

UW/03/23

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

FROM: Rodney Bouchard, Union Water Manager

DATE: January 12, 2023

RE: Proposed 2023 UWSS Operations and Capital Budget



RECOMMENDATION

That the Union Water Supply System Joint Board of Management (UWSS Board) adopts the Proposed 2023 Operational and Capital Budget for the Union Water Supply System;

And further, that the UWSS Board adopts an increase of \$0.014 per cubic metre for the UWSS Wholesale Rate. The new proposed UWSS Wholesale Rate for 2023 would be \$0.7125 per cubic meter.

And further, that the UWSS General Manager be provided the delegated authority to implement the 2023 UWSS Operations & Maintenance Budget and Capital Program

REPORT HIGHLIGHTS

- Potable water demand from UWSS is anticipated to be approximately 21,747,000 m³ for 2023. This demand represents an increase of 4.5% over the forecasted year end demand for 2022. It should be noted that 2022 demand is approximately 5% higher than 2021 demand to date and it is anticipated that a similar increase in demand will occur in 2023.
- An increase of \$0.014/m³ is proposed for the UWSS Wholesale Rate. The new proposed wholesale rate for 2023 would be \$0.7125/m³.
- UWSS Revenue for 2023 is estimated at \$16,150,000. This includes estimated wholesale rate revenue of \$15,495,000, investment income of \$422,000, property rental revenue of \$60,000, and sundry revenue of \$23,000. This also includes \$150,000 municipal study revenue for a joint study between UWSS and Windsor Utilities Commission (WUC) where UWSS is leading the financial part of the study and will be reimbursed by ENWIN/WUC for 50% of the study costs.
- Operational and Debt Service Expenditures for 2023 are estimated at \$10,396,000. This includes \$3,831,000 OCWA Operations and Maintenance services and \$2,409,000 for Sunlife Loan (former MFP Debt).
- 2023 Revenue versus Operational and Debt Service Expenditures are anticipated to result in a surplus of approximately \$5,753,000;
- A Capital Program of \$6,620,000 is proposed for 2023. This includes a proposed Administration Building expansion (\$2 million), new backup generators at the Water Treatment Plant (\$2 million) and a significant major maintenance/ upgrade program (\$2.62 million).
- A draw of \$867,000 from the UWSS Reserves would be needed to fund the 2023 Capital Program.
- Total reserves for 2022 year end are forecasted to be \$18.4 million.

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Re: Proposed 2023 UWSS Operations and Capital Budget

BACKGROUND:

Since the Transfer Order of January 2001 was put into place, the UWSS Board has been responsible for considering and approving an annual budget for the Union Water Supply System. The format of the 2023 budget is generally the same as that previously prepared for 2022 and previous years.

DISCUSSION:

The proposed 2023 UWSS Operations and Capital Budget package was provided to UWSS Board members in December 2022 for review. The UWSS General Manager is seeking approval of the proposed 2023 UWSS Budget so that critical studies and major capital upgrades and improvements can be initiated without delay.

This budget report is outlined to provide details in regards to the following:

- Anticipated revenue for 2023 from wholesale of water to the partner municipalities;
- Anticipated operating expenditures for 2023 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 2023 for UWSS;
- Forecasted Operational Expenditures and Capital Works program for 2023-2028.

The Proposed 2023 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 5-years) Fixed Fee Operations Agreement between UWSS and OCWA that came into effect on January 1, 2019 and is to be reviewed in 2023;
- The proposed capital budget for 2023 that includes significant capital projects such as the expansion of the Administration Building, the purchase and installation of new backup generating power systems at the water treatment plant, and a long list of major maintenance and capital upgrades at UWSS facilities.

Details regarding the budget components are discussed below.

OPERATING EXPENDITURES

Expenditures for the Union Water Supply System (UWSS) consist of a) *Fixed Expenditures*, which includes the OCWA operations contract, UWSS Administration and debt service; and b) *Programs and Studies* that are proposed for 2023. The total projected expenditures for 2023 is budgeted at approximately at \$10,396,000.

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Fixed Expenditures

Fixed expenditures for the budget process include the OCWA Operations Budget, UWSS Administrative Budget, and Debt Service. The total fixed expenditures for 2023 is budgeted at \$9,566,034. The fixed expenditures consist of the following components

OCWA Operations Budget:	\$3,831,155
UWSS Administrative Budget:	\$ 606,000
Legal/Professional Fees:	\$ 200,000
Leamington Administration Support:	\$ 50,000
Residuals Ponds Maintenance:	\$ 150,000
CO2 Gas Bulk Purchase Contract:	\$ 110,000
Watermain Repairs:	\$ 100,000
Un-Budgeted Repairs:	\$ 100,000
Water Quality/Corrosion Monitoring Program:	\$ 50,000
Land Transfer Tax:	\$ 147,255
Property Taxes:	\$ 162,690
Electricity and Natural Gas:	<u>\$ 1,650,000</u>
<i>Total Operations, Administrative, Energy:</i>	<i>\$7,157,100</i>
Debt Service:	
Sunlife Debt (MFP Debt):	<u>\$2,408,934</u>
<i>Total Debt Service:</i>	<i>\$2,408,934</i>
Total Fixed Costs:	\$9,566,034

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Programs and Studies

A number of Programs and Studies are included in the 2023 Budget. These studies are designed to achieve one of the following goals:

- Assess and identify improvements to 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 to assess future capital infrastructure needs;
- Evaluate water quality to for potential issues such as toxic algae in raw water, nitrification issues in larger distribution systems, etc.
- Evaluate new technologies that may benefit UWSS' operations

For the 2023 budget year, \$830,000 has been allocated to Programs and Studies. The following studies are proposed or currently in place.

