

Municipality of Middlesex Centre

2017 Development Charges Update Study

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 Planning for growth

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List of Acronyms and Abbreviations

D.C.	Development Charges
D.C.A.	Development Charges Act
G.F.A.	Gross floor area
mm	Millimeters
N.F.P.O.W.	No fixed place of work
O.M.B.	Ontario Municipal Board
O.Reg.	Ontario Regulation
para.	Paragraph
P.P.U.	Persons per unit
R.S.O.	Revised Statute of Ontario
sq.mt.	Square metre
s.s.	Subsection

1. Introduction

1.1 Background

The Municipality of Middlesex Centre (Municipality) imposes development charges to recover the increase in the needs for service arising from growth. The basis for the Municipality's existing residential and non-residential development charges is documented in the "Municipality of Middlesex Centre 2014 Development Charges Background Study" dated July 2, 2014 (as amended). This Background Study provides the supporting documentation for the Municipality's Development Charges (D.C.) By-law 2014-069, which came into effect on July 24, 2014. The resultant 2014 D.C. by municipal service and development type are summarized in Table 1-1 below.

Table 1-1
Municipality of Middlesex Centre
July 24, 2014 Schedule of Development Charges

Service	RESIDENTIAL (\$ per Dwelling Unit)			
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples
Municipal Wide Services:				
Roads	\$ 1,498	\$ 849	\$ 630	\$ 1,050
Public Works	\$ 500	\$ 283	\$ 210	\$ 350
Fire Protection Services	\$ 1,009	\$ 572	\$ 424	\$ 707
Parks and Recreation	\$ 1,619	\$ 918	\$ 681	\$ 1,135
Library Services	\$ 62	\$ 35	\$ 26	\$ 43
Administration - Studies	\$ 271	\$ 154	\$ 114	\$ 190
Total Municipal Wide Services	\$ 4,959	\$ 2,811	\$ 2,085	\$ 3,475
Area Specific Services:				
Water and Sewer Service Areas				
Water Services	\$ 1,300	\$ 737	\$ 547	\$ 911
Wastewater Services	\$ 9,589	\$ 5,436	\$ 4,032	\$ 6,719
TOTAL				
Water and Sewer Service Areas	\$ 15,848	\$ 8,983	\$ 6,663	\$ 11,105
Unserviced	\$ 4,959	\$ 2,811	\$ 2,085	\$ 3,475

Service	NON-RESIDENTIAL (\$ per Square Metre of Gross Floor Area)		
	Other Non-Residential	Agricultural Use	Industrial
Municipal Wide Services:			
Roads	\$ 7.54	\$ 1.28	\$ 3.02
Public Works	\$ 2.52	\$ -	\$ 1.01
Fire Protection Services	\$ 5.02	\$ 1.26	\$ 2.01
Parks and Recreation	\$ 2.70	\$ -	\$ 1.08
Library Services	\$ 0.10	\$ -	\$ 0.04
Administration - Studies	\$ 1.35	\$ -	\$ 0.54
Total Municipal Wide Services	\$ 19.23	\$ 2.54	\$ 7.69
Area Specific Services:			
Water and Sewer Service Areas			
Water Services	\$ 3.47	\$ -	\$ 1.39
Wastewater Services	\$ 25.60	\$ -	\$ 10.24
TOTAL			
Water and Sewer Service Areas	\$ 48.30	\$ 2.54	\$ 19.32
Unserviced	\$ 19.23	\$ 2.54	\$ 7.69

The Municipality's D.C. have been indexed annually in accordance with by-law 2014-69 on January 1st of each year. Table 1-2 summarizes the Municipality's schedule of charges currently in effect as at January 2, 2017. As a result of annual indexing, the D.C.s have increased by approximately 6.6% since by-law adoption.

Table 1-2
Municipality of Middlesex Centre
Schedule of Development Charges as at January 1, 2017

Service	RESIDENTIAL (\$ per Dwelling Unit)			
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples
Municipal Wide Services:				
Roads	\$ 1,597	\$ 905	\$ 672	\$ 1,120
Public Works	\$ 533	\$ 302	\$ 224	\$ 373
Fire Protection Services	\$ 1,076	\$ 610	\$ 452	\$ 754
Parks and Recreation	\$ 1,726	\$ 979	\$ 726	\$ 1,210
Library Services	\$ 66	\$ 37	\$ 28	\$ 46
Administration - Studies	\$ 289	\$ 164	\$ 122	\$ 203
Total Municipal Wide Services	\$ 5,288	\$ 2,997	\$ 2,223	\$ 3,706
Area Specific Services:				
<u>Water and Sewer Service Areas</u>				
Water Services	\$ 1,386	\$ 786	\$ 583	\$ 971
Wastewater Services	\$ 10,225	\$ 5,797	\$ 4,299	\$ 7,165
TOTAL				
Water and Sewer Service Areas	\$ 16,899	\$ 9,580	\$ 7,106	\$ 11,842
Unserviced	\$ 5,288	\$ 2,997	\$ 2,223	\$ 3,706

Service	NON-RESIDENTIAL (\$ per Square Metre of Gross Floor Area)		
	Other Non-Residential	Agricultural Use	Industrial
Municipal Wide Services:			
Roads	\$ 8.04	\$ 1.36	\$ 3.22
Public Works	\$ 2.69	\$ -	\$ 1.08
Fire Protection Services	\$ 5.35	\$ 1.34	\$ 2.14
Parks and Recreation	\$ 2.88	\$ -	\$ 1.15
Library Services	\$ 0.11	\$ -	\$ 0.04
Administration - Studies	\$ 1.44	\$ -	\$ 0.58
Total Municipal Wide Services	\$ 20.51	\$ 2.70	\$ 8.21
Area Specific Services:			
<u>Water and Sewer Service Areas</u>			
Water Services	\$ 3.70	\$ -	\$ 1.48
Wastewater Services	\$ 27.30	\$ -	\$ 10.92
TOTAL			
Water and Sewer Service Areas	\$ 51.50	\$ 2.70	\$ 20.61
Unserviced	\$ 20.51	\$ 2.70	\$ 8.21

1.2 Existing Policies (Rules)

The following summarizes policies governing the calculation, payment, and collection of D.C. as provided in By-law 2014-069 (as amended):

- The Municipality imposes a uniform municipal-wide development charge for all municipal services, except for water and wastewater services. Development charges for water and wastewater services are imposed in the municipal serviced area only as identified in Schedule “C” to the by-law, including Komoka, Ilderton, Delaware and Arva Settlement Areas. One municipal development charge by-law is used for all services.
- Development charges are imposed at the time of building permit issuance for all services on a per residential dwelling unit basis for residential development and per square metre of gross floor area for non-residential development.
- The by-law provides statutory exemptions with respect to:
 - industrial building additions of up to and including 50% of the existing gross floor area (defined in O.Reg. 82/98, s.1) of the building; for industrial building additions which exceed 50% of the existing gross floor area, only the portion of the addition in excess of 50% is subject to development charges (s.4(3));
 - buildings or structures owned by and used for the purposes of any municipality, local board or Board of Education (s.3); and
 - residential development that results in only the enlargement of an existing dwelling unit, or that results only in the creation of up to two additional dwelling units (based on prescribed limits set out in s.2 of O.Reg. 82/98).
- The by-law provides the following non-statutory exemptions:
 - full exemptions for greenhouse developments;
 - partial exemption for industrial development, with the amount payable calculated at 40% of the calculated Non-Residential Charge; and
 - partial exemption for non-residential agricultural uses, with the amount payable calculated at 17% of the Roads Services Charge and 25% of the Fire Protection Services Charge.

- Where a development involves the demolition of and replacement of a building or structure on the same site, or the conversion from one principal use to another, the developer shall be allowed a credit equivalent to:
 - the number of dwelling units demolished/converted multiplied by the applicable residential development charge in place at the time the development charge is payable; and/or
 - the gross floor area of the building demolished/converted multiplied by the current non-residential development charge in place at the time the development charge is payable.

The demolition credit is allowed only if the land was improved by occupied structures, and if the demolition permit related to the site was issued less than 5 years prior to the issuance of a building permit. The credit can, in no case, exceed the amount of development charges that would otherwise be payable.

- The by-law provides for indexing of the D.C., without amendment, annually on January 1st each year, in accordance with the most recent available twelve month change in the Statistics Canada's Non-Residential Building Construction Price Index
- The by-law will expire on July 23, 2019 unless is it repealed by Council at an earlier date.

