

Municipality of North Perth

Water System Financial Plan
2015-2025



November 2014

Final Report

Municipality of North Perth Water Financial Plan

Introduction

The Municipality of North Perth has prepared a financial plan for the Municipality's four water systems serving the residents in Listowel, Atwood, Molesworth and Gowanstown. The financial plan is for a period of 10 years to assist staff with long-term cost recover and capital planning. Under Ontario Regulation 453/07, the municipality is required to complete a financial plan for municipal water services as part of the application process for renewal of the Drinking Water Licences. **Appendix A** has the full North Perth Financial Plan for Water Works.

This report is an update to the Water and Wastewater System Financial Plan and Rate Study that was completed by BM Ross in 2011. This plan was updated with actual numbers and projected over an additional 10 year plan.

Description of Systems

The Municipality of North Perth owns and operates four drinking water systems:

Atwood Drinking Water System – Two groundwater wells, disinfection and iron sequestering treatment, one storage reservoir and approximately 4.4km of distribution watermains.

Gowanstown Drinking Water System – One groundwater well, disinfection and iron sequestering treatment, two pressure regulating tanks and approximately 0.3km of distribution watermains.

Listowel Drinking Water System – Three groundwater wells and pumphouses with disinfection and iron sequestering treatment, one elevated storage tank and approximately 49.9km of distribution watermains.

Molesworth Drinking Water System – One groundwater well, disinfection and iron sequestering treatment, four pressure regulating tanks and approximately 1.5km of distribution watermains.

Financial Position

Cash and Cash Equivalents

Cash and cash equivalents is derived from the cash that is available at the end of the year. This is determined by adding the cash at the beginning of the year plus the net cash receipts (payments) that are made for the entire year.

Liabilities

Currently, the North Perth water system has two long term loans. One loan is for well upgrades with a principal balance of \$268,955.56 at the end of 2014 and the other loan is for water meters, which has a principal balance of \$90,571.74 at the end of 2014. No future borrowings are anticipated in the current plan.

Non-Financial Assets

The existing watermain and facilities book value is estimated to be at \$10, 627,048 for 2014. The book value comes from the total historical cost of the asset less the accumulated depreciation for the asset. This is easily available from CityWide, North Perth's asset management database.

Over the life of this Financial Plan, capital costs from new projects will be recovered by reserves, development charges and direct billing to customers. The new watermains and facilities at cost estimates were derived from the development charges report that was completed in 2014 and also from the projects that were listed in the Waterworks Financial Plan and Rate Study dated January 6, 2011. **Table 1.0** is the Planned Water Works Capital Projects for 2014-2025.

**Table 1.0
Planned Water Works Capital Projects 2014-2025**

Project	Year	Approx. Cost	Reserves	Development Charges	Amortization
Binning St W Extension	2014	251,000		251,000	3,347
Looping Watermain from Krotz St E to Tremaine Ave S to Rocher Rd	2014	70,170	35,000	35,170	936
Hamilton Crt (Rocher Rd)	2014	50,000		50,000	667
Rocher Road Servicing Easement (Hamilton Crt to EFS Service)	2014	119,475	119,475		1,593
2014 Total		490,645	154,475	336,100	6,542
Mitchell Road S Extension	2015	110,000		110,000	1,467
Bolton St E/Davidson Ave	2015	157,000	157,000		2,093
N/Wellington Ave S					
Nichol Ave S– Clayton St E to Mowat St E	2015	96,000	96,000		
2015 Total		363,000	253,000	110,000	4,840
Elma St W – bridge to Victoria Ace S	2016	315,000	315,000		4,200
Molesworth Well Building	2016	100,000	100,000		2,000
2016 Total		415,000	415,000		6,200
Victoria Ave S – Main St W to Ann St	2017	297,500	297,500		3,967
Maitland Ave N – Elizabeth St W to Arena	2017	59,500	59,500		794
South End Watermain Looping – Extend Watermain Down Line 84 (from Hwy 23 to Wallace Ave S)	2017	1,075,000	537,500	537,500	14,334
2017 Total		1,432,000	894,500	537,500	19,093
Inkerman St W-Davidson Ave N to Elm Ave N	2018	381,500	381,500		5,087
Binning St W – Argyle Ave N to Kin Station	2018	287,000	287,000		3,827
2018 Total		668,500	668,500		8,913

