



Water and Wastewater Rate Study

Town of Essex

February 5, 2021

Watson & Associates Economists Ltd.
905-272-3600
info@watsonecon.ca

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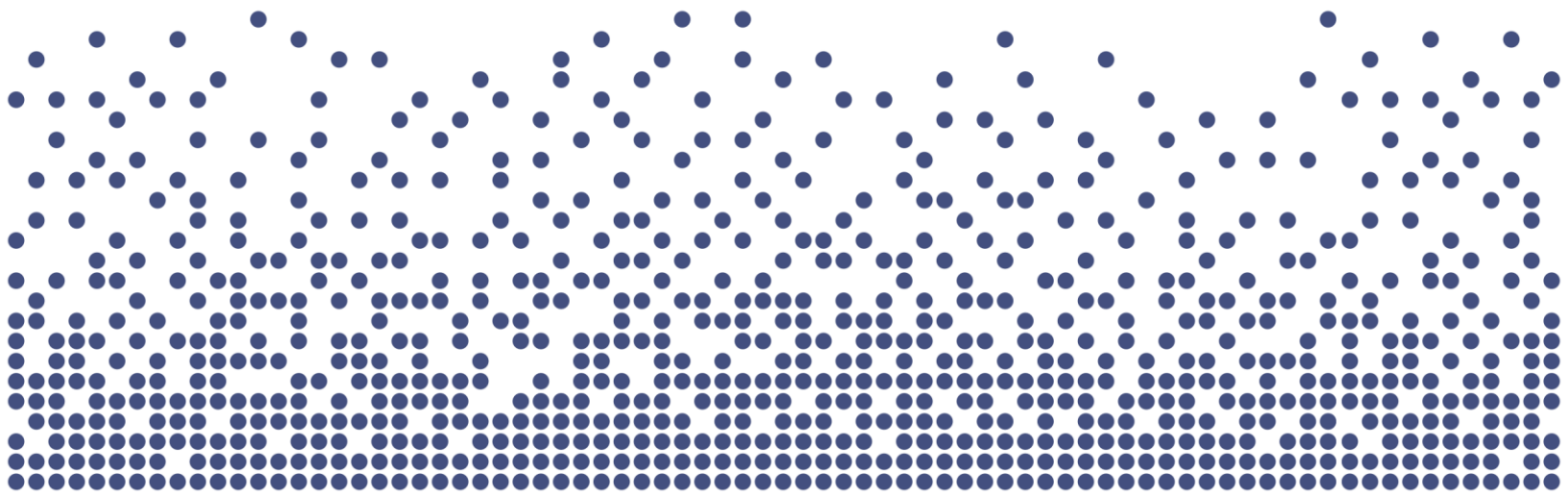
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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
A.M.O.	Association of Municipalities of Ontario
C.W.W.F.	Clean Water and Wastewater Fund
D.C.A.	Development Charges Act, 1997
F.I.R.	Financial Information Return
I.J.P.A.	Infrastructure for Jobs and Prosperity Act, 2015
I.O.	Infrastructure Ontario
LPAT	Local Planning Appeal Tribunal
M.O.E.	Ministry of Environment
O.C.I.F.	Ontario Community Infrastructure Fund
O.M.B.	Ontario Municipal Board
O.Reg.	Ontario Regulation
O.S.I.F.A.	Ontario Strategic Infrastructure Financing Authority
P.S.A.B.	Public Sector Accounting Board
P.T.I.F.	Public Transit Infrastructure Fund
S.W.S.S.A.	Sustainable Water and Sewage Systems Act, 2002



Executive Summary



Executive Summary

The Town of Essex retained Watson & Associates Economists Ltd. (Watson) to undertake a water and wastewater rate study. This study aims to update the analysis for current capital and operating forecasts, costing for lifecycle cost requirements, current volumes and customer profiles. The results of this analysis provide updated water and wastewater base charges and volume rates for customers within the Town of Essex. The rate analysis contained herein continues to provide fiscally responsible practices that are in line with current provincial legislation at a level of rate increases that are reasonable.

The analysis presented herein provides the following:

- Capital spending program amounts for water are \$13.92 million for Wards 1 & 2 and \$14.63 million for Wards 3 & 4 (inflated - 2020-2030).
- Capital spending program amounts for wastewater are \$3.04 million for Ward 1, \$2.53 million for Ward 3 and \$4.45 million for Ward 4 (inflated – 2020-2030).
- Annual operating expenditures are assumed to increase by 1% for most expenditures from 2022-2023 and 2% per annum thereafter (2024-2030). Expenditures related to utilities, fuels, chemicals and other materials have been increased at 2% per annum from 2022-2023 and 5% annually for the remainder of the forecast period;
- Union Water rates related to purchased water for Wards 1 & 2 for 2020-2024 are based on the rates provided in the 2018 Union Water Rate Study. These rates are inflated by 4% annually thereafter (2025-2030).
- The present rate structure (base monthly charge and a constant volume rate for each ward) is continued;
- Existing 2020 water customers total 6,608
 - Wards 1 & 2: 3,160 existing customers with growth anticipated to add 553 customers over the forecast period to 2030.
 - Wards 3 & 4: 3,448 existing customers with growth anticipated to add 264 customers over the forecast period to 2030.
- Existing wastewater customers total 5,163:
 - Ward 1: 2,903 existing customers, increasing by 431 customers over the forecast period.



- Ward 3: 1,069 existing customers, increasing by 124 customers over the forecast period.
- Ward 4: 1,191 existing customers, increasing by 140 customers over the forecast period.

Based on the above information, the following annual increases are anticipated to the base charges and volume rates over the forecast period:

Service Area	Base Charge	Volume Charge
Water:		
Wards 1 & 2	2%	1%
Wards 3 & 4	2%	1%
Wastewater:		
Ward 1	2%	2%
Ward 3	2%	3% (2021-2025) 2% (2026-2030)
Ward 4	2%	3%

Tables ES-1 and ES-2 summarize the forecasted water rates and average annual bill, based on the average volume usage by Ward as follows:

- Table ES-1: Wards 1 & 2 – average annual volume of 180 m³ over the forecast period.
- Table ES-2: Wards 3 & 4 - average annual volume of 145 m³ over the forecast period.

Tables ES-3, ES-4, and ES-5 summarize the recommended wastewater rates and average annual bill, based on average annual volumes by Ward, as follows:

- Table ES-3: Ward 1 – average annual volume of 180 m³ over the forecast period.
- Table ES-4: Ward 3 - average annual volume of 130 m³ over the forecast period.
- Table ES-5: Ward 4 - average annual volume of 160 m³ over the forecast period.



Table ES-1
Town of Essex
Water Rate Summary – Wards 1 & 2
Annual Customer Water Bill – Based on 180 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$19.69	\$20.08	\$20.49	\$20.90	\$21.31	\$21.74	\$22.17	\$22.62	\$23.07	\$23.53	\$24.00
Constant Rate	\$1.45	\$1.46	\$1.47	\$1.48	\$1.49	\$1.50	\$1.52	\$1.54	\$1.56	\$1.58	\$1.60
Annual Base Rate Bill	\$236.28	\$241.01	\$245.83	\$250.74	\$255.76	\$260.87	\$266.09	\$271.41	\$276.84	\$282.38	\$288.02
Volume	180	180	180	180	180	180	180	180	180	180	180
Annual Volume Bill	\$261.00	\$262.80	\$264.60	\$266.40	\$268.20	\$270.00	\$273.60	\$277.20	\$280.80	\$284.40	\$288.00
Total Annual Bill	\$497.28	\$503.81	\$510.43	\$517.14	\$523.96	\$530.87	\$539.69	\$548.61	\$557.64	\$566.78	\$576.02
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		0.7%	0.7%	0.7%	0.7%	0.7%	1.3%	1.3%	1.3%	1.3%	1.3%
%Increase - Total Annual Bill		1.3%	1.3%	1.3%	1.3%	1.3%	1.7%	1.7%	1.6%	1.6%	1.6%

Table ES-2
Town of Essex
Water Rate Summary – Wards 3 & 4
Annual Customer Water Bill – Based on 145 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$19.69	\$20.08	\$20.49	\$20.90	\$21.31	\$21.74	\$22.17	\$22.62	\$23.07	\$23.53	\$24.00
Constant Rate	\$1.63	\$1.65	\$1.67	\$1.69	\$1.71	\$1.73	\$1.75	\$1.77	\$1.79	\$1.81	\$1.83
Annual Base Rate Bill	\$236.28	\$241.01	\$245.83	\$250.74	\$255.76	\$260.87	\$266.09	\$271.41	\$276.84	\$282.38	\$288.02
Volume	145	145	145	145	145	145	145	145	145	145	145
Annual Volume Bill	\$236.35	\$239.25	\$242.15	\$245.05	\$247.95	\$250.85	\$253.75	\$256.65	\$259.55	\$262.45	\$265.35
Total Annual Bill	\$472.63	\$480.26	\$487.98	\$495.79	\$503.71	\$511.72	\$519.84	\$528.06	\$536.39	\$544.83	\$553.37
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
%Increase - Total Annual Bill		1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%



Table ES-3
Town of Essex
Wastewater Rate Summary – Ward 1
Annual Customer Wastewater Bill – Based on 180 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$20.68	\$21.09	\$21.52	\$21.95	\$22.38	\$22.83	\$23.29	\$23.75	\$24.23	\$24.71	\$25.21
Constant Rate	\$1.44	\$1.47	\$1.50	\$1.53	\$1.56	\$1.59	\$1.62	\$1.65	\$1.68	\$1.71	\$1.74
Annual Base Rate Bill	\$248.16	\$253.12	\$258.19	\$263.35	\$268.62	\$273.99	\$279.47	\$285.06	\$290.76	\$296.57	\$302.51
Volume	180	180	180	180	180	180	180	180	180	180	180
Annual Volume Bill	\$259.20	\$264.60	\$270.00	\$275.40	\$280.80	\$286.20	\$291.60	\$297.00	\$302.40	\$307.80	\$313.20
Total Annual Bill	\$507.36	\$517.72	\$528.19	\$538.75	\$549.42	\$560.19	\$571.07	\$582.06	\$593.16	\$604.37	\$615.71
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		2.1%	2.0%	2.0%	2.0%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%
%Increase - Total Annual Bill		2.0%	2.0%	2.0%	2.0%	2.0%	1.9%	1.9%	1.9%	1.9%	1.9%

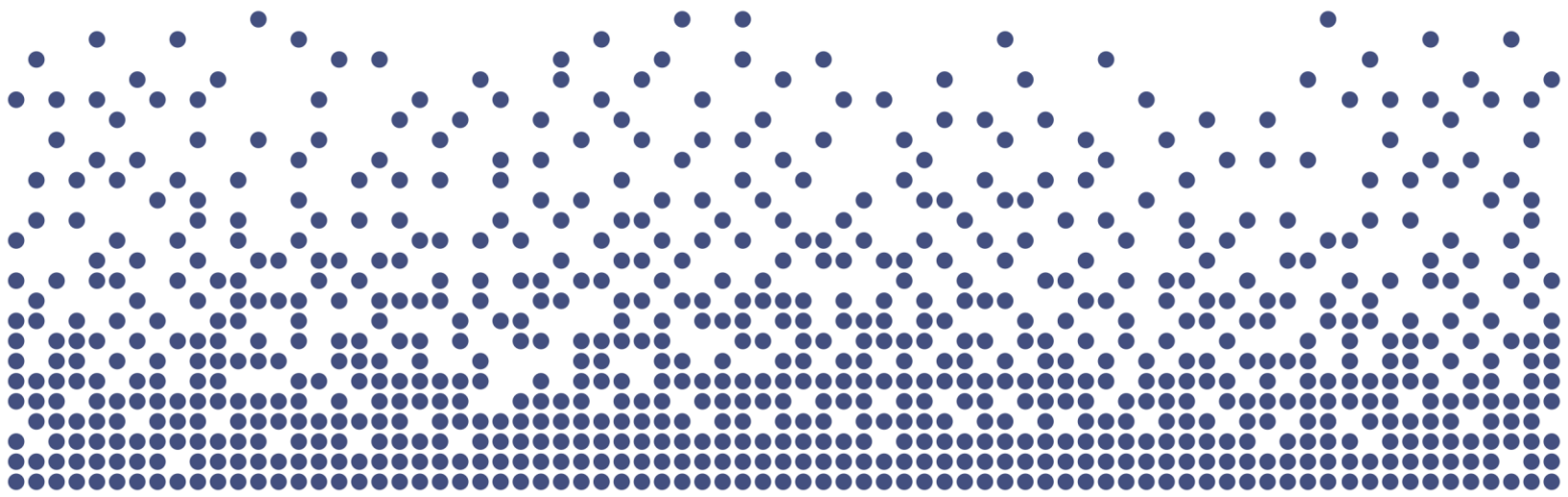
Table ES-4
Town of Essex
Wastewater Rate Summary – Ward 3
Annual Customer Wastewater Bill – Based on 130 m³. of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$21.71	\$22.14	\$22.59	\$23.04	\$23.50	\$23.97	\$24.45	\$24.94	\$25.44	\$25.95	\$26.46
Constant Rate	\$2.20	\$2.27	\$2.34	\$2.41	\$2.48	\$2.55	\$2.60	\$2.65	\$2.70	\$2.75	\$2.81
Annual Base Rate Bill	\$260.52	\$265.73	\$271.05	\$276.47	\$282.00	\$287.64	\$293.39	\$299.26	\$305.24	\$311.35	\$317.57
Volume	130	130	130	130	130	130	130	130	130	130	130
Annual Volume Bill	\$286.00	\$295.10	\$304.20	\$313.30	\$322.40	\$331.50	\$338.00	\$344.50	\$351.00	\$357.50	\$365.30
Total Annual Bill	\$546.52	\$560.83	\$575.25	\$589.77	\$604.40	\$619.14	\$631.39	\$643.76	\$656.24	\$668.85	\$682.87
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		3.2%	3.1%	3.0%	2.9%	2.8%	2.0%	1.9%	1.9%	1.9%	2.2%
%Increase - Total Annual Bill		2.6%	2.6%	2.5%	2.5%	2.4%	2.0%	2.0%	1.9%	1.9%	2.1%



