



2021 Development Charges Update Study – Consolidation Report

Township of Wilmot

This report consolidates the April 30, 2021 Development Charges Update Study and the July 2, 2021 Addendum Report

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1. Introduction

1.1 Background

The Township of Wilmot (Township) imposes development charges (D.C.s) to recover the increase in the needs for service arising from development. The basis for the calculation of the Township’s current residential and non-residential D.C. is documented in the Township’s “2019 Development Charges Background Study” dated May 15, 2019, as amended. This D.C. Background Study (Update Study) provides the supporting documentation for the Township’s D.C. By-law 2019-42. The Township’s current D.C.s by municipal service and development type are summarized in Table 1-1. These tables reflect the indexed charges that are currently in force as of December 1, 2020.

Table 1-1
Township of Wilmot Current Development Charges

a. Township-wide Services

Service	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms+	Apartments - Bachelor and 1 Bedroom	Townhouse Dwelling	Lodging Units	Industrial	Commercial/ Institutional
Roads and Related	\$2,188	\$1,489	\$921	\$1,665	\$775	\$0.59	\$1.24
Fire Protection Services	\$362	\$247	\$152	\$276	\$129	\$0.35	\$0.21
Parks and Recreation	\$4,679	\$3,185	\$1,970	\$3,564	\$1,660	\$0.40	\$0.40
Library Services	\$195	\$133	\$83	\$149	\$69	\$0.02	\$0.02
Administration	\$506	\$345	\$214	\$386	\$180	\$0.13	\$0.29
Total Township-wide Services	\$7,930	\$5,399	\$3,340	\$6,040	\$2,813	\$1.49	\$2.16

b. Urban Services

Service	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms+	Apartments - Bachelor and 1 Bedroom	Townhouse Dwelling	Lodging Units	Industrial	Commercial/ Institutional
Wastewater Services	\$3,487	\$2,373	\$1,468	\$2,656	\$1,238	\$0.93	\$1.95
Water Services	\$700	\$477	\$295	\$533	\$249	\$0.19	\$0.39
Total Urban Services	\$4,187	\$2,850	\$1,763	\$3,189	\$1,487	\$1.12	\$2.34

c. Summary

Service	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms +	Apartments - Bachelor and 1 Bedroom	Townhouse Dwelling	Lodging Units	Industrial	Commercial/ Institutional
Grand Total Rural Area	\$7,930	\$5,399	\$3,340	\$6,040	\$2,813	\$1.49	\$2.16
Grand Total Urban Area	\$12,117	\$8,249	\$5,103	\$9,229	\$4,300	\$2.61	\$4.50



1.2 Existing Policies (Rules)

The following subsections set out the rules governing the calculation, payment, and collection of the D.C. as provided in By-law 2019-42, in accordance with the *Development Charges Act, 1997*, as amended (D.C.A.).

1.2.1 *Payment in any Particular Case*

In accordance with the D.C.A., section 2 (2), a D.C. shall be calculated, payable, and collected where the development requires one or more of the following:

- the passing of a zoning by-law or of an amendment to a zoning by-law under section 34 of the *Planning Act*;
- the approval of a minor variance under section 45 of the *Planning Act*;
- a conveyance of land to which a by-law passed under section 50 (7) of the *Planning Act* applies;
- the approval of a plan of subdivision under section 51 of the *Planning Act*;
- a consent under section 53 of the *Planning Act*;
- the approval of a description under section 50 of the *Condominium Act*; or
- the issuing of a building permit under the *Building Code Act* in relation to a building or structure.

1.2.2 *Determination of the Amount of the Charge*

The following conventions were adopted:

- a) Costs allocated to residential uses will be assigned to different types of residential units based on the average occupancy for each housing type constructed during the previous decade. Costs allocated to non-residential uses will be assigned to industrial, commercial, and institutional uses based on the gross floor area (G.F.A.) constructed.
- b) Costs allocated to residential and non-residential uses are based upon a number of conventions, as may be suited to each municipal circumstance. These are summarized in Chapter 5 of the 2019 D.C. Background Study, as amended.



1.2.3 Application to Redevelopment of Land (Demolition and Conversion)

If a development involves the demolition 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 D.C. in place at the time the D.C. is payable; and/or
- the G.F.A. of the building demolished/converted multiplied by the current non-residential D.C. in place at the time the D.C. 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 five years prior to the issuance of a building permit.

The credit can, in no case, exceed the amount of D.C.s that would otherwise be payable.

1.2.4 Exemptions (full or partial)

Statutory exemptions

- Industrial building additions of up to and including 50% of the existing G.F.A. (defined in O. Reg. 82/98, section 1) of the building; for industrial building additions which exceed 50% of the existing G.F.A., only the portion of the addition in excess of 50% is subject to D.C.s (section 4 (3));
- Buildings or structures owned by and used for the purposes of any municipality, local board or Board of Education (section 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 section 2 of O. Reg. 82/98).

Non-statutory exemptions

- Lands, buildings or structures used or to be used for a place of worship or for the purposes of a churchyard or cemetery exempt from taxation under the *Assessment Act*,



- A home occupation;
- Accessory use or structure;
- Temporary use under section 39 of the *Planning Act*; and
- Non-residential farm buildings constructed for bona fide farm uses.

1.2.5 Indexing

All D.C.s will be subject to mandatory indexing annually on December 1st of each year in accordance with provisions under the D.C.A.

1.2.6 By-law Duration

The by-law will expire on September 1, 2024 unless it is repealed by Council at an earlier date.

1.2.7 Date Charge Payable

D.C.s imposed under this by-law are calculated, payable, and collected upon issuance of a building permit with respect to each dwelling unit, building or structure.

1.3 Changes to the D.C.A.: More Homes, More Choice Act and the COVID-19 Economic Recovery Act

On May 2, 2019, the Province introduced Bill 108 (*More Homes, More Choice Act*), which proposed changes to the D.C.A. The Bill was introduced as part of the Province's "*More Homes, More Choice: Ontario's Housing Supply Action Plan*." The Bill received Royal Assent on June 6, 2019. While having received Royal Assent, many of the amendments to the D.C.A. would not come into effect until they are proclaimed by the Lieutenant Governor. On January 1, 2020, the following provisions were proclaimed:

- A D.C. for rental housing and institutional developments will pay the charge in six equal annual installments, with the first payment commencing on the date of occupancy. A D.C. for non-profit housing developments will pay the charge in 21 equal annual installments. A municipality may charge interest on the installments. Any unpaid D.C. amounts may be added to the property and collected as taxes.



- The determination of the D.C. for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval shall be determined based on the D.C.s in effect on the date the planning application was submitted. These provisions only apply to Site Plan and Zoning By-law Amendment planning applications received on or after January 1, 2020. Developments arising from planning application approvals not fitting these criteria, or if the building permit arising from these planning approvals is issued two-years or more after the planning application approval, the D.C. is determined based on the provisions of the D.C. by-law.

In early 2020, the Province released Bill 197 (*COVID-19 Economic Recovery Act*), an omnibus bill amending numerous statutes, including the D.C.A. and *Planning Act*. This Bill also revised some of the proposed amendments included in the *More Homes, More Choice Act*. The *COVID-19 Economic Recovery Act* received Royal Assent on July 21, 2020 and were proclaimed on September 18, 2020. The following provides a summary of the additional changes to the D.C.A. that are now in effect:

List of D.C.-Eligible Services

The D.C.A. previously defined ineligible services for D.C.s. The amendments to the D.C.A. now defined the services that are eligible for inclusion in a D.C. by-law. The following summarizes the D.C.-eligible services:

- Water supply services, including distribution and treatment services;
- Wastewater services, including sewers and treatment services;
- Storm water drainage and control services;
- Services related to a highway;
- Electrical power services;
- Toronto-York subway extension, as defined in subsection 5.1 (1);
- Transit services other than the Toronto-York subway extension;
- Waste diversion services;
- Policing services;
- Fire protection services;
- Ambulance services;
- Library Services;
- Long-term care services;



- Parks and recreation services (excluding the acquisition of land for parks);
- Public health services;
- Childcare and early years services;
- Housing services;
- *Provincial Offences Act* services;
- Services related to emergency preparedness;
- Services related to airports, but only in the Regional Municipality of Waterloo;
and
- Additional services as prescribed.

Removal of 10% Statutory Deduction

The D.C.A. previously required a 10% statutory deduction for all services not specifically identified in subsection 5 (5) of the D.C.A. (i.e. soft services). This had the effect of categorizing D.C.-eligible services into two groups, i.e. 90% D.C. recoverable services, and 100% D.C. recoverable services. The amendments to the D.C.A. remove the 10% statutory deduction for soft services.

Classes of D.C. Services

As noted above the D.C.A. categorized services generally into two categories. The amended D.C.A. repeals these provisions and provides the following:

- A D.C. by-law may provide for any eligible service or capital cost related to any eligible service to be included in a class, set out in the by-law.
- A class may be composed of any number or combination of services and may include parts or portions of the eligible services or parts or portions of the capital costs in respect of those services.
- A D.C. by-law may provide for a class consisting of studies in respect of any eligible service whose capital costs are described in paragraphs 5 and 6 of section 5 of the D.C.A.
- A class of service set out in the D.C. by-law is deemed to be a single service with respect to reserve funds, use of monies, and credits.



Statutory Exemptions

The D.C.A. provides for statutory exemptions from payment of D.C.s where the development is creating additional residential dwelling units within prescribed classes of existing residential buildings or structures. This statutory exemption has been expanded to include secondary residential dwelling units, in prescribed classes, that are ancillary to existing residential buildings. Furthermore, additional statutory exemptions are provided for the creation of a second dwelling unit in prescribed classes of proposed new residential buildings, including structures ancillary to new dwellings.

Transition

Services, other than those described in paragraphs 1 to 10 of subsection 2 (4) of the D.C.A. (i.e. soft services) within an existing D.C. by-law can remain in effect, even if the by-law expires, until the earlier of the day the by-law is repealed, the day the municipality passes a community benefits charge by-law under subsection 37 (2) of the *Planning Act*, or the specified date. The specified date is September 18, 2022.

1.4 Other Legislative Changes

Bill 213, An Act to Reduce Burdens on People and Businesses by Enacting, Amending and Repealing Various Acts and Revoking a Regulation received Royal Assent on December 8, 2020. This Bill amended the Ministry of Training, Colleges and *Universities Act* to provide an exemption from the payment of D.C.s for universities. Specifically, the Act states:

Land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education is exempt from D.C.s imposed under the D.C.A. if the development in respect of which D.C.A. would otherwise be payable is intended to be occupied and used by the university.

This statutory exemption to the payment of D.C.s came into effect on the December 8, 2020.



1.5 Purpose of this Document

This background study has been prepared pursuant to the requirements of the D.C.A. to amend the Township's D.C. by-law. The proposed amendments relate to the removal of the 10% deduction for soft services and provide updates to the underlying D.C.-eligible capital cost estimates. In addition, other proposed amendments relate to the timing and collection of D.C.s, and statutory exemptions, as a result of recent changes to the D.C.A. (as summarized in section 1.3 and 1.4 herein).

This D.C. background study and draft amending by-law will be provided to the public to provide interested parties with sufficient background information on the legislation, recommendations, and an outline of the basis for these recommendations.

The following chapters of this study include:

- Chapter 2 – Anticipated Development
- Chapter 3 – Revisions to the Anticipated Capital Needs
- Chapter 4 – Revised D.C. Calculation and Schedule of Charges
- Chapter 5 – D.C. Policy Recommendations and D.C. By-law Rules
- Chapter 6 – Asset Management Plan and Long-Term Capital and Operating Costs
- Chapter 7 – Process for Adoption of the Amending D.C. By-law
- Appendix A – Draft Amending D.C. By-law
- Appendix B – Cash Flow Calculations

It should be noted that this study is provided as an update to the Township's 2019 D.C. Background Study, and as such the calculations are denominated in 2019 dollars (the Township's D.C. background study cost base). The amended D.C. rates will be subsequently indexed to 2020 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 Township's website in accordance with provisions of the D.C.A. on April 30, 2021. The statutory public meeting will be held on May 31, 2021. A presentation will be made to the public



regarding the recommendations of this study, 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 from the release of the D.C. background study has been satisfied. The intended date for passage of the D.C. by-law is June 30, 2021.

