

UW/35/19

TO: Chair and Members of the Union Water Supply System
Joint Board of Management

FROM: Rodney Bouchard, Union Water Manager

DATE: December 13, 2019

RE: 2020 UWSS Operations and Capital Budget Report



RECOMMENDATION

That the Union Water Supply System Joint Board of Management (UWSS Board) adopts the Draft 2020 Operational and Capital Budget for the Union Water Supply System;

And further, that the UWSS Board adopts an increase of \$0.0248 per cubic metre for the UWSS Wholesale Rate. The new proposed UWSS Wholesale Rate for 2020 would be \$0.6458 per cubic meter.

And further, that the UWSS General Manager be provided the delegated authority to implement the 2020 UWSS Operations & Maintenance Budget and 2020 Capital Program.

REPORT HIGHLIGHTS

- Potable water demand from UWSS is anticipated to be approximately 16,795,000 m³ (3,694,900,000 imperial gallons) for 2020. This represents a 1% increase in flow over the predicted total demand for 2019.
- An increase of \$0.0248 per cubic meter is proposed for the UWSS Wholesale Rate. The new proposed Rate 1 wholesale rate for 2020 would be \$0.6458 per cubic meter.
- UWSS Revenue for 2020 is estimated at \$11,426,730 of which \$10,946,310 is from wholesale of water to municipalities, \$459,000 from investment revenue and \$21,420 from Sundry Revenue.
- Operational and Debt Service Expenditures for 2020 are estimated at \$8,281,694. This includes \$3,330,300 for OCWA Operations and Maintenance services and \$2,351,279 for the Sunlife Loan (former MFD Debt).
- 2020 Revenue versus Operational and Debt Service Expenditures are anticipate to result in a surplus of approximately \$3,145,036 for 2020 Fiscal Year;
- A budget of \$285,000 has been established for proposed 2020 Operational Studies and Programs.
- A Capital Program of \$5,050,000 is proposed for 2020; A draw of \$1,905,000 from the UWSS Reserves would be needed to fund the 2020 Capital Program.

BACKGROUND:

Since the Transfer Order of January 2001, the Board is responsible for considering and approving an annual budget for the Union Water Supply System. The format of the budget is generally the same as that previously prepared for 2019.

This draft budget is being presented to the UWSS board for consideration. The draft 2020 budget is outlined to provide details in regards to the following:

- Anticipated revenue for 2020 from wholesale of water to the partner municipalities;
- Anticipated operating expenditures for 2020 including estimated costs for operation of the system by the Ontario Clean Water Agency (OCWA), under its contract with UWSS;
- Proposed Capital Works program for 2020 for UWSS;
- Forecasted Operational Expenditures and Capital Works program for 2021-2025.

DISCUSSION:

The draft 2020 Budget documents have been prepared based on the discussions with the contracted operator, OCWA, in regards to operational budget, major maintenance needs, and existing operational issues that would require implementation of capital works to resolve. The Budget documents reflect the following:

- The operations and maintenance costs associated with the 5-Year (with option to renew for an additional 5 years) Cost Plus Operations and Maintenance Agreement between UWSS and OCWA that came into effect on July 1, 2019;
- Capital Projects that were approved and initiated in previous years that are on-going into 2020.

Details regarding the budget components are discussed below.

OPERATING EXPENDITURES

Expenditures for the Union Water Supply System (UWSS) include *Fixed Expenditures* such as the OCWA operations contract, administration, and debt service and *Programs and Studies* that are proposed for 2020 to identify cost effective improvements for the operation of the UWSS. The total projected expenditures for 2020 is budgeted at approximately at \$8,281,694.

Fixed Expenditures

Fixed expenditures for the budget process include the OCWA Operations Budget, UWSS Administrative Budget, and Debt Service. The total fixed expenditures for 2020 is budgeted at \$7,996,694. The fixed expenditures consist of the following components:

OCWA Operations Budget:	\$3,330,300
UWSS Administrative Budget:	\$ 611,615
Residuals Ponds Maintenance:	\$ 150,000
CO2 Gas Bulk Purchase Contract:	\$ 178,500
Watermain Repairs:	\$ 100,000
Electricity and Natural Gas:	<u>\$ 1,275,000</u>
<i>Total Operations, Administrative, Energy:</i>	<i>\$5,645,415</i>
Debt Service:	
Sunlife Debt (MFP Debt):	<u>\$2,351,279</u>
<i>Total Debt Service:</i>	<i>\$2,351,279</i>
Total Fixed Costs:	\$7,996,694

Programs and Studies

A number of Programs and Studies are included in the 2020 Budget. These studies are designed to achieve one of the following goals:

- Assess and improve operational processes to improve cost efficiencies potentially resulting in decrease of fixed operations costs such as electricity costs and chemical costs;
- Evaluate water demand and water usage by various sectors including residential, commercial, industrial, and food processing/greenhouse industry;
- Evaluate water quality to for potential issues such as toxic algae in raw water, nitrification issues in larger distribution systems, etc.

For the 2020 budget year, \$260,000 has been allocated to Programs and Studies. The following studies are proposed or currently in place.

Water Demand/Water Loss/ Water Quality Initiatives:	\$ 75,000
Lake Erie HAB Monitoring Project:	\$100,000
Emergency Water Servicing Study:	\$ 30,000
New WTP Reservoir #3 Study:	\$ 40,000
Backup Power Generation/Energy Study:	<u>\$ 40,000</u>
Total:	\$285,000

Operating Expenditure Summary

Fixed Expenditures:	\$7,996,694
Programs and Studies:	<u>\$ 285,000</u>
Total Operating Expenditures for 2020:	\$8,281,694

REVENUE

Revenue for the budget process is mainly based on wholesale billings from the sale of potable water to the 4 municipal owners. A much smaller component of revenue is based on miscellaneous revenue such as investment income and sundry income. The total estimated revenue for 2020 is \$11,426,730

Wholesale Water Revenue Summary

Wholesale water revenue is based on annual water usage by the 4 owner municipalities and the wholesale water rates.

Water Usage

The projected water "usage" by municipal owners for 2020 is 16,950,000 m³ (3,729,000,000 imperial gallons) for 2020. This represents a 1% increase in flow over the predicted total demand for 2019.

Figure 1 depicts the total UWSS water usage trend from 1998-2019.

