Township of Essa
Asset Management Plan
For the Ten Year Period from 2014 to 2023
Appendix A, Working Assumptions

The following are the Working Assumptions for the Plan for the ten year period from 2014 to 2023:

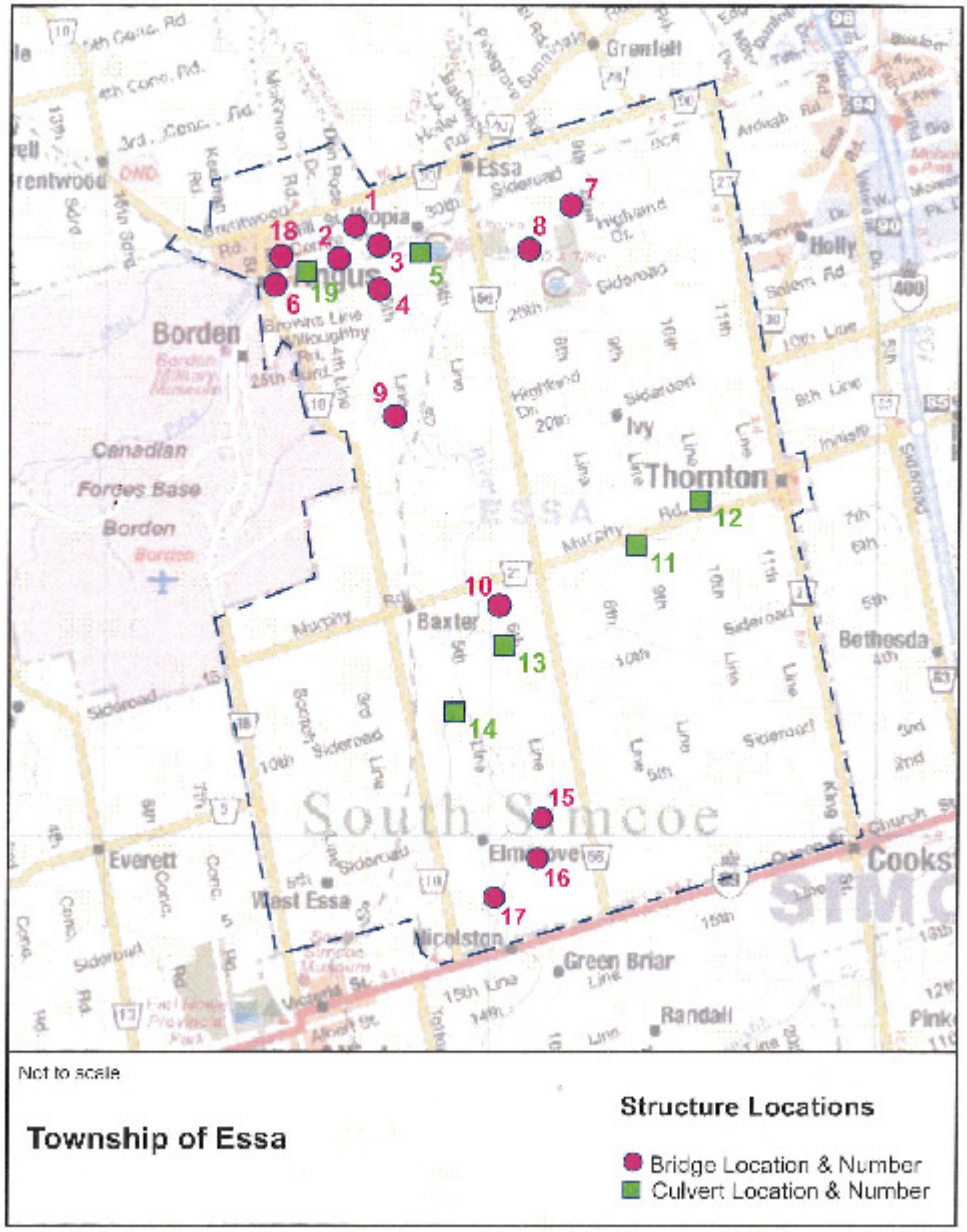
1. The Township of Essa will continue to provide the broad types and ranges of services that it currently provides
2. Canada Gross Domestic Product (GDP) will remain on average in a range of 1.00% to 5.00%
3. Canada and Ontario Consumer Price Index (CPI) increases will remain on average in a range of 0.00% to 4.00%
4. Barrie Ontario Census Metropolitan Area Unemployment Rate will remain on average in a range of 5.00% to 9.00% (Statistics Canada, CANSIM, table 282-0116 and Catalogue no. 71-001-XIE)
5. Activities and complement at CFB Borden will not substantially change or adversely affect operations, expenses, or revenues of Essa
6. New Provincial Legislation and Regulations will not substantially change or adversely affect operations, expenses, or revenues of Essa
7. Investment earnings interest rate (on new investments) will remain on average in a range of 1.00% to 5.00%
8. Long Term Debt interest rate (borrowing costs on new debt) will remain on average in a range of 3.00% to 7.00%
9. Federal Gas Tax grants to the Township will remain consistent and reliable sources of funding in the order of not less than $ 0.5 million annually
10. Ontario Municipal Partnership Fund (OMPF) grants to the Township will gradually decline in both relative and absolute dollars; Essa will not benefit from the Northern and Rural Municipal Fiscal Circumstances Index component of OMPF; Essa will not be eligible for any new unconditional grants that the Province of Ontario introduces
11. Policing Services costs provided by the Ontario Provincial Police (OPP) will continue to escalate at a rate in excess of CPI and inflation; the Province of Ontario will not provide any policing services costs reconciliation under OMPF that will benefit Essa
12. County grants to the Township for active transportation will be available
13. Growth and development will be at a pace in the order of 100 new residential dwelling units and 1,000 square metres of non-residential gross floor space per year
14. Diesel, gasoline, natural gas, hydro, and energy input costs will not increase by more than 9.00% in any given year
15. Sand, salt, gravel, asphalt, concrete, structural steel, PVC pipe, raw materials, and construction material input costs will not increase by more than 9.00% in any given year

The Working Assumptions may be modified and refined over the course of the Plan.

The Plan may be re-evaluated if one or more of the working assumptions do not hold for an extended period of time.

Appendix B

Township of Essa Structure Location Map 2012



source: Township of Essa, Municipal Structure Inventory and Inspection – 2012 Report, Appendix A, Key Plan, prepared by AECOM, dated February 2013

Township of Essa
Asset Management Plan
For the Ten Year Period from 2014 to 2023
Appendix C, Bridge and Culvert Replacement Values

Bridge and Culvert (Replacement) Values

1	$ 479,000
2	$ 665,000
3	$ 530,000
4	$ 550,000
5	$ 789,000
6	$ 1,039,000
7	$ 638,000
8	$ 509,000
9	$ 1,782,000
10	$ 698,000
11	$ 455,000
12	$ 332,000
13	$ 543,000
14	$ 581,000
15	$ 2,470,000
16	$ 2,333,000
17	$ 2,189,000
18	$ 493,000
19	$ 217,000
20	$ 1,250,000
	$ 18,542,000

source: Township of Essa, Municipal Structure Inventory and Inspection – 2012 Report, Appendix E, Structure Appraisal Sheets, prepared by AECOM, dated February 2013, supplemented by capital project cost data

Appendix D, Fire Underwriters Survey, letter dated April 19, 2002

FIRE UNDERWRITERS SURVEY
A SERVICE TO INSURERS AND MUNICIPALITIES

c/o Insurers' Advisory Organization Inc., 90 Allstate Parkway, Markham, Ontario L3R 6H3
Telephone: (905) 474-0003 • Toll-free: 1-800-268-8080 • Fax: (905) 474-1504

April 19, 2002

Fire Chief Paul Macdonald
Essa Township Fire Department
P. O. Box 10
3786 Simcoe County Rd. 21
ANGUS, Ontario
L0M 1B0

Subject: Fire Underwriters Survey Grading for Essa.

Dear Chief,

In 2000, a Fire Underwriters' Survey was completed to determine the fire defences of the Township of Essa for insurance classification purposes. Our analysis of this survey has now been completed and the results are as follows:

Thornton Fire Station #1

The Public Fire Protection Classification (Industrial, Commercial, Institutional and Multi-family Residential) has improved, since our previous survey, from a Class 9 to a Class 7 in Fydrant Protected Areas (H.P.A.) that are within 5 km. (3miles) from a responding fire station. It remains a Class 9 in areas that are over 5 km. from a responding fire station, with or without hydrant protection.