Wallace Ave S – Main St E to Elma St E	2019	82,600	82,600		1,101
McLaren Ave N – McDonald St E to Dead End	2019	161,000	161,000		2,147
Union St E-Davidson Ave S to Wellington Ave S	2019	82,600	82,600		1,101
2019 Total		326,200	326,200		4,349
Livingstone Ave N-Main St W to Binning St W	2020	257,600	257,600		3,435
Davidson Ave N-Main St E to Inkerman St E	2020	81,900	81,900		1,092
McDonald St W – Barber Ave N to Wallace Ave N	2020	245,000	245,000		3,667
Additional Water Tower	2020	3,875,000	775,000	3,100,000	51,667
2020 Total		4,459,500	1,359,500	3,100,000	59,460
Victoria Ave N - Inkerman St W to Binning St W	2021	98,000	98,000		1,307
2021 Total		98,000	98,000		1,307
Herbert St-Wallace Ave S to Richelieu St	2022	108,500	108,500		1,447
2022 Total		108,500	108,500		1,447

Analysis of Financial Position

The equity in tangible capital assets is calculated by taking the financial position at year end less the total financial assets. Reserve and reserve funds are determined by adding the 'Transfer to Reserve' figures and deducting the 'Transfer from Reserve' figures to give the ending reserve balance. Since future projects are unknown and hard to predict from 2021 to 2025, an estimated average, based on the prior year deductions, was entered for the reserve deductions. **Table 2.0** gives a summary of the reserve balances for 2014.

Table 2.0
North Perth Water Fund Balances

Reserve Fund	2013 Est. Balance	Additions	Deductions	2014 Est. Balance
Water	653,926	821,875	154,475	1,321,326

Revenue

Fees and Service Charges

The total number of cubic meters for both residential and commercial users was determined in 2013 using the Water Rationalization for 2013. By using the growth rate of 1.5% (as per the North Perth Strategic Plan), the cubic meters increased by this rate each year. North Perth had set water fees up until 2016, however, after the findings from this financial plan (see Appendix A for details), it is recommended that the 7 percent increase be spread over seven years instead of two. This allowed for a 1% volumetric rate increase starting in 2015.

For base rate service charges for both residential and commercial users, the rates increased by 1%, except for the 18mm service that increased by 0.5% and the 25mm service increased by 0.25%. This was to narrow the gap between the rates of the 15mm and 25mm services. The number of users was increased by the 1.5% growth rate, similar to the way the cubic meters were increased.

