

TO: CHAIR AND MEMBERS OF THE UNION WATER
SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT

FROM: RODNEY BOUCHARD, UNION WATER MANAGER

DATE: DECEMBER 11, 2015

RE: DRAFT 2016 UWSS OPERATIONS AND CAPITAL BUDGET REPORT



RECOMMENDATION

That the Union Water Supply System Joint Board of Management (UWSS Board) adopts the Draft 2016 Operational and Capital Budget for the Union Water Supply System;

And further, that the UWSS Board endorses an increase of \$0.05 per thousand gallons (\$0.0109 per cubic metre) for UWSS wholesale Rate 1 from \$2.62 per thousand gallons (\$0.5758 per cubic metre) to \$2.67 per thousand gallons (\$0.5868 per cubic metre) to be put into effect on April 1, 2016.

And further, that the UWSS Board endorses an increase of \$0.05 per 1000 gallons (\$0.0109/m³) is proposed for the Highbury Canco preferred rate. The new proposed Highbury Canco rate would be \$1.95 per 1000 gallons (\$0.4286/m³) to take effect on January 1, 2016.

REPORT HIGHLIGHTS

- Potable water demand from UWSS is anticipated to be approximately 3,140,000,000 imperial gallons (14,287,050 m³) for 2016.
- Potable water demand from UWSS in 2016 is budgeted to be similar to potable demand in 2015.
- UWSS Revenue for 2016 is estimated at \$8,442,000 (rounded to nearest thousand).
- Operational and Debt Service Expenditures for 2016 are estimated at \$6,697,000. This represents a decrease in expenditures of approximately 6% as compared to 2015. This reduction is mainly attributed to reduction of debt service due to payment of debt;
- 2016 Revenue versus Operational and Debt Service Expenditures are anticipate to result in a surplus of approximately \$1,744,000 for 2016 Fiscal Year;
- A Capital Program of \$1,180,000 is proposed for 2016.
- The proposed Capital Program for 2016 will result in a budgeted net surplus of \$565,000 for 2016 fiscal year.
- An increase of \$0.05 per 1000 gallons (\$0.0109/m³) is proposed for the UWSS Wholesale Rate. The new proposed Rate 1 wholesale Rate would be \$2.67 per 1000 gallons (\$0.5868/m³) to take effect on April 1, 2016.
- An increase of \$0.05 per 1000 gallons (\$0.0109/m³) is proposed for the Highbury Canco preferred rate. The new proposed Highbury Canco rate would be \$1.95 per 1000 gallons (\$0.4286/m³) to take effect on January 1, 2016.

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 2015.

This draft budget is being presented to the UWSS board for consideration. The draft 2016 budget is outlined to provide details in regards to the following:

- Anticipated revenue for 2016 from wholesale of water to the partner municipalities;
- Anticipated operating expenditures for 2016 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 2016 for UWSS;
- Forecasted Operational Expenditures and Capital Works program for 2016-2021.

DISCUSSION:

The draft 2016 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 Fixed Fee Operations Agreement between UWSS and OCWA that came into effect on January 1, 2014;
- The anticipated reduction in debt service associated with the 2015 closeout of Libro Credit Union (formerly Woodslee Credit Union) debt, closeout of debt due to the Municipality of Leamington for the Leamington Phase 2 Trunk Water Main Project, and closeout of the OSIFA (municipal debentures) debt.

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 2016 to identify cost effective improvements for the operation of the UWSS. The total projected expenditures for 2016 is budgeted at approximately at \$6,647,000.

Fixed Expenditures

Fixed expenditures for the budget process include the OCWA Operations Budget, UWSS Administrative Budget, and Debt Service. The total fixed expenditures for 2016 is budgeted at \$6,457,000. The fixed expenditures consist of the following components:

OCWA Operations Budget:	\$2,712,000
UWSS Administrative Budget:	\$ 469,128
Electricity and Natural Gas:	<u>\$1,000,000</u>
<i>Total Operations, Administrative, Energy:</i>	<i>\$4,131,128</i>
Debt Service:	
Sunlife Debt (MFP Debt):	\$2,276,080
Woodslee Credit Union Loan:	\$0
OSIFA (municipal debentures):	\$0
Leamington Debt Repayment:	<u>\$0</u>
<i>Total Debt Service:</i>	<i>\$2,276,080</i>
Total Fixed Costs:	\$6,457,208

Programs and Studies

A number of Programs and Studies are included in the 2016 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 2016 budget year, \$240,000 has been allocated to Programs and Studies. The following studies are proposed or currently in place:

Water Demand/Usage Project: This project is being conducted in conjunction with University of Windsor with funding support from an Ontario Centers of Excellence (OCE) Grant. The study is anticipated to take 2-3 years to complete and is designed to evaluate water demand/usage from large users (e.g. Greenhouse operations) through real-time monitoring instrumentation. The data will be used to complete the UWSS' Master Plan and update the hydraulic water model. 2016 will represent Year 3 of the 3-year study.

For the 2016 Budget year, UWSS' commitment to this project is \$35,000

Water Quality Investigations: The funds of \$25,000 allocated for water quality investigations includes a continuation of a partnership with Canadian Water Network for work associated with the assessment and evaluation of source water related impacts to the UWSS drinking water system.

For the 2016 Budget year, \$25,000 has been allocated for these water quality studies.

Algae Related Assessments: It is proposed that UWSS will undertake a review of the existing clarification process at the UWSS Treatment Plant for possible future introduction of a Dissolved Air Flotation (DAF) clarification process to remove nuisance and toxic algae from Lake Erie sourced raw water. These assessments will also include the proposed purchase and installation of a second multi-parameter probe/equipment to further monitor raw water for algae related components.

For the 2016 Budget year, \$30,000 has been allocated for these water quality studies.

On-Site Hypochlorite Generation Assessment: It is proposed that in 2016 UWSS will initiate a review of On-site Hypochlorite Generation process for its possible implementation at the UWSS Treatment Facility. Currently, UWSS utilizes chlorine gas for primary disinfection at its treatment plant. This process consists of transporting chlorine gas "tonners" to the UWSS treatment plant via transport truck, off-loading the tonners into the chlorine building and "switching out" chlorine tonners as needed for primary disinfection. It is well noted that chlorine gas is extremely toxic and poses a risk to treatment plant operators and neighbouring residents. Thus, the use of chlorine gas requires a large contingent of health and safety measures and monitoring, and many emergency protocols should a chlorine gas leak occur.

On-site Hypochlorite Generation technology consists of using a pure non-toxic salt source to create saline brine that is then used by the hypochlorite “generator” to create a non-hazardous low-concentration hypochlorite solution for disinfection of drinking water. The non-hazardous aspect of this technology provides a low-risk method for disinfection of water and thus significantly reduces health and safety risks to plant operators, staff, and neighbouring residents as compared to chlorine gas disinfection.

