



The Township of Cramahe Drinking Water System

Financial Plan

March 3, 2016



Sharratt Water Management Ltd.
Sustainable Water Management Specialists

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Financial Plan

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Appendix 3 Cramahe Water System Financial Statement 2015-2022 Inflated \$24

Appendix 4 Cramahe Water System Capital Statement 2015-2022 Inflated \$25

Appendix 5 Cramahe Water Reserve 2015-2031 Inflated \$25

Appendix 6 Cramahe Water System Debt 2018-2031 Inflated \$26

Appendix 7 Cramahe Tangible Capital Assets 2015-2022 Inflated \$26

Introduction

The Township of Cramahe has authorized Sharratt Water Management Ltd. (SWML) to develop the Financial Plan for the Township's drinking water system. A renewal of the drinking water system is now required and a financial plan must be prepared, approved by Council, and submitted to the provincial Ministry of Municipal Affairs and Housing in order to obtain a licence renewal.

This Financial Plan has been prepared in accordance with the Financial Plan regulation (O. Reg. 453/07 set out in appendix 1) made under the Safe Drinking Water Act, as well as the provisions of the financial planning guidelines published by the Ministry of the Environment (MOE) in August 2007 entitled "Toward Financially Sustainable Drinking-Water and Wastewater Systems".

In order to develop this financial plan, water system capital needs, identified by Lakefront Utility Services Inc. (LUSI), have been projected in current dollars and then inflated to the year 2031, in order to provide a longer-term context for this plan. In addition, operating costs have been inflated and projected to 2022. The revenue needed to support the operating and capital plan is laid out in a funding plan that relies largely on user fees based on rates, reserve interest, imposts, government grants and occasional miscellaneous revenues. User fees from rates are set so that adequate reserves are developed in order to fund future capital and major maintenance expenses to at least 2022, and ideally, to maintain reserves at a sustainable level well into the future. This plan is based on the planning assumptions concerning future inflation and interest rates as well as the level of asset renewal and replacement.

The Financial Plan is also based on the tangible capital asset information that the Township generated in accordance with the Public Sector Accounting Board (PSAB) standard PS 3150 requirements. The Financial Plan includes a projection of financial and non-financial tangible capital assets to the year 2022, which is more than the six-year planning horizon required by Reg. 453/07.

1.1 Legislative Context to Financial Planning

There have been a number of legislative initiatives affecting water system management and operations over the past decade. These initiatives were a result of the water borne illness tragedy in Walkerton in 2000. Following this event, the Government of Ontario established a public inquiry chaired by the Honourable Dennis O'Connor to look into the tragedy. The Inquiry Report recommended a comprehensive approach to the delivery of safe drinking water in Ontario.

The MOE has responded to the Inquiry recommendations by making legislative changes. One change directly related to the development of this Financial Plan was the passage of

the Safe Drinking Water Act, 2002 (SDWA). It requires owners of a municipal drinking water system to apply for and initially obtain a Municipal Drinking Water Licence and to renew the licence at preset times. Five elements must be in place in order for the owner of a drinking water system to obtain a licence:

- 1) A Drinking Water Works Permit to establish or alter a drinking-water system;
- 2) An accepted Operational Plan. The Drinking Water Quality Management Standard (DWQMS) is the standard upon which operational plans are based. The plan documents an operating authority's quality management system (QMS).
- 3) An Accredited Operating Authority. A third party audit of an operating authority's QMS will be the basis for accreditation.
- 4) A Permit to Take Water.
- 5) A Financial Plan that must be prepared and approved in accordance with the prescribed requirements in the Financial Plans Regulation.

Regulation 453/07 of the Safe Drinking Water Act was passed in 2007 and contains several provisions affecting the preparation of Financial Plans pertaining to the licencing of a water system:

- A person who makes an application under the Act for a municipal drinking water licence shall, before making the application, prepare and approve financial plans for the system that satisfy the requirements of O. Reg. 453/07, S. 1(1).
- The Financial Plan must be approved by a resolution that is passed by the Council of the municipality
- The Financial Plan must apply to a period of at least six years with the first year to which the financial plans must apply must be the year in which the drinking water system's existing municipal drinking water licence would otherwise expire.
- Once a system is licensed, the municipality's Financial Plan is required to be updated every 5 years, in conjunction with every application for license renewal.

1.2 Recent Accounting and Policy Changes

In June 2006, the Public Sector Accounting Board (PSAB) of the Canadian Institute of Chartered accountants approved new municipal financial accounting and reporting standards requiring that tangible capital assets (TCA), including components of the water system, be included in municipal financial statements. The new accounting standard PS 3150 came into effect on January 1, 2009. This provides for a sharper focus on the

depreciation of the capital asset base of the water system and the need to plan for renewal and replacement on a timely basis. This data is an integral component of the financial statements included in this Financial Plan.

The Clean Water Act 2006 targets the protection of drinking water supplies through the development of collaborative, locally driven, science and watershed based source protection plans. According to the MOE financial planning guidelines, Financial Plans should include source water protection costs related to the provision of water services. Utilities are encouraged to have, at minimum, estimates of any current source protection costs as a separate cost item by the time that their Financial Plans are required in order to effectively align with the anticipated approval timelines for source protection plans.

In June 2007, the government of Ontario proposed a lead action plan. The Financial Plans regulation contains requirements for municipalities to include in their Financial Plans, the costs associated with replacing lead service pipes, if any exist, that are part of the drinking water system.

1.3 Township of Cramahe Water System

The Township of Cramahe water system serves customers in the community of Colborne. All users are metered.

In 2015, the system served approximately 980 residential, industrial, commercial and institutional users. The Township uses a two-part rate structure with a fixed or basic charge that increases for larger meter sizes. It also has a volumetric charge that applies to all water used. The water rates, effective March 1, 2015, are as set out in Table 1:

Table 1 Township of Cramahe Water Rates (Effective Mar. 1 2015)			
Metered Monthly Fixed Charge - Minimum Charge			
Meter Size	Millimetres (inches)	Mor	Monthly \$
		15 (.62)	8.46
		20 (.75)	9.31
		25 (1.0)	11.85
		40 (1.5)	15.24
		50 (2.0)	24.55
		75 (3.0)	93.11
Metered Volumetric Charge - All Water Registered on Meter			
	Per Cubic Metre (220 gallons) in \$		1.92
A water bill is calculated by taking the number of months by the monthly rate for that particular meter size, and adding the volume of water used multiplied by \$1.92 per cubic metre. Thus a family of four, with a 15 mm meter, that used 100 cubic metres over three months would receive a quarterly bill for \$8.46 times 3 or \$25.38 plus \$1.92 times 100 or \$19.20 for a total bill of \$44.58 for water only. Wastewater costs would be added on to this figure.			

Operating Plan

The operating plan details the recurring minor maintenance as well as the capital renewal and major maintenance investment costs required to sustain the drinking water system. These costs are detailed in the attachments to this Financial Plan document. Some key assumptions are set out below.

2.1 Operations Expenses

Operating costs such as labour, chemicals, insurance and other costs are projected to increase at 2.5% per annum and energy is projected to increase at 5% per annum for the 2015-2022 periods. These are itemized in appendix 3.

2.2 Capital Renewal and Major Maintenance Expenses

Capital renewal and major maintenance costs have been projected to 2031 by LUSI and funding needs for these costs have been included in the user fee revenue needs estimates for 2016-2022. The intent of the operating plan is to ensure that funding will be available, when needed, at least for the projected capital and major maintenance costs between 2016 and 2022, and preferably a substantial time beyond. Capital and major maintenance costs are projected to increase at 3.0% per year to 2031. The projected capital renewal and major maintenance needs are set out in appendix 2 to this Financial Plan. Capital and major maintenance needs beyond the 2031 horizon should be considered in the Financial Plan needed before the next licence renewal in five years. That report will roll the current 2031 capital time horizon forward, at least another five years, for capital and major maintenance projects.

2.3 Debt Servicing Costs

The Township currently has no debt outstanding. However, the renewal schedule for the water mains proposed by LUSI will require borrowing. The system will fall into a deficit by late 2017. It is projected that this debt will build to about \$3.8 million by 2020. By late 2018, it is assumed that a \$4.5 million loan will be taken to curb the deficit. The amortizer loan would be for 15 years at 3.13% per annum. Debt details are shown in appendix 6.

2.4 Lead Replacement Costs

There is no lead present in the system and as a result, no funds have been set aside for lead abatement. There is only a Ministry of the Environment requirement to check for lead in the distribution system every third year.