Figure 1

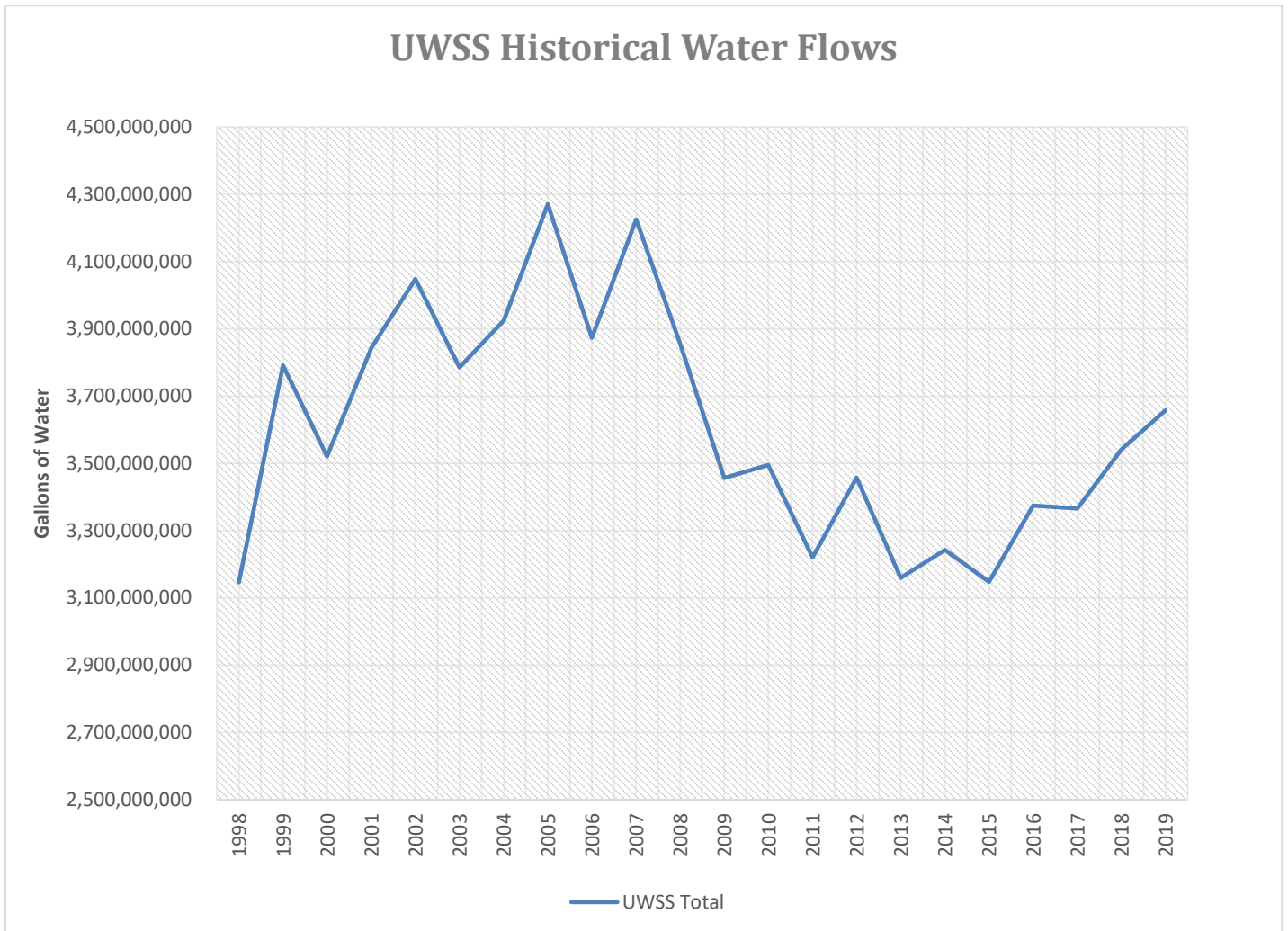
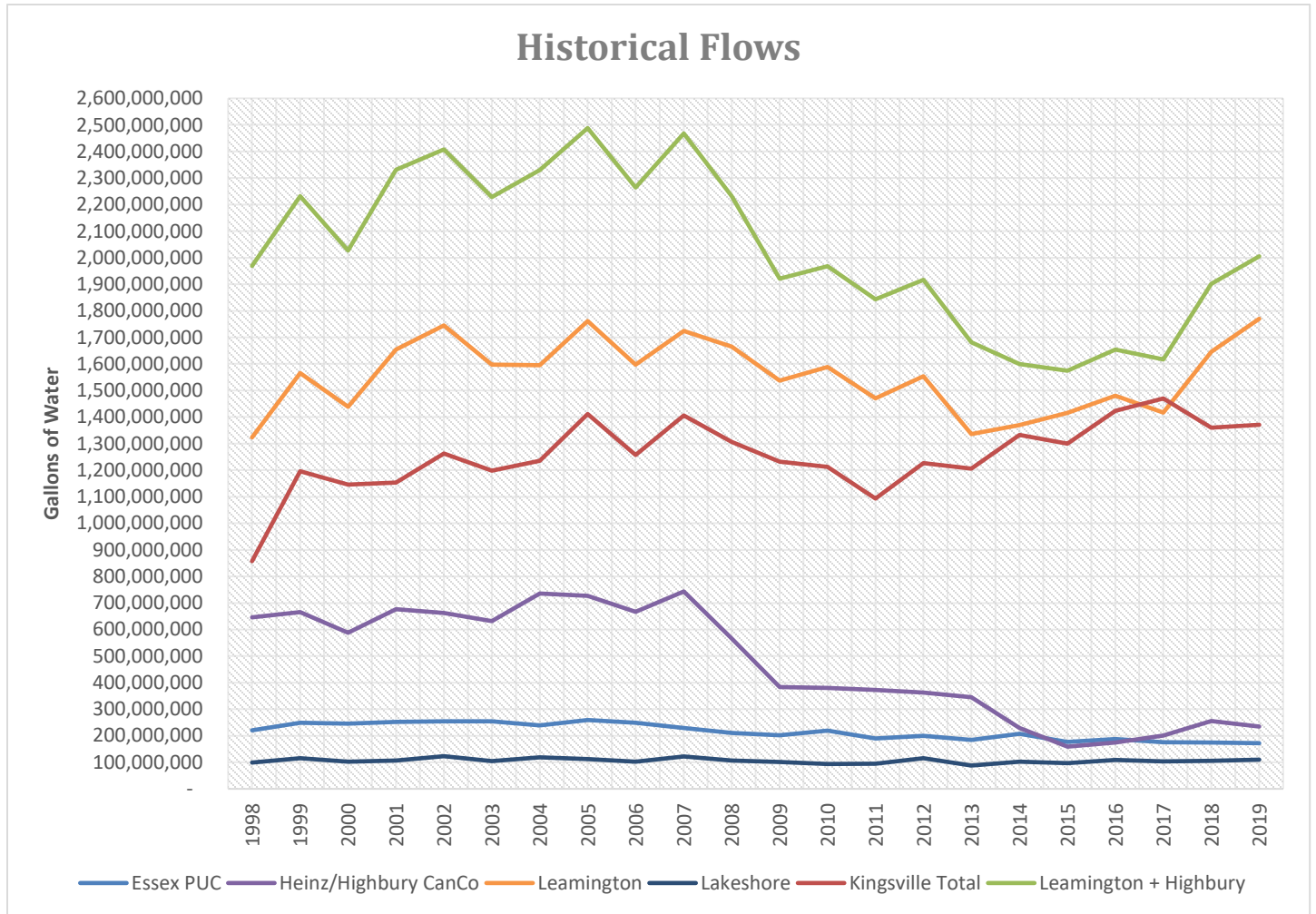


Figure 2 depicts the water usage trend by each municipal partner from 1998-2015.

Figure 2



Wholesale Water Rates

For the 2020 budgeting process, it is proposed that an increase of \$0.0248 per cubic meter be applied to the UWSS wholesale rate. This would result in a 2020 UWSS wholesale rate of \$0.6458 per cubic meter to be applied as of January 1, 2020.

Based on the anticipated water usage rates for 2020 of 16,950,000 m3 of potable water the wholesale rate water revenue is estimated at:

Wholesale Rate Revenue Total: \$10,946,310

Miscellaneous Revenue

Miscellaneous revenue includes income from investments and sundry income.