This study will evaluate the potential for implementing on-site hypochlorite generation technology at the UWSS treatment plant from a health and safety and cost analysis basis.

For the 2016 Budget year, \$40,000 has been allocated for these water quality studies.

Energy Audit/ Energy Optimization Assessment: It is proposed that UWSS will implement a full energy audit and energy optimization assessment of all UWSS facilities in 2016. This assessment will be designed to identify, plan, and implement energy related cost savings measures for UWSS facilities. It is noted that energy costs are the second largest annual expenditures incurred by UWSS. Expected energy usage at UWSS facilities, including electricity and natural gas heating, for 2016 (i.e. \$950,000) will account for approximately 15% of the 2016 budgeted fixed expenditures. It is anticipated that the results of this work will identify a number of energy use reduction opportunities and strategies that can be implemented at UWSS.

For the 2016 Budget year, \$60,000 has been allocated for these water quality studies. It should be noted that the Ontario SaveONEnergy program has grant funding available for undertaking energy reduction assessments and implementation of energy reduction strategies. The proposed budget of \$60,000 does not include any grant funding that could be obtained for such assessment.

UWSS Organizational Restructuring Evaluation: It is proposed that the issue of restructuring UWSS into a Municipal Service Corporation (MSC) will be reviewed in 2016. This includes preparation of a Business Plan to restructure into an MSC and undertaking public consultation.

For the 2016 Budget year, \$50,000 has been allocated for this work.

Operating Expenditure Summary

Fixed Expenditures:	\$6,457,208
Programs and Studies:	<u>\$ 240,000</u>
Total Operating Expenditures for 2016:	\$6,697,208

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 2016 is \$8,441,600

Wholesale Water Revenue Summary

Wholesale water revenue is based on annual water usage by the 4 owner municipalities and the wholesale water rates. This also includes wholesale water revenue to Highbury CanCo, which started operations in late June 2014 at the former HJ Heinz Plant facility in Leamington, Ontario.

Water Usage

The projected water “usage” by municipal owners for 2016 is 3,140,000,000 imperial gallons (14,287,050 m³) of potable water. This usage estimate is based on water demand for 2015.

Figure 1 depicts the total UWSS water usage trend from 1998-2015.

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

Figure 1

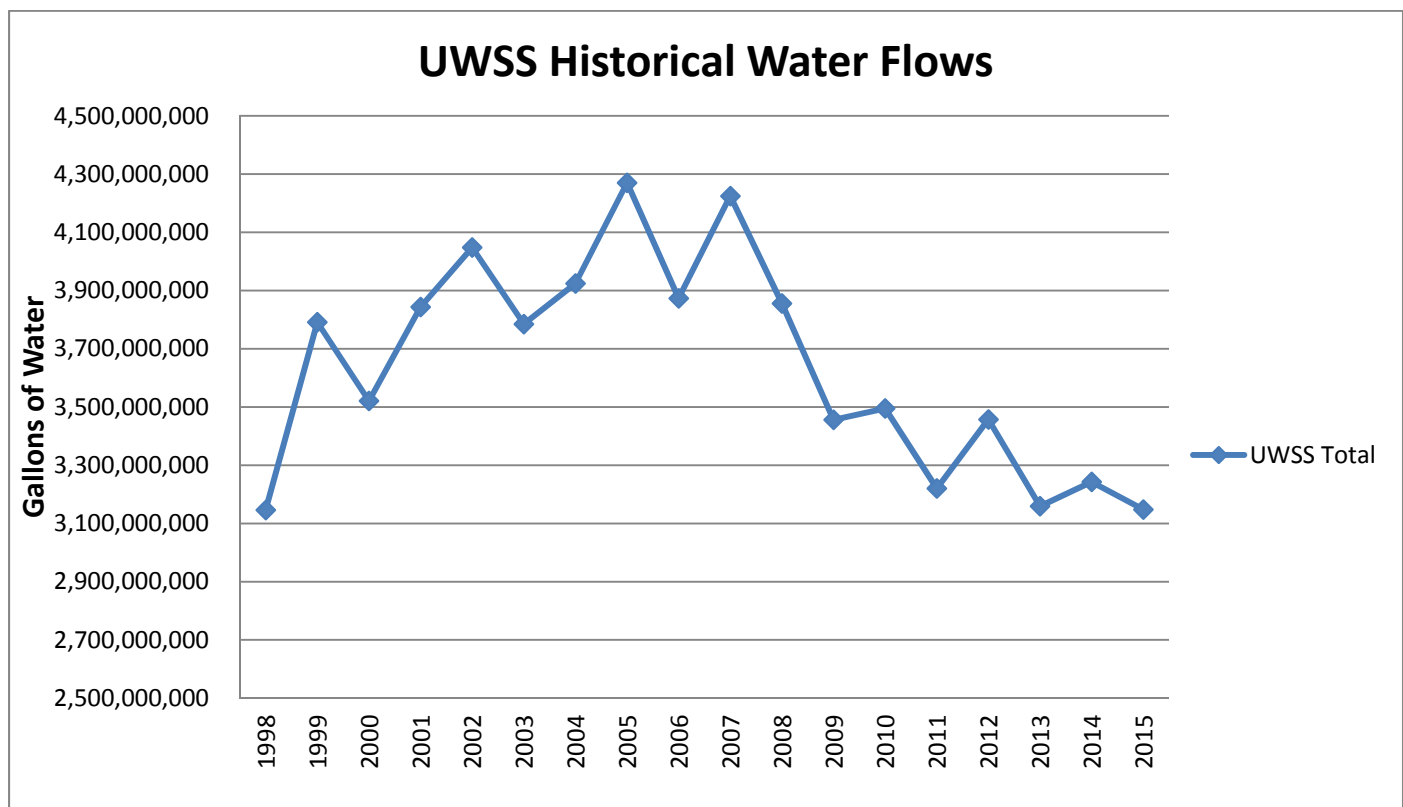
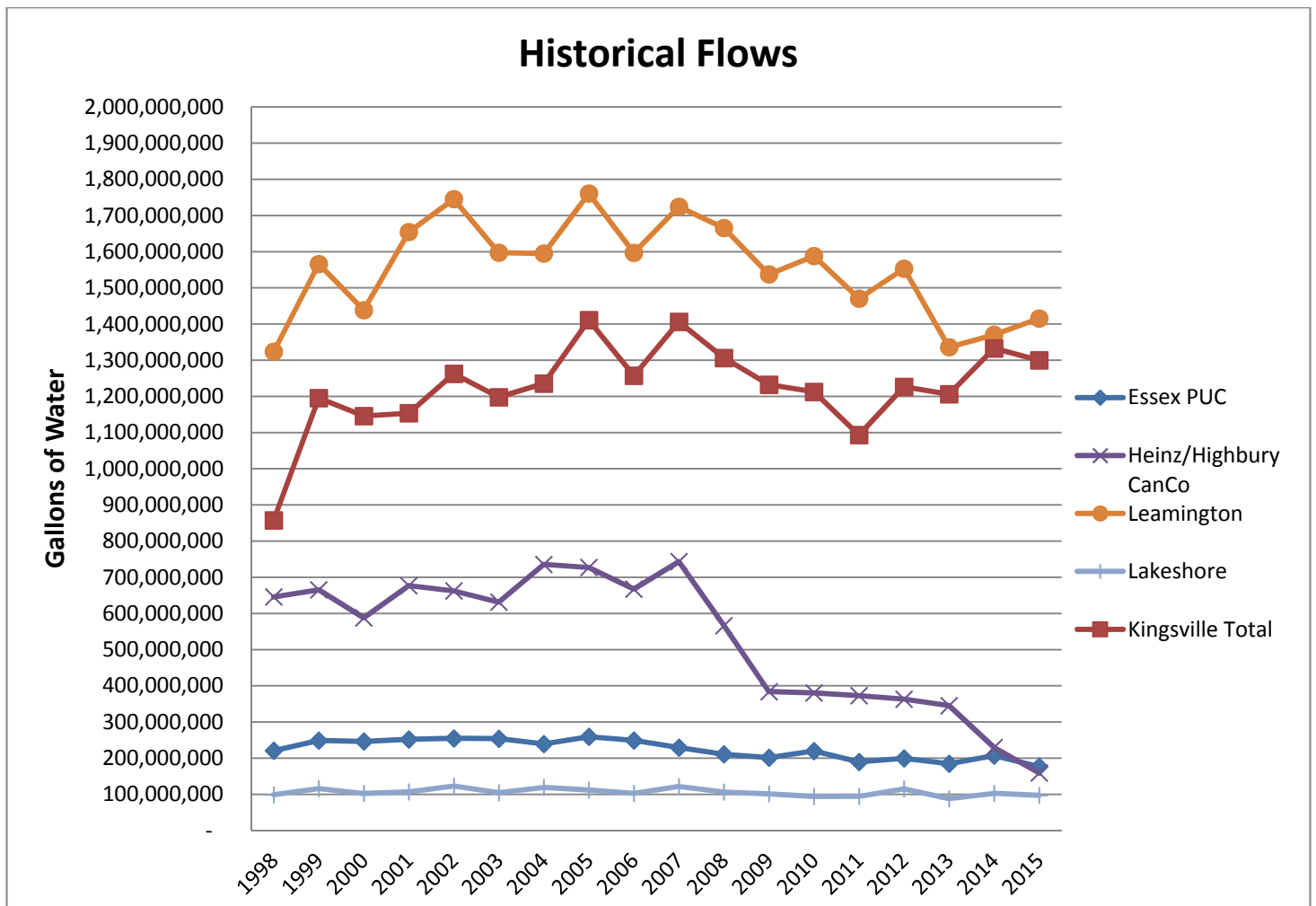