2.5 Source Water Protection Costs

In 2014, \$23,250, and in 2015, an additional \$26,661 was spent on the development of a source protection plan. At this stage, no additional funds are projected as needed.

3.0 Funding Plan

The funding plan lays how the Township will generate the required funds to meet the expenditure requirements detailed in the operating plan. The funding plan is detailed in the appendices to this Financial Plan report. The funding plan proposed will rely primarily on user fees, reserve interest, when the reserve is in surplus, and miscellaneous source of revenue. Some key assumptions and results are presented below.

3.1 Government Grants

No allowance has been made for any new government grants in the 2016-2022 periods. Should grants be obtained, which would be very helpful in view of the large capital renewal schedule proposed, the funds displaced would likely be placed in the reserves to reduce the size of any needed loans.

3.2 Debt

The water reserve will be put into deficit in 2017 and in late 2018; it is projected that a \$4.5 million 15-year term loan at 3.13% be taken out. This loan will have to be supplemented by some further borrowing by 2024, if the current LUSI capital renewal schedule is maintained.

3.3 Required User Fees

Based on this funding plan, the Cramahe user fees and water rates are projected to increase at 7% per annum for at least the next seven years or about 4.5% per annum above inflation per year for the 2016-2022 periods. This is shown in line 2 of appendix 3. The user fee increases are based on the need to generate adequate revenue to cover extensive water main capital renewal and major maintenance, inflated at 3% per annum, set out by LUSI, along with an assumption that most operating costs will inflate at 2.5% per annum, with energy costs increasing at 5% per annum.

4.0 Continuous Improvement

Provincial regulation 453/07 requires that the Financial Plans be updated every 5 years, along with the request for the renewal of the Drinking Water Licence. This on-going update will assist in revisiting the assumptions made to develop the operating and funding plans as well as re-assessing the need for capital renewal and major maintenance expenditures.

5.0 Financial Plan Summary

This section provides a summary of principal features concerning the current and future state of the water system contained in the projected Financial Statements over 8 years (2015-2022) in compliance with O. Reg. 453. The detailed financial statements, required by Reg.453/07, are set out in tabular form in Section 6. The notes regarding the various line entries in financial statements are presented at the end of the financial statement section.

5.1 Statement of Financial Position (Table 6.1)

One important feature of a water system is a statement of it's the net financial assets/debt. A positive number indicates that the system has the resources to deal with future capital and other needs. A negative number indicates that past capital and other investments must be financed from future revenues. The Cramahe water system's net financial assets are shown in Figure 5.1:

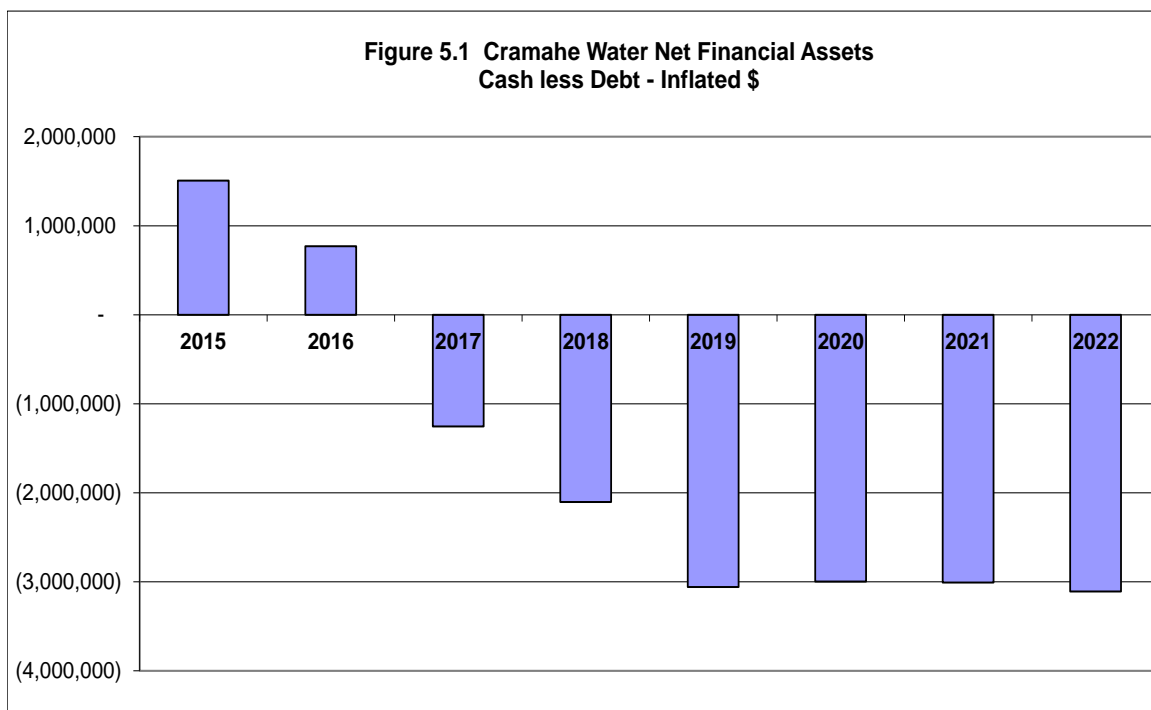
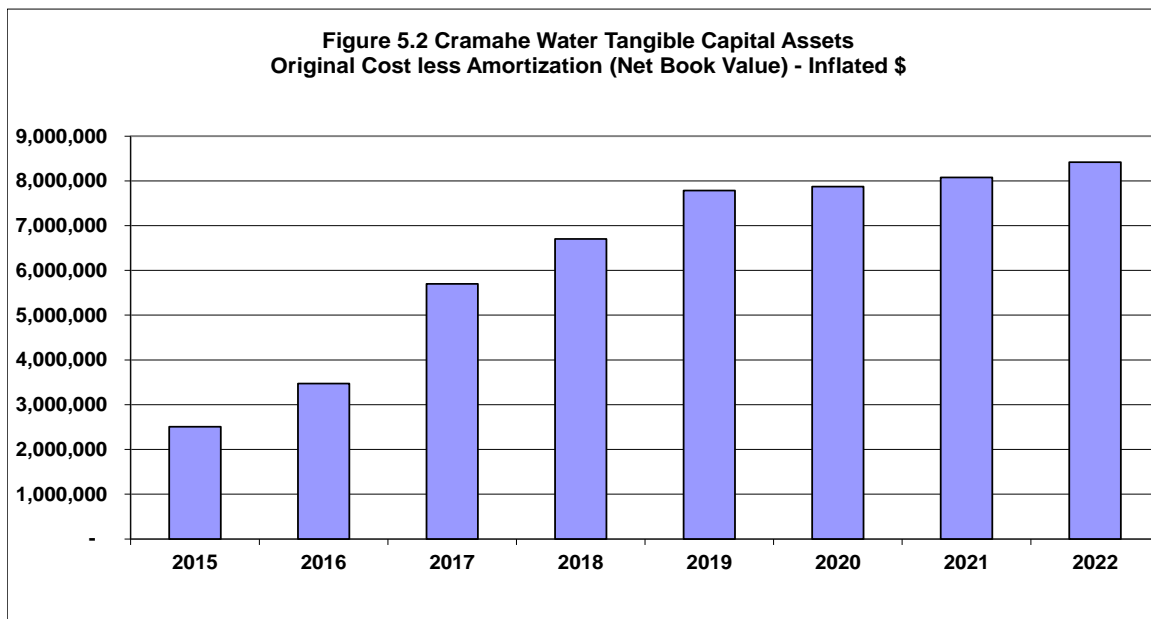


Figure 5.1 shows that that the system is projected to have a surplus in 2015 and 2016 but it then slides into a growing deficit due the renewal of some major infrastructure assets. The financial assets picture remains in a growing deficit reaching just over \$3 million by 2019. The deficit will persist at this level until 2024 and then decline. All assets forming

the basis for figure 5.1 are priced in inflated dollars with the assumption that water user fees increase at 4.5% above 3% per annum inflation (or 7% per annum through 2022, at least. A new financial plan in 2020 will project rates beyond 2022.