Investment (interest) income:	\$ 459,000
Sundry revenue:	<u>\$ 21,420</u>
Total Misc. Revenue:	\$ 480,420

Sundry revenue is revenue received from various sources such as lease of space on water towers for telecommunications equipment. The estimated sundry revenue for 2020 is \$21,420 and is roughly based on 2019 revenue.

Revenue Summary

Wholesale Rate Revenue:	\$10,946,310
Miscellaneous Revenue:	<u>\$ 480,420</u>
Total Estimated Revenue for 2020:	\$11,426,730

REVENUE VERSUS OPERATING EXPENDITURES

A comparison of Revenue versus Expenditures for 2020 budget is as follows. It should be noted that the total estimated expenditures also include the proposed budget for operational Programs and Studies of \$260,000.

Total Estimated Revenue:	\$11,426,730
Total Estimated Expenditures:	<u>\$ 8,281,694</u>
Surplus/(Deficit):	\$ 3,145,036

CAPITAL PROGRAM

The proposed Capital Program for 2020 is budgeted at \$4,990,000. This includes any major Capital Equipment Purchases (e.g. vehicles, heavy equipment) and major Capital Works.

Capital Works:

The following major capital works projects are proposed for 2020:

Low Lift Pump #5 Major Maintenance:	\$ 35,000
Low Lift Roof Replacement:	\$ 90,000
Blue Green Algae Probes (2):	\$ 30,000
Low Lift Main Electrical/Transformer Upgrades:	\$ 250,000
New Carbon Recirculation Pump:	\$ 10,000
Filter #4 Rehab:	\$ 400,000
New Highlift #7 Pump:	\$ 250,000
New Panel/Quick Connect for Portable Generator:	\$ 60,000
SCADA System Upgrades (cont'd from 2019):	\$ 250,000
Security System Install:	\$ 85,000
UWSS Wide Communication System Upgrades:	\$ 20,000
Cottam Booster Reservoir Baffling Assessment:	\$ 30,000
Kingsville Water Tower Rehabilitation:	\$1,300,000
Distribution System Components:	\$ 200,000
Master Water Meter Upgrades:	\$ 50,000
Laboratory Upgrades:	\$ 100,000
Treatment Plant Admin Area Improvements:	\$ 45,000
Grounds Improvements:	\$ 100,000
Fencing - Water Treatment Plant and Leamington Tower:	\$ 45,000
DAF System Design/Construction:	\$1,400,000
Chlorine Gas System Project (cont'd from 2019):	\$ 150,000
CO2 pH System Project (cont'd from 2019):	<u>\$ 150,000</u>
Total Capital Works for 2020:	\$5,050,000

BUDGET SUMMARY

The proposed 2020 budget is summarized as follows:

Total Estimated Revenue: (includes wholesale rate revenue and miscellaneous revenue)	\$11,426,730
Total Estimated Operating Expenditures: (includes Operations Contract, UWSS Admin, Programs & Studies)	<u>(\$8,281,694)</u>
Revenue versus Operating Expenditures: Surplus/ (Deficit)	\$3,145,036
Capital Program: (includes Capital Purchases and Capital Works)	<u>(\$5,050,000)</u>
NET SURPLUS/ (DEFICIT) : (Operating surplus/deficit less Capital Program)	(\$1,904,964)

The capital program for 2020 will be funded through the UWSS Reserves.

CASH /RESERVES VERSUS DEBT

Cash and Reserves for UWSS as of January 1, 2020 are forecasted to be approximately \$18,048,333 million dollars. It should be noted that of the estimated \$18,048,333 in available cash and reserves for 2020, approximately \$10,516,503 are dedicated to UWSS Settlement Reserve, which is associated with the 2006 settlement that was reached regarding the MFP debt. Although the UWSS Board has authority to use these funds as it sees fit, the intent is to keep these funds in an interest bearing investment funds to offset the annual MFP Debt obligation and to function as a rate stabilizing Reserve Fund. These funds are currently invested in a GIC that will come to term in 2022 but are fully liquid and accessible if needed.

The 2020 Operating and Capital Budget projects a Net Deficit of \$1,904,964 for 2020 year end. Thus, it is anticipated that UWSS reserves at the end of 2020 will decrease to approximately \$16,143,369

Based on debt repayment schedules, the total UWSS long term debt balance for as of January 2020 is \$11,832,897 and consists solely of the Sunlife Loan (aka former MFP Debt) that has a term date of 2026. At the end of 2020, this debt will decrease to \$10,678,259.

PROPOSED 6-YEAR CAPITAL WORKS PLAN

The UWSS General Manager, with assistance and input from OCWA Operations Staff has developed a proposed 6-year Capital Works Plan (2020-2025) for the UWSS. This Plan reflects the UWSS Manager's intention to undertake upgrades and improvements to the UWSS to address lifecycle replacement/upgrade issues and to improve water treatment, storage and transmission efficiencies.

The Proposed 6-Year Capital Plan is included as Appendix B to this Report. The Plan identifies the proposed works for each year and the anticipated value of the works. The total proposed capital works expenditures for 2020-2025 are projected at \$31,500,000.

CONCLUSIONS:

It is the UWSS General Manager's opinion that the Budget presented in this report provides a Budget for UWSS that is fiscally prudent while also providing for the major maintenance and lifecycle replacements needed to ensure that UWSS facilities and operations are effective and sustainable for the future.

Respectfully submitted,



Rodney Bouchard, General Manager
Union Water Supply System Joint Board of Management

rb/kmj

Filename: t:\union wtr\reports to board\2019\uw35-19 2020 uwss operations and capital budget report.december 13, 2019.docx

**2020 UWSS OPERATIONS AND CAPITAL BUDGET
TABLES AND DETAILS**

UNION WATER SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT
2020 Draft Budget
Flows and Revenue