1.6 Summary of Proposed Amendments

Other than the changes identified within this report, all other D.C. calculations and policies (i.e. rules) contained in By-law 2019-42 remain unchanged by this process.

The analysis provided herein will address the proposed amendments to the Township's D.C. by-law arising from the recent amendments to the D.C.A., as outlined in sections 1.3 and 1.4 above. In particular, Chapters 3 and 4 address changes to the D.C.-eligible costs and calculation of the charges resulting from the removal of the 10% statutory deduction for "soft" services, reclassification of Administration service to the class of service for Growth-Related Studies, and changes to the capital costs underlying the charges have also been made for Administration Studies/Growth-Related Studies, Parks and Recreation, Roads and Related, Water, and Wastewater services.

The revisions for the increase in need for services and associated capital cost estimates are discussed in detail in Chapter 3 of this report. In addition, the charges have been calculated on a cash flow basis to incorporate anticipated financing costs of capital. Chapter 5 presents the changes to the D.C. by-law collection policies, statutory exemptions to reflect legislative changes, and non-statutory exemptions.



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 D.C.s can be imposed, must be estimated.” The growth forecast contained in Chapter 3 of the 2019 D.C. Background Study (with supplemental tables in Appendix A) provides for the anticipated development for which the Township will be required to provide services over a ten-year (mid-2019 to mid-2029) and a twelve-year time horizon (mid-2019 to mid-2031).

The growth forecast contained in the 2019 D.C. Background Study is summarized in Table 2-1. For the purposes of this Update Study, the growth forecast as contained within the 2019 D.C. Background Study remains unchanged. The increase in need for service and capital costs are calculated over the 10-year forecast period for all services.

Table 2-1
Township of Wilmot
2019 D.C. Background Study – Growth Forecast Summary

Time Horizon	Net Population ^[1]	Residential Units	Employment ^[2]	Sq.ft. of G.F.A.
Early 2019	20,847	7,755	5,668	n/a*
Early 2029	25,743	9,632	6,976	n/a
Mid 2031	27,067	10,144	7,337	n/a
Incremental Change				
10-year (2019-2029)	4,896	1,877	1,308	998,300
12-year (2019-2031)	6,220	2,389	1,669	1,266,300

*n/a = not applicable

[1] Excludes institutional.

[2] Excludes No Fixed Place of Work (N.F.P.O.W.) and Work at Home (W.A.H.).



3. Revisions to the Anticipated Capital Needs

The 2019 D.C. Background Study 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 the following services:

- Roads and Related Services;
- Fire Protection Services;
- Parks and Recreation Services;
- Library Services;
- Administration Studies;
- Water Services; and
- Wastewater Services.

The following sections summarize the amendments made to the D.C.-eligible capital costs. In accordance with the amendments to the D.C.A., the 10% statutory deduction has been removed from the calculation of the D.C.-eligible capital costs for Parks and Recreation Services, Library Services, and specific studies under Administration.

The changes to the D.C.-eligible capital costs for Roads and Related Services, Fire Protection Services, Parks and Recreation, Water, Wastewater, and Administration Studies comprising the D.C. amendment are also summarized. Other than the revisions included in this report, all other capital needs and the determination of D.C. recoverable costs contained in the Township's 2019 D.C. Background Study remain unchanged.

3.1 Roads and Related Services

The Township's 2019 D.C. Background Study identified \$5.4 million in gross capital costs to meet the increase in need for service for roads and related services. Through this Update Study, additional needs, including storm sewer capacity improvements, road reconstructions and improvements, and studies have been identified.

Furthermore, some of the cost estimates in the 2019 D.C. Background Study have been updated to reflect either the actual cost, for completed projects, or the revised cost estimates available to the Township. Studies for roads and related services previously listed under administration studies have also been moved to be included in the services' costs.



The changes outlined above and presented in Table 3-1 increase the gross capital costs for roads and related services by \$24.1 million resulting in a total cost of \$29.5 million. In recognition of the benefits to existing development, \$14.7 million has been deducted from the costs. An additional \$508,288 has been deducted reflecting developer contributions in accordance with the Township's local service policy. After incorporating the existing D.C. reserve fund deficit balance of \$1.6 million, \$15.8 million in capital needs have been included in the D.C. calculation.

The revised D.C. recoverable costs are allocated 80% to residential development, 7% to industrial development, and 13% to commercial/institutional development. This approach is based on the incremental growth in population to employment for the 10-year forecast period and is consistent with the Township's 2019 D.C. Background Study.



**Table 3-1
Infrastructure Costs Covered in the D.C. Calculation – Roads and Related Services**

Prj .No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Benefit to Existing Development	Less:	Potential D.C. Recoverable Cost			
							Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Industrial 7%	Commercial/ Institutional 13%
1	Backhoe Loader	2021	185,000	-	185,000	18,500		166,500	133,200	11,798	21,502
2	Stripe/Stall/Template Painter Unit & Trailer	2020	21,200	-	21,200	-		21,200	16,960	1,502	2,738
3	Facility Construction	2024	434,000	-	434,000	43,400		390,600	312,480	27,678	50,442
4	Sidewalk Unit	2022	165,000	-	165,000	-		165,000	132,000	11,692	21,308
5	Clearing Unit	2023	125,000	-	125,000	-		125,000	100,000	8,857	16,143
6	Provision for Bike Lanes	2022	2,266,900	-	2,266,900	906,760		1,360,140	1,088,112	96,379	175,649
7	Single Axle Dump Truck	2023	250,000	-	250,000	-		250,000	200,000	17,715	32,285
8	Tailgate Asphalt Spreader	2027	85,000	-	85,000	-		85,000	68,000	6,023	10,977
9	Bridge Street 34/B - T9	2022	2,955,000	-	2,955,000	2,394,079	508,288	52,633	42,107	3,730	6,797
10	Wilmot Employment Lands Collector Road (Remaining Cost)	2022	1,732,000	-	1,732,000	-		1,732,000	1,385,600	122,729	223,671
11	Hamilton/Neville/Arnold Road Improvements	2020-2030	2,990,000	-	2,990,000	448,500		2,541,500	2,033,200	180,090	328,210
12	Hamilton Road @ Hwy 7&8 Intersection Improvements	2025	568,000	-	568,000	28,400		539,600	431,680	38,236	69,684
13	Bridge Improvements and Repairs	2020-2030	6,218,000	-	6,218,000	5,596,200		621,800	497,440	44,061	80,299
14	Ontario Structure Inspections	2020-2030	189,000	-	189,000	170,100		18,900	15,120	1,339	2,441
15	Road Conversion Repairs and Improvements	2020-2030	3,215,000	-	3,215,000	2,893,500		321,500	257,200	22,781	41,519
16	Sidewalk Repairs and Replacement Improvements	2020-2030	757,000	-	757,000	681,300		75,700	60,560	5,364	9,776
17	Radar Speed Display Signs	2020-2030	38,000	-	38,000	34,200		3,800	3,040	269	491
18	Beck Street Reconstruction (Local to collector)	2025	662,000	-	662,000	264,800		397,200	317,760	28,146	51,294
19	Louisa Street Reconstruction (Local to collector)	2025	331,000	-	331,000	132,400		198,600	158,880	14,073	25,647
20	Charlotta Street Reconstruction (Local to collector)	2025	596,000	-	596,000	238,400		357,600	286,080	25,339	46,181
21	Hincks Street Reconstruction (Local to collector)	2025	710,000	-	710,000	284,000		426,000	340,800	30,186	55,014
22	Storm Sewer Capacity Improvements - Intensification	2020-2028	4,258,000	-	4,258,000	212,900		4,045,100	3,236,080	286,635	522,385
23	Hamilton Road Pedestrian Crossing Review and Pavement Markings	2022	104,000	-	104,000	26,000		78,000	62,400	5,527	10,073
24	GIS Transportation Network Growth Modelling and Mapping	2023	47,000	-	47,000	2,350		44,650	35,720	3,164	5,766
25	Traffic Counts and Road Needs Study	2020-2030	284,000	-	284,000	255,600		28,400	22,720	2,012	3,668
26	Space Needs Study (Public Works)	2020	20,000	-	20,000	2,000		18,000	14,400	1,275	2,325
27	Infrastructure Master Plan (Phase I-IV)	2020-2023	250,000	-	250,000	50,000		200,000	160,000	14,172	25,828
	Reserve Fund Balance/Unfunded Projects							1,567,797	1,254,237	111,094	202,465
	Total		29,456,100	-	29,456,100	14,683,389	508,288	15,832,220	12,665,776	1,121,869	2,044,575



3.2 Fire Protection Services

For fire protection services, the Township's 2019 D.C. Background Study identified \$635,000 in gross capital costs to meet the increase in need for service for fire protection services. The Township completed its Fire Master Plan in December 2020 which identified additional growth-related needs. The Fire Master Plan identified facility and vehicle needs. In addition, cost estimates for the vehicles included in the 2019 D.C. Background Study have been updated.

The costs for additional needs identified through the master planning process, as well as the studies previously included under administration studies have been incorporated through this Update Study.

The changes outlined above and presented in Table 3-2 increase the gross capital costs for fire protection services by \$635,000 to \$9.6 million. Deductions have been applied in recognition of the benefits to growth beyond the forecast period (\$1.1 million) and to existing development (\$4.1 million). After including the existing D.C. reserve fund deficit balance of \$162,941, the resulting D.C. recoverable costs total \$4.5 million have been included in the calculation of the charge.

The revised D.C. recoverable costs are allocated 67% to residential development, 22% to industrial development, and 11% to commercial/institutional development. This approach is based on forecast developable land area, by type of development, in the Township, which is consistent with the Township's 2019 D.C. Background Study.



**Table 3-2
Infrastructure Costs Covered in the D.C. Calculation – Fire Protection Services**

Prj .No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost			
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 67%	Industrial 22%	Commercial/ Institutional 11%
1	Fire Training Officer Vehicle	2020	62,000	-	62,000	-		62,000	41,664	13,330	7,006
2	Station 1 Pumper	2027	852,000	-	852,000	-		852,000	572,544	183,180	96,276
3	Station 3 New Hamburg Fire Station	2028	4,257,900	-	4,257,900	1,277,370		2,980,530	2,002,916	640,814	336,800
4	Station 1 Baden Fire Station	2035	2,838,600	1,149,349	1,689,251	1,689,251		-	-	-	-
5	Station 2 New Dundee Interior Renovations	2023	189,200	-	189,200	152,535		36,665	24,639	7,883	4,143
6	Upgrage to Platform Aerial	2022	1,324,700	-	1,324,700	1,000,000		324,700	218,198	69,811	36,691
7	Fire Facility Condition Assessment	2021	15,000	-	15,000	12,153		2,847	1,913	612	322
8	Fire Master Plan and Community Risk Assessment	2024	70,000	-	70,000	14,000		56,000	37,632	12,040	6,328
	Reserve Fund Balance/Unfunded Projects							162,941	109,496	35,032	18,412
	Total		9,609,400	1,149,349	8,460,051	4,145,309	-	4,477,684	3,009,003	962,702	505,978



3.3 Parks and Recreation Services

This study serves to remove the 10% statutory deduction that is no longer required for Parks and Recreation Services due of the recent changes to the D.C.A. Some of the cost estimates in the 2019 D.C. Background Study have been updated to reflect either the actual cost, for completed projects, or the revised cost estimates available to the Township. Furthermore, additional needs, including a multi-purpose pad and turf maintenance tractor have been identified. Studies listed under administration studies have also been moved to be included in the services' costs.

The updated capital needs and D.C.-eligible costs for Parks and Recreation Services are presented in Table 3-3. In aggregate \$12.8 million gross capital costs have been identified to meet the increase in need for service, an increase of \$1.2 million from the costs in the 2019 D.C. Background Study. Capital costs of \$1.8 million have been deducted in recognition of the benefit to existing development. In addition, \$1.6 million has also been deducted reflecting anticipated growth-related portion of grants and contributions. After incorporating the reserve fund deficit balance of \$27,664, a total of \$9.4 million in capital costs has been included in the calculation of the charge.

As the predominant users of parks and recreation services tend to be residents of the Township, the forecast growth-related costs have been allocated 95% to residential and 5% to non-residential development.