Figure 2



Wholesale Water Rates

For the 2016 budgeting process, it is proposed that an increase of \$0.05 per 1000 gallon (\$0.0109/m³) be applied to the UWSS wholesale rate. This would result in a 2016 UWSS wholesale rate of \$2.67 per 1000 gallons (\$0.5868/m³). It is proposed that the increase in the wholesale rate be applied at the start of the 2nd quarter 2016, thus on April 1, 2016.

Further, at the October 15, 2014 UWSS Board meeting, the UWSS Board agreed to extend a preferred rate of \$1.90 per 1000 gallons (\$0.4176/m³) to Highbury CanCo until December 31, 2015. The 2016 UWSS budget is based on a \$0.05 per 1000 gallon increase of the Highbury CanCo wholesale water rate resulting in a new rate of \$1.95 per 1000 gallons (\$0.4286/m³).

Based on the anticipated water usage rates for 2016 of 3,140,000,000 imperial gallons of potable water the wholesale rate water revenue is estimated at:

Wholesale Rate Revenue Total:	\$8,268,600
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Miscellaneous Revenue

Miscellaneous revenue includes income from investments and sundry income.

Investment (interest) income:	\$ 155,000
Sundry revenue:	\$ <u>18,000</u>
Total Misc. Revenue:	\$ 173,000

Sundry revenue is revenue received from various sources such as lease of space on water towers for telecommunications equipment. The estimated sundry revenue for 2016 is \$18,000 and is roughly based on 2015 revenue.

Revenue Summary

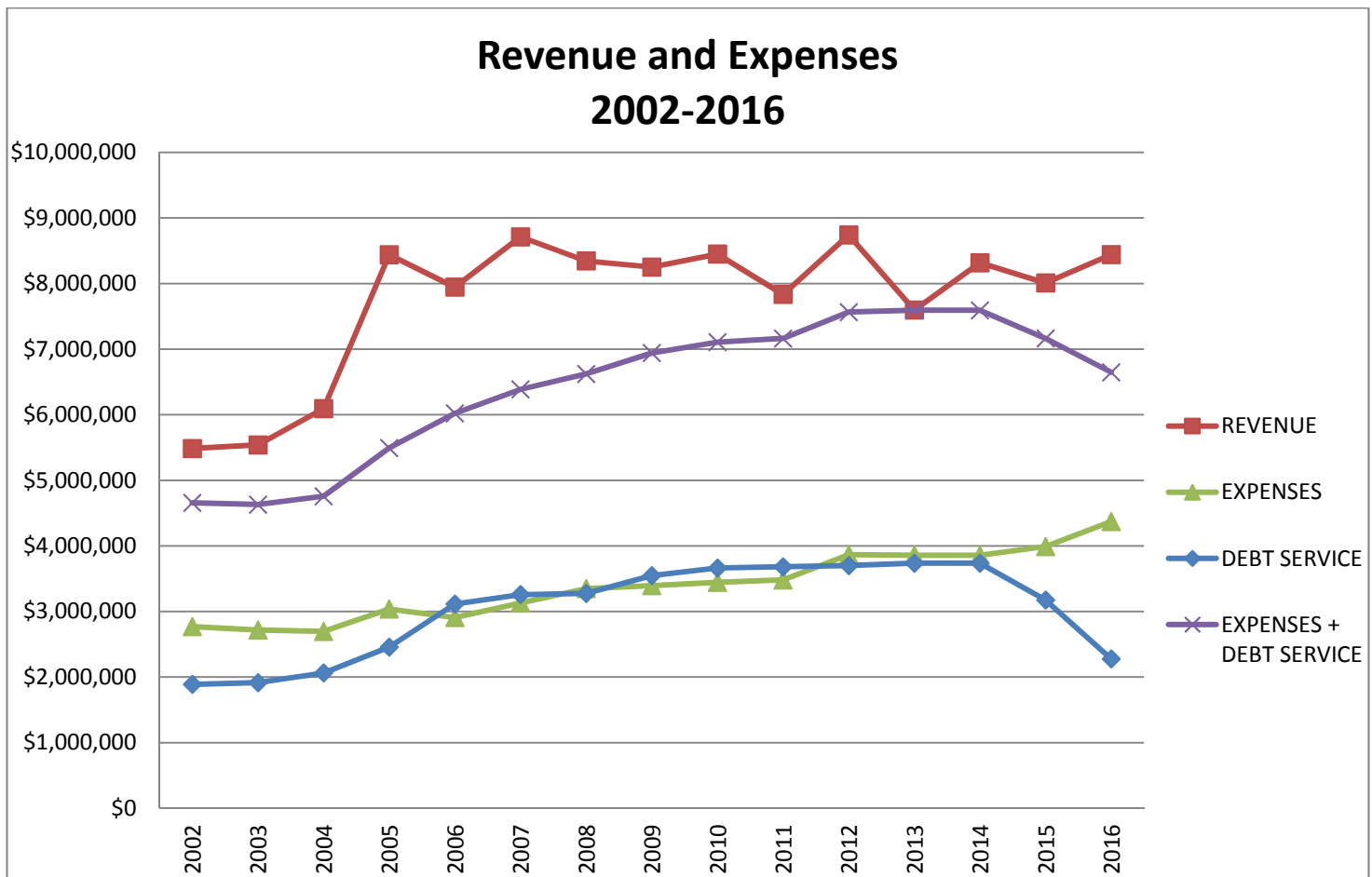
Wholesale Rate Revenue:	\$8,268,600
Miscellaneous Revenue :	\$ <u>173,000</u>
Total Estimated Revenue for 2016:	\$8,441,600