A second feature is the total value of the water system's tangible capital assets such as wells, water towers, reservoirs and water lines. Consideration of the value of tangible capital assets is part of PSAB compliance. The current value of the capital assets is termed net book value (NBV). It is the original cost of an asset less the accumulated amortization. Tangible capital assets, once installed, are being used, and are immediately decreasing in value. Annual amortization, for purposes of this study, is determined by dividing the original (historic) cost of an asset by its expected lifetime in years. Amortization is accumulated in equal annual increments (straight-line method) as the asset wears out so that by the last year of the expected life of the asset, amortization equals the original value of the asset. At that time, the asset has no net book value.

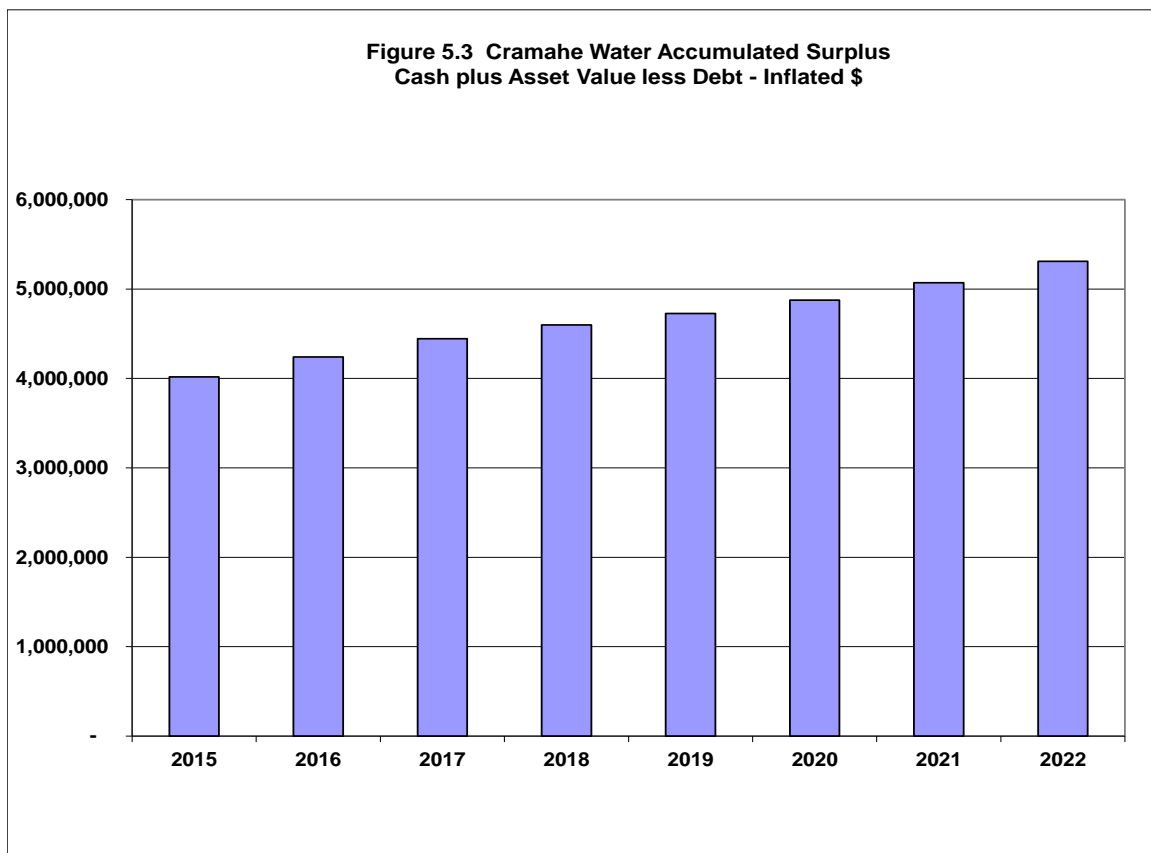
Water systems have a great deal of resources tied up in tangible capital assets and managing these assets is critical to maintaining current and future levels of service. As has been noted above, tangible capital assets, once installed, are being used and decrease in value due to amortization. An increase in tangible capital assets is an indication that assets have been renewed faster than they are used. A decrease indicates that assets are being used, or amortized, faster than they are renewed. The value of the Township's water system assets is set out in Figure 5.2 and detailed in appendix 7.



The net book value increases from \$2.5 million in 2015 to \$7.8 million in 2019. This growth is very rapid due the value of the renewal of a number of large pieces of water main

infrastructure. It then increases more slowly after that reaching \$8.4 million in 2022 as smaller projects are undertaken to renew the system faster than it is declining due to amortization. This overall growth is due to the substantial renewal of the Township's water mains.

A third feature is the accumulated surplus set out in Figure 5.3. It represents cash on hand plus the net book value of tangible capital assets less debt.



The cash and asset value is relatively stable going from \$4 million in 2015 to \$4.4 million in 2017 and then ending up at \$5.3 million in 2022. The Township is gaining value during this period, financing renewal by using its current reserves, by applying its surplus of user fees over operating and capital expenditures, and by taking on debt.

5.2 Statement of Operations (Table 6.2)

This statement summarizes the operating revenues and expenditures. The expenditures include ongoing operating costs plus asset amortization. It provides an indication of whether or not the system assets are being maintained on a year over year basis and is illustrated in Figure 5.4:

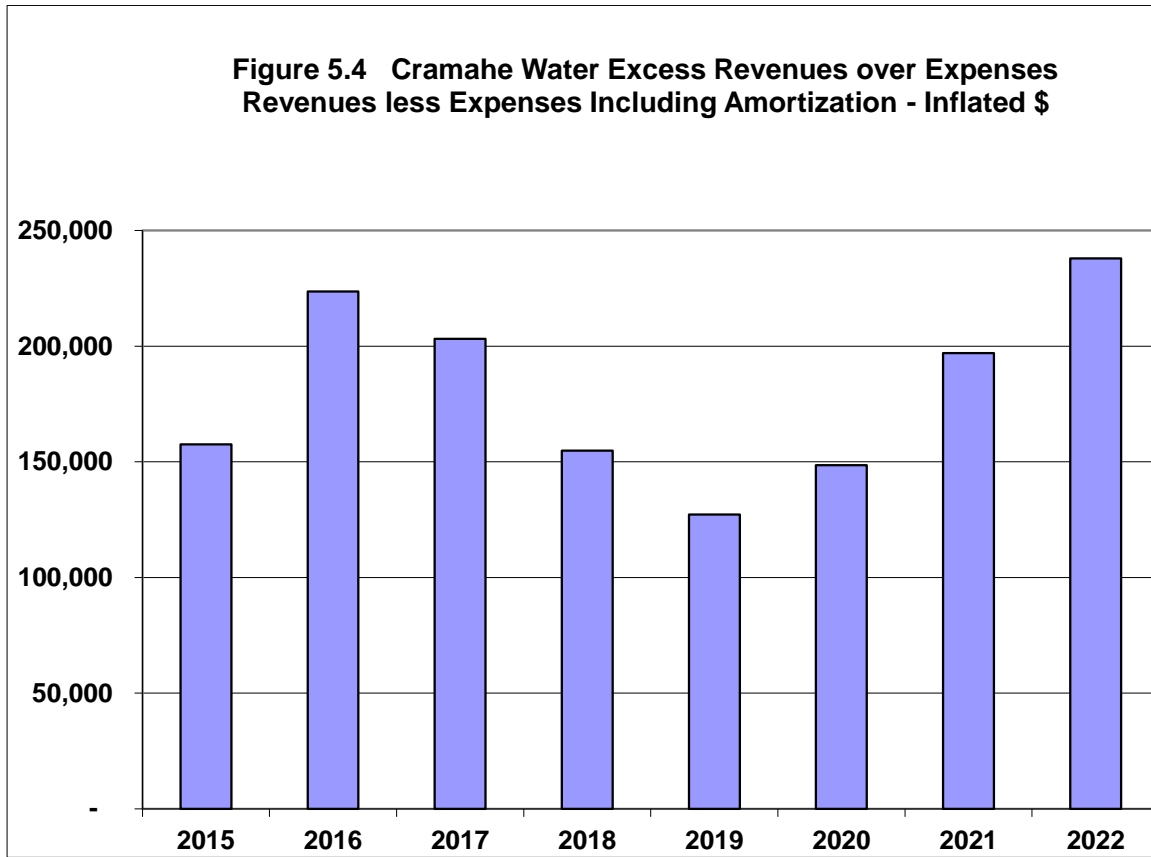


Figure 5.4 indicates that more is being spent on renewal than the decline in the value of the tangible capital assets in all years. This shows that the Township is improving its water system asset base over the next seven years.

