



MUNICIPALITY OF BLUEWATER DRAFT DEVELOPMENT CHARGES BACKGROUND STUDY (2022)



MUNICIPALITY OF BLUEWATER
DEVELOPMENT CHARGES BACKGROUND STUDY
VERSION 3

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MUNICIPALITY OF BLUEWATER 2022 DEVELOPMENT CHARGES BACKGROUND STUDY

1.0 Introduction

The Municipality of Bluewater is considering establishing, by by-law, revised development charges to pay for capital costs required due to increased needs for services arising from development. The by-law may establish development charges against residential and non-residential development activities in the Municipality during the period of 2022-2027. This by-law would be passed under the statutory authority of the *Development Charges Act, 1997* (DCA) as amended and its accompanying Regulations. It will replace the existing Development Charges by-law (By-law 92-2017) passed on August 21, 2017.

Section 10 of the Act requires that a development charge background study be completed and specifies the contents of the study. *Ontario Regulation 82/98*, Section 8, as amended (O.Reg. 82/98) further defines the content of the study. This Development Charges Background Study (Background Study) has been prepared in order to provide Council with sufficient information to make a decision on the value of any development charge to adopt. This report includes the following major components:

- An outline of the framework for conducting the study;
- An overview of the local growth forecasts for residential and non-residential activities;
- A summary of growth-related projects and services;
- A synopsis of the methodology applied to establish a development charge;
- The calculations associated with establishing development charges for each applicable service category;
- Asset management information for assets funded by the development charges;
- Presentation of the proposed development charge schedule; and
- Details on the process to implement a Development Charges By-law.

2.0 Background

The Municipality currently administers a wide variety of public services and maintains an extensive inventory of facilities, infrastructure, equipment and land. Several major infrastructure projects have been initiated in recent years or are being planned for implementation in the foreseeable future. Given the capital investment associated with the provision of these projects and other municipal activities, Council has expressed an interest in considering a new Development Charge By-law to recover applicable costs from new development activities.

B. M. Ross and Associates Limited (BMROSS) was engaged to conduct a Development Charges Background Study to consider the adoption of development charges applicable to new construction activities within the Municipality. Section 10 of the DCA specifies that the Background Study must include the following components:

- Forecasts for the anticipated amount, type and location of development for which development charges can be applied;
- An estimate of the increased level of service required to accommodate growth (for each service incorporated into the development charge);
- Forecasts of the average service levels for certain services over the 10-year period immediately preceding the preparation of the Background Study. The assessment of previous service levels must consider both the quality and quantity of service provided;
- Assessment of long-term capital and operating costs for infrastructure required for each applicable service;
- Consideration of the use of more than one development charge bylaw to reflect different service areas; and
- An evaluation of life cycle costs and financial sustainability over the lifetime of the asset.

3.0 Current Practice

In 2017, the Municipality enacted By-law 92-2017, to collect development charges on residential and non-residential development within the municipality. Currently, as set out in By-law 92-2017, there are municipal-wide development charges, as well as development charges for wastewater services in Bayfield, Hensall and Zurich and water services in Hensall.

The current by-law was imposed after consideration of a Development Charges Background Report dated December 19, 2016. This report analyzed potential growth and development across the entire Bluewater and evaluated capital works necessary to service this growth. By-law 92-2017 was passed on August 21, 2017, imposing charges for service categories as identified in the 2016 Background Report. The charges established under that by-law are as follows:

Table 3.1 Current Residential/Non-Residential Development Charges from Bylaw 92-2017

Service Category	Single & Semi-Detached	Other Multiples	Apartments (2 bedrooms +)	Apartments (Bachelor, 1 bedroom)	Non-Residential (per ft²)	Wind Turbines
Municipal Wide Services:						
Services Related to a Highway	838	666	617	401	0.48	838
Outdoor Recreation Services	672	533	494	322	0.09	-
Administration	387	307	285	185	0.25	387
Waste Diversion	21	17	15	10	0.01	-
Total Municipal Wide Services	1,918	1,523	1,411	918	0.83	1,225
Urban Services						
Wastewater – Bayfield	7,320	5,811	5,398	3,510	1.26	-
Wastewater – Hensall	3,034	2,409	2,237	1,455	0.16	-
Wastewater – Zurich	6,481	5,145	4,779	3,108	0.00	-
Water- Hensall	2,495	1,981	1,840	1,196	0.13	-
Grand Total Rural Area	1,918	1,532	1,411	918	0.83	1,225
Grand Total Bayfield Area	9,238	7,334	6,809	4,428	2.09	1,225
Grand Total Hensall Area	7,447	5,913	5,488	3,569	1.12	1,225
Grand Total Zurich Area	8,399	6,668	6,190	4,026	0.83	1,225

The 2021 balance of the development charge reserve funds is summarized in Table 3.2. In 2021, \$193,558.48 was deposited into the applicable development charge reserve accounts. There were no withdrawals made. The balance of the reserve accounts at the end of 2021 is \$894,777.02. It is anticipated that as development charges are collected, they will either remain in reserve until payments for development charge projects are made or will be applied to debt repayment for projects that have been implemented.

Table 3.2 Summary of Development Charges Collected, Withdrawn and Current Balances

Reserve Fund	2021 Opening Balance	Deposits	Withdrawals	Interest	2021 Closing Balance
Administration	48,226.49	18,258.47	0.00	400.79	66,885.75
Roads	103,686.25	38,520.28	0.00	675.00	142,881.53
Wastewater – Bayfield	450,742.37	93,765.78	0.00	2,583.00	547,091.15
Wastewater – Hensall	6,499.03	4,825.62	0.00	0.00	11,324.65
Wastewater – Zurich	0.00	6,630.06	0.00	0.00	6,630.06
Water - Hensall	5,377.22	3,951.38	0.00	44.00	9,372.60
Recreation	79,880.55	26,673.41	0.00	505.00	107,058.96
Waste Diversion	2,581.84	933.48	0.00	17.00	3,532.32
Total	696,993.75	193,558.48	0.00	4,224.79	894,777.02

4.0 Approach

This report is an update of the 2017 Background Study completed by Watson and Associates Economists Limited. The purpose of this study is to conform to the requirements of the DCA and to support an amount that can be collected as a development charge. It is also an opportunity to review how the assumptions and forecasts used in the previous report performed. Additionally, the process of implementing and collecting the development charges is reviewed to determine whether changes or improvements need to be made. The approach to conducting the review is as follows:

- Review with municipal staff and Council the existing process, what projects were implemented during the life of the existing by-law and to discuss new projects;
- Review historical and future growth in the Municipality. Municipal staff provided information on buildings/development activity since the previous report was prepared;
- Municipal staff and consulting engineers provided updated capital works forecasts and potential projects;

- BMROSS analyzed and evaluated the services collected for in the existing by-law, and the proposed works to service new development, with respect to:
 - Applicability under the Act;
 - Benefit to existing development;
 - Allocation between different types of development;
 - Level of service in the community;
 - Potential impact of long-term capital and operating costs for the proposed works; and
 - Service areas of the proposed works.

The following represent the final components of the development charges process:

- Provide Council with an interim presentation to identify proposed services that could be collected for in a development charge;
- Council determines a development charge amount they intend to collect by by-law;
- Establish, by Council resolution, a development charge schedule which the Municipality intends to collect;
- Prepare a draft Development Charges By-law prescribing the proposed development charges schedule;
- Arrange a public meeting to present details on the study process and the proposed development charges schedule. The meeting is a requirement of the DCA. A minimum 20-day notice period must be provided prior to the meeting;
- Acknowledge and attempt to address concerns raised during the statutory public meeting, and document input received through consultation;
- Finalize the implementing By-law following consideration of comments received via consultation;
- Obtain, by Council resolution, approval of the proposed Development Charges By-law; and
- Circulate the Notice of Passage for the Development Charges By-law. The By-law will immediately come into effect. The By-law may be appealed to the Ontario Land Tribunal (OLT) in the 40-day period following the passage of the By-law.

5.0 Population and Growth Forecast

5.1 General

Forecasts have been prepared to project population and household growth for the Municipality over a 25-year planning period. The growth forecasts were established following an assessment of general growth and development trends in Bluewater as identified from statistical data, building permit data and background research. The forecasts extrapolated from these analyses are considered reasonable projections of growth and development within the Municipality. The background research and analyses of population and growth is included in Appendix A.

5.2 Current Population and Household Trends

The most recent population count for the Municipality of Bluewater is the 2021 Census. In 2021, the population of Bluewater was 7,540 permanent residents, an increase of 404 persons from the 2016 count and 496 persons from the 2011 Census. The increase in population between 2016 and 2021 equates to an annual average growth rate of 1.1%. Over the last 10 years of census data, the annual average growth rate was 0.68%.

The largest population centre in the Municipality is the community of Bayfield. The permanent population of Bayfield by the most recent Census count is 1,394 people. This is an increase of 159 people over the 2016 Census count. Other communities in Bluewater include Hensall and Zurich. These communities had populations of 1,126 and 941 persons respectively. Over the last 5 years, the populations of these communities have increased by 105 people in Hensall and 24 in Zurich. Table 5.1 summarizes the recent census data for Bluewater and the above noted communities.

Table 5.1 Census Population Counts, 2001-2021

Year	Bayfield	Hensall	Zurich	Bluewater
2001	909	1,194	860	6,919
2006	1,081	1,128	885	7,120
2011	1,023	1,173	865	7,044
2016	1,235	1,021	917	7,136
2021	1,394	1,126	941	7,540
5-year change	159	105	24	404
10-year change	371	-47	76	496
20-year change	485	-68	81	621
5-year change (%)	12.87	10.28	2.62	5.66
10-year change (%)	36.27	-4.01	8.79	7.04
20-year change (%)	53.36	-5.7	9.42	8.98
5-year average annual growth rate (%)	2.45	1.98	0.52	1.11
10-year average annual growth rate (%)	3.14	-0.41	0.85	0.68
20-year average annual growth rate (%)	2.16	-0.29	0.45	0.43

The increase in population in Bluewater is driven primarily by increases in the population of Bayfield. The increase in the population in Bayfield is likely attributable to its desirable location along Lake Huron as a retirement community as well as conversions of seasonal homes to permanent homes. Increases in the population of the rural centres of Hensall and Zurich, may be driven by affordability and availability.