Table ES-5
Town of Essex
Wastewater Rate Summary – Ward 4
Annual Customer Wastewater Bill – Based on 160 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$20.68	\$21.09	\$21.52	\$21.95	\$22.38	\$22.83	\$23.29	\$23.75	\$24.23	\$24.71	\$25.21
Constant Rate	\$1.93	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.31	\$2.38	\$2.45	\$2.52	\$2.60
Annual Base Rate Bill	\$248.16	\$253.12	\$258.19	\$263.35	\$268.62	\$273.99	\$279.47	\$285.06	\$290.76	\$296.57	\$302.51
Volume	160	160	160	160	160	160	160	160	160	160	160
Annual Volume Bill	\$308.80	\$318.40	\$328.00	\$337.60	\$347.20	\$358.40	\$369.60	\$380.80	\$392.00	\$403.20	\$416.00
Total Annual Bill	\$556.96	\$571.52	\$586.19	\$600.95	\$615.82	\$632.39	\$649.07	\$665.86	\$682.76	\$699.77	\$718.51
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		3.1%	3.0%	2.9%	2.8%	3.2%	3.1%	3.0%	2.9%	2.9%	3.2%
%Increase - Total Annual Bill		2.6%	2.6%	2.5%	2.5%	2.7%	2.6%	2.6%	2.5%	2.5%	2.7%



Report



Chapter 1

Introduction



1. Introduction

1.1 Background

The Town of Essex provides water service via two systems, Wards 1 and 2 in the north representing the former Essex and Colchester North communities and Wards 3 and 4 in the south representing the former Colchester South and Harrow communities. The Union Water Management Board provides the water supply for Wards 1 & 2 whereas the water supply for Wards 3 & 4 is an independent system with treatment and storage located within Harrow. In addition, customers in Wards 1, 3 & 4 are provided wastewater services via the Essex Pollution Control Plant and the Harrow and Colchester South Water Treatment Plant. Customers in Ward 2 are provided wastewater systems through the Amherstburg wastewater system and are therefore not included in the rate analysis provided herein.

The Town of Essex currently services 6,608 metered water customers and 5,163 wastewater customers. The water and wastewater systems are metered and utilize rate structures with a monthly base charge as well as a volume charge on a per cubic metre basis. Table 1-1 provides the existing rates presently in effect.

Table 1-1
Town of Essex
Water and Wastewater Rates – 2020

2020 - Water Billing Rates			2020 - Wastewater Billing Rates		
Ward	Monthly Base Charge	Consumption Charge per m ³	Ward	Monthly Base Charge	Consumption Charge per m ³
Ward 1 - Essex Service Area	\$ 19.69	\$ 1.45	Ward 1 - Essex Service Area	\$ 20.68	\$ 1.44
Ward 2 - Colchester North Service Area	\$ 19.69	\$ 1.45	Ward 2 - Colchester North Service Area*	\$ -	\$ -
Ward 3 - Colchester South Service Area	\$ 19.69	\$ 1.63	Ward 3 - Colchester South Service Area	\$ 21.71	\$ 2.20
Ward 4 - Harrow Service Area	\$ 19.69	\$ 1.63	Ward 4 - Harrow Service Area	\$ 20.68	\$ 1.93

* Receive Services via the Amherstburg system



Since the Walkerton crisis, the Province has continued to make legislative changes for municipal water and wastewater systems. Noted below are the historical changes along with pending legislation anticipated to be implemented in the future. Watson & Associates Economists Ltd. (Watson) was retained by the Town of Essex to assist in addressing these changes in a proactive manner as they relate to the water and wastewater systems. The assessment provided herein addresses changes recommended to the water and wastewater rates based on the most current information and forecasts the implications over the next ten-year period.

1.2 Study Process

The objectives of the study and the steps involved in carrying out this assignment are summarized below:

- Identify all current and future water and wastewater system capital needs to assess the immediate and longer-term implications;
- Identify potential methods of cost recovery from the capital needs listing. These recovery methods may include other statutory authorities (e.g. *Development Charges Act, 1997* (D.C.A.), *Municipal Act*, etc.) as an offset to recovery through the water and wastewater rates;
- Identify existing operating costs by component and estimate future operating costs over the next ten years. This assessment identifies fixed and variable costs in order to project those costs sensitive to changes to the existing infrastructure inventory, as well as costs which may increase commensurate with growth; and
- Provide staff and Committee/Council the findings to assist in gaining approval of the rates for 2021 and future years.

1.3 Regulatory Changes in Ontario

Resulting from the water crisis in Walkerton, significant regulatory changes have been made in Ontario. These changes arise as a result of the Walkerton Commission and the 93 recommendations made by the Walkerton Inquiry Part II report. Areas of recommendation include:

- watershed management and source protection;



- quality management;
- preventative maintenance;
- research and development;
- new performance standards;
- sustainable asset management; and
- lifecycle costing.

The legislation which would have most impacted municipal water and wastewater rates was the *Sustainable Water and Sewage Systems Act* (S.W.S.S.A.) which would have required municipalities to implement full cost pricing. The legislation was enacted in 2002, however, it had not been implemented pending the approval of its regulations. The Act was repealed as of January 1, 2013. It is expected that the provisions of the *Water Opportunities Act* will implement the fundamental requirements of S.W.S.S.A. Furthermore, on December 27, 2017, O.Reg. 588/17 was released under the *Infrastructure for Jobs and Prosperity Act, 2015* (I.J.P.A.), which outlines the requirements for asset management for municipalities. The results of the asset management review under this Act will need to be considered in light of the recent investments undertaken by the Town and the capital spending plan provided herein. The following sections describe these various resulting changes.

1.4 Sustainable Water and Sewage Systems Act

As noted earlier, the S.W.S.S.A. was passed on December 13, 2002. The intent of the Act was to introduce the requirement for municipalities to undertake an assessment of the “full cost” of providing their water and wastewater services. It is noted, however, that this Act has been repealed. To provide broader context and understanding to other legislation discussed herein, a description of the Act is provided below.

Full costs for water service was defined in subsection 3(7) of the Act and included “...source protection costs, operating costs, financing costs, renewal and replacement costs and improvement costs associated with extracting, treating or distributing water to the public and such other costs which may be specified by regulation.” Similar provisions were made for wastewater services in subsection 4(7) with respect to “...collecting, treating or discharging waste water.”



The Act would have required the preparation of two reports for submission to the Ministry of the Environment (or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*). The first report was on the “full cost of services” and the second was the “cost recovery plan.” Once these reports were reviewed and approved by the Ministry, the municipality would have been required to implement the plans within a specified time period.

In regard to the **full cost of services** report, the municipality (deemed a regulated entity under the Act) would prepare and approve a report concerning the provision of water and sewage services. This report was to include an inventory of the infrastructure, a management plan providing for the long-term integrity of the systems and would address the full cost of providing the services (other matters may be specified by the regulations) along with the revenue obtained to provide them. A professional engineer would certify the inventory and management plan portion of the report. The municipality’s auditor would be required to provide a written opinion on the report. The report was to be approved by the municipality and then be forwarded to the Ministry along with the engineer’s certification and the auditor’s opinion. The regulations would stipulate the timing for this report.

The second report was referred to as a **cost recovery plan** and would address how the municipality intended to pay for the full costs of providing the service. The regulations were to specify limitations on what sources of revenue the municipality may use. The regulations may have also provided limits as to the level of increases any customer or class of customer may experience over any period of time. Provision was made for the municipality to implement increases above these limits; however, ministerial approval would be required first. Similar to the first report, the municipal auditor would provide a written opinion on the report prior to Council’s adoption, and this opinion must accompany the report when submitted to the Province.

The Act provided the Minister the power to approve or not approve the plans. If the Minister was not satisfied with the report or if a municipality did not submit a plan, the Minister may have a plan prepared. The cost to the Crown for preparing the plan would be recovered from the municipality. As well, the Minister may direct two or more regulated municipalities to prepare a joint plan. This joint plan may be directed at the onset or be directed by the Minister after receiving the individual plans from the municipalities.



The Minister also had the power to order a municipality to generate revenue from a specific revenue source or in a specified manner. The Minister may have also ordered a regulated entity to do or refrain from doing such things as the Minister considered advisable to ensure that the entity pays the full cost of providing the services to the public.

Once the plans were approved and in place, the municipality would be required to submit progress reports. The timing of these reports and the information to be contained therein would be established by the regulations. A municipal auditor's opinion must be provided with the progress report. Municipalities will also revise the plans if they deem the estimate does not reflect the full cost of providing the services, as a result of a change in circumstances, regulatory or other changes that affect their plan, etc. The municipality would then revise its prior plan, provide an auditor's opinion, and submit the plan to the Minister.

1.5 Financial Plans Regulation

On August 16, 2007, the M.O.E. passed O.Reg 453/07 which requires the preparation of financial plans for water (and wastewater) systems. The M.O.E. has also provided a Financial Plan Guidance Document to assist in preparing the plans. A brief summary of the key elements of the regulation is provided below:

- The financial plan will represent one of the key elements for the municipality to obtain its Drinking Water Licence;
- The financial plans shall be for a period of at least six years, but longer planning horizons are encouraged;
- As the regulation is under the *Safe Drinking Water Act, 2002*, the preparation of the plan is mandatory for water and encouraged for wastewater;
- The plan is considered a living document (i.e. will be updated as annual budgets are prepared) but will need to be undertaken, at a minimum, every five years;
- The plans generally require the forecasting of capital, operating and reserve fund positions, providing detailed inventories, forecasting future users and volume usage and corresponding calculation of rates. In addition, P.S.A.B. information on the system must be provided for each year of the forecast (i.e. total non-financial assets, tangible capital asset acquisitions, tangible capital asset construction, betterments, write-downs, disposals, total liabilities and net debt);



- The financial plans must be made available to the public (at no charge) upon request and be available on the municipality's website. The availability of this information must also be advertised; and
- The financial plans are to be approved by Resolution of the Council or governing body indicating that the drinking water system is financially viable.

In general, the financial principles of the draft regulations follow the intent of S.W.S.S.A. to move municipalities towards financial sustainability. Many of the prescriptive requirements, however, have been removed (e.g. preparation of two separate documents for provincial approval, auditor opinions, engineer certifications, etc.).

A Guideline ("Towards Financially Sustainable Drinking Shores – Water and Wastewater Systems") had been developed to assist municipalities in understanding the Province's direction and provided a detailed discussion on possible approaches to sustainability. The Province's Principles of Financially Sustainable Water and Wastewater Services are provided below:

Principle #1: Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.

Principle #2: An integrated approach to planning among water, wastewater, and stormwater systems is desirable given the inherent relationship among these services.

Principle #3: Revenues collected for the provision of water and wastewater services should ultimately be used to meet the needs of those services.

Principle #4: Lifecycle planning with mid-course corrections is preferable to planning over the short term, or not planning at all.

Principle #5: An asset management plan is a key input to the development of a financial plan.

Principle #6: A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.



Principle #7: Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.

Principle #8: Financial plans are “living” documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.

Principle #9: Financial plans benefit from the close collaboration of various groups, including engineers, accountants, auditors, utility staff, and municipal Council.

1.6 Water Opportunities Act, 2010

As noted earlier, since the passage of the *Safe Drinking Water Act, 2002*, continuing changes and refinements to the legislation have been introduced. Some of these Bills have found their way into law, while others have not been approved. Bill 72, the *Water Opportunities Act, 2010*, was introduced into legislation on May 18, 2010 and received Royal Assent on November 29, 2010.

The Act provides for the following elements:

- The fostering of innovative water, wastewater and stormwater technologies, services, and practices in the private and public sectors;
- Preparation of water conservation plans to achieve water conservation targets established by the regulations; and
- Preparation of sustainability plans for municipal water services, municipal wastewater services and municipal stormwater services.

With regard to the sustainability plans:

- The Act extends from the water financial plans and requires a more detailed review of the water financial plan and requires a full plan for wastewater and stormwater services; and
- Regulations will provide performance targets for each service – these targets may vary based on the jurisdiction of the regulated entity or the class of entity.



The financial plan shall include:

- An asset management plan for the physical infrastructure;
- A financial plan;
- For water, a water conservation plan;
- An assessment of risks that may interfere with the future delivery of the municipal service, including, if required by the regulations, the risks posed by climate change and a plan to deal with those risks; and
- Strategies for maintaining and improving the municipal service, including strategies to ensure the municipal service can satisfy future demand, consider technologies, services and practices that promote the efficient use of water and reduce negative impacts on Ontario's water resources, and increase co-operation with other municipal service providers.

Performance indicators will be established by service, with the following considerations:

- May relate to the financing, operation or maintenance of a municipal service or to any other matter in respect of what information may be required to be included in a plan;
- May be different for different municipal service providers or for municipal services in different areas of the Province.

Regulations will prescribe:

- Timing;
- Contents of the plans;
- Which identified portions of the plan will require certification;
- Public consultation process; and
- Limitations, updates, refinements, etc.