The Dwelling Protection Grade (Single-family Residential) has improved, since our previous survey, from a Class 3B in hydrant protected areas (H.P.A.) to a Class 3A within 8 km. (5 miles) of a responding fire station; Fire Hall Protected (FH) 3B within 8 km. of a responding fire station, but without hydrant protection; Class 5 over 8 km. from a responding fire station, with or without hydrant protection. These are the highest gradings attainable with a volunteer/part-time fire department.

Angus Fire Station #2

The Public Fire Protection Classification (Industrial, Commercial, Institutional and Multi-family Residential) has improved, since our previous survey, from a Class 9 to a Class 6 in Hydrant Protected Areas (H.P.A.) that are within 5 km. (3miles) from a responding fire station. It remains a Class 9 in areas that are over 5 km. from a responding fire station, with or without hydrant protection.

The Dwelling Protection Grade (Single-family Residential) remains uncharged from our previous survey. The Grades are as follows: H.P.A. 3A within 8 km. (5 miles) of a responding fire station; Fire Hall Protected (FH) 3B within 8 km. of a responding fire station, but without hydrant protection; 5 over 8 km. from a responding fire station, with or without hydrant protection. These are the highest gradings attainable with a volunteer/part-time fire department. Class 5

If you have any questions or require assistance, please do not hesitate to contact the undersigned.

We wish to take this opportunity to thank all those who participated in the preparation of this survey.

Regards,

Pete Rose, C.F.I.
Public Fire Protection Specialist
Fire Underwriters' Survey

Appendix E, Fire Underwriters Survey, letter dated June 12, 2007

FIRE UNDERWRITERS SURVEY
A SERVICE TO INSURERS AND MUNICIPALITIES

c/o CGI Insurance Business Services, 150 Commerce Valley Dr. West, Lock Box 200, Markham, ON, L3T 7Z3
Telephone: (905) 882-8200 Toll-free: 1-800-8380 Fax: (905)-882-4842

June 12, 2007

Fire Chief Paul Macdonald
Township of Essa
5786 County Road 21
Utopia, Ontario
L0M 1T0

Subject: **Superior Tanker Shuttle Accreditation**

Dear Chief Macdonald:

The Fire Underwriters' Survey is pleased to give your municipality Superior Tanker Shuttle Accreditation. The test procedure was carried out on June 9, 2007 with the undersigned present. The flow rate during the 2-hour test period averaged 2,385 litres per minute or 525 imperial gallons per minute.

Your team worked in a well coordinated and organized manner with proper supervision.

Regards,

Peter J. Rose, C.E.T. F.F.T.
Fire Protection Specialist

see NFPA 1142

Public Fire Protection Classification

Class 1 to 10

Appendix F, Fire Protection Survey Services, letter dated Sept. 28, 2013

Fire Protection Survey Services ™

P.O. Box 170
Longford Mills, Ontario, Canada, L0K 1L0
Telephone: (705) 689-6183 Fax: (208) 474-3520
E-mail: firepss@bell.net Website: www.fpss.ca

Fire Department Water Tanker Shuttle Accreditation

Presented To: Essa Township

ACCREDITED FIRE STATIONS

Thornton Fire Station #1
Angus Fire Station #2

Date Test Passed: September 28, 2013

Flow Achieved: 510 I.G.P.M. 2315 LITERS/MIN.

Two (2) Hour Test Time

Signed:
Peter J. Rose, C.E.T., F.P.S.
Partner
Senior Fire Protection Specialist
Senior Loss Control Specialist

This Certificate Expires on October 01, 2018

FPSS *"Professionalism With Pride"*©

Appendix G, Reserve Fund Balances from 2004 to 2013

Township of Essa
Reserve Funds
from 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	201
Dev Ch General Government	$ 45,713	$ 56,484	$ 72,677	$ 79,125	$ 73,423	$ 70,851	$ 98,704	$ 121,998	$ 13
Dev Ch Fire Services	$ 106,689	$ 64,914	-$ 0	$ 13,582	$ 160,152	$ 227,439	$ 356,827	$ 454,534	$ 52
Dev Ch Police Services	$ 1,662	$ 15,914	$ 27,442	$ 32,746	$ 46,274	$ 53,172	$ 74,529	$ 87,201	$ 11
Dev Ch Roads and Related	$ 896,490	$ 674,525	$ 667,270	$ 552,931	$ 1,317,705	$ 748,823	$ 893,324	$ 407,110	$ 81
Dev Ch Public Works and Fleet	$ 10,428	-$ 23,568	$ -	$ 69,196	$ 180,185	$ 132,922	$ 224,883	$ 291,453	$ 37
Dev Ch Waterworks	$ 633,985	$ 1,082,169	$ 1,132,520	$ 901,674	$ 13,487	$ 537,453	$ 1,444,611	-$ 329,557	-$ 88
Dev Ch Sanitary Sewage Works	$ 1,157,011	$ -	$ 33,725	$ 4,127	$ 511,144	$ 911,327	$ 1,385,248	$ 1,837,682	$ 3,59
Dev Ch Recreation	$ 349,693	$ 696,277	$ 954,119	$ 764,259	$ 1,235,212	$ 1,563,459	$ 1,115,717	$ 1,323,615	$ 1,82
Dev Ch Library Services	$ 91,267	$ 112,423	$ 125,900	$ 146,031	$ 178,181	$ 210,394	$ 124,178	$ 10,351	$ 2
Sub-Total Development Charges	$ 3,292,938	$ 2,679,138	$ 3,013,652	$ 2,563,670	$ 3,715,763	$ 4,455,839	$ 5,718,020	$ 4,204,388	$ 6,52
Federal Gas Tax	$ -	$ 163,873	$ 253,617	$ -	$ 57,627	$ 607,332	$ 360,434	$ 384,596	$ 19
Roads Capital, Browns Line	$ 414,664	$ 634,667	$ 856,885	$ 1,117,116	$ 1,531,380	$ 1,350,193	$ 1,500,085	$ 0	$ 3
Water Levies	$ 15,309	$ 29,219	$ 37,996	$ 44,288	$ 48,819	$ 49,580	$ 50,131	$ 50,762	$ 5
Sanitary Sewer Levies	$ 73,961	$ 77,155	$ 81,566	$ 85,558	$ 88,796	$ 90,640	$ 92,107	$ 93,265	$ 9
Parkland	$ 62,537	$ 114,068	$ 103,465	$ 16,420	$ 16,952	$ 17,216	$ 17,407	$ 25,134	$ 2
Total Reserve Funds	$ 3,859,408	$ 3,698,121	$ 4,347,182	$ 3,827,052	$ 5,459,337	$ 6,570,800	$ 7,738,185	$ 4,758,145	$ 6,89