The number of permanently occupied private dwellings in Bluewater, Bayfield, Hensall and Zurich as counted through previous censuses are summarized in Table 5.2 The number of private dwellings in the Municipality has increased over the last 15 years,

with approximately 482 new dwellings. Counts of occupied dwellings for Bayfield, Hensall and Zurich are not available for 2001.

Over the last census period, there has been an increase in the number of occupied dwellings in Bluewater. In Bayfield, there have been an additional 155 dwellings between 2016 and 2021, 15 in Hensall and 8 in Zurich.

Table 5.2 Census Occupied Dwelling Counts, 2006-2021

Year	Bayfield	Hensall	Zurich	Bluewater
2006	491	413	353	2,766
2011	498	449	371	2,820
2016	562	438	391	3,027
2021	717	453	399	3,302
5-year change	155	15	8	275
10-year change	219	4	28	482
15-year change	226	40	46	536
5-year change (%)	27.58	3.42	2.05	9.08
10-year change (%)	43.98	0.89	7.55	17.09
15-year change (%)	46.03	9.69	13.03	19.38
5-year average annual growth rate (%)	4.99	0.68	0.41	1.75
10-year average annual growth rate (%)	3.71	0.09	0.73	1.59
15-year average annual growth rate (%)	2.56	0.62	0.52	1.12

To gain a better understanding of residential development occurring in Bluewater, building permit data for new residential dwellings was assessed. Table 5.3 summarizes the number of new building units throughout the Municipality between 2012 and 2021.

Table 5.3 Building Permits Issued for New Residential Development, 2012-2021

Year	Single & Semi-Detached	Multiple	Apartment	Total
2012	33	7	0	40
2013	38	4	10	52
2014	27	4	0	31
2015	24	4	0	28
2016	29	11	0	40
2017	38	0	0	38
2018	31	7	0	38
2019	45	11	0	56
2020	39	6	0	45
2021	39	0	0	39

Year	Single & Semi-Detached	Multiple	Apartment	Total
5-year total	192	24	0	216
10-year total	343	54	10	407
5-year average	38.4	4.8	0	43.2
10-year average	34.3	5.4	1	40.7

Over the past 10 years, there were permits issued for 407 new residential units in Bluewater. This includes 54 units of multi-unit type housing. An examination of the average number of permits over the last 10, and 5 years shows an increase in the average number of new units per year. This increase reflects the recent increase in new homes built throughout the Municipality. The majority of new homes constructed are single detached (84%), followed by multi-unit type dwellings (13%). There was one 10-unit apartment building constructed in the last 10 years.

In the future, it is expected that the majority of new units will continue to be single detached homes; however, it is expected that the proportion of multi-dwellings will increase.

5.3 Population and Households Forecast

5.3.1 Forecast Methodology

For the purposes of this study, a population forecast for Bluewater was developed. These forecasts are based on input from staff, forecasted developments, and building permit data.

The forecast incorporated the following methodological components:

- The 2021 population and household counts, as determined by the 2021 Census, were used as the starting points for the projections.
- Overall, it is estimated that development will occur at a rate of 41 units/year in Bluewater over the next 20 years. Given work completed for the Bayfield WWTP EA and Secondary Plan, it is estimated that the average number of new units in Bayfield will be 25 units per year. Growth in Zurich and Hensall is estimated to occur at a rate of 1 unit per year in each community. It is forecasted that there will be 14 units on average per year in the remainder of the Municipality.
- Population densities throughout Bluewater are already generally low and are expected to remain relatively steady over the next 20 years, with an average of 2.2 persons per unit in Bayfield, 2.36 in Zurich, 2.49 in Hensall, and 2.35 in the remainder of the Municipality.
- The expected number of households and population density was then used to forecast the population increase.
- It is expected that the majority of development will occur as single detached units and medium density units (row houses and/or townhouses).

Several major assumptions were also made to substantiate the use of the aforementioned methodology as the basis for a population forecast. They are as follows:

- Population growth will generally be accommodated through the development of existing lots and registered lots through Plans of Subdivisions and Site Plans.
- The Bayfield WWTP expansion will proceed in the near future.

5.3.2 Residential and Population Forecast

A residential and population growth forecast was developed for Bluewater based upon the previously discussed methodology. Table 5.4 shows the population forecasts for Bayfield, Zurich, Hensall and remainder of the Municipality. Table 5.5 contains the forecasted number of additional dwelling units over the same period.

Table 5.4: Residential Population Forecast 2022-2047

Year	Bayfield Population	Zurich Population	Hensall Population	Remainder of Municipality	Bluewater (Total)
2021	1,394	941	1,126	4,079	7,540
2022	1,632	944	1,130	4,105	7,811
2027	1,907	956	1,143	4,270	8,276
2032	2,182	968	1,155	4,434	8,739
2037	2,457	979	1,168	4,599	9,203
2042	2,732	991	1,180	4,763	9,666
2047	3,007	1,003	1,193	4,928	10,131
5-year change	275	12	13	165	465
10-year change	550	24	25	329	928
20-year change	1,100	47	50	658	1,855
25-year change	1,375	59	63	823	2,320

Table 5.5: Residential Dwelling Forecast 2021-2047

Year	Bayfield Units	Zurich Units	Hensall Units	Remainder of Municipality	Bluewater (Total)
2021	717	399	453	1,733	3,302
2022	742	400	454	1,747	3,343
2027	867	405	459	1,817	3,548
2032	992	410	464	1,887	3,753
2037	1,117	415	469	1,957	3,958
2042	1,242	420	474	2,027	4,163

Year	Bayfield Units	Zurich Units	Hensall Units	Remainder of Municipality	Bluewater (Total)
2047	1,367	425	479	2,097	4,368
5-year change	125	5	5	70	205
10-year change	250	10	10	140	410
20-year change	500	20	20	280	820
25-year change	625	25	25	350	1025

5.4 Non-Residential Development Forecast

The forecast for non-residential development is based on the average amount of new non-residential growth in Bluewater over the last five years. The average annual amount of non-residential growth in the Municipality is 18,951 ft² per year. It is predicted that non-residential growth will continue at current rates. Given this, the forecasted amount of non-residential growth over the next 5, 10 and 20 years is shown in Table 5.6.

Table 5.6 Forecasted Non-Residential Growth (ft²)

Year	Bluewater Non-Residential Growth (ft ²)	Bayfield Non-Residential Growth (ft ²)	Hensall Non-Residential Growth (ft ²)	Zurich Non-Residential Growth (ft ²)
2022-2027	18,951	1,482	8,924	7,812
2022-2032	37,902	2,964	17,847	15,625
2022-2042	75,803	5,928	35,694	31,250

6.0 Review of Growth-Related Capital Costs

6.1 General Considerations

Projects and services that are anticipated to be required as a result of growth throughout Bluewater were reviewed and evaluated. The following factors and evaluation steps were considered during this process:

- Identification of municipal services required to permit occupancy for new development (e.g., water, wastewater, parks and recreation, public work facilities, roads, etc.).
- A review of projects/services contained in the 2017 Background Report.
- A review of new projects/services that were proposed to be collected for in a development charge because they will be required as a result of growth.

- Assessment of the applicability of services and projects under the DCA, taking the following factors into consideration:
 - Eligible Services: Development charges can only be applied to each of the following services to recover the growth-related capital costs for facility construction and improvement, land acquisition and improvement, equipment and furnishings:
 - Water and wastewater services.
 - Stormwater infrastructure.
 - Services related to a highway (as defined in subsection 1(1) of the *Municipal Act, 2001*).
 - Electrical power services.
 - Policing services.
 - Ambulance services.
 - Waste diversion services.
 - Fire Protection services.
 - Library services.
 - Long term care services.
 - Parks and recreation services.
 - Childcare and early year programs and services.
 - Housing services.
 - Services related to by-law enforcement and municipally administered courts.
 - Emergency preparedness services.
 - Transit services; and
 - Development charge background studies; and
 - Studies related to the above matters;
- Identification of completed projects and services which benefit future development and included allocations specifically for growth (i.e., additional capacity).
- Identification of proposed projects and services which will provide benefit to further development within the next ten years; and
- Assessment of the probable capital costs which will be incurred for those projects or services determined to be DCA-eligible.

6.2 Review of Projects/Services from the 2016 Background Report

The evaluation process included a review of growth-related projects that were included in the 2017 Development Charges. The projects were reviewed in terms of their status, cost and grant estimates, and continued applicability. The review is summarized in Table 6.1.

Table 6.1 Summary of Review of 2017 Development Charge Projects

Service Category	Project	Summary of Review
Recreation	Parkland Development	<ul style="list-style-type: none"> • For the development of parklands. Costs reviewed and will be carried forward. • Continue to collect.
Administration	Development Charge Studies	<ul style="list-style-type: none"> • Cost associated with completing Development Charge Background Study. • Remove 10% reduction (no longer required under DC Act) • Continue to collect
Administration	Parks and Recreation Master Plan	<ul style="list-style-type: none"> • Municipality has received grant funding that will wholly pay for this project. • Remove from development charges. • Apply funds collected against other studies in Administrative category
Administration	Road Needs Study	<ul style="list-style-type: none"> • Costs updated to reflect updated cost estimate. • Continue to collect.
Administration	Water and Wastewater Master Plan	<ul style="list-style-type: none"> • Municipality intends to undertake this project in the future. • Continue to collect.
Waste Diversion Services	Growth-related Capital Component of Collection related to Waste Diversion	<ul style="list-style-type: none"> • Staff directed to remove this project from DCs – have defined a waste diversion project for the Stanley landfill that will benefit future growth. • Reserves will be applied to transfer station project.
Services Related to a Highway	Airport Line Bridge Replacement and Expansion	<ul style="list-style-type: none"> • Project proceeding to construction. • Costs updated to reflect tender results and grant received. • Continue to collect.
Services Related to a Highway	Expansion for two more Bays	<ul style="list-style-type: none"> • Project has been further defined. Expansion of 5 bays at the Varna site. • Costs updated.
Services Related to a Highway	Public Works Office Expansion	<ul style="list-style-type: none"> • Project is included with expansion at the Varna site. • Costs included with 5-bay expansion at Varna.
Services Related to a Highway	Tractor and Blower	<ul style="list-style-type: none"> • Has been purchased. • Reviewed costs and continue to collect.
Services Related to a Highway	Single Axle	<ul style="list-style-type: none"> • Cost updated. • Municipality still plans to purchase. • Continue to collect.