5.3 Statement of Cash Flow (Table 6.3)

This fifth feature shows how revenues are generated and spent over the study period. The expenditures include operating expenses and capital acquisitions. These are shown in Table 6.3 and set out in Figure 5.5.

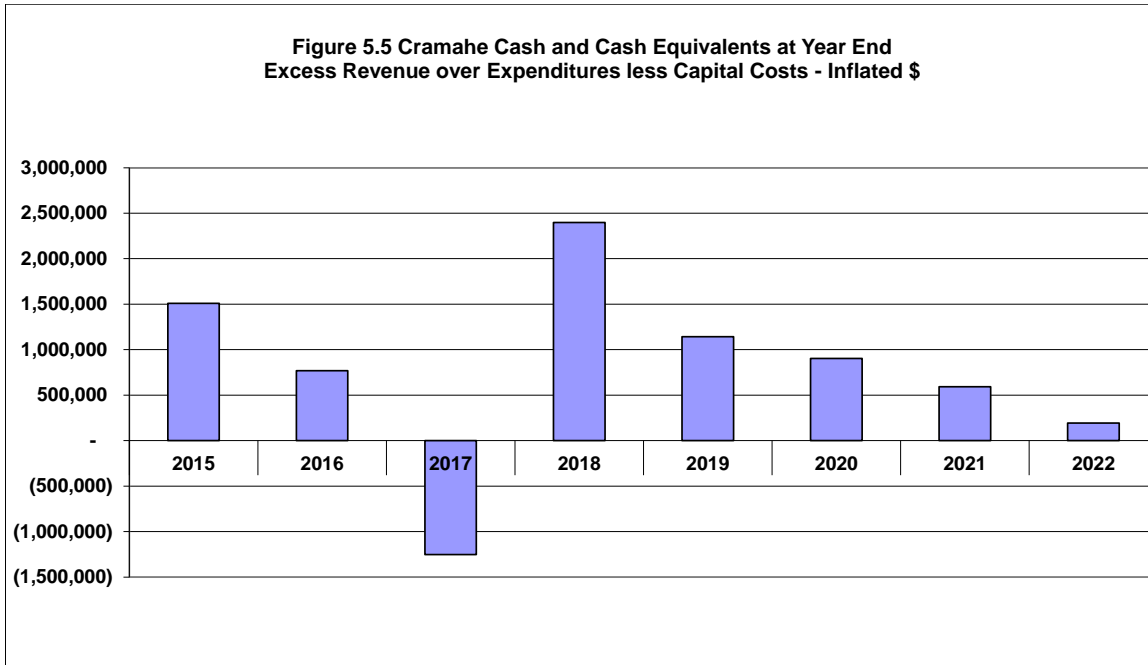


Figure 5.5 indicates that the cash equivalents from reserves, in inflated dollars, decline rapidly from 2015 to 2017 as funds are flowed to fund main renewal. The proposed loan in late 2018 supplements the cash position rendering it positive in 2018, and it then begins a decline to 2022. The cash position in 2024 will become a deficit and some financing will be required. Total debt, combining the cash deficit and the principal outstanding of the 2018 loan is projected to reach \$3.1 million in 2024, and then begin to decline. The debt picture is set out in appendix 6, assuming a 7% rate increase to 2031. Rates beyond 2022 will be reviewed in the next Financial Plan scheduled for 2020, as required by Reg 453/07. Senior government financial assistance for this infrastructure investment would substantially reduce this number.

5.4 Conclusion

The Cramahe water system is projected by LUSI to require substantial renewal over the next 15 years. This has been included as a basis for this Financial Plan. To accomplish this objective, user fees are projected to increase substantially at a rate increase of 7% per year, or 4.5% over expected operating inflation, to at least 2022 in order to service the needed debt associated with the projected renewal. The Plan is viable to 2031, based on the proposed increases and the assumed rates of inflation and interest rates. The next Financial Plan, due in 5 years, will look at capital needs beyond 2031. The detailed financial statements, set out in tabular form as specified in Reg. 453/07, that were the basis for the above summary charts, follow in Section 6.

6.0 Financial Statements

The detailed financial statements are set out in the following tables followed by the notes that correspond to the numbers in the tables.

6.1 Statement of Financial Position

Table 6.1 Statement of Financial Position - Township of Cramahe Water System- Inflated \$									
	2015	2016	2017	2018	2019	2020	2021	2022	Notes
Financial Assets									
Cash and Cash Equivalents	1,508,437	769,743	(1,252,893)	2,396,954	1,141,978	903,840	592,469	192,506	1
Long Term Accounts Receivable	-	-	-	-	-	-	-	-	
Deposits	-	-	-	-	-	-	-	-	
Total Financial Assets	1,508,437	769,743	(1,252,893)	2,396,954	1,141,978	903,840	592,469	192,506	
Liabilities									
Accounts Payable (Capital)	-	-	-	-	-	-	-	-	
Debt Principal Outstanding	-	-	-	4,500,000	4,200,000	3,900,000	3,600,000	3,300,000	2
Deferred Revenue (Dev Charge Reserve Bal.)	-	-	-	-	-	-	-	-	
Government Grant	-	-	-	-	-	-	-	-	
Other liabilities	-	-	-	-	-	-	-	-	
Total Liabilities	-	-	-	4,500,000	4,200,000	3,900,000	3,600,000	3,300,000	
Net Financial Assets (Debt)	1,508,437	769,743	(1,252,893)	(2,103,046)	(3,058,022)	(2,996,160)	(3,007,531)	(3,107,494)	
Non Financial Assets									
Tangible Capital Asset Cost	3,485,910	3,730,313	4,751,376	7,014,551	8,103,224	9,313,146	9,545,001	9,903,217	3
Additions to Tangible Capital Assets - Cost	90,000	1,036,897	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950	4
Constuction in Progress	154,403	-	-	-	-	-	-	-	5
Loss on Disposal	-	4,011	16,993	7,111	-	-	-	-	6
Accumulated Amortization incl. Addition	1,220,817	1,291,413	1,370,804	1,424,896	1,528,420	1,673,595	1,824,577	1,978,650	7
Total Non Financial Assets (Net Book Value)	2,509,496	3,471,786	5,697,558	6,702,589	7,784,726	7,871,406	8,078,640	8,416,516	
Accumulated Surplus/(deficit)	4,017,932	4,241,529	4,444,665	4,599,543	4,726,704	4,875,246	5,071,109	5,309,022	
Note: Unaudited for Planning Purposes Only - Actual results will differ from the above and these differences could be material.									

6.2 Statement of Financial Operations

Table 6.2 Statement of Financial Operations - Township of Cramahe Water System - Inflated \$									
	2015	2016	2017	2018	2019	2020	2021	2022	Notes
Revenues									
User Fees	538,463	576,155	616,486	659,640	705,815	755,222	808,088	864,654	8
Other Revenues - Impost Fees and Misc.	12,384	12,693	13,011	13,336	13,669	14,011	14,361	14,720	9
Interest on Reserves	-	37,711	19,244	(56,380)	59,924	28,549	22,596	14,812	10
Earned Dev Charge Revenues	-	-	-	-	-	-	-	-	
Total Revenues	550,847	626,560	648,740	616,596	779,408	797,783	845,045	894,186	
Expenses									
Day to Day Operating Expenses	283,914	292,388	300,529	308,915	319,555	329,645	335,435	346,882	11
Minor Maintenance	49,128	35,968	36,867	37,789	38,734	39,702	40,694	41,712	12
Major Maintenance (non capital)	-	-	-	-	25,324	2,898	-	-	13
Debt Interest	-	-	-	-	140,850	131,820	122,070	113,606	14
Amortization	60,239	70,596	91,214	107,903	127,785	145,174	149,822	154,073	15
Loss on Asset Disposal	-	4,011	16,993	7,111	-	-	-	-	5
Lead Abatement	-	-	-	-	-	-	-	-	16
Source Water Protection	26,661	-	-	-	-	-	-	-	17
Total Expenses	419,943	402,963	445,603	461,718	652,248	649,240	648,022	656,273	
Excess (Deficit) of Revenues over Expenses	130,904	223,596	203,137	154,878	127,161	148,542	197,023	237,913	
Other									
Working Capital	-	-	-	-	-	-	-	-	
Government Transfers	26,661	-	-	-	-	-	-	-	18
Miscellaneous	-	-	-	-	-	-	-	-	
Accounting Adjustment	-	-	-	-	-	-	1,160	-	
Excess (Deficit) of Revenues over Expenses	157,565	223,596	203,137	154,878	127,161	148,542	195,863	237,913	
Accumulated Surplus (Deficit) Beginning of year	3,860,367	4,017,932	4,241,528	4,444,666	4,599,543	4,726,704	4,875,246	5,071,109	
Accumulated Surplus (Deficit) End of Year	4,017,932	4,241,528	4,444,666	4,599,543	4,726,704	4,875,246	5,071,109	5,309,022	
Note: Unaudited for Planning Purposes Only - Actual results will differ from the above and these differences could be material.									
2015 Beginning Accumulated Surplus/(Deficit) in \$ is made up of									
Working Surplus (Deficit)	-								
Capital Reserve Opening	1,535,035								
Rate Stabilization Reserve opening	-								
Development Charge Reserve opening	-								
Total Cash	1,535,035								
Less									
Debt start of year	0								
Dev Charge Res Opening	0								
Total Debt	0								
Add									
Tangible Capital Assets Adj Opening for 2015	2,325,332								
Accounting Adjustment									
Opening Balance for 2015	3,860,367								