Appendix G, Taxation Based Reserve Balances from 2004 to 2013

Township of Essa
Taxation Based Reserves
from 2004 to 2013

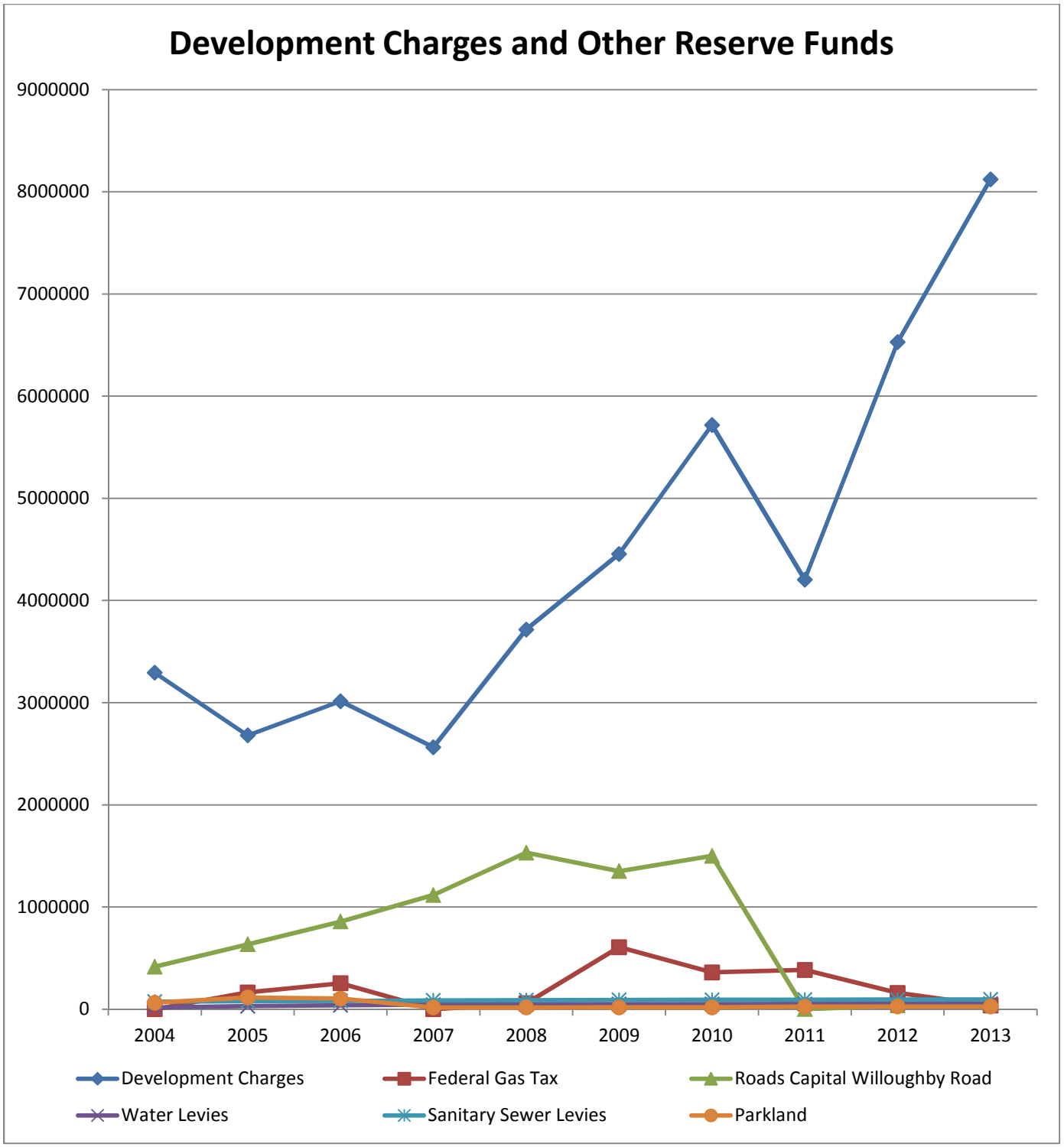
	2004	2005	2006	2007	2008	2009
Special Projects	$ 1,005,345	$ 1,336,582	$ 1,210,708	$ 1,373,457	$ 1,701,209	$ 4,772,997
Proceeds from Sale of Thornton Hydro	$ 256,931	$ 232,680	$ 135,144	$ 95,674	$ 97,042	$ 97,770
Capital Equipment	$ 1,448,901	$ 1,448,901	$ 1,448,901	$ 1,989,764	$ 3,199,121	$ 2,003,324
Fire Services	$ 304,367	$ 222,411	$ 143,218	$ 222,410	$ 222,410	$ 222,410
Fire Training and Equipment	$ -	$ -	$ -	$ -	$ -	$ -
Police Services	$ 171,291	$ 626,705	$ 626,705	$ 626,705	$ 476,705	$ 476,705
Parks and Recreation	$ 402,926	$ 411,884	$ 381,104	$ 328,511	$ 321,454	$ 266,326
Trails	$ 2,262	$ -	$ 150	$ 338	$ 338	$ 438
Riverbank Restoration	$ 9,121	$ 20,045	$ 27,043	$ 37,240	$ 62,058	$ 67,743
Contingencies and Other	$ 56,530	$ 56,530	$ 56,530	$ 56,530	$ 56,530	$ 56,530
Working Funds	$ 934,935	$ 934,935	$ 934,935	$ 934,935	$ 934,935	$ 934,935
Total Taxation Based Reserves	$ 4,592,609	$ 5,290,673	$ 4,964,438	$ 5,665,564	$ 7,071,802	$ 8,899,178

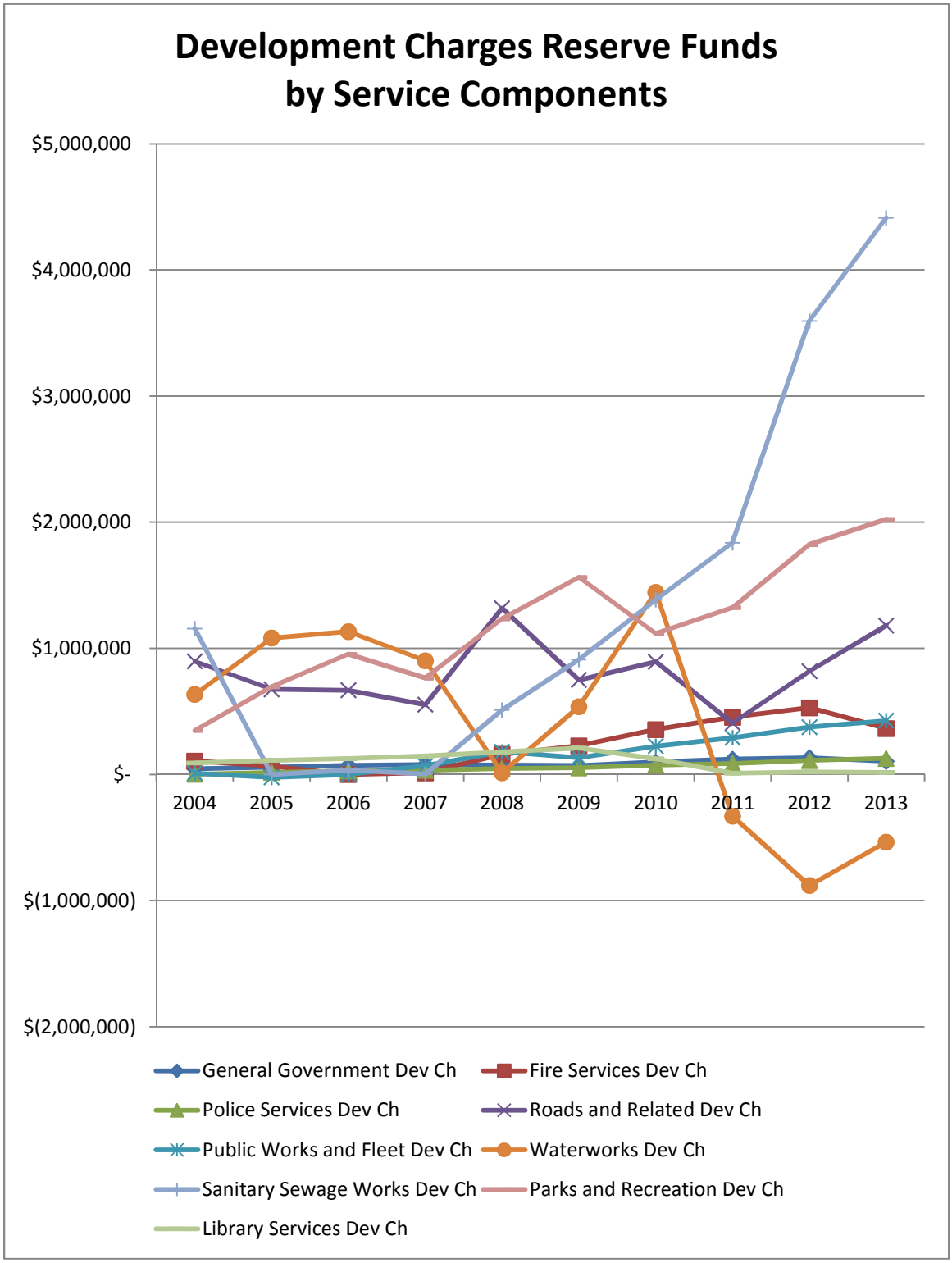
Appendix G, Rate Based Reserve Balances from 2004 to 2013