New WTP Reservoir #3 Study & Preliminary Engineering	\$170,000
UWSS-WUC Water Service Redundancy-Conceptual:	\$140,000
Peaking Plant Environmental Assessment:	\$120,000
Lake Erie HAB Monitoring Project:	\$100,000
Cottam 12-inch WM Replacement- Prelim. Engineering:	\$100,000
Leak Detection Study :	\$ 75,000
Backup Power Generation/Energy Study:	\$ 45,000
DAF #1 Optimization and WTP Capacity Testing:	\$ 40,000
UWSS Infrastructure Review and Master Servicing Plan:	<u>\$ 40,000</u>
Total:	\$830,000

Operating Expenditure Summary

Fixed Expenditures:	\$9,566,034
Programs and Studies:	<u>\$ 830,000</u>
Total Operating Expenditures for 2023:	\$10,396,034

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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, property rental income, and sundry income. The total estimated revenue for 2023 is \$16,149,368

Wholesale Water Revenue Summary

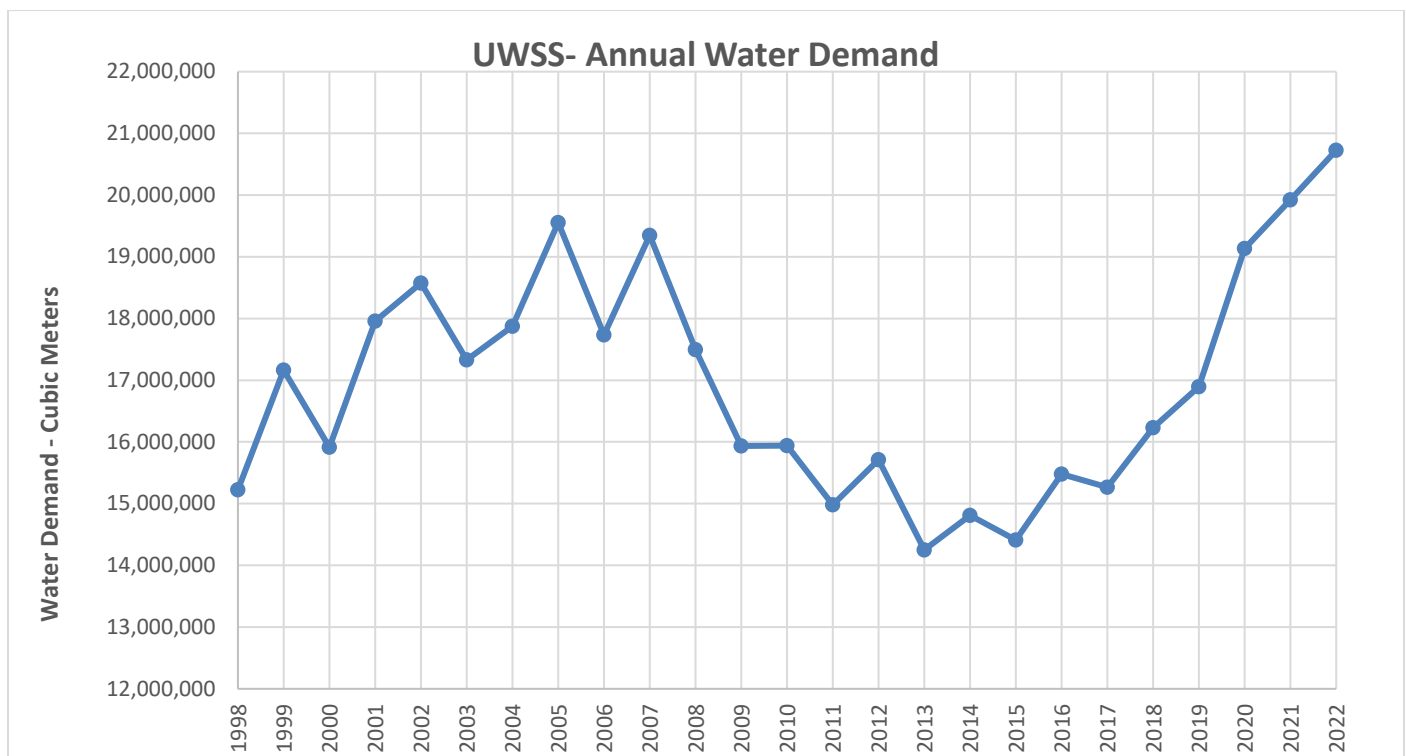
Wholesale water revenue is based on annual water usage by the 4 owner municipalities and the wholesale water rates.

Water Usage

The projected water “usage” by municipal owners for 2023 is 21,747,451 m3 (4,784,000,000 imperial gallons), which is based on a 4.5% increase in water demand over 2022. It should be noted that 2022 demand is approximately 5% higher than 2021 demand to date and it is anticipated that a similar increase in demand will occur in 2023.

Figure 1 depicts the total UWSS water usage trend from 1998-2022 (value for 2022 is a projected total).

Figure 1



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Figure 2 depicts cumulative daily water demand from 1998-2022.