6.3 Statement of Cash Flow

Table 6.3 Statements of Change in Cash Flow - Township of Cramahe Water System - Inflated \$									
	2015	2016	2017	2018	2019	2020	2021	2022	Notes
Operating Transactions									
Total Operating Revenues	550,847	588,849	629,497	672,976	719,484	769,233	822,449	879,374	
Total Cash for Operating Expenses	419,943	402,963	445,603	461,718	652,248	649,240	648,022	656,273	19
Interest from Cash Reserves	-	37,711	19,244	(56,380)	59,924	28,549	22,596	14,812	10
Excess of Revenues Over Expenses	130,904	223,596	203,137	154,878	127,161	148,542	197,023	237,913	
Deduct Non Cash Charges to Operations									
Amortization	60,239	70,596	91,214	107,903	127,785	145,174	149,822	154,073	20
Loss on the Disposal of Assets	-	4,011	16,993	7,111	-	-	-	-	
Total	60,239	74,607	108,207	115,014	127,785	145,174	149,822	154,073	
Working Capital Items									
Accounts Receivable	-	-	-	-	-	-	-	-	
Working Capital Items	-	-	-	-	-	-	-	-	
Capital Work in Progress	154,403	-	-	-	-	-	-	-	
Cash provided/used in Operating Transactions	154,403	-	-	-	-	-	-	-	
Capital Transactions									
Acquisition of TCAs	90,000	1,036,897	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950	4
Proceeds on Disposal of TCA	-	-	-	-	-	-	-	-	
Cash provided/used in Capital Transactions	90,000	1,036,897	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950	
Investing Transactions									
Proceeds from Investments	-	-	-	-	-	-	-	-	
Cash (used in) Provided by Investing Activities	-	-	-	-	-	-	-	-	
Cash Provided/used in Investing Transactions	-	-	-	-	-	-	-	-	
Financing Transactions									
Other	-	-	-	-	-	-	-	-	
Proceeds from Debentures/Loans	-	-	-	4,500,000	-	-	-	-	2
Debt Principal Repayment	-	-	-	-	300,000	300,000	300,000	300,000	2
Proceeds from Government Grants	26,661	-	-	-	-	-	-	-	
Working Surplus	-	-	-	-	-	-	-	-	
Cash Provided by/(used) in Financing Activities	26,661	-	-	4,500,000	(300,000)	(300,000)	(300,000)	(300,000)	
Increase (decrease) in Cash Equivalents	(26,599)	(738,693)	(2,022,636)	3,649,847	(1,254,976)	(238,138)	(311,370)	(399,964)	
Cash and Cash Equivalents at the beginning of the Year	1,535,035	1,508,436	769,743	(1,252,893)	2,396,954	1,141,978	903,840	592,470	
Cash and Cash Equivalents at the End of the Year	1,508,436	769,743	(1,252,893)	2,396,954	1,141,978	903,840	592,470	192,506	
Note: Unaudited for Planning Purposes Only - Actual results will differ from the above and these differences could be material.									
2015 Opening Cash and Cash Equivalents Calculation									
Opening Capital Reserve	1,535,035								
Total	1,535,035								

6.4 Notes on the Cramahe Water System Financial Plan

1. Cash and cash equivalent is represented by the funds in short-term bank investments drawn from the capital and major maintenance reserve. This interest is shown in the financial statement in appendix 3, line 8. The reserve is set out in appendix 5.
2. It is proposed that a \$4.5 million loan be taken out on December 31, 2018 for a 15-year period at 3.13% interest. The debt situation is set out in appendix 6.
3. The Township valued tangible capital assets acquired to the end of 2014. This project has extended the valuation of new capital assets and capital asset replacement to 2022, as per the LUSI schedule. Capital works that are replaced are assumed, for purposes of this study, to be removed from service on July 1 on the year the renewal is scheduled. Any remaining amortization is shown as a disposal cost bringing the book value of the asset to zero. For water mains that are relined, it is assumed that the original asset maintains its value and continues to amortize according to the original schedule. The cost of the relining is amortized over 40 years. Amortization was determined using the straight-line method. These are capital projects according to the PSAB definition of capital and are itemized in the non-shaded or white cells of appendix 2.
4. These new projects were put into service during the year and amortization commenced. Amortization was determined using the straight-line method, meaning that the asset is amortized by the same amount each year. All current assets and all new works are assumed, for purposes of this study, to have been constructed or disposed of on July 1. A half year of amortization was provided for in the first year.
5. These are expenditures on projects that were under construction but were not put into service in this year, and no amortization was applied in this year.
6. Figures in this line cover assets that are replaced before they have reached the previously projected end of their life. They have value that is not fully amortized. The book value remaining after July 1 of the year that they are replaced is considered a loss on disposal and this figure is placed in this row. The effect is to reduce the book value of the asset replaced to zero as of July 1.
7. This is the sum of the opening amortization for the year plus the annual amortization less any applicable loss on disposal for those particular assets replaced. The original historic costs, additions to the system, amortization, loss on disposal and closing net present values is set out in appendix 7.
8. This user fee revenue from the fixed and variable portion of the water charges paid by the systems users.
9. Funding provided by impost fees and a small amount of miscellaneous revenue.
10. This is the interest from the capital reserves, shown in appendix 5, set at 2.5% per annum based on beginning of the year balance, if in surplus, and 4.5%, if in deficit.
11. Day to day operating costs cover wages, office supplies, chemicals, energy and other features needed to run a water system. Most are projected to increase at 2.5% per and the figure is 5% per annum for energy. They are set out in appendix 3.
12. Minor maintenance are small day-to-day repairs and regular equipment replacement.
13. Major maintenance represent substantial one-time preventive maintenance repair projects that will maintain the life of an asset, but did not meet the Township's PSAB definition of capital. They are shown shaded in yellow in appendix 2.
14. Debt interest is on the debt set out in note 2 above.

15. This is the annual amortization of each water system asset, that is placed into service, both existing and those constructed in-year, determined by dividing original (historic) acquisition value of the asset by the number of years it is expected to be in service. The amortization of each asset is summed to yield an annual figure that is shown here as a non-financial expense.
16. There is no lead present in the system and as a result, no funds have been set aside for lead abatement, and only limited testing is required every three years.
17. In 2014, \$23,250 was spent and in 2015, \$26,661 was spent on source protection planning. At this stage, no additional funds are projected as needed.
18. Ministry of Environment (MOE) financial assistance provided to support source protection plan development.
19. Operating expenses on this line include annual amortization, a non-financial cost.
20. Amortization, a non-financial cost, was included in the operating expenses described in note 19, but are non-financial expenses, and therefore, in order to deal only with financial expenditures, this line shows the addition of amortization to total system cash flows.

Appendix 1 Ontario Regulation 453/07

ONTARIO REGULATION 453/07 FINANCIAL PLANS

Consolidation Period: From April 1, 2008 to the [e-Laws currency date](#).

Last amendment: O. Reg. 69/08.

This is the English version of a bilingual regulation.

Requirement to prepare financial plans

1. (1) A person who makes an application under clause 32 (1) (b) of the Act for a municipal drinking water licence shall, before making the application, prepare and approve financial plans for the system that satisfy the requirements prescribed under section 2. O. Reg. 453/07, s. 1 (1).