Flow Metering Location	2019 Approved 2019 Budget	2019 As of Oct. 30th	2019 Forecasted to Dec 31st	2019 Forecasted % of Budget at Dec. 31st	2020 Rate Increase of \$0.0248 per m3 (4%)	2021 Rate Increase of \$0.0258 per m3 (4%)	2022 Rate Increase of \$0.0269 per m3 (4%)	2023 Rate Increase of \$0.0279 per m3 (4%)	2024 Rate Increase of \$0.0291 per m3 (4%)	2025 Rate Increase of \$0.0302 per m3 (4%)
Essex PUC	795,455	749,196	792,000	100%	795,000	802,950	810,980	819,089	827,280	835,553
Gosfield N. Twsp	613,636	617,057	649,000	106%	645,000	651,450	657,965	664,544	671,190	677,901
Gosfield S. Twsp	5,022,727	4,646,459	4,912,000	98%	5,020,000	5,070,200	5,120,902	5,172,111	5,223,832	5,276,070
Highbury CanCo	977,273	1,092,286	1,146,000	117%	1,150,000	1,161,500	1,173,115	1,184,846	1,196,695	1,208,662
Kingsville PUC	659,091	607,693	642,000	97%	650,000	656,500	663,065	669,696	676,393	683,157
Leamington PUC	7,045,455	7,680,763	8,096,000	115%	8,150,000	8,231,500	8,313,815	8,396,953	8,480,923	8,565,732
Lakeshore	477,273	510,516	534,000	112%	540,000	545,400	550,854	556,363	561,926	567,545
Total Flow:	15,590,909	15,903,970	16,771,000	108%	16,950,000	17,119,500	17,290,695	17,463,602	17,638,238	17,814,620
	3,430,000,000	3,498,873,380	3,689,620,000		3,729,000,000	3,766,290,000	3,803,952,900	3,841,992,429	3,880,412,353	3,919,216,477
					101%	101%	101%	101%	101%	101%
Rate 1 Flow	15,590,909	15,903,970	16,771,000	108%	16,950,000	17,119,500	17,290,695	17,463,602	17,638,238	17,814,620
Rate 1	\$0.6210	\$0.6210	\$0.6210		\$0.6458	\$0.6716	\$0.6985	\$0.7264	\$0.7555	\$0.7857
Rate 1 Revenue	\$9,681,955	\$9,876,365	\$10,414,791	108%	\$10,946,310	\$11,497,456	\$12,077,550	\$12,685,560	\$13,325,689	\$13,996,947
Rate 2 Flow	0	0	0		0	0	0	0	0	0
Rate 2	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Rate 2 Revenue	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Rate 3 Flow	0	0	0		0	0	0	0	0	0
Rate 3 Flow	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Rate 3 Revenue	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Lifecycle Rate	\$0.0791	\$0.0791	\$0.0791		\$0.0791	\$0.0791	\$0.0791	\$0.0791	\$0.0791	\$0.0791
	\$1,233,553	\$1,258,322	\$1,326,922		\$1,341,084	\$1,354,495	\$1,368,040	\$1,381,720	\$1,395,537	\$1,409,493
Total Revenue	\$9,681,955	\$9,876,365	\$10,414,791	108%	\$10,946,310	\$11,497,456	\$12,077,550	\$12,685,560	\$13,325,689	\$13,996,947

**UNION WATER SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT
2020 Draft Budget
Budget Summary**

	2019 Approved Budget	2019 Forecasted to Dec 31st	2019 Forecasted % of Budget at Dec. 31st	2020 Rate Increase of \$0.0248 per m3 (4%)	2021 Rate Increase of \$0.0253 per m3 (4%)	2022 Rate Increase of \$0.0263 per m3 (4%)	2023 Rate Increase of \$0.0274 per m3 (4%)	2024 Rate Increase of \$0.0284 per m3 (4%)	2025 Rate Increase of \$0.0296 per m3 (4%)
Water Flows									
REVENUE									
Senior Government Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Wholesale Rate Billings	\$9,681,955	\$10,414,791	108%	\$10,946,310	\$11,497,456	\$12,077,550	\$12,685,560	\$13,325,689	\$13,996,947
Investment Income	\$450,000	\$513,000	114%	\$459,000	\$468,180	\$477,544	\$487,094	\$496,836	\$506,773
Sundry revenue	\$21,000	\$21,000	100%	\$21,420	\$21,848	\$22,285	\$22,731	\$23,186	\$23,649
TOTAL REVENUES	\$10,152,955	\$10,948,791	108%	\$11,426,730	\$11,987,485	\$12,577,379	\$13,195,386	\$13,845,711	\$14,527,370
OPERATING EXPENDITURE									
General Administration	\$344,250	\$338,383	98%	\$359,115	\$354,077	\$359,139	\$364,302	\$369,568	\$374,939
Leamington Assistance	\$30,000	\$30,000	100%	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Miscellaneous Legal/Professional fees	\$90,000	\$95,000	106%	\$75,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
OCWA Operating Contract	\$3,265,000	\$3,100,000	95%	\$3,330,300	\$3,396,906	\$3,464,844	\$3,534,141	\$3,604,824	\$3,676,920
Programs and Studies	\$180,000	\$120,000	67%	\$285,000	\$210,000	\$185,000	\$185,000	\$185,000	\$185,000
Operational/Maintenance/Upgrades - General	\$250,000	\$220,000	88%	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Property Taxes	\$147,500	\$147,500	100%	\$147,500					
CO2 Liquefied Gas Procurement	\$175,000	\$0	0%	\$178,500	\$182,070	\$185,711	\$189,426	\$193,214	\$197,078
Electricity and Natural Gas	\$1,250,000	\$1,200,000	96%	\$1,275,000	\$1,300,500	\$1,326,510	\$1,353,040	\$1,380,101	\$1,407,703
TOTAL OPERATING EXPENDITURES	\$5,731,750	\$5,647,000	99%	\$5,930,415	\$5,768,553	\$5,846,204	\$5,950,908	\$6,057,707	\$6,166,641
Debt Service	\$2,332,441	\$2,332,441	100%	\$2,351,279	\$2,370,377	\$2,389,596	\$2,408,934	\$2,428,392	\$2,449,323
TOTAL DEBT SERVICE EXPENDITURES	\$2,332,441	\$2,332,441	100%	\$2,351,279	\$2,370,377	\$2,389,596	\$2,408,934	\$2,428,392	\$2,449,323
CAPITAL EXPENDITURE									
Capital Repair, Maintenance & Upgrade Works	\$5,735,000	\$4,243,303	74%	\$5,050,000	\$4,340,000	\$8,705,000	\$4,865,000	\$4,390,000	\$4,210,000
Contingency									
TOTAL CAPITAL EXPENDITURES	\$5,735,000	\$4,243,303	74%	\$5,050,000	\$4,340,000	\$8,705,000	\$4,865,000	\$4,390,000	\$4,210,000
NET SURPLUS/(DEFICIT)	(\$3,646,236)	(\$1,273,953)	35%	(\$1,904,964)	(\$491,446)	(\$4,363,421)	(\$29,456)	\$969,612	\$1,701,406

	2019 Budget	2019 Forecast	2020 Budget	2021 Budget	2022 Budget	2023 Budget	2024 Budget	2025 Budget
Operating & Capital Reserves	\$8,537,613	\$8,537,613	\$7,263,660	\$5,358,696	\$6,467,250	\$2,953,829	\$5,824,373	\$7,343,985
Addition/(subtraction) from Operations Budget.	(\$3,646,236)	(\$1,273,953)	(\$1,904,964)	(\$491,446)	(\$4,363,421)	(\$29,456)	\$969,612	\$1,701,406
Addition/(Subtraction) from Rate Stabilization Reserve	\$0	\$0	\$0	\$1,600,000	\$850,000	\$2,900,000	\$550,000	\$120,000
Total Operating & Capital Reserves	\$4,891,377	\$7,263,660	\$5,358,696	\$6,467,250	\$2,953,829	\$5,824,373	\$7,343,985	\$9,165,391
Rate Stabilization Reserve	\$10,255,000	\$10,516,503	\$10,784,673	\$11,059,682	\$9,741,704	\$9,140,118	\$6,422,920	\$6,001,379
Interest (GIC at 2.55%)	\$261,503	\$268,171	\$275,009	\$282,022	\$248,413	\$182,802	\$128,458	\$120,028
Subtotal Rate Stabilization Reserve	\$10,516,503	\$10,784,673	\$11,059,682	\$11,341,704	\$9,990,118	\$9,322,920	\$6,551,379	\$6,121,406
(Subtraction) from Rate Stabilization Reserve	\$0	\$0	\$0	(\$1,600,000)	(\$850,000)	(\$2,900,000)	(\$550,000)	(\$120,000)
Total Rate Stabilization Reserve	\$10,516,503	\$10,784,673	\$11,059,682	\$9,741,704	\$9,140,118	\$6,422,920	\$6,001,379	\$6,001,406
Total Reserves	\$15,407,879	\$18,048,333	\$16,418,378	\$16,208,955	\$12,093,947	\$12,247,293	\$13,345,364	\$15,166,797
Sun Life Debt	\$11,832,897	\$11,832,897	\$10,678,259	\$9,375,773	\$7,908,943	\$6,259,451	\$4,401,835	\$2,310,158