Figure 2

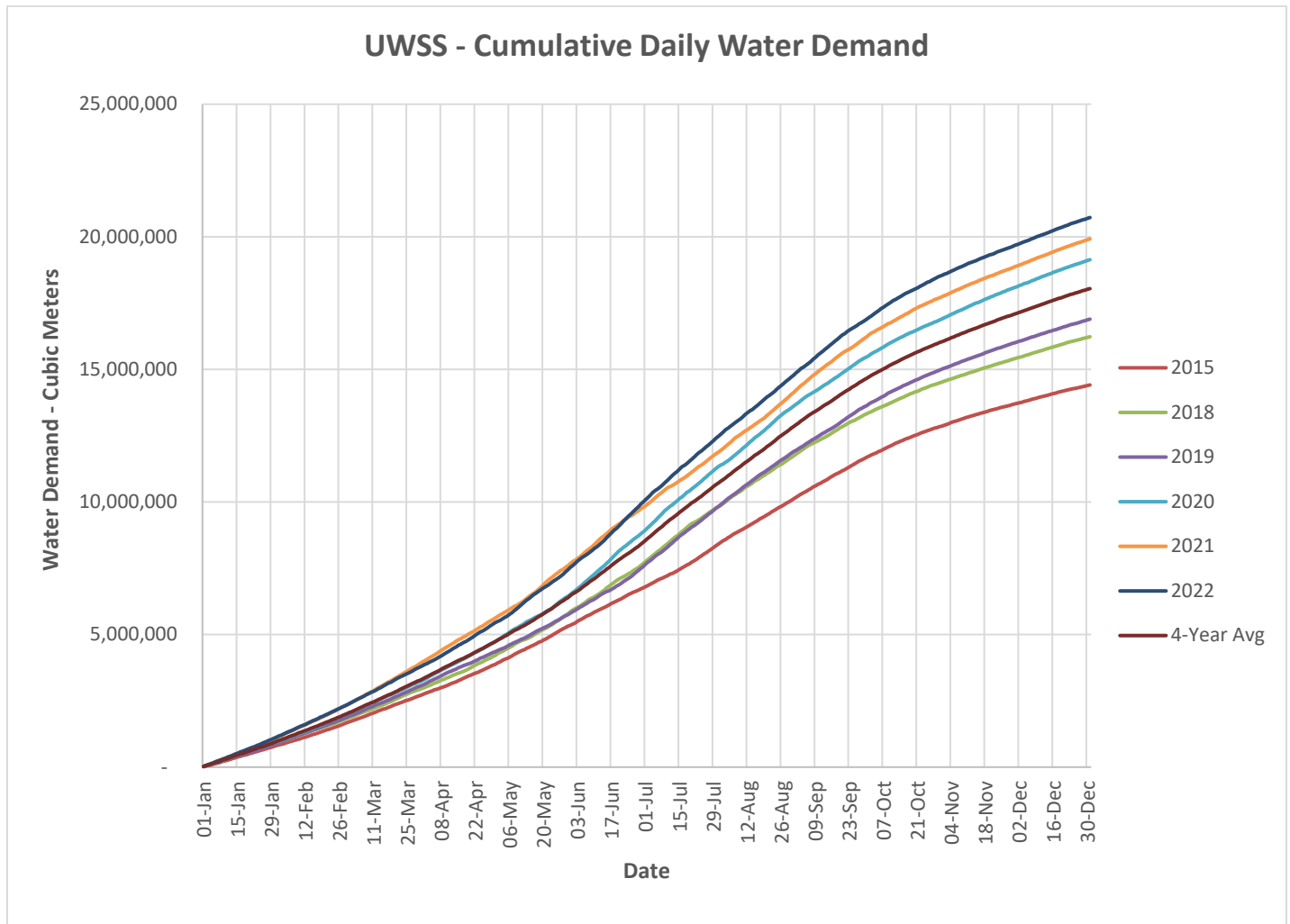
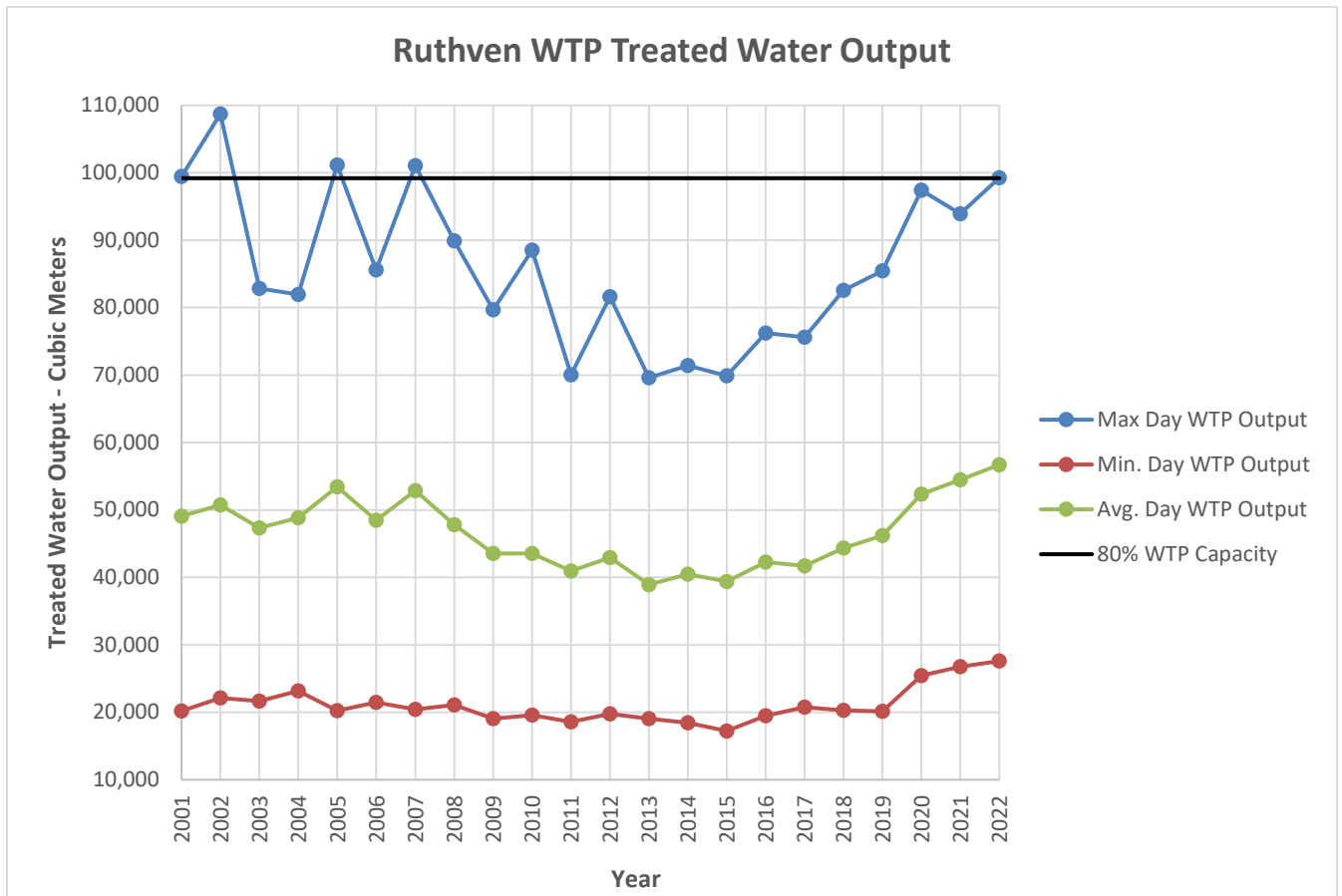