(2) A person who makes an application under subsection 32 (4) of the Act for the renewal of a municipal drinking water licence shall, before making the application, prepare and approve financial plans for the system that satisfy the requirements prescribed under section 3. O. Reg. 453/07, s. 1 (2).

(3) As a condition in a municipal drinking water licence that is issued in response to an application made under section 33 of the Act for a municipal drinking water licence, the Director shall include a requirement that the owner of the drinking water system, by the later of July 1, 2010 and the date that is six months after the date the first licence for the system is issued, prepare and approve financial plans for the system that satisfy the requirements prescribed under section 3. O. Reg. 453/07, s. 1 (3).

(4) The Director shall include, as a condition in a municipal drinking water licence, the requirement set out in subsection (3) in any amendments to a license made after the application, if the condition is not satisfied at the time when the amendment is made. O. Reg. 453/07, s. 1 (4).

Financial plan requirements; new systems

2. For the purposes of clause (b) of the definition of “financial plans” in subsection 30 (1) of the Act, the following requirements are prescribed for financial plans that are required by subsection 1 (1) to satisfy the requirements of this section:

1. The financial plans must be approved by a resolution that indicates that the drinking water system is financially viable and that is passed by,
 - i. the council of the municipality, if the owner of the drinking water system is a municipality, or
 - ii. the governing body of the owner, if the owner of the drinking water system has a governing body and is not a municipality.
2. The financial plans,
 - i. must include a statement that the financial impacts of the drinking water system have been considered, and
 - ii. must apply for a period of at least six years.
3. The first year to which the financial plan must apply is the year in which the drinking water system is expected to first serve the public.
4. For each year in which the financial plans apply, the financial plans must include details of the proposed or projected financial operations of the drinking water system itemized by,
 - i. total revenues, further itemized by water rates, user charges and other revenues,
 - ii. total expenses, further itemized by amortization expenses, interest expenses and other expenses,
 - iii. annual surplus or deficit, and
 - iv. accumulated surplus or deficit.
5. The owner of the drinking water system must,
 - i. make the financial plans available, on request, to members of the public who are served by the drinking water system without charge,

- ii. make the financial plans available to members of the public without charge through publication on the Internet, if the owner maintains a website on the Internet, and
 - iii. provide notice advising the public of the availability of the financial plans under subparagraphs i and ii, if applicable, in a manner that, in the opinion of the owner, will bring the notice to the attention of members of the public who are served by the drinking water system.
6. The owner of the drinking water system must give a copy of the financial plans to the Ministry of Municipal Affairs and Housing. O. Reg. 453/07, s. 2.

Financial plan requirements; licence renewal

3. (1) For the purposes of clause (b) of the definition of “financial plans” in subsection 30 (1) of the Act, the following requirements are prescribed for financial plans that are required by subsection 1 (2) or a condition that is included in a municipal drinking water licence under subsection 1 (3) to satisfy the requirements of this section:

1. The financial plans must be approved by a resolution that is passed by,
 - i. the council of the municipality, if the owner of the drinking water system is a municipality, or
 - ii. the governing body of the owner, if the owner of the drinking water system has a governing body and is not a municipality.
2. The financial plans must apply to a period of at least six years.
3. The first year to which the financial plans must apply must be the year determined in accordance with the following rules:
 - i. If the financial plans are required by subsection 1 (2), the first year to which the financial plans must apply must be the year in which the drinking water system’s existing municipal drinking water licence would otherwise expire.
 - ii. If the financial plans are required by a condition that was included in a municipal drinking water licence under subsection 1 (3), the first year to which the financial plans must apply must be the later of 2010 and the year in which the first licence for the system was issued.
4. Subject to subsection (2), for each year to which the financial plans apply, the financial plans must include the following:
 - i. Details of the proposed or projected financial position of the drinking water system itemized by,
 - A. total financial assets,
 - B. total liabilities,
 - C. net debt,
 - D. non-financial assets that are tangible capital assets, tangible capital assets under construction, inventories of supplies and prepaid expenses, and
 - E. changes in tangible capital assets that are additions, donations, write downs and disposals.
 - ii. Details of the proposed or projected financial operations of the drinking water system itemized by,
 - A. total revenues, further itemized by water rates, user charges and other revenues,
 - B. total expenses, further itemized by amortization expenses, interest expenses and other expenses,
 - C. annual surplus or deficit, and
 - D. accumulated surplus or deficit.
 - iii. Details of the drinking water system’s proposed or projected gross cash receipts and gross cash payments itemized by,
 - A. operating transactions that are cash received from revenues, cash paid for operating expenses and finance charges,
 - B. capital transactions that are proceeds on the sale of tangible capital assets and cash used to acquire capital assets,
 - C. investing transactions that are acquisitions and disposal of investments,
 - D. financing transactions that are proceeds from the issuance of debt and debt repayment,

- E. changes in cash and cash equivalents during the year, and
 - F. cash and cash equivalents at the beginning and end of the year.
 - iv. Details of the extent to which the information described in subparagraphs i, ii and iii relates directly to the replacement of lead service pipes as defined in section 15.1- 3 of Schedule 15.1 to Ontario Regulation 170/03 (Drinking Water Systems), made under the Act.
 - 5. The owner of the drinking water system must,
 - i. make the financial plans available, on request, to members of the public who are served by the drinking water system without charge,
 - ii. make the financial plans available to members of the public without charge through publication on the Internet, if the owner maintains a website on the Internet, and
 - iii. provide notice advising the public of the availability of the financial plans under subparagraphs i and ii, if applicable, in a manner that, in the opinion of the owner, will bring the notice to the attention of members of the public who are served by the drinking water system.
 - 6. The owner of the drinking water system must give a copy of the financial plans to the Ministry of Municipal Affairs and Housing. O. Reg. 453/07, s. 3 (1).
- (2) Each of the following sub-subparagraphs applies only if the information referred to in the sub-subparagraph is known to the owner at the time the financial plans are prepared:
- 1. Sub-subparagraphs 4 i A, B and C of subsection (1).
 - 2. Sub-subparagraphs 4 iii A, C, E and F of subsection (1). O. Reg. 453/07, s. 3 (2).

Alternative requirements for two or more drinking water systems

4. If section 3 applies to the financial plans of two or more drinking water systems that are solely owned by the same owner, the requirements prescribed by the section may, as an alternative, be satisfied by financial plans that comply with the section but treat those systems as if they were one drinking water system. O. Reg. 453/07, s. 4.

Amendment of financial plans

5. Sections 2 and 3 do not prevent financial plans from being amended. O. Reg. 453/07, s. 5.

Additional information

6. The requirements of this Regulation do not prevent a person from providing additional information in financial plans prepared for the purpose of meeting the requirements of the Act. O. Reg. 453/07, s.