UNION WATER SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT
2020 Draft Budget
Operational Revenue Expenditures

<u>Number</u>	<u>Account Description</u>	2019	2019	2019	2020	2021	2022	2023	2024	2025
		Approved Budget	Forecasted to Dec 31st	Forecasted % of Budget at Dec. 31st	Rate Increase of \$0.0248 per m3 (4%)	Rate Increase of \$0.0253 per m3 (4%)	Rate Increase of \$0.0263 per m3 (4%)	Rate Increase of \$0.0274 per m3 (4%)	Rate Increase of \$0.0284 per m3 (4%)	Rate Increase of \$0.0296 per m3 (4%)
REVENUE ACCOUNTS										
FEES REVENUE										
0700-3700	Wholesale Rate Billings	\$9,681,955	\$10,414,791	108%	\$10,946,310	\$11,497,456	\$12,077,550	\$12,685,560	\$13,325,689	\$13,996,947
		\$9,681,955	\$10,414,791	108%	\$10,946,310	\$11,497,456	\$12,077,550	\$12,685,560	\$13,325,689	\$13,996,947
MISCELLANEOUS REVENUES										
0700-4100	Investment Income (Operations)	\$450,000	\$513,000	114%	\$459,000	\$468,180	\$477,544	\$487,094	\$496,836	\$506,773
0700-3999	Sundry revenue	\$21,000	\$21,000	100%	\$21,420	\$21,848	\$22,285	\$22,731	\$23,186	\$23,649
		\$471,000	\$534,000	113%	\$480,420	\$490,028	\$499,829	\$509,826	\$520,022	\$530,422
	TOTAL REVENUES :	\$10,152,955	\$10,948,791	108%	\$11,426,730	\$11,987,485	\$12,577,379	\$13,195,386	\$13,845,711	\$14,527,370
EXPENDITURE ACCOUNTS										
WAGES AND BENEFITS										
0700-5000	Salaried	\$180,000	\$175,000	97%	\$183,600	\$187,272	\$191,017	\$194,838	\$198,735	\$202,709
	Part time	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0
0700-5200 to 5210	Benefits - Full time	\$63,250	\$64,000	101%	\$64,515	\$65,805	\$67,121	\$68,464	\$69,833	\$71,230
	Benefits - Part time	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0
		\$243,250	\$239,000	98%	\$248,115	\$253,077	\$258,139	\$263,302	\$268,568	\$273,939
OFFICE OVERHEAD, RENTS AND SERVICES										
0700-7010	Office supplies	\$2,000	\$1,750	88%	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
0700-7015	Board expenses	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0
0700-7020	Dues, Memberships, Subsc	\$5,000	\$3,000	60%	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
0700-7030	Travel & Mileage	\$2,500	\$3,000	120%	\$3,000	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
0700-7040	Training	\$6,000	\$4,500	75%	\$8,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
0700-7050	Conferences	\$6,000	\$11,000	183%	\$10,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
0700-7052	Meeting Expenses	\$2,000	\$2,000	100%	\$3,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
0700-7070	Uniforms/Clothing	\$500	\$500	100%	\$500	\$500	\$500	\$500	\$500	\$500
0700-7950	Legal/Professional fees	\$90,000	\$95,000	106%	\$75,000	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
0700-7959-002070	Audit Fees	\$6,500	\$6,197	95%	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500	\$6,500
0700-7080 & 7085	Operational Purchases/Maint.	\$17,500	\$17,500	100%	\$20,000	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500
0700-7110	Communications	\$1,500	\$900	60%	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
0700-7120	Postage & Courier	\$500	\$250	50%	\$500	\$500	\$500	\$500	\$500	\$500
0700-7130	Advertising & Promotion	\$7,000	\$5,000	71%	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000
0700-7140	Insurance	\$15,000	\$15,286	102%	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
0700-7130	Donations & Grants	\$4,000	\$3,000	75%	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
0700-7230 to 7290	Office equipment Purchases/Maint.	\$5,000	\$5,500	110%	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
	Facility Enhancements - General	\$20,000	\$20,000	100%	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
		\$191,000	\$194,383	102%	\$186,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000
0700-6720	OCWA Operating Union	\$3,265,000	\$3,100,000	95%	\$3,330,300	\$3,396,906	\$3,464,844	\$3,534,141	\$3,604,824	\$3,676,920
0700-6750	Property Taxes	\$147,500	\$147,500	100%	\$147,500	\$147,500	\$147,500	\$147,500	\$147,500	\$147,500
0700-7090	Leamington Assistance	\$30,000	\$30,000	100%	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
0700-7090	Sundry	\$250	\$250	100%	\$0	\$0	\$0	\$0	\$0	\$0
0700-7410 & 7420	Electricity and Natural Gas	\$1,250,000	\$1,200,000	96%	\$1,275,000	\$1,300,500	\$1,326,510	\$1,353,040	\$1,380,101	\$1,407,703
	CO2 Gas Bulk Purchase	\$175,000	\$0	0%	\$178,500	\$182,070	\$185,711	\$189,426	\$193,214	\$197,078
0700-7989-002070	Operational Programs & Studies	\$180,000	\$120,000	67%	\$285,000	\$210,000	\$185,000	\$185,000	\$185,000	\$185,000
	Residuals Ponds Maintenance	\$150,000	\$120,000	80%	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
	Watermain Repairs	\$100,000	\$100,000	100%	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
	TOTAL OPERATIONAL EXPENDITURES:	\$5,732,000	\$5,251,133	92%	\$5,930,415	\$5,916,053	\$5,993,704	\$6,098,408	\$6,205,207	\$6,314,141
	NET OPERATIONAL SURPLUS/(DEFICIT)	\$4,420,955	\$5,697,658	129%	\$5,496,315	\$6,071,431	\$6,583,675	\$7,096,978	\$7,640,504	\$8,213,229
DEBT SERVICE										
0700-6000 & 6100	Sun Life Debt Obligation	\$2,332,441	\$2,332,441	100%	\$2,351,279	\$2,370,377	\$2,389,596	\$2,408,934	\$2,428,392	\$2,449,323
0700-6000 & 6100	Woodslee Credit Union									
0700-6000 & 6100	OSIFA									
0700-6010 & 6110	Leamington WM									
	TOTAL DEBT SERVICE:	\$2,332,441	\$2,332,441	100%	\$2,351,279	\$2,370,377	\$2,389,596	\$2,408,934	\$2,428,392	\$2,449,323
	SURPLUS/(DEFICIT) AFTER DEBT	\$2,088,514	\$3,365,217	161%	\$3,145,036	\$3,701,054	\$4,194,079	\$4,688,044	\$5,212,112	\$5,763,906