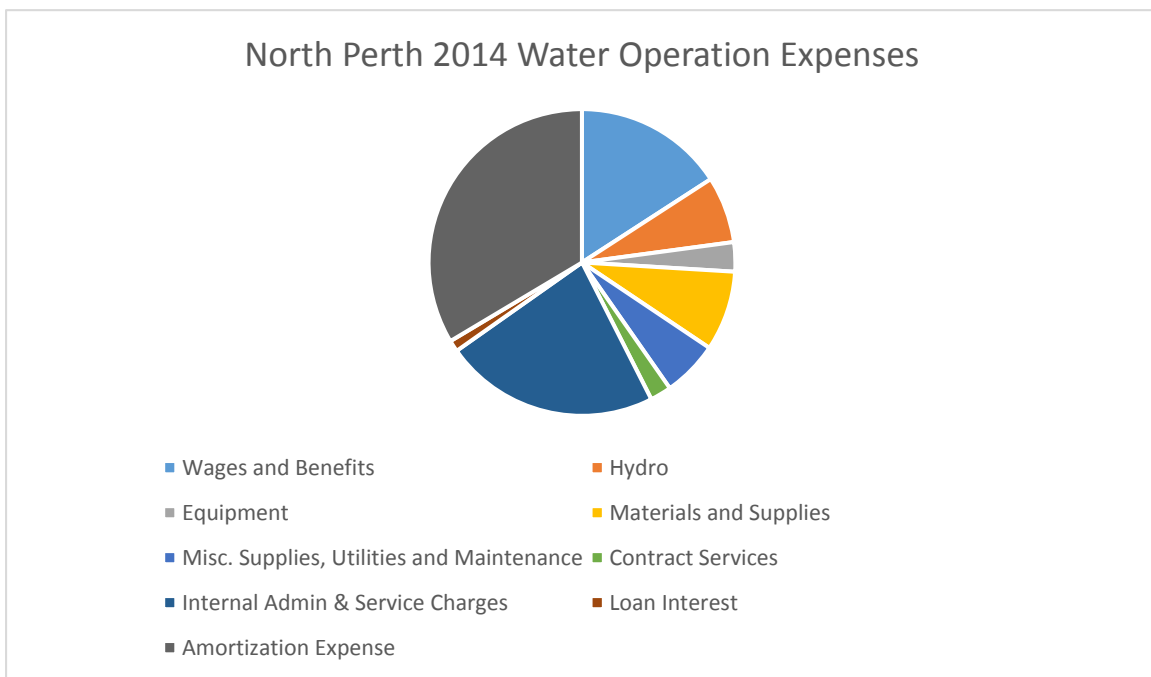
Expenses

Actual expenses were used for 2013 and a cost of living increase of 2.5% was applied to the expenses for the subsequent years. The long-term debt charges-interest was from two loans, the OSIFA/OSTAR Water and the Water Meters loan. The Water Meters loan payments end in 2016, while the OSIFA/OSTAR Water loan payments end in 2017. This is shown in the debenture schedule that is attached in **Appendix B** of this report.

Amortization expense is determined by dividing an asset's historical cost by the asset's life expectancy. The asset's life expectancy for each asset category can be found in the North Perth's Capital Asset Policy. This amortization expense takes the existing asset's amortization and includes the amortization that will be added from the capital projects in **Table 1.0**.

In 2019, the municipality will anticipate to assume the infrastructure in the Hanna's Haven subdivision, which is located in the southwest quadrant of Listowel. In 2024, the municipality will be prepared to assume the infrastructure in Emerald Green's subdivision, which is located in the northwest corner of Listowel. By assuming the infrastructure in these subdivisions, the amortization expense will increase. With the expected growth in the Municipality, it is expected that an additional water employee will be needed to keep up with operations, increase in locates and administrative duties. This has been added into the wages and benefits starting in 2017.

Figure 1.0



Capital Transactions

Growth related amounts are from the future projects that are listed in Table 1.0 and that are funded by development charges. These amounts came from the Development Charges Study that was completed in 2014. Replacement of existing infrastructure was

determined by the amount of reserves needed to fund the future capital projects. These figures are listed in **Table 1.0** of this report.

Conclusions

There has been a positive effect on the financial position of the North Perth Water System due to the rate increases that were implemented in 2011. From the Financial Plan completed by BM Ross in January 2011, the recommendation was given to increase the water volumetric rates by 12.1% and the base rate charges by 27.9%. From the findings of this report, it is recommended that going forward, starting in 2015, to increase the water rates in small increments of 1% for both the volumetric rates and base rate charges. The rates will be reviewed on an annual basis to ensure the financial position of the municipality is being met.