**Table 3-3
Infrastructure Costs Covered in the D.C. Calculation – Parks and Recreation Services**

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 95%	Non-Residential Share 5%
2	Employment Lands Woodlot Trail Design/Construction	2019-2020	426,000	-	426,000	63,900	320,980	41,120	39,064	2,056
3	New Trails Maintenance Vehicle	2020	28,000	-	28,000	2,800		25,200	23,940	1,260
6	Beck Park Parking Lot Enlargement	2022	80,000	-	80,000	16,000		64,000	60,800	3,200
7	Petersburg Lighting for Diamond #2	2022	95,000	-	95,000	9,500		85,500	81,225	4,275
8	P&F Pick-up Truck	2020	38,826	-	38,826	3,883		34,943	33,196	1,747
9	Provision for Recreation Floor Space	2021-2023	6,623,000	-	6,623,000	993,450		5,629,550	5,348,073	281,478
12	New Hamburg Skateboard Park	2023-2026	473,000	-	473,000	70,950		402,050	381,948	20,103
13	Spray Zones (3)	2023-2026	615,000	-	615,000	92,250		522,750	496,613	26,138
14	Provision for Parks Operations Facility	2024	1,419,000	-	1,419,000	-		1,419,000	1,348,050	70,950
15	Artificial Turf Field (WRDSB partnership)	2020-2021	1,850,000	-	1,850,000	277,500	786,250	786,250	746,938	39,313
16	New Artificial Turf Field Maintenance Tractor	2021	28,000	-	28,000	5,320		22,680	21,546	1,134
17	New Multi-purpose Pad Mannheim CC	2021	47,000	-	47,000	7,050		39,950	37,953	1,998
18	Space Needs Study (Parks Operations Facility)	2020	20,000	-	20,000	-		20,000	19,000	1,000
19	3rd Ice Pad Needs Study	2020	25,000	-	25,000	3,750		21,250	20,188	1,063
20	Third Ice Pad Site Selection / Conceptual Design	2021	55,000	-	55,000	8,250		46,750	44,413	2,338
21	Recreation Master Plan Update	2022	50,000	-	50,000	10,000		40,000	38,000	2,000
22	Trails Master Plan Update	2023	20,000	-	20,000	4,000		16,000	15,200	800
	Reserve Fund Balance/Unfunded Projects							27,664	26,281	1,383
	Total		12,831,932	-	12,831,932	1,801,474	1,636,250	9,421,872	8,950,779	471,094



3.4 Library Services

The statutory 10% deduction that is no longer required for library services under the amended D.C.A was removed. No changes to the capital projects included for library services are required and as such, the total gross capital costs remain unchanged at \$344,147 when compared to the 2019 D.C. Background Study. Including the reserve fund deficit balance of \$1,483, total capital costs of \$345,630 has been included in the calculation of the charge.

The D.C. recoverable costs are allocated 95% to residential development and 5% to non-residential development based on the recognition that residential users are the primary users of library Services. The detailed capital needs listing and calculation of D.C.-eligible costs are shown in Table 3-4.



**Table 3-4
Infrastructure Costs Covered in the D.C. Calculation – Library Services**

Prj. No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost		
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Non-Residential Share
	2019-2028								95%	5%
1	Provision for Library Facility Space	2022-2023	344,147	-	344,147	-		344,147	326,940	17,207
	Reserve Fund Balance/Unfunded Projects							1,483	1,409	74
	Total		344,147	-	344,147	-	-	345,630	328,349	17,282



3.5 Growth-Related Studies

The Township's 2019 D.C. Background Study included growth-related studies under administration studies. These studies included both service-specific studies, that pertain to one of the D.C.-eligible services permitted in the D.C.A., and other general growth-related studies that pertain to all services.

For the purposes of this amendment, the capital cost estimates for any service-specific study have been included within the capital needs listing for the service. The remaining growth-related studies including Official Plan Review, D.C. Background Study, and Strategic Plan Update have been allocated to the respective D.C.-eligible services based on the proportionate share of 10-year D.C.-eligible capital needs.

The revised gross capital costs for growth-related studies, included in the schedule of charges as a separate "class of service," total \$325,200. Applying deductions for general benefits to ineligible services (\$15,700), and benefit to existing development (\$98,000), and including the unfunded costs of studies reflected in the D.C. reserve fund balance (\$13,200), results in D.C. recoverable costs of \$274,609.

The allocation of the net growth-related costs between residential, industrial, and commercial/institutional development is based on the residential and non-residential allocation for each service area and are presented in Table 3-8 below.



**Table 3-5
Infrastructure Costs Covered in the D.C. Calculation – Growth-Related Studies Class of Service**

Prj. No	Increased Service Needs Attributable to Anticipated Development	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Other Deductions (to Recognize Benefit to Non-D.C. Services)	Net Capital Cost	Less:		Potential D.C. Recoverable Cost			
							Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share	Industrial	Commercial/ Institutional
	2019-2028									82%	8%	10%
1	Official Plan Update	2020	60,000	-	3,600	56,400	24,000		32,400	26,599	2,459	3,341
2	Baden Urban Growth Centre Strategy	2020	50,000	-	4,000	46,000	10,000		36,000	29,555	2,732	3,713
3	Strategic Plan Update	2023	30,000	-	1,500	28,500	15,000		13,500	11,083	1,025	1,392
4	Zoning By-Law Consolidation	2024	25,000	-	1,500	23,500	10,000		13,500	11,083	1,025	1,392
5	Development Charge By-Law Study	2024	28,500	-	-	28,500	-		28,500	23,398	2,163	2,939
6	Official Plan 5-year Review	2025	60,000	-	3,600	56,400	24,000		32,400	26,599	2,459	3,341
7	Strategic Plan Update	2027	30,000	-	1,500	28,500	15,000		13,500	11,083	1,025	1,392
8	Development Charge Background Study	2028	28,500	-	-	28,500	-		28,500	23,398	2,163	2,939
9	Development Charge Update Study	2021	13,200	-		13,200	-		13,200	10,837	1,002	1,361
	Reserve Fund Balance								63,109	51,811	4,790	6,508
	Total		325,200	-	15,700	309,500	98,000	-	274,609	225,445	20,844	28,321



3.6 Water Services

The Township's 2019 D.C. Background Study identified \$1.0 million in additional capital needs for municipal water services. As part of this Update Study, the capital costs for the Facility Construction and Watermain Casing Pipe projects have been increase reflecting the Township's updated capital cost forecast. Additional needs for Watermain Pressure Zoning Testing and GIS Zone Modelling and Mapping have been identified. Furthermore, the costs of the studies pertaining to water services that were previously reflected in the administration studies capital needs listing, have been added to the capital needs listing for water services.

The changes outlined above and presented in Table 3-6 increase the gross capital costs for water services by \$1.5 million resulting in a total cost of \$2.4 million. In recognition of the benefits to existing development, \$79,850 has been deducted from the costs. Incorporating the existing D.C. reserve fund deficit balance of \$500,066, results in total capital costs of \$2.8 million included in the D.C. calculation.

The revised D.C. recoverable costs are allocated 80% to residential development, 7% to industrial development, and 13% to commercial/institutional development. This approach is based on the incremental growth in population to employment for the 10-year forecast period and is consistent with the Township's 2019 D.C. Background Study.

3.7 Wastewater Services

The Township's 2019 D.C. Background Study identified \$9.2 million in additional capital needs for municipal water services. The capital costs for all projects have been revised to reflect current cost estimates and changed in needs. Additional needs identified after the completion of the 2019 D.C. Background Study include the Baden Trunk Sewer Construction, Trunk Sewer (deep installations), Forest Glen Pumping Station, Forest Glen Forcemain, and the Sanitary Sewer Casing Pipe at Railway Crossing. The costs of the studies pertaining to wastewater services that were previously reflected in the administration studies capital needs listing, have been added to the capital needs listing for wastewater services.



The changes outlined above and presented in Table 3-7 increase the gross capital costs for wastewater services from \$9.2 million to \$16.8 million. A post period deduction of \$958,319 has been deducted reflecting the benefit to development beyond the forecast period. Further deductions of \$3.3 million have been applied in recognition of the benefits to existing development, and \$748,200 in other contributions. Incorporating the existing D.C. reserve fund deficit balance of \$379,600, total capital need of \$12.2 million have been included in the D.C. calculation.

The revised D.C. recoverable costs are allocated 80% to residential development, 7% to industrial development, and 13% to commercial/institutional development. This approach is based on the incremental growth in population to employment for the 10-year forecast period and is consistent with the Township's 2019 D.C. Background Study.



**Table 3-6
Infrastructure Costs Covered in the D.C. Calculation – Water Services**

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost			
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Industrial 7%	Commercial/ Institutional 13%
1	Facility Construction	2024	434,000	-	434,000	43,400		390,600	312,480	27,678	50,442
2	Provision for Water Looping	2020-2025	375,000	-	375,000	-		375,000	300,000	26,572	48,428
3	NH 200mm Watermain Casing Pipe (220m) at Railway Crossing	2022-2023	1,230,000	-	1,230,000	-		1,230,000	984,000	87,158	158,842
4	Watermain Pressure Zone Testing	2021-2028	142,000	-	142,000	7,100		134,900	107,920	9,559	17,421
5	GIS Zone Modelling and Mapping	2023	47,000	-	47,000	2,350		44,650	35,720	3,164	5,766
6	Space Needs Study (Public Works)	2020	20,000	-	20,000	2,000		18,000	14,400	1,275	2,325
7	Infrastructure Master Plan (Phase I-IV)	2020-2023	125,000	-	125,000	25,000		100,000	80,000	7,086	12,914
	Reserve Fund Balance/Unfunded Projects							500,066	400,053	35,435	64,579
	Total		2,373,000	-	2,373,000	79,850	-	2,793,216	2,234,573	197,927	360,716



**Table 3-7
Infrastructure Costs Covered in the D.C. Calculation – Wastewater Services**

Prj. No	Increased Service Needs Attributable to Anticipated Development 2019-2028	Timing (year)	Gross Capital Cost Estimate (2019\$)	Post Period Benefit	Net Capital Cost	Less:		Potential D.C. Recoverable Cost			
						Benefit to Existing Development	Grants, Subsidies and Other Contributions Attributable to New Development	Total	Residential Share 80%	Industrial 7%	Commercial/Institutional 13%
1	Morningside Trunk Sanitary Sewer - Hwy 7&8 Crossing	2021-2023	979,000	191,625	787,375	212,502		574,874	459,899	40,735	74,239
2	Morningside Trunk Sanitary Sewer - South of Hwy 7&8	2021-2023	3,917,000	766,694	3,150,306	850,224		2,300,082	1,840,066	162,984	297,033
3	Snyder's Road Sanitary Sewer (Charlotta St. - Foundry St.)	2020	2,103,000	-	2,103,000	831,339		1,271,661	1,017,328	90,110	164,222
4	Foundry Street Trunk Sanitary Sewer	2022-2024	473,000	-	473,000	97,603		375,397	300,318	26,601	48,479
5	Facility Construction	2024	434,000	-	434,000	43,400		390,600	312,480	27,678	50,442
6	Baden Trunk Sewer Construction	2022	3,690,000	-	3,690,000	761,428		2,928,572	2,342,858	207,518	378,196
7	Trunk Sewer Flow Monitoring Improvements (Foundry/Snyders/Waterloo)	2022	378,000	-	378,000	18,900		359,100	287,280	25,446	46,374
8	Infrastructure Standards and Specifications Construction	2020-2028	95,000	-	95,000	19,000		76,000	60,800	5,385	9,815
9	Vactor Truck Replacement	2023	378,000	-	378,000	283,500		94,500	75,600	6,696	12,204
10	Trunk Sewer - Deep installations requiring local sewer system (Incremental cost only)	2020-2028	615,000	-	615,000	-		615,000	492,000	43,579	79,421
11	GIS Zone Modelling and Mapping	2022	47,000	-	47,000	2,350		44,650	35,720	3,164	5,766
12	Forest Glen Pumping Station	2023-2024	1,936,000	-	1,936,000	135,520	580,800	1,219,680	975,744	86,426	157,510
13	Forest Glen Forcemain	2023-2024	293,000	-	293,000	20,510	87,900	184,590	147,672	13,080	23,838
14	Space Needs Study (Public Works)	2020	20,000	-	20,000	1,400	6,000	12,600	10,080	893	1,627
15	Infrastructure Master Plan (Phase I-IV)	2020-2023	125,000	-	125,000	8,750	37,500	78,750	63,000	5,580	10,170
16	Sanitary Servicing Staging Study	2020	75,000	-	75,000	5,250	22,500	47,250	37,800	3,348	6,102
17	Lift Station Facility Condition Assessment	2020	45,000	-	45,000	3,150	13,500	28,350	22,680	2,009	3,661
18	NH 450mm dia. Sanitary sewer casing pipe (220m) at Railway Crossing	2022-2023	1,235,000	-	1,235,000	-		1,235,000	988,000	87,512	159,488
	Reserve Fund Balance							379,600	303,680	26,898	49,022
	Total		16,838,000	958,319	15,879,681	3,294,825	748,200	12,216,256	9,773,005	865,642	1,577,609



3.8 Summary

Table 3-8 summarizes the total change in D.C.-eligible costs for all services and classes of service in comparison to the 2019 D.C. Background Study. In aggregate, D.C.-eligible capital costs of \$21.0 million have been added to the calculation of the charge.