1.3 Basis for D.C. By-law Update

This 2017 D.C. Update Study (Update Study) provides for an amendment to the Municipality's D.C. By-law. The purpose of the amendment is to provide for updates to the underlying capital cost estimates identified in the Municipality's 2014 D.C. Background Study, as amended, to determine the updated charges for Fire, Roads, Public Works, Parks and Recreation, Administration, Water, and Wastewater services. Changes in the capital cost estimates arise from the completion of various studies and environmental assessments, and the Municipality's updated capital project plans. Furthermore, updated cost data is available based on the actual costs incurred to complete some of the projects identified in the 2014 D.C. Background Study.

This amendment is being recommended at this time due to the increase in the capital cost estimates and the resultant under-recovery of anticipated capital cost requirements under the existing D.C. by-law. Details on the capital cost updates are presented in

Chapter 3 of this study. The revised schedule of D.C. is presented in the draft amending by-law contained in Appendix A herein. It should be noted that this report is provided as an amendment to the Municipality's D.C. By-law (i.e. By-law 2014-069) and as such the calculations are denominated in 2014 dollars (the Municipality's D.C. Background Study cost base). The amended D.C. rates are subsequently indexed to current rates for implementation.

The notice of the Public Meeting will be advertised in accordance with the requirements of the D.C.A., i.e. 20 clear-days prior to the public meeting. This background study document will be released for public review and posted on the Municipality's website in accordance with provisions of the D.C.A. on September 1, 2017. The statutory public meeting will be held in Council Chambers, at the Municipality's Municipal Offices on October 4, 2017. A presentation will be made to the public regarding the recommendations of this report, and Council will receive oral and written comments on the matter. It is anticipated that Council will consider for adoption the proposed amending by-law after the 60-day period between the release of the D.C. Background Study and the passage of the D.C. by-law (i.e. no earlier than November 1, 2017).

2. Anticipated Development

It is a requirement of Section 5 (1) of the D.C.A. that “the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated”. The growth forecast contained in Chapter 3 of the 2014 D.C. Background Study (with supplemental tables in Appendix A) provides for the anticipated development for which the Municipality of Middlesex Centre will be required to provide services, over a ten-year (2014-2024) and 20-year (2014-2034) time horizon.

Schedules 2 and 10c, contained within Appendix A of the 2014 D.C. Background Study, are provided below to summarize the anticipated amount, type, and location of residential and non-residential growth, respectively, over the various growth forecast periods.

For the purposes of this Update Study, the 2014 D.C. Background Study growth forecast remains unchanged. The revised capital cost estimated have been considered in the context of the growth forecast. Adjustment to the total D.C. eligible costs are provided, where necessary, to ensure that the increase in the need for service pertains to the underlying increase in development.

Schedule 2 Middlesex Centre Estimate of the Anticipated Amount, Type and Location of Development for Which Development Charges Can Be Imposed

DEVELOPMENT LOCATION	TIMING	SINGLES & SEMI- DETACHED	MULTIPLES ¹	APARTMENTS ²	TOTAL	GROSS POPULATION	EXISTING UNIT	NET
					RESIDENTIAL UNITS	IN NEW UNITS	POPULATION CHANGE	POPULATION INCREASE
Ilderton	2014 - 2024	391	28	-	419	1,319	(68)	1,251
	2014 - 2034	716	77	-	793	2,473	(161)	2,312
Kilworth	2014 - 2024	480	53	-	533	1,661	(57)	1,604
	2014 - 2034	909	100	-	1,009	3,144	(135)	3,009
Komoka	2014 - 2024	209	44	25	278	811	(40)	771
	2014 - 2034	382	69	74	525	1,504	(95)	1,409
Delaware	2014 - 2024	92	-	-	92	295	(45)	250
	2014 - 2034	174	-	-	174	559	(107)	452
Other Areas	2014 - 2024	85	5	-	90	281	(244)	36
	2014 - 2034	154	17	-	171	519	(576)	(57)
Middlesex Centre	2014 - 2024	1,254	133	25	1,412	4,367	(455)	3,912
	2014 - 2034	2,325	265	81	2,672	8,199	(1,074)	7,125

Source: Watson & Associates Economists Ltd., 2014

Residential distribution based on a combination of historical permit activity, available housing supply and discussions with Middlesex Centre staff regarding future development prospects.

1. Includes townhomes and apartments in duplexes.

Schedule 10c
Middlesex Centre
Estimate of the Anticipated Amount, Type and Location of Non-Residential
Development for Which Development Charges Can Be Imposed¹

DEVELOPMENT LOCATION	TIMING	PRIMARY GFA S.M. ²	INDUSTRIAL GFA S.M.	COMMERCIAL GFA S.M.	INSTITUTIONAL GFA S.M.	TOTAL NON-RES ³ GFA S.M.	EMPLOYMENT INCREASE
Ilderton	2014 - 2024		-	3,559	3,438	6,997	123
	2014 - 2034		1,947	6,086	6,725	14,758	238
Kilworth	2014 - 2024		-	3,149	3,042	6,191	109
	2014 - 2034		-	5,385	5,950	11,335	197
Komoka	2014 - 2024		15,364	2,413	2,331	20,108	210
	2014 - 2034		30,571	4,126	4,559	39,256	404
Delaware	2014 - 2024		1,921	1,738	1,678	5,337	76
	2014 - 2034		2,531	2,971	3,283	8,785	130
Other Areas	2014 - 2024	139,956	1,920	1,207	1,165	4,292	96
	2014 - 2034	280,000	3,895	2,064	2,280	8,239	188
Middlesex Centre	2014 - 2024	139,956	19,205	12,066	11,654	42,925	614
	2014 - 2034	280,000	38,944	20,632	22,797	82,373	1,157

Source: Watson & Associates Economists Ltd., 2014

1. Square Metres Per Employee Assumptions

Industrial	121
Commercial/ Population Related	51
Institutional	65
Primary	3,500

2. Includes all farm related buildings (barns, outbuildings, silos). As per the 2009 Middlesex Centre Development Charge Review.

3. Excludes Primary GFA

3. Revisions to the Anticipated Capital Needs

The 2014 D.C. Background Study adopted by Council in the preparation of the Municipality's D.C. by-law justified the maximum amount that could be charged for residential and non-residential development. The study and by-law identified anticipated capital needs for recovery through D.C.s for Fire Protection, Roads, Public Works, Parks and Recreation, Libraries, Administration, Water, and Wastewater services. The Municipality's current by-law provides for the uniform Municipal-wide recovery of growth-related costs arising from the increase in the needs for service related to development with area-specific charges for Water and Wastewater services. The intent of the amendment does not alter the Municipality's policy. As a result, the current policy or municipal-wide and area-specific charges is maintained.

3.1 Revised Capital Costs

The following subsections summarize the amendments made to the various capital projects comprising the D.C. amendment. For the purpose of calculating the amended D.C., the capital costs estimates (and actuals, where applicable) have been deflated to 2014 values, applying the change in the Statistics Canada Non-Residential Building Construction Price Index for the period (i.e. 6.6%). This reflects the indexing of the Municipality's D.C. over the period since by-law adoption.

3.1.1 Roads

The Municipality's roads capital program has been amended to include the Ilderton Road storm sewer project and revise capital cost estimates of previously included projects. The revisions are based on actual project costs incurred and the latest engineering cost estimates. As summarized in Table 3 1, the added project and the revised cost estimates increase the D.C. recoverable costs from \$4.45 million to \$5.85 million after the necessary deductions. The D.C. recoverable amount of \$5.85 million represents a 32% increase over the 2014 D.C. Background Study amount.

Consistent with the 2014 D.C. Background Study, the net capital costs have been attributed 86% to residential and 32% to non-residential development based on the relative net population employment increase for the 2014-2034 period.