Township of Essa
Rate Based Reserves
from 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Water Rate Stabilization	$ 54,182	$ 82,510	$ 90,205	$ 90,205	$ 90,205	$ 90,205	$ 90,205	$ 90,205	$ 606,345	$ 606,3
Water Infrastructure	$ 175,000	$ 857,907	$ 1,227,907	$ 1,597,907	$ 1,915,416	$ 2,250,625	$ 2,586,645	$ 2,864,897	$ 3,187,765	$ 3,522,2
Sanitary Sewer Stabilization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 405,776	$ 405,7
Sanitary Sewer Infrastructure	$ 75,000	$ 611,499	$ 635,373	$ 704,414	$ 738,867	$ 840,501	$ 1,026,889	$ 1,223,237	$ 1,443,527	$ 1,671,6
Sub-total	$ 304,182	$ 1,551,916	$ 1,953,485	$ 2,392,526	$ 2,744,488	$ 3,181,331	$ 3,703,740	$ 4,178,339	$ 5,643,414	$ 6,206,0
Building Inspection Future Enforcement	$ -	$ 135,000	$ 135,000	$ 135,000	$ 135,000	$ 192,325	$ 327,101	$ 327,101	$ 371,722	$ 296,3
Angus Business Improvement Area Reserve Fund	$ 12,125	$ 15,741	$ 23,710	$ 35,795	$ 36,410	$ 21,926	$ 29,666	$ 33,688	$ 37,955	$ 42,1
Total Rate Based Reserves	$ 316,307	$ 1,702,657	$ 2,112,195	$ 2,563,321	$ 2,915,898	$ 3,395,582	$ 4,060,507	$ 4,539,128	$ 6,053,091	$ 6,544,5

Note that while the Angus Business Improvement Area is a Reserve Fund, as opposed to a Reserve, it has been included in this chart as it is rate based

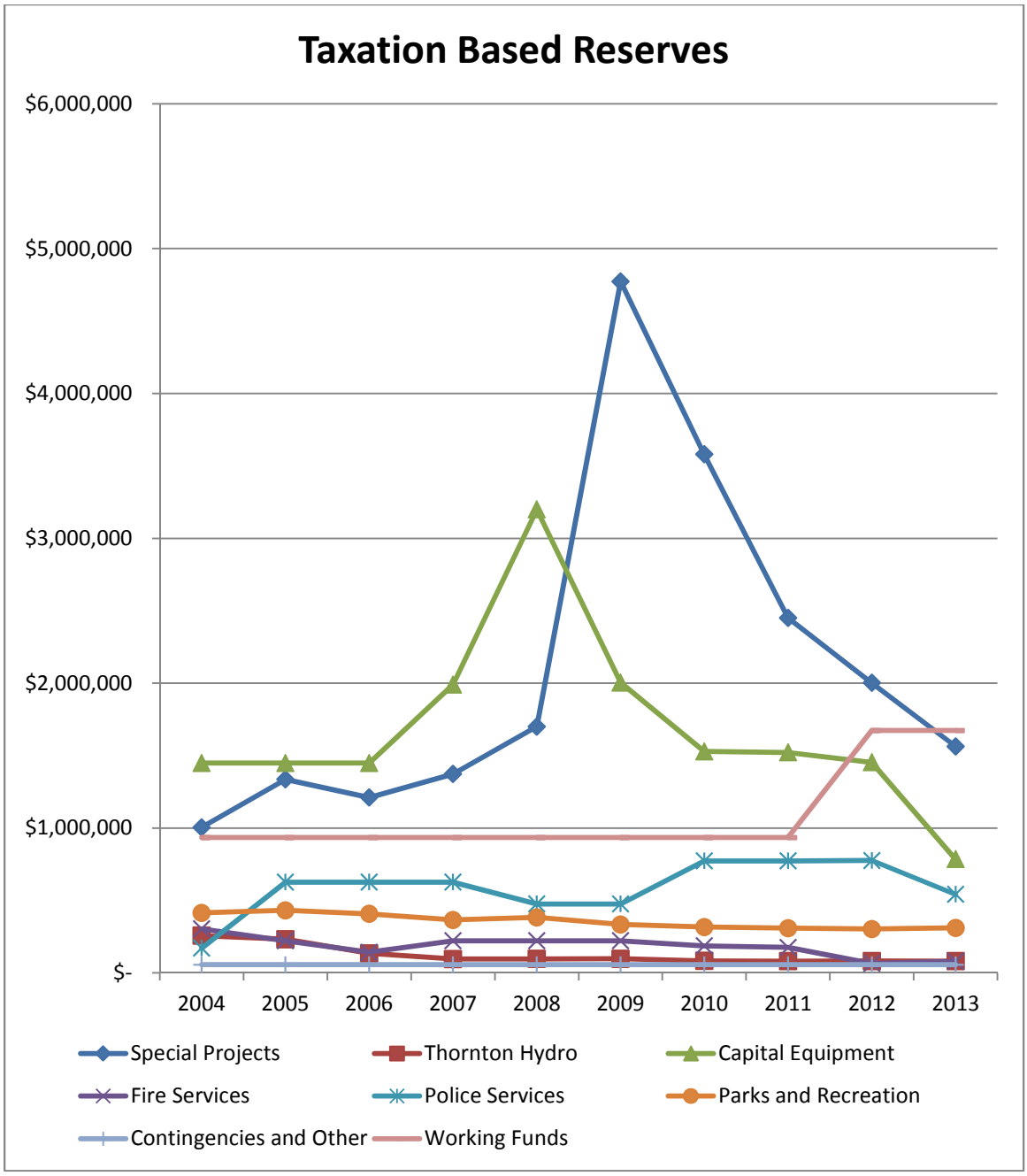

Development Charges and Other Reserve Funds
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Development Charges
Federal Gas Tax
Roads Capital Willoughby Road
Water Levies
Sanitary Sewer Levies
Parkland


Development Charges Reserve Funds
by Service Components
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$(2,000,000)
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
General Government Dev Ch
Fire Services Dev Ch
Police Services Dev Ch
Roads and Related Dev Ch
Public Works and Fleet Dev Ch
Waterworks Dev Ch
Sanitary Sewage Works Dev Ch
Parks and Recreation Dev Ch
Library Services Dev Ch

Development Charges Reserve Funds, Sources of Funds: collection of development charges; Uses of Reserve Funds: growth-related capital projects, debt servicing

Recreation Land (Parkland) Reserve Fund, Sources of Funds: cash in lieu of parkland, developer contributions, and proceeds of sale of parkland; Uses of Reserve Fund: parkland acquisition and parkland development (baseball diamonds, soccer pitches, tennis courts, playing fields); traditionally has not been required for parkland acquisition

Federal Gas Tax Reserve Fund, Sources of Funds: Federal Gas Tax grant; Uses of Reserve Fund: road reconstruction and rehabilitation, bridge reconstruction and rehabilitation, buses for transit, supplementary sand and salt storage dome


Taxation Based Reserves
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Special Projects
Thornton Hydro
Capital Equipment
Fire Services
Police Services
Parks and Recreation
Contingencies and Other
Working Funds

Special Projects Reserve, Source of Funds: proceeds of sale of land, may be supplemented through disposition of surplus municipal lands; Uses of Reserve: road reconstruction and rehabilitation, bridge reconstruction and rehabilitation, drainage improvements, arena additions and expansions, parks and recreation facilities and equipment, and other projects as approved by Council

Sale of Thornton Hydro Reserve, Source of Funds: proceeds of sale of Thornton Hydro, not intended to be replenished; Uses of Reserve: projects in Thornton as approved by Committee and Council, such as replacement of playground equipment in Thornton

Capital Equipment Reserve, Sources of Funds: taxation, no specific program of replenishment; Uses of Reserve: General Administration Equipment, Computer acquisition and replacement, Fire Fleet replacement, Public Works Fleet replacement

Internal and external machine time (rental) rates should be reviewed with an objective of increasing machine time (rental) rates to more fully reflect cost recovery for replacement of machinery and equipment

Annual machine time revenue net of machine time expenses should be considered for transfer to the Capital Equipment Reserve and the contributions reflected in annual budgets

Fire Department Reserve, Sources of Funds: taxation, no specific program of replenishment; Uses of Reserve: Fire Fleet and Equipment replacement