Table 3-8
Township of Wilmot
D.C.-Eligible Cost Comparison (2019\$)

Service/Class	D.C. Eligible Costs:		Change (\$)
	2019 D.C. Background Study	2021 Update Study	
Municipal-Wide			
Roads and Related	4,193,188	15,832,220	11,639,032
Fire Protection Services	797,941	4,477,684	3,679,742
Parks and Recreation	7,515,231	9,421,872	1,906,641
Library Services	311,216	345,630	34,415
Administration/Growth-Related Studies	970,007	274,609	(695,397)
Area-Specific/Urban Area			
Water Services	1,338,096	2,793,216	1,455,120
Wastewater Services	6,659,167	12,216,256	5,557,089
Total	21,784,845	45,361,487	23,576,642



4. Revised D.C. Calculation and Schedule of Charges

The calculation of the maximum D.C.s that could be imposed by Council has been undertaken using a cash-flow approach for the growth-related capital costs for all services and classes of service. The cash-flow calculations account for the timing of revenues and expenditures and the resultant financing needs and have been undertaken by service for each forecast development type, i.e. residential, industrial, and commercial and institutional. D.C. cash flow calculation tables are provided in Appendix B and have been undertaken to account for 0.5% earnings on D.C. reserve fund balances and 3% interest charged for reserve fund borrowing.

Based on the proposed amendments to the D.C.-eligible costs included in the 2019 D.C. Background Study detailed in Chapter 3 herein, Tables 4-1, 4-2, and 4-3 present the updated D.C. calculations. Table 4-1 presents the calculation of D.C.s to be imposed for water and wastewater services in the municipally urban serviced area over the 2019-2028 forecast period. Table 4-2 presents the calculations of the proposed D.C.s to be imposed on anticipated development in the Township over the 10-year planning horizon for roads and related and fire protection services. Table 4-3 calculates the proposed D.C.s to be imposed on anticipated development in the Township over the 10-year planning horizon for parks and recreation and library services.

The calculation for residential development is generated on a per capita basis and is based upon four forms of housing types (single and semi-detached, apartments 2+ bedrooms, apartment's bachelor and 1 bedroom, townhouses, and lodging units). The non-residential D.C. has been calculated on a per sq.ft. of G.F.A. basis for industrial development and commercial/institutional development respectively. Table 4-4 summarizes the recommended schedule of charges, reflecting the maximum D.C.s by residential dwelling type, per sq.ft. of G.F.A. for industrial development, and per sq.ft. of G.F.A. for commercial/institutional development. The charges in Table 4-4 are denominated in 2019\$ consistent with the 2019 D.C. Background Study. Table 4-5 provides the amended schedule of charges adjusted to reflect the indexing that was applied in 2020.

Table 4-6 compares the Township's existing charges to the charges proposed herein (Table 4-5), for a single detached residential dwelling unit and per sq.ft. of G.F.A. for



industrial development and commercial/institutional development respectively. The calculated charges are \$24,476 for a single detached residential dwelling unit, \$6.96 per sq.ft. for industrial G.F.A., and \$10.90 per sq.ft. for commercial/institutional G.F.A. The residential charges for a single detached dwelling unit represent an increase of \$12,359 over the current charges. The proposed charges for industrial development represent an increase of \$4.35 per sq.ft. relative to the current charges. The proposed charges for commercial and institutional developments represent an increase of \$6.40 per sq.ft. over the current charges.

Table 4-1
Urban Area Services D.C. Calculation
2019-2028

SERVICE	2019\$ D.C.-Eligible Cost			2019\$ D.C.-Eligible Cost		
	Residential	Industrial	Commercial/ Institutional	S.D.U.	Industrial (per sq.ft)	Commercial/ Institutional (per sq.ft)
1. Wastewater Services	\$9,773,005	\$865,642	\$1,577,609	\$6,093	\$1.63	\$3.42
2. Water Services	\$2,234,573	\$197,927	\$360,716	\$1,391	\$0.37	\$0.78
TOTAL	\$12,007,577	\$1,063,569	\$1,938,325	\$7,483	\$2.01	\$4.20
Growth-Related Studies	\$73,134	\$6,478	\$11,806			
Financing Costs	\$18,026	\$1,887	\$403			
D.C.-Eligible Capital Cost	\$12,098,738	\$1,071,934	\$1,950,534			
10-Year Gross Population/GFA Growth (sq.ft.)	5,012	534,000	464,300			
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$2,414	\$2.01	\$4.20			
By Residential Unit Type	P.P.U.					
Single and Semi-Detached Dwelling	3.100	\$7,483				
Apartments - 2 Bedrooms +	2.110	\$5,093				
Apartments - Bachelor and 1 Bedroom	1.305	\$3,150				
Townhouse Dwelling	2.361	\$5,699				
Lodging Units	1.100	\$2,655				



Table 4-2
Municipal-Wide Services D.C. Calculation
2019-2028

SERVICE	2019\$ D.C.-Eligible Cost			2019\$ D.C.-Eligible Cost		
	Residential	Industrial	Commercial/ Institutional	S.D.U.	Industrial (per sq.ft)	Commercial/ Institutional (per sq.ft)
3. Roads and Related	\$12,665,776	\$1,121,869	\$2,044,575	\$7,864	\$2.11	\$4.43
4. Fire Protection Services	\$3,009,003	\$962,702	\$505,978	\$2,028	\$1.96	\$1.19
TOTAL	\$15,674,779	\$2,084,571	\$2,550,553	\$9,892	\$4.07	\$5.61
Growth-Related Studies	\$95,470	\$12,696	\$15,535			
Financing Costs	\$260,962	\$78,179	\$40,286			
D.C.-Eligible Capital Cost	\$16,031,212	\$2,175,446	\$2,606,373			
10-Year Gross Population/GFA Growth (sq.ft.)	5,024	534,000	464,300			
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$3,191	\$4.07	\$5.61			
By Residential Unit Type	P.P.U.					
Single and Semi-Detached Dwelling	3.100	\$9,892				
Apartments - 2 Bedrooms +	2.110	\$6,733				
Apartments - Bachelor and 1 Bedroom	1.305	\$4,164				
Townhouse Dwelling	2.361	\$7,534				
Lodging Units	1.100	\$3,510				

Table 4-3
Municipal-Wide Services D.C. Calculation
2019-2028

SERVICE	2019\$ D.C.-Eligible Cost		2019\$ D.C.-Eligible Cost	
	Residential	Non-Residential	S.D.U.	Non-Residential (per sq.ft.)
5. Parks and Recreation	\$8,950,779	\$471,094	\$5,577	\$0.48
6. Library Services	\$328,349	\$17,282	\$207	\$0.02
TOTAL	\$9,279,127	\$488,375	\$5,784	\$0.50
Growth-Related Studies	\$56,516	\$2,975		
Financing Costs	\$37,693	\$7,828		
D.C.-Eligible Capital Cost	\$9,373,337	\$499,177		
10-Year Gross Population/GFA Growth (sq.ft.)	5,024	998,300		
Cost Per Capita/Non-Residential GFA (sq.ft.)	\$1,866	\$0.50		
By Residential Unit Type	P.P.U.			
Single and Semi-Detached Dwelling	3.100	\$5,784		
Apartments - 2 Bedrooms +	2.110	\$3,937		
Apartments - Bachelor and 1 Bedroom	1.305	\$2,435		
Townhouse Dwelling	2.361	\$4,405		
Lodging Units	1.100	\$2,052		



Table 4-4
Schedule of Calculated D.C.s (2019\$)

Service	Residential: Single and Semi- Detached Dwelling	Residential: Apartments - 2 Bedrooms+	Residential: Apartments - Bachelor and 1 Bedroom	Residential: Townhouse Dwelling	Residential: Lodging Units	Non- Residential: Industrial (per sq.ft. of Gross Floor Area)	Non- Residential: Commercial/ Institutional (per sq.ft. of Gross Floor Area)
Municipal Wide Services:							
Roads and Related	\$7,864	\$5,353	\$3,311	\$5,990	\$2,791	\$2.11	\$4.43
Fire Protection Services	\$2,028	\$1,380	\$854	\$1,544	\$719	\$1.96	\$1.19
Parks and Recreation	\$5,577	\$3,796	\$2,348	\$4,248	\$1,979	\$0.48	\$0.48
Library Services	\$207	\$141	\$87	\$157	\$73	\$0.02	\$0.02
Total Municipal Wide Services	\$15,676	\$10,670	\$6,600	\$11,939	\$5,562	\$4.57	\$6.11
Urban Services							
Wastewater Services	\$6,093	\$4,147	\$2,565	\$4,640	\$2,162	\$1.63	\$3.42
Water Services	\$1,391	\$947	\$585	\$1,059	\$493	\$0.37	\$0.78
Total Urban Services	\$7,483	\$5,094	\$3,150	\$5,699	\$2,655	\$2.01	\$4.20
Grand Total Rural Area	\$15,676	\$10,670	\$6,600	\$11,939	\$5,562	\$4.57	\$6.11
Grand Total Urban Area	\$23,159	\$15,764	\$9,750	\$17,638	\$8,217	\$6.58	\$10.31



Table 4-5
Schedule of Calculated D.C.s (Indexed to 2021\$)

Service	Residential: Single and Semi- Detached Dwelling	Residential: Apartments - 2 Bedrooms+	Residential: Apartments - Bachelor and 1 Bedroom	Residential: Townhouse Dwelling	Residential: Lodging Units	Non- Residential: Industrial (per sq.ft. of Gross Floor Area)	Non- Residential: Commercial/ Institutional (per sq.ft. of Gross Floor Area)
Municipal Wide Services:							
Roads and Related	\$8,311	\$5,657	\$3,499	\$6,331	\$2,950	\$2.23	\$4.68
Fire Protection Services	\$2,143	\$1,458	\$903	\$1,632	\$760	\$2.07	\$1.26
Parks and Recreation	\$5,894	\$4,012	\$2,482	\$4,490	\$2,092	\$0.51	\$0.51
Library Services	\$218	\$149	\$92	\$166	\$77	\$0.02	\$0.02
Total Municipal Wide Services	\$16,567	\$11,277	\$6,975	\$12,618	\$5,878	\$4.83	\$6.46
Urban Services							
Wastewater Services	\$6,439	\$4,383	\$2,711	\$4,904	\$2,285	\$1.73	\$3.61
Water Services	\$1,470	\$1,001	\$618	\$1,119	\$521	\$0.39	\$0.83
Total Urban Services	\$7,909	\$5,384	\$3,329	\$6,023	\$2,806	\$2.12	\$4.44
Grand Total Rural Area	\$16,567	\$11,277	\$6,975	\$12,618	\$5,878	\$4.83	\$6.46
Grand Total Urban Area	\$24,476	\$16,660	\$10,304	\$18,641	\$8,684	\$6.96	\$10.90



Table 4-6
Comparison of Current and Calculated D.C.s (Indexed)