**Table 3-1
Roads – Anticipated Capital Needs**

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Municipality of Middlesex Centre
Service: Roads

Prj .No	Increased Service Needs Attributable to Anticipated Development 2014-2034	Timing (year)	Gross Capital Cost Estimate	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 86%	Non-Residential Share 14%
Delaware											
1	Wellington St. (Victoria to Martin)	2018	1,207,801	-		1,207,801	181,170		1,026,631	883,210	143,421
2	Martin Rd. (Longwoods to Harris)		1,160,436	-		1,160,436	174,065		986,371	848,574	137,797
3	Harris Rd. (Victoria to Martin)		858,898	-		858,898	128,835		730,063	628,073	101,990
4	Harris Rd. (Martin to Carriage)		171,954	-		171,954	25,793		146,161	125,742	20,419
			-	-		-	-		-	-	-
Ilderton											
5	George St. and King St. Intersection		35,772	-		35,772	-		35,772	30,775	4,997
6	Hyde Park Rd. (Stonefield, north to subdivision entrance)	2018	1,151,431	-		1,151,431	115,143		1,036,288	891,518	144,770
7	Meadow Creek Rd (Calvert to park entrance)	2015	60,620	-		60,620	30,310		30,310	26,076	4,234
8	Ilderton Rd. Storm Sewer		205,755	-		205,755	30,863	48,119	126,773	109,062	17,710
Komoka											
9	Oxbow Dr. W Rural (Amiens to 2000m east)		167,274	-		167,274	100,364		66,910	57,562	9,347
10	Oxbow Dr. W Urban (Komoka Rd to 375m west)		390,936	-		390,936	234,562		156,374	134,529	21,846
11	Oxbow Dr. E Urban (Komoka Rd to Valleyview)	2018	1,029,471	-		1,029,471	617,683		411,788	354,261	57,527
12	Oxbow Dr. E Rural (Valleyview to Coldstream)		178,841	-		178,841	143,073		35,768	30,771	4,997
13	Queen St. (Oxbow to CN tracks)		1,165,526	-		1,165,526	617,729		547,797	471,270	76,528
14	Queen St. (CN tracks to CP tracks)		600,925	-		600,925	330,509		270,416	232,639	37,777
15	Queen St. (CP tracks to Glendon)		627,689	-		627,689	338,952		288,737	248,400	40,337
16	Transportation Master Plan (3)		90,000	-		90,000	22,500		67,500	58,070	9,430
	Reserve Fund Adjustment			-		-	-		(111,174)	(95,643)	(15,531)
				-		-	-		-	-	-
	Total		9,103,329	-	-	9,103,329	3,091,551	48,119	5,852,485	5,034,890	817,595

3.1.2 Public Works

The Municipality's 2014 D.C. Background Study identified \$6.03 million in gross capital costs for Public Works with a corresponding D.C. eligible amount of \$1.49 million after deductions for the benefit to existing development. The capital program has been amended to reflect the actual cost incurred on the purchase of a Single Axle Truck in 2015. As a result, the gross capital costs increase to \$6.05 million, with the D.C. eligible amount increasing to \$1.51 million as summarized in Table 3-2. The D.C. recoverable amount represents a 1.3% increase over the 2014 D.C. Background Study amount. Consistent with the 2014 D.C. Background Study, the net capital costs have been attributed 86% to residential and 32% to non-residential development.

3.1.3 Fire Protection Services

The Municipality's 2014 D.C. Background Study identified additional capital needs for Fire Protection Services to address the increase in the needs for services related to development. This capital program included two additional vehicles and funds for future relocation and expansion of the Coldstream Fire Hall. The gross capital cost estimate for the Fire Hall relocation/expansion project increased to \$3.21 million. After deducting \$473,963 for post period benefit, \$200,430 for the growth portion of a grant, and \$1.57 million for the replacement of the existing fire station space as benefit to existing development, the net growth-related cost for inclusion in the calculation of the charge for this project total \$960,168. As shown in Table 3-3 the updated increase in the need for services of \$1.9 million represents a 19% increased over the amount in the 2014 D.C. Background Study and utilizes the maximum D.C. cap limit arising from the historical level of service. The D.C. recoverable cost attribution has been maintained at 86% residential and 14% non-residential.

Table 3-3
Fire Protection Services – Anticipated Capital Needs

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Municipality of Middlesex Centre
Service: Fire Services

Prj .No	Increased Service Needs Attributable to Anticipated Development 2014-2024	Timing (year)	Gross Capital Cost Estimate	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 86%	Non-Residential Share 14%
1	Coldstream Fire Hall Relocation/Expansion	2017	3,205,080	473,963		2,731,117	1,570,489	200,430	960,198	829,937	130,261
2	Fire Vehicle	2018	45,000			45,000			45,000	38,895	6,105
3	Quint/Pumper		850,000			850,000			850,000	734,688	115,312
	Unfunded Capital		41,262			41,262			41,262	35,664	5,598
	Total		4,141,341	473,963	-	3,667,378	1,570,489	200,430	1,896,459	1,639,184	257,275

3.1.4 Parks and Recreation Services

The Municipality's 2014 D.C. Background Study identified additional capital needs for Parks and Recreation Services to address the increase in the needs for services related to development. Projects included in the 2014 D.C. Background Study included outstanding debt payments for the Wellness Centre, additional parkland development, additional trail development, and various vehicles and equipment. The capital program identified in the 2014 D.C. Background Study is being amended to include previously omitted projects – Sifton Secondary Trail, Edgewater Trail, Ilderton Optimist washroom, and a 2014 Tractor (mower). Additionally, capital cost estimates of previously identified projects were being updated to reflect actual costs incurred or more recent estimates. The revised capital needs listing is summarized in Table 3-4 costs increased from \$4.28 million to \$4.96 million. After adjusting for the benefit to existing development, grants, and the statutory 10% deduction, the D.C. eligible costs are \$2.82 million, a 21% increase over the 2014 Background Study estimates.

The revised D.C. recoverable costs are allocated 95% to residential development and 5% non-residential development, consistent with the Municipality's 2014 D.C. Background Study, and based on the recognition that residential users are the primary users of parks and recreation services.

3.1.5 Administration – Studies

The Municipality's 2014 D.C. Background Study included cost estimates for growth-related studies to be undertaken over the 10-year forecast period. These studies included two Zoning By-law Reviews, Official Plan Review, and two D.C. Background Studies.

The revised anticipated capital needs listing for Administration Studies is summarized in Table 3-5. Revision of the cost estimates for the D.C. Background Studies to include a D.C. Amendment, result in a gross capital cost of \$498,269, an increase of approximately \$7,227 relative to the 2014 D.C. Background Study. Applying the required deductions for benefit to existing development and the 10% statutory deduction for soft services, results in D.C. recoverable costs of \$432,796. This represents a 2% increase to the 2014 D.C. Background Study.

The D.C. recoverable cost attribution has been attributed 86% to residential and 14% to non-residential development consistent with the Municipality's 2014 D.C. Background Study

**Table 3-4
Parks and Recreation – Anticipated Capital Needs**

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

Municipality of Middlesex Centre
Service Parks and Recreation Services

Prj.No	Increased Service Needs Attributable to Anticipated Development 2014-2024	Timing (year)	Gross Capital Cost Estimate	Post Period Benefit	Other Deductions	Net Capital Cost	Less:		Subtotal	Less: Other (e.g. 10% Statutory Deduction)	Potential DC Recoverable Cost		
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development			Total	Residential Share 95%	Non-Residential Share 5%
1	Wellness Centre Debt Payments	2015-2024	3,019,933	-	-	3,019,933	1,660,963		1,358,970		1,358,970	1,291,021	67,948
	Outdoor Recreation								-	-	-	-	-
MP.56	New Pavilion at Weldon Park	2015	100,000	-	-	100,000			100,000	10,000	90,000	85,500	4,500
MP.45	Basketball Court (Deer Haven Optimist Park)	2015	36,125	-	-	36,125			36,125	3,613	32,513	30,887	1,626
MP.54	Skate Park (Komoka-Kilworth-Delaware)	2014	152,913	-	-	152,913		60,000	92,913	9,291	83,622	79,441	4,181
MP.53	Splash Pad at Wellness Centre	2014	205,199	-	-	205,199			205,199	20,520	184,679	175,445	9,234
MP.48	Play Structures in New Residential Development Areas	2015	30,000	-	-	30,000			30,000	3,000	27,000	25,650	1,350
MP.40	Full-Size Soccer Fields at Future Parks in New Subdivisions	2015	30,000	-	-	30,000			30,000	3,000	27,000	25,650	1,350
MP.51	Junior-level Playground Equipment at Weldon Park	2015	20,000	-	-	20,000			20,000	2,000	18,000	17,100	900
	Trails (as per Trails Master Plan)								-	-	-	-	-
2	Primary Trails	2017	104,094	-	-	104,094		56,261	47,833	4,783	43,049	40,897	2,152
3	Secondary Trails	2014-2024	330,662	-	-	330,662			330,662	33,066	297,595	282,716	14,880
4	Tertiary Trails	2014-2024	383,925	-	-	383,925		7,502	376,423	37,642	338,780	321,841	16,939
5	Sifton Secondary Trail		161,935			161,935			161,935	16,194	145,742	138,455	7,287
6	Edgewater Trail		105,038			105,038			105,038	10,504	94,535	89,808	4,727
	Vehicles & Equipment								-	-	-	-	-
7	Float Trailer Tri-Axe Dump	2015	3,751			3,751			3,751	375	3,376	3,207	169
8	Diamond Groomer	2020	8,500			8,500			8,500	850	7,650	7,268	383
9	Gill Seeder	2020	12,000			12,000			12,000	1,200	10,800	10,260	540
10	Ilderton Optimist Washroom	2014/2015	242,862			242,862			242,862	24,286	218,576	207,647	10,929
11	2014 Tractor (mower)	2014	10,010			10,010			10,010	1,001	9,009	8,559	450
	Reserve Fund Adjustment										(173,573)	(164,895)	(8,679)
	Total		4,956,947	-	-	4,956,947	1,660,963	123,764	3,172,220	181,325	2,817,322	2,676,456	140,866