Figure 3 depicts the maximum, minimum and average daily treated water output from the UWSS' Ruthven Water Treatment Plant for the years 2001-2022.

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Figure 3



Wholesale Water Rates

For the 2023 budgeting process, it is proposed that an increase of \$0.0140 per cubic meter be applied to the UWSS wholesale rate. This would result in a 2023 UWSS wholesale rate of \$0.7125 per cubic meter to be applied as of January 1, 2023.

Based on the anticipated water demand of 21,747,451 m3 of potable water for 2023, the wholesale rate water revenue is estimated at:

Wholesale Rate Revenue Total: \$15,495,059

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Miscellaneous Revenue

Miscellaneous revenue includes income from investments and sundry income.

Investment (interest) income:	\$ 421,577
UWSS/WUC Study Reimbursement:	\$ 150,000
Property Rental Revenue:	\$ 60,000
Sundry revenue:	<u>\$ 22,731</u>
Total Misc. Revenue:	\$ 654,308

Sundry revenue is revenue received from various sources such as lease of space on water towers for telecommunications equipment. The property rental revenue is revenue from recently acquired property that is being leased to a tenant.

Revenue Summary

Wholesale Rate Revenue:	\$15,945,059
Miscellaneous Revenue :	<u>\$ 654,308</u>
Total Estimated Revenue for 2023:	\$16,149,368

REVENUE VERSUS OPERATING EXPENDITURES

A comparison of Revenue versus Expenditures for 2023 budget is as follows. It should be noted that the total estimated expenditures also include the proposed budget for operational Programs and Studies of \$830,000.

Total Estimated Revenue:	\$16,149,368
Total Estimated Expenditures:	<u>\$10,396,034</u>
Surplus/(Deficit):	\$ 5,753,334

CAPITAL PROGRAM

The proposed Capital Program for 2023 is budgeted at \$6,620,000.

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Capital Works:

The following major capital works projects are proposed for 2023:

Administration Building Expansion :	\$2,000,000
New Backup Power Generating System - WTP	\$2,000,000
Meter Chamber Rehab Program	\$ 350,000
New High Lift Pump #7:	\$ 300,000
Albuna Water Tower Upgrades:	\$ 200,000
Wastewater System Upgrades:	\$ 200,000
Variable Frequency Drives for Low Lift Pumps:	\$ 150,000
Kingsville Water Tower utility building:	\$ 150,000
Distribution System Component Improvements:	\$ 150,000
Grounds Improvements (asphalt/road repairs, landscaping):	\$ 150,000
Bulk Water Fill Station - WTP	\$ 100,000
Outbuilding Improvements:	\$ 100,000
Low Lift Roof Replacement:	\$ 100,000
Filters 1&3 Control Console Upgrades:	\$ 75,000
Electrical Upgrade - Capacitors:	\$ 70,000
New Backup Wastewater Pump:	\$ 70,000
New Vehicle for UWSS:	\$ 65,000
Quench Buggy:	\$ 60,000
New Telephone System:	\$ 50,000
Water Quality Analyzers:	\$ 50,000
Surge Valves - High Lift Pumps #8 & 9:	\$ 50,000
Polymer System Upgrades:	\$ 40,000
Low Lift pump #4 rehab:	\$ 40,000
Fencing Upgrades:	\$ 40,000
SCADA Upgrades:	\$ 30,000
Travelling Screen #3:	\$ 30,000
Communication System Upgrades:	\$ 30,000
Air Compressor Upgrades:	<u>\$ 20,000</u>
Total Capital Works for 2023:	\$6,620,000

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BUDGET SUMMARY

The proposed 2023 budget is summarized as follows:

Total Estimated Revenue: (includes wholesale rate revenue and miscellaneous revenue)	\$16,149,368
Total Estimated Operating Expenditures: (includes Operations Contract, UWSS Admin, Programs & Studies)	<u>(\$10,396,034)</u>
Revenue versus Operating Expenditures: Surplus/ (Deficit)	\$5,753,334
Capital Program: (includes Capital Purchases and Capital Works)	<u>(\$6,620,000)</u>
NET SURPLUS/ (DEFICIT) : (Operating surplus/deficit less Capital Program)	(\$866,666)

The capital program for 2023 will be funded through 2023 Revenue and UWSS Reserves.