**Union Water Supply System
2020 Draft Budget -
2019 Capital Expenditures**

<u>Item Description</u>	2019 Approved Study/ Capital Budget	Projected Expenditures to Dec. 31st	Projected % of Budget to Dec. 31st	Amounts Proposed for Inclusion in 2020 Budget	Comments
<u>Studies and Programs</u>					
Water Demand/usage/quality initiatives	\$60,000	\$60,000	100%	\$0	On-going until end of November
New Ruthven WTP Reservoir #3 Study	\$40,000	\$0	0%	\$40,000	Will be included in 2020 Budget
Backup power generation/ energy study	\$40,000	\$20,000	50%	\$20,000	Will continue into 2020
Secondary Disinfection Review	\$40,000	\$40,000	100%	\$0	Completed
Total Studies/Programs:	\$180,000	\$120,000	67%	\$60,000	
<u>Capital Works and Major Maintenance</u>					
Low Lift Pump #1 Rehab	\$35,000	\$14,716	42%	\$0	Completed
Blue Green Algae/ Chlorophyll Probe - Low lift well	\$30,000	\$0	0%	\$0	Moved to 2020
Low Lift Surge Tanks - Ladders and new compressors	\$40,000	\$0	0%	\$0	On-hold
Low Lift Main Electrical-Transformer/Feed/Switch Gear/Breaker Upgrades	\$200,000	\$30,000	15%	\$170,000	Design being completed. Purchase and Install in 2020 Budget
Flow Meters and Control Valves - Clarifier #1 and #3	\$25,000	\$16,257	65%	\$0	Completed
Carbon Feed Pumps (2)	\$30,000	\$27,923	93%	\$0	Completed
Carbon Recirculation Pump Rehab	\$10,000	\$10,000	100%	\$0	Will be completed in December
Carbon Scrubber System Upgrade	\$50,000	\$0	0%	\$50,000	To be included in 2020 Budget
Turbidity Meters for Clarifier #3 and #4	\$10,000	\$12,211	122%	\$0	completed
Filter #2 and #4 Inlet Gate Replacement	\$30,000	\$30,000	100%	\$0	Gate valves purchased. To be installed in December
Filter Meter Replacements - Filters 5,6,7 &8	\$35,000	\$35,000	100%	\$0	New valves/equipment purchased. Install start in November
Chlorine Analyzers - 5 units	\$25,000	\$23,843	95%	\$0	Completed
Highlift Pump #10 (renamed HL #7) - NEW	\$250,000	\$35,000	14%	\$215,000	In design stage. Tender in January 2020
Upside Down Valve Corrosion Protection	\$100,000	\$63,353	63%	\$0	Completed
Lighting Upgrade - Exterior Areas	\$10,000	\$0	0%	\$0	Completed through OCWA budget.
Laboratory Upgrades	\$100,000	\$15,000	15%	\$85,000	On-hold until CO2 project complete. Start design in November
Power Factor Capacitor Upgrades - Low Lift and High Lift	\$50,000	\$0	0%	\$0	Will be part of Backup electrical generation capacity study in 2020
Energy Monitoring and Management System - High Lift	\$35,000	\$35,000	100%	\$0	Completed. Awaiting invoice
SCADA System Upgrades (continued from 2018)	\$1,035,000	\$875,000	85%	\$155,000	In progress. Completion scheduled for February 2020
Security System Install	\$60,000	\$0	0%	\$60,000	On-hold until SCADA project complete. 2020 Budget item
Cottam Booster Reservoir Regrading/Drainage	\$60,000	\$60,000	100%	\$0	Completed.
Rechlorination System Upgrades	\$30,000	\$10,000	33%	\$0	In-progress.
Distribution System Components	\$75,000	\$50,000	67%	\$0	On-going
Master Water Meters Upgrades	\$50,000	\$0	0%	\$50,000	Awaiting completion of SCADA system. For 2020 Budget
DAF System Design	\$150,000	\$30,000	20%	\$120,000	Preliminary Stage; Detailed design to start in November
Chlorine Gas System Improvements and New Scrubber	\$1,550,000	\$1,400,000	90%	\$150,000	In progress. Substantial Completion scheduled for Mid January
CO2 pH Adjustment System Construction	\$1,550,000	\$1,400,000	90%	\$150,000	In progress. Substantial Completion scheduled for Mid January
Total Capital Works and Major Maintenance:	\$5,625,000	\$4,173,303	74%	\$1,205,000	
<u>Maintenance and Repairs</u>					
Grounds Improvements	\$50,000	\$30,000	60%	\$20,000	On-going
Treatment Plant Bldg Improvements - Admin Area/New offices	\$30,000	\$30,000	100%	\$0	On-going
UWSS Wide Communication Upgrades	\$20,000	\$10,000	50%	\$10,000	On-going
Wastewater Pumps Rehab	\$10,000	\$0	0%	\$0	Completed under OCWA budget
Total Maintenance and Repairs:	\$110,000	\$70,000	64%	\$30,000	
Total Capital Works:	\$5,735,000	\$4,243,303	74%	\$1,235,000	

**UNION WATER SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT
2020 Draft Budget
Proposed Capital Budget**

Item Description	CATEGORY							FUNDING SOURCE		
	Studies	Treatment Plant Upgrades & Renewals	Low Lift Upgrades	Cottam Booster Upgrades	SCADA / Communication/ Security System Upgrades	Electrical Systems	Transmission Facilities	TOTAL	Revenue	Reserves
STUDIES/PROGRAMS										
Water Demand/ Water Loss/ Water Quality Initiatives	\$75,000							\$75,000	\$75,000	\$0
Lake Erie Hab Monitoring Project - UWSS & Univ. of Windsor/GLIER	\$100,000							\$100,000	\$100,000	\$0
Emergency Water Servicing Study - UWSS & WUC	\$30,000							\$30,000	\$30,000	\$0
New Ruthven WTP Reservoir #3 Study	\$40,000							\$40,000	\$40,000	\$0
Backup power generation/ energy study	\$40,000							\$40,000	\$40,000	\$0
Total Studies/Programs	\$285,000							\$285,000	\$285,000	\$0
CAPITAL WORKS/ MAJOR MAINTENANCE										
Low Lift Pump #5 Rehab			\$35,000					\$35,000	\$35,000	\$0
Low Lift Roof Replacement			\$90,000					\$90,000	\$90,000	\$0
Blue Green Algae/ Chlorophyll Probe - Low lift well			\$30,000					\$30,000	\$30,000	\$0
Low Lift Main Electrical-Transformer/Feed/Switch Gear/Breaker Upgrades						\$250,000		\$250,000	\$250,000	\$0
Carbon Recirculation Pump - New		\$10,000						\$10,000	\$10,000	\$0
Filter # 4 - Rehab (recoat filter box; new underdrains)		\$400,000						\$400,000	\$400,000	\$0
Highlift Pump #7 - New		\$250,000						\$250,000	\$250,000	\$0
New Panel, Quick Connect & Transfer Switch for Portable Generator		\$60,000						\$60,000	\$60,000	\$0
SCADA System Upgrades (continued from 2019)		\$250,000						\$250,000	\$250,000	\$0
Security System Install					\$85,000			\$85,000	\$85,000	\$0
UWSS Wide Communication Upgrades					\$20,000			\$20,000	\$20,000	\$0
Cottam Booster - Review Baffling to improve reservoir mixing				\$30,000				\$30,000	\$30,000	\$0
Kingsville Water Tower Recoating; Safety Upgrades; Improvements							\$1,300,000	\$1,300,000	\$1,095,000	\$205,000
Distribution System Components							\$200,000	\$200,000	\$200,000	\$0
Master Water Meters Upgrades							\$50,000	\$50,000	\$50,000	\$0
Laboratory Upgrades		\$100,000						\$100,000	\$100,000	\$0
Treatment Plant Bldg Improvements - Admin Area/New offices		\$45,000						\$45,000	\$45,000	\$0
Grounds Improvements (landscaping; asphalt/road repairs, etc)		\$100,000						\$100,000	\$100,000	\$0
Fencing - Treatment Plant Property; Leamington Water Tower Property		\$45,000						\$45,000	\$45,000	\$0
Total Capital Works/ Major Maintenance		\$1,260,000	\$155,000	\$30,000	\$105,000	\$250,000	\$1,550,000	\$3,350,000	\$3,145,000	\$205,000
NEW CAPITAL WORKS										
DAF System Design/ Build (Project Will start in Fall 2020; complete in 2021. Total budget \$2,500,000)		\$1,400,000						\$1,400,000	\$0	\$1,400,000
Chlorine Gas System Improvements and New Scrubber		\$150,000						\$150,000	\$0	\$150,000
CO2 pH Adjustment System Construction		\$150,000						\$150,000	\$0	\$150,000
Total New Capital Works		\$1,700,000	\$0	\$0	\$0	\$0	\$0	\$1,700,000	\$0	\$1,700,000
TOTAL MAJOR MAINTENANCE and CAPITAL		\$2,960,000	\$155,000	\$30,000	\$105,000	\$250,000	\$1,550,000	\$5,050,000	\$3,145,000	\$1,905,000
TOTAL MAINTENANCE, CAPITAL and STUDIES								\$5,335,000		