Service Category	Project	Summary of Review
Wastewater	Bayfield Wastewater Services	<ul style="list-style-type: none"> • Expansion of Bayfield Wastewater Treatment • Costs updated to current (2021) estimate. • Update design capacity • Include financing (interest) costs in cost estimate. • Continue to collect.
Wastewater	Hensall Wastewater	<ul style="list-style-type: none"> • Expansion of Hensall Wastewater Treatment. • Project constructed. • Continue to collect.
Wastewater	Zurich Wastewater Services	<ul style="list-style-type: none"> • Expansion of the Zurich Wastewater Treatment Plant. • Project constructed. • Continue to collect.
Water	Hensall Water Services	<ul style="list-style-type: none"> • For additional water storage. • Updated project costs and grant funding received. • Review design capacity.

6.3 Review of Additional Services

Additional services that are anticipated to be required as a result of growth in the Municipality were reviewed and evaluated as part of the study. Table 6.2 provides a summary of new service categories/projects that are proposed to be included in the development charge calculation. Additional information on the projects included in Table 6.2 is also included in Appendix B.

Table 6.2 New Projects for Inclusion in Development Charges

Service Category & Area	Project	Description
Administration	Water System Needs Assessment	<ul style="list-style-type: none"> • Municipality will be undertaking a technical study of the water system to understand potential future projects needed to service future growth areas. This study may identify future projects to be included in future development charges.
Services Related to a Highway	Sidewalk Plow	<ul style="list-style-type: none"> • An additional sidewalk plow is required to service future development. • This will be an addition to the existing fleet.
Services Related to a Highway	Zurich Main Street Reconstruction	<ul style="list-style-type: none"> • Main Street in Zurich is being reconstructed by the County of Huron. Costs attributed to improvements to sidewalks and boulevards are the responsibility of Bluewater. Will benefit existing and future development within the community.

Service Category & Area	Project	Description
Services Related to a Highway	Bayfield Main Street Reconstruction	<ul style="list-style-type: none"> Main Street in Bayfield is being reconstructed. Work includes improvements to drainage, sidewalks, and boulevards. Will benefit existing and future development within the community.
Services Related to a Highway	New Sidewalks	<ul style="list-style-type: none"> The Municipality will be constructing additional sidewalk to service development areas.
Services Related to a Highway	Traffic Study	<ul style="list-style-type: none"> The Municipality is planning on undertaking a traffic study to investigate intersection needs in the future. This study will be driven by future development.
Waste Diversion	Stanley Transfer Station	<ul style="list-style-type: none"> Construction of a transfer station at the Stanley landfill. This facility will divert recyclable and compostable materials from the landfill. Will benefit existing and future development.
Water	Zurich Water Supply	<ul style="list-style-type: none"> The groundwater wells in Zurich are being replaced by a connection to the Lake Huron Primary Water Supply system. The project involves construction of transmission pipeline and pumping stations. The design of the pipeline and pumping stations includes capacity for future development. Will benefit existing and future development.

6.4 Service Areas

In previous iterations of the Development Charges By-law, the Municipality had development charges for areas with water and wastewater services. These service areas were justified on the basis that there were projects with specific benefitting areas e.g. the Hensall water storage project benefitted only Hensall and therefore was only collected from development within Hensall. Through this Background Study, it has been identified that there are four service areas for the purposes of collecting development charges:

- Rural area
- Bayfield area
- Hensall area
- Zurich area

The following table summarizes the projects collected for in each of the service areas.

Table 6.3 Development Charge Projects and Applicable Service Areas

Project	Project Category	Service Area
Road Needs Study	Administration	Municipal-wide
Water & Wastewater Master Plan	Administration	Municipal-wide
Development Charge Study	Administration	Municipal-wide
Water System Needs Assessment	Administration	Municipal-wide
Parkland Development	Parks and Recreation	Municipal-wide
Expansion of Public Works Bays and Office	Services Related to a Highway	Municipal-wide
Airport Line Bridge Replacement	Services Related to a Highway	Municipal-wide
Tractor and Blower	Services Related to a Highway	Municipal-wide
Single Axle	Services Related to a Highway	Municipal-wide
Sidewalk Plow	Services Related to a Highway	Municipal-wide
Zurich Main Street Reconstruction	Services Related to a Highway	Municipal-wide
Bayfield Main Street Reconstruction	Services Related to a Highway	Municipal-wide
New Sidewalks	Services Related to a Highway	Municipal-wide
Traffic Study	Services Related to a Highway	Municipal-wide
Stanley Transfer Station	Waste Diversion	Municipal-wide
Bayfield Wastewater Treatment Expansion	Wastewater	Bayfield
Zurich Wastewater Treatment Expansion	Wastewater	Zurich
Hensall Wastewater Treatment Expansion	Wastewater	Hensall
Hensall Water Storage	Water	Hensall
Zurich Water Supply	Water	Zurich

6.5 Asset Management

Amendments to the Development Charges Act in 2015 and Ontario Regulation 82/98 require that development charge background studies include an asset management plan. This plan must include all assets with capital costs funded by development charges and demonstrate that assets are financially sustainable over their full life cycle.

The Municipality of Bluewater last updated their asset management plan in 2021. The intent of the AMP is to serve as a strategic, tactical and financial document to allow the Municipality to follow sound asset management practices while optimizing available resources and achieving a desired level of service. The AMP included consideration of the following asset categories: road network, bridges and culverts, water network, sanitary sewer network, storm sewer network, facilities and fleet assets.

A number of the projects funded through development charges have been either built or are expansions to existing infrastructure. These projects were evaluated as part of the 2021 AMP and include:

- Hensall Wastewater Plant
- Zurich Wastewater Plant

Additionally, studies included are not considered assets.

The remaining projects have yet to be constructed and represent new assets. It is expected that as these projects are built or bought, they will be incorporated into future updates of the AMP. Given the estimated life cycle of the assets (based on the lifetime estimates), the replacement costs were estimated assuming 2% annual inflation. The assets not included in the 2021 AMP have a life-cycle cost totaling: \$106 million dollars. The assumed life expectancy of the assets ranges from 10 to 75 years. Assuming 3.5% annual interest, the Municipality will require an additional \$336,678 per year to fund the lifecycle costs of these additional projects. This amount does not factor in potential grants or other contributions.

The number of additional residences in Bluewater is expected to continue to increase over the next 10 years. The forecasted addition of 410 units will contribute to the existing assessment base and offset the costs associated with these additional assets. Given this, and the Municipality's continued efforts towards establishing long-term funding strategies, the projects included in the development charges are considered financially sustainable over their life cycles.

7.0 Calculation of the Development Charge

7.1 Methodology

The DCA and O. Reg. 82/98 prescribe the methodology which must be applied to calculate the growth-related capital costs for those projects and services being considered for inclusion into the development charge (i.e., DCA-recoverable capital costs). The following outlines the methodology used to calculate possible development charges for each service category:

Preliminary Capital Cost Assessment

- Establish the total estimated capital costs for those projects or services with growth related components which will be implemented within ten years (i.e., gross growth-related capital costs). Exclude costs for local services installed or

paid for by land developers as a condition of approval under Section 51 of the Planning Act (subdivision of land);

- Define the benefiting area for the proposed works and estimate the total capacity of the growth-related project or service. Exclude the proportion of the service that can be met by the excess capacity of existing facilities, unless Council has indicated, at the time the excess capacity was created, that it would be paid for by new development;
- Reduce the net growth-related capital costs of the project or service by the value of any anticipated grants or subsidies.

Service Level and Benefit Adjustments

- Review the service description to determine if the proposed works exceed the average level of service (service standard) in the Municipality over the previous 10-year period. The determination of average service level must take into account the quantity of service (i.e., number or size) and the quality of service (i.e., value or cost). Reduce the net cost of the works by any anticipated increase in the service standard.
- Reduce the net capital cost by the amount the increase in service would benefit existing development.
- Allocate the net capital costs for project or service between residential and non-residential development (i.e., industrial, institutional, commercial activities), based upon anticipated benefit.

Development Charge Calculation and Cash Flow Adjustments

- Calculate the development charge for each service based upon the estimated amount of future growth it will facilitate during the applicable planning period;
- Determine the residential development charge for various types of dwellings based upon the expected occupancy characteristics. Establish area-specific charges for localized projects and services, as required.
- Establish the non-residential development charge based upon a building standard (i.e., cost per square metre of development). Establish area-specific charges for localized projects and services, as required.

7.2 Assumptions Used in the Development Charge Calculation

7.2.1 Spatial Applicability of Capital Costs

The projects included in the following service categories that benefit development on a municipal-wide basis: Administration, Parks and Recreation, Services Related to a Highway. The projects in the Wastewater and Water services categories have specific benefiting areas as summarized in Table 6.3. The service areas are:

- Rural
- Bayfield
- Hensall

- Zurich

7.2.2 Allocation of Costs Between Growth and Existing Development

Where a proposed service provides a benefit to existing development, the capital costs must be reduced by the amount of the benefit. Where applicable, for purposes of allocating project costs between future growth and existing development, design capacities have been converted to single person equivalents. This permits a cost per person value to be calculated, which applies equally to both existing development and predicted growth. For other projects, where capacity is not defined, the allocation is based on the assumed proportion of benefit to existing and future development.