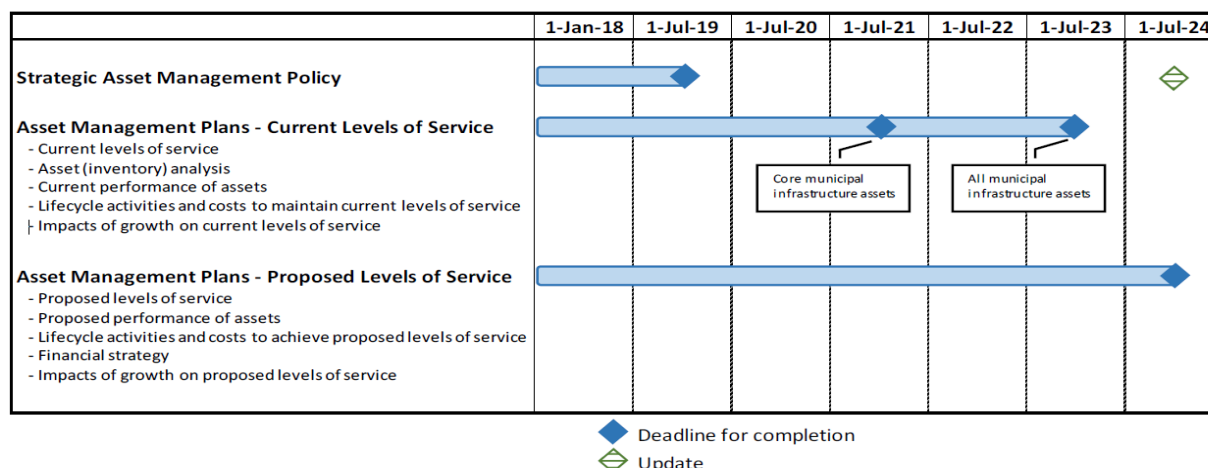
As noted earlier, it is expected that this Act will implement the principles of the S.W.S.S.A. once all regulations are put in place.

1.7 Infrastructure for Jobs and Prosperity Act, 2015 (I.J.P.A.)

On June 4, 2015, the Province of Ontario passed the I.J.P.A. which, over time, will require municipalities to undertake and implement asset management plans for all



infrastructure they own. On December 27, 2017, the Province released Ontario Regulation 588/17 under the I.J.P.A. which has three phases that municipalities must meet:



Every municipality in Ontario will have to prepare a strategic asset management policy by July 1, 2019. Municipalities will be required to review their strategic asset management policies at least every five years and make updates, as necessary. The subsequent phases are as follows:

- Phase 1 – Asset Management Plan (by July 1, 2021):
 - For core assets, municipalities must have the following:
 - Inventory of assets;
 - Current levels of service measured by standard metrics; and
 - Costs to maintain levels of service.
- Phase 2 – Asset Management Plan (by July 1, 2023):
 - Same steps as Phase 1 but for all assets.
- Phase 3 – Asset Management Plan (by July 1, 2024):
 - Builds on Phase 1 and 2 by adding:
 - Proposed levels of service; and
 - Lifecycle management and financial strategy.

In relation to water and wastewater (which is considered a core asset), municipalities will need to have an asset management plan that addresses the related Phase 1 infrastructure by July 1, 2021 (Note that as of the time of writing, a number of municipalities have approached the province to request an extension of this deadline



given the problems arising from COVID-19 however, no changes to the deadline have been announced). O.Reg. 588/17 specifies that the municipality's asset management plan must include the following for each asset category:

- The current levels of service being provided, determined in accordance with the following qualitative descriptions and technical metrics and based on data from at most the two calendar years prior to the year in which all information required under this section is included in the asset management plan;
- The current performance of each asset category, including:
 - a summary of the assets in the category;
 - the replacement cost of the assets in the category;
 - the average age of the assets in the category, determined by assessing the average age of the components of the assets;
 - the information available on the condition of the assets in the category;
 - a description of the municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate; and
- The lifecycle activities that would need to be undertaken to maintain the current levels of service.

Upon completion of the asset management plan for water and wastewater services, the Town will need to consider the impacts on the capital plan provided herein.

1.8 Forecast Growth and Servicing Requirements

The Town of Essex services 3,160 metered water customers in Wards 1 & 2 and 3,448 metered water customers in Wards 3 & 4. The Town also services 2,903 wastewater customers in Ward 1, 1,069 customers in Ward 3 and 1,191 customers in Ward 4. Currently wastewater customers in Ward 2 are serviced through the Amherstburg system and billed directly. Information on the existing number of customers and existing billable volumes was obtained from the Town.

For forecasting future wastewater volumes, the average annual usage per customer in over the past four years, was utilized. The following provides the average volumes utilized in the forecast broken down by Ward:

- Ward 1: 180 m³



- Ward 3: 130 m³
- Ward 4: 160 m³

For forecasting future water usage within Wards 1 & 2 an average of 180 m³ per customer has been assumed based on the average wastewater usage for Ward 1. For Wards 3 & 4 an average 145 m³ per customer has been assumed for new customers based on the average of wastewater volumes for Ward 3 of 130 m³ per year and Ward 4 of 160 m³ per year.

For future water and wastewater customers to be added to the systems, the growth identified in 2020 is based on actual building permit data. For 2021-2025, the additional customer growth is based on building permit application and planning data provided by staff. The remainder of the forecast from 2026 to 2030 is consistent with the growth identified in the Town's 2019 Development Charges (D.C.) background study.

Tables 1-2 provides for the forecast of water users and volumes for all Wards, while Table 1-3 provides the forecast of wastewater users and volumes. The forecast of future users has been broken out by Wards 1 & 2 and Wards 3 & 4 for water and by individual ward for wastewater.



Table 1-2
Town of Essex
2020 to 2030 Water System Forecast

Water Users Forecast - Ward 1 & 2

Year	Total Users	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020	81	41	81	81	81	81	81	81	81	81	81	81
2021	105		53	105	105	105	105	105	105	105	105	105
2022	111			56	111	111	111	111	111	111	111	111
2023	20				10	20	20	20	20	20	20	20
2024	40					20	40	40	40	40	40	40
2025	40						20	40	40	40	40	40
2026	39							20	39	39	39	39
2027	39								20	39	39	39
2028	39									20	39	39
2029	39										20	39
Total	553	41	134	242	307	337	377	417	456	495	534	553
m ³ /user	180	180	180	180	180	180	180	180	180	180	180	180
Annual Flow		7,380	24,120	43,560	55,260	60,660	67,860	75,060	82,080	89,100	96,120	99,540

Water Users Forecast - Ward 3 & 4

Year	Total Users	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020	48	24	48	48	48	48	48	48	48	48	48	48
2021	23		12	23	23	23	23	23	23	23	23	23
2022	53			27	53	53	53	53	53	53	53	53
2023	40				20	40	40	40	40	40	40	40
2024	10					5	10	10	10	10	10	10
2025	10						5	10	10	10	10	10
2026	20							10	20	20	20	20
2027	20								10	20	20	20
2028	20									10	20	20
2029	20										10	20
Total	264	24	60	98	144	169	179	194	214	234	254	264
m ³ /user	145	145	145	145	145	145	145	145	145	145	145	145
Annual Flow		3,480	8,700	14,210	20,880	24,505	25,955	28,130	31,030	33,930	36,830	38,280



Table 1-2 (Cont'd)
Town of Essex
2020 to 2030 Water System Forecast

Water Customer Forecast	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ward 1 & 2											
Existing	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160
New - Growth	41	134	242	307	337	377	417	456	495	534	553
Subtotal Ward 1 & 2	3,201	3,294	3,402	3,467	3,497	3,537	3,577	3,616	3,655	3,694	3,713
Ward 3 & 4											
Existing	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448
New	24	60	98	144	169	179	194	214	234	254	264
Subtotal Ward 1 & 2	3,472	3,508	3,546	3,592	3,617	3,627	3,642	3,662	3,682	3,702	3,712
Total	6,673	6,802	6,948	7,059	7,114	7,164	7,219	7,278	7,337	7,396	7,425

Water Volume Forecast (m³)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ward 1 & 2											
Existing	774,325	774,325	774,325	774,325	774,325	774,325	774,325	774,325	774,325	774,325	774,325
Adjustment for Conservation											
New	7,380	24,120	43,560	55,260	60,660	67,860	75,060	82,080	89,100	96,120	99,540
Subtotal Ward 1 & 2	781,705	798,445	817,885	829,585	834,985	842,185	849,385	856,405	863,425	870,445	873,865
Ward 3 & 4											
Existing	781,912	781,912	781,912	781,912	781,912	781,912	781,912	781,912	781,912	781,912	781,912
Adjustment for Conservation											
New	3,480	8,700	14,210	20,880	24,505	25,955	28,130	31,030	33,930	36,830	38,280
Subtotal Ward 3 & 4	785,392	790,612	796,122	802,792	806,417	807,867	810,042	812,942	815,842	818,742	820,192
Total	1,567,097	1,589,057	1,614,007	1,632,377	1,641,402	1,650,052	1,659,427	1,669,347	1,679,267	1,689,187	1,694,057



Table 1-3
Town of Essex
2020 to 2030 Wastewater System Forecast

Wastewater Users Forecast - Ward 1 Essex Service Area

Year	Total Users	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020	78	39	78	78	78	78	78	78	78	78	78	78
2021	32		16	32	32	32	32	32	32	32	32	32
2022	65			33	65	65	65	65	65	65	65	65
2023	20				10	20	20	20	20	20	20	20
2024	40					20	40	40	40	40	40	40
2025	40						20	40	40	40	40	40
2026	39							20	39	39	39	39
2027	39								20	39	39	39
2028	39									20	39	39
2029	39										20	39
Total	431	39	94	143	185	215	255	295	334	373	412	431
m ³ /user	180	180	180	180	180	180	180	180	180	180	180	180
Annual Flow		7,020	16,920	25,740	33,300	38,700	45,900	53,100	60,120	67,140	74,160	77,580

Wastewater Users Forecast - Ward 3 Colchester South Service Area

Year	Total Users	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020	22	11	22	22	22	22	22	22	22	22	22	22
2021	10		5	10	10	10	10	10	10	10	10	10
2022	30			15	30	30	30	30	30	30	30	30
2023	30				15	30	30	30	30	30	30	30
2024	0					-	-	-	-	-	-	-
2025	0						-	-	-	-	-	-
2026	8							4	8	8	8	8
2027	8								4	8	8	8
2028	8									4	8	8
2029	8										4	8
Total	124	11	27	47	77	92	92	96	104	112	120	124
m ³ /user	130	130	130	130	130	130	130	130	130	130	130	130
Annual Flow		1,430	3,510	6,110	10,010	11,960	11,960	12,480	13,520	14,560	15,600	16,120

Wastewater Users Forecast - Ward 4 Harrow Service Area

Year	Total Users	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020	26	13	26	26	26	26	26	26	26	26	26	26
2021	13		7	13	13	13	13	13	13	13	13	13
2022	23			12	23	23	23	23	23	23	23	23
2023	10				5	10	10	10	10	10	10	10
2024	10					5	10	10	10	10	10	10
2025	10						5	10	10	10	10	10
2026	12							6	12	12	12	12
2027	12								6	12	12	12
2028	12									6	12	12
2029	12										6	12
Total	140	13	33	51	67	77	87	98	110	122	122	122
m ³ /user	160	160	160	160	160	160	160	160	160	160	160	160
Annual Flow		2,080	5,280	8,160	10,720	12,320	13,920	15,680	17,600	19,520	19,520	19,520



Table 1-3 (Cont'd)
Town of Essex
2020 to 2030 Wastewater System Forecast

Wastewater Customer Forecast	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ward 1 - Essex											
Existing	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903
New - Growth	39	94	143	185	215	255	295	334	373	412	431
Sub-Total Ward 1	2,942	2,997	3,046	3,088	3,118	3,158	3,198	3,237	3,276	3,315	3,334
Ward 3 - Colchester South											
Existing	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069
New - Growth	11	27	47	77	92	92	96	104	112	120	124
Sub-Total Ward 3	1,080	1,096	1,116	1,146	1,161	1,161	1,165	1,173	1,181	1,189	1,193
Ward 4 - Harrow											
Existing	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191
New - Growth	13	33	51	67	77	87	98	110	122	122	122
Sub-Total Ward 4	1,204	1,224	1,242	1,258	1,268	1,278	1,289	1,301	1,313	1,313	1,313
Total	5,226	5,317	5,404	5,492	5,547	5,597	5,652	5,711	5,770	5,817	5,840

Wastewater Flows Forecast (m³)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ward 1 - Essex											
Existing	644,250	644,250	644,250	644,250	644,250	644,250	644,250	644,250	644,250	644,250	644,250
New	7,020	16,920	25,740	33,300	38,700	45,900	53,100	60,120	67,140	74,160	77,580
Sub-Total Ward 1	651,270	661,170	669,990	677,550	682,950	690,150	697,350	704,370	711,390	718,410	721,830
Ward 3 - Colchester South											
Existing	140,978	140,978	140,978	140,978	140,978	140,978	140,978	140,978	140,978	140,978	140,978
New	1,430	3,510	6,110	10,010	11,960	11,960	12,480	13,520	14,560	15,600	16,120
Sub-Total Ward 3	142,408	144,488	147,088	150,988	152,938	152,938	153,458	154,498	155,538	156,578	157,098
Ward 4 - Harrow											
Existing	271,879	271,879	271,879	271,879	271,879	271,879	271,879	271,879	271,879	271,879	271,879
New	2,080	5,280	8,160	10,720	12,320	13,920	15,680	17,600	19,520	19,520	19,520
Sub-Total Ward 4	273,959	277,159	280,039	282,599	284,199	285,799	287,559	289,479	291,399	291,399	291,399
Total	1,067,637	1,082,817	1,097,117	1,111,137	1,120,087	1,128,887	1,138,367	1,148,347	1,158,327	1,166,387	1,170,327



Chapter 2

Capital Infrastructure Needs



2. Capital Infrastructure Needs

2.1 Capital Forecast

Capital forecasts have been provided for the water systems and are presented on Tables 2-1 and 2-2 while the capital forecasts for the wastewater systems are presented on Tables 2-3, 2-4 and 2-5 (note: costs are presented in uninflated dollars). The basis for these forecasts is the Town's Capital Forecasts. In addition, capital works identified as asset replacement needs, based on the inventory data provided for the water and wastewater systems, have been included.