Fire Department Training and Equipment, Sources of Funds: fire cost recovery fees; Uses of Reserve: Fire Training and Equipment replacement

Fire cost recovery fees should be reviewed with an objective of increasing fire cost recovery fees to more fully reflect cost recovery; other charges and fees should be increased while apparatus rates are on par with Provincial rates

Surplus annual fire cost recovery, insurance recovery, and standby revenues net of fire expenses should be considered for transfer to the Fire Department Training and Equipment Reserve, with an appropriate split between funding training and equipment replacement, and the contributions reflected in annual budgets

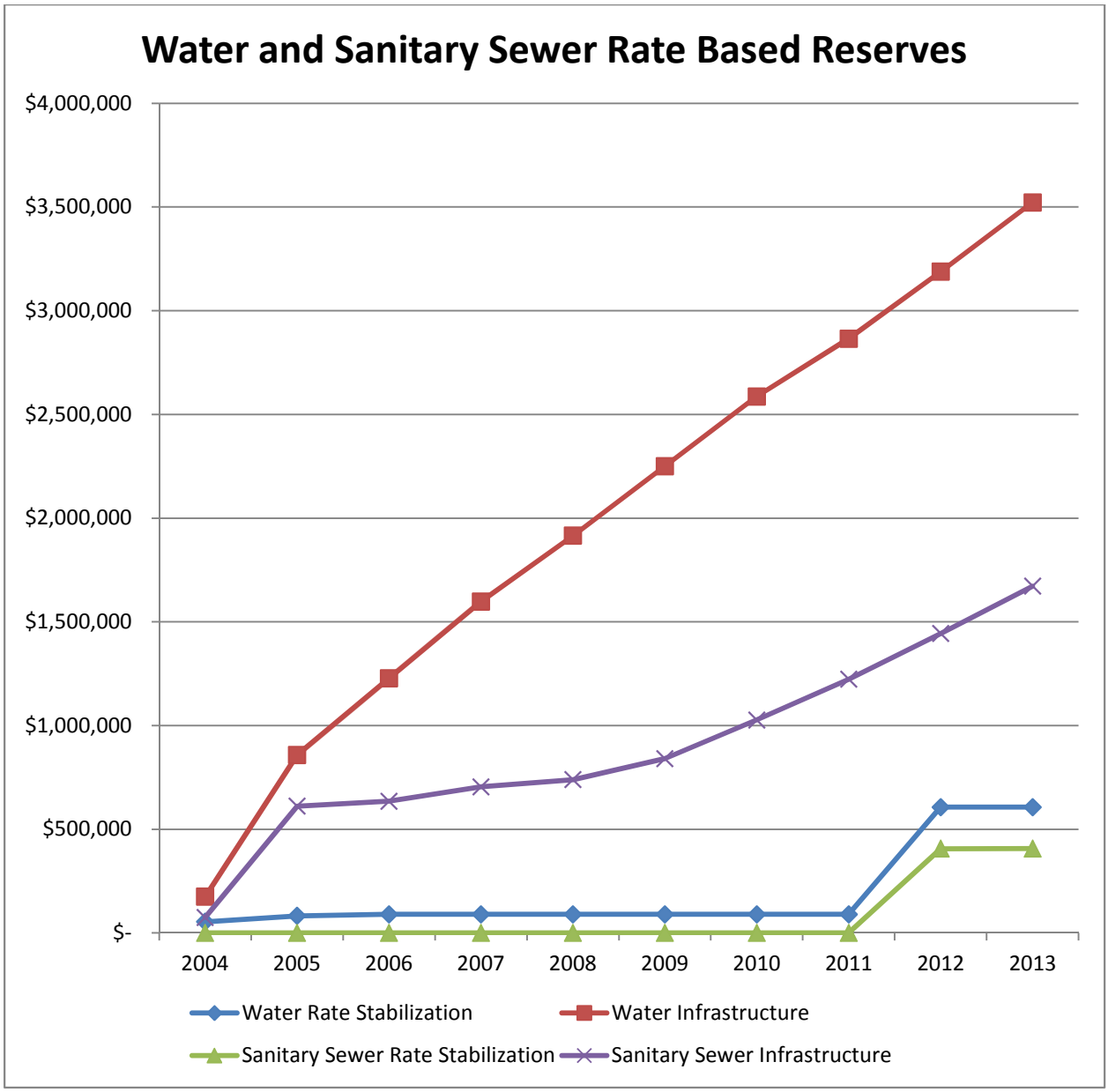
An annual amount should be considered for transfer to the Fire Department Reserve to provide for fire fleet replacement and the contributions reflected in annual budgets

Policing Reserve, Sources of Funds: annual police servicing cost reconciliation surplus (deficit); Uses of Funds: annual police servicing operational cost increases

Parks and Recreation Reserve, Sources of Funds: taxation, no specific program of replenishment; Uses of Reserve: Arena equipment replacement, Parks and Recreation equipment replacement, Playground equipment replacement

Trails Reserve, Sources of Funds: donations; Uses of Reserve: Trail development

Riverbank Restoration, Sources of Funds: grants, donations, and taxation; Use of Reserve: Riverbank Restoration projects


Water and Sanitary Sewer Rate Based Reserves
$4,000,000
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$-
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Water Rate Stabilization
Water Infrastructure
Sanitary Sewer Rate Stabilization
Sanitary Sewer Infrastructure

Water Rate Stabilization, Sources of Funds: water user charges and annual water system surplus (deficit); Use of Reserve: water rate stabilization

Water Infrastructure Replacement, Sources of Funds: water user charges and annual water system surplus (deficit); Use of Reserve: replacement of water plant, equipment, and infrastructure, debt servicing

Transfers to the water rate stabilization reserve should be capped at an appropriate level and future water system surpluses, if any, be transferred to the water infrastructure replacement reserve.

Sanitary Sewer Rate Stabilization, Sources of Funds: sanitary sewer user charges and annual sanitary sewer system surplus (deficit); Use of Reserve: sanitary sewer rate stabilization

Sanitary Sewer Infrastructure Replacement, Sources of Funds: sanitary sewer user charges and annual sanitary sewer system surplus (deficit); Use of Reserve: replacement of wastewater plant, equipment, and infrastructure, debt servicing

Transfers to the sewer rate stabilization reserve should be capped at an appropriate level and future sanitary sewer system surpluses, if any, be transferred to the sanitary sewer infrastructure replacement reserve.

Appendix H, Extract from Capital Investment Plan Historical 31/10/2014

TOWNSHIP OF ESSA
CAPITAL INVESTMENT PLAN
FIVE YEAR HISTORICAL CAPITAL PROJECTS

SECTION: **SUMMARY**

DEPARTMENT: **Summary**

Sub-Department: Historical

INCREASE (DECREASE)

PROJECT FINANCIAL DETAILS

ID Description	2007 Budget	2007 Actual	2008 Budget	2008 Actual	2009 Budget
Projects					
Administration, Council, CAO, Clerk, Treasury	60,250	57,427	47,000	41,015	0
Fire, Rescue, & Emergency Services	121,500	128,557	86,500	11,427	151,000
Building Permits and Inspection Services	0	0	0	0	0
Municipal By-Law Enforcement and Animal Contro	0	0	0	0	0
Roadways	663,500	804,819	822,200	666,977	1,673,600
Bridges and Culverts	2,101,000	864,890	1,242,762	1,149,787	460,000
Public Works	1,262,300	1,237,082	599,300	586,067	2,283,000
Waterworks	3,046,377	1,584,374	1,958,818	1,522,668	418,069
Wastewater (Sewage) Works	156,700	301,512	60,000	72,336	182,750
Parks and Recn Parks, Outdoor Recreation Facilit	140,700	265,929	83,500	90,293	77,925
Parks and Recn Angus Arena and Recreation Cen	31,900	31,605	8,000	9,717	25,000
Parks and Recn Thornton Arena and Recreation C	168,650	168,971	14,000	5,195	17,500
Parks and Recn Community Buildings	12,000	14,145	0	0	0
Library Services	43,822	43,878	0	0	3,390,752
Planning, Economic Development, BIA	0	0	21,700	2,125	40,000
Other	0	0	0	0	0
Total Project Costs	7,808,699	5,503,188	4,843,780	4,157,608	8,719,596
Sources of Financing					
Revenue Fund:					
from Operations (Tax Base)					
from Operations (User Fees)					
Reserves and Reserve Funds:					
from Reserves					
from Reserve Funds					
from Development Charges					
Other Sources					
Total Financing	0	0	0	0	0
Unfinanced Outlay (Net)		5,503,188		4,157,608	