7.2.3 Allocation of Costs Between Residential and Non-Residential Development

For the purposes of this study, a series of ratios were established to calculate the relative benefit of projects and services to residential and non-residential activities. The ratios were established based upon the current assessment data. Table 7.1 shows the percentage of residential and non-residential development in Bluewater.

Table 7.1 Ratio of Residential and Non-Residential Development in Bluewater

Category	Bluewater
Residential	88%
Non-Residential	12%

7.2.4 Occupancy Considerations

The average occupancy rate in Bluewater, based on the population and number of dwellings as reported in the Census is 2.3 persons per dwelling unit. Different types of residential development contain different numbers of occupants. On a per unit basis, the smaller the average occupancy, the less demand is generally placed on services. For purposes of this report, the occupancies defined in Table 7.2 are assumed for various housing types. These are based on average occupancies per the last Census.

Table 7.2 Residential Occupancies for Various Dwelling Types

Residential Unit Type	Persons Per Unit	Percentage of Single-Family Unit Charge
Single Family Residential, including semi-detached	2.39	100%
Multiples	1.64	68.6%
Apartment (1 bedroom), mobile home, park model trailer	1.5	62.8%
Apartment (2+ bedroom)	1.6	66.9%

7.3 Wind Turbines

In keeping with the 2016 Background Study, wind turbines are deemed to be equivalent to a residential single detached units as it relates to Services Related to a Highway and Administration only. Previously, staff identified the services impacted by this type of

development includes Services Related to a Highway, Fire Protection Services and Administration. The impact on these services are similar to a residential single detached unit and therefore, 100% of the Services Related to a Highway and Administration is recommended as the charge for future Wind Turbines developed within the Municipality. In the future, should fire protection projects be included within the DCs, it is expected that those charges would also be recovered from Wind Turbines.

7.4 Calculated Development Charge

Appendix B provides information on each service category and service component, as well as the key considerations for the calculation of development charges. Based upon the calculations presented in Appendix B, development charge schedules have been prepared for residential and non-residential activities. Table 7.3 provides a summary of the development charge calculations per capita, based on the calculations outlined in Appendix B for the service areas. The calculated development charges for the different unit types for the services areas are summarized in Tables 7.4. The calculated non-residential charges are summarized in Table 7.5.

It is recommended that development charges schedules, selected by Council using this Report as a guide, be collected by by-law in the Bluewater for the period 2022-27.

Table 7.3 Calculated Residential Development Charges per Capita

Service Category	Development Charge per Capita
Municipal-wide	
• Administration	83
• Parks & Recreation	208
• Services Related to a Highway	699
• Waste Diversion	186
Municipal-wide Total	1,176
Bayfield Wastewater	9,874
Hensall Wastewater	1,213
Zurich Wastewater	2,741
Hensall Water	656
Zurich Water	5,365
Rural Area Total	1,176
Bayfield Total	11,050
Hensall Total	3,045
Zurich Total	9,282

Table 7.4 Calculated Residential Development Charges Per Unit

Service Category	Single & Semi-Detached (per unit)	Multi-units (per unit)	Apartment (2 bedroom +) per unit	Apartment (1 bedroom, bachelor), mobile home, park model trailer (per unit)
Municipal-wide				
• Administration	198	136	133	125
• Parks & Recreation	497	341	333	312
• Services Related to a Highway	1,671	1,16	1,18	1,049
• Waste Diversion	445	305	298	279
Municipal-wide Total	2,811	1,928	1,882	1,765
Bayfield Wastewater	23,599	18,121	17,680	16,576
Hensall Wastewater	2,899	1,989	1,941	1,820
Zurich Wastewater	6,551	4,495	4,386	4,112
Hensall Water	1,568	1,076	1,050	984
Zurich Water	12,822	8,799	8,584	8,048
Rural Area Total	2,811	1,928	1,882	1,765
Bayfield Total	26,410	18,121	17,680	16,576
Hensall Total	7,278	4,993	4,873	4,569
Zurich Total	22,184	15,222	14,852	13,925

Table 7.5 Calculated Non-Residential Development Charges

Service Category	Non-Residential Development Charge (per sq. ft)	Wind Turbine (per turbine)
Municipal-wide		
• Administration	0.27	198
• Parks & Recreation	-	
• Services Related to a Highway	2.34	1,671
• Waste Diversion	0.62	
Municipal-wide Total	3.23	1,869
Bayfield Wastewater	4.27	
Hensall Wastewater	0.13	
Zurich Wastewater	0.59	
Hensall Water	0.07	
Zurich Water	1.16	
Rural Area Total	3.23	1,869
Bayfield Total	7.50	1,869
Hensall Total	3.43	1,869
Zurich Total	4.98	1,869

7.5 Development Charge Capital Program Summary

Table 7.6 summarizes the net project costs, amount attributable to existing development and amount recoverable through development charges. Over the next 10 years, \$475,923 may be recovered from Administrative, Parks and Recreation and Waste Diversion services through development charges. Adding the development charges that may be recovered for Services Related to Highways, Water and Wastewater Services over the next 20 years, the potential amount recoverable through development charges is \$16,292,329. Actual collection will depend on development in the future. For projects included in the development charges \$10,996,489 is attributed to existing development and must be funded through reserves, rates and other sources.

Table 7.6 Development Charge Capital Program Summary

Category	Net Cost (\$)	Benefit to Existing (\$)	Benefit to Future (\$)	Available Reserves	DC Recoverable \$ (Residential)	DC Recoverable \$ (Non-Residential)	Total Recoverable Through DCs
Administration	300,400	147,000	153,400	66,886	76,132	10,382	86,514
Parks and Recreation	300,000	-	300,000	107,059	192,941	-	192,941
Waste Diversion	800,000	600,000	200,000	3,532	172,892	23,576	196,468
Services Related to Hwy	4,104,860	3,420,968	1,605,492	129,892	1,298,528	177,072	1,475,600
Wastewater	17,354,547	1,267,746	10,257,217	565,046	*	*	9,692,171
Water	10,218,783	5,560,775	4,658,008	9,373	*	*	4,648,635
Total	33,078,590	10,996,489	17,174,116	881,788	1,740,493	211,030	16,292,329

*note – Water and wastewater development charges are calculated based on capacity. Capacity expected to be allocated on first come-first serve basis, so amount collected through development charges will be based on actual development that occurs.

8.0 Implementation

8.1 General Considerations

As discussed, a Development Charges By-law must be adopted to implement a development charges schedule and the associated collection policies. Section 5(1)(9) of the DCA prescribes that the Bluewater must establish rules within the implementing by-law to set out how development charges will be applied at the local level.

This section of the report outlines certain components of the DCA which will need to be considered during the preparation of the Development Charges By-law.

8.2 Applicable Development

Section 2(2) of the DCA prescribes that development charges can be collected against development activities requiring one or more of the following:

- Issuance of a building permit;
- Condominium Act approval;
- Certain Planning Act approvals (i.e., minor variances, re-zonings, consents, severances, plans of subdivision).

Development charges cannot be applied to development activities which:

- Enlarge an existing dwelling unit;
- Create a second dwelling unit in prescribed classes of proposed new residential buildings, including structures ancillary to dwellings;
- Create additional dwelling units as prescribed (subject to prescribed restrictions); and
- Increase the gross floor area of an industrial development by less than 50%.

Section 3 of the DCA further prescribes that lands owned, and used by, municipal governments and school boards are not subject to the provisions of the by-law. However, Council is also permitted to include provisions in the by-law which exempt specific types of development from development charges. In this respect, local municipalities commonly exempt places of worship, public hospitals and farm buildings from the development charges specified in the by-law.

8.3 Charge Ceilings

Development charges to be collected against new development must not exceed the values defined in Tables 7.3 to 7.5 of this study. Council can establish Development Charges Schedules in the by-law which prescribe charges which are less than those calculated in the aforementioned tables for the entire Municipality, specific areas of the Municipality, or specific categories of development.

8.4 Phasing-in

Council is permitted to phase-in development charges over the five-year lifespan of the by-law. Phasing-in of development charges is occasionally implemented by local municipalities concerned with the financial burden placed upon new development,

particularly in areas where these fees have not previously been applied. Any phasing in of development charges will be outlined in the Development Charge By-law.

8.5 Inflation Adjustments

The DCA permits development charges to be adjusted to inflation, on an annual basis, using an index specified in the by-law. This measure is commonly employed by local municipalities to ensure that the fees collected reflect the real cost of the projects and services.

8.6 Front-Ending Agreements

The Development Charges By-law may contain policies which permit the Municipality to enter into front-ending agreements with land developers for infrastructure activities specified in the by-law (e.g., watermain installation, road extensions). Front-ending agreements allow developers to finance all, or a portion of the capital costs of a project in order to permit the work to proceed in advance of a municipal capital works schedule. The agreement is required to stipulate, at a minimum, the nature and cost of the work, a cost-sharing program, a collection system and the specific benefiting area.

Under front-ending agreements, the Municipality typically assumes the following general responsibilities:

- Collecting development charges from subsequent development activities in the defined service area;
- Reimbursing the other parties in the agreement for a share of the development charge (corresponding to the work completed).

Front-ending agreements are subject to public review. Affected property owners may appeal the terms of an agreement to the Ontario Land Tribunal.

8.7 Credits

The Development Charges By-law may contain provisions which allow the Municipality to permit works specified in the by-law to be carried out by an individual in exchange for credit towards the applicable development charge. The amount of the credit established must reflect the reasonable cost for the doing the work, as agreed upon by the involved parties. The credit provided by the Municipality can only be applied to the service category, or categories, which are directly related to the work undertaken.

9.0 SUMMARY

This report presents the results of a Development Charges Background Study for the Municipality of Bluewater. Council is considering a new Development Charges By-law for the Municipality and the study is required under the *Development Charges Act, 1997*.