Appendix 2 Capital Replacement and Major Maintenance 2015-31 Inflated \$ 1/2

Asset Description	Task	Center Year	Repl. Date	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Water Mains																				
Hot Mix																				
Streamside Dr., From Durham St. S. To Dead End		1960	2035																	
Streamside Dr., From Durham St. S. To Dead End		1960	2050																	
Streamside (East 2/3)	Relining																293,707			
Durham St. S	Relining														553,694					
Durham St. N., From Hwy 2., To Scott St		1960	2035																	
Parliament St., From Hwy 2., To Scott St		1960	2035																	
Parliament St., From Scott St., To House # 93 (End HCB, Start LCB)		1960	2035																	
James Court., From Hwy 2., To Dead End		1960	2050																	
Kesington St., From Hwy 2., To Alfred St		1960	2050																	
Elgin St. S., From Hwy 2., To Alfred St		1960	2050																	
Elgin St., From Alfred St., To Dead End		1960	2050																	
		1960	2050																	
Simmons St., From Elgin St., To Victoria St		1960	2050																	
Victoria St., From Hwy 2., To North Street		1960	2050																	
Victoria St., From North St., To Creek St		1960	2050																	
Victoria St., From Creek St., To Arthur St		1960	2050																	
Victoria St., From Arthur St., To Earl St		1960	2050																	
North St., From Victoria St., To Division St		1960	2035																	
Creek St., From Division St., To Victoria St	Relining	1960	2035					231,855												
Arthur St., From Victoria St., To Division St (Half Point)		1960	2035																	
Arthur St., From Victoria St., To Division St (Half Point)		1960	2050																	
Arthur St.	Relining																			272,800
Thomlea Rd., From Arthur St., To Dead End		1960	2050																	
Rotary Centennial., From Division St., To Parking Lot		1960	2035																	
Division St., From William St., To Arthur St		1960	2035																	
Division St., From Arthur St To Creek		1960	2035																	
Division St., From Creek St To North St		1960	2035																	
Division From North St., To King St		1960	2035																	
Division St. Watermain	Relining							1,125,509												
Arthur St., Division St., To Cortland Cres (including Baldwin)		1960	2050																	
Courtland Cres., From Arthur St. W., To The end of Courtland Cres		1960	2050																	
King St. E., From Ontario St., To Division		1960	2035																	
King St. W., From Division St., To Victoria		1960	2035																	
King St. W., From Victoria St., To Elgin St. S		1960	2035																	
King St. W., From Elgin St. S., To Kensington St		1960	2035																	
King St. W., From Kensington St., To Durham St., S		1960	2035																	
King St. W., From Durham St. S. To Parliament St		1960	2035																	
King St. W., From Parliament St., To Spencer St		1960	2035																	
King St. W., From Spencer St., To Colton Street		1960	2035																	
King St. W Watermain	Replacement					2,333,980														
King St. E Watermain	Replacement						628,318													
Church St. W., From Ontario St., To Toronto St		1960	2050																	
Church St., From Toronto Rd., To Percy St		1960	2035																	
Roberston St., From Toronto St., To Ontario St	Replacement	1960	2035				491,727													
Park St. W., From Toronto Rd., To Percy St		1960	2035																	
Norton St., From Percy St., To Toronto St		1960	2035																	
Park St., From Percy St., To Elgin St		1960	2035																	
Cedar St., From Percy St., To Burnham St	Replacement	1960	2035							358,216										
Church St. E., From Percy St., To Victory St		1960	2050																	
Church St E., From Victory St., To Elgin St		1960	2050																	
Victory St., From King St E., To Church St E		1960	2050																	
Victoria Sq., From Hwy 2., To Church St		1960	2035																	
Burnham St., From Church St. E. To Park St. E	Replacement	1960	2035		618,000															
Elgin St. N., From Hwy 2., To Church St		1960	2050																	
Elgin St. N., From Church St., To The End		1960	2035																	
Industrial St., From Purdy St., To Elgin St N		1960	2050																	
Ontario St., From Roberston., To Toronto Street		1960	2050																	

Appendix 2 Capital Replacement and Major Maintenance 2015-31 Inflated \$ 2/2

Asset Description	Constr Year	Repl. Date	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Ontario St., From Church St., To Roberson St	1960	2035																	
Ontario St., From King St., To Church St	1960	2035																	
Ontario St. Church St. to Earl St.	Refrining											913,341							
Ontario St., From King St., To End	1960	2035																	
Toronto St., From Ontario St., To The End of Services	1960	2050																	
Toronto Street., From Ontario St., To Old Percy Rd	1960	2035																	
Toronto St., From Park Rd., To Norton Lane	1960	2035																	
Toronto Street., From Norton Lane., To Church St	1960	2035																	
Percy St., From County Rd. 25., To Park Rd	1960	2035																	
Percy St., From Park St., To Cedar St	1960	2035																	
Percy St., From Cedar St., To Church St	1960	2035																	
Percy St., From Church St., To King St	1960	2035																	
Purdy St., From Big Apple., To Percy St	1960	2050																	
Purdy Street., From Percy St., To Industrial Park	1960	2050																	
Purdy St., From Industrial Park., To Elgin St	1960	2050																	
Purdy St., From Industrial Park., To Elgin St	1960	2050																	
Purdy St., From Elgin St., To Location of Pump House	1960	2035																	
Water Tower Main	1960	2035																	
Water Pollution Control Plant Entrance	1960	2050																	
Phase 1 of Industrial Park Road North	2009	2099																	
Tim Horroxt's Big Apple Drive	2009	2099																	
Surface Treated																			
Colton St., From Victoria Beach Rd., To Hwy 2	1960	2035																	
Colton St., From Victoria Beach Rd., To Hwy 2	1960	2050																	
Scott St., From Durham Rd., To Parliament St	1960	2035																	
Scott St., From Durham Rd., To Parliament St	1960	2035																	
Scott St., From Durham Rd., To Parliament St	1960	2035																	
Scott St., From Durham Rd., To Creek	Replacement									491,950									
Spencer St., From Hwy 2., To the end of Spencer Street	1960	2035																	
Parliament St., From House # 93 (Start of LCB).	1960	2035																	
Earl St. E., From Division St., To Victoria St (3/4 of the street)	1960	2035																	
Earl St. E., From Division St., To Victoria St (1/4 of the street)	1960	2050																	
Earl St. W., From Ontario., To Division	1960	2035																	
Earl Street Watermain	Replacement														926,745				
William St., From Victoria St., To Ontario St	1960	2050																	
William St., From Victoria St., To Ontario St	1960	2035																	
Old Percy Rd., From Toronto St., To Dead End	Replacement						84,413												
Elgin St. N., From Park St., To Purdy St	1960	2035																	
Refurbishment of Elgin Street PRV				10,300															
PRV	Replacement							2,898					3,360						3,895
Gravel																			
Durham St., From Victoria Beach Rd., To Hwy 2	1960	2035																	
Water Facilities																			
Water Tower	Inspection	2006	2056				2,814					3,262					3,781		
Transfer Switch between plant and tower				15,000															
Back up Generator				75,000															
Chlorine Analyzer	Replace						5,629												
Well #1 Current Well to be Replaced by New Well 2015																			
Emergency Acquisition																			
Drilled Hole/Casing - new well # 1	Rehabilitate			350,000															31,158
Pump - new well #1	Refrurbish			80,000															15,580
Motor - new well #1	Rebuild			30,000															
Well #2																			
Drilled Hole/Casing/Screen	Rehabilitate	1999	2049																113,444
Electric Motor	Rebuild	1999	2029										13,048						116,848
Pump	Replace	1999	2029										26,095						
Well #2 Watermain	Replacement																		30,252
Water Meters		2012	2032																
New Well Discharge Piping				61,800															
Colton Street Well	Well Installation			41,200															
Well	Inspection						16,883					19,572							22,689
Capital as per PSAB			550,000	731,300	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950									
Major Maintenance			0	0	0	0	25,324	2,898	0	0									
Total in Inflated \$ (Inflation at 3% per Year)			550,000	731,300	2,333,980	1,120,045	1,235,246	234,753	358,216	491,950									
Total in 2015\$			550,000	710,000	2,200,000	1,025,000	1,097,500	202,500	300,000	400,000		747,500	2,500	400,000	650,000	200,000	112,500	107,500	170,000
Total in Inflated \$ (Inflation at 3% per Year)			550,000	731,300	2,333,980	1,120,045	1,235,246	234,753	358,216	491,950		975,318	3,360	553,694	926,745	293,707	170,166	167,481	272,800

Yellow (or shaded) – Major Maintenance

Appendix 3 Cramahe Water System Financial Statement 2015-2022 – Non Audited - Inflated \$