A summary of the capital works related to the water and wastewater services is provided on the following tables.

Table 2-1
Town of Essex
2020 to 2030 Water Capital Forecast Summary
Wards 1 & 2 (Uninflated \$)

Description	Total 2020-2030	Years Undertaken
New/Upgrade:		
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	8,500	2020
Backflow Prevention and Monitoring Program Wards 1/2 Maintenance	60,000	2020-2030
Equipment Contingency Wards 1 and 2	97,000	2021-2030
Lifecycle:		
Backflow Prevention and Monitoring Program Wards 1/2	6,999	2020
Gordon, Wilson, Fox, Station Street Main Replacement (cfwd WW-18-0009)	190,536	2020
Gordon, Wilson, Station Street Phase 1 (Construction)	850,000	2020
Pickup Truck Unit #607 Replacement	22,500	2020
Victor Watermain (ward 1)	165,000	2020-2021
Irwin Watermain (Ward 1)	335,000	2020
Viscount Watermain (Ward 1 and 2)	160,000	2021
Replace Truck	23,750	2022
Meter Reading Software	17,000	2021
Lifecycle Asset Replacement	10,090,000	2022-2030
Studies:		
Water Rate Study	30,000	2020, 2025
Water Model Development and Master Plan	50,000	2022
Water Rate Financial Plan	7,000	2020, 2025
Growth Related:		
Hwy 3 Crossing	250,000	2022
Total Water	12,363,285	



Table 2-2
Town of Essex
2020-2030 Water Capital Forecast Summary
Wards 3 & 4 (Uninflated \$)

Description	Total 2020-2030	Years Undertaken
New/Upgrade:		
Upgrades to Harrow-Colchester South Water Treatment Plant (cfwd WW-18-0010)	260,000	2020
CWWF Upgrades to Harrow-Colchester South WTP	326,833	2020
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	8,500	2020
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	947,500	2020-2024
OCWA Capital Recommendations	1,980,000	2020-2030
Lifecycle:		
Queen Street (Phillip Ferris to Concession 3) Main Replacement	175,097	2020
Backflow Prevention and Monitoring Program Wards 3/4	6,999	2020
Backflow Prevention and Monitoring Program Wards 3/4 Maintenance	60,000	2020-2030
Pickup Truck Unit #607 Replacement	22,500	2020
Queen Watermain (Ward 4)	340,000	2020
Replace Truck	23,750	2022
Meter Reading Software	17,000	2021
Equipment Contingency Wards 3 and 4	98,500	2021-2030
Lifecycle Asset Replacement	8,860,000	2022-2030
Studies:		
Water Rate Study	30,000	2020, 2025
Water Model Development and Master Plan	50,000	2022
Water Rate Financial Plan	7,000	2020, 2025
Total Water	13,213,679	



Table 2-3
Town of Essex
2020 to 2030 Wastewater Capital Forecast Summary
Ward 1 (Uninflated \$)

Description	Total 2020-2030	Years Undertaken
New/Upgrade:		
Treatment - Ward 1 Contingency	955,000	2020-2030
OCWA Capital Recommendations - Ward 1	1,166,000	2020-2030
Lifecycle:		
Grit Blower Replacement at Pollution Control Plant (cfwd SS-18-0008)	10,000	2020
Collection and Conveyance - Ward 1	600,000	2020-2030
Studies:		
Sanitary Service Area Amendment (South of Hwy3)	21,000	2021
Total Wastewater	2,752,000	

Table 2-4
Town of Essex
2020 to 2030 Wastewater Capital Forecast Summary
Ward 3 (Uninflated \$)

Description	Total 2020-2030	Years Undertaken
New/Upgrade:		
OCWA Capital Recommendations - Ward 3	986,000	2020-2030
Lifecycle:		
CWWF Funding Projects	4,110	2020
CWWF Funding Projects, Upgrades to Ward 3 Lagoons and Pump Station (cfwd SS-18-0007)	45,898	2020
Treatment - Ward 3 Contingency	575,000	2020-2030
Collection and Conveyance - Ward 3	627,500	2020-2030
Studies:		
Sanitary Sewer Masterplan Ward 3	92,399	2020
Total Wastewater	2,330,907	



Table 2-5
Town of Essex
2020 to 2030 Wastewater Capital Forecast Summary
Ward 4 (Uninflated \$)

Description	Total 2020-2030	Years Undertaken
New/Upgrade:		
Upgrades to Ward 4 Lagoons and Pump Station (cfwd SS-18-0009)	115,000	2020
OCWA Capital Recommendations - Ward 4	1,820,600	2020-2026
Lifecycle:		
CWWF Funding Projects	4,110	2020
Treatment - Ward 4 Cell Treatment	500,000	2020
Treatment - Ward 4 Cell Treatment (cfwd SS-18-0017/SS-17-0007)	500,000	2020
CWWF Upgrades to Harrow Lagoon and Pump Station (cfwd SS-18-0016)	45,417	2020
Treatment - Ward 4 Contingency	575,000	2020-2030
Collection and Conveyance - Ward 4	571,500	2020-2030
Studies:		
Harrow Sanitary Optimization Study (cfwd SS-18-0010)	80,282	2020
Total Wastewater	4,211,909	



Chapter 3

Lifecycle Costing



3. Lifecycle Costing

3.1 Overview of Lifecycle Costing

3.1.1 *Definition*

For many years, lifecycle costing has been used in the field of maintenance engineering and to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use in the areas of industrial decision-making and the management of physical assets.

By definition, lifecycle costs are all the costs which are incurred during the lifecycle of a physical asset, from the time its acquisition is first considered to the time it is taken out of service for disposal or redeployment. The stages which the asset goes through in its lifecycle are specification, design, manufacture (or build), install, commission, operate, maintain and disposal. Figure 3-1 depicts these stages in a schematic form.

3.1.2 *Financing Costs*

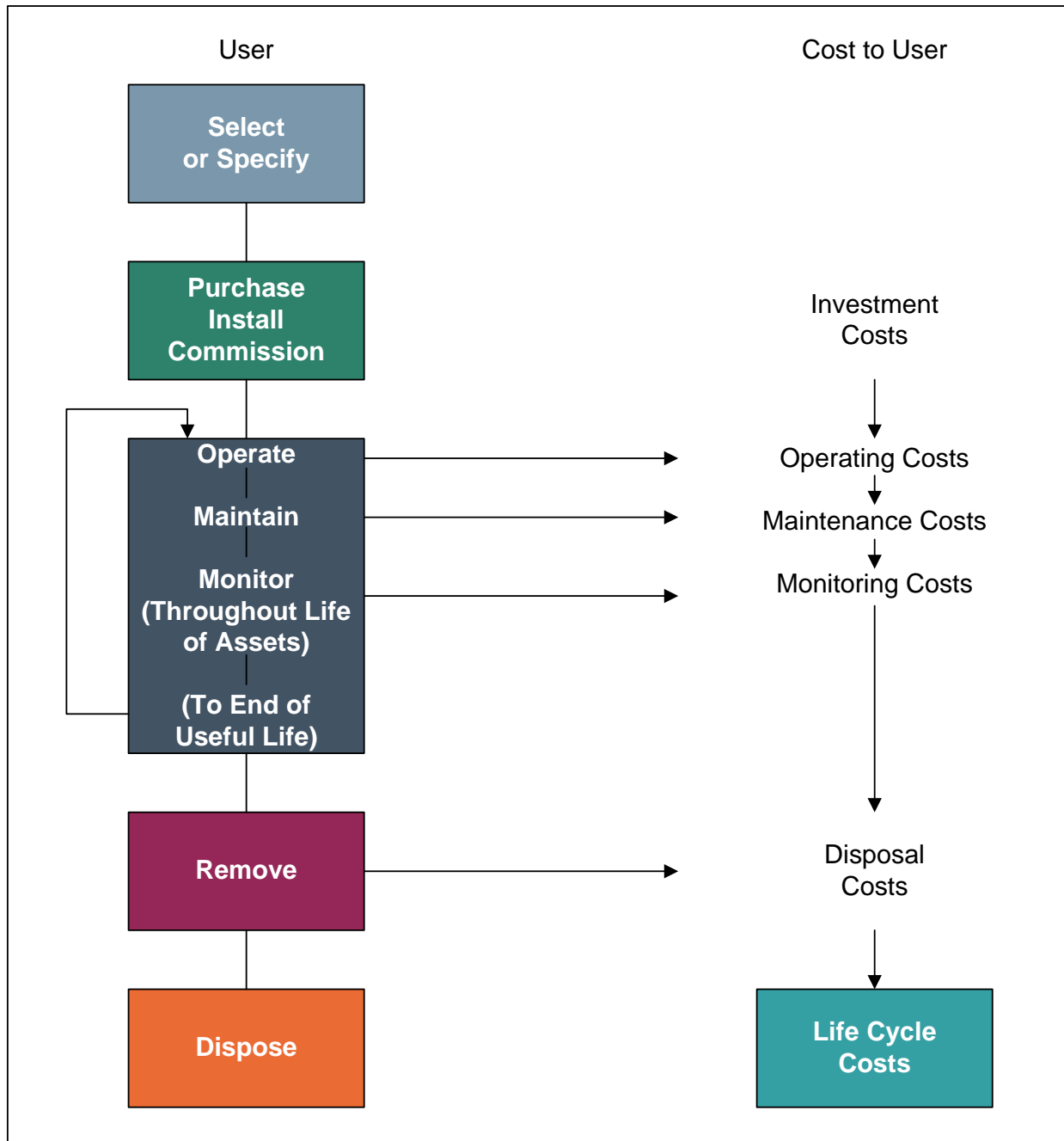
This section will focus on financing mechanisms in place to fund the costs incurred throughout the asset's life.

In a municipal context, services are provided to benefit tax/rate payers. Acquisition of assets is normally timed in relation to direct needs within the community. At times, economies of scale or technical efficiencies will lead to oversizing an asset to accommodate future growth within the Town. Over the past few decades, new financing techniques such as development charges have been employed based on the underlying principle of having tax/rate payers who benefit directly from the service paying for that service. Operating costs which reflect the cost of the service for that year are charged directly to all existing tax/rate payers who have received the benefit. Operating costs are normally charged through the tax base or user rates.

Capital expenditures are recouped through several methods, with operating budget contributions, development charges, reserves, developer contributions and debentures, being the most common.



Figure 3-1
Lifecycle Costing



New construction related to growth could produce development charges and developer contributions (e.g. works internal to a subdivision which are the responsibility of the developer to construct) to fund a significant portion of projects, where new assets are being acquired to allow growth within the Town to continue. As well, debentures could



be used to fund such works, with the debt charge carrying costs recouped from taxpayers in the future.

Capital construction to replace existing infrastructure, however, is largely not growth-related and will therefore not yield development charges or developer contributions to assist in financing these works. Hence, a municipality will be dependent upon debentures, reserves and contributions from the operating budget to fund these works.

Figure 3-2 depicts the costs of an asset from its initial conception through to replacement and then continues to follow the associated costs through to the next replacement.

As referred to earlier, growth-related financing methods such as development charges and developer contributions could be utilized to finance the growth-related component of the new asset. These revenues are collected (indirectly) from the new homeowner who benefits directly from the installation of this asset. Other financing methods may be used as well to finance the non-growth-related component of this project, such as reserves which have been collected from past tax/rate payers, operating budget contributions which are collected from existing tax/rate payers and debenturing which will be carried by future tax/rate payers. Ongoing costs for monitoring, operating and maintaining the asset will be charged annually to the existing tax/rate payer.