CASH /RESERVES VERSUS DEBT

Cash and Reserves for UWSS as of January 1, 2023 are forecasted to be approximately \$18,415,000 dollars. It should be noted that of the estimated \$18,415,000 in available cash and reserves for 2023, approximately \$11,342,000 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 account to offset the annual MFP Debt obligation and to function as a Rate Stabilizing Reserve Fund.

The 2023 UWSS Operating and Capital Budget projects a Net Deficit of \$866,666 for 2023 year end. Thus, it is anticipated that UWSS reserves at the end of 2023 will decrease to approximately \$17,548,000

Based on debt repayment schedules, the total UWSS long term debt balance as of January 1, 2023 is \$7,908,943 and consists solely of the Sunlife Loan (aka former MFP Debt) that has a term date of 2026. At the end of 2023, this debt will decrease to \$6,259,451.

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PROPOSED 10-YEAR CAPITAL WORKS PLAN

The UWSS General Manager, with assistance and input from OCWA Operations Staff has developed a proposed 10-year Capital Works Plan (2023-2032) for the UWSS. This Plan reflects the 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 10-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 rate and Reserve funded capital works expenditures for 2023-2031 are projected at \$34.5 million. Proposed debt funded capital works for this period is valued at \$121 million and includes the proposed Reservoir #3/ UV project in 2023-2024 (\$35 million), replacement and upsizing of 12-inch watermain to Cottam in 2024-2025 (\$12 million) and new peaking water treatment plant in 2027-2028 (\$55 million).

CONCLUSIONS:

It is the UWSS 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

**2023 UWSS DRAFT OPERATIONS AND CAPITAL BUDGET
TABLES AND DETAILS**

**UNION WATER SUPPLY SYSTEM
2023 DRAFT BUDGET
Budget Summary**

	2022	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	Approved Budget	Forecasted Year End	Total Budget	Total Budget	Total Budget	Total Budget	Total Budget	Total Budget	Total Budget	Total Budget	Total Budget	Total Budget
REVENUE												
Senior Government Grants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Wholesale Rate Billings	\$14,364,653	\$14,541,029	\$15,495,059	\$16,037,456	\$16,597,268	\$17,177,251	\$17,778,005	\$18,402,481	\$19,047,474	\$19,715,507	\$20,407,414	\$21,124,061
Investment Income	\$413,311	\$515,000	\$421,577	\$430,009	\$438,609	\$447,381	\$456,329	\$465,455	\$474,765	\$484,260	\$493,945	\$503,824
Sundry revenue	\$22,285	\$22,285	\$22,731	\$23,186	\$23,649	\$24,122	\$24,605	\$25,097	\$25,599	\$26,111	\$26,633	\$27,166
Property Rental Revenue	\$142,800	\$144,174	\$60,000									
Municipal Study Revenue	\$0	\$0	\$150,000									
Capital Rate Income - Greenhouse Sector	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL REVENUES	\$14,943,049	\$15,222,488	\$16,149,368	\$16,490,650	\$17,059,526	\$17,648,755	\$18,258,938	\$18,893,033	\$19,547,837	\$20,225,877	\$20,927,992	\$21,655,051
OPERATING EXPENDITURE												
General Administration	\$432,639	\$420,993	\$606,000	\$518,400	\$525,230	\$532,193	\$539,090	\$546,126	\$553,303	\$560,623	\$568,089	\$575,705
Leamington Assistance	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Miscellaneous Legal/Professional fees	\$150,000	\$185,000	\$200,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
OCWA Operating Contract	\$3,612,763	\$3,671,658	\$3,831,155	\$3,946,090	\$4,064,472	\$4,186,407	\$4,311,999	\$4,441,359	\$4,574,599	\$4,711,837	\$4,853,193	\$4,998,788
Programs and Studies	\$710,000	\$315,898	\$830,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Operational/Maintenance/Upgrades - General	\$325,000	\$349,224	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Property Taxes	\$159,500	\$159,500	\$162,690	\$165,944	\$169,263	\$172,648	\$176,101	\$179,623	\$183,215	\$186,880	\$190,617	\$194,430
Land Transfer Tax			\$147,255									
CO2 Liquified Gas Procurement	\$110,000	\$105,000	\$110,000	\$112,200	\$114,444	\$116,733	\$119,068	\$121,449	\$123,878	\$126,355	\$128,883	\$131,460
Electricity and Natural Gas	\$1,381,380	\$1,599,000	\$1,650,000	\$1,732,500	\$1,819,125	\$1,910,081	\$2,005,585	\$2,105,865	\$2,211,158	\$2,321,716	\$2,437,801	\$2,559,692
TOTAL OPERATING EXPENDITURES	\$6,931,282	\$6,856,273	\$7,987,100	\$7,150,133	\$7,367,534	\$7,593,061	\$7,826,843	\$8,069,421	\$8,321,153	\$8,582,411	\$8,853,583	\$9,135,075
Debt Service - Sunlife Loan	\$2,389,596	\$2,389,596	\$2,408,934	\$2,428,392	\$2,449,323	\$2,467,669	\$0	\$0	\$0	\$0	\$0	\$0
Capital Loan for Reservoir and UV - \$30million @ 3% for 10yrs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cottam WM replacement loan - \$12million @ 3% for 10yrs							\$0	\$0	\$0	\$0	\$0	\$0
TOTAL DEBT SERVICE EXPENDITURES	\$2,389,596	\$2,389,596	\$2,408,934	\$2,428,392	\$2,449,323	\$2,467,669	\$0	\$0	\$0	\$0	\$0	\$0
CASH CAPITAL EXPENDITURE												
Capital Repair, Maintenance & Upgrade Works	\$9,380,000	\$7,859,706	\$6,620,000	\$6,660,000	\$3,080,000	\$2,990,000	\$1,720,000	\$1,220,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
TOTAL CASH FUNDED CAPITAL EXPENDITURES	\$9,380,000	\$7,859,706	\$6,620,000	\$6,660,000	\$3,080,000	\$2,990,000	\$1,720,000	\$1,220,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
NET SURPLUS/(DEFICIT)	(\$3,757,829)	(\$1,883,087)	(\$866,666)	\$252,125	\$4,162,669	\$4,598,025	\$8,712,096	\$9,603,612	\$8,226,684	\$8,643,466	\$9,074,409	\$9,519,976
Operating & Capital Reserves												
	2022	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
	Budget	Forecasted Year End	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget
Operating & Capital Reserves	\$9,005,422	\$9,005,422	\$7,122,335	\$6,255,668	\$6,507,793	\$10,670,462	\$15,268,487	\$23,980,582	\$33,584,195	\$41,810,879	\$50,454,345	\$59,528,754
Addition/(subtraction) from Operations Budget	-\$3,757,829	-\$1,883,087	-\$866,666	\$252,125	\$4,162,669	\$4,598,025	\$8,712,096	\$9,603,612	\$8,226,684	\$8,643,466	\$9,074,409	\$9,519,976
Addition/(Subtraction) from Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating & Capital Reserves	\$5,247,593	\$7,122,335	\$6,255,668	\$6,507,793	\$10,670,462	\$15,268,487	\$23,980,582	\$33,584,195	\$41,810,879	\$50,454,345	\$59,528,754	\$69,048,731
Rate Stabilization Reserve												
Rate Stabilization Reserve	\$11,060,436	\$11,060,436	\$11,342,477	\$11,631,710	\$11,928,319	\$12,232,491	\$12,544,420	\$12,864,302	\$13,192,342	\$13,528,747	\$13,873,730	\$14,227,510
Interest (GIC at 2.55%)	\$282,041	\$282,041	\$289,233	\$296,609	\$304,172	\$311,929	\$319,883	\$328,040	\$336,405	\$344,983	\$353,780	\$362,802
Subtotal Rate Stabilization Reserve	\$11,342,477	\$11,342,477	\$11,631,710	\$11,928,319	\$12,232,491	\$12,544,420	\$12,864,302	\$13,192,342	\$13,528,747	\$13,873,730	\$14,227,510	\$14,590,311
(Subtraction) from Rate Stabilization Reserve	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Rate Stabilization Reserve	\$11,342,477	\$11,342,477	\$11,631,710	\$11,928,319	\$12,232,491	\$12,544,420	\$12,864,302	\$13,192,342	\$13,528,747	\$13,873,730	\$14,227,510	\$14,590,311
Total Reserves	\$16,590,070	\$18,464,812	\$17,887,378	\$18,436,112	\$22,902,953	\$27,812,906	\$36,844,885	\$46,776,536	\$55,339,625	\$64,328,075	\$73,756,264	\$83,639,042
Sunlife Debt	\$7,908,943	\$7,908,943	\$6,259,451	\$4,406,948	\$2,310,158	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**UNION WATER SUPPLY SYSTEM
2023 DRAFT BUDGET
Budgeted Water Demand and Wholesale Rate Revenue**

Flow Metering Location	2022 Approved Budget	2022 Forecasted Year End	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2027 Budget	2028 Budget	2029 Budget	2030 Budget	2031 Budget	2032 Budget
Essex PUC	892,000	934,271	980,985	985,889	990,819	995,773	1,000,752	1,005,756	1,010,784	1,015,838	1,020,918	1,026,022
Gosfield N. Twsp	690,000	614,006	614,006	617,076	620,161	623,262	626,379	629,510	632,658	635,821	639,000	642,195
Gosfield S. Twsp	6,260,000	6,228,541	6,539,968	6,638,068	6,737,639	6,838,703	6,941,284	7,045,403	7,151,084	7,258,350	7,367,226	7,477,734
Highbury CanCo	1,075,000	1,081,388	1,081,388	1,086,795	1,092,229	1,097,690	1,103,179	1,108,694	1,114,238	1,119,809	1,125,408	1,131,035
Kingsville PUC	698,000	722,383	758,502	762,295	766,106	769,937	773,786	777,655	781,544	785,451	789,379	793,325
Leamington PUC	10,235,000	10,567,638	11,096,630	11,296,369	11,499,704	11,706,698	11,917,419	12,131,933	12,350,307	12,572,613	12,798,920	13,029,300
Lakeshore	715,000	669,280	675,973	679,353	682,749	686,163	689,594	693,042	696,507	699,990	703,490	707,007
Total Flow:	20,565,000	20,817,507	21,747,451	22,065,844	22,389,407	22,718,227	23,052,392	23,391,993	23,737,122	24,087,873	24,444,340	24,806,620
	4,524,300,000	4,579,851,540	4,784,439,291	4,854,485,778	4,925,669,572	4,998,009,877	5,071,526,231	5,096,883,862	5,122,368,281	5,147,980,123	5,173,720,023	5,199,588,624
Projected Demand Increase	3.7%	1.2%	4.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Water Demand increase from 2021		5.0%										
Rate 1 Flow	20,565,000	20,817,507	21,747,451	22,065,844	22,389,407	22,718,227	23,052,392	23,391,993	23,737,122	24,087,873	24,444,340	24,806,620
Rate 1	\$0.6985	\$0.6985	\$0.7125	\$0.7268	\$0.7413	\$0.7561	\$0.7712	\$0.7867	\$0.80	\$0.8185	\$0.8349	\$0.8515
Rate 1 Revenue	\$14,364,653	\$14,541,029	\$15,495,059	\$16,037,456	\$16,597,268	\$17,177,251	\$17,778,005	\$18,402,481	\$19,047,474	\$19,715,507	\$20,407,414	\$21,124,061
Capital Rate - Flow	0	0	0	12,136,214	12,314,174	12,495,025	12,678,816	12,865,596	13,055,417	13,248,330	13,444,387	13,643,641
Capital Rate	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Rate Revenue	\$0.00	\$0.00	\$0.00	\$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	\$0.0791	\$0.0791	\$0.0791
	\$1,627,103	\$1,647,081	\$1,720,658	\$1,745,850	\$1,771,450	\$1,797,466	\$1,823,905	\$1,850,775	\$1,878,081	\$1,905,832	\$1,934,036	\$1,962,700
Total Revenue	\$14,364,653	\$14,541,029	\$15,495,059	\$16,037,456	\$16,597,268	\$17,177,251	\$17,778,005	\$18,402,481	\$19,047,474	\$19,715,507	\$20,407,414	\$21,124,061