Appendix H, Extract from Capital Investment Plan Historical 31/10/2014

2009 Actual	2010 Budget	2010 Actual	2011 Budget	2011 Actual	Five Year Actual Total
0	0	0	0	0	98,442
161,308	404,500	399,712	10,500	17,903	718,906
0	0	16,570	20,000	16,521	33,091
0	0	0	0	0	0
2,114,993	2,449,100	1,531,274	3,262,766	1,977,540	7,095,603
62,923	610,000	493,702	1,497,183	964,234	3,535,536
2,746,537	768,500	610,843	1,534,300	1,441,581	6,622,110
446,058	1,230,000	96,059	3,296,496	2,519,476	6,168,634
227,340	32,200	32,032	10,000	21,488	654,708
110,766	500,800	506,157	336,000	555,276	1,528,421
3,634	1,748,000	1,499,345	20,000	19,026	1,563,327
18,767	156,000	151,729	0	0	344,661
0	300,000	176,488	10,000	12,197	202,831
0	2,360,000	97,166	2,563,021	1,668,437	1,809,481
23,478	125,000	0	10,000	74,233	99,837
0	155,000	0	0	6,805	6,805
					0
					0
					0
5,915,803	10,839,100	5,611,076	12,570,266	9,294,717	30,482,392
					0
					0
					0
					0
					0
					0
					0
					0
					0
0	0	0	0	0	0
5,915,803		5,611,076		9,294,717	

Appendix H, Extract from Capital Investment Plan Forecast 31/10/2014

TOWNSHIP OF ESSA
CAPITAL INVESTMENT PLAN
TEN YEAR FORECAST 2014 - 2023 CAPITAL PROJECTS
ACTUAL COSTS FOR 2012 AND 2013 CAPITAL PROJECTS

SECTION: SUMMARY

DEPARTMENT: Summary

Sub-Department: Forecast

PERFORMANCE & ACTIVITY MEASURES
INCREASE (DECREASE)

PROJECT FINANCIAL DETAILS

ID Description	2012 Actual	2013 Actual	2014 Forecast	2015 Forecast	2016 Forecast
Projects					
Administration	0	20,548	42,500	119,500	100,000
Fire, Rescue, & Emergency Services	184,370	680,288	300,500	1,122,250	258,500
Building Permits and Inspection Services	0	0	0	0	0
Municipal By-Law Enforcement and Animal Control	0	0	0	30,000	0
Roadways	2,832,361	1,536,474	2,260,300	4,004,400	2,807,500
Bridges and Culverts	548,700	3,657	0	1,020,000	257,000
Public Works	530,713	316,906	192,400	911,623	755,330
Waterworks	1,346,531	22,318	259,889	166,585	232,810
Wastewater (Sewage) Works	46,402	0	1,757,734	232,944	270,194
Parks and Recn Parks, Outdoor Recreation Facilit	28,003	189,713	366,000	275,000	384,000
Parks and Recn Angus Arena and Recreation Cent	61,778	48,947	0	466,000	465,000
Parks and Recn Thornton Arena and Recreation C	216,463	407,678	22,000	124,500	193,910
Parks and Recn Community Buildings	3,515	2,006	50,000	20,000	20,000
Library Services	133,395	148,931	125,700	120,000	120,000
Planning, Economic Development, BIA	0	0	80,000	25,000	10,000
Other	4,745	0	0	11,925	23,850
Total Project Costs	5,936,976	3,377,466	5,457,023	8,649,727	5,896,094
Sources of Financing					
Revenue Fund:					
from Operations (Tax Base)	790,857	813,858	987,057	4,255,587	3,274,047
from Operations (User Fees)	66,708	0	0	63,250	100,500
	0	0	0	0	0
Reserves and Reserve Funds:					
from Reserves	591,407	1,117,854	495,198	417,525	380,000
from Reserve Funds	751,871	658,534	2,643,623	712,133	724,810
from Development Charges	1,740,664	583,451	1,150,750	2,379,757	1,417,737
Other Sources					
Grants	469,245	147,152	66,875	31,875	0
Donations, Trade ins, Proceeds	0	0	13,500	1,500	1,000
Developers	1,426,224	46,617	100,000	788,000	0
Total Financing	5,936,976	3,377,466	5,457,023	8,649,727	5,896,094
Unfinanced Outlay (Net)	0	0	0	0	0

Tax Supported	3,439,400	8,250,198	5,395,090
Water and Sewer Rate Supported	2,017,623	399,529	503,004
Bldg Insp Rate Supported	0	0	0
Total	5,457,023	8,649,727	5,898,094

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Appendix H, Extract from Capital Investment Plan Forecast 31/10/2014

2017 Forecast	2018 Forecast	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast	Total Forecast
140,000	20,000	30,000	62,500	0	50,000	15,000	579,500
258,500	388,500	267,050	644,550	200,300	211,550	155,550	3,807,250
0	0	0	20,000	20,000	0	0	40,000
0	0	0	0	0	0	30,000	60,000
2,103,500	3,061,500	3,267,000	2,102,000	2,172,000	3,570,500	2,885,800	28,234,500
896,000	154,000	614,000	116,000	66,000	41,000	13,000	3,179,000
1,339,235	1,336,055	1,892,855	2,098,815	1,907,705	285,000	100,000	10,819,018
138,050	196,240	279,500	239,825	2,708,580	181,750	364,280	4,767,509
275,944	241,444	215,694	267,444	238,694	238,694	211,094	3,949,880
225,000	225,000	375,000	235,000	235,000	200,000	200,000	2,720,000
110,000	120,000	2,365,000	100,000	100,000	98,500	100,000	3,924,500
608,910	388,910	103,910	98,910	100,000	99,000	97,000	1,837,050
0	0	0	0	0	0	0	90,000
120,000	120,000	120,000	120,000	120,000	120,000	120,000	1,205,700
5,000	5,000	0	30,000	20,000	0	0	175,000
0	35,775	35,775	35,775	35,775	35,775	35,775	250,425
							0
							0
							0
6,222,139	6,292,424	9,565,784	6,170,819	7,924,054	5,131,769	4,327,499	65,639,332
3,732,397	3,904,647	4,467,647	3,033,647	3,348,237	3,309,487	2,658,037	32,970,800
106,250	71,750	46,000	117,750	89,000	69,000	41,400	704,900
0	0	0	0	0	0	0	0
445,000	220,000	90,000	122,500	30,000	50,000	15,000	2,265,323
630,050	688,240	771,500	731,825	655,580	573,750	576,280	8,907,791
1,298,442	1,397,787	4,180,637	2,164,097	3,791,237	1,019,532	926,282	19,726,268
3,000	3,000	3,000	0	3,000	3,000	3,000	116,750
7,000	7,000	7,000	1,000	7,000	7,000	7,500	58,500
0	0	0	0	0	0	0	888,000
6,222,139	6,292,424	9,565,784	6,170,819	7,924,054	5,131,769	4,327,499	65,639,332
0	0	0	0	0	0	0	
5,808,145	5,854,740	9,070,590	5,663,550	4,976,780	4,711,325	3,752,125	56,921,943
413,994	437,684	495,194	507,269	2,947,274	420,444	575,374	8,717,389
0	0	0	20,000	20,000	0	0	40,000
6,222,139	6,292,424	9,565,784	6,190,819	7,944,054	5,131,769	4,327,499	65,679,332

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Appendix I, Extract from Development Charges Background Study 2013, Water Capital Program