3.1.6 Water

The 2014 D.C. Background Study included capital needs for the Municipal water services based on updated capital cost estimates for works contained in the previous D.C. studies. This Update Study includes further updates to the capital cost estimates, based on recent environmental assessments undertaken by the Municipality. The total gross capital cost estimate for Water Services increased from \$26.7 million to \$28.8 million including financing costs. After deductions were made for benefit to existing development, post period benefit, and grants, the D.C. eligible cost is \$3.5 million, a 13% increase over the 2014 D.C. Background Study amount.

The D.C. recoverable cost attribution is maintained at 89% residential and 11% non-residential. The revised anticipated capital needs listing is provided in Table 3-6 and the cash flow analysis is provided in Appendix B.

3.1.7 Wastewater

The 2014 D.C. Background Study included capital need for the Municipal water services based on updated capital cost estimates for works contained in the previous D.C. studies. This Update Study includes further updates to the capital cost estimates based on recent engineering estimates and removes Little Farm Trunk Sanitary Sewer environmental assessment project. The total gross capital cost estimate decreased from \$31.9 million to \$31.2 million including financing costs. After deductions were made for benefit to existing development, post period benefit, and grants, the D.C. eligible cost is \$22.5 million, a 2% reduction relative to the 2014 D.C. Background Study amount.

The D.C. recoverable cost attribution is maintained at 89% residential and 11% non-residential. The revised anticipated capital needs listing is provided in Table 3-7 and the cash flow analysis in Appendix B.

Table 3-6
Water – Anticipated Capital Needs

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

MUNICIPALITY OF MIDDLESEX CENTRE
Service: Water Services (uniform rates)

Prj. No	Increased Service Needs Attributable to Anticipated Development 2014-2034	Service Area	Timing (Year)	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost	
							Benefit to Existing Development (Updated)	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Equivalent 100%
1	Common Transmission Main	Kilworth/Komoka and	complete	8,124,546	-	8,124,546	-	8,124,546	-	-
2	Arva Booster P.S. and Connection	Kilworth/Komoka and	complete	3,971,382	-	3,971,382	-	3,971,382	-	-
3	M.C. Transmission Main	Kilworth/Komoka and	complete	1,434,456	535,824	898,632	458,653	-	439,979	439,979
4	Komoka BPS and Reservoir	Kilworth/Komoka and	complete	3,343,511	383,835	2,959,676	1,671,755	-	1,287,921	1,287,921
5	Glendon Dr. (Springer Rd. to Tunks Line)	Kilworth/Komoka	2018	331,818	-	331,818	151,641	-	180,177	180,177
6	Komoka B.P.S. Upgrades	Delaware	2019	396,029	142,075	253,954	198,014	-	55,939	55,939
7	On-Line B.P.S.	Delaware	2019	396,029	142,075	253,954	198,014	-	55,939	55,939
8	300mm Transmission Main	Delaware	2019	4,973,512	1,784,247	3,189,264	2,486,756	-	702,508	702,508
9	Delaware Storage	Delaware	2018	1,756,595	664,203	1,092,392	830,876	135,969	125,547	125,547
10	Pressure Zone Separation	Delaware	2023	397,779	142,703	255,076	198,890	-	56,186	56,186
11	Pumping Station Pump Upgrades - unfunde	Ilderton	complete	146,819	-	146,819	-	-	146,819	146,819
12	Ilderton Water Storage Facility	Ilderton	2014	3,553,241	-	3,553,241	1,090,177	2,000,000	463,065	463,065
13	Financing Costs			419,354		419,354		-	419,354	419,354
	Reserve Fund Adjustment			(415,842)		(415,842)		-	(415,842)	(415,842)
	Total			28,829,229	3,794,964	25,034,265	7,284,776	14,231,898	3,517,591	3,517,591

**Table 3-7
Wastewater – Anticipated Capital Needs**

INFRASTRUCTURE COSTS COVERED IN THE DC CALCULATION

MUNICIPALITY OF MIDDLESEX CENTRE

Service: Wastewater Services (uniform rates)

Prj. No	Increased Service Needs Attributable to Anticipated Development 2014-2034	Service Area	Timing (Year)	Gross Capital Cost Estimate	Post Period Benefit	Net Capital Cost	Less:		Potential DC Recoverable Cost	
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Equivalent 100%
1	Existing Komoka WWTF Costs-unfunded	Kilworth/Komoka	complete	1,002,495	-	1,002,495	764,724	-	237,771	237,771
2	Phase I WWTF Upgrades & Studies	Kilworth/Komoka	complete	9,078,417	375,284	8,703,133	-	-	8,703,133	8,703,133
3	Phase II WWTF Upgrades	Delaware	2020-25	3,405,000	2,990,638	414,362	-	-	414,362	414,362
4	Komoka Pumping Station Upgrades	Kilworth/Komoka	2015	320,000	-	320,000	183,168	-	136,832	136,832
5	Kilworth Misc. Trunk Sanitary Sewers	Kilworth/Komoka	2016	235,073	-	235,073	69,629	-	165,444	165,444
6	Kilworth Misc. Trunk Storm Sewers	Kilworth/Komoka	2016	330,000	-	330,000	-	-	330,000	330,000
7	Komoka PS Upgrades Design Studies	Kilworth/Komoka	2015	112,534	-	112,534	64,414	-	48,120	48,120
8	Kilworth Pumping Station and Forcemain	Kilworth/Komoka	2016	3,723,186	-	3,723,186	781,869	-	2,941,317	2,941,317
9	Delaware PS & Forcemain	Delaware	2018-20	3,479,640	1,248,321	2,231,319	1,739,820	-	491,499	491,499
10	Misc. Wastewater Trunk Sewers	Delaware	2018-20	86,811	62,287	24,524	-	-	24,524	24,524
11	Drainage Study	Delaware	2014	50,000	-	50,000	-	-	50,000	50,000
12	WWTF and Expansion - unfunded	Ilderton	complete	1,923,386	-	1,923,386	-	-	1,923,386	1,923,386
13	Future Phase 1 - WWTF Expansion per EA	Ilderton	2020-25	3,694,868	-	3,694,868	-	-	3,694,868	3,694,868
14	WWTF EA Study	Ilderton	2015	248,513	-	248,513	-	-	248,513	248,513
15	Misc. Trunk Sanitary Sewers	Ilderton	2018-20	924,000	-	924,000	-	-	924,000	924,000
16	Ilderton West Pumping Station and Forcemain	Ilderton West	2014	1,097,583	-	1,097,583	360,007	-	737,576	737,576
17	Arva WWTF EA	Arva	2018	234,446	-	234,446	-	-	234,446	234,446
18	Financing Costs			2,167,213	-	2,167,213	-	-	2,167,213	2,167,213
	Reserve Fund Adjustment			(955,332)		(955,332)		-	(955,332)	(955,332)
	Total			31,157,832	4,676,529	26,481,303	3,963,631	-	22,517,672	22,517,672

3.2 D.C. By-law Revised Schedule of Charges

Based on the revisions to the 2014 D.C. Background Study anticipated capital needs identified above, the revised residential and non-residential D.C. calculations are provided in Tables 3-8 through 3-10 below. As noted in Chapter 1 of this report, Council adopted specific exemption policies with respect to some types of development. These exemption policies, as well as other D.C. policies (i.e. rules) contained in By-law 2014-069, as amended, remain unchanged through this process. Only the amount of development charges for Roads, Public Works, Fire Protection, Parks and Recreation, Administration, Water, and Wastewater services D.C.s are being amended to reflect the capital cost adjustments noted herein.