REVENUE VERSUS OPERATING EXPENDITURES

A comparison of Revenue versus Expenditures for 2016 budget is as follows. It should be noted that the total estimated expenditures also include the proposed budget for operational Programs and Studies of \$240,000.

Total Estimated Revenue:	\$8,448,600
Total Estimated Expenditures:	<u>\$6,697,208</u>
Surplus/(Deficit):	\$1,744,392

Figure 3



CAPITAL PROGRAM

The proposed Capital Program for 2015 is budgeted at \$1,180,000. This includes major Capital Equipment Purchases (e.g. vehicles, heavy equipment) and major Capital Works.

Capital Equipment Purchases

The following Capital Equipment Purchases are budgeted for 2016:

Purchase of Mobile 250HP Backup Generator: \$ 150,000

Capital Works:

The following major capital works projects are proposed for 2016:

Low Lift Pump #1 Major Maintenance:	\$ 30,000
Zebra Mussel Control Systems:	\$ 70,000
Carbon Feed Pump Upgrades (2):	\$ 20,000
Carbon Scrubber System Upgrade:	\$ 40,000
Removal of Existing Microstrainers:	\$ 30,000
Clarifier #1 Painting and Maintenance	\$ 100,000
Filter Meter Upgrades (Year 2 of 3-year Program):	\$ 15,000
Treatment Plant Valves (eg. Filters, etc.):	\$ 40,000
Turbidity Meter Upgrades (Year 2 of 3 year Program):	\$ 25,000
Chlorine Analyzer Replacements (Year 1 of 2yr Program):	\$ 20,000
High Lift Pump #3 Rehabilitation:	\$ 45,000
High Lift Reservoir Repairs:	\$ 50,000
Residuals Lagoon Excavation - South Lagoon:	\$ 100,000
Lagoon Residuals Materials Management:	\$ 100,000
Lighting Upgrades - Exterior:	\$ 15,000
Window Replacements-Treatment Plant (Year 2 of 3):	\$ 25,000
Front Foyer/Entrance Upgrades:	\$ 40,000
Road upgrades to Maintenance Shop-New Concrete Pad:	\$ 15,000
Upgrades to Pole Barn-New Roof, electrical:	\$ 40,000
Cottam Booster Pump #1 Rehabilitation:	\$ 20,000
Security System Install:	\$ 20,000
SCADA System Upgrade/Maintenance:	\$ 35,000
Communication System Improvements:	\$ 35,000
Distribution System Valves and Components:	\$ 50,000
Master Meter Replacements/Upgrades:	<u>\$ 50,000</u>
Total Capital Works for 2016:	\$1,030,000

2016 UWSS Capital Program Summary

Capital Equipment Purchases:	\$ 150,000
Capital Works:	<u>\$1,030,000</u>
Total Capital Program for 2016:	\$1,180,000

BUDGET SUMMARY

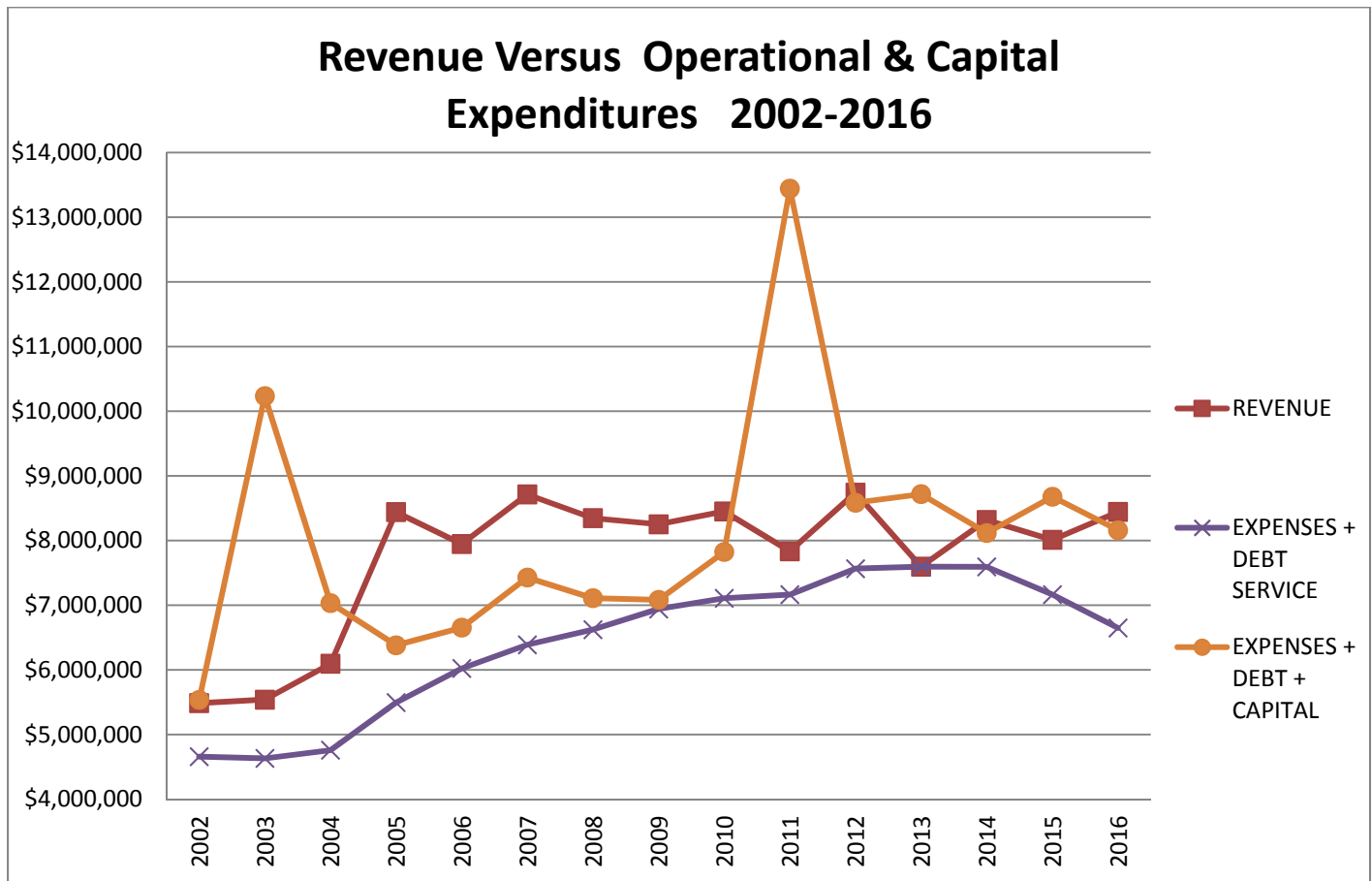
The proposed 2016 budget is summarized as follows:

Total Estimated Revenue: (includes wholesale rate revenue and miscellaneous revenue)	\$8,441,600
Total Estimated Operating Expenditures: (includes Operations Contract, UWSS Admin, Programs & Studies)	<u>(\$6,697,208)</u>
Revenue versus Operating Expenditures: Surplus/ (Deficit)	\$1,744,392
Capital Program: (includes Capital Purchases and Capital Works)	<u>(\$1,180,000)</u>
NET SURPLUS/ (DEFICIT): (Operating surplus/deficit less Capital Program)	\$564,392

Figure 4 below provides a chart that compares historical UWSS Revenue versus Operating and Capital Expenditures.

Appendix A to this report includes worksheets and tables that provide details on the 2016 Operations and Capital Budgets including a Budget Summary worksheet, Operations and Debt Detail worksheet, 2016 Capital Budget Details worksheet, and a Water Flow and Revenue worksheet.

Figure 4



CASH /RESERVES VERSUS DEBT

Cash and Reserves for UWSS as of January 1, 2016 are forecasted to be approximately \$16,034,000 million dollars. It should be noted that of the estimated \$16,034,000 in available cash and reserves for 2016, approximately \$10,432,000 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 do with 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.

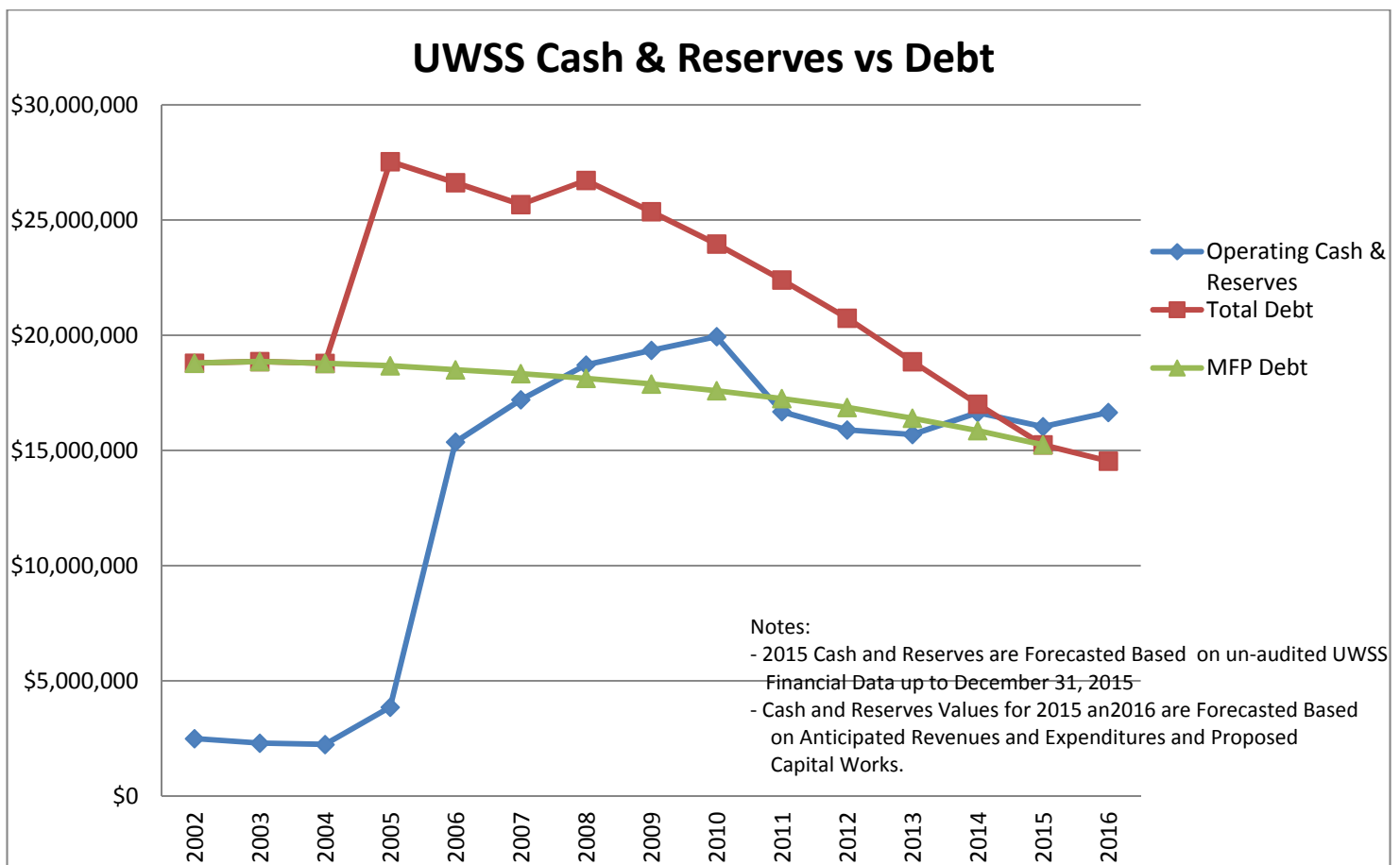
The 2016 Operating and Capital Budget projects a Net Surplus of \$615,000 for 2016 year end. Thus, it is anticipated that UWSS reserves at the end of 2016 will increase to approximately \$16,649,000

Based on debt repayment schedules, the total UWSS long term debt balance for as of January 2016 is \$15,246,064. The total debt load is broken down into the following debt obligations:

Sunlife Debt (MFP Debt):	\$15,246,064
Woodslee Credit Union Loan:	\$0
OSIFA (municipal debentures):	\$0
Leamington Debt Repayment:	<u>\$0</u>
Total Debt:	\$15,246,064

Figure 5 presents a graph comparing Total Debt and MFP Debt versus Cash Equivalents. It should be noted that "Cash & Reserves" for 2016-2020 are projected based on anticipated Revenues, Expenditures, and proposed Capital Works and are subject to significant changes.