Residential (Single Detached) Comparison

Service	Current	Calculated
Municipal-wide Services:		
Roads and Related	\$2,188	\$8,311
Fire Protection Services	\$362	\$2,143
Parks and Recreation	\$4,679	\$5,894
Library Services	\$195	\$218
Administration Studies	\$506	n/a*
Total Municipal-wide Services	\$7,930	\$16,567
Area-Specific Services:		
Wastewater Services	\$3,487	\$6,439
Water Services	\$700	\$1,470
Total Area-Specific Services	\$4,187	\$7,909
Grand Total - Rural Area	\$7,930	\$16,567
Grand Total - Urban Area	\$12,117	\$24,476

*not applicable

Industrial (per sq.ft.) Comparison

Service	Current	Calculated
Municipal-wide Services:		
Roads and Related	\$0.59	\$2.23
Fire Protection Services	\$0.35	\$2.07
Parks and Recreation	\$0.40	\$0.51
Library Services	\$0.02	\$0.02
Administration Studies	\$0.13	n/a
Total Municipal-wide Services	\$1.49	\$4.83
Area-Specific Services:		
Wastewater Services	\$0.93	\$1.73
Water Services	\$0.19	0.39
Total Area-Specific Services	\$1.12	\$2.12
Grand Total – Rural Area	\$1.49	\$4.83
Grand Total – Urban Area	\$2.61	\$6.96

*not applicable



Commercial/Institutional (per sq.ft.) Comparison

Service	Current	Calculated
Municipal-wide Services:		
Roads and Related	\$1.24	\$4.68
Fire Protection Services	\$0.21	\$1.26
Parks and Recreation	\$0.40	\$0.51
Library Services	\$0.02	\$0.02
Administration Studies	\$0.29	n/a
Total Municipal-wide Services	\$2.16	\$6.46
Area-Specific Services:		
Wastewater Services	\$1.95	\$3.61
Water Services	\$0.39	\$0.83
Total Area-Specific Services	\$2.34	\$4.44
Grand Total – Rural Area	\$2.16	\$6.46
Grand Total – Urban Area	\$4.50	\$10.90

*not applicable



5. D.C. Policy Recommendations and D.C. By-law Rules

The Township's current D.C. by-law provides for the uniform Township-wide recovery for all municipal services, except water and wastewater services that are imposed on an area-specific basis in the municipal service area. D.C.s are imposed for all services through one by-law. The intent of the amendment does not alter the Township's policy for the imposition of D.C. by service and the respective Township-wide and area-specific orientation.

Other than those policies revisions identified in sections 5.1 and 5.2, all other rules and policies contained within By-law 2019-42 remain unchanged.

5.1 D.C. Calculation and Collection Policies

The recent amendments to the D.C.A. provide for mandatory installments payments of D.C.s for rental housing, non-profit housing, and institutional development as follows:

Rental housing and institutional developments will pay D.C.s in six equal annual installments, with the first payment commencing at the date of occupancy. Non-profit housing developments will pay D.C.s in 21 equal annual installments. Interest may be charged on the installments, and any unpaid amounts may be added to the property and collected as taxes.

Furthermore, the D.C.s for development proceeding through the site plan or zoning by-law amendment planning approvals processes will be calculated on the date the planning application is made and will be payable at building permit issuance.

- The D.C. amount for all developments occurring within two years of a Site Plan or Zoning By-law Amendment planning approval (for applications submitted on or after January 1, 2020) shall be determined based on the D.C. charge in effect on the date of Site Plan or Zoning By-law Amendment planning application. If the development is not proceeding via these planning approvals, or if the building permit is issued after the two-year period of application approval, then the amount is determined the earlier of the date of issuance of a building permit or occupancy.



The D.C.A. also provides that municipalities may charge interest on the installment payments, and charges calculated where the planning application is received in specific circumstances outlined above. The interest charged on installment payments and charges calculated when the planning application is made will be governed by the Township’s Council approved Development Charges Interest Policy.

5.2 Statutory Exemptions

The amendments to the D.C.A. provide for the following additional statutory exemptions to the payment of D.C.s.

Residential intensification exemptions have been expanded to allow for the creation of additional dwelling units within ancillary structures to existing residential dwellings without the payment of D.C.s. Section 2 (3) (b) of the D.C.A. provides that D.C.s are not payable for residential development that results only in the creation of up to two additional dwelling units in prescribed classes of existing residential buildings or prescribed structures ancillary to existing residential buildings, subject to the prescribed restrictions set out in section 2 (1) of O. Reg. 82/98 (see Table 5-1).

Table 5-1
Prescribed Classes of Existing Residential Buildings, Prescribed Additional Dwelling Units, and Restrictions

Item	Name of Class of Existing Residential Building	Description of Class of Existing Residential Buildings	Maximum Number of Additional Dwelling Units	Restrictions
1.	Existing single detached dwellings	Existing residential buildings, each of which contains a single dwelling unit, that are not attached to other buildings.	Two	The total gross floor area of the additional dwelling unit or units must be less than or equal to the gross floor area of the dwelling unit already in the building.
2.	Existing semi-detached dwellings or row dwellings	Existing residential buildings, each of which contains a single dwelling unit, that have one or two vertical walls, but no other parts, attached to other buildings.	One	The gross floor area of the additional dwelling unit must be less than or equal to the gross floor area of the dwelling unit already in the building.
3.	Existing rental residential buildings	Existing residential rental buildings, each of which contains four or more dwelling units.	Greater of one and 1% of the existing units in the building	None
4.	Other existing residential buildings	An existing residential building not in another class of residential building described in this table.	One	The gross floor area of the additional dwelling unit must be less than or equal to the gross floor area of the smallest dwelling unit already in the building.



The creation of a second dwelling unit in prescribed classes of proposed new residential buildings, including structures ancillary to dwellings are now also exempt from the payment of D.C.s, subject to the prescribed restrictions set out in section 2 (3) of O. Reg. 82/98 (see Table 5-2).

To provide additional clarity in interpreting the application of the exemption for a second dwelling that would be ancillary to a proposed new detached dwelling, semi-detached dwelling, or row dwelling, the proposed new principal dwelling and one ancillary dwelling unit must be located on parcel of land on which no other detached dwelling, semi-detached dwelling, or row dwelling would be located.

Table 5-2
Prescribed Classes of Proposed New Residential Buildings, and Restrictions

Item	Name of Class of Proposed New Residential Buildings	Description of Class of Proposed New Residential Buildings	Restrictions
1.	Proposed new detached dwellings	Proposed new residential buildings that would not be attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	<p>The proposed new detached dwelling must only contain two dwelling units.</p> <p>The proposed new detached dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.</p>
2.	Proposed new semi-detached dwellings or row dwellings	Proposed new residential buildings that would have one or two vertical walls, but no other parts, attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	<p>The proposed new semi-detached dwelling or row dwelling must only contain two dwelling units.</p> <p>The proposed new semi-detached dwelling or row dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.</p>
3.	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling and that are permitted to contain a single dwelling unit.	<p>The proposed new detached dwelling, semi-detached dwelling or row dwelling, to which the proposed new residential building would be ancillary, must only contain one dwelling unit.</p> <p>The gross floor area of the dwelling unit in the proposed new residential building must be equal to or less than the gross floor area of the detached dwelling, semi-detached dwelling or row dwelling to which the proposed new residential building is ancillary.</p>



Bill 213, An Act to Reduce Burdens on People and Businesses by Enacting, Amending and Repealing Various Acts and Revoking a Regulation received Royal Assent on December 8, 2020. This Bill amended the *Ministry of Training, Colleges and Universities Act* to provide an exemption from the payment of D.C.s for universities. Specifically, the Act states:

Land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education is exempt from development charges imposed under the *Development Charges Act, 1997* if the development in respect of which development charges would otherwise be payable is intended to be occupied and used by the university.

The Township's D.C. By-law will be updated through this process to state this statutory exemption.

5.3 Non-Statutory Exemptions

The Township's non-statutory exemptions are outlined in section 1.2.4 of this report. The exemption for Temporary Use under section 39 of the *Planning Act* will be removed from the by-law as part of this amendment process. This non-statutory exemption is proposed to be removed in acknowledgment of the additional statutory exemptions required for residential intensification. As a result, it is proposed that the exemption be removed from the by-law.



6. Asset Management Plan and Long-Term Capital and Operating Costs

The D.C.A. requires the background study to include an Asset Management Plan (A.M.P) related to new infrastructure. Section 10 (3) of the D.C.A. provides:

The A.M.P. 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 A.M.P. analysis included in the 2019 D.C. Background Study, which found that the capital plan was deemed to be financially sustainable, has been updated to account for the capital cost revisions described herein.

The updated A.M.P. analysis contained in Table 6-1 identifies:

- \$3.1 million in total annualized expenditures; and
- Incremental operating revenues of \$5.4 million and existing operating revenues of \$21.1 million, totaling \$26.5 million by the end of the period.

In consideration of the above changes, the capital plan is still deemed to be financially sustainable.



Table 6-1
Township of Wilmot
Asset Management – Future Expenditures and Associated Revenues (2019\$)

Description	2029 (Total)
Expenditures (Annualized)	
Annual Debt Payment on Non-Growth-Related Capital ^[1]	\$290,510
Annual Debt Payment on Post Period Capital ^[2]	\$70,515
Lifecycle:	
Annual Lifecycle – Town Wide Services	\$1,438,899
Annual Lifecycle – Area Specific Services ^[3]	\$366,373
Sub-Total Annual Lifecycle	\$1,805,271
Incremental Operating Costs (for D.C. Services)	\$903,045
Total Expenditures	\$3,069,341
Revenue (Annualized)	
Total Existing Revenue ^[4]	\$21,074,601
Incremental Tax and Non-Tax Revenue (User Fees, Fines, Licences, etc.)	\$5,400,211
Total Revenues	\$26,474,812

^[1] Non-growth-related component of projects.

^[2] Interim debt financing for post period benefit.

^[3] All infrastructure costs included in area-specific by-laws have been included .

^[4] As per sch. 10 of fir.

As a requirement of the D.C.A., under subsection 10 (2) ©, 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.

Table 6-2 summarizes the changes to the incremental annual operating costs associated with the D.C.-eligible costs at full emplacement.



Table 6-2
Township of Wilmot
Operating and Capital Expenditure Impacts for Future Capital Expenditures

Service	Annual Lifecycle Expenditures	Annual Operating Expenditures	Total Annual Expenditures
Wastewater Services	\$322,881	\$377,354	\$700,235
Water Services	\$43,492	\$52,374	\$95,866
Roads and Related Services	\$627,687	\$184,635	\$812,322
Fire Protection Services	\$282,767	\$120,568	\$403,335
Parks and Recreation	\$518,002	\$168,113	\$686,116
Library Services	\$10,442	\$-	\$10,442
Total	\$1,805,271	\$903,045	\$2,708,316



7. Process for Adoption of the Amending Development Charges By-law

If approved, the changes provided herein will form part of the 2019 D.C. Background Study, as amended. Appendix A to this D.C. Update Study includes the draft Amending D.C. By-law being presented for Council's consideration. The D.C. Update Study and draft Amending D.C. By-law will be presented to the public at a public meeting of Council to solicit public input on the proposed D.C. by-law.