The revised schedule of charges is provided in Table 3-11. A comparison of the indexed charge (to 2017\$) with the Municipality's current D.C. rates is provided in Table 3-12.

Table 3-8

**MUNICIPALITY OF MIDDLESEX CENTRE
DEVELOPMENT CHARGE CALCULATION
Municipal-wide Services
2014-2024**

SERVICE	2014 \$ DC Eligible Cost		2014 \$ DC Eligible Cost	
	Residential	Non-Residential	SDU	per sq.mt.
1. Fire Protection Services	\$ 1,639,184	\$ 257,275	\$ 1,205	\$ 5.99
2. Parks and Recreation	\$ 2,676,456	\$ 140,866	\$ 1,968	\$ 3.28
3. Library Services	\$ 84,785	\$ 4,462	\$ 62	\$ 0.10
4. Administration - Studies	\$ 374,083	\$ 58,713	\$ 275	\$ 1.37
TOTAL DC ELIGIBLE CAPITAL COST	\$ 4,774,507	\$ 461,317	\$ 3,510	\$ 10.74
10 Year Gross Population / GFA Growth (ft ² .)	4,367	42,925		
Cost Per Capita / Non-Residential GFA (ft ² .)	\$ 1,093.32	\$ 10.75		
<u>By Residential Unit Type</u>	<u>p.p.u</u>			
Single and Semi-Detached Dwelling	3.21	\$ 3,510		
Apartments - 2 Bedrooms +	1.82	\$ 1,990		
Apartments - Bachelor and 1 Bedroom	1.35	\$ 1,476		
Other Multiples	2.25	\$ 2,460		

Table 3-9

**MUNICIPALITY OF MIDDLESEX CENTRE
DEVELOPMENT CHARGE CALCULATION
Municipal-wide Services
2014-2034**

SERVICE	2014 \$ DC Eligible Cost		2014 \$ DC Eligible Cost	
	Residential	Non-Residential	SDU	per sq.mt.
5. Roads	\$ 5,034,890	\$ 817,595	\$ 1,971	\$ 9.93
6. Public Works	\$ 1,294,879	\$ 210,270	\$ 507	\$ 2.55
TOTAL DC ELIGIBLE CAPITAL COST	\$ 6,329,769	\$ 1,027,866	\$ 2,478	\$ 12.48
20 Year Gross Population / GFA Growth (ft ² .)	8,199	82,373		
Cost Per Capita / Non-Residential GFA (ft ² .)	\$ 772.02	\$ 12.48		
By Residential Unit Type	p.p.u			
Single and Semi-Detached Dwelling	3.21	\$ 2,478		
Apartments - 2 Bedrooms +	1.82	\$ 1,405		
Apartments - Bachelor and 1 Bedroom	1.35	\$ 1,042		
Other Multiples	2.25	\$ 1,737		

Table 3-10

**MUNICIPALITY OF MIDDLESEX CENTRE
DEVELOPMENT CHARGE CALCULATION
Urban Service Area
2014-2034**

	Potential DC Recoverable Cost Residential Equivalent \$	Potential DC Recoverable Cost Residential Equivalent \$	
		Water Services	Wastewater Services
Total	3,517,591	22,517,672	

ANTICIPATED DEVELOPMENT		
Gross Population (2014-2034)		
Kilworth/Komoka	4,648	4,648
Delaware	559	559
Ilderton	2,473	2,473
Total Population	7,680	7,680

DC RESIDENTIAL/NON-RESIDENTIAL CALCULATION		
DC/capita	458	2,932
DC/sdu (3.21 ppu)	1,470	9,412
DC/sq.mt. GFA (based on 3 l/sm)	3.92	25.12

**Table 3-11
Amended Schedule of Development Charges (2014\$)**

Service	RESIDENTIAL (\$ per Dwelling Unit)			
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples
<u>Municipal Wide Services:</u>				
Roads	\$ 1,971	\$ 1,118	\$ 829	\$ 1,382
Public Works	\$ 507	\$ 287	\$ 213	\$ 355
Fire Protection Services	\$ 1,205	\$ 683	\$ 507	\$ 845
Parks and Recreation	\$ 1,968	\$ 1,116	\$ 828	\$ 1,379
Library Services	\$ 62	\$ 35	\$ 26	\$ 43
Administration - Studies	\$ 275	\$ 156	\$ 116	\$ 193
Total Municipal Wide Services	\$ 5,988	\$ 3,395	\$ 2,519	\$ 4,197
<u>Area Specific Services:</u>				
<u>Water and Sewer Service Areas</u>				
Water Services	\$ 1,470	\$ 834	\$ 618	\$ 1,030
Wastewater Services	\$ 9,412	\$ 5,336	\$ 3,959	\$ 6,597
TOTAL				
Water and Sewer Service Areas	\$ 16,870	\$ 9,565	\$ 7,097	\$ 11,824
Unserviced	\$ 5,988	\$ 3,395	\$ 2,519	\$ 4,197

Service	NON-RESIDENTIAL (\$ per Square Metre of Gross Floor Area)		
	Other Non-Residential	Agricultural Use	Industrial
<u>Municipal Wide Services:</u>			
Roads	\$ 9.93	\$ 1.69	\$ 3.97
Public Works	\$ 2.55	\$ -	\$ 1.02
Fire Protection Services	\$ 5.99	\$ 1.50	\$ 2.40
Parks and Recreation	\$ 3.28	\$ -	\$ 1.31
Library Services	\$ 0.10	\$ -	\$ 0.04
Administration - Studies	\$ 1.37	\$ -	\$ 0.55
Total Municipal Wide Services	\$ 23.22	\$ 3.19	\$ 9.29
<u>Area Specific Services:</u>			
<u>Water and Sewer Service Areas</u>			
Water Services	\$ 3.92	\$ -	\$ 1.57
Wastewater Services	\$ 25.12	\$ -	\$ 10.05
TOTAL			
Water and Sewer Service Areas	\$ 52.27	\$ 3.19	\$ 20.91
Unserviced	\$ 23.22	\$ 3.19	\$ 9.29

**Table 3-12
Comparison of Development Charges (2017\$)**

Service	Residential (\$ per Dwelling Unit)							
	Single and Semi-Detached Dwelling		Apartments - 2 Bedrooms +		Apartments - Bachelor and 1 Bedroom		Other Multiples	
	Current	Proposed	Current	Proposed	Current	Proposed	Current	Proposed
Municipal Wide Services:								
Roads	\$ 1,597	\$ 2,102	\$ 905	\$ 1,192	\$ 672	\$ 884	\$ 1,120	\$ 1,474
Public Works	\$ 533	\$ 541	\$ 302	\$ 306	\$ 224	\$ 227	\$ 373	\$ 379
Fire Protection Services	\$ 1,076	\$ 1,285	\$ 610	\$ 728	\$ 452	\$ 541	\$ 754	\$ 901
Parks and Recreation	\$ 1,726	\$ 2,099	\$ 979	\$ 1,190	\$ 726	\$ 883	\$ 1,210	\$ 1,470
Library Services	\$ 66	\$ 66	\$ 37	\$ 37	\$ 28	\$ 28	\$ 46	\$ 46
Administration - Studies	\$ 289	\$ 293	\$ 164	\$ 166	\$ 122	\$ 124	\$ 203	\$ 206
Total Municipal Wide Services	\$ 5,288	\$ 6,385	\$ 2,997	\$ 3,620	\$ 2,224	\$ 2,686	\$ 3,706	\$ 4,475
Area Specific Services:								
<u>Water and Sewer Service Areas</u>								
Water Services	\$ 1,386	\$ 1,568	\$ 786	\$ 889	\$ 583	\$ 660	\$ 971	\$ 1,099
Wastewater Services	\$ 10,225	\$ 10,036	\$ 5,797	\$ 5,690	\$ 4,299	\$ 4,222	\$ 7,165	\$ 7,034
TOTAL								
Unserviced	\$ 5,288	\$ 6,385	\$ 2,997	\$ 3,620	\$ 2,224	\$ 2,686	\$ 3,706	\$ 4,475
Water and Sewer Service Areas	\$ 16,899	\$ 17,989	\$ 9,580	\$ 10,199	\$ 7,106	\$ 7,568	\$ 11,842	\$ 12,609