Figure 5



PROPOSED 6-YEAR CAPITAL WORKS PLAN

The UWSS Manager, with assistance and input from OCWA Operations Staff has developed a proposed 6-year Capital Works Plan (2016-2021) 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.

It needs to be noted that large capital works project identified for 2017 (i.e. On-Site Chlorine Generation Facility - \$2,250,000) and 2020 (i.e. Replacement and upsizing of 12-inch feedermain to Cottam Booster - \$6,000,000). These items are currently included as "placeholders" and undertaking of such works would be subject to thorough technical and financial evaluation and approval by the UWSS Board. Costs associated with these future capital works are preliminary and are included for Capital Planning and Finance purposes and are subject to change.

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

**2016 UWSS DRAFT OPERATIONS AND CAPITAL BUDGET
TABLES AND DETAILS**

UNION WATER SUPPLY SYSTEM JOINT BOARD OF MANAGEMENT

2016 Draft Budget

Operations and Debt Detail

<u>Number</u>	<u>Account Description</u>	2015	2015	2015	2016	2017	2018	2019	2020	
		Approved Budget	As of Dec. 1, 2015	Forecast To December 31, 2015	Budget- Rate 1 Increase of \$0.05/1000 Gallons	Budget- Rate 1 Increase of \$0.05/1000 Gallons	Budget- Rate 1 Increase of \$0.05/1000 Gallons	Budget- Rate 1 Increase of \$0.05/1000 Gallons	Budget- Rate 1 Increase of \$0.05/1000 Gallons	
REVENUE ACCOUNTS										
FEES REVENUE										
0700-3700	Wholesale Rate Billings	\$7,836,500	\$7,703,893	\$8,124,249	\$8,268,600	\$8,540,800	\$8,697,800	\$8,854,800	\$9,011,800	
		\$7,836,500	\$7,703,893	\$8,124,249	\$8,268,600	\$8,540,800	\$8,697,800	\$8,854,800	\$9,011,800	
MISCELLANEOUS REVENUES										
0700-4100	Investment Income (Operations)	\$15,000			\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	
0700-3999	Sundry revenue	\$18,000	\$19,737	\$20,500	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	
0700-4100	Reserve Income (Wholesale)	\$60,000			\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
	Reserve Income (MFP)	\$80,000		\$150,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	
		\$173,000	\$19,737	\$170,500	\$173,000	\$173,000	\$173,000	\$173,000	\$173,000	
	TOTAL REVENUES :	\$8,009,500	\$7,723,630	\$8,294,749	\$8,441,600	\$8,713,800	\$8,870,800	\$9,027,800	\$9,184,800	
EXPENDITURE ACCOUNTS										
WAGES AND BENEFITS										
0700-5000	Salaried	\$154,020	\$146,942	\$154,000	\$157,100	\$160,242	\$163,447	\$166,716	\$170,051	
	Part time	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0700-5200 to 5210	Benefits - Full time	\$44,880	\$33,138	\$43,079	\$45,778	\$46,693	\$47,627	\$48,580	\$49,551	
	Benefits - Part time	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		\$198,900	\$180,080	\$197,079	\$202,878	\$206,936	\$211,074	\$215,296	\$219,602	
OFFICE OVERHEAD, RENTS AND SERVICES										
0700-7010	Office supplies	\$1,500	\$1,840	\$1,950	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	
0700-7015	Board expenses	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	
0700-7020	Dues, Memberships, Subsc	\$3,000	\$2,854	\$2,854	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	
0700-7030	Travel & Mileage	\$2,000	\$1,058	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	
0700-7040	Training	\$4,000	\$3,275	\$3,500	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	
0700-7050	Conferences	\$4,000	\$3,824	\$3,760	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	
0700-7052	Meeting Expenses	\$1,000	\$1,017	\$1,150	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	
0700-7070	Uniforms/Clothing	\$500	\$0	\$250	\$500	\$500	\$500	\$500	\$500	
0700-7950	Legal/Professional fees	\$30,000	\$25,730	\$27,500	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
0700-7959-002070	Audit Fees	\$15,000	\$6,838	\$14,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	
0700-6750	Property Taxes	\$100,000	\$136,111	\$136,111	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000	
0700-7080 & 7085	Operational Purchases/Maint.	\$20,000	\$10,601	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	
0700-7090	Sundry	\$250	\$0	\$0	\$250	\$250	\$250	\$250	\$250	
0700-7090	Leamington Assistance	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	
0700-7110	Communications	\$1,500	\$786	\$1,250	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	
0700-7120	Postage & Courier	\$500	\$75	\$110	\$500	\$500	\$500	\$500	\$500	
0700-7130	Advertising & Promotion	\$4,000	\$281	\$1,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	
0700-7140	Insurance	\$16,000	\$14,407	\$14,407	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	
0700-7130	Donations & Grants	\$3,000	\$3,000	\$3,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	
0700-7230 to 7290	Office equipment Purchases/Maint.	\$5,000	\$4,215	\$4,500	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
		\$232,750	\$237,412	\$253,342	\$266,250	\$266,250	\$266,250	\$266,250	\$266,250	
0700-6720	OCWA Operating Union	\$2,583,504	\$2,439,715	\$2,583,504	\$2,712,000	\$2,766,240	\$2,821,565	\$2,877,996	\$2,935,556	
0700-7410 & 7420	Electricity and Natural Gas	\$875,000	\$934,384	\$963,461	\$1,000,000	\$1,000,000	\$1,050,000	\$1,100,000	\$1,150,000	
		\$3,458,504	\$3,374,099	\$3,546,965	\$3,712,000	\$3,766,240	\$3,871,565	\$3,977,997	\$4,085,557	
0700-7989-002070	Operational Programs & Studies	\$100,000	\$69,743	\$69,743	\$240,000	\$275,000	\$90,000	\$210,000	\$135,000	
	TOTAL OPERATIONAL EXPENDITURES:	\$3,990,154	\$3,861,334	\$4,067,129	\$4,421,128	\$4,514,426	\$4,438,889	\$4,669,543	\$4,706,409	
	NET OPERATIONAL SURPLUS/(DEFICIT)	\$4,019,346	\$3,862,296	\$4,227,620	\$4,020,472	\$4,199,374	\$4,431,911	\$4,358,257	\$4,478,391	
DEBT SERVICE										
0700-6000 & 6100	Sun Life Debt Obligation	\$2,257,578	\$1,881,315	\$2,257,578	\$2,276,080	\$2,294,701	\$2,313,441	\$2,332,441	\$2,379,089	
0700-6000 & 6100	Woodslee Credit Union	\$372,492	\$372,492	\$372,492						
0700-6000 & 6100	OSIFA	\$375,352	\$0	\$375,352						
0700-6010 & 6110	Leamington WM	\$168,651	\$353,324	\$353,324						
	TOTAL DEBT SERVICE:	\$3,174,073	\$2,607,131	\$3,358,746	\$2,276,080	\$2,294,701	\$2,313,441	\$2,332,441	\$2,379,089	
	SURPLUS/(DEFICIT) AFTER DEBT	\$845,273	\$1,255,165	\$868,874	\$1,744,392	\$1,904,674	\$2,118,470	\$2,025,817	\$2,099,302	