Appendix A

North Perth Financial Plan for Water Works

NORTH PERTH FINANCIAL PLAN FOR WATER WORKS

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
FINANCIAL POSITION												
Financial assets												
Cash and cash equivalents	1,321,326	1,913,969	2,399,893	2,422,003	2,788,397	3,522,275	3,248,659	3,885,694	4,549,834	5,241,751	5,962,135	6,711,693
Total FINANCIAL ASSETS	1,321,326	1,913,969	2,399,893	2,422,003	2,788,397	3,522,275	3,248,659	3,885,694	4,549,834	5,241,751	5,962,135	6,711,693
Liabilities												
Long-term debt	359,527	212,130	91,942	-	-	-	-	-	-	-	-	-
Total LIABILITIES	359,527	212,130	91,942	-	-	-	-	-	-	-	-	-
NET DEBT (Liabilities-Assets)	(961,799)	(1,701,839)	(2,307,951)	(2,422,003)	(2,788,397)	(3,522,275)	(3,248,659)	(3,885,694)	(4,549,834)	(5,241,751)	(5,962,135)	(6,711,693)
Non-financial assets (Tangible capital assets)												
Existing watermain and facilities-book value	10,627,048	10,374,053	10,130,470	9,886,887	9,644,494	9,403,101	9,165,311	8,941,560	8,721,360	8,501,160	8,280,963	8,074,257
New water mains and facilities-at cost	490,645	363,000	415,000	1,432,000	668,500	521,200	4,459,500	475,297	475,297	475,297	475,297	475,297
Less: Amortization	(330,003)	(313,741)	(309,755)	(327,751)	(333,172)	(338,440)	(350,087)	(337,355)	(335,251)	(335,251)	(337,547)	(324,057)
Total NON-FINANCIAL ASSETS	10,787,690	10,423,312	10,235,715	10,991,136	9,979,822	9,585,861	13,274,724	9,079,502	8,861,406	8,641,206	8,418,713	8,225,497
Financial position at Year End (Non Finance assets-Net Debt)	11,749,489	12,125,150	12,543,667	13,413,140	12,768,219	13,108,136	16,523,384	12,965,196	13,411,240	13,882,957	14,380,849	14,937,190
Analysis of financial position												
Equity in tangible capital assets	10,428,163	10,211,182	10,143,773	10,991,136	9,979,822	9,585,861	13,274,724	9,079,502	8,861,406	8,641,206	8,418,713	8,225,497
Reserves and reserve funds	1,321,326	1,913,968	2,399,894	2,422,004	2,788,397	3,522,275	3,248,660	3,885,694	4,549,834	5,241,751	5,962,136	6,711,693
General surplus (deficit)	-	-	-	-	-	-	-	-	-	-	-	-
Financial position (from analysis)	11,749,489	12,125,150	12,543,667	13,413,140	12,768,219	13,108,136	16,523,384	12,965,196	13,411,240	13,882,957	14,380,849	14,937,190

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
FINANCIAL OPERATIONS												
REVENUE												
Fees and Service Charges												
User Fee - Metered Residential Water	521,533	534,649	548,096	561,880	576,012	590,498	605,349	620,574	636,181	652,181	668,584	685,399
User Fee - Metered Commercial Water	155,497	159,408	163,417	167,527	171,740	176,059	180,487	185,027	189,680	194,450	199,341	204,354
Service Charge - Residential Water	748,065	766,879	786,166	805,938	826,207	846,986	868,288	890,125	912,512	935,462	958,989	983,107
Service Charge - Commercial Water	98,118	100,642	103,233	105,892	108,622	111,424	114,301	117,254	120,285	123,397	126,592	129,872
Misc. Fees and Service Charges	53,269	54,068	54,879	55,702	56,538	57,386	58,247	59,120	60,007	60,907	61,821	62,748
Internal Transfer - Hydrants	25,883	26,271	26,665	27,065	27,471	27,883	28,301	28,726	29,156	29,594	30,038	30,488
License Agreement	8,401	8,527	8,655	8,785	8,916	9,050	9,186	9,324	9,464	9,606	9,750	9,896
Expense Recovery	7,827	7,944	8,063	8,184	8,307	8,432	8,558	8,686	8,817	8,949	9,083	9,219
Total REVENUE	1,618,593	1,658,388	1,699,174	1,740,973	1,783,813	1,827,719	1,872,718	1,918,836	1,966,102	2,014,547	2,064,198	2,115,083
EXPENSES												
Wages and Benefits	155,768	159,662	163,653	207,946	213,145	218,474	223,936	229,534	235,272	241,154	247,183	253,362
Operations	240,359	246,368	252,527	258,841	265,312	271,944	278,743	285,712	292,854	300,176	307,680	315,372
Contracted Services	21,940	22,488	23,050	23,626	24,217	24,823	25,443	26,079	26,731	27,399	28,084	28,787
Internal Transfers	223,086	228,663	234,379	240,239	246,245	252,401	258,711	265,179	271,808	278,603	285,569	292,708
Long-Term debt Charges-Interest	11,795	8,168	4,450	1,769	-	-	-	-	-	-	-	-
Amortization of Capital Assets	330,003	313,741	309,755	327,751	333,172	338,440	350,087	337,355	335,251	335,251	337,547	324,057
Total EXPENSES	982,950	979,090	987,815	1,060,172	1,082,091	1,106,082	1,136,920	1,143,859	1,161,916	1,182,584	1,206,063	1,214,285
Net Revenue (Deficit) for the year	635,643	679,299	711,359	680,801	701,722	721,637	735,798	774,976	804,186	831,963	858,135	900,798