	2015	2016	2017	2018	2019	2020	2021	2022
Revenues								
1 Sale of Water Flat Rate	-	-	-	-	-	-	-	-
2 Metered Sale of Water	538,463	576,155	616,486	659,640	705,815	755,222	808,088	864,654
3 Meter Sales	-	-	-	-	-	-	-	-
4 OSWAP Funding	-	-	-	-	-	-	-	-
5 Impost Fees	9,384	9,618	9,859	10,105	10,358	10,617	10,882	11,154
6 Miscellaneous Revenue	3,000	3,075	3,152	3,231	3,311	3,394	3,479	3,566
7 MOE Source Mgt. Grant	26,661	-	-	-	-	-	-	-
8 Reserve Interest- Income (Expense)	-	37,711	19,244	(56,380)	59,924	28,549	22,596	14,812
9 Loan	-	-	-	4,500,000	-	-	-	-
10 Subtotal	577,508	626,560	648,740	5,116,596	779,408	797,783	845,045	894,186
11								
Expenditures for all Systems								
12								
13 Part Time Salaries	-	-	-	-	-	-	-	-
14 Administration Fee	4,000	4,100	4,203	4,308	4,415	4,526	4,639	4,755
15 Distributed Salary	-	-	-	-	-	-	-	-
16 Payment in Lieu Expense	6,553	6,717	6,885	7,057	7,234	7,414	7,600	7,790
18 Telephone	452	464	475	487	499	512	525	538
19 Hydro	31,975	33,259	34,922	36,668	38,501	40,426	42,448	44,570
20 Water Charges	-	-	-	-	-	-	-	-
21 Office Supplies	167	171	175	179	184	188	193	198
22 Water Billing Contract	8,252	8,459	8,670	8,887	9,109	9,337	9,570	9,809
23 Meters/Spoolers	414	-	-	-	-	-	-	-
24 Postage	83	85	88	90	92	94	97	99
25 Advertising	-	-	-	-	-	-	-	-
26 Line Maintenance	27,813	14,119	14,472	14,834	15,205	15,585	15,975	16,374
27 Equipment Maintenance	9,249	9,480	9,717	9,960	10,209	10,464	10,726	10,994
28 Building Maintenance	511	524	537	550	564	578	593	608
30 Sampling	4,495	4,607	4,722	4,840	4,961	5,085	5,213	5,343
31 Training	-	-	-	-	2,000	-	-	2,000
32 Contracted Out	1,099	1,126	1,155	1,184	1,213	1,243	1,275	1,306
33 Audit	4,000	4,100	4,203	4,308	4,415	4,526	4,639	4,755
34 Insurance	10,441	10,702	10,970	11,244	11,525	11,814	12,109	12,412
35 Legal	1,805	-	-	-	-	-	-	-
36 Fire Cost	247	6,001	6,151	6,304	6,462	6,623	6,789	6,959
38 Capital Works (Small)	-	-	-	-	-	-	-	-
39 Capital Equipment	-	-	-	-	-	-	-	-
40 New Programs	-	-	-	-	-	-	-	-
41 Other Expenses	-	-	-	-	-	-	-	-
42 Studies	-	-	-	-	-	-	-	-
43 Material on Hand/Shop Supplies	11,555	11,844	12,140	12,444	12,755	13,074	13,401	13,736
44 Machine Rental	-	-	-	-	-	-	-	-
45 Use of Twsp Equipment	-	-	-	-	-	-	-	-
46 Contracted Out (LUSI)	189,861	194,608	199,473	204,460	209,572	214,811	220,181	225,686
47 Lead Removal	-	-	-	-	-	-	-	-
48 Source Protection	26,661	-	-	-	-	-	-	-
49 Municipal Licenses	9,648	7,000	7,175	7,354	7,538	10,916	7,727	7,920
50 Consulting, Eng. Fees	10,721	10,989	11,263	11,545	11,834	12,129	12,433	12,744
51 Major Maintenance	-	-	-	-	25,324	2,898	-	-
52 Loan Principal	-	-	-	-	300,000	300,000	300,000	300,000
53 Loan Interest	-	-	-	-	140,850	131,820	122,070	113,606
54 Subtotal - Expenses	359,704	328,356	337,396	346,704	824,462	804,066	798,200	802,200
55								
56 Revenues Less Expenses	217,804	298,204	311,344	4,769,892	(45,054)	(6,283)	46,845	91,986
57								
58 Trans to (from) Capital	-	-	-	-	-	-	-	-
59 Trans to (from) Water Mtr Res	-	-	-	-	-	-	-	-
60 Trans to (from) Wat Reserve	217,804	298,204	311,344	4,769,892	(45,054)	(6,283)	46,845	91,986
62 Subtotal	217,804	298,204	311,344	4,769,892	(45,054)	(6,283)	46,845	91,986
63								
64 Total Expenses and Transfers	577,508	626,560	648,740	5,116,596	779,408	797,783	845,045	894,186
65								
66 Change in Operating Fund	(0)	(0)	0	(0)	(0)	(0)	0	(0)
67 Opening Fund Balance	(0)	(0)	(0)	0	-	(0)	(0)	0
68 Closing Fund Balance	(0)	(0)	0	(0)	(0)	(0)	0	0

Appendix 4 Cramahe Water System Capital Statement 2015-2022 Inflated \$

	2015	2016	2017	2018	2019	2020	2021	2022
Revenue								
1 Grant	-	-	-	-	-	-	-	-
2 Revenue Fund	-	-	-	-	-	-	-	-
3 Reserve Fund	244,402	1,036,898	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950
4 Sub Total	244,402	1,036,898	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950
5								
6 Expenditures								
7 Capital (LUSI's List)	244,402	1,036,898	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950
10 Subtotal	244,402	1,036,898	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950
11								
12 Change in Fund	-	-	-	-	-	-	-	-

Appendix 5 Cramahe Water Reserve 2015-2031 Inflated \$

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Value	1,535,035	1,508,437	769,743	(1,252,893)	2,396,954	1,141,978	903,840	592,469	192,506	334,436	(425,903)	(212,765)	(456,899)	(1,017,372)	(913,845)	(589,310)	(158,141)
Contribution	217,804	298,204	311,344	4,769,892	(45,054)	(6,283)	46,845	91,986	133,267	199,930	235,663	319,134	386,832	443,016	535,825	625,169	762,991
Expenditure	244,402	1,036,898	2,333,980	1,120,045	1,209,922	231,855	358,216	491,950	-	975,318	3,360	553,694	926,745	293,707	170,166	167,481	272,800
Close	1,508,437	769,743	(1,252,893)	2,396,954	1,141,978	903,840	592,469	192,506	334,436	(425,903)	(212,765)	(456,899)	(1,017,372)	(913,845)	(589,310)	(158,141)	324,933

Note: The deficits above are in fact a loan. Total debt is determined by adding the above year-end totals to the balance of the principal outstanding on the 2018 loan. See appendix 6 for a total

Appendix 6 Cramahe Water System Debt 2018-2031 Inflated \$

Cramahe Water System Debt 2018-2031 Inflated \$																		
Amount	Start	Finish	Interest Rate	Type	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Loan 1				Amortizing														
4,500,000	31/12/2018	31/12/2033	3.13%	Principal		300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
				Interest		140,850	131,820	122,070	113,606	103,007	93,643	84,511	75,120	65,730	56,803	46,692	47,560	28,170
				Total		440,850	431,820	422,070	413,606	403,007	393,643	384,511	375,120	365,730	356,803	346,692	347,560	328,170
						-	-	-										
				Principal Balance Year End	4,500,000.00	4,200,000	3,900,000	3,600,000	3,300,000	3,000,000	2,700,000	2,400,000	2,100,000	1,800,000	1,500,000	1,200,000	900,000	600,000
				Reserves Surplus (Deficit)		1,141,978	903,840	592,469	192,506	334,436	(425,903)	(212,765)	(456,899)	(1,017,372)	(913,845)	(589,310)	(158,141)	324,933
				Total Effective Debt		(3,058,022)	(2,996,160)	(3,007,531)	(3,107,494)	(2,665,564)	(3,125,903)	(2,612,765)	(2,556,899)	(2,817,372)	(2,413,845)	(1,789,310)	(1,058,141)	(275,067)

Appendix 7 Cramahe Tangible Capital Assets 2015-2022 Inflated \$

	2015	2016	2017	2018	2019	2020	2021	2022
Opening NBV	2,325,331.76	2,509,495.95	3,471,785.52	5,697,558.44	6,702,589.30	7,784,725.94	7,871,406.32	8,078,639.60
Original Cost	3,485,910.00	3,730,312.99	4,751,376.00	7,014,551.00	8,103,224.18	9,313,146.15	9,545,000.96	9,903,216.65
Additions	90,000.00	1,036,897.01	2,333,980.00	1,120,045.18	1,209,921.97	231,854.81	358,215.69	491,949.55
Construction in Progress	154,402.99	-	-	-	-	-	-	-
Write Down	-	-	-	-	-	-	-	-
Closing Cost	3,730,312.99	4,767,210.00	7,085,356.00	8,134,596.18	9,313,146.15	9,545,000.96	9,903,216.65	10,395,166.20
Opening Amort	1,160,578.24	1,220,817.04	1,279,590.48	1,316,992.56	1,400,634.87	1,528,420.20	1,673,594.64	1,824,577.05
Annual Amortization	60,238.80	70,596.16	91,213.88	107,903.33	127,785.33	145,174.44	149,822.27	154,073.10
Loss on Disposal	-	4,011.28	16,993.20	7,110.99	-	-	-	-
Accumulated Amortization	1,220,817.04	1,291,413.20	1,370,804.36	1,424,895.88	1,528,420.20	1,673,594.64	1,824,577.05	1,978,650.15
Closing NBV	2,509,495.95	3,471,785.52	5,697,558.44	6,702,589.30	7,784,725.94	7,871,406.32	8,078,639.60	8,416,516.05