34	Peak Hour Increment Dist-Elev - Mcf-miles/Day	0.0	844,935	0.000% [Ln 23 - Ln 22] x Ln 26
35	Suburban Equivalent Meters	1,836	67,677	2.713% Equivalent 5/8" meters
36	Suburban Wholesale BUDGET - \$	8,341,700	287,989,100	2.897% Ln 11
<u>CTA Summary by Major Category</u>				
37	CTA Commodity		2.788%	908,500
38	CTA Max Day		2.416%	3,733,200
39	CTA Peak Hour		2.571%	3,607,800
40	CTA Total Demand		2.490%	7,341,000
41	TOTAL CTA SHARE		2.519%	8,249,500

* The proposed charges in this document are preliminary in nature and are subject to change or modification by the Great Lakes Water Authority Board following a public hearing of the FY 2019 Financial Plan and service charge schedule for the System. The public hearing is scheduled for February 28, 2018. The Notice of this Public Hearing can be found in the customer portal.

Impact of Wholesale Water Service Charge Proposals
 "Unbundling" of Revenue and Unit Cost Adjustment
 Novi

Scenario 1		Allocated BUDGET \$	Sales Projection Mcf	Unit Cost \$/Mcf	Variance
1	Original Allocated FY 2018 BUDGET	8,893,200	273,900	32.47	Sales = adjusted 36 mo avg thru 9/2016
2	Revenue Under Adjusted Sales	9,164,600	294,700	31.10	-4.2% Sales = adjusted 36 mo avg thru 9/2017
3	Variance	271,400	20,800		
Adjustments					
4	Reallocate Net GCDC/Non-Op Rev Variance	56,500	294,700	0.19	0.6% Reallocation of fixed costs
5	FY 2019 BUDGET Adjustment	169,200	294,700	0.57	1.8% 2% BUDGET increase * Ln (1)
6	Address Specific Novi Sales Adj	93,200	294,700	0.32	1.0% Ln (1) - Ln (2) adj commodity allocation
7	Impact of Master Meter Inventory Changes	(11,300)	294,700	(0.04)	-0.1% Relative Distance / Elevation Changes
8	Impact of Contract Reopeners	226,100	294,700	0.77	2.5% Relative Contract Demands
9	Impact of UoS Study for NMM Customers	(205,900)	294,700	(0.70)	-2.2% Relative UoS Study
10	Impact of Cost of Service Allocations	(62,200)	294,700	(0.21)	-0.7% Consolidate (6)/(7)/(8), Cost Pool Allo, etc.
11	Total Adjustments	265,600		0.90	2.9% Ln (11) / Ln (2)
12	Allocated FY 2019 BUDGET	9,158,800	294,700	31.08	-0.1%
13	Ratio of Revised Projected Sales to Original		107.6%		Ln (2) / Ln (1)
14	BUDGET to BUDGET Change (a)	265,600	294,700	0.90	2.9%
15	Specific Sales/Revenue Variance	(271,400)	294,700	(0.92)	-3.0% Necessary to recover baseline rev req't
16	Net Adjusted Revenue Req'd from Charges	(5,800)	294,700	(0.02)	-0.1% Net Charge Impact