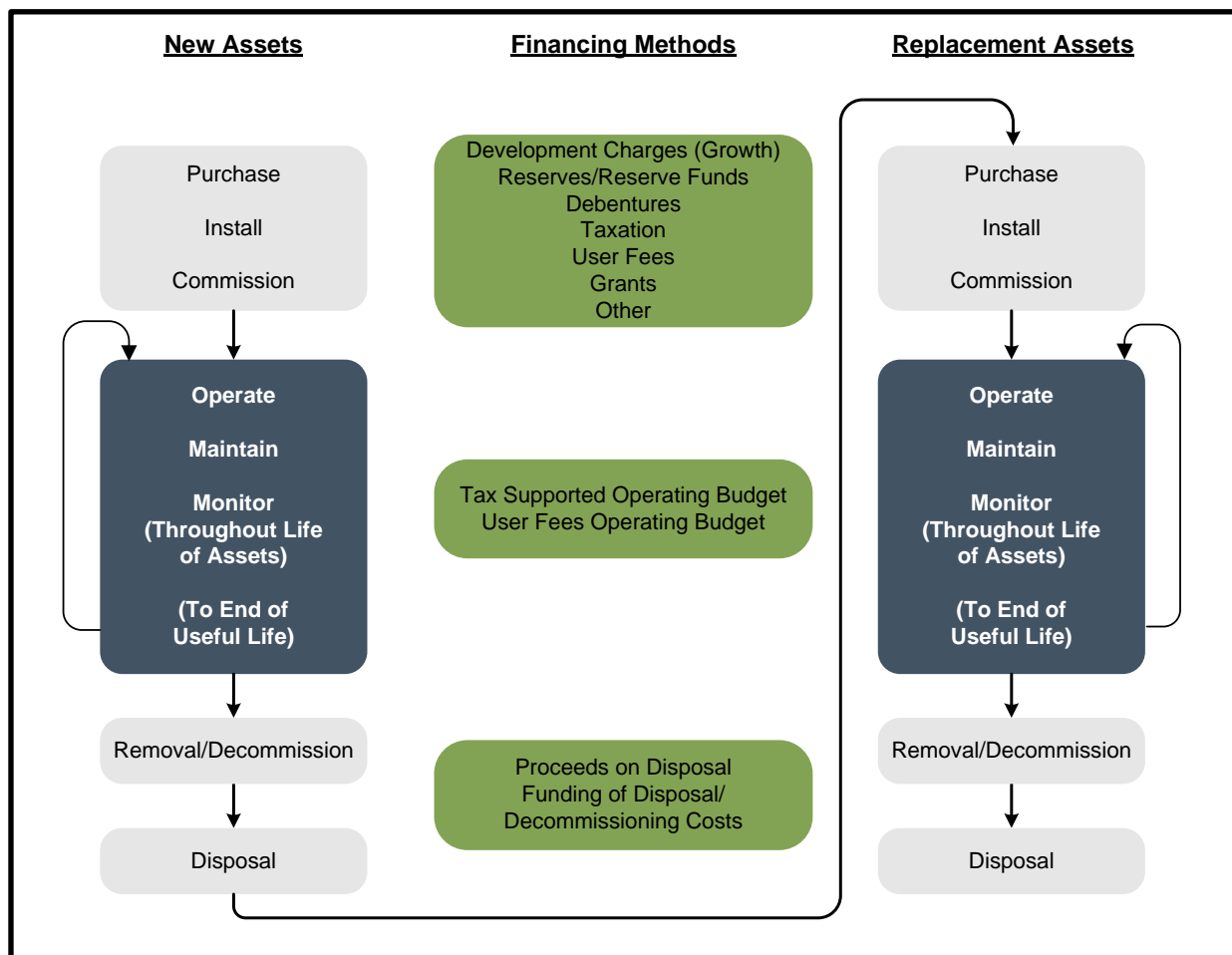
When the asset requires replacement, the sources of financing will be limited to reserves, debentures and contributions from the operating budget. At this point, the question is raised: "If the cost of replacement is to be assessed against the tax/rate payer who benefits from the replacement of the asset, should the past tax/rate payer pay for this cost or should future rate payers assume this cost?" If the position is taken that the past user has used up the asset, hence he should pay for the cost of replacement, then a charge should be assessed annually through the life of the asset, to have funds available to replace it when the time comes. If the position is taken that the future tax/rate payer should assume this cost, then debenturing and, possibly, a contribution from the operating budget should be used to fund this work.

Charging for the cost of using up an asset is the fundamental concept behind depreciation methods utilized by the private sector. This concept allows for expending the asset as it is used up in the production process. The tracking of these costs forms part of the product's selling price and, hence, end-users are charged for the asset's



depreciation. The same concept can be applied in a municipal setting to charge existing users for the asset's use and set those funds aside in a reserve to finance the cost of replacing the asset in the future.

Figure 3-2
Financing Lifecycle Costs



3.1.3 Costing Methods

There are two fundamental methods of calculating the cost of the usage of an asset and for the provision of the revenue required when the time comes to retire and replace it. The first method is the Depreciation Method. This method recognizes the reduction in the value of the asset through wear and tear and aging. There are two commonly used forms of depreciation: the straight-line method and the reducing balance method (shown graphically in Figure 3-3).



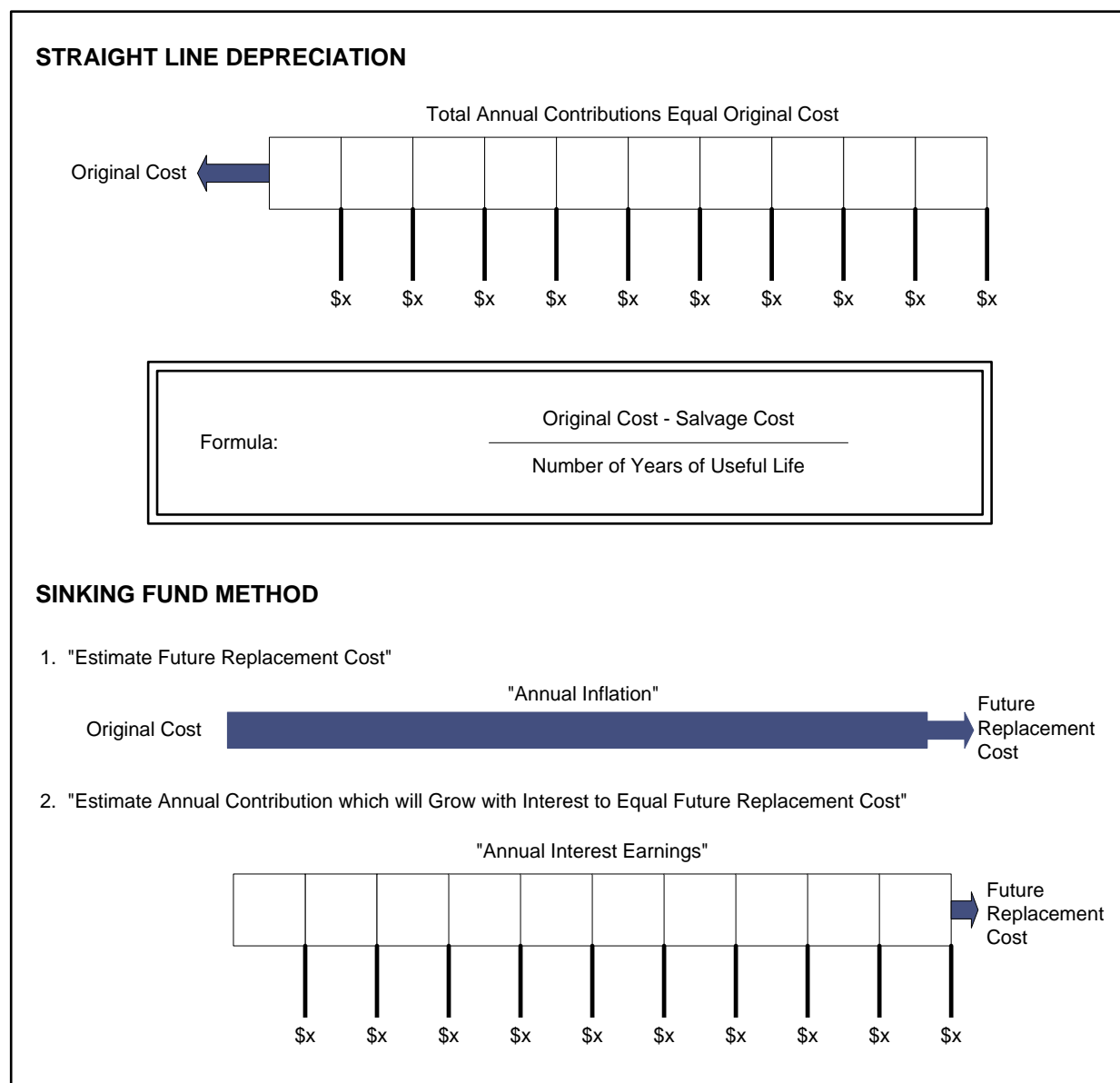
The straight-line method is calculated by taking the original cost of the asset, subtracting its estimated salvage value (estimated value of the asset at the time it is disposed of) and dividing this by the estimated number of years of useful life. The reducing balance method is calculated by utilizing a fixed percentage rate and this rate is applied annually to the undepreciated balance of the asset value.

The second method of lifecycle costing is the sinking fund method. This method first estimates the future value of the asset at the time of replacement. This is done by inflating the original cost of the asset at an assumed annual inflation rate. A calculation is then performed to determine annual contributions (equal or otherwise) which, when invested, will grow with interest to equal the future replacement cost.

The preferred method used herein for forecasting purposes is the sinking fund method of lifecycle costing.



Figure 3-3



3.2 Impact on Budgets

Detailed water and wastewater systems inventory information was obtained from the Town. The age of the water systems dates back to the 1950s and has continued to be expanded throughout the years. The wastewater systems date back to the early 1970s. The total value of existing water infrastructure is \$126.75 million, and the value of existing wastewater infrastructure is \$57.93 million.



The detailed water and wastewater inventories are provided in Appendices A and B, respectively. As well, the lifecycle “sinking fund” contribution amounts for each piece of infrastructure have also been included. These calculations determine the level of investment the Town may wish to consider as part of its budgeting practices. This information is summarized in Figure 3-4.

Figure 3-4
Town of Essex
Summary of Water and Wastewater Infrastructure

Area	Total Replacement Value	Amount included in 10-year forecast	Net Replacement for Future Lifecycle	Annual Lifecycle Replacement
Water				
Wards 1 & 2				
Water Meters, Machinery & Equipment	96,430	11,860,785	49,622,585	-
Water - Vehicles	129,280			-
Watermains	59,443,300			1,415,784
Water Hydrants	1,814,360			47,255
Sub-Total Wards 1 & 2	61,483,370	11,860,785	49,622,585	1,463,039
Wards 3 & 4				
Water Facilities	1,777,810	9,603,846	55,662,224	71,582
Land Improvements	468,030			12,501
Watermains	57,911,290			1,848,428
Water - Hydrants	2,035,150			75,301
Water - Vehicles	129,280			-
Water - Meters, Machinery, and Equipment	2,944,510			201,402
Sub-Total Wards 3 & 4	65,266,070	9,603,846	55,662,224	2,209,215
Total Water	126,749,440	21,464,631	105,284,809	3,672,254
Wastewater				
Ward 1				
Wastewater Facilities	16,061,950	610,000	46,736,676	558,452
Wastewater - Forcemain	4,150,070			181,295
Wastewater - Lagoons	3,117,692			274,726
Sanitary Sewers	21,968,214			716,947
Wastewater - Manholes	1,950,900			62,750
Wastewater Machinery & Equipment	62,730			355
Wastewater Vehicles	35,120			-
Sub-Total Ward 1	31,284,726	610,000	46,736,676	1,236,073
Ward 3				
Sanitary Sewers - Ward 3	12,403,530	1,252,508	12,646,457	359,040
Wastewater - Facilities - Ward 3	365,745			31,576
Sanitary Manholes - Ward 3	1,060,200			34,446
Wastewater Machinery & Equipment - Ward 3	69,490			3,193
Sub-Total Wards 2 & 3	13,898,965	1,252,508	12,646,457	428,256
Ward 4				
Wastewater - Facilities	775,090	2,196,027	10,553,782	25,009
Sanitary Sewers	10,798,179			662,712
Sanitary Manholes	1,109,300			36,710
Wastewater Machinery & Equipment	67,240			6,358
Sub-Total Ward 4	12,749,809	2,196,027	10,553,782	730,788
Total Wastewater	57,933,500	4,058,535	69,936,915	2,395,117
Total Water and Wastewater	184,682,940	25,523,166	175,221,724	6,067,372

Average investment per customer is \$19,181 for water and \$11,221 for wastewater



With respect to lifecycle costing contained in the Appendices, the following information was taken into consideration:

- approximate age of the assets;
- estimated useful life; and
- estimated replacement costs.

Summaries of both water and wastewater assets are shown on Figures 3-5 through 3-9. These figures demonstrate when the assets are coming due for replacement based on average useful lives, and the cost of the replacement in 2020 dollars.



Figure 3-5
Town of Essex
Summary of Water Infrastructure Replacement Years (2020 \$) – Wards 1 & 2

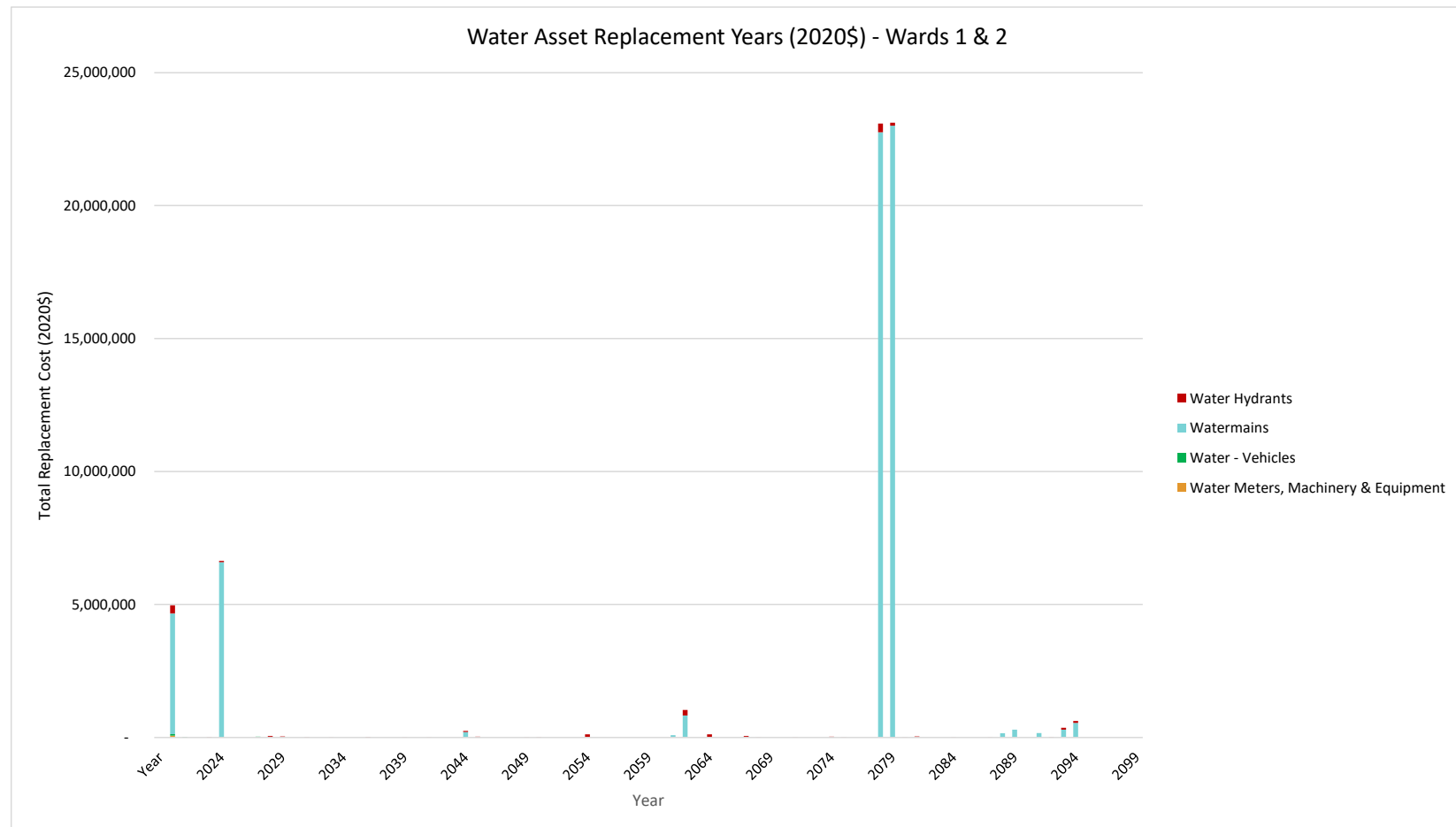




Figure 3-6
Town of Essex
Summary of Water Infrastructure Replacement Years (2020 \$) – Wards 3 & 4