APPENDIX C
TABLE 1

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
ANGUS SERVICE AREA - WATER SUPPLY AND DISTRIBUTION

ANGUS WATER SUPPLY AND DISTRIBUTION	Estimated Project Costs					
	Gross Cost	Grants and Subsidies	Benefit to Existing and Local Shares	Net Growth-Related	Post Period Benefit	Net DC Recoverable 2013-2031
Project Descriptions						
1 In-ground Storage Facility (2,500 m^3) at Mill Street Reservoir Site	$2,545,000	$0	0% $0	$2,545,000	$0	$2,545,000
2 Angus Water Supply Test Well Drilling Program	$140,000	$0	0% $0	$140,000	$0	$140,000
3 Angus Water Debenture	$1,364,541	$0	0% $0	$1,364,541	$0	$1,364,541
Mill Street Reservoir Principal (2013 to 2024) $ 788,477.69						
Mill Street Reservoir Interest (2013 to 2024) $ 123,135.66						
Brownley Reservoir Principal (2013 to 2024) $ 391,748.94						
Brownley Reservoir Interest (2013 to 2024) $ 61,178.98						
4 Recovery of Angus Water DC Reserve Fund Deficit	$888,723	$0	0% $0	$888,723	$0	$888,723
TOTAL ANGUS WATER SUPPLY AND DISTRIBUTION	$4,938,264	$0	$0	$4,938,264	$0	$4,938,264

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Appendix I, Extract from Development Charges Background Study 2013, Sewer Capital Program

APPENDIX C
TABLE 3

TOWNSHIP OF ESSA
DEVELOPMENT-RELATED CAPITAL PROGRAM
ANGUS SERVICE AREA - SEWAGE TREATMENT AND COLLECTION

ANGUS SEWAGE TREATMENT AND COLLECTION	Estimated Project Costs							Net DC Recoverable 2013-2031
	Gross Cost	Grants and Subsidies	Benefit to Existing and Local Shares		Net Growth-Related	Post Period Benefit		
Project Descriptions								
1 **Angus WWTP Expansion**								
Construction and Related Costs	$4,228,765	$0	0%	$0	$4,228,765	0%	$0	$4,228,765
Debenture Financing Costs[1]	$2,189,007	$0	0%	$0	$2,189,007	0%	$0	$2,189,007
Sub-Total Angus WWTP Expansion	**$6,417,772**	**$0**		**$0**	**$6,417,772**		**$0**	**$6,417,772**
Sewage Collection and Related Works								
2 Recovery of Sewage Treatment Plant Existing Credits[2]	$395,336	$0	0%	$0	$395,336	0%	$0	$395,336
3 Sludge Management (Digesters)	$2,263,820	$0	0%	$0	$2,263,820	0%	$0	$2,263,820
4 Aeration System Upgrades	$136,850	$0	3%	$3,500	$133,350	0%	$0	$133,350
Sub-Total Sewage Collection and Related Works	**$2,796,006**	**$0**		**$3,500**	**$2,792,506**		**$0**	**$2,792,506**
Subtotal	**$9,213,778**	**$0**		**$3,500**	**$9,210,278**		**$0**	**$9,210,278**
Less Available DC Reserve Fund	($3,597,017)				($3,597,017)			($3,597,017)
TOTAL ANGUS SEWAGE TREATMENT AND COLLECTION	**$5,616,761**	**$0**		**$3,500**	**$5,613,261**		**$0**	**$5,613,261**

Notes
1) The Township issued a debenture (By-law Number 2008-01) to finance the growth-related share of the Angus WWTP and Pump Station No. 2 works; balance of repayments from 2013 to 2031.

Semi-Annual Payments	$173,453.31
Number of Remaining Payments	37
Total Payments	$6,417,772.47
Principal	$4,228,765.05
Interest	$2,189,007.42

2) Including File No E-T-94007, 43-21-010-010-05410-0000, Conc III Pt Lots 31 and 32 (Clauriz Construction Inc, Previn Court Subdivision)

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Appendix J, Municipal Performance Measurement Program 2012 Results Drinking Water

TOWNSHIP OF ESSA

Municipal Performance Measurement Program (MPMP) • 2012 RESULTS

FIR Reference	Minister's List #	Drinking Water	2012	2011	2010	2009	2008
91 3311 35	9.1 a)	Operating costs for the treatment of drinking water per megalitre.	$ 603.39	$ 686.04	$ 551.33	$ 805.04	$ 446.08
91 3311 45	9.1 b)	Total costs for the treatment of drinking water per megalitre.	$ 930.33	$ 1,024.49	$ 881.32	$ 1,100.84	
91 3311 46		Total costs, net of interest on long term debt, for the treatment of drinking water per megalitre.	$ 886.55				
91 3312 35	9.2 a)	Operating costs for the distribution/ transmission of drinking water per kilometre of water distribution pipe.	$ 8,183.87	$ 8,320.29	$ 7,225.21	$ 10,832.51	$ 6,256.63
91 3312 45	9.2 b)	Total costs for the distribution/ transmission of drinking water per kilometre of water distribution pipe.	$ 14,000.31	$ 14,275.00	$ 13,585.44	$ 17,095.56	
91 3312 46		Total costs, net of interest on long term debt, for the distribution/ transmission of drinking water per kilometre of water distribution pipe.	$ 12,642.44				
91 3313 35	9.3 a)	Operating costs for the treatment and distribution/transmission of drinking water per megalitre (integrated system).	$ 1,007.59	$ 1,145.84	$ 918.88	$ 1,341.74	$ 743.47
91 3313 45	9.3 b)	Total costs for the treatment and distribution/transmission of drinking water per megalitre (integrated system).	$ 1,621.81	$ 1,813.37	$ 1,572.42	$ 1,947.84	
91 3313 46		Total costs, net of interest on long term debt, for the treatment and distribution/transmission of drinking water per megalitre (integrated system).	$ 1,510.95				
92 3355 07	9.4	Weighted number of days when a boil water advisory issued by the medical officer of health, applicable to a municipal water supply, was in effect.	0.0000	0.0000	0.0000	0.0000	0.0000
92 3356 07	9.5	Number of water main breaks per 100 kilometres of water distribution pipe in a year.	0.00	0.00	0.00	0.00	0.00

NOTES & KEY FACTORS FOR UNDERSTANDING RESULTS:

OCWA is contracted operator of system

CONTACT PERSON:

REFERENCE:

- The formulas for efficiency measures were revised in 2009 to reflect changes in the reporting of expenses consistent with accrual accounting concepts. New total cost measures were introduced and revised in 2010. Total costs mean operating costs as defined in MPMP, plus amortization and interest on long term debt, less revenue received from other municipalities for tangible capital assets.
- Starting with the 2012 reporting year, municipalities that report interest on long term debt for a service in the Financial Information Return may report an additional, optional measure to the public. This optional measure nets out interest on long term debt from total costs in the numerator of the measure.

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Appendix J, Municipal Performance Measurement Program 2012 Results Wastewater (Sewage)

TOWNSHIP OF ESSA

Municipal Performance Measurement Program (MPMP) • 2012 RESULTS

FIR Reference	Minister's List #	Wastewater (Sewage)	2012	2011	2010	2009	2008
91 3111 35	7.1 a)	Operating costs for the collection/conveyance of wastewater per kilometre of wastewater main.	$ 6,105.20	$ 5,555.60	$ 5,878.15	$ 8,297.36	$ 5,691.52
91 3111 45	7.1 b)	Total costs for the collection/conveyance of wastewater per kilometre of wastewater main.	$ 9,713.51	$ 9,154.14	$ 9,539.00	$ 11,541.82	
91 3111 46		Total costs, net of interest on long term debt, for the collection/conveyance of wastewater per kilometre of wastewater main.	$ 9,713.51				
91 3112 35	7.2 a)	Operating costs for the treatment and disposal of wastewater per megalitre.	$ 595.86	$ 477.85	$ 499.38	$ 614.78	$ 407.32
91 3112 45	7.2 b)	Total costs for the treatment and disposal of wastewater per megalitre.	$ 1,464.65	$ 1,249.67	$ 1,339.17	$ 1,354.94	
91 3112 46		Total costs, net of interest on long term debt, for the treatment and disposal of wastewater per megalitre.	$ 1,222.23				
91 3113 35	7.3 a)	Operating costs for the collection/conveyance, treatment, and disposal of wastewater per megalitre (integrated system).	$ 845.91	$ 677.93	$ 713.40	$ 878.26	$ 581.89
91 3113 45	7.3 b)	Total costs for the collection/conveyance, treatment, and disposal of wastewater per megalitre (integrated system).	$ 1,862.49	$ 1,579.35	$ 1,686.48	$ 1,721.45	
91 3113 46		Total costs, net of interest on long term debt, for the collection/conveyance, treatment, and disposal of wastewater per megalitre (integrated system).	$ 1,620.07				
92 3154 07	7.4	Number of wastewater main backups per 100 kilometres of wastewater main in a year.	0.00	0.00	0.00	0.00	0.00
92 3155 07	7.5	Percentage of wastewater estimated to have by-passed treatment.	0.000%	0.000%	0.000%	0.000%	0.000%

Township of Essa
Asset Management Plan
For the Ten Year Period from 2014 to 2023
Appendix K, Capital Project Prioritization and Risk Analysis

Capital Project Prioritization, Probability and Risk or Consequence of Failure

A physical inspection and condition assessment may be the most reliable determination of infrastructure and asset condition. Where a physical condition assessment has not been undertaken, the estimated remaining useful life of infrastructure may be used as a proxy for condition assessment, on a high level basis, to infer a condition upon a class of assets. It should not be solely relied upon to determine the need to proceed with a specific project. The use of a prioritization matrix should be considered in the absence of physical inspections and condition assessments.