**2016 Draft Budget
Capital Budget Details**

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
<u>STUDIES/PROGRAMS</u>										
Water Demand/Usage (e.g. Smart Water Study)	\$35,000							\$35,000	\$35,000	
Water Quality (CWN, etc.)	\$25,000							\$25,000	\$25,000	
On-Site Hypochlorite Generation Assessment	\$40,000							\$40,000	\$40,000	
Energy Audit / Optimization	\$60,000							\$60,000	\$60,000	
Algae Related Assessments (e.g. Prelim DAF evaluation, etc.)	\$30,000							\$30,000	\$30,000	
UWSS Restructuring to MSC-Next Steps-Business Plan	\$50,000							\$50,000	\$50,000	
Total Studies/Programs	\$240,000							\$240,000		
<u>CAPITAL WORKS/ MAJOR MAINTENANCE</u>										
Low Lift Pump #1 Major Maintenance			\$30,000					\$30,000	\$30,000	
Zebra Mussel Control System - Intake #1			\$70,000					\$70,000	\$70,000	
Carbon Feed Pump Replacements (2)		\$20,000						\$20,000	\$20,000	
Carbon Scrubber System Upgrade		\$40,000						\$40,000	\$40,000	
Removal of Existing Microstrainers		\$30,000						\$30,000	\$30,000	
Clarifier #1 Painting and Maintenance		\$100,000						\$100,000	\$100,000	
Filter Meter Replacements (Year 2 of 3 Year Program)		\$15,000						\$15,000	\$15,000	
Treatment Plant Valves (eg. Filters, etc)		\$40,000						\$40,000	\$40,000	
Turbidity Meter Replacements (Year 2 of 3 year Program)		\$25,000						\$25,000	\$25,000	
Chlorine Analyzer Replacements (Year 1 of 2 year Program)		\$20,000						\$20,000	\$20,000	
High Lift Pump #3 Rehabilitation		\$45,000						\$45,000	\$45,000	
High Lift Reservoir Repairs		\$50,000						\$50,000	\$50,000	
Waste Lagoon Excavation - south lagoon		\$100,000						\$100,000	\$100,000	
Lagoon Residuals Materials Management		\$100,000						\$100,000	\$100,000	
Lighting Upgrades - Exterior of Treatment Plant		\$15,000						\$15,000	\$15,000	
Window Replacements - Treatment Plant (Year 2 of 3 Year Program)		\$25,000						\$25,000	\$25,000	
Front Foyer/Entrance Upgrades		\$40,000						\$40,000	\$40,000	
Roadway Upgrades to Maintenance Shop - New cement pad		\$15,000						\$15,000	\$15,000	
Upgrades to Pole Barn- New Roof, electrical, etc.		\$40,000						\$40,000	\$40,000	
Cottam Booster Pump #1 - Rehabilitation				\$20,000				\$20,000	\$20,000	
Security System Install					\$20,000			\$20,000	\$20,000	
SCADA System Upgrade/Maintenance					\$35,000			\$35,000	\$35,000	
Communication System Improvements					\$35,000			\$35,000	\$35,000	
Distribution System Valves and Components							\$50,000	\$50,000	\$50,000	
Master Water Meter Replacements/Upgrades							\$50,000	\$50,000	\$50,000	
Portable 250hp Backup Generator for High lift, low lift, towers, etc						\$150,000		\$150,000	\$150,000	
Total Capital Works/ Major Maintenance	-	\$720,000	\$100,000	\$20,000	\$90,000	\$150,000	\$100,000	\$1,180,000	\$1,180,000	\$0
TOTAL STUDIES , CAPITAL and MAINTENANCE	\$240,000	\$720,000	\$100,000	\$20,000	\$90,000	\$150,000	\$100,000	\$1,420,000	\$1,420,000	\$0