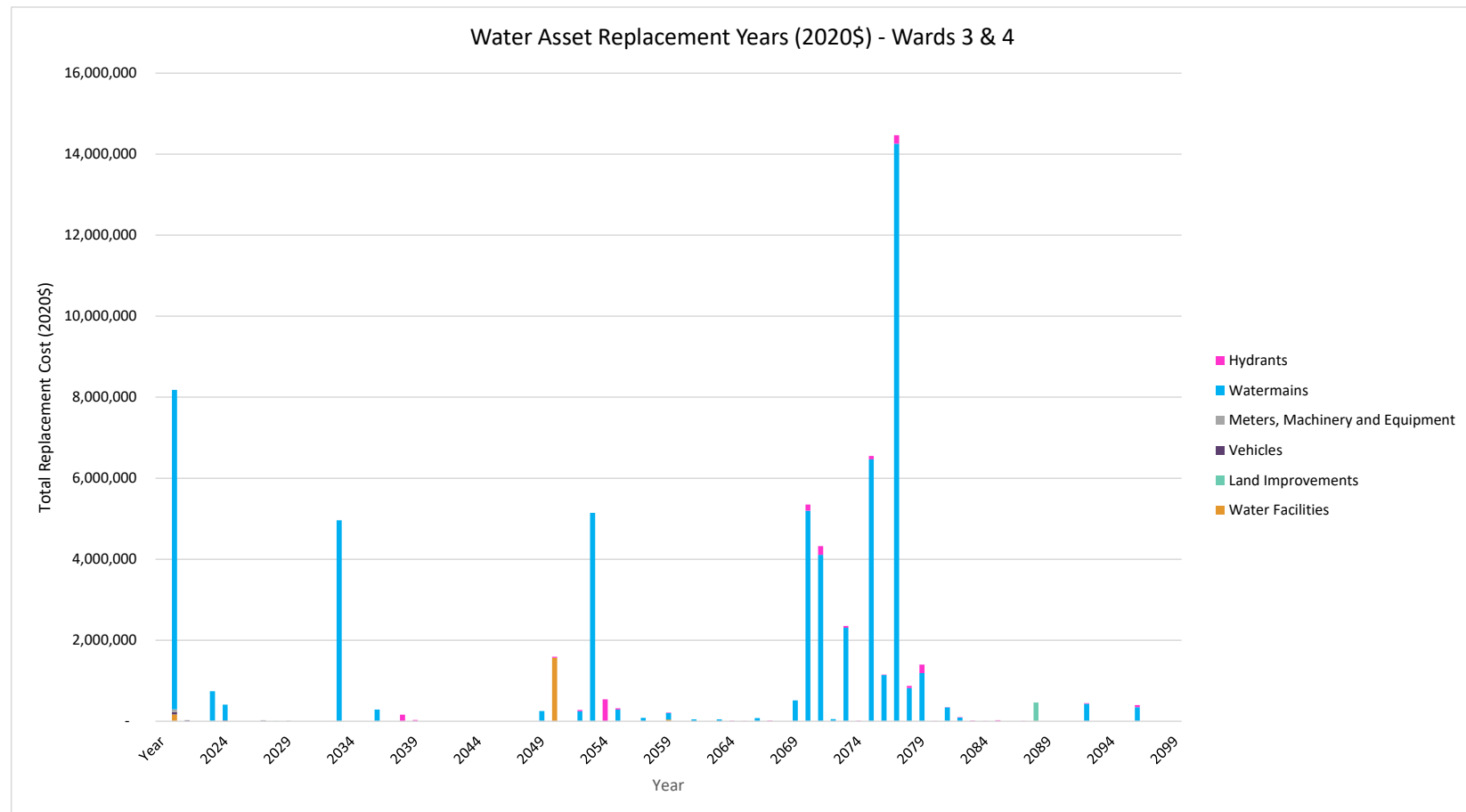




Figure 3-7
Town of Essex
Summary of Wastewater Infrastructure Replacement Years (2020 \$) – Ward 1

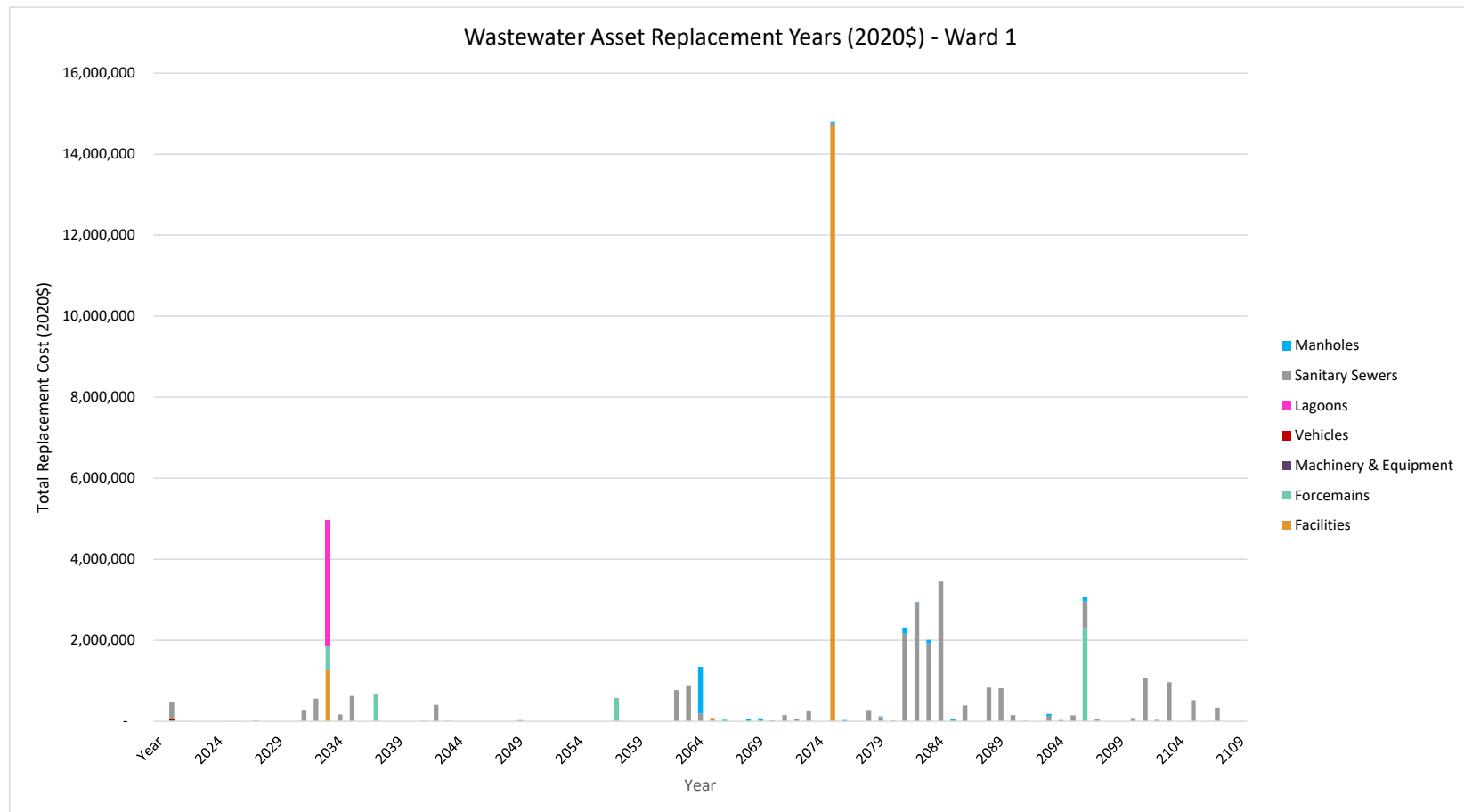




Figure 3-8
Town of Essex
Summary of Wastewater Infrastructure Replacement Years (2020 \$) – Ward 3

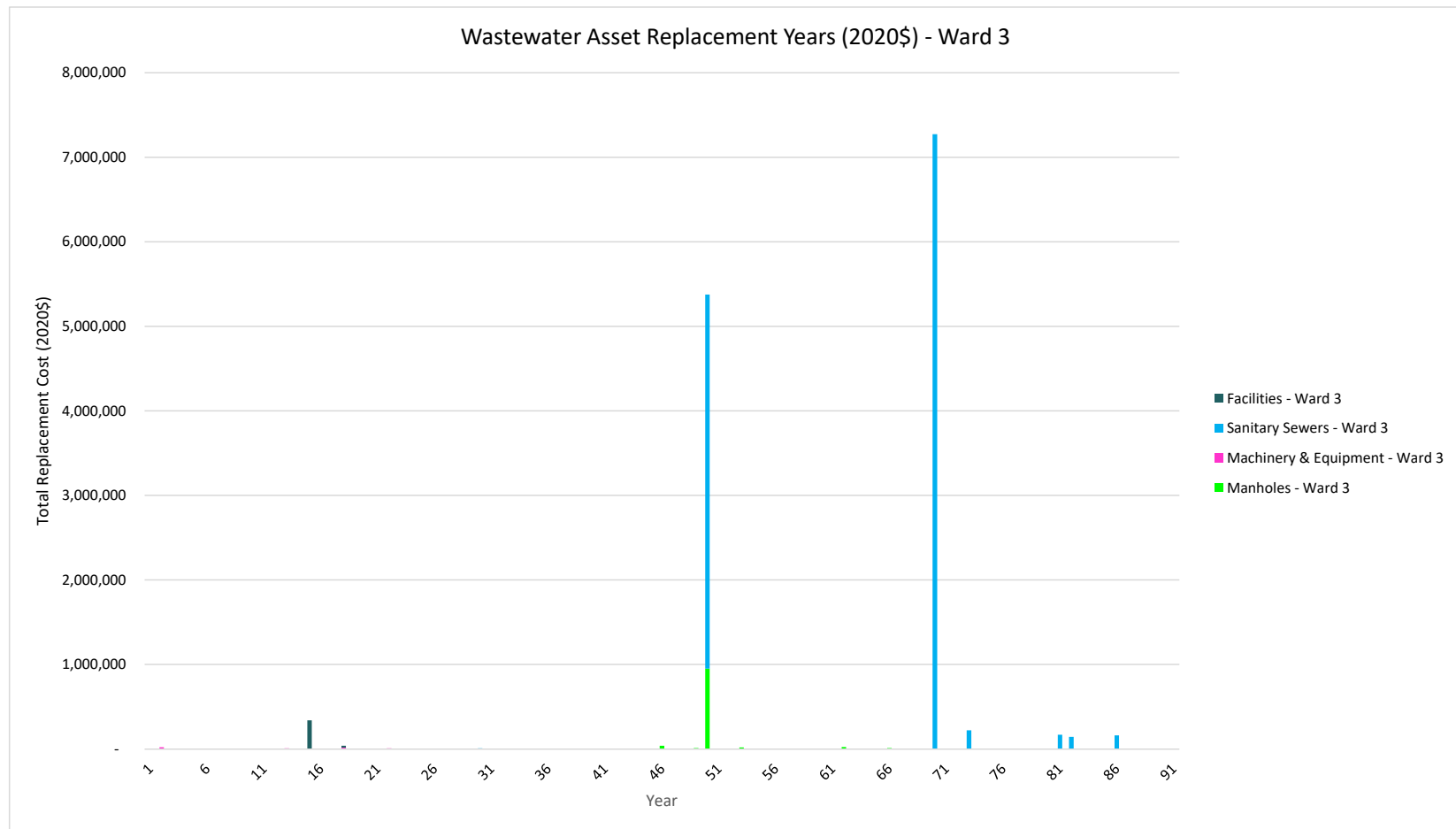
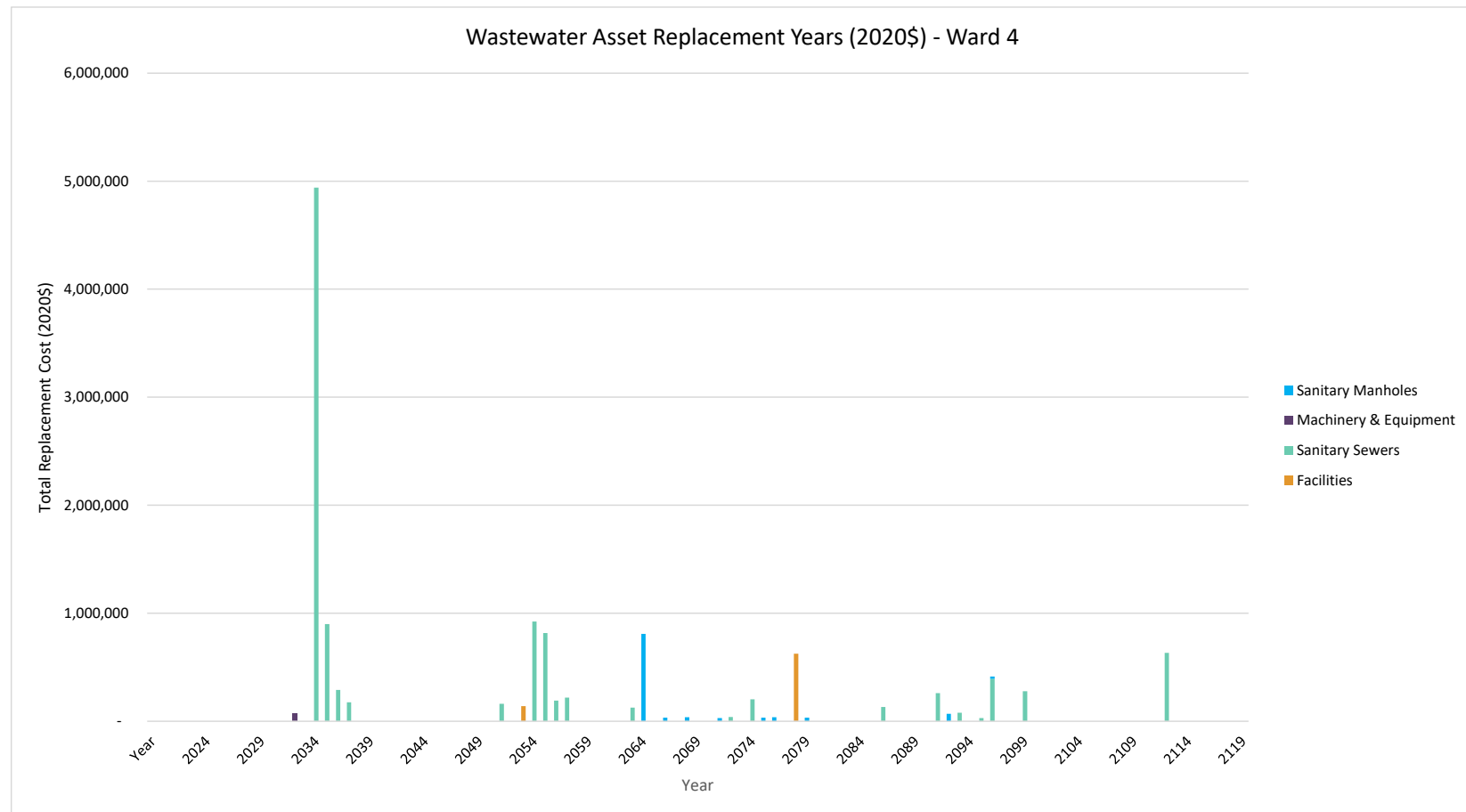