Notes:

1. Revenue from rates projected based on 1.5% population increase each year
2. Expenses are based on a 1.5% cost of living increase

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
CASH FLOW												
Operating Transactions												
Net revenue (deficit) for the year	635,643	679,299	711,359	680,801	701,722	721,637	735,798	774,976	804,186	831,963	858,135	900,798
Add (deduct) non-cash expense:												
Amortization of capital assets	330,003	313,741	309,755	327,751	333,172	338,440	350,087	337,355	335,251	335,251	337,547	324,057
Total OPERATING TRANSACTIONS	965,646	993,040	1,021,114	1,008,552	1,034,894	1,060,077	1,085,885	1,112,332	1,139,437	1,167,214	1,195,682	1,224,855
Capital Transactions												
Growth related	(336,100)	(110,000)	-	(537,500)	-	-	(3,100,000)	-	-	-	-	-
Service enhancement (system upgrades)	-	-	-	-	-	-	-	-	-	-	-	-
Lead service reduction	-	-	-	-	-	-	-	-	-	-	-	-
Replacement of existing infrastructure (watermain & facilities)	(154,475)	(253,000)	(415,000)	(894,500)	(668,500)	(326,200)	(1,359,500)	(475,297)	(475,297)	(475,297)	(475,297)	(475,297)
Total CAPITAL TRANSACTIONS	(490,575)	(363,000)	(415,000)	(1,432,000)	(668,500)	(326,200)	(4,459,500)	(475,297)	(475,297)	(475,297)	(475,297)	(475,297)
Investing transactions												
Proceeds from portfolio investments	-	-	-	-	-	-	-	-	-	-	-	-
Purchase of portfolio investments	-	-	-	-	-	-	-	-	-	-	-	-
Total INVESTING TRANSACTIONS	-	-	-	-	-	-	-	-	-	-	-	-
Financing transactions												
Proceeds from Development Charges	336,100	110,000	-	537,500	-	-	3,100,000	-	-	-	-	-
Loan-Principal OSIFA/OSTAR Water Man.	(85,187)	(87,381)	(89,633)	(91,942)	-	-	-	-	-	-	-	-
Loan-Principal #4 Water Meters	(58,584)	(60,016)	(30,556)	-	-	-	-	-	-	-	-	-
Total FINANCING TRANSACTIONS	192,329	(37,397)	(120,189)	445,558	-	-	3,100,000	-	-	-	-	-
Net Cash Receipts (Payments) for the year	667,400	592,643	485,925	22,110	366,394	733,877	(273,615)	637,035	664,140	691,917	720,384	749,557
Cash at beginning of year	653,926	1,321,326	1,913,969	2,399,893	2,422,003	2,788,397	3,522,275	3,248,659	3,885,694	4,549,834	5,241,751	5,962,135
Cash at end of year	1,321,326	1,913,969	2,399,893	2,422,003	2,788,397	3,522,275	3,248,659	3,885,694	4,549,834	5,241,751	5,962,135	6,711,693

Appendix B

Loan Debenture Schedules

THE MUNICIPALITY OF NORTH PERTH
Schedule "C" to By-law Number 154-2007

Amortizing Debenture Schedule

Organization Name: The Town of North Perth
Principal Amount (\$): \$822,164.00
Annual Interest Rate (%): 2.56%
Loan Term (Years): 10
Debenture Date (m/d/yyyy): 12/3/2007
Maturity Date (m/d/yyyy): 12/1/2017
Payment Frequency: SemiAnnual
Loan Type: Amortize