**UWSS 6-YEAR CAPITAL PLAN
TABLES AND DETAILS**

UNION WATER SUPPLY SYSTEM Six Year Recommended Capital / Major Maintenance - December 13, 2019								<i>DRAFT FOR 2020</i>	
	2020	2021	2022	2023	2024	2025	Total Capital Expenditures 2018-2024	Comments	
Union Area Water Supply System									
Studies and Programs									
							\$ -		
Water Demand/Water Loss/Water Usage/ Water Quality Initiatives	\$ 75,000	\$ 60,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 275,000		Smart Water Study, etc. CWN Algae Study, Corrosion Monitoring
Lake Erie HAB Monitoring Study - UWSS & U of Windsor	\$ 100,000						\$ 100,000		
Emergency Water Servicing Study - UWSS / WUC	\$ 30,000						\$ 30,000		
New Ruthven WTP Reservoir #3 Study	\$ 40,000						\$ 40,000		M&T System installation in 2017 for Low Lift
Backup power generation / energy study	\$ 40,000						\$ 40,000		
Cottam 12-inch main replacement- EA & Prelim Eng							\$ -		Evaluation of Options and Prelim Engineering for Replacement of 12-inch WM to Cottam
Master Plan Update							\$ -		
Contingency (un-identified future studies)		\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 750,000		
Subtotal Studies and Programs	\$ 285,000	\$ 210,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 185,000	\$ 1,235,000		
Low Lift									
Intake #1 & 2* (Note 5)					\$ 30,000	\$ 30,000	\$ 60,000		Maintenance
Intake # 2 (See Item 16 for more detail)			\$ 30,000				\$ 30,000		Maintenance
Intake # 3, shoreline intake							\$ -		Improvements needed to make fully functional
Coarse Bar Screen (2)							\$ -		maintenance not required
Travelling Screen #1							\$ -		replaced in 2008 \$110,000.
Travelling Screen #2							\$ -		Replaced in 2012
Travelling Screen #3							\$ -		installed in 1994; upgrades planned for 2020
Pump Wells(2)							\$ -		cleaned & inspected annually
Low Lift Pump 1 *(Note 1)							\$ -		rebuilt in 2018
Low Lift Pump 2				\$ 35,000			\$ 35,000		rebuilt in 2017
Low Lift Pump 3			\$ 30,000				\$ 30,000		rebuilt in 2016
Low Lift Pump 4				\$ 30,000			\$ 30,000		rebuilt in 2007
Low Lift Pump 5	\$ 35,000				\$ 30,000	\$ 30,000	\$ 95,000		
Low Lift Pump 6							\$ -		rebuilt in 2008
Low Lift Pump 7		\$ 35,000					\$ 35,000		rebuilt in 2008
Zebra Mussel Control System							\$ -		Zebra mussel intake upgrades
Pump discharge line							\$ -		
Low Lift Surge Tanks (2) and Compressor System *(Note 6)							\$ -		Ladder/safety system; 2 new compressors needed
Low Lift Roof Replacement	\$ 90,000						\$ 90,000		
Low Lift Diesel Generator							\$ -		O & M Contracted to Genrep
Low Lift transformer, feed, switch gear, breaker upgrades	\$ 250,000						\$ 250,000		Electrical Transformer, switchgear etc is obsolete Needs to be upgraded
General Building Maintenance & Equipment									
Roadway upgrades to Maintenance Area -			\$ 75,000				\$ 75,000		upgrade of roadway to rear plant area
New Maintenance Shop Building							\$ -		
Building/Grounds -	\$ 100,000	\$ 50,000	\$ 100,000				\$ 250,000		Conc. Pad for Generator; Low lift road upgrades; VC26
Fencing- Treatment Plant Property; Leamington Water Tower	\$ 45,000						\$ -		
Upgrades to Pole Barn - Roof, electric, etc.							\$ -		
Clarification System									
Clarifier 1 -							\$ -		New Flow meter and control valve
Clarifier 2 -							\$ -		To be retrofitted to DAF in 2020
Clarifier 3							\$ -		New Flow meter and control valve

Clarifier 4								\$ -
Chemical System								\$ -
Coagulant Feed System		\$ 30,000						\$ 30,000
Coagulant Storage								\$ -
Coagulant Aid System								\$ -
Carbon Feed System								\$ -
Carbon Flushing Lines								\$ -
Tank Mixers (3)								\$ -
Recirc. Pump	\$ 10,000							\$ 10,000
Slurry Transfer Pumps (2)								\$ -
Carbon Feed Pumps (4)			\$ 40,000					\$ 40,000
Carbon Scrubber System								\$ -
Filtration								\$ -
Filter 1								\$ -
Filter 2								\$ -
Filter 3								\$ -
Filter 4	\$ 400,000							\$ 400,000
Filter 5								\$ -
Filter 6								\$ -
Filter 7								\$ -
Filter 8								\$ -
Turbidity Meters for Filter Backwash								\$ -
Filter Meter Replacements								\$ -
Valves								\$ -
Removal of Microstrainers/ Install of Flooring								\$ -
Pumps								\$ -
Backwash Pump 1 - Actuator upgrade								\$ -
Backwash Pump 2			\$ 100,000					\$ 100,000
High Lift Pump 1 *(Note 2) Diesel Pump								\$ -
High Lift Pump 2								\$ -
High Lift Pump 3								\$ -
High Lift Pump 4								\$ -
High Lift Pump 5								\$ -
High Lift Pump 6								\$ -
High Lift Pump 7	\$ 250,000							\$ 250,000
High Lift Pump 8								\$ -
High Lift Pump 9			\$ 125,000					\$ 125,000
High Lift Pump No. 10								\$ -
High Lift Reservoirs and components		\$ 50,000		\$ 50,000				\$ 100,000
Wastewater Pumps (2)			\$ 10,000					\$ 10,000
Diesel Generator 1 (170 kW)								\$ -
Diesel Generator 2 (750 kW)								\$ -
Diesel Generator Upgrades					\$ 2,000,000	\$ 1,500,000		\$ 3,500,000
HL Compressor 1								\$ -
HL Compressor 2								\$ -
HL Compressor 3		\$ 15,000	\$ 15,000					\$ 30,000
Main Plant Electrical								\$ -
Panel, Quick Connect & Transfer Switch for Portable Generator	\$ 60,000							\$ 60,000
Power Factor Capacitors for Energy Management								\$ -
Energy Monitoring and Management System - High Lift								\$ -
Generator B Transfer Switch Automation								\$ -
Disinfection								\$ -
Dehumidification								\$ -
Chlorine Feed System								\$ -
Ammonia Feed System								\$ -
Scrubber System								\$ -
SCADA /Communication/Security								\$ -
Security System Install	\$ 85,000							\$ 85,000
System upgrade and Maintenance	\$ 250,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000		\$ 400,000
UWSS Wide Communication System Improvements	\$ 20,000	\$ 20,000	\$ 50,000	\$ 20,000	\$ 20,000	\$ 20,000		\$ 150,000
Monitoring Equipment								\$ -