Impact Illustration - \$ millions



Relative Revenue Req't Change - \$ millions



FY 2019 Suburban Wholesale Water Service Charge Schedule Calculation *
Novi

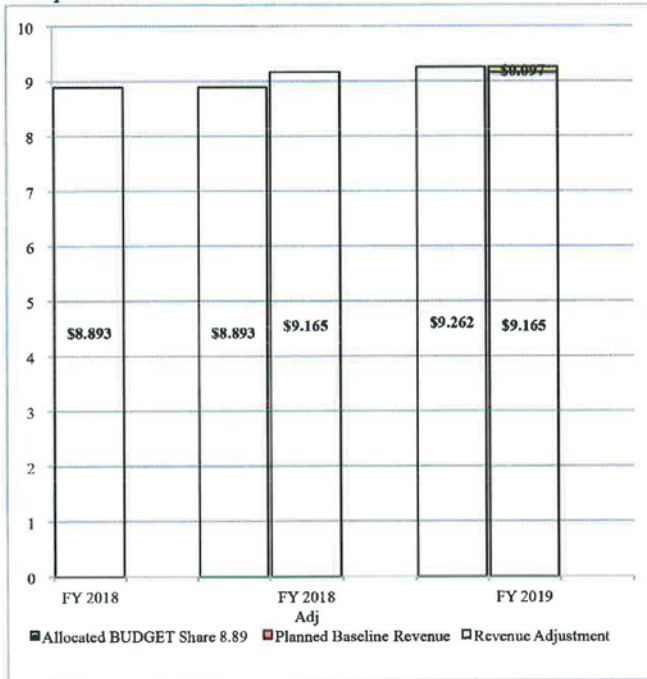
Scenario 2	(1)	(2)		(3)	(4)
	Total	SHARE			Charge
	Cost Pool	% Share	Allocation		Schedule
	\$	(a)	\$		
BUDGET Categories					
1	Commodity	8,870,300	1.633%	144,900	
2	Max Day Usage	144,157,600	2.280%	3,287,100	
3	Peak Hour Increment	4,343,500	0.000%	0	
4	Peak Hour Distance	66,035,600	2.355%	1,555,400	
5	Commodity Distance-Elevation	23,713,600	3.220%	763,600	
6	Max Day Distance-Elevation	10,386,800	4.294%	446,100	
7	Peak Hour Distance-Elevation	58,080,900	3.534%	2,052,400	
8	Peak Hour Increment Distance-Elevation	11,856,700	0.000%	0	
9	Subtotal Common-To-All	327,445,000	2.519%	8,249,500	
10	Suburban Only - Meter Related	3,399,900	2.713%	92,200	
11	Subtotal FY 2019 BUDGET	330,844,900	2.521%	8,341,700	
12	Detroit / Suburban Capital Adjustment	20,700,000	2.897%	599,600	
13	Subtotal Adjusted FY 2019 BUDGET			8,941,300	
14	KWA / Flint Contract Adjustment	6,874,000	2.601%	178,800	
15	Highland Park Bad Debt Adjustment	1,530,900	2.528%	38,700	
16	Initially Allocated Revenue Requirement			9,158,800	
17	Adjustment to Phase Implementation of UoS Study			102,900	
18	Total Amount for Net Charges	330,844,900	2.799%	9,261,700	
FY 2019 Service Charge Schedule					
19	Fixed Monthly Charges @	60%		5,557,000	\$463,100 per month
20	Commodity Charges @	40%	294,700	3,704,700	\$12.57 per Mcf
(a) Units / SHARE Calculations					
	Basis	Units	Applied Units		
		<i>Mcf/day</i>	<i>Mcf/day</i>		
21	Annual Sales - Mcf	294,700	807.4		Sales = 36 mo "hybrid" - 9/17
22	Allocated Non-Revenue Water		165.5		Allocated share @ 20.5% of sales
23	Commodity Units		972.9	972.9	Ln 21 + Ln 22
24	Max Day Units - mgd	19.00	2,539.9	2,705.4	Contract or proxy + Ln 22
25	Peak Hour Units - mgd	19.00	2,539.9	2,705.4	Contract or proxy + Ln 22
26	Distance - miles	31.4			
27	Elevation - feet	936.0			
28	Dist-Elev Factor - miles	62.3			[Ln 27-610]/10.56 + Ln 28
Cost Pool / Usage Category					
	Novi	System	SHARE		
29	Commodity Units - Mcf	972.9	59,577	1.633%	Ln 23
30	Max Day Units - Mcf/Day	2,705.4	118,648	2.280%	Ln 24
31	Peak Hour Increment - Mcf/Day	0.0	28,577	0.000%	Ln 25 - Ln 23
32	Peak Hour Distance - Mcf-miles/Day	84,950.5	3,606,538	2.355%	Ln 25 x Ln 26
33	Commodity Distance-Elevation - Mcf-miles/Day	60,611.7	1,882,259	3.220%	Ln 23 x Ln 28
34	Max Day Distance-Elevation - Mcf-miles/Day	168,548.3	3,924,765	4.294%	Ln 24 x Ln 28
35	Peak Hour Distance-Elevation - Mcf-miles/Day	168,548.3	4,769,700	3.534%	Ln 25 x Ln 27
36	Peak Hour Increment Dist-Elev - Mcf-miles/Day	0.0	844,935	0.000%	[Ln 25 - Ln 23] x Ln 28
37	Suburban Equivalent Meters	1,836	67,677	2.713%	Equivalent 5/8" meters
38	Suburban Wholesale BUDGET - \$	8,341,700	287,989,100	2.897%	Ln 11
CTA Summary by Major Category					
39	CTA Commodity		2.788%	908,500	
40	CTA Max Day		2.416%	3,733,200	
41	CTA Peak Hour		2.571%	3,607,800	
42	CTA Total Demand		2.490%	7,341,000	
43	TOTAL CTA SHARE		2.519%	8,249,500	