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

UNION WATER SUPPLY SYSTEM Six Year Recommended Capital / Major Maintenance - November 10, 2015								
	2016	2017	2018	2019	2020	2021	Total Capital Expenditures 2016-2021	Comments
Union Area Water Supply System								
Studies and Programs								
Water Demand/Usage Study	\$ 35,000						\$ 35,000	Smart Water Study, etc.
Water Quality Investigations	\$ 25,000	\$ 50,000	\$ 50,000	\$ 35,000	\$ 35,000	\$ 35,000	\$ 230,000	CWN Algae Study, etc,
Energy Optimization Study	\$ 60,000						\$ 60,000	
On-Site Hypochlorite Generation Evaluation	\$ 40,000						\$ 40,000	Evaluate the Potential for Installation of On-Site Hypo Generation facility for main disinfection
UWSS Restructing to MSC - Next Steps - Business Plan	\$ 50,000						\$ 50,000	
Algae Related Studies (Prelim DAF Evaluation, additional Probe)	\$ 30,000						\$ 30,000	
Water Loss/Leak Detection Study		\$ 125,000					\$ 125,000	
Operations Contract Assessment			\$ 40,000				\$ 40,000	
Cottam 12-inch main replacement- EA & Prelim Eng				\$ 175,000			\$ 175,000	Evaluation of Options and Prelim Engineering for Replacement of 12-inch WM to Cottam
Master Plan Update		\$ 100,000					\$ 100,000	
Contingency (un-identified future studies)					\$ 100,000	\$ 100,000	\$ 200,000	
Subtotal Studies and Programs	\$ 240,000	\$ 275,000	\$ 90,000	\$ 210,000	\$ 135,000	\$ 135,000	\$ 1,085,000	
Low Lift								
Intake #1 & 2* (Note 5)					\$30,000		\$ 30,000	Maintenance
Intake # 2 (See Item 16 for more detail)						\$30,000	\$ 30,000	Maintenance
Intake # 3, shoreline intake					\$100,000		\$ 100,000	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				\$120,000			\$ 120,000	installed in 1994; upgrades planned for 2019
Pump Wells(2)							\$ -	cleaned & inspected annually
Low Lift Pump 1 *(Note 1)	\$ 30,000					\$ 30,000	\$ 60,000	rebuilt in 2005
Low Lift Pump 2		\$ 30,000					\$ 30,000	rebuilt in 2004, should schedule for rebuild
Low Lift Pump 3			\$ 30,000				\$ 30,000	rebuilt in 2006
Low Lift Pump 4		\$ 30,000					\$ 30,000	rebuilt in 2007
Low Lift Pump 5							\$ -	
Low Lift Pump 6			\$ 30,000				\$ 30,000	rebuilt in 2008
Low Lift Pump 7				\$ 30,000			\$ 30,000	rebuilt in 2008
Zebra Mussel Control System	\$ 70,000					\$ 50,000	\$ 120,000	Install zebra mussel control system for Intake #1.
Pump discharge line							\$ -	
Low Lift Surge Tanks (2) and Compressor System *(Note 6)					\$20,000		\$ 20,000	General maintenance
Low Lift Diesel Generator							\$ -	O & M Contracted to Genrep
Low Lift Electrical Transformer Upgrade	\$0	\$50,000					\$ 50,000	Electrical Transformer is old and undersized. Needs to be upgraded
General Building Maintenance & Equipment								
Roadway upgrades to Maintenance Area - Cement Pad	\$ 15,000			\$ 75,000			\$ 90,000	upgrade of roadway to rear plant area
New Maintenance Shop Building	\$ -				\$ 150,000		\$ 150,000	new maintenance/vehicle storage area
Building/Grounds		\$ 50,000		\$ 50,000		\$ 50,000	\$ 150,000	General improvements
Upgrades to Pole Barn - Roof, electric, etc.	\$ 40,000		\$ 100,000				\$ 140,000	Pole Barn roof leaking badly. Electrical needs upsizing
Clarification System								
Clarifier 1	\$ 100,000						\$ 100,000	sandblasting & painting

Software Upgrade			\$80,000				\$ 80,000	Wonderware SCADA software upgrade
Security System Install	\$20,000						\$ 20,000	Keyless entry security system
System upgrade and Maintenance	\$35,000	\$20,000	\$20,000	\$20,000	\$20,000		\$ 115,000	upgrade to maintain currency of system,pending audit
UWSS Wide Communication System Improvements	\$35,000	\$20,000	\$20,000	\$20,000	\$20,000		\$ 115,000	improvements to existing communication system
Monitoring Equipment								
Turbidity Meter Replacement -	\$25,000	\$25,000					\$ 50,000	Old equipment. All need to be updated
Chlorine Analyzer Replacements	\$20,000	\$20,000	\$20,000				\$ 60,000	Old equipment. All need to be updated
Building Maintenance								
Facility Enhancements - General		\$20,000	\$20,000	\$20,000	\$20,000	\$150,000	\$ 230,000	Elevator Needed for Access
Windows & Doors Replacement	\$25,000	\$25,000					\$ 50,000	asbestos like material present in window caulking, portion to be completed each year until finished
Front Foyer Upgrade -	\$40,000						\$ 40,000	Front Foyer entry Roof Structure leaking badly. Structure to be removed and upgraded
New Equipment								
Portable Backup Generator for Low Lift, Water Towers, Emergency	\$ 150,000						\$ 150,000	New portable Backup generator
Cottam Reservoir & Booster PS								
Reservoir - 2 water mixers							\$ -	repairs to isolation valves, and installation of 2 mixer pumps - Completed 2013
Booster Pump 1	\$20,000						\$ 20,000	new in 1996
Booster Pump 2		\$20,000					\$ 20,000	new in 1996
Booster Pump 3			\$20,000				\$ 20,000	new in 1996
Booster Pump 4						\$35,000	\$ 35,000	new in 1996
Surge Tanks (2)							\$ -	Insurance inspected in 2009, needs internal inspection
Compressor			\$15,000				\$ 15,000	Replaced 2012
Emergency Disinfection System		\$100,000					\$ 100,000	Completed 2014
Cottam MCC PLC Upgrade							\$ -	Completed 2014
Distribution System								
Leamington Tower							\$ -	
Albuna Tower							\$ -	
Kingsville Tower			\$0	\$550,000			\$ 550,000	Safety Upgrades and Painting (2017)
Essex Tower		\$650,000					\$ 650,000	Painting (2016)
Distribution System Valves and other Components	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$ 300,000	For water main breaks, etc.
Master Water Meter Replacement/Upgrades	\$50,000	\$50,000					\$ 100,000	Replacement and Upgrade of Mechanical Water Meters to Magnetic Water Meters
Cottam 12-inch main replacement- EA			\$250,000				\$ 250,000	To be evaluated
Wastewater Treatment System								
Waste Lagoon Excavation - north lagoon		\$100,000				\$100,000	\$ 200,000	
Waste Lagoon Excavation - south lagoon	\$100,000			\$100,000			\$ 200,000	
Lagoon Residuals Materials Management	\$100,000	\$50,000	\$75,000	\$75,000	\$50,000	\$50,000	\$ 400,000	
NEW CAPITAL WORKS								
Installation of On-Site Hypo Generation for Main Disinfection		\$2,250,000					\$ 2,250,000	On-site Hypochlorite Generation System for Primary
Residuals management facility			\$2,250,000				\$ 2,250,000	Residuals management facility to replace lagoons
Replacement of 12-inch Cottam Water Main					\$6,000,000		\$ 6,000,000	

Subtotal Capital and Major Maintenance \$1,180,000 \$1,715,000 \$1,025,000 \$1,400,000 \$505,000 \$680,000 \$ 6,505,000

Subtotal Studies and Programs \$240,000 \$275,000 \$90,000 \$210,000 \$135,000 \$135,000 \$ 1,085,000

TOTAL CAPITAL AND STUDIES \$1,420,000 \$1,990,000 \$1,115,000 \$1,610,000 \$640,000 \$815,000 \$ 7,590,000

Total New Capital Works \$0 \$2,250,000 \$2,250,000 \$0 \$6,000,000 \$0 \$ 10,500,000

TOTAL CAPITAL, STUDIES AND NEW CAPITAL \$ 1,420,000 \$ 4,240,000 \$ 3,365,000 \$ 1,610,000 \$ 6,640,000 \$ 815,000 \$ 18,090,000