The following is a sample template for prioritization using a matrix. The matrix may be expanded to further differentiate between the relative priorities of projects. Ratings may be weighted to further differentiate between the results of the matrix. Components of systems need to be evaluated based on their effect on the larger system as a whole.

Remaining Useful Life (Estimate)	Inferred Condition (Estimate)	Probability of Failure	Probability of Failure Rating
86% to 100%	New to Excellent	Improbable	1
61% to 85%	Good	Unlikely	2
41% to 60%	Fair	Possible	3
16% to 40%	Poor	Likely	4
0% to 15%	Very Poor	Highly Probable	5

Risk or Consequence of Failure	Risk or Consequence of Failure Rating
Low, very low measurable effect of any kind	1
Medium Low, low or minor change in the function, serviceability, or capacity of the asset or system, or its effect on public safety and the environment	2
Medium, moderate change in the function, serviceability, or capacity of the asset or system, or its effect on public safety and the environment	3
Medium High, major change in the function, serviceability, or capacity of the asset or system, or its effect on public safety and the environment	4
High, significant or complete loss of function, serviceability, or capacity of the asset or system, or severe impact on public safety or severe impact on the environment	5

Alternatively, instead of a rating, Probability of Failure may be assigned a likelihood of occurrence in the form of a percentage ranging from 0% to 100%.

Capital Project Priority Matrix		Probability of Failure Rating				
		1	2	3	4	5
Risk or Consequence of Failure	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Alternatively, the Priority Matrix may be expressed as the likelihood and consequence of risk evaluated on a scale of “Low” to “Extreme”.

Risk		Likelihood				
		Rare	Unlikely	Moderate	Likely	Almost Certain
Consequence	Insignificant.	Low	Low	Low	Moderate	High
	Minor.	Low	Low	Moderate	High	High
	Moderate.	Low	Moderate	High	High	Extreme
	Major.	Moderate	High	High	Extreme	Extreme
	Critical Severe.	High	High	Extreme	Extreme	Extreme

Source: based on <http://www.moi.gov.on.ca/en/infrastructure/building_together_mis/risk_primer.asp>; format has been modified for presentation purposes; outcomes have been modified for comparison purposes

The proposed timing of a class of capital projects or a detailed investigation and assessment of a particular capital project may be derived from the Priority Rating.

Priority Rating	Timing
High	Immediate (as soon as practical), 1 year
Medium High	Short Term, 1 to 3 years
Medium	Medium Term, 4 to 9 years
Medium Low	Long Term, 10 years or longer
Low	Long Term, 10 years or longer

Risk Analysis

Categories of risk management strategies

- Prevention: Terminate (eliminate) the risk by doing things differently
- Reduction: Take action to either reduce the likelihood of occurrence or limit the impact when the risk does occur
- Transference: Pass management of the risk to a third party (e.g. insurance, contract provisions)
- Acceptance: Tolerate the risk, if the cost to mitigate the risk outweighs the likelihood and consequence of the risk, or the likelihood and impact of risk occurring is acceptable
- Contingency: Plan and organize actions to be initiated if the risk occurs; this includes ensuring the required resources are in place and responsibility for implementing the actions is clear

Source: <http://www.moi.gov.on.ca/en/infrastructure/building_together_mis/risk_primer.asp>

Risk analysis and risk management are ongoing processes.

Township of Essa
Asset Management Plan
For the Ten Year Period from 2014 to 2023
Appendix L, Asset Management Strategies for Core Infrastructure

Asset Management Strategies for Core Infrastructure

Lifecycle Activities Associated with Roadways

Minor Maintenance	Inspection, Monitoring, Sweeping, Dig Outs, Cold Patch, Roadside Maintenance
Major Maintenance	Repairing Potholes, Grinding Out Rutting, Patching Sections
Rehabilitation	Asphalt Overlay, Milling and Paving
Replacement	Resurfacing, Base and Surface Reconstruction
Disposal	There are no plans in place to dispose of open public roads
Expansion	New roads will be added to the roads network through subdivision development

Lifecycle Activities Associated with Bridges

Minor Maintenance	Inspection, Monitoring, Sweeping, Cleaning, Painting
Major Maintenance	Repairs to Cracked or Spalled Concrete, Damaged Expansion Joints, Bent or Damaged Railings
Rehabilitation	Reinforcement of Structural Components, Deck Replacement, Lining
Replacement	Full Structure and Deck Reconstruction
Disposal	There are no plans in place to dispose of or remove bridges
Expansion	There are no plans in place to add anymore new bridges

Lifecycle Activities Associated with Storm Sewers

Minor Maintenance	Inspection, Monitoring, Cleaning, Flushing, CCTV Inspection
Major Maintenance	Repairing Maintenance Holes, Replacing Sections
Rehabilitation	Lining of Pipes, Replacing Sections
Replacement	Full Dig Out and Reconstruction
Disposal	There are no plans in place to dispose of or abandon storm sewers
Expansion	New storm sewers will be added to the system with subdivision development

Lifecycle Activities Associated with Watermains

Minor Maintenance	Inspection, Monitoring, Cleaning, Flushing, Hydrant Flushing, Pressure Testing
Major Maintenance	Repairing Watermain Breaks, Repairing Valves, Replacing Sections
Rehabilitation	Lining of Pipes, Replacing Sections, Cathodic Protection Program
Replacement	Full Dig Out and Reconstruction
Disposal	There are no plans in place to dispose of or abandon watermains
Expansion	New watermains will be added to the system with subdivision development

Lifecycle Activities Associated with Sanitary Sewer Trunks

Minor Maintenance	Inspection, Monitoring, Cleaning, Flushing, CCTV Inspection
Major Maintenance	Repairing Maintenance Holes, Replacing Sections
Rehabilitation	Lining of Pipes, Replacing Sections
Replacement	Full Dig Out and Reconstruction
Disposal	There are no plans in place to dispose of or abandon sanitary sewers
Expansion	New sanitary sewers will be added to the system with subdivision development

Roads

Roads are inspected and maintained pursuant to the Municipal Act, 2001, O. Reg. 239/02 Minimum Maintenance Standards for Municipal Highways as amended by O. Reg. 23/10.

Gravel Roads Program

Essa has an annual gravel roads program including grading and dust control. The gravel roads hard surfacing program will result in dust suppressant cost savings of $ 1,200 per km per year.

Bridges and Structures

Bridges and structures are inspected bi-annually and maintained pursuant to the Public Transportation and Highway Improvement Act, R.S.O. 1990.

Sidewalks

Sidewalks are inspected annually and maintained pursuant to the Municipal Act, 2001, O. Reg. 239/02 Minimum Maintenance Standards for Municipal Highways as amended by O. Reg. 23/10. This is a proxy for the desired level of service.

Beginning in 2014, the Township has a non-capital sidewalk repair program to maintain existing sidewalks and to upgrade sidewalks that do not meet the minimum maintenance standards. The average annual costs of the program are $ 10,000, being $ 80.00 per metre, with 1,250 metres intended to be covered over the next ten years under the program, for a total of $ 100,000. The program may be adjusted in conjunction with the proposed sidewalk replacement program where it is more effective to replace older sidewalks than to repair sections of them. The program is primarily funded through operations.

Township of Essa
Asset Management Plan
For the Ten Year Period from 2014 to 2023

END