Rate Increase - \$ Amount/m3	\$0.027		\$0.0140	\$0.014	\$0.015	\$0.015	\$0.015	\$0.016	\$0.016	\$0.016	\$0.016	\$0.017
Rate increase - %	4.0%		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

Item Description	Studies	Treatment Plant Upgrades & Renewals	Low Lift Upgrades	Cottam Booster Upgrades	SCADA / Communication/ Security System Upgrades	Transmission Facilities	General/ Various Facilities	TOTAL	Comments
STUDIES/PROGRAMS									
New Ruthven WTP Reservoir #3 Study/ Preliminary Engineering	\$170,000							\$170,000	Started in 2022- Completion in Spring 2023
UWSS-WUC Water Service Redundancy - Conceptual Design	\$140,000							\$140,000	Started in 2022 - Completion in Spring 2023
Peaking Plant EA	\$120,000							\$120,000	Jan 2023 Proposed Start
Lake Erie HAB Monitoring Project - UWSS & Univ. of Windsor/GLIER	\$100,000							\$100,000	Last Year of 3yr NSERC Grant Funded Study
Cottam 12-inch WM Replacement - Preliminary Engineering	\$100,000							\$100,000	Proposed Start in Early Summer 2023
Leak Detection Study	\$75,000							\$75,000	Proposed Start in Early Summer 2023
Backup power generation/ energy study	\$45,000							\$45,000	Started in 2022 - Completion in Spring 2023
DAF #1 Optimization and WTP Capacity Testing	\$40,000							\$40,000	Started in 2022 - Completion in Spring 2023
UWSS Infrastructure Review and Master Servicing Plan	\$40,000							\$40,000	Started in 2021 - Completion in Spring 2023
Total Studies/Programs	\$830,000							\$830,000	
CAPITAL WORKS/ MAJOR MAINTENANCE									
Low Lift #4 Rehab			\$40,000					\$40,000	
Low Lift Roof Replacement			\$100,000					\$100,000	
Travelling Screen #3 major maintenance			\$30,000					\$30,000	
Polymer System Upgrade - 4 new pumps		\$40,000						\$40,000	
Highlift Pump #7 - New		\$300,000						\$300,000	
Surge Valves for High Lift Pumps #8 and #9		\$50,000						\$50,000	
Air Compressor Upgrades		\$20,000						\$20,000	
Filter 1&3 Control Console Upgrades		\$75,000						\$75,000	
Electrical Upgrades - capacitors, etc.							\$70,000	\$70,000	
Communication System upgrades					\$30,000			\$30,000	
New Telephone System					\$50,000			\$50,000	
SCADA System Upgrades					\$30,000			\$30,000	
New Variable Frequency Drives (VFDs) and upgrades to Cottam Booster Pumps				\$150,000				\$150,000	
Albuna Water Tower Upgrades						\$200,000		\$200,000	
Distribution System Components						\$150,000		\$150,000	
Meter Chamber Rehabilitation						\$350,000		\$350,000	
Water Quality Analyzers - Turbidity/Chlorine/Multiparameter							\$50,000	\$50,000	
Wastewater Pump - New backup pump		\$70,000						\$70,000	
Wastewater Pond Upgrades		\$200,000						\$200,000	
Grounds Improvements (landscaping; asphalt/road repairs, etc)							\$100,000	\$100,000	
Outbuilding Improvements							\$100,000	\$100,000	
Fencing Upgrades - various areas							\$40,000	\$40,000	
Total Capital Works/ Major Maintenance		\$755,000	\$170,000	\$150,000	\$110,000	\$700,000	\$360,000	\$2,245,000	
NEW CAPITAL WORKS									
Administration Building Expansion with New Elevator		\$2,000,000						\$2,000,000	
Backup Power System Upgrades - New Generators at WTP							\$2,000,000	\$2,000,000	
Kingsville Water Tower new utility Building							\$150,000	\$150,000	
Bulk Water Fill Station - WTP							\$100,000	\$100,000	
Total New Capital Works		\$2,000,000	\$0	\$0	\$0	\$0	\$2,250,000	\$4,250,000	
CAPITAL PURCHASES									
Quench Buggy							\$60,000	\$60,000	
New Vehicle							\$65,000	\$65,000	
Total New Capital Purchases								\$125,000	
TOTAL MAJOR MAINTENANCE and CAPITAL		\$2,755,000	\$170,000	\$150,000	\$110,000	\$700,000	\$2,610,000	\$6,620,000	