The study incorporated the primary key activities:

- Review of historic growth in Bluewater and extrapolation of growth and development forecasts for that study area;

- Review and evaluation of capital works projects that would be required to service the predicted growth;
- Calculation of a recommended Development Charge Amount for the proposed projects and services in accordance with the DCA.

It is our opinion that the Development Charge Amounts set out in Tables 7.3-7.5 of the report are in compliance with the provisions of the DCA and O. Reg. 82/98. However, the charge that is used in the implementing by-law will be set by Council after due consideration.

10.0 FUTURE ACTION

The following represent the final activities required to adopt a Development Charges program:

- Council reviews the Background Study. Following due consideration and any required revisions, Council accepts this draft report and by resolution, agrees that the intent of the Municipality is to implement the growth-related capital works itemized in Appendix B;
- Council considers a Development Charge Amount to establish, and specific implementation policies to be incorporated into the implementing by-law;
- A draft by-law is prepared in accordance with the recommendations of Council;
- The statutory public meeting is held with a minimum 20-day notice period. The Background Study and the draft By-law will be made available for public review during the notice period;
- Council must pass the implementing by-law within one year of the completion of Background Study. A 40-day review period must be provided after the passage of the By-law. Any individual or organization may appeal the provisions of the Development Charges By-law to the Ontario Land Tribunal during the review period.

All of which is respectfully submitted.

B. M. ROSS AND ASSOCIATES LIMITED

Per _____

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**APPENDIX A
GROWTH AND DEVELOPMENT
FORECAST**

DRAFT

1.0 INTRODUCTION

1.1 General

Section 5(1) of the Development Charges Act, S.O. 1997 (DCA) stipulates that for the purposes of calculating a development charge, “the anticipated amount, type and location of development, for which development charges can be imposed, must be estimated”. The following discussion summarizes the process undertaken to develop a growth and development forecast for the Municipality of Bluewater.

Development forecasts have been prepared in conjunction with the Development Charges Background Study to project a population for Bluewater over 10-year (2022-2032), 20-year (2022-2042), and 25-year (2022-2047) planning periods. The growth projections were established following an assessment of general growth and development trends evident in the Municipality as identified from statistical data, recent population projections and other background research. The forecasts extrapolated from this analysis are considered to be realistic predictions of population and household growth in Bluewater. An estimate of non-residential development has been prepared through an analysis of available building permit information.

The growth projections established in this study provide a basis for determining the level of service required to accommodate future development activities. In this regard, the growth forecasts provide a framework to estimate (1) the capital expenditures needed to finance additional service and (2) an appropriate development charge to recover growth related capital costs.

1.2 Background

A series of reports were reviewed to gather background information on population growth and general development trends in the study area. The following are among the key sources of information consulted during this review:

- Statistics Canada Census of Canada data for the period 2001-2021 (data is collected in 5-year intervals).
- Building permit records compiled by the Municipality for the period 2016-2021. The records detail the type (e.g., residential, commercial, industrial) and value of development.
- 2017 Development Charges Background Study for the Municipality of Bluewater by Watson and Associates Economists Limited.
- Bayfield Sewage Treatment Plant Expansion Environmental Class Assessment by B. M. Ross and Associates Limited (2021).
- Bluewater staff and
- An assessment of current development projects and proposals.

2.0 BACKGROUND POPULATION & DEVELOPMENT INFORMATION

2.1 Residential Growth Trends

2.1.1 Population

The most recent population count for the Municipality of Bluewater is the 2021 Census. In 2021, the population of Bluewater was 7,540 permanent residents, an increase of 404 persons from the 2016 count and 496 persons from the 2011 Census. The increase in population between 2016 and 2021 equates to an annual average growth rate of 1.1%. Over the last 10 years of census data, the annual average growth rate was 0.68%.

The largest population centre in the Municipality is the community of Bayfield. The permanent population of Bayfield by the most recent Census count is 1,394 people. This is an increase of 159 people over the 2016 Census count. Other communities in Bluewater include Hensall and Zurich. These communities had populations of 1,126 and 941 persons respectively. Over the last 5 years, the populations of these communities have increased by 105 people in Hensall and 24 in Zurich. Table 2.1 summarizes the recent census data for Bluewater and the above noted communities.

Table 2.1 Census Population Counts, 2001-2021

Year	Bayfield	Hensall	Zurich	Bluewater
2001	909	1,194	860	6,919
2006	1,081	1,128	885	7,120
2011	1,023	1,173	865	7,044
2016	1,235	1,021	917	7,136
2021	1,394	1,126	941	7,540
5-year change	159	105	24	404
10-year change	371	-47	76	496
20-year change	485	-68	81	621
5-year change (%)	12.87	10.28	2.62	5.66
10-year change (%)	36.27	-4.01	8.79	7.04
20-year change (%)	53.36	-5.7	9.42	8.98
5-year average annual growth rate (%)	2.45	1.98	0.52	1.11
10-year average annual growth rate (%)	3.14	-0.41	0.85	0.68
20-year average annual growth rate (%)	2.16	-0.29	0.45	0.43

The increase in population in Bluewater is driven primarily by increases in the population of Bayfield. The increase in the population in Bayfield is likely attributable to its desirable location along Lake Huron as a retirement community as well as conversions of seasonal homes to permanent homes. Increases in the population of the rural centres of Hensall and Zurich, may be driven by affordability and availability.

The 2016 Census (2021 data is not yet available) was consulted to identify recent levels of movement within and to the Municipality. Between the 2016 and 2011 census periods, 31.2% of the population moved. Approximately 10% moved within the Municipality, with 18.4% moving to Bluewater from within Ontario, 0.8% moving from another province, and 1.3% (or 85 people) coming from outside of Canada.

The average age in Bluewater, as of the 2021 census, is 46.6 years old. This is older than the provincial average of 41.8 years. Those aged 65 and over account for 27% of the population of Bluewater, whereas children, or those aged 14 or less make up approximately 14% of the population. The proportion of the population aged 65 and over in Bluewater is significantly greater than for Ontario as a whole at 18.5%. This reflects the Municipality's role as a retirement destination.

2.1.2 Residential Development

The number of permanently occupied private dwellings in Bluewater, Bayfield, Hensall and Zurich as counted through previous censuses are summarized in Table 2.2 The number of private dwellings in the Municipality has increased over the last 15 years, with approximately 482 new dwellings. Counts of occupied dwellings for Bayfield, Hensall and Zurich are not available for 2001.

Over the last census period, there has been an increase in the number of occupied dwellings in Bluewater. In Bayfield, there have been an additional 155 dwellings between 2016 and 2021, 15 in Hensall and 8 in Zurich.

Table 2.2 Census Occupied Dwelling Counts, 2006-2021

Year	Bayfield	Hensall	Zurich	Bluewater
2006	491	413	353	2,766
2011	498	449	371	2,820
2016	562	438	391	3,027
2021	717	453	399	3,302
5-year change	155	15	8	275
10-year change	219	4	28	482
15-year change	226	40	46	536
5-year change (%)	27.58	3.42	2.05	9.08
10-year change (%)	43.98	0.89	7.55	17.09
15-year change (%)	46.03	9.69	13.03	19.38
5-year average annual growth rate (%)	4.99	0.68	0.41	1.75
10-year average annual growth rate (%)	3.71	0.09	0.73	1.59
15-year average annual growth rate (%)	2.56	0.62	0.52	1.12

To gain a better understanding of residential development occurring in Bluewater, building permit data for new residential dwellings was assessed. Table 2.3 summarizes the number of new building units throughout the Municipality between 2012 and 2021.

Table 2.3 Building Permits Issued for New Residential Development, 2012-2021

Year	Single & Semi-Detached	Multiple	Apartment	Total
2012	33	7	0	40
2013	38	4	10	52
2014	27	4	0	31
2015	24	4	0	28
2016	29	11	0	40
2017	38	0	0	38
2018	31	7	0	38
2019	45	11	0	56
2020	39	6	0	45
2021	39	0	0	39
5-year total	192	24	0	216
10-year total	343	54	10	407
5-year average	38.4	4.8	0	43.2
10-year average	34.3	5.4	1	40.7

Over the past 10 years, there were permits issued for 407 new residential units in Bluewater. This includes 54 units of multi-unit type housing. An examination of the average number of permits over the last 10, and 5 years shows an increase in the average number of new units per year. This increase reflects the recent increase in new homes built throughout the Municipality. The majority of new homes constructed are single detached (84%), followed by multi-unit type dwellings (13%). There was one 10-unit apartment building constructed in the last 10 years.

In the future, it is expected that the majority of new units will continue to be single detached homes; however, it is expected that the proportion of multi-dwellings will increase.

2.1.3 Occupancy

For the purposes of this study, the average household density, or occupancy, is calculated from the permanent population and number of usually occupied dwellings. It is generally expressed as the average number of persons per household. The household density for the Municipality, Bayfield, Zurich and Hensall based on census data, is shown in Table 2.4.

Table 2.4 Household Densities (Persons Per Unit)

Year	Bayfield	Hensall	Zurich	Bluewater
2006	2.20	2.73	2.51	2.57
2011	2.05	2.61	2.33	2.50
2016	2.20	2.33	2.35	2.36
2021	1.94	2.49	2.36	2.28

Overall, the number of people per dwelling unit in the Municipality has declined over the last 10 years. This trend is common across rural Southwestern Ontario, as a result of shifting demographics, with more seniors, fewer children per household, and an increase in the number of single-person households. Generally, the density remains higher in the rural areas compared to the urban communities. The low density within Bayfield reflects the greater number of retirees than families in the community.

2.1.4 Types of Residential Development

Residential development in Bluewater includes a variety of types of dwelling units, including single detached, semi detached, row, apartment and moveable dwellings. Table 2.5 summarizes the number of single detached, multi and apartment units, population living the different unit types and average density as reported through the 2021 Census.