Payment Date	Total Payment	Principal Amount	Interest Amount	Principal Balance
6/2/2008	\$46,855.43	\$36,331.73	\$10,523.70	\$785,832.27
12/1/2008	\$46,855.43	\$36,796.78	\$10,058.65	\$749,035.49
6/1/2009	\$46,855.43	\$37,267.78	\$9,587.65	\$711,767.71
12/1/2009	\$46,855.43	\$37,744.80	\$9,110.63	\$674,022.91
6/1/2010	\$46,855.43	\$38,227.94	\$8,627.49	\$635,794.97
12/1/2010	\$46,855.43	\$38,717.25	\$8,138.18	\$597,077.72
6/1/2011	\$46,855.43	\$39,212.84	\$7,642.59	\$557,864.88
12/1/2011	\$46,855.43	\$39,714.76	\$7,140.67	\$518,150.12
6/1/2012	\$46,855.43	\$40,223.11	\$6,632.32	\$477,927.01
12/3/2012	\$46,855.43	\$40,737.96	\$6,117.47	\$437,189.05
6/3/2013	\$46,855.43	\$41,259.41	\$5,596.02	\$395,929.64
12/2/2013	\$46,855.43	\$41,787.53	\$5,067.90	\$354,142.11
6/2/2014	\$46,855.43	\$42,322.41	\$4,533.02	\$311,819.70
12/1/2014	\$46,855.43	\$42,864.14	\$3,991.29	\$268,955.56
6/1/2015	\$46,855.43	\$43,412.80	\$3,442.63	\$225,542.76
12/1/2015	\$46,855.43	\$43,968.48	\$2,886.95	\$181,574.28
6/1/2016	\$46,855.43	\$44,531.28	\$2,324.15	\$137,043.00
12/1/2016	\$46,855.43	\$45,101.28	\$1,754.15	\$91,941.72
6/1/2017	\$46,855.43	\$45,678.58	\$1,176.85	\$46,263.14
12/1/2017	\$46,855.31	\$46,263.14	\$592.17	\$0.00

Amortizing Debenture Schedule

Municipality Name: The Municipality of North Perth
Principal Amount (\$): \$546,200.00
Annual Interest Rate (%): 2.43%
Loan Term (Years): 10
Debenture Date (m/d/yyyy): 4/18/2006
Maturity Date (m/d/yyyy): 4/15/2016
Payment Frequency: SemiAnnual
Loan Type: Amortize

OSIFA - Water Meter

Payment Date	Total Payment	Principal Amount	Interest Amount	Principal Balance
10/16/2006	\$30,927.19	\$24,290.86	\$6,636.33	\$521,909.14
4/16/2007	\$30,927.19	\$24,585.99	\$6,341.20	\$497,323.15
10/15/2007	\$30,927.19	\$24,884.71	\$6,042.48	\$472,438.44
4/15/2008	\$30,927.19	\$25,187.06	\$5,740.13	\$447,251.38
10/15/2008	\$30,927.19	\$25,493.09	\$5,434.10	\$421,758.29
4/15/2009	\$30,927.19	\$25,802.83	\$5,124.36	\$395,955.46
10/15/2009	\$30,927.19	\$26,116.33	\$4,810.86	\$369,839.13
4/15/2010	\$30,927.19	\$26,433.64	\$4,493.55	\$343,405.49
10/15/2010	\$30,927.19	\$26,754.81	\$4,172.38	\$316,650.68
4/15/2011	\$30,927.19	\$27,079.88	\$3,847.31	\$289,570.80
10/17/2011	\$30,927.19	\$27,408.90	\$3,518.29	\$262,161.90
4/16/2012	\$30,927.19	\$27,741.92	\$3,185.27	\$234,419.98
10/15/2012	\$30,927.19	\$28,078.99	\$2,848.20	\$206,340.99
4/15/2013	\$30,927.19	\$28,420.15	\$2,507.04	\$177,920.84
10/15/2013	\$30,927.19	\$28,765.45	\$2,161.74	\$149,155.39
4/15/2014	\$30,927.19	\$29,114.95	\$1,812.24	\$120,040.44
10/15/2014	\$30,927.19	\$29,468.70	\$1,458.49	\$90,571.74
4/15/2015	\$30,927.19	\$29,826.74	\$1,100.45	\$60,745.00
10/15/2015	\$30,927.19	\$30,189.14	\$738.05	\$30,555.86
4/15/2016	\$30,927.11	\$30,555.86	\$371.25	\$0.00