* The proposed charges in this document are preliminary in nature and are subject to change or modification by the Great Lakes Water Authority Board following a public hearing of the FY 2019 Financial Plan and service charge schedule for the System. The public hearing is scheduled for February 28, 2018. The Notice of this Public Hearing can be found in the customer portal.

**Impact of Wholesale Water Service Charge Proposals
"Unbundling" of Revenue and Unit Cost Adjustment
Novi**

Scenario 2		Allocated BUDGET \$	Sales Projection Mcf	Unit Cost \$/Mcf	Variance
1	Original Allocated FY 2018 BUDGET	8,893,200	273,900	32.47	<i>Sales = adjusted 36 mo avg thru 9/2016</i>
2	Revenue Under Adjusted Sales	9,164,600	294,700	31.10	<i>-4.2% Sales = adjusted 36 mo avg thru 9/2017</i>
3	Variance	271,400	20,800		
Adjustments					
4	Reallocate Net GCDC/Non-Op Rev Variance	56,500	294,700	0.19	0.6% <i>Reallocation of fixed costs</i>
5	FY 2019 BUDGET Adjustment	169,200	294,700	0.57	1.8% <i>2% BUDGET increase * Ln (1)</i>
6	Address Specific Novi Sales Adj	93,200	294,700	0.32	1.0% <i>Ln (1) - Ln (2) adj commodity allocation</i>
7	Impact of Master Meter Inventory Changes	(11,300)	294,700	(0.04)	-0.1% <i>Relative Distance / Elevation Changes</i>
8	Impact of Contract Reopeners	226,100	294,700	0.77	2.5% <i>Relative Contract Demands</i>
9	Impact of UoS Study for NMM Customers	(103,000)	294,700	(0.35)	-1.1% <i>Relative UoS Study</i>
10	Impact of Cost of Service Allocations	(62,200)	294,700	(0.21)	-0.7% <i>Consolidate (6)/(7)/(8), Cost Pool Allo, etc.</i>
11	Total Adjustments	368,500		1.25	4.0% <i>Ln (11) / Ln (2)</i>
12	Allocated FY 2019 BUDGET	9,261,700	294,700	31.43	1.1%
13	Ratio of Revised Projected Sales to Original		107.6%		<i>Ln (2) / Ln (1)</i>
14	BUDGET to BUDGET Change (a)	368,500	294,700	1.25	4.0%
15	Specific Sales/Revenue Variance	(271,400)	294,700	(0.92)	-3.0% <i>Necessary to recover baseline rev req't</i>
16	Net Adjusted Revenue Req'd from Charges	97,100	294,700	0.33	1.1% <i>Net Charge Impact</i>

Impact Illustration - \$ millions



Relative Revenue Req't Change - \$ millions