Table 2.5 2021 Count of Residential Units by Type, Bluewater

Unit Type	Population	Number of Units	Persons Per Unit (PPU)
Single & Semi Detached	6,595	2,760	2.39
Multi	500	305	1.64
Apartment	375	250	1.50

2.1.5 Residential Developments

The majority of residential development in Bluewater occurs on existing lots, lots created by severance, or lots created by Plan of Subdivision. Municipal staff provided information on the following potential developments listed in Table 2.6. Historically, a lack of sewage capacity at the Bayfield Wastewater Treatment Plant (WWTP) has constrained development within that community. It is expected that when the Bayfield WWTP expansion is completed there will be an influx of development.

Table 2.6 Potential Residential Developments

Name	Total Units	Status	Location
Cornerstone Estates	14	Under construction	Lakeshore

Name	Total Units	Status	Location
Deer Ridge	23	Draft Plan	Bayfield
C14-14-2021	5	Under construction	Bayfield
C45-48-2021	9	Draft Plan	Lakeshore
Bayfield Meadows	8	Phase III	Bayfield

2.2 Seasonal Occupied Dwellings

There are a number of seasonally occupied dwellings, used primarily as cottages, in the Municipality. The majority of these seasonally occupied homes are located along the Lake Huron shoreline and Bayfield. This also includes a number of recreational dwellings in trailer parks. From MPAC data provided by staff, the estimated number of seasonal properties is 2,153 units.

For the purposes of development charges, new seasonal dwellings are captured in the new residential building permit data. There is no differentiation between new seasonal and new permanent residential units for development charges.

2.3 Non-Residential Growth Trends

2.3.1 Labour Force

Labour and employment for Bluewater was obtained from the 2016 Census. The number of persons employed was 3,710 or 62.5% of the population aged 15 and over. The unemployment rate is 2.1% which was lower than the Huron County rate of 5.3%. Approximately 34.8% of the population reported not being in the labour force. Approximately 20.8% of the workers in the Municipality are self-employed.

Approximately 37.6% of those over the age of 15 reported working full time and 32.9% worked part time. The majority of employed residents in Bluewater work in sales and service occupations (20.5%), followed by trades, transportation or equipment operators (18.6%), and management occupations (17.4%), and business, finance and administration occupations (11.8%).

The majority of employees in Bluewater (36.5%) commute to work within the Municipality. Another 38.7% commute to another municipality within Huron County, and 24.9% commute to another County within Ontario.

2.3.2 Non-Residential Development

The number of building permits issued for non-residential development, including additions and new construction, in the Municipality over the last 5 years is summarized in Table 2.7. In the last five years there have been 20 building permits issued for new non-residential buildings. Table 2.8 summarizes the amount of new non-residential growth in square feet, based on permit information. Over the last five years, the average amount of new non-residential growth is 18,951 ft².

Table 2.7 Summary of Non-Residential Building Permits 2017-2021, Bluewater

Year	Number of Permits Issued
2017	1
2018	5
2019	3
2020	6
2021	5
Total	20

Table 2.8 Non-Residential Building (ft²) from 2017-2021

Year	Total Gross Floor Area (GFA) from Permits (ft ²)	Bayfield Non-Residential Growth (ft ²)	Hensall Non-Residential Growth (ft ²)	Zurich Non-Residential Growth (ft ²)
2017	1,250	0	1,250	0
2018	9,524	5,724.9	1,800	0
2019	12,225	0	0	1,376
2020	41,243	99	26,000	2,289
2021	30,512	1,586	15,568	0
Total	94,754	7,409.9	44,618	3,665
Average	18,951	1,482	8,924	1,833

The majority of non-residential development (47%) occurred in Hensall, followed by Zurich and Bayfield.

2.4 Development Patterns in the Study Area

A number of factors could influence growth trends in Bluewater. Of relevance to this study are the following:

- Development in Bayfield has been constrained since 2013 due to a lack of sewage capacity. An Environmental Assessment to increase the capacity has been completed and design is proceeding. It is suspected there is pent up demand for development in Bayfield that will materialize when sewage capacity is available.
- The number of households is expected to outstrip population growth in Bluewater due to the overall aging of the population (resulting from lower death and birth rates). The aging of the population is expected to increase demands for services and housing designed to accommodate the needs of seniors.
- It is expected that development in Bluewater, will primarily occur in the urban centres of Bayfield (when sewage capacity is available), and to a lesser degree

in Hensall and Zurich. Growth along the lakeshore area is also expected to continue.

- In general, the Municipality does not contain the scale of manufacturing and service sector activities to draw a significant number of commuters to Bluewater. However, there may be an increase in the number of remote workers located in the Municipality following the COVID-19 pandemic.
- It is expected the majority of residential growth will occur as single detached units, however it is expected that multi-unit type dwellings will be built at an increasing rate.

2.5 Residential and Non-Residential Allocation

The allocation between residential and non-residential development for the purposes of calculating development charges is determined from the tax assessment data. The tax assessment data is used to determine the percentage of the tax base that is residential and non-residential. The non-residential percentage includes commercial and industrial development and excludes agricultural, managed forests, and pipeline assessment data. The percentages of residential and non-residential development for the Municipality are summarized in Table 2.9.

Table 2.9: Residential and Non-Residential Allocations

Residential Allocation (%)	Non-Residential Allocation (%)
88	12

3.0 RESIDENTIAL GROWTH PROJECTIONS

3.1 Forecast Methodology

For the purposes of this study, a population forecast for Bluewater was developed. These forecasts are based on input from staff, forecasted developments, and building permit data.

The forecast incorporated the following methodological components:

- The 2021 population and household counts, as determined by the 2021 Census, were used as the starting points for the projections.
- Overall, it is estimated that development will occur at a rate of 41 units/year in Bluewater over the next 20 years. Given work completed for the Bayfield WWTP EA and Secondary Plan, it is estimated that the average number of new units in Bayfield will be 25 units per year. Growth in Zurich and Hensall is estimated to occur at a rate of 1 unit per year in each community. It is forecasted that there will be 14 units on average per year in the remainder of the Municipality.
- Population densities throughout Bluewater are already generally low and are expected to remain at relatively steady over the next 20 years, with an average of

2.2 persons per unit in Bayfield, 2.36 in Zurich, 2.49 in Hensall, and 2.35 in the remainder of the Municipality.

- The expected number of households and population density was then used to forecast the population increase.
- It is expected that the majority of development will occur as single detached units and medium density units (row houses and/or townhouses).

Several major assumptions were also made to substantiate the use of the aforementioned methodology as the basis for a population forecast. They are as follows:

- Population growth will generally be accommodated through the development of existing lots and registered lots through Plans of Subdivisions and Site Plans.
- The Bayfield WWTP expansion will proceed in the near future.

3.2 Residential and Population Forecasts

A residential and population growth forecast was developed for Bluewater based upon the previously discussed methodology. Table 3.1 shows the population forecasts for Bayfield, Zurich, Hensall and remainder of the Municipality. Table 3.2 contains the forecasted number of additional dwelling units over the same period.

Table 3.1: Residential Population Forecast 2022-2047

	Bayfield Population	Zurich Population	Hensall Population	Remainder of Municipality	Bluewater (Total)
2021	1,394	941	1,126	4,079	7,540
2022	1,632	944	1,130	4,105	7,811
2027	1,907	956	1,143	4,270	8,276
2032	2,182	968	1,155	4,434	8,739
2037	2,457	979	1,168	4,599	9,203
2042	2,732	991	1,180	4,763	9,666
2047	3,007	1,003	1,193	4,928	10,131
5-year change	275	12	13	165	465
10-year change	550	24	25	329	928
20-year change	1,100	47	50	658	1,855
25-year change	1,375	59	63	823	2,320

Table 3.2: Residential Dwelling Forecast 2021-2047

	Bayfield Units	Zurich Units	Hensall Units	Remainder of Municipality	Bluewater (Total)
2021	717	399	453	1,733	3,302
2022	742	400	454	1,747	3,343
2027	867	405	459	1,817	3,548
2032	992	410	464	1,887	3,753
2037	1,117	415	469	1,957	3,958
2042	1,242	420	474	2,027	4,163
2047	1,367	425	479	2,097	4,368
5-year change	125	5	5	70	205
10-year change	250	10	10	140	410
20-year change	500	20	20	280	820
25-year change	625	25	25	350	1025

3.3 Forecast Assessment

The following represents the key findings of the population and residential development forecasts for the Municipality of Bluewater:

- The number of residential units in Bluewater is expected to continue to increase over the next 20 years. The majority of the development is expected to occur in Bayfield and in the form of single detached units.
- It is forecasted that there will be an additional 1,855 persons in the Municipality in 20 years.
- It is expected that the future developments via the Plan of Subdivision process will support the continued growth within the Municipality.

3.4 Conclusions

The forecasts presented in Section 3.2 appear to be reasonable and appropriate forecasts for the Municipality of Bluewater, given historic growth rates and the factors previously discussed. In this regard, the forecast defined in Tables 3.1 and 3.2 should be adopted as the basis for calculating the residential development charges for the Municipality.

4.0 NON-RESIDENTIAL GROWTH FORECAST

4.1 Forecast

The forecast for non-residential development is based on the average amount of new non-residential growth in Bluewater over the last five years. The average annual amount

of non-residential growth in the Municipality is 18,951 ft² per year. It is predicted that non-residential growth will continue at current rates. Given this, the forecasted amount of non-residential growth over the next 5, 10 and 20 years is shown in Table 4.1.

Table 4.1 Forecasted Non-Residential Growth (ft²)

Year	Bluewater Non-Residential Growth (ft²)	Bayfield Non- Residential Growth (ft²)	Hensall Non- Residential Growth (ft²)	Zurich Non- Residential Growth (ft²)
2022-2027	18,951	1,482	8,924	7,812
2022-2032	37,902	2,964	17,847	15,625
2022-2042	75,803	5,928	35,694	31,250

For the purposes of this Background Study, the following assumptions of employees per square foot of non-residential development were used:

- Bayfield: 625 sq.ft/employee
- Hensall: 2,550 sq. ft/employee
- Zurich: 1,250 sq. ft/employee

Note, that it is assumed that there will be no industrial growth within Bayfield over the forecast period.