**UWSS 10 -YEAR CAPITAL
PLAN TABLES AND DETAILS**

UNION WATER SUPPLY SYSTEM
Ten Year Recommended Capital / Major Maintenance-
DRAFT - January 12, 2023

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total Capital Expenditures 2023-2032
Union Area Water Supply System											
Studies and Programs											
Lake Erie HAB Monitoring Study - UWSS & U of Windsor	\$ 100,000										\$ 100,000
Leak Detection Study	\$ 75,000										\$ 75,000
UWSS-WUC Water Service Redundancy - Conceptual Design	\$ 140,000										\$ 140,000
New Ruthven WTP Reservoir #3 Study/ Preliminary Engineering	\$ 170,000										\$ 170,000
Backup power generation / energy study	\$ 45,000										\$ 45,000
Peaking Plant EA	\$ 120,000										\$ 120,000
Cottam 12-inch watermain replacement-Preliminary engineering	\$ 100,000										\$ 100,000
DAF #1 Optimization and WTP Capacity Testing	\$ 40,000										\$ 40,000
UWSS Infrastructure Review and Master Servicing Plan	\$ 40,000										\$ 40,000
Contingency (un-identified future studies)	\$ -	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 2,250,000
Subtotal Studies and Programs	\$ 830,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 2,580,000
Low Lift											
Intake #1 & 2* (Note 5)		\$ 30,000	\$ 30,000								\$ 60,000
Intake # 2 (See Item 16 for more detail)											\$ -
Intake # 3, shoreline intake											\$ -
Coarse Bar Screen (2)											\$ -
Travelling Screen #1											\$ -
Travelling Screen #2											\$ -
Travelling Screen #3	\$ 30,000										\$ 30,000
Pump Wells(2)											\$ -
Low Lift Pump 1 *(Note 1)											\$ -
Low Lift Pump 2											\$ -
Low Lift Pump 3	\$ 40,000										\$ 40,000
Low Lift Pump 4											\$ -
Low Lift Pump 5											\$ -
Low Lift Pump 6											\$ -
Low Lift Pump 7											\$ -
Zebra Mussel Control System		\$ 20,000									\$ 20,000
Pump discharge line											\$ -
Low Lift Surge Tanks (2) and Compressor System *(Note 6)											\$ -
Low Lift Roof Replacement	\$ 100,000										\$ 100,000
Low Lift Diesel Generator			\$ 1,500,000								\$ 1,500,000
Low Lift transformer, feed, switch gear, breaker upgrades											\$ -
General Building Maintenance & Equipment											
Grounds Improvements	\$ 100,000	\$ 35,000		\$ 100,000	\$ 100,000	\$ 100,000					\$ 435,000
Ammonia Building Retrofits											\$ -
Fencing Upgrades	\$ 40,000										\$ 40,000
Outbuilding Improvements	\$ 100,000				\$ 200,000	\$ 200,000					\$ 500,000
											\$ -
Clarification System											
Clarifier 1 -											\$ -
Clarifier 2 -											\$ -
Clarifier 3											\$ -
Clarifier 4											\$ -
Chemical System											
Coagulant Feed System				\$ 20,000							\$ 20,000
Coagulant Storage											\$ -
Polymer system upgrades - 4 new pumps	\$ 40,000										\$ 40,000

Carbon Feed System									
Carbon Flushing Lines									\$ -
Tank Mixers (3)									\$ -
Recirc. Pump									\$ -
Slurry Transfer Pumps (2)									\$ -
Carbon Feed Pumps (4)				\$ 30,000					\$ 30,000
Carbon Scrubber System	\$ 50,000								\$ 50,000
Filtration									\$ -
Filter 1	\$ 37,500								\$ 37,500
Filter 2									\$ -
Filter 3	\$ 37,500								\$ 37,500
Filter 4									\$ -
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					\$ 150,000	\$ 150,000			\$ 300,000
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	\$ 300,000								\$ 300,000
High Lift Pump 8	\$ 25,000								\$ 25,000
High Lift Pump 9	\$ 25,000			\$ 200,000					\$ 225,000
High Lift Pump No. 10									\$ -
High Lift Reservoirs and components	\$ 50,000								\$ 50,000
Wastewater Pumps (2)				\$ 90,000					\$ 90,000
Surge Tanks (2)									\$ -
HL Compressor 1									\$ -
HL Compressor 2					\$ 20,000	\$ 20,000			\$ 40,000
HL Compressor 3	\$ 20,000								\$ 20,000
Main Plant Reservoirs and Clearwells									\$ -
Reservoir #1									\$ -
Reservoir #2									\$ -
Clearwells					\$ 200,000	\$ 200,000			\$ 400,000
Main Plant Electrical									\$ -
General Electrical upgrades	\$ 70,000								\$ 70,000
New Generators for Treatment Plant									\$ -
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									\$ -
System upgrade and Maintenance	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000			\$ 180,000
New Telephone System	\$ 50,000								\$ 50,000
UWSS Wide Communication System Improvements	\$ 30,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000			\$ 130,000
Monitoring Equipment									0
Turbidity Meter Replacement -	\$ 25,000								\$ 25,000
Chlorine Analyzer Replacements	\$ 25,000								\$ 25,000