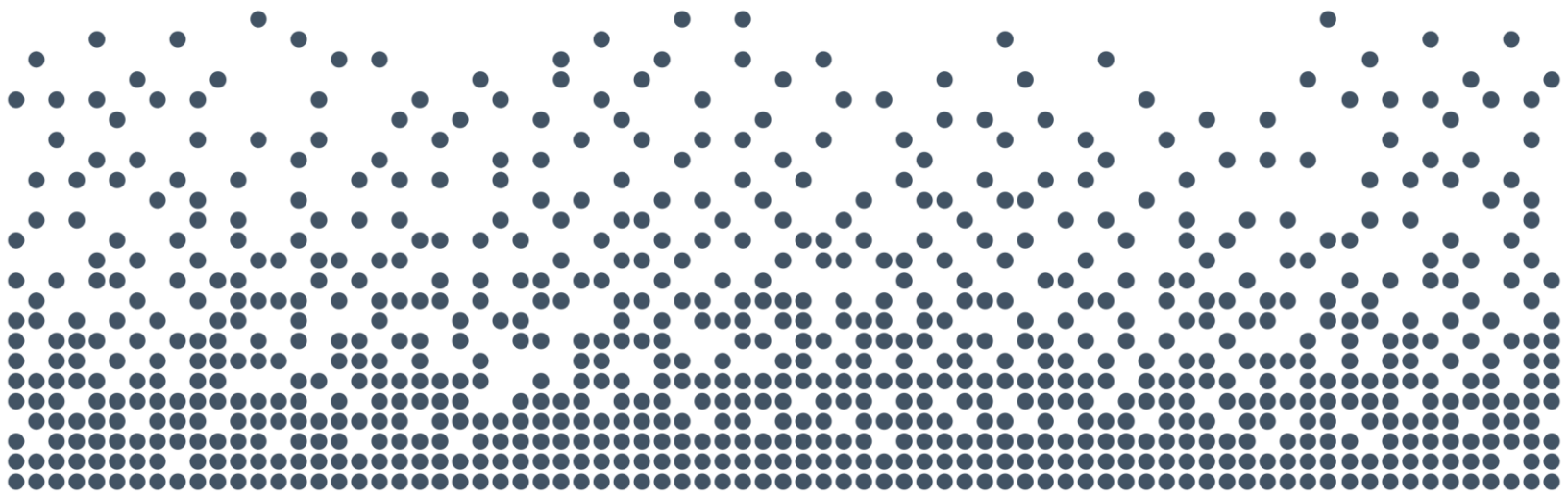
It is anticipated that Council will consider for adoption the proposed amending by-law at a subsequent meeting of Council on July 12, 2021, witnessing the 60-day period between the release of the D.C. Background Study and the passage of the D.C. By-law. It is proposed that the Amending D.C. By-law will come into effect on the date of passage.

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 Development Charges Update Study dated April 30, 2021, as amended, subject to further annual review during the capital budget process;”

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

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



Appendices



Appendix A

Draft Amending D.C. By-law

THE CORPORATION OF THE TOWNSHIP OF WILMOT

BY-LAW NO. 2021-38

A BY-LAW TO AMEND DEVELOPMENT CHARGES BY-LAW 2019-42

WHEREAS section 19 of the *Development Charges Act, 1997* S.O. 1997, c.27, as amended (“the Act”) provides for amendments to be made to development charges by-laws;

AND WHEREAS the Council of the Corporation of the Township of Wilmot (hereinafter called “the Council”) has determined that certain amendments should be made to the Development Charge By-law of the Corporation of the Township of Wilmot, being By-law 2019-42;

AND WHEREAS, in accordance with the Act, a development charges background study has been completed in respect of the proposed amendment;

AND WHEREAS the Council of the Corporation of the Township of Wilmot has given notice and held a public meeting in accordance with the Act;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF WILMOT ENACTS AS FOLLOWS:

1. **By-law 2019-42 is hereby amended as follows:**

a. The following definitions are added to subsection 1.1 of the By-law:

“institutional,” for the purposes of subsection 3.15, means development of a building or structure intended for use:

- (a) as a long-term care home within the meaning of subsection 2 (1) of the *Long-Term Care Homes Act, 2007*;
- (b) as a retirement home within the meaning of subsection 2(1) of the *Retirement Homes Act, 2010*.
- (c) By any institution of the following post-secondary institutions for the objects of the institution:

- (i) a university in Ontario that receives direct, regular and ongoing operation funding from the Government of Ontario;
 - (ii) a college or university federated or affiliated with a university described in subclause (i); or
 - (iii) an Indigenous Institute prescribed for the purposes of section 6 of the *Indigenous Institute Act, 2017*;
- (d) as a memorial home, clubhouse or athletic grounds by an Ontario branch of the Royal Canadian Legion; or
- (e) as a hospice to provide end of life care;

“non-profit housing development,” for the purposes of subsection 3.16, means development of a building or structure intended for use as residential premises by:

- (a) a corporation without share capital to which the *Corporations Act* applies, that is in good standing under that Act and whose primary objective is to provide housing;
- (b) a corporation without share capital to which the *Canada Not-for-profit Corporation Act* applies, that is in good standing under that Act and whose primary objective is to provide housing; or
- (c) a non-profit housing co-operative that is in good standing under the *Co-operative Corporations Act*;

“rental housing,” for the purposes of subsection 3.15, means development of a building or structure with four or more dwelling units all of which are intended for use as rented residential premises;

b. Section 2 is deleted and replaced with the following:

2. **DESIGNATION OF SERVICES**

2.1 The categories of services and classes of service for which development charges are imposed under this By-law are as follows:

Services

- (a) Road and Related Services;
- (b) Fire Protection Services;
- (c) Parks and Recreation Services;
- (d) Library Services;
- (e) Wastewater Services; and
- (f) Water Services.

c. The following paragraph is added subsection 3.3 of the by-law:

3.3 (b) land vested in or leased to a university that receives regular and ongoing operating funds from the government for the purposes of post-secondary education if the development in respect of which development charges would otherwise be payable is intended to be occupied and used by the university.

d. Subsections 3.5 is deleted and replaced with the following:

3.5 Notwithstanding the provisions of this By-law, development charges shall not be imposed with respect to developments or portions of developments as follows:

- (a) the enlargement to an existing residential dwelling unit;
- (b) the creation of the first two additional Dwelling Units in, or ancillary to, and existing Single Detached Dwelling; or
- (c) the creation of the first additional Dwelling Unit in, or ancillary to, an existing Semi-Detached, Townhouse or Apartment building.

- (d) the creation of a second dwelling unit in prescribed classes of proposed new residential buildings, including structures ancillary to dwellings, subject to the following restrictions:

Item	Name of Class of Proposed New Residential Buildings	Description of Class of Proposed New Residential Buildings	Restrictions
1.	Proposed new detached dwellings	Proposed new residential buildings that would not be attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new detached dwelling must only contain two dwelling units. The proposed new detached dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
2.	Proposed new semi-detached dwellings or row dwellings	Proposed new residential buildings that would have one or two vertical walls, but no other parts, attached to other buildings and that are permitted to contain a second dwelling unit, that being either of the two dwelling units, if the units have the same gross floor area, or the smaller of the dwelling units.	The proposed new semi-detached dwelling or row dwelling must only contain two dwelling units. The proposed new semi-detached dwelling or row dwelling must be located on a parcel of land on which no other detached dwelling, semi-detached dwelling or row dwelling would be located.
3.	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling	Proposed new residential buildings that would be ancillary to a proposed new detached dwelling, semi-detached dwelling or row dwelling and that are permitted to contain a single dwelling unit.	The proposed new detached dwelling, semi-detached dwelling or row dwelling, to which the proposed new residential building would be ancillary, must only contain one dwelling unit. The gross floor area of the dwelling unit in the proposed new residential building must be equal to or less than the gross floor area of the detached dwelling, semi-detached dwelling or row dwelling to which the proposed new residential building is ancillary.

- e. Subsections 3.9 is deleted and replaced with the following:

3.9 Other Exemptions:

Notwithstanding the provision of this by-law, development charges shall not be imposed with respect to:

- (a) Lands, buildings or structures used or to be used for a place of worship or for the purposes of a churchyard or cemetery exempt from taxation under the Assessment Act;
- (b) A Home Occupation;

- (c) An accessory building, provided that the total Gross Floor Area of the Accessory Building or Buildings on the site does not exceed the total Gross Floor Area of the applicable main use, buildings, Dwelling Units or Lodging Units;
 - (d) Farming, excluding a Farm Occupation.
- f. The following subsections be added to the by-law:
 - 3.15 Notwithstanding subsection 3.13, development charges for rental housing and institutional developments are due and payable in 6 installments commencing with the first installment payable on the date of occupancy, and each subsequent installment, including interest as provided in the Township's Council approved Development Charge Interest Policy, payable on the anniversary date each year thereafter.
 - 3.16 Notwithstanding subsection 3.13, development charges for non-profit housing developments are due and payable in 21 installments commencing with the first installment payable on the date of first occupancy, and each subsequent installment, including interest as provided in the Township's Council approved Development Charge Interest Policy, payable on the anniversary date each year thereafter.
 - 3.17 Where the development of land results from the approval of a Site Plan or Zoning By-law Amendment made on or after January 1, 2020, and the approval of the application occurred within 2 years of building permit issuance, the development charges under subsections 3.13, 3.15 and 3.16 shall be calculated based on the rates set out in Schedule "B" on the date the planning application was made, including interest as provided in the Township's Council approved Development Charge Interest Policy. Where both planning applications apply development charges under subsections 3.13, 3.15 and 3.16 shall be calculated on the rates, including interest as provided in the Township's Council approved Development Charge Interest Policy, set out in Schedule "B" on the date of the later planning application.

g. Schedules A and B are deleted and replaced with the attached.

2. **This By-law shall come into effect on the date of passage.**

PASSED this 12th day of July, 2021.

Mayor

Township Clerk

SCHEDULE "A" TO
BY-LAW 2019-42
COMPONENTS OF SERVICES DESIGNATED IN SECTION 2.1

100% Eligible Services

Transportation Services

- Roads
- Bridges and Culverts
- Public Works Facilities
- Public Works Rolling Stock
- Growth-Related Studies

Fire Protection Services

- Fire Stations
- Fire Vehicles
- Fire Small Equipment and Gear
- Growth-Related Studies

Parks and Recreation Services

- Parkland Development
- Vehicles and Equipment
- Indoor Recreation Facilities
- Growth-Related Studies

Library Services

- Library Facilities
- Growth-Related Studies

Municipal Water and Wastewater Urban Service Area (New Hamburg and Baden)

Wastewater Services

- Wastewater Systems
- Growth-Related Studies

Water Services

- Water Systems
- Growth-Related Studies

Schedule "B"
To By-law 2019-42
Schedule of Development Charges

Service	Residential:	Residential:	Residential:	Residential:	Residential:	Non-Residential:	Non-Residential:
	Single and Semi-Detached Dwelling	Apartments - 2 Bedrooms+	Apartments - Bachelor and 1 Bedroom	Townhouse Dwelling	Lodging Units	Industrial (per sq.ft. of Gross Floor Area)	Commercial/ Institutional (per sq.ft. of Gross Floor Area)
Municipal Wide Services:							
Roads and Related Services	\$7,864	\$5,353	\$3,311	\$5,990	\$2,791	\$2.11	\$4.43
Fire Protection Services	\$2,028	\$1,380	\$854	\$1,544	\$719	\$1.96	\$1.19
Parks and Recreation Services	\$5,577	\$3,796	\$2,348	\$4,248	\$1,979	\$0.48	\$0.48
Library Services	\$207	\$141	\$87	\$157	\$73	\$0.02	\$0.02
Total Municipal Wide Services	\$15,676	\$10,670	\$6,600	\$11,939	\$5,562	\$4.57	\$6.11
Urban Services							
Wastewater Services	\$6,093	\$4,147	\$2,565	\$4,640	\$2,162	\$1.63	\$3.42
Water Services	\$1,391	\$947	\$585	\$1,059	\$493	\$0.37	\$0.78
Total Urban Services	\$7,483	\$5,094	\$3,150	\$5,699	\$2,655	\$2.01	\$4.20
Grand Total Rural Area	\$15,676	\$10,670	\$6,600	\$11,939	\$5,562	\$4.57	\$6.11
Grand Total Urban Area	\$23,159	\$15,764	\$9,750	\$17,638	\$8,217	\$6.58	\$10.31



Appendix B

Cash Flow Calculations



Cash Flow Calculation – Roads and Related

Cash Flow Calculation - Roads - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$2,521.11	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(1,254,237)	-	-	-	502	2,521.11	1,266,608	12,370	62	12,432
2020	12,432	6,316,720	6,506,222	-	502	2,596.75	1,304,606	(5,189,184)	(155,676)	(5,344,859)
2021	(5,344,859)	133,200	141,312	-	502	2,674.65	1,343,744	(4,142,427)	(124,273)	(4,266,700)
2022	(4,266,700)	2,710,219	2,961,529	-	502	2,754.89	1,384,056	(5,844,173)	(175,325)	(6,019,498)
2023	(6,019,498)	335,720	377,856	-	502	2,837.54	1,425,578	(4,971,775)	(149,153)	(5,120,929)
2024	(5,120,929)	312,480	362,250	-	502	2,922.66	1,468,345	(4,014,833)	(120,445)	(4,135,278)
2025	(4,135,278)	1,535,200	1,833,109	-	502	3,010.34	1,512,396	(4,455,992)	(133,680)	(4,589,671)
2026	(4,589,671)	-	-	-	502	3,100.65	1,557,768	(3,031,904)	(90,957)	(3,122,861)
2027	(3,122,861)	68,000	86,140	-	502	3,193.67	1,604,501	(1,604,501)	(48,135)	(1,652,636)
2028	(1,652,636)	-	-	-	502	3,289.48	1,652,636	(0)	(0)	(0)
Total		11,411,539	12,268,418	0	5,024		14,520,237		(997,582)	