**APPENDIX B
ANALYSIS OF GROWTH-RELATED
PROJECTS**

DRAFT

Project Description: Through the Development Charges Act, the cost of development-related studies can be recouped through development charges. The projects, costs, and benefits to existing and future for each study are summarized in Table B-1.

Analysis of Long-Term Capital and Operating Costs: There are no long-term or operating costs associated with these development-related studies.

Project Benefiting Area(s): Municipal-Wide

Costs:

Total Costs	\$ 300,400
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 300,400

Allocation of Costs

Benefit to Existing Development	\$ 147,000
Benefit to Future Development	\$ 153,400
Deduct amount in reserve	- \$ 66,886
Amount recoverable through Development Charges	\$ 86,514

Development Charge Calculations

Residential Allocation (per capita)

\$86,514 x 88% (based on residential assessment)	\$ 76,133
Divided by future growth (928 persons)	928 persons
Residential development charges (per capita)	\$ 83

Non-Residential Allocation (per square foot)

\$86,514 x 12% (based on residential assessment)	\$ 10,382
Divided by future growth (ft ²)	37,902 ft ²
Non-residential development charges (per ft²)	\$ 0.27

Table B-1
Municipality of Bluewater Development Charges Background Study – Growth Related Studies

Project	Net Cost (minus grants/ subsidies)	Attributable to Existing	Attributable to Future
Development Charge Study	28,700	\$ 0 (0%)	\$28,700 (100%)
Development Charge Study	28,700	\$ 0 (0%)	\$28,700 (100%)
Road Needs	\$40,000	\$36,000 (90%)	\$4,000 (10%)
Road Needs	\$40,000	\$36,000 (90%)	\$4,000 (10%)
Water and Wastewater Master Plan	\$150,000	\$75,000 (50%)	\$75,000 (50%)
Water System Needs Assessment	\$13,000	\$ 0 (0%)	\$13,000 (100%)
Total	\$300,400	\$147,000	\$153,400

Project Description: There are approximately 45 acres of parkland within Bluewater. The Municipality anticipates equipping new parkland that is obtained through the development process (either land or cash in lieu). The Municipality has identified \$300,000 in capital spending for additional parkland development. It is anticipated that upon completion of the Parks and Recreation Master Plan, specific projects will be identified and included in future development

Given that outdoor recreation users are predominately residents, the growth-related costs have been allocated 100% to residential.

Analysis of Long-Term Capital and Operating Costs: Operating costs associated with future parkland development will be paid out of the general tax base. The increase in the tax base from new development should offset any increase in operating costs.

Project Benefiting Area(s): Municipal-wide

Costs:

Total Costs	\$ 300,000
Deduct any grants or subsidies	\$ 0
Deduct amount available in reserve	- \$ 107,059
Subtotal	\$ 192,941

Allocation of Costs

Given that outdoor recreation users are predominately residents, the growth-related costs have been allocated 100% to residential.

Development Charge Calculations

Residential Allocation (per capita)

\$ 192,941 x 100% (based on residential assessment)	\$ 192,94
Divided by future capacity (928 persons)	928 persons
Residential development charges (per capita)	\$ 208

Non-Residential Allocation (per square foot)

This service is not allocated to non-residential development.

Project Description: The Municipality has previously identified the need to replace and expand the Airport Line Bridge, north of County Road 83. The current structure is a one lane bridge and the replacement will accommodate two-way traffic. The Municipality has received grant funding amounting to \$2,012,919.48 for this project.

Analysis of Long-Term Capital and Operating Costs: This project will replace an existing asset. The costs of the project attributed to existing development will be paid for through monies collected through operating costs. The additional development serviced by this project will offset the long-term capital and operating costs.

Project Benefiting Area(s): Municipal-wide

Costs:

Total Costs	\$ 2,415,600.00
Deduct any grants or subsidies	\$ 2,012,919
Subtotal	\$ 402,681

Allocation of Costs

Benefit to Existing Development (90%)	\$ 362,412
Benefit to Future Development (10%)	\$ 40,268
Amount available in development charge reserve account	\$ 12,989
Amount recoverable through development charges	\$ 27,279

Development Charge Calculations

Residential Allocation (per capita)

\$ 27,279 x 88% (based on residential assessment)	\$ 24,005
Divided by 20-year growth (1,855 persons)	1855 persons
Residential development charges (per capita)	\$ 13

Non-Residential Allocation (per square foot)

\$27,279 x 12% (based on non-residential assessment)	\$ 3,273
Divided by 20-year non-residential growth (ft ²)	75,803
Non-residential development charges (per ft²)	\$ 0.04

Project Description: The Municipality currently has 12 bays utilized by the public works department. Over the next 20 years, the Municipality has identified that 5 additional bays will be constructed in Varna. The current 10-year average level of service in the Municipality with respect to public works bays is 0.0017 bays/person. The development charge is based on the next 20 years of growth paying for the equivalent level of service as what currently exists.

Analysis of Long-Term Capital and Operating Costs: This project will improve an existing asset. The costs of the project attributed to existing development will be paid for through monies collected through reserves. The additional development serviced by this project will offset the long-term capital and operating costs.

Project Benefiting Area(s): Municipal-wide

Costs:

Total Costs	\$ 1,152,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 1,152,000

Allocation of Costs

Amount available in development charge reserve account	- \$ 12,989
Cost per bay (5 bays)	\$230,400
Amount recoverable based on service level (0.0017 bays/person x 1855 persons over the next 20 years)	\$726,566
Amount attributed to existing development	\$ 425,434
Amount recoverable through development charges	\$ 713,577

Development Charge Calculations

Residential Allocation (per capita)

\$ 713,577 x 88% (based on residential assessment)	\$ 627,948
Divided by 20-year growth (1,855 persons)	1855 persons
Residential development charges (per capita)	\$ 339

Non-Residential Allocation (per square foot)

\$713,577 x 12% (based on non-residential assessment)	\$ 85,629
Divided by 20-year non-residential growth (ft ²)	75,803
Non-residential development charges (per ft²)	\$ 1.13

Project Description: The Municipality is planning on purchasing two additional vehicles as part of the public works fleet to service growth. These vehicles include a tractor and blower, sidewalk plow and a single axle truck. These vehicles will benefit both future and existing growth.

Analysis of Long-Term Capital and Operating Costs: This project will add new asset. The costs of the project attributed to existing development will be paid for through monies collected through reserves. The additional development serviced by this project will offset the long-term capital and operating costs.

Project Benefiting Area(s): Municipal-Wide

Costs:

Total Costs	\$ 634,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 634,000

Allocation of Costs

Benefit to Existing Development	\$ 158,500
Benefit to Future Development	\$ 475,500
Deduct amount in reserve	- \$ 38,968
Amount recoverable through Development Charges	\$ 436,532

Development Charge Calculations

Residential Allocation (per capita)

\$436,532 x 88% (based on residential assessment)	\$ 384,148
Divided by future growth (1,855 persons)	1,855 persons
Residential development charges (per capita)	\$ 207

Non-Residential Allocation (per square foot)

\$436,532 x 12% (based on residential assessment)	\$ 52,384
Divided by future growth (ft ²)	75,803
Non-residential development charges (per ft²)	\$ 0.69

Table B-2
Municipality of Bluewater Development Charges Background Study – Vehicles

Project	Net Cost (minus grants/ subsidies)	Attributable to Existing	Attributable to Future
Tractor and Blower	\$139,000	\$34,750 (25%)	\$104,250 (75%)
Single Axle	\$350,000	\$87,500 (25%)	\$262,500 (75%)
Sidewalk Plow	\$145,000	\$36,250 (25%)	\$108,750 (75%)
Total	\$634,000	\$158,500	\$475,500

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Project Description: The Municipality has identified a number of capital projects related to roads and sidewalks. These projects are outlined in Table B-3. These projects include new sidewalks and road reconstruction projects.

Analysis of Long-Term Capital and Operating Costs: This project will add new and improve existing assets. The costs of the project attributed to existing development will be paid for through monies collected through reserves. The additional development serviced by this project will offset the long-term capital and operating costs.

Project Benefiting Area(s): Municipal-Wide

Costs:

Total Costs	\$ 3,502,779
Deduct any grants or subsidies	\$ 650,000
Subtotal	\$ 2,837,779

Allocation of Costs

Benefit to Existing Development	\$ 2,474,621
Benefit to Future Development	\$ 363,158
Deduct amount in reserve	- \$ 64,946
Amount recoverable through Development Charges	\$ 298,212

Development Charge Calculations

Residential Allocation (per capita)

\$298,212 x 88% (based on residential assessment)	\$ 262,426
Divided by future growth (1,855 persons)	1,855 persons
Residential development charges (per capita)	\$ 141

Non-Residential Allocation (per square foot)

\$298,212 x 12% (based on residential assessment)	\$ 35,785
Divided by future growth (ft ²)	75,803
Non-residential development charges (per ft²)	\$ 0.47

Table B-3
Municipality of Bluewater Development Charges Background Study – Roads and Sidewalks

Project	Net Cost (minus grants/ subsidies)	Attributable to Existing	Attributable to Future
Zurich Main Street Rehabilitation	\$506,082	\$455,474 (90%)	\$50,608 (10%)
Bayfield Main Street Rehabilitation	\$2,183,247	\$1,964,922 (90%)	\$218,325 (10%)
New Sidewalks	\$98,450	\$49,225 (50%)	\$49,225 (50%)
Traffic Study	\$50,000	\$5,000 (10%)	\$45,000 (90%)
Total	\$2,837,779	\$2,474,621	\$363,158

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Project Description: The Municipality plans to construct a waste transfer station at the Stanley landfill. This transfer station will be constructed to support diverting waste from materials that can be recycled or otherwise disposed of, from the landfill. This project will benefit existing and future development over the next 10 years.