Service	Non-Residential (\$/Sq.mt.)					
	Other Non-Residential		Agricultural		Industrial	
	Current	Proposed	Current	Proposed	Current	Proposed
Municipal Wide Services:						
Roads	\$ 8.04	\$ 10.59	\$ 1.36	\$ 1.80	\$ 3.22	\$ 4.24
Public Works	\$ 2.69	\$ 2.72	\$ -	\$ -	\$ 1.08	\$ 1.09
Fire Protection Services	\$ 5.35	\$ 6.39	\$ 1.34	\$ 1.60	\$ 2.14	\$ 2.55
Parks and Recreation	\$ 2.88	\$ 3.50	\$ -	\$ -	\$ 1.15	\$ 1.40
Library Services	\$ 0.11	\$ 0.11	\$ -	\$ -	\$ 0.04	\$ 0.04
Administration - Studies	\$ 1.44	\$ 1.46	\$ -	\$ -	\$ 0.58	\$ 0.58
Total Municipal Wide Services	\$ 20.51	\$ 24.76	\$ 2.70	\$ 3.40	\$ 8.21	\$ 9.90
Area Specific Services:						
<u>Water and Sewer Service Areas</u>						
Water Services	\$ 3.70	\$ 4.18	\$ -	\$ -	\$ 1.48	\$ 1.67
Wastewater Services	\$ 27.30	\$ 26.79	\$ -	\$ -	\$ 10.92	\$ 10.72
TOTAL						
Unserviced	\$ 20.51	\$ 24.76	\$ 2.70	\$ 3.40	\$ 8.21	\$ 9.90
Water and Sewer Service Areas	\$ 51.51	\$ 55.73	\$ 2.70	\$ 3.40	\$ 20.61	\$ 22.29

3.3 Long-term Operating Impact

As a requirement of the D.C.A., 1997 under subsection 10(2)(c), an analysis must be undertaken to assess the long-term capital and operating cost impacts for the capital infrastructure projects identified within the D.C. As part of this analysis, it was deemed necessary to isolate the incremental operating expenditures directly associated with these capital projects, factor in cost savings attributable to economies of scale or cost sharing where applicable, and prorate the cost on a per unit basis (i.e. square foot of building space, per vehicle, etc.). This was undertaken through a review of the Municipality's 2012 Financial Information Return.

In addition to the operational impacts, over time the initial capital projects will require replacement. This replacement of capital is often referred to as lifecycle cost. By definition, lifecycle costs are all the costs which are incurred during the life of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The method selected for lifecycle costing is the sinking fund method which provides that money will be contributed annually and invested, so that those funds will grow over time to equal the amount required for future replacement. The following factors were utilized to calculate the annual replacement cost of the capital projects (annual contribution = factor x capital asset cost) and are based on an annual growth rate of 2% (net of inflation) over the average useful life of the asset:

Table 3-13 depicts the annual incremental operating impact resulting from the proposed gross capital projects at the time they are all in place. It is important to note that, while municipal program expenditures will increase with growth in population, the costs associated with the new infrastructure (i.e. facilities) would be delayed until the time these works are in place.

**Table 3-13
Incremental Operating Impacts**

SERVICE	NET GROWTH RELATED EXPENDITURES	ANNUAL OPERATING EXPENDITURES	TOTAL ANNUAL EXPENDITURES
1. Wastewater	(423,456)	-	(2,200)
	-	-	-
2. Water	284,654	-	1,400
	-	-	-
3. Roads	1,404,678	-	57,800
	-	-	-
4. Public Works	19,583	283	783.31
	-	-	-
5. Fire Protection Services	307,398	-	7,500
	-	-	-
6. Parks and Recreation	497,806	-	12,200
	-	-	-
7. Library Services	-	-	-
	-	-	-
8. Administration - Studies	6,504	-	-
Total	2,097,167	283	77,483

3.4 Asset Management Plan

The D.C.A. was amended in 2015, with the revisions to the Act effective January 1, 2016. One of the changes to the D.C.A. was that in preparing a D.C. Background Study the municipality shall include an asset management plan. In this regard, the D.C.A. requires that the asset management plan shall:

- a) “deal with all assets whose capital costs are proposed to be funded under the development charge by-law;
- b) demonstrate that all the assets mentioned in clause (a) are financially sustainable over their full life cycle;
- c) contain any other information that is prescribed; and
- d) be prepared in the prescribed manner.”

The Municipality’s Asset Management Plan (A.M.P) dated December 5, 2013, includes growth-related (D.C.) projects. In particular, the A.M.P. identified \$51.9 million in capital expenditures for the 20-year forecast period 2014 to 2033, approximately \$52.6 million when indexed to 2014\$. Completion of the 2014 D.C. Background Study updated the growth-related projects, however, these changes are not reflected in the Asset Management Plan.

This section provides an analysis of the A.M.P. for the capital costs funded under the D.C. by-law 2014-069 and this amendment. All the values in the 2013 A.M.P. have been indexed to 2014\$ to allow for comparison with the D.C. Study estimates.

Tax-supported Services

The 2013 A.M.P. considered expansion projects for the following tax-supported services: roads, public works, fire protection, parks and recreation, administration, and libraries. Expansion projects identified in the 2013 A.M.P. totalled \$8.5 million over the forecast period. With the completion of the 2014 D.C. Background Study, these costs increased to \$13.8 million. This amendment identifies an additional \$2.4 million, bringing the expansion projects costs to \$16.3 million. \$10.4 million of the initial capital costs would be financed through D.C. payments, \$0.4 million from Federal/Provincial grants, and the remaining non-growth portion paid for by the Municipality’s other revenue sources (taxation, user fees etc.). The increase in the non-growth share from \$3.5 million to \$5.5 million represents a 2% increase in the tax-supported capital to be

funded by the Municipality. Furthermore, the D.C. funded portion of expansion projects would result in additional annual lifecycle contribution costs of \$0.71 million.

The 2013 A.M.P. recommended annual increases of 3.94% in the tax rate for the first ten years of the forecast and 1.97% for the remainder of the forecast. The impacts of incremental costs identified above would increase those amounts by 5% i.e. from 3.94% to 4.14% and 1.97% to 2.07%.

Water Services

For water services, the 2013 A.M.P. identified \$11.0 million in expansion project costs. With the completion of the 2014 D.C. Background Study, the total growth-related capital costs were estimated at \$26.9 million. This amendment identifies an additional \$1.9 million bringing the total growth-related costs to \$28.8 million, a \$17.8 million increase over the 2013 A.M.P. identified capital. Financing for these works would come from D.C. and grant funding with the non-growth portion paid by the Municipality's other revenue sources. The non-growth share of the projects increased by 30% over the amount identified in the 2013 A.M.P. Furthermore, the D.C. funded portion of expansion projects would result in additional annual lifecycle contribution costs of \$1.2 million.

The 2013 A.M.P. recommended water rate increases of 10% per year for the first four years of the forecast and 3% increases thereafter as part of the financing strategy. The impacts of incremental costs identified above would increase those amounts by 22% i.e. from 10% to 12.22% and 3% to 3.67%.

Wastewater

Expansion projects for wastewater identified in the 2013 A.M.P. totalled \$29.4 million, with \$19.1 million being the non-growth portion. During the 2014 D.C. Background Study process, expansion-related capital costs were identified at \$30.6 million and this Update Study reduces the estimated costs to \$29.9 million over the 2014-2033 forecast period. Furthermore, grant funding was identified in the 2014 D.C. Background Study and this Update Study. The non-growth portion of these projects total \$8.6 million. Furthermore, the D.C. funded portion of expansion projects would result in additional annual lifecycle contribution costs of \$1.4 million.

The 2013 A.M.P. recommended rate increases of 10.83% per year for the first eight years of the forecast and 3.25% increases thereafter as part of the financing strategy.

The impacts of incremental costs identified above would increase those amounts by 15% i.e. from 10.83% to 12.49% and 3.25% to 3.75%.

In consideration of the above, the assets contained herein are deemed financially sustainable, however there may be additional tax and rate pressures as identified above.

4. Process for Adoption of the Amending D.C. By-law

The changes herein form part of the 2017 D.C. Update Study. Appendix A to this update study includes the Draft Amending D.C. By-law being presented for Council's consideration at the statutory public meeting on November 4, 2017. At that meeting a presentation will be made to the public regarding the recommendations of the 2017 D.C. Update Study, and Council may receive oral and written comments on the matter.