Cash Flow Calculation - Roads - Industrial

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$2,101	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(111,094)	-	-	-	53,400	2,101	112,190	1,096	5	1,101
2020	1,101	559,502	576,288	-	53,400	2,164	115,555	(459,631)	(13,789)	(473,420)
2021	(473,420)	11,798	12,517	-	53,400	2,229	119,022	(366,915)	(11,007)	(377,922)
2022	(377,922)	240,057	262,317	-	53,400	2,296	122,593	(517,647)	(15,529)	(533,176)
2023	(533,176)	29,736	33,469	-	53,400	2,365	126,270	(440,374)	(13,211)	(453,585)
2024	(453,585)	27,678	32,086	-	53,400	2,436	130,058	(355,613)	(10,668)	(366,282)
2025	(366,282)	135,980	162,367	-	53,400	2,509	133,960	(394,689)	(11,841)	(406,529)
2026	(406,529)	-	-	-	53,400	2,584	137,979	(268,550)	(8,057)	(276,607)
2027	(276,607)	6,023	7,630	-	53,400	2,661	142,118	(142,118)	(4,264)	(146,382)
2028	(146,382)	-	-	-	53,400	2,741	146,382	(0)	(0)	(0)
Total		1,010,775	1,086,673	0	534,000		1,286,128		(88,361)	

Cash Flow Calculation - Roads - Commercial/Institutional

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$4,404	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(202,465)	-	-	-	46,430	4,404	204,462	1,997	10	2,007
2020	2,007	1,019,678	1,050,268	-	46,430	4,536	210,596	(837,665)	(25,130)	(862,795)
2021	(862,795)	21,502	22,811	-	46,430	4,672	216,914	(668,692)	(20,061)	(688,753)
2022	(688,753)	437,497	478,065	-	46,430	4,812	223,422	(943,396)	(28,302)	(971,698)
2023	(971,698)	54,194	60,995	-	46,430	4,956	230,124	(802,570)	(24,077)	(826,647)
2024	(826,647)	50,442	58,476	-	46,430	5,105	237,028	(648,095)	(19,443)	(667,538)
2025	(667,538)	247,820	295,910	-	46,430	5,258	244,139	(719,309)	(21,579)	(740,888)
2026	(740,888)	-	-	-	46,430	5,416	251,463	(489,426)	(14,683)	(504,108)
2027	(504,108)	10,977	13,905	-	46,430	5,578	259,007	(259,007)	(7,770)	(266,777)
2028	(266,777)	-	-	-	46,430	5,746	266,777	(0)	(0)	(0)
Total		1,842,109	1,980,431	0	464,300		2,343,932		(161,035)	



Cash Flow Calculation – Fire Protection

Cash Flow Calculation - Fire - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		Development Related Long-Term Debt		Population Growth	\$649.63	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/ (Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments	Per Capita per Year Inflated at (3%) Starting in 2020						
2019	(109,496)	-	-	-	-	502	649.63	326,372	216,875	1,084	217,960
2020	217,960	41,664	42,914	-	-	502	669.11	336,163	511,209	2,556	513,765
2021	513,765	1,913	2,030	-	-	502	689.19	346,248	857,983	4,290	862,273
2022	862,273	218,198	238,431	-	-	502	709.86	356,635	980,477	4,902	985,379
2023	985,379	24,639	27,731	-	-	502	731.16	367,334	1,324,982	6,625	1,331,607
2024	1,331,607	37,632	43,626	-	-	502	753.09	378,354	1,666,335	8,332	1,674,667
2025	1,674,667	-	-	-	-	502	775.69	389,705	2,064,372	10,322	2,074,694
2026	2,074,694	-	-	-	-	502	798.96	401,396	2,476,090	12,380	2,488,471
2027	2,488,471	572,544	725,282	-	-	502	822.93	413,438	2,176,627	10,883	2,187,510
2028	2,187,510	2,002,916	2,613,351	-	-	502	847.61	425,841	0	0	0
Total		2,899,507	3,693,365	0	0	5,024		3,741,487		61,375	

Cash Flow Calculation - Fire - Industrial

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		Development Related Long-Term Debt		Sq. Ft. of Gross Floor Area	\$1.955	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/(Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments	per sq.ft. per Year Inflated at (3%) Starting in 2020						
2019	(35,032)	-	-	-	-	53,400	1.955	104,420	69,387	347	69,734
2020	69,734	13,330	13,730	-	-	53,400	2.014	107,552	163,556	818	164,374
2021	164,374	612	649	-	-	53,400	2.075	110,779	274,503	1,373	275,876
2022	275,876	69,811	76,284	-	-	53,400	2.137	114,102	313,694	1,568	315,263
2023	315,263	7,883	8,872	-	-	53,400	2.201	117,525	423,915	2,120	426,035
2024	426,035	12,040	13,958	-	-	53,400	2.267	121,051	533,128	2,666	535,794
2025	535,794	-	-	-	-	53,400	2.335	124,682	660,476	3,302	663,779
2026	663,779	-	-	-	-	53,400	2.405	128,423	792,201	3,961	796,162
2027	796,162	183,180	232,047	-	-	53,400	2.477	132,276	696,391	3,482	699,873
2028	699,873	640,814	836,117	-	-	53,400	2.551	136,244	(0)	(0)	(0)
Total		927,670	1,181,657	0	0	534,000		1,197,053		19,636	

Cash Flow Calculation - Fire - Commercial/Institutional

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		Development Related Long-Term Debt		Sq. Ft. of Gross Floor Area	\$1.182	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/(Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments	per sq.ft. per Year Inflated at (3%) Starting in 2020						
2019	(18,412)	-	-	-	-	46,430	1.182	54,881	36,469	182	36,651
2020	36,651	7,006	7,216	-	-	46,430	1.217	56,527	85,962	430	86,392
2021	86,392	322	341	-	-	46,430	1.254	58,223	144,274	721	144,995
2022	144,995	36,691	40,093	-	-	46,430	1.292	59,970	164,872	824	165,696
2023	165,696	4,143	4,663	-	-	46,430	1.330	61,769	222,802	1,114	223,916
2024	223,916	6,328	7,336	-	-	46,430	1.370	63,622	280,202	1,401	281,603
2025	281,603	-	-	-	-	46,430	1.411	65,531	347,134	1,736	348,870
2026	348,870	-	-	-	-	46,430	1.454	67,497	416,366	2,082	418,448
2027	418,448	96,276	121,960	-	-	46,430	1.497	69,522	366,010	1,830	367,840
2028	367,840	336,800	439,447	-	-	46,430	1.542	71,607	(0)	(0)	(0)
Total		487,566	621,057	0	0	464,300		629,149		10,320	



Cash Flow Calculation – Parks and Recreation

Cash Flow Calculation - Parks and Recreation - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Related Long-Term Debt	Population Growth	\$1,789.72	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/ (Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020				
2019	(26,281)	39,064	39,064		502	1,789.72	899,154	833,810	4,169	837,979
2020	837,979	867,067	893,079		502	1,843.41	926,129	871,029	4,355	875,384
2021	875,384	5,465,738	5,798,602		502	1,898.71	953,913	(3,969,305)	(119,079)	(4,088,384)
2022	(4,088,384)	283,997	310,331		502	1,955.67	982,530	(3,416,185)	(102,486)	(3,518,671)
2023	(3,518,671)	893,760	1,005,935		502	2,014.34	1,012,006	(3,512,600)	(105,378)	(3,617,978)
2024	(3,617,978)	1,348,050	1,562,759		502	2,074.77	1,042,366	(4,138,371)	(124,151)	(4,262,522)
2025	(4,262,522)	26,822	32,027		502	2,137.02	1,073,637	(3,220,912)	(96,627)	(3,317,539)
2026	(3,317,539)	-	-		502	2,201.13	1,105,846	(2,211,693)	(66,351)	(2,278,043)
2027	(2,278,043)	-	-		502	2,267.16	1,139,022	(1,139,022)	(34,171)	(1,173,192)
2028	(1,173,192)	-	-		502	2,335.18	1,173,192	(0)	(0)	(0)
Total		8,924,498	9,641,797	0	5,024		10,307,796		(639,718)	

Cash Flow Calculation - Parks and Recreation - Non-Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.474	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/ (Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020				
2019	(1,383)	2,056	2,056		99,830	0.474	47,324	43,885	219	44,104
2020	44,104	45,635	47,004		99,830	0.488	48,744	45,844	229	46,073
2021	46,073	287,670	305,190		99,830	0.503	50,206	(208,911)	(6,267)	(215,178)
2022	(215,178)	14,947	16,333		99,830	0.518	51,712	(179,799)	(5,394)	(185,193)
2023	(185,193)	47,040	52,944		99,830	0.534	53,263	(184,874)	(5,546)	(190,420)
2024	(190,420)	70,950	82,250		99,830	0.550	54,861	(217,809)	(6,534)	(224,343)
2025	(224,343)	1,412	1,686		99,830	0.566	56,507	(169,522)	(5,086)	(174,607)
2026	(174,607)	-	-		99,830	0.583	58,202	(116,405)	(3,492)	(119,897)
2027	(119,897)	-	-		99,830	0.601	59,949	(59,949)	(1,798)	(61,747)
2028	(61,747)	-	-		99,830	0.619	61,747	(0)	(0)	(0)
Total		469,710	507,463	0	998,300		542,516		(33,669)	



Cash Flow Calculation – Library

Cash Flow Calculation - Library - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		Related Long-Term Debt		Population Growth	\$66.29	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/ (Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments	Per Capita per Year Inflated at (3%) Starting in 2020						
2019	(1,409)	-	-	-	502	66.29	33,302	31,893	159	32,053	
2020	32,053	-	-	-	502	68.27	34,301	66,354	332	66,686	
2021	66,686	-	-	-	502	70.32	35,330	102,016	510	102,526	
2022	102,526	326,940	357,256	-	502	72.43	36,390	(218,340)	(6,550)	(224,890)	
2023	(224,890)	-	-	-	502	74.61	37,482	(187,409)	(5,622)	(193,031)	
2024	(193,031)	-	-	-	502	76.84	38,606	(154,425)	(4,633)	(159,058)	
2025	(159,058)	-	-	-	502	79.15	39,764	(119,293)	(3,579)	(122,872)	
2026	(122,872)	-	-	-	502	81.52	40,957	(81,915)	(2,457)	(84,372)	
2027	(84,372)	-	-	-	502	83.97	42,186	(42,186)	(1,266)	(43,452)	
2028	(43,452)	-	-	-	502	86.49	43,452	0	0	0	
Total		326,940	357,256	0	5,024		381,771		(23,106)		

Cash Flow Calculation - Library - Non-Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures		Development Related Long-Term Debt		Sq. Ft. of Gross Floor Area	\$0.018	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3% D.C. Reserve Fund Interest Earnings/(Cost)	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments	per sq.ft. per Year Inflated at (3%) Starting in 2020						
2019	(74)	-	-	-	99,830	0.018	1,753	1,679	8	1,687	
2020	1,687	-	-	-	99,830	0.018	1,805	3,492	17	3,510	
2021	3,510	-	-	-	99,830	0.019	1,859	5,369	27	5,396	
2022	5,396	17,207	18,803	-	99,830	0.019	1,915	(11,492)	(345)	(11,836)	
2023	(11,836)	-	-	-	99,830	0.020	1,973	(9,864)	(296)	(10,160)	
2024	(10,160)	-	-	-	99,830	0.020	2,032	(8,128)	(244)	(8,371)	
2025	(8,371)	-	-	-	99,830	0.021	2,093	(6,279)	(188)	(6,467)	
2026	(6,467)	-	-	-	99,830	0.022	2,156	(4,311)	(129)	(4,441)	
2027	(4,441)	-	-	-	99,830	0.022	2,220	(2,220)	(67)	(2,287)	
2028	(2,287)	-	-	-	99,830	0.023	2,287	(0)	(0)	(0)	
Total		17,207	18,803	0	998,300		20,093		(1,216)		