Figure 3-9
Town of Essex
Summary of Wastewater Infrastructure Replacement Years (2020 \$) – Ward 4





Chapter 4

Capital Cost Financing Options



4. Capital Cost Financing Options

4.1 Summary of Capital Cost Financing Alternatives

Historically, the powers that municipalities had to raise alternative revenues to taxation to fund capital services have been restrictive. Over the past decade, legislative reforms have been introduced. Some of these have expanded municipal powers (e.g. Bill 26 introduced in 1996 to provide for expanded powers for imposing fees and charges), while others appear to restrict them (Bill 98 in 1997 providing amendments to the D.C.A.).

The Province passed a new *Municipal Act* which came into force on January 1, 2003. Part XII of the Act and O.Reg. 584/06 govern a municipality's ability to impose fees and charges. In contrast to the previous *Municipal Act*, this Act provides municipalities with broadly defined powers and does not differentiate between fees for operating and capital purposes. It is anticipated that the powers to recover capital costs under the previous *Municipal Act* will continue within the new Statutes and Regulations, as indicated by s.9(2) and s.452 of the new *Municipal Act*.

Under s.484 of *Municipal Act, 2001*, the *Local Improvement Act* was repealed with the in-force date of the *Municipal Act* (January 1, 2003). The municipal powers granted under the *Local Improvement Act* now fall under the jurisdiction of the *Municipal Act*. To this end, on December 20, 2002, O.Reg. 390/02 was filed, which allowed for the *Local Improvement Act* to be deemed to remain in force until April 1, 2003. O.Reg. 119/03 was enacted on April 19, 2003, which restored many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

The methods of capital cost recovery available to municipalities are provided as follows:

Recovery Methods	Section Reference
• <i>Development Charges Act, 1997</i>	4.2
• <i>Municipal Act</i>	4.3
○ Fees and Charges	
○ Sewer and Water Area Charges	
○ Connection Fees	
○ Local Improvements	



Recovery Methods	Section Reference
• Grant Funding	4.4
• Existing Reserves/Reserve Funds	4.5
• Debenture Financing	4.6
• Infrastructure Ontario	4.7

4.2 Development Charges Act, 1997

In November, 1996, the Ontario Government introduced Bill 98, a new *Development Charges Act*. The Province's stated intentions were to "create new construction jobs and make home ownership more affordable" by reducing the charges and to "make municipal Council decisions more accountable and more cost effective." The basis for this Act is to allow municipalities to recover the growth-related capital cost of infrastructure necessary to accommodate new growth within the municipality. Generally, the Act provided the following changes to the former Act:

- Replace those sections of the 1989 Act that govern municipal development charges;
- Limit services which can be financed from development charges, specifically excluding parkland acquisition, administration buildings, and cultural, entertainment, tourism, solid waste management and hospital facilities;
- Ensure that the level of service used in the calculation of capital costs will not exceed the average level of service over the previous decade. Level of service is to be measured from both a quality and quantity perspective;
- Provide that uncommitted excess capacity available in existing municipal facilities and benefits to existing residents are removed from the calculation of the charge;
- Ensure that the development charge revenues collected by municipalities are spent only on those capital costs identified in the calculation of the development charge;
- Require municipalities to contribute funds (e.g. taxes, user charges or other non-development charge revenues) to the financing of certain projects primarily funded from development charges. The municipal contribution is 10 percent for services such as recreation, parkland development, libraries, etc.;
- Permit (but apparently not require) municipalities to grant developers credits for the direct provision of services identified in the development charge calculation



and, when credits are granted, require the municipality to reimburse the developer for the costs the municipality would have incurred if the project had been financed from the development charge reserve fund;

- Set out provisions for front-end financing capital projects (limited to essential services) required to service new development; and
- Set out provisions for appeals and complaints.

In late 2015, the Province approved further amendments to the D.C.A. The only changes related to water and wastewater are for the municipality to provide an asset management calculation for the growth-related works and for Council to consider (but not necessarily approve) area-specific rates.

Most recently, a number of amendments to the D.C.A. were made through the *More Homes, More Choice Act, 2019*, the *Plan to Build Ontario Together Act, 2019* and the *COVID-19 Economic Recovery Act, 2020*. With respect to water and wastewater, a few changes may impact D.C. revenue collections:

1. Timing of Collection:

- a. D.C. Rate Freeze – For developments proceeding through site plan or zoning by-law amendment, the D.C. rate is frozen at the time the application is submitted. The D.C. remains frozen for two years after the application is approved. Should the D.C. study be updated to increase water and wastewater D.C. rates during this period, the Township would not be able to collect for this increase.
 - b. D.C. Installment Payments – For rental housing and institutional development D.C.s are paid over 5 years and for non-profit housing, D.C.s are paid over 20 years. This provides a delay in receipt of D.C. revenues which will need to be cash-flowed by the municipality.
2. Mandatory Exemption (additional units) – For existing dwellings, one additional dwelling unit could be constructed within the existing dwelling. This additional dwelling unit is exempt from D.C.s. With the changes to the Act, one additional dwelling unit may be constructed within a new residential dwelling, which would be exempt from D.C.s. Further, one ancillary dwelling unit may be constructed on the same property as a new unit. This ancillary dwelling would be exempt from D.C.s. As these new additional units are exempt from D.C.s, no D.C.



revenue may be collected for these units, however, each additional unit provides additional population which requires capacity in the water and wastewater treatment plants. As a result, consideration for these additional units should be made during the D.C. study process to ensure all capacity available to growth is allocated appropriately. It is noted that currently, the Town imposes D.C.s for wastewater services, however, currently does not impose D.C.s. If growth-related capital needs are identified for the water systems in the future, the Town would have to undertake a D.C. study to establish a charge to imposed against new development.

4.3 Municipal Act

Part XII of the *Municipal Act* provides municipalities with broad powers to impose fees and charges via passage of a by-law. These powers, as presented in s.391(1), include imposing fees or charges:

- “for services or activities provided or done by or on behalf of it;
- for costs payable by it for services or activities provided or done by or on behalf of any other municipality or local board; and
- for the use of its property including property under its control.”

Restrictions are provided to ensure that the form of the charge is not akin to a poll tax. Any charges not paid under this authority may be added to the tax roll and collected in a like manner. The fees and charges imposed under this part are not appealable to the Local Planning Appeal Tribunal (LPAT, formerly known as the O.M.B.).

Section 221 of the previous *Municipal Act* permitted municipalities to impose charges, by by-law, on owners or occupants of land who would or might derive benefit from the construction of sewage (storm and sanitary) or water works being authorized (in a specific benefit area). For a by-law imposed under this section of the previous Act:

- A variety of different means could be used to establish the rate and recovery of the costs and could be imposed by a number of methods at the discretion of Council (i.e. lot size, frontage, number of benefiting properties, etc.);
- Rates could be imposed with respect to costs of major capital works, even though an immediate benefit was not enjoyed;
- Non-abutting owners could be charged;



- Recovery was authorized against existing works, where a new water or sewer main was added to such works, "notwithstanding that the capital costs of existing works has in whole or in part been paid;"
- Charges on individual parcels could be deferred;
- Exemptions could be established;
- Repayment was secured; and
- LPAT approval was not required.

While under the new *Municipal Act* no provisions are provided specific to the previous s.221, the intent to allow capital cost recovery through fees and charges is embraced within s.391. The new *Municipal Act* also maintains the ability of municipalities to impose capital charges for water and sewer services on landowners not receiving an immediate benefit from the works. Under s.391(2) of the Act, "a fee or charge imposed under subsection (1) for capital costs related to sewage or water services or activities may be imposed on persons not receiving an immediate benefit from the services or activities but who will receive a benefit at some later point in time." Also, capital charges imposed under s.391 are not appealable to the LPAT on the grounds that the charges are "unfair or unjust."

Section 222 of the previous *Municipal Act* permitted municipalities to pass a by-law requiring buildings to connect to the municipality's sewer and water systems, charging the owner for the cost of constructing services from the mains to the property line. Under the new *Municipal Act*, this power still exists under Part II, General Municipal Powers (s.9 (3) b of the *Municipal Act*). Enforcement and penalties for this use of power are contained in s.427 (1) of the *Municipal Act*.

Under the previous *Local Improvement Act*:

- A variety of different types of works could be undertaken, such as watermain, storm and sanitary sewer projects, supply of electrical light or power, bridge construction, sidewalks, road widening and paving;
- Council could pass a by-law for undertaking such work on petition of a majority of benefiting taxpayers, on a 2/3 vote of Council and on sanitary grounds, based on the recommendation of the Minister of Health. The by-law was required to go to the LPAT, which might hold hearings and alter the by-law, particularly if there were objections;



- The entire cost of a work was assessed only upon the lots abutting directly on the work, according to the extent of their respective frontages, using an equal special rate per metre of frontage; and
- As noted, this Act was repealed as of April 1, 2003; however, O.Reg. 119/03 was enacted on April 19, 2003 which restores many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

4.4 Historical Grant Funding

Federal Infrastructure Funding

Phase 1 (April 1, 2016 to March 31, 2018)

Funding was provided by the Government of Canada to expressly help municipalities with repair and rehabilitation projects. Funding was mainly provided through the Clean Water and Wastewater Fund (C.W.W.F.) and Public Transit Infrastructure Fund (P.T.I.F.) in Federal Phase 1 projects. The C.W.W.F. was announced in Ontario on September 15, 2016. The Fund is \$1.1 billion for water, wastewater, and storm water systems in Ontario. The federal government provided \$569 million and Ontario and municipal governments provided \$275 million each.

Over 1,300 water, wastewater, and storm water projects have been approved in Ontario through the C.W.W.F. In Ontario, P.T.I.F. accounted for nearly \$1.5 billion of the national total of \$3.4 billion. The program was allocated by ridership numbers from the Canadian Urban Transit Association. The Association of Municipalities of Ontario (A.M.O.) understands that \$1 billion of Ontario's share has been approved.

Phase 2: Next Steps

The federal government announced Phase 2 of its infrastructure funding plan with a total of \$180 billion spent over 11 years. In addition to the balance of funding for previous green, social, and public transit infrastructure funds (\$20 billion each, including Phase 1), the government has added \$10.1 billion for trade and transportation infrastructure and \$2 billion for rural and northern communities. This funding must be implemented by agreements with each Province and Territory.



In Phase 2, Ontario will be eligible for \$11.8 billion including \$8.3 billion for transit, \$2.8 billion for green infrastructure, \$407 million for community, culture and recreation and \$250 million for rural and northern communities.