Analysis of Long-Term Capital and Operating Costs: This project will add an asset. The costs of the project attributed to existing development will be paid for through monies collected through operating costs of the landfill and reserves. The additional development serviced by this project will offset the long-term capital and operating costs.

Project Benefiting Area(s): Municipal-wide

Costs:

Total Costs	\$ 800,000
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 800,000

Allocation of Costs

Benefit to Existing Development (75%)	\$ 600,000
Benefit to Future Development (25%)	\$ 200,000
Amount available in development charge reserve account	\$ 3,532
Amount recoverable through development charges	\$ 196,468

Development Charge Calculations

Residential Allocation (per capita)

\$196,468 x 88% (based on residential assessment)	\$ 172,892
Divided by 10-year growth (928 persons)	928 persons
Residential development charges (per capita)	\$ 186

Non-Residential Allocation (per square foot)

\$196,468 x 12% (based on non-residential assessment)	\$ 23,576
Divided by 10-year non-residential growth (ft ²)	37,902
Non-residential development charges (per ft²)	\$ 0.62

Project Description: The Municipality recently completed a Municipal Class Environmental Assessment to determine the preferred method of expanding the Bayfield Wastewater Treatment Plant (WWTP). The expansion will address an existing servicing deficiency as well as allow new, growth-related customers to connect to the system.

The capital cost associated with the first stage of expansion is estimated at \$7,831,400. It is anticipated that this project will require the Municipality to take out a debenture. The interest cost associated with a 20-year debenture at 4% is \$3,693,562.39. Existing flows, as of 2021, are 1,274 m³/d, which exceeds the rated capacity of 1,056 m³/day. It is estimated that existing flows can be reduced by 153 m³/day through Inflow and Infiltration (I&I) reductions. The expansion has a design capacity of 1,700 m³/day, with design unit flows of 1.15 m³/day per equivalent residential unit.

The first stage of expansion will provide capacity of 1,700 m³/d - 1,274 m³/day + 153 m³/day = 579 m³/day. This is 503 ERUs based on a design capacity of 1.15 m³/day.

The current deficit in wastewater treatment capacity is 1,274 m³/d – 1,056 m³/day = 218 m³/day. The I&I reductions will address 153 m³/day or this deficit, leaving 65 m³/day to be accommodated through the expansion. This is equivalent to 56 ERUs (1.15 m³/day x 65 m³/day). This is equivalent to 11% of the expansion, which will benefit existing development.

Analysis of Long-Term Capital and Operating Costs: This project will expand an existing asset. The costs of the project attributed to the existing deficit will be paid for through monies collected through connection fees, wastewater rates and reserves. The additional development serviced by this project will offset the long-term capital and operating costs through wastewater rates and reserves.

Project Benefiting Area(s): Bayfield

Costs:

Total Capital Costs	\$ 7,831,400
Financing Costs	\$ 3,693,562
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 11,524,962

Allocation of Costs

Benefit to Existing Development (11%)	\$ 1,267,746
Benefit to Future Development (89%)	\$ 10,257,217
Amount available in development charge reserve account	\$ 547,091
Amount recoverable through development charges	\$ 9,710,125

Development Charge Calculations

Residential Allocation (per capita)

Amount recoverable through development charges	\$ 9,710,125
Divided by 447 ERU of future capacity (503 ERU – 56 ERU)	447 ERU
Divided by 2.2 person per ERU	2.2 person/ERU
Residential development charges (per capita)	\$ 9,874

Non-Residential Allocation (per square foot)

Employee to resident ratio	0.27
Cost per employee	\$2,665.99
Average sq. ft per employee	624 ft ² /employee
Non-residential development charges (per ft²)	\$ 4.27

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Project Description: The Municipality recently completed work on the Zurich wastewater system, including repairs, replacements and construction of new works that increased the level of treatment from secondary to tertiary and provided capacity for future growth.

The capital cost associated with the work is estimated at \$3,365,000. The Municipality received a grant for this work and the amount of the grant attributable to future growth is: \$909,028. The Municipality has debentured this project and the interest cost with financing is \$993,763.

The expanded capacity is 495 m³/d. Flow per customer is 0.93 m³/day for a single detached equivalent unit.

Analysis of Long-Term Capital and Operating Costs: This project will expand an existing asset. The costs of the project attributed to the existing deficit will be paid for through monies collected through connection fees, wastewater rates and reserves. The additional development serviced by this project will offset the long-term capital and operating costs through wastewater rates and reserves.

Project Benefiting Area(s): Zurich

Costs:

Total Capital Costs	\$ 3,365,000
Financing Costs	\$ 993,763
Deduct any grants or subsidies	\$ 909,028
Subtotal	\$ 3,449,735
Deduct amount available in reserve	\$6,630
Amount recoverable through development charges	\$3,443,105

Development Charge Calculations

Residential Allocation (per capita)

Amount recoverable through development charges	\$3,443,105
Expanded capacity (m ³ /day)	495
Cost per m ³ /day	\$6,956
Required m ³ /day for a single detached unit	0.93
Cost per single detached unit	\$6,469
Residential Development Charge per capita (2.36 persons/unit)	\$2,741

Non-Residential Allocation (per square foot)

Employee to resident ratio	0.27
Cost per employee	\$740.08
Average sq. ft per employee	1,250 ft ² /employee
Non-residential development charges (per ft²)	\$ 0.59

Project Description: The Municipality recently completed work on the Hensall wastewater system to upgrade and expand the plant. The work increased the level of treatment from secondary to tertiary and provided capacity for future growth.

The capital cost associated with the work is \$3,541,000. The Municipality received a grant for this work and the amount of the grant attributable to future growth is: \$1,401,275. The Municipality has debentured this project and the interest cost with financing is \$240,125.

The expanded capacity is 980 m³/d. Flow per customer is 1.25 m³/day for a single detached equivalent unit.

Analysis of Long-Term Capital and Operating Costs: This project will expand an existing asset. The costs of the project attributed to the existing deficit will be paid for through monies collected through connection fees, wastewater rates and reserves. The additional development serviced by this project will offset the long-term capital and operating costs through wastewater rates and reserves.

Project Benefiting Area(s): Hensall

Costs:

Total Capital Costs	\$ 3,541,000
Financing Costs	\$ 240,125
Deduct any grants or subsidies	\$ 1,401,275
Subtotal	\$ 2,379,850
Deduct amount available in reserve	\$11,325
Amount recoverable through development charges	\$2,368,525

Development Charge Calculations

Residential Allocation (per capita)

Amount recoverable through development charges	\$2,368,525
Expanded capacity (m ³ /day)	980
Cost per m ³ /day	\$2,417
Required m ³ /day for a single detached unit	1.25
Cost per single detached unit	\$3,021
Residential Development Charge per capita (2.49 persons/unit)	\$1,213

Non-Residential Allocation (per square foot)

Employee to resident ratio	0.27
Cost per employee	\$327.59
Average sq. ft per employee	2550 ft ² /employee
Non-residential development charges (per ft²)	\$ 0.13

Project Description: The Municipality recently completed a Class EA for the expansion of water storage in Hensall. A new facility will provide additional storage to service future growth. The current cost estimate for the new water storage facility is \$4,329,750. A grant has been received in the amount of \$3,175,005.60. The new facility will have a capacity of 1718 m³/day. The demand associated with the existing population is 1,126 m³/day.

The expanded storage facility will supply a design population of 1,718 person. The current serviced population is 1,126 persons.

Analysis of Long-Term Capital and Operating Costs: This project will expand an existing asset. The costs of the project attributed to the existing deficit will be paid for through monies collected through connection fees, water rates and reserves. The additional development serviced by this project will offset the long-term capital and operating costs through water rates and reserves.

Project Benefiting Area(s): Hensall

Costs:

Total Capital Costs	\$ 4,329,750
Deduct any grants or subsidies	\$ 3,175,006
Subtotal	\$ 1,154,744

Development Charge Calculations

Residential Allocation (per capita)

Amount attributable to existing development (34%)	\$756,835
Amount attributable to future development (66%)	\$397,910
Deduct amount available in reserve	\$9,373
Amount recoverable through development charges	\$388,537
Expanded capacity (persons)	592
Residential Development Charge (per capita)	\$656

Non-Residential Allocation (per square foot)

Employee to resident ratio	0.27
Cost per employee	\$177.20
Average sq. ft per employee	2550 ft ² /employee
Non-residential development charges (per ft²)	\$ 0.07

Project Description: The Municipality is undertaking a project to replace the existing groundwater supply for Zurich and connect the community to the Lake Huron Primary Water Supply. This work will include transmission pipeline and pumping facilities to supply the existing community and future growth.

The current cost estimate for the works is \$6,204,029. This project is expected to be debentured and the estimated interest is \$2,860,008.65. The design capacity of the pipeline is 1,152 m³/day. Existing usage is 614 m³/day. Average usage per customer is 1.6 m³/day.

Analysis of Long-Term Capital and Operating Costs: This project will expand an existing asset. The costs of the project attributed to the existing deficit will be paid for through monies collected through connection fees, water rates and reserves. The additional development serviced by this project will offset the long-term capital and operating costs through water rates and reserves.

Project Benefiting Area(s): Zurich

Costs:

Total Capital Costs	\$ 6,204,030
Interest costs associated with debenture	\$2,860,009
Deduct any grants or subsidies	\$ 0
Subtotal	\$ 9,064,038

Development Charge Calculations

Residential Allocation (per capita)

Amount attributable to existing development (53%)	\$ 4,803,940
Amount attributable to future development (47%)	\$ 4,260,098
Amount recoverable through development charges	\$ 4,260,098
Expanded capacity (m ³ /day)	538
Expanded capacity (ERU = 538 m ³ /day / 1.6 m ³ /day/ERU)	336
Charge per capita (2.36 persons per ERU)	5,365

Non-Residential Allocation (per square foot)

Employee to resident ratio	0.27
Cost per employee	\$1,448.65
Average sq. ft per employee	1250 ft ² /employee
Non-residential development charges (per ft²)	\$ 1.16