It is anticipated that Council will consider for adoption the proposed amending by-law at a subsequent meeting of Council, witnessing the 60-day period between the release of the D.C. Background Study and the passage of the D.C. By-law (i.e. no earlier than November 1, 2017). If Council is satisfied with the proposed changes to the D.C. Background Study and D.C. By-Law, it is recommended that Council:

“Approve the amended capital project listing set out in the Development Charges Background Study dated July 2, 2014 (as amended), subject to further annual review during the capital budget process;”

“Approve the Development Charges Update Study dated September 1, 2017;”

“Determine that no further public meeting is required;” and

“Approve the Amending Development Charge By-law as set out herein”

Appendix A – Draft Amending Development Charges By-law

THE CORPORATION OF THE MUNICIPALITY OF MIDDLESEX CENTRE

BY-LAW NUMBER 2017-XX

A BY-LAW TO AMEND BY-LAW NUMBER 2014-069 (AS AMENDED) BEING A BY-LAW TO ESTABLISH DEVELOPMENT CHARGES FOR THE CORPORATION OF THE MUNICIPALITY OF MIDDLESEX CENTRE.

WHEREAS the Municipality of Middlesex Centre enacted By-law 2014-069 pursuant to the *Development Charges Act*, 1997, S.O. 1997, c. 27 (the "Act"), which Act authorizes Council to pass by-laws for the imposition of development charges against land;

AND WHEREAS the Municipality has undertaken a study pursuant to the Act which has identified certain capital items for inclusion in the Municipality's development charges;

AND WHEREAS Council has before it a report entitled "Municipality of Middlesex Centre 2017 Development Charges Update Study" prepared by Watson & Associates Economists Ltd., dated September 1, 2017 (the "background study");

AND WHEREAS the background study and the proposed development charge by-law amendment were posted to the Municipality's website on _____, 2017 and made available to the public on _____, 2017, and Council gave notice to the public of a meeting pursuant to Section 12 of the Act (the "public meeting") on _____, 2017;

AND WHEREAS Council, on _____, 2017 held the public meeting, at which Council considered the background study, amending by-law and written submissions, and Council heard comments and representations from all persons who applied to be heard;

AND WHEREAS it is now deemed necessary and expedient that By-law Number 2014-069 (as amended) be amended;

THEREFORE, THE COUNCIL OF THE CORPORATION OF THE MUNICIPALITY OF MIDDLESEX CENTRE ENACTS AS FOLLOWS:

1. By-law 2014-069 is hereby amended as follows:

Schedule "B" is deleted and the attached Schedule "B" substitutes therefore.

2. Except as amended by this By-law, all provisions of By-Law 2014-069 are and shall remain in full force and effect.

THIS BY-LAW SHALL COME INTO FORCE AND EFFECT JANUARY 1, 2018.

Read a first time this ____th day of _____ **2017.**

Read a second time this ____th day of _____ **2017.**

Read a third time and finally passed this ____th day of _____ **2017.**

MAYOR

MUNICIPAL CLERK

**SCHEDULE "B"
TO BY-LAW #2014-069**

**MUNICIPALITY OF MIDDLESEX CENTRE
SCHEDULE OF DEVELOPMENT CHARGES**

Service	RESIDENTIAL (\$ per Dwelling Unit)			
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Other Multiples
<u>Municipal Wide Services:</u>				
Roads	\$ 1,971	\$ 1,118	\$ 829	\$ 1,382
Public Works	\$ 507	\$ 287	\$ 213	\$ 355
Fire Protection Services	\$ 1,205	\$ 683	\$ 507	\$ 845
Parks and Recreation	\$ 1,968	\$ 1,116	\$ 828	\$ 1,379
Library Services	\$ 62	\$ 35	\$ 26	\$ 43
Administration - Studies	\$ 275	\$ 156	\$ 116	\$ 193
Total Municipal Wide Services	\$ 5,988	\$ 3,395	\$ 2,519	\$ 4,197
<u>Area Specific Services:</u>				
<u>Water and Sewer Service Areas</u>				
Water Services	\$ 1,470	\$ 834	\$ 618	\$ 1,030
Wastewater Services	\$ 9,412	\$ 5,336	\$ 3,959	\$ 6,597
TOTAL				
Water and Sewer Service Areas	\$ 16,870	\$ 9,565	\$ 7,097	\$ 11,824
Unserviced	\$ 5,988	\$ 3,395	\$ 2,519	\$ 4,197

Service	NON-RESIDENTIAL (\$ per Square Metre of Gross Floor Area)		
	Other Non-Residential	Agricultural Use	Industrial
<u>Municipal Wide Services:</u>			
Roads	\$ 9.93	\$ 1.69	\$ 3.97
Public Works	\$ 2.55	\$ -	\$ 1.02
Fire Protection Services	\$ 5.99	\$ 1.50	\$ 2.40
Parks and Recreation	\$ 3.28	\$ -	\$ 1.31
Library Services	\$ 0.10	\$ -	\$ 0.04
Administration - Studies	\$ 1.37	\$ -	\$ 0.55
Total Municipal Wide Services	\$ 23.22	\$ 3.19	\$ 9.29
<u>Area Specific Services:</u>			
<u>Water and Sewer Service Areas</u>			
Water Services	\$ 3.92	\$ -	\$ 1.57
Wastewater Services	\$ 25.12	\$ -	\$ 10.05
TOTAL			
Water and Sewer Service Areas	\$ 52.27	\$ 3.19	\$ 20.91
Unserviced	\$ 23.22	\$ 3.19	\$ 9.29

Appendix B – Cash Flow Analysis for Water and Wastewater Services

Table B-1

Cashflow Assumptions	
A. DC Index rate	2.50%
B. Reserve fund interest earnings	2.00%
C. Borrowing rate-20yr	5.00%

MUNICIPALITY OF MIDDLESEX CENTRE
DEVELOPMENT CHARGE CASHFLOW ANALYSIS
Uniform Middlesex Centre Water Service
2014 \$

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018	Year 6 2019	Year 7 2020	Year 8 2021	Year 9 2022	Year 10 2023	Year 11 2024	Year 12 2025	Year 13 2026	Year 14 2027	Year 15 2028	Year 16 2029	Year 17 2030	Year 18 2031	Year 19 2032	Year 20 2033	Year 21 2034	
Anticipated Development																						
Single Detached Equivalents	116	117	117	117	117	117	117	116	116	116	116	112	112	111	111	111	111	111	110	110	110	
DC Rates ¹																						
Residential - per single dwelling unit	\$1,470	\$1,507	\$1,545	\$1,583	\$1,623	\$1,663	\$1,705	\$1,748	\$1,791	\$1,836	\$1,882	\$1,929	\$1,977	\$2,027	\$2,077	\$2,129	\$2,183	\$2,237	\$2,293	\$2,350	\$2,409	
DC Revenue Collection Projection:																						
DC Revenue	\$170,548	\$176,319	\$180,727	\$185,245	\$189,876	\$194,623	\$199,489	\$202,728	\$207,796	\$212,991	\$218,316	\$216,058	\$221,459	\$224,969	\$230,593	\$236,358	\$242,267	\$248,324	\$252,239	\$258,544	\$265,008	
Total Revenues	\$ 170,548	\$ 176,319	\$ 180,727	\$ 185,245	\$ 189,876	\$ 194,623	\$ 199,489	\$ 202,728	\$ 207,796	\$ 212,991	\$ 218,316	\$ 216,058	\$ 221,459	\$ 224,969	\$ 230,593	\$ 236,358	\$ 242,267	\$ 248,324	\$ 252,239	\$ 258,544	\$ 265,008	
Expenditure Projection by Service/Sub-Category :																						
1. M.C. Transmission Main	\$150,859	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ 13,145	\$ -	\$ -	\$ -
2. Komoka BPS and Reservoir	\$1,287,920	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ 112,218	\$ -	\$ -	\$ -
3. Glendon Dr. (Springer Rd. to Tunks Line)	\$0	\$ -	\$ -	\$ -	\$ -	\$ 189,299	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4. Komoka B.P.S. Upgrades	\$63,290	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097
5. On-Line B.P.S.	\$63,290	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097	\$ 6,097
6. 300mm Transmission Main	\$794,824	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575	\$ 76,575
7. Delaware Storage	\$266,927	\$ -	\$ -	\$ -	\$ -	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629	\$ 24,629
8. Pressure Zone Separation	\$71,923	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659	\$ 8,659
9. Pumping Station Pump Upgrades - unfunded	\$0	\$ 146,819	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10. Ilderton Water Storage Facility	\$333,758	\$ -	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ 43,223	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenditures	\$ 272,182	\$ 168,586	\$ 168,586	\$ 168,586	\$ 357,884	\$ 193,215	\$ 281,985	\$ 281,985	\$ 281,985	\$ 281,985	\$ 290,644	\$ 247,421	\$ 247,421	\$ 247,421	\$ 247,421	\$ 247,421	\$ 247,421	\$ 247,421	\$ 247,421	\$ 122,058	\$ 122,058	\$ 122,058
Reserve Fund Balance:																						
Revenues Minus Expenditures	(\$101,633)	\$7,733	\$12,141	\$16,659	(\$168,008)	\$1,408	(\$82,497)	(\$79,257)	(\$74,189)	(\$68,994)	(\$72,328)	(\$31,363)	(\$25,962)	(\$22,452)	(\$16,828)	(\$11,063)	(\$5,154)	\$903	\$130,180	\$136,486	\$142,950	
Opening Balance	\$415,842	\$319,985	\$334,195	\$353,141	\$377,030	\$212,362	\$218,031	\$137,833	\$59,351	(\$15,506)	(\$87,000)	(\$165,496)	(\$205,908)	(\$242,814)	(\$277,968)	(\$309,115)	(\$335,910)	(\$357,989)	(\$374,976)	(\$262,243)	(\$137,504)	
Sub-total	\$314,209	\$327,718	\$346,336	\$369,800	\$209,021	\$213,770	\$135,534	\$58,576	(\$14,838)	(\$84,500)	(\$159,328)	(\$196,849)	(\$231,870)	(\$265,266)	(\$294,796)	(\$320,178)	(\$341,064)	(\$357,086)	(\$344,796)	(\$125,757)	\$5,446	
Interest Earnings/ (Interim Borrowing Cost)	\$5,776	\$6,477	\$6,805	\$7,229	\$3,340	\$4,261	\$2,295	\$775	(\$689)	(\$2,500)	(\$6,158)	(\$9,058)	(\$10,946)	(\$12,702)	(\$14,319)	(\$15,732)	(\$16,924)	(\$17,890)	(\$17,447)	(\$11,747)	(\$5,446)	
Closing Balance	\$319,985	\$334,195	\$353,141	\$377,030	\$212,362	\$218,031	\$137,833	\$59,351	(\$15,506)	(\$87,000)	(\$165,496)	(\$205,908)	(\$242,814)	(\$277,968)	(\$309,115)	(\$335,910)	(\$357,989)	(\$374,976)	(\$262,243)	(\$137,504)	(\$0)	