Upgraded in 2013
System upgraded 2015
Inspection and refurbishment needed
Larger pumps required
requires upgrade
Fully upgraded in 2012
new media/air scour in 2014; new inlet gate needed
Fully upgraded in 2013
Filter leaking; needs recoating and new underdrains
New Media in 2017
new media in 2018
New Media in 2017
new media in 2018
New items to optimize backwash process
New Filter meters for Filters 6-8
Completed in 2016-2017
Microstrainer No. 2 to be removed
new actuator
new in 1996
motor repairs 2018
Replaced 2013
rebuilt 2006
rebuilt 2007
rebuilt 2008
new pump 2013
new in 1996, rebuilt 2015
new in 1996
New pump needed in newer high lift bay
Upside down valve/piping corrosion protection
RSP #2 replacement
New voltage regulator and associated components
Replacement
Replacement
Replacement
New Panel & Quick Connects for Portable Generator, etc.
Capacitors are failing. Upgrades needed
Completed in 2014
installed new in 2002
new acid pump installed in 2009
Keyless entry security system
New SCADA System in 2018/2019; maintenance after
improvements to existing communication system

Turbidity Meter Replacement -								\$ -	For clarifiers #3 and #4 monitoring
Chlorine Analyzer Replacements								\$ -	4 new units needed
Blue Green Algae Monitoring Probe	\$ 30,000							\$ 30,000	2 new units needed
Building Maintenance									
Facility Enhancements - General								\$ -	
Maintenance Shop Roof Replacement								\$ -	Roof Leaking and Needs to be Replaced
Windows & Doors Replacement								\$ -	asbestos like material present in window caulking, portion to
Admin Building	\$ 45,000							\$ 45,000	
Laboratory Upgrade	\$ 100,000							\$ 100,000	Laboratory to be moved to old microstrainer room and
New Equipment									
Portable Backup Generator for Low Lift, Water Towers, Emergency								\$ -	Purchased in 2016
Cottam Reservoir & Booster PS									
Reservoir	\$ 30,000							\$ 30,000	Review Baffling to improve reservoir mixing
Booster Pump 1								\$ -	new in 1996
Booster Pump 2								\$ -	new in 1996
Booster Pump 3		\$ 15,000						\$ 15,000	new in 1996
Booster Pump 4								\$ -	new in 1996
Surge Tanks (2)								\$ -	Insurance inspected in 2009, needs internal inspection
Compressor		\$ 15,000						\$ 15,000	Replaced 2012
Reservoir Cover Regrading/Repairs								\$ -	Started in Dec. 2018/to be completed in 2019
Rechlorination system upgrades								\$ -	Rechlorination system is old and obsolete; needs upgrade
Cottam MCC PLC Upgrade								\$ -	Completed 2014
Distribution System									
Leamington Tower								\$ -	New Cathodic System installed in 2018
Albuna Tower			\$ 250,000					\$ 250,000	New Control Valve on 42inch for Albuna Control
Kingsville Tower	\$ 1,300,000							\$ 1,300,000	Safety Upgrades and Painting (2020)
Essex Tower		\$ 30,000						\$ 30,000	recoated and upgraded in 2018; new cathodic system 2020
Distribution System Maintenance	\$ 200,000	\$ 200,000	\$ 100,000					\$ 500,000	New Actuators for 1A/1B and other components
Master Water Meter Replacement/Upgrades	\$ 50,000							\$ 50,000	Cell Based reporting system
Wastewater Treatment System									
Wastewater Lagoon Upgrades				\$ 100,000	\$ 100,000	\$ 100,000		\$ 300,000	Clay liner improvements
Residuals Management system (see new capital works)								\$ -	
								\$ -	
NEW CAPITAL WORKS								\$ -	
								\$ -	
CO2 pH Adjustment System Install	\$ 150,000							\$ 150,000	New CO2 based pH adjustment system/pretreatment
UV Disinfection - In-reservoir UV vault	\$ -	\$ 1,500,000	\$ 4,500,000	\$ 2,500,000				\$ 8,500,000	New UV Disinfection System.
Dry Scrubber - Chlorine Gas system upgraded	\$ 150,000							\$ 150,000	Chlorine Building Expansion and Dry Scrubber Install
Pre-Treatment/clarification upgrades (DAF) design	\$ 1,400,000	\$ 1,100,000	\$ 2,500,000					\$ 5,000,000	Conversion of Clarifiers No 1 and 2 to DAF
Residuals management Polymer system waste system upgrades		\$ 250,000			\$ 1,000,000	\$ 2,500,000		\$ 3,750,000	Residuals staging/ dewatering area and Polymer/thickening process for residuals
Admin Building upgrades, expansion and elevator		\$ 1,000,000	\$ 500,000	\$ 100,000				\$ 1,600,000	Office Admin area expansion and new elevator
Replacement of 12-inch Cottam Water Main			\$ 250,000	\$ 2,000,000	\$ 6,000,000			\$ 8,250,000	New 18-inch watermain to cottam
<i>Subtotal Capital and Major Maintenance</i>	\$3,350,000	\$490,000	\$955,000	\$265,000	\$2,210,000	\$1,710,000		\$ 8,980,000	
<i>Total New Capital Works</i>	\$1,700,000	\$3,850,000	\$7,750,000	\$4,600,000	\$2,180,000	\$2,500,000		\$ 22,580,000	
TOTAL CAPITAL	\$5,050,000	\$4,340,000	\$8,705,000	\$4,865,000	\$4,390,000	\$4,210,000		\$ 31,560,000	
								\$ -	
<i>Subtotal Studies and Programs</i>	\$285,000	\$210,000	\$185,000	\$185,000	\$185,000	\$185,000		\$ 1,235,000	
<i>Contingency</i>								\$ -	
TOTAL CAPITAL, STUDIES AND NEW CAPITAL	\$ 5,335,000	\$ 4,550,000	\$ 8,890,000	\$ 5,050,000	\$ 4,575,000	\$ 4,395,000		\$ 32,795,000	