Cash Flow Calculation – Growth-Related Studies

Cash Flow Calculation - Growth-Related Studies - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$44.81	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(51,736)	-	-	-	502	44.81	22,514	(29,222)	(877)	(30,098)
2020	(30,098)	56,073	57,755	-	502	46.16	23,190	(64,664)	(1,940)	(66,604)
2021	(66,604)	10,821	11,480	-	502	47.54	23,885	(54,199)	(1,626)	(55,825)
2022	(55,825)	-	-	-	502	48.97	24,602	(31,223)	(937)	(32,160)
2023	(32,160)	11,067	12,456	-	502	50.44	25,340	(19,276)	(578)	(19,855)
2024	(19,855)	34,431	39,915	-	502	51.95	26,100	(33,669)	(1,010)	(34,679)
2025	(34,679)	26,561	31,715	-	502	53.51	26,883	(39,512)	(1,185)	(40,697)
2026	(40,697)	-	-	-	502	55.11	27,690	(13,007)	(390)	(13,398)
2027	(13,398)	11,067	14,019	-	502	56.77	28,520	1,103	6	1,109
2028	1,109	23,364	30,485	-	502	58.47	29,376	0	0	0
Total		173,384	197,826	0	5,024		258,099		(8,538)	

Cash Flow Calculation - Growth-Related Studies - Industrial

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.039	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(4,772)	-	-	-	53,400	0.039	2,077	(2,695)	(81)	(2,776)
2020	(2,776)	5,172	5,327	-	53,400	0.040	2,139	(5,965)	(179)	(6,144)
2021	(6,144)	998	1,059	-	53,400	0.041	2,203	(4,999)	(150)	(5,149)
2022	(5,149)	-	-	-	53,400	0.042	2,269	(2,880)	(86)	(2,966)
2023	(2,966)	1,021	1,149	-	53,400	0.044	2,337	(1,778)	(53)	(1,831)
2024	(1,831)	3,176	3,682	-	53,400	0.045	2,408	(3,106)	(93)	(3,199)
2025	(3,199)	2,450	2,925	-	53,400	0.046	2,480	(3,645)	(109)	(3,754)
2026	(3,754)	-	-	-	53,400	0.048	2,554	(1,200)	(36)	(1,236)
2027	(1,236)	1,021	1,293	-	53,400	0.049	2,631	102	1	102
2028	102	2,155	2,812	-	53,400	0.051	2,710	(0)	(0)	(0)
Total		15,993	18,248	0	534,000		23,807		(788)	

Cash Flow Calculation -Growth-Related Studies - Commercial/Institutional

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.062	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(6,601)	-	-	-	46,430	0.062	2,873	(3,728)	(112)	(3,840)
2020	(3,840)	7,155	7,369	-	46,430	0.064	2,959	(8,251)	(248)	(8,498)
2021	(8,498)	1,381	1,465	-	46,430	0.066	3,048	(6,915)	(207)	(7,123)
2022	(7,123)	-	-	-	46,430	0.068	3,139	(3,984)	(120)	(4,103)
2023	(4,103)	1,412	1,589	-	46,430	0.070	3,233	(2,460)	(74)	(2,533)
2024	(2,533)	4,393	5,093	-	46,430	0.072	3,330	(4,296)	(129)	(4,425)
2025	(4,425)	3,389	4,047	-	46,430	0.074	3,430	(5,041)	(151)	(5,193)
2026	(5,193)	-	-	-	46,430	0.076	3,533	(1,660)	(50)	(1,709)
2027	(1,709)	1,412	1,789	-	46,430	0.078	3,639	141	1	141
2028	141	2,981	3,890	-	46,430	0.081	3,748	(0)	(0)	(0)
Total		22,123	25,241	0	464,300		32,932		(1,089)	



Cash Flow Calculation – Water

Cash Flow Calculation - Water - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$445.84	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(400,053)	-	-	-	501	445.84	223,457	(176,595)	(5,298)	(181,893)
2020	(181,893)	394,400	406,232	-	501	459.22	230,161	(357,964)	(10,739)	(368,703)
2021	(368,703)	107,920	114,492	-	501	473.00	237,066	(246,130)	(7,384)	(253,514)
2022	(253,514)	984,000	1,075,243	-	501	487.19	244,178	(1,084,579)	(32,537)	(1,117,117)
2023	(1,117,117)	35,720	40,203	-	501	501.80	251,503	(905,817)	(27,174)	(932,991)
2024	(932,991)	312,480	362,250	-	501	516.86	259,048	(1,036,193)	(31,086)	(1,067,279)
2025	(1,067,279)	-	-	-	501	532.36	266,820	(800,459)	(24,014)	(824,473)
2026	(824,473)	-	-	-	501	548.33	274,824	(549,648)	(16,489)	(566,138)
2027	(566,138)	-	-	-	501	564.78	283,069	(283,069)	(8,492)	(291,561)
2028	(291,561)	-	-	-	501	581.73	291,561	(0)	(0)	(0)
Total		1,834,520	1,998,421	0	5,012		2,561,687		(163,214)	

Cash Flow Calculation - Water - Industrial

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.371	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings / (Cost)	
2019	(35,435)	-	-	-	53,400	0.371	19,793	(15,642)	(469)	(16,111)
2020	(16,111)	34,934	35,982	-	53,400	0.382	20,386	(31,707)	(951)	(32,658)
2021	(32,658)	9,559	10,141	-	53,400	0.393	20,998	(21,801)	(654)	(22,455)
2022	(22,455)	87,158	95,240	-	53,400	0.405	21,628	(96,066)	(2,882)	(98,948)
2023	(98,948)	3,164	3,561	-	53,400	0.417	22,277	(80,233)	(2,407)	(82,640)
2024	(82,640)	27,678	32,086	-	53,400	0.430	22,945	(91,781)	(2,753)	(94,534)
2025	(94,534)	-	-	-	53,400	0.443	23,634	(70,901)	(2,127)	(73,028)
2026	(73,028)	-	-	-	53,400	0.456	24,343	(48,685)	(1,461)	(50,146)
2027	(50,146)	-	-	-	53,400	0.470	25,073	(25,073)	(752)	(25,825)
2028	(25,825)	-	-	-	53,400	0.484	25,825	0	0	0
Total		162,492	177,010	0	534,000		226,901		(14,457)	

Cash Flow Calculation - Water - Commercial/Institutional

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$0.777	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings / (Cost)	
2019	(64,579)	-	-	-	46,430	0.777	36,072	(28,507)	(855)	(29,362)
2020	(29,362)	63,666	65,576	-	46,430	0.800	37,154	(57,784)	(1,734)	(59,518)
2021	(59,518)	17,421	18,482	-	46,430	0.824	38,268	(39,732)	(1,192)	(40,923)
2022	(40,923)	158,842	173,571	-	46,430	0.849	39,416	(175,078)	(5,252)	(180,331)
2023	(180,331)	5,766	6,490	-	46,430	0.874	40,599	(146,222)	(4,387)	(150,608)
2024	(150,608)	50,442	58,476	-	46,430	0.901	41,817	(167,268)	(5,018)	(172,286)
2025	(172,286)	-	-	-	46,430	0.928	43,071	(129,214)	(3,876)	(133,091)
2026	(133,091)	-	-	-	46,430	0.955	44,364	(88,727)	(2,662)	(91,389)
2027	(91,389)	-	-	-	46,430	0.984	45,694	(45,694)	(1,371)	(47,065)
2028	(47,065)	-	-	-	46,430	1.014	47,065	(0)	(0)	(0)
Total		296,138	322,595	0	464,300		413,521		(26,347)	



Cash Flow Calculation – Wastewater

Cash Flow Calculation - Wastewater - Residential

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Population Growth	\$1,953.19	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		Per Capita per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings/ (Cost)	
2019	(303,680)	-	-	-	501	1,953.19	978,939	675,259	3,376	678,636
2020	678,636	1,703,688	1,754,799	-	501	2,011.79	1,008,308	(67,856)	(2,036)	(69,892)
2021	(69,892)	2,299,965	2,440,033	-	501	2,072.14	1,038,557	(1,471,367)	(44,141)	(1,515,508)
2022	(1,515,508)	3,954,175	4,320,834	-	501	2,134.30	1,069,714	(4,766,629)	(142,999)	(4,909,628)
2023	(4,909,628)	1,199,016	1,349,503	-	501	2,198.33	1,101,805	(5,157,326)	(154,720)	(5,312,046)
2024	(5,312,046)	312,480	362,250	-	501	2,264.28	1,134,859	(4,539,437)	(136,183)	(4,675,620)
2025	(4,675,620)	-	-	-	501	2,332.21	1,168,905	(3,506,715)	(105,201)	(3,611,916)
2026	(3,611,916)	-	-	-	501	2,402.18	1,203,972	(2,407,944)	(72,238)	(2,480,182)
2027	(2,480,182)	-	-	-	501	2,474.24	1,240,091	(1,240,091)	(37,203)	(1,277,294)
2028	(1,277,294)	-	-	-	501	2,548.47	1,277,294	0	0	0
Total		9,469,325	10,227,419	0	5,012		11,222,444		(691,345)	

Cash Flow Calculation - Wastewater - Industrial

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$1,624	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings / (Cost)	
2019	(26,898)	-	-	-	53,400	1,624	86,709	59,811	299	60,110
2020	60,110	150,904	155,431	-	53,400	1,672	89,311	(6,010)	(180)	(6,191)
2021	(6,191)	203,719	216,126	-	53,400	1,723	91,990	(130,326)	(3,910)	(134,236)
2022	(134,236)	350,240	382,717	-	53,400	1,774	94,750	(422,203)	(12,666)	(434,870)
2023	(434,870)	106,203	119,532	-	53,400	1,828	97,592	(456,809)	(13,704)	(470,514)
2024	(470,514)	27,678	32,086	-	53,400	1,882	100,520	(402,080)	(12,062)	(414,142)
2025	(414,142)	-	-	-	53,400	1,939	103,536	(310,607)	(9,318)	(319,925)
2026	(319,925)	-	-	-	53,400	1,997	106,642	(213,283)	(6,398)	(219,682)
2027	(219,682)	-	-	-	53,400	2,057	109,841	(109,841)	(3,295)	(113,136)
2028	(113,136)	-	-	-	53,400	2,119	113,136	0	0	0
Total		838,744	905,892	0	534,000		994,026		(61,236)	

Cash Flow Calculation - Wastewater - Commercial/Institutional

Year	D.C. Reserve Fund Opening Balance	Development Related Expenditures	Development Related Expenditures	Development Related Long-Term Debt	Sq. Ft. of Gross Floor Area	\$3,404	Anticipated Revenues	Annual Surplus/ (Deficit)	0.5% / 3%	D.C. Reserve Fund Closing Balance after Interest
		Nominal Project Cost	Project Cost Inflated at 3%	Existing Debt Payments		per sq.ft. per Year Inflated at (3%) Starting in 2020			D.C. Reserve Fund Interest Earnings / (Cost)	
2019	(49,022)	-	-	-	46,430	3,404	158,025	109,004	545	109,549
2020	109,549	275,018	283,269	-	46,430	3,506	162,766	(10,954)	(329)	(11,282)
2021	(11,282)	371,272	393,883	-	46,430	3,611	167,649	(237,516)	(7,125)	(244,641)
2022	(244,641)	638,303	697,491	-	46,430	3,719	172,679	(769,454)	(23,084)	(792,537)
2023	(792,537)	193,551	217,844	-	46,430	3,831	177,859	(832,522)	(24,976)	(857,498)
2024	(857,498)	50,442	58,476	-	46,430	3,946	183,195	(732,779)	(21,983)	(754,763)
2025	(754,763)	-	-	-	46,430	4,064	188,691	(566,072)	(16,982)	(583,054)
2026	(583,054)	-	-	-	46,430	4,186	194,351	(388,703)	(11,661)	(400,364)
2027	(400,364)	-	-	-	46,430	4,311	200,182	(200,182)	(6,005)	(206,187)
2028	(206,187)	-	-	-	46,430	4,441	206,187	0	0	0
Total		1,528,587	1,650,963	0	464,300		1,811,585		(111,600)	