Table B-2

Cashflow Assumptions	
A. DC Index rate	2.50%
B. Reserve fund interest earnings	2.00%
C. Borrowing rate-20yr	5.00%

MUNICIPALITY OF MIDDLESEX CENTRE
DEVELOPMENT CHARGE CASHFLOW ANALYSIS
Uniform Middlesex Centre Wastewater Service
2014 \$

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018	Year 6 2019	Year 7 2020	Year 8 2021	Year 9 2022	Year 10 2023	Year 11 2024	Year 12 2025	Year 13 2026	Year 14 2027	Year 15 2028	Year 16 2029	Year 17 2030	Year 18 2031	Year 19 2032	Year 20 2033	Year 21 2034	
Anticipated Development																						
Single Detached Equivalents	116	117	117	117	117	117	117	116	116	116	116	112	112	111	111	111	111	111	110	110	110	
DC Rates ¹																						
Residential - per single dwelling unit	\$9,412	\$9,647	\$9,888	\$10,135	\$10,389	\$10,648	\$10,915	\$11,188	\$11,467	\$11,754	\$12,048	\$12,349	\$12,658	\$12,974	\$13,298	\$13,631	\$13,972	\$14,321	\$14,679	\$15,046	\$15,422	
DC Revenue Collection Projection:																						
DC Revenue	\$1,091,755	\$1,128,696	\$1,156,913	\$1,185,836	\$1,215,482	\$1,245,869	\$1,277,016	\$1,297,754	\$1,330,198	\$1,363,453	\$1,397,539	\$1,383,082	\$1,417,659	\$1,440,126	\$1,476,129	\$1,513,032	\$1,550,858	\$1,589,630	\$1,614,691	\$1,655,059	\$1,696,435	
Total Revenues	\$ 1,091,755	\$ 1,128,696	\$ 1,156,913	\$ 1,185,836	\$ 1,215,482	\$ 1,245,869	\$ 1,277,016	\$ 1,297,754	\$ 1,330,198	\$ 1,363,453	\$ 1,397,539	\$ 1,383,082	\$ 1,417,659	\$ 1,440,126	\$ 1,476,129	\$ 1,513,032	\$ 1,550,858	\$ 1,589,630	\$ 1,614,691	\$ 1,655,059	\$ 1,696,435	
Expenditure Projection by Service/Sub-Category :																						
Debt Service	\$0	\$237,771	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
1. Existing Komoka WWTF Costs-unfunded	\$0	\$237,771	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2. Phase I WWTF Upgrades & Studies	\$7,745,705	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	\$ 559,523	
3. Phase II WWTF Upgrades	\$504,860	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	\$ 56,961	
4. Komoka Pumping Station Upgrades & Studies	\$189,575	\$ -	\$ -	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	\$ 15,686	
5. Kilworth Misc. Trunk Sanitary Sewers	\$173,820	\$ -	\$ -	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	\$ 14,870	
6. Kilworth Misc. Trunk Storm Sewers	\$346,706	\$ -	\$ -	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	\$ 29,659	
7. Komoka PS Upgrades Design Studies	\$0	\$ -	\$ 50,526	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8. Kilworth Pumping Station and Forcemain	\$3,014,850	\$ -	\$ -	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	\$ 249,464	
9. Delaware PS & Forcemain	\$556,086	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	\$ 53,575	
10. Misc. Wastewater Trunk Sewers	\$27,747	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	\$ 2,673	
11. Drainage Study	\$0	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
12. WWTF and Expansion - unfunded	\$0	\$ 1,923,396	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
13. Future Phase 1 - WWTF Expansion per EA	\$4,614,383	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	\$ 555,520	
14. WWTF EA Study	\$0	\$ -	\$ 254,725	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
15. Misc. Trunk Sanitary Sewers	\$1,020,171	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	\$ 98,286	
16. Ilderton West Pumping Station and Forcemain	\$737,576	\$ -	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	\$ 59,185	
17. Aves WWTF EA	\$0	\$ -	\$ -	\$ -	\$ 284,970	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Expenditures	\$ 2,770,681	\$ 923,959	\$ 883,859	\$ 928,388	\$ 1,213,358	\$ 928,388	\$ 1,082,921	\$ 1,082,921	\$ 1,139,882	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,695,403	\$ 1,135,879	
Reserve Fund Balance:																						
Revenues Minus Expenditures	(\$1,678,925)	\$204,737	\$273,055	\$257,449	\$2,124	\$317,482	\$194,095	\$214,833	\$247,277	\$223,571	(\$297,864)	(\$312,321)	(\$277,744)	(\$255,276)	(\$219,273)	(\$182,370)	(\$144,544)	(\$105,773)	(\$80,711)	(\$40,344)	\$560,556	
Opening Balance	\$955,332	(\$746,460)	(\$576,999)	(\$330,063)	(\$86,543)	(\$88,725)	\$227,495	\$428,081	\$653,624	\$916,446	\$1,160,582	\$878,483	\$575,924	\$302,755	\$47,152	(\$176,660)	(\$372,423)	(\$539,202)	(\$674,579)	(\$791,036)	(\$539,202)	
Sub-total	(\$723,593)	(\$541,723)	(\$303,944)	(\$72,614)	(\$84,419)	\$228,757	\$421,591	\$642,914	\$900,901	\$1,140,017	\$862,718	\$566,162	\$298,180	\$47,479	(\$172,121)	(\$359,030)	(\$516,967)	(\$644,974)	(\$755,290)	(\$831,396)	\$21,355	
Interest Earnings/ (Interim Borrowing Cost)	(\$22,866)	(\$35,276)	(\$26,119)	(\$13,929)	(\$4,306)	(\$1,261)	\$6,491	\$10,710	\$15,545	\$20,565	\$15,765	\$9,762	\$4,575	(\$327)	(\$4,539)	(\$13,392)	(\$22,235)	(\$29,604)	(\$35,747)	(\$40,560)	(\$21,355)	
Closing Balance	(\$746,460)	(\$576,999)	(\$330,063)	(\$86,543)	(\$88,725)	\$227,495	\$428,081	\$653,624	\$916,446	\$1,160,582	\$878,483	\$575,924	\$302,755	\$47,152	(\$176,660)	(\$372,423)	(\$539,202)	(\$674,579)	(\$791,036)	(\$871,941)	\$0	