Federal Gas Tax

The federal Gas Tax is a permanent source of funding provided up front, twice-a-year, to Provinces and Territories, who in turn flow this funding to their municipalities to support local infrastructure priorities. Municipalities can pool, bank and borrow against this funding, providing significant financial flexibility. Every year, the federal Gas Tax provides over \$2 billion and supports approximately 2,500 projects in communities across Canada. Each municipality selects how best to direct the funds with the flexibility provided to make strategic investments across 18 different project categories, which include other water and wastewater servicing.

Ontario Government

The Province has taken steps to increase municipal infrastructure funding. The Ontario Community Infrastructure Fund (O.C.I.F.) was increased in 2016 with formula-based support growing to \$200 million, and application funding growing to \$100 million annually by 2018/2019. As well, \$15 million annually will go to the new Connecting Links program to help pay for the construction and repair costs of municipal roads that connect communities to provincial highways. This is on top of the Building Ontario Up investment of \$130 billion in public infrastructure over 10 years starting in 2015.

4.5 Existing Reserves/Reserve Funds

The Town has established reserves and reserve funds for water and wastewater costs. The following table summarizes the water and wastewater reserves utilized in this analysis and their respective balances at December 31, 2019:

Reserve	Dec. 31 2019	
Water	Ward 1/2	Ward 3/4
General Reserve Fund	5,482,742	3,498,276
Lifecycle Reserve Fund	4,006,558	6,563,387



Reserve	Dec. 31 2019		
Wastewater	Ward 1	Ward 3	Ward 4
General Reserve Fund	(731,903)	1,870,213	209,480
Development Charges Reserve Fund	(2,138,965)	410,343	(132,082)
Lifecycle Reserve Fund	2,362,485	1,011,643	1,433,774

4.6 Debenture Financing

Although it is not a direct method of minimizing the overall cost to the ratepayer, debentures are used by municipalities to assist in cash flowing large capital expenditures.

The Ministry of Municipal Affairs regulates the level of debt incurred by Ontario municipalities, through its powers established under the *Municipal Act*. Ontario Regulation 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own purpose revenue may be allotted for servicing the debt (i.e. debt charges). The Town of Essex's 2019 calculation on Debt Capacity is shown on Schedule 81 of the Town's most recent Financial Information Return (F.I.R.). This calculates to the Town's estimated annual repayment limit of approximately \$5.88 million. Based upon 10-year financing at an assumed rate of 4%, the available debt for the Town is approximately \$47.70 million.

4.7 Infrastructure Ontario

Infrastructure Ontario (I.O.) is an arms-length crown corporation, which has been set up as a tool to offer low-cost and longer-term financing to assist municipalities in renewing their infrastructure (this corporation has merged the former O.S.I.F.A. into its operations). I.O. combines the infrastructure renewal needs of municipalities into an infrastructure investment "pool." I.O. will raise investment capital to finance loans to the public sector by selling a new investment product called Infrastructure Renewal Bonds to individual and institutional investors.

I.O. provides access to infrastructure capital that would not otherwise be available to smaller borrowers. Larger borrowers receive a longer term on their loans than they could obtain in the financial markets, and can also benefit from significant savings on transaction costs such as legal costs and underwriting commissions. Under the I.O.



approach, all borrowers receive the same low interest rate. I.O. will enter into a financial agreement with each municipality subject to technical and credit reviews, for a loan up to the maximum amount of the loan request.

The first round of the former O.S.I.F.A.'s 2004/2005 infrastructure renewal program was focused on municipal priorities of clean water infrastructure, sewage treatment facilities, municipal roads and bridges, public transit and waste management infrastructure. The focus of the program was expanded in 2005/2006 somewhat to include:

- clean water infrastructure;
- sewage infrastructure;
- waste management infrastructure;
- municipal roads and bridges;
- public transit;
- municipal long-term care homes;
- renewal of municipal social housing and culture; and
- tourism and recreation infrastructure.

With the merging of O.S.I.F.A. and I.O., the program was broadened in late 2006 to also include municipal administrative buildings, local police and fire stations, emergency vehicles and equipment, ferries, docks and municipal airports.

To be eligible to receive these loans, municipalities must submit a formal application along with pertinent financial information. Allotments are prioritized and distributed based upon the Province's assessment of need.

The analysis provided herein assumes that the Town will require non-growth-related debt financing of \$100,000 in 2025 for wastewater in Ward 4. No other debt is anticipated for the water systems or the wastewater systems in Ward 1 or 3.

4.8 Recommended Capital Financing Approach

Of the various funding alternatives provided in this section, the following are recommended for further consideration by the Town of Essex for the capital expenditures (inflated) provided in Chapter 2:



Water Services Capital Financing

Description	Wards 1 & 2 2020-2030	Wards 3 & 4 2020-2030
Capital Financing		
Provincial/Federal Grants	-	-
Development Charges Reserve Fund	-	-
Non-Growth Related Debenture Requirements	-	-
Growth Related Debenture Requirements	-	-
Operating Contributions	-	-
Lifecycle Reserve Fund	11,792,500	10,164,900
Water Reserve	2,151,435	4,486,929
Total Capital Financing	13,943,935	14,651,829

Wastewater Services Capital Financing

Wastewater Capital Financing	Ward 1 2020-2030	Ward 3 2020-2030	Ward 4 2020-2030
Capital Financing			
Provincial/Federal Grants	-	-	-
Development Charges Reserve Fund	-	-	-
Non-Growth Related Debenture Requirements	-	-	100,000
Growth Related Debenture Requirements	-	-	-
Operating Contributions	-	-	-
Lifecycle Reserve Fund	3,018,000	-	1,400,000
Wastewater Reserve	21,000	2,527,907	2,947,309
Total Capital Financing	3,039,000	2,527,907	4,447,309

Tables 4-1 and 4-2 provide for the full capital expenditure and funding program by year for water while Tables 4-3, 4-4 and 4-5 provide for wastewater.



Table 4-1
Town of Essex
Capital Budget Forecast – Water – Wards 1 & 2
(inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	8,500	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 1/2 Maintenance	5,000	60,900	10,200	5,200	5,300	5,400	5,500	5,600	5,700	5,900	6,000	6,100
Equipment Contingency Wards 1 and 2	-	108,600	8,700	8,800	10,600	10,800	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle:												
Backflow Prevention and Monitoring Program Wards 1/2	6,999	-	-	-	-	-	-	-	-	-	-	-
Gordon, Wilson, Fox, Station Street Main Replacement (cfwd WW-18-0009)	190,536	-	-	-	-	-	-	-	-	-	-	-
Gordon, Wilson, Station Street Phase 1 (Construction)	850,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck Unit #607 Replacement	22,500	-	-	-	-	-	-	-	-	-	-	-
Victor Watermain (ward 1)	140,000	25,500	25,500	-	-	-	-	-	-	-	-	-
Irwin Watermain (Ward 1)	335,000	-	-	-	-	-	-	-	-	-	-	-
Viscount Watermain (Ward 1 and 2)	-	163,200	163,200	-	-	-	-	-	-	-	-	-
Replace Truck	-	24,700	-	24,700	-	-	-	-	-	-	-	-
Meter Reading Software	-	17,300	17,300	-	-	-	-	-	-	-	-	-
Lifecycle Asset Replacement	-	11,634,100	-	520,200	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Studies:												
Water Rate Study	15,000	16,600	-	-	-	-	16,600	-	-	-	-	-
Water Model Development and Master Plan	-	52,000	-	52,000	-	-	-	-	-	-	-	-
Water Rate Financial Plan	3,500	3,900	-	-	-	-	3,900	-	-	-	-	-
Growth Related:												
Hwy 3 Crossing	-	260,100	-	260,100	-	-	-	-	-	-	-	-
Total Capital Expenditures	1,577,035	12,366,900	224,900	871,000	652,600	773,900	920,300	1,143,100	1,453,100	1,822,000	2,049,700	2,456,300
Capital Financing												
Provincial/Federal Grants		-										
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	11,792,500	160,000	518,600	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Water Reserve	1,577,035	574,400	64,900	352,400	15,900	16,200	37,000	16,900	17,200	17,600	18,000	18,300
Total Capital Financing	1,577,035	12,366,900	224,900	871,000	652,600	773,900	920,300	1,143,100	1,453,100	1,822,000	2,049,700	2,456,300



Table 4-2
Town of Essex
Capital Budget Forecast – Water – Wards 3 & 4
(inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Upgrades to Harrow-Colchester South Water Treatment Plant (cfwd WW-18-0010)	260,000	-	-	-	-	-	-	-	-	-	-	-
CWWF Upgrades to Harrow-Colchester South WTP	326,833	-	-	-	-	-	-	-	-	-	-	-
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	8,500	-	-	-	-	-	-	-	-	-	-	-
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	165,000	823,400	181,100	202,900	217,500	221,900	-	-	-	-	-	-
OCWA Capital Recommendations	540,000	1,509,500	450,800	448,400	410,700	129,900	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle:												
Queen Street (Phillip Ferris to Concession 3) Main Replacement	175,097	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 3/4	6,999	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 3/4 Maintenance	5,000	60,900	10,200	5,200	5,300	5,400	5,500	5,600	5,700	5,900	6,000	6,100
Pickup Truck Unit #607 Replacement	22,500	-	-	-	-	-	-	-	-	-	-	-
Queen Watermain (Ward 4)	340,000	-	-	-	-	-	-	-	-	-	-	-
Replace Truck	-	24,700	-	24,700	-	-	-	-	-	-	-	-
Meter Reading Software	-	17,300	17,300	-	-	-	-	-	-	-	-	-
Equipment Contingency Wards 3 and 4	-	110,200	8,700	10,400	10,600	10,800	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle Asset Replacement	-	10,164,900	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Studies:												
Water Rate Study	15,000	16,600	-	-	-	-	16,600	-	-	-	-	-
Water Model Development and Master Plan	-	52,000	-	52,000	-	-	-	-	-	-	-	-
Water Rate Financial Plan	3,500	3,900	-	-	-	-	3,900	-	-	-	-	-
Total Capital Expenditures	1,868,429	12,783,400	668,100	1,263,800	1,280,800	1,179,800	986,500	1,098,100	1,234,800	1,435,300	1,655,300	1,980,900
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	10,164,900	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Water Reserve	1,868,429	2,618,500	668,100	743,600	644,100	368,000	48,000	28,200	28,700	29,300	30,000	30,500
Total Capital Financing	1,868,429	12,783,400	668,100	1,263,800	1,280,800	1,179,800	986,500	1,098,100	1,234,800	1,435,300	1,655,300	1,980,900



Table 4-3
Town of Essex
Capital Budget Forecast – Wastewater – Ward 1 (inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Treatment - Ward 1 Contingency	70,000	989,000	79,000	91,000	96,000	97,000	99,000	101,000	103,000	105,000	108,000	110,000
OCWA Capital Recommendations - Ward 1	75,000	1,204,000	141,000	143,000	220,000	94,000	96,000	98,000	100,000	102,000	104,000	106,000
Lifecycle:												
Grit Blower Replacement at Pollution Control Plant (cfwd SS-18-0008)	10,000	-	-	-	-	-	-	-	-	-	-	-
Collection and Conveyance - Ward 1	30,000	640,000	41,000	52,000	64,000	65,000	66,000	68,000	69,000	70,000	72,000	73,000
Studies:												
Sanitary Service Area Amendment (South of Hwy3)	-	21,000	21,000	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	185,000	2,854,000	282,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	185,000	2,833,000	261,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000
Wastewater Reserve	-	21,000	21,000	-	-	-	-	-	-	-	-	-
Total Capital Financing	185,000	2,854,000	282,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000



Table 4-4
Town of Essex
Capital Budget Forecast – Wastewater – Ward 3
(inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
OCWA Capital Recommendations - Ward 3	262,000	785,000	98,000	154,000	161,000	74,000	79,000	68,000	37,000	37,000	38,000	39,000
Lifecycle:												
CWWF Funding Projects	4,110	-	-	-	-	-	-	-	-	-	-	-
CWWF Funding Projects, Upgrades to Ward 3 Lagoons and Pump Station (cfwd SS-18-0007)	45,898	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 3 Contingency	40,000	599,000	43,000	55,000	58,000	60,000	61,000	62,000	63,000	64,000	66,000	67,000
Collection and Conveyance - Ward 3	32,500	667,000	43,000	55,000	66,000	68,000	69,000	70,000	72,000	73,000	75,000	76,000
Studies:												
Sanitary Sewer Masterplan Ward 3	92,399	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	476,907	2,051,000	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	476,907	2,051,000	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000
Total Capital Financing	476,907	2,051,000	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000



Table 4-5
Town of Essex
Capital Budget Forecast – Wastewater – Ward 4
(inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrades:												
Upgrades to Ward 4 Lagoons and Pump Station (cfwd SS-18-0009)	115,000	-	-	-	-	-	-	-	-	-	-	-
OCWA Capital Recommendations - Ward 4	750,000	1,177,000	40,000	8,000	8,000	11,000	1,104,000	6,000	-	-	-	-
Lifecycle:												
CWWF Funding Projects	4,110	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 4 Cell Treatment	500,000	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 4 Cell Treatment (cfwd SS-18-0017/SS-17-0007)	500,000	-	-	-	-	-	-	-	-	-	-	-
CWWF Upgrades to Harrow Lagoon and Pump Station (cfwd SS-18-0016)	45,417	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 4 Contingency	40,000	599,000	43,000	55,000	58,000	60,000	61,000	62,000	63,000	64,000	66,000	67,000
Collection and Conveyance - Ward 4	26,500	610,000	38,000	49,000	61,000	62,000	63,000	65,000	66,000	67,000	69,000	70,000
Studies:												
Harrow Sanitary Optimization Study (cfwd SS-18-0010)	80,282	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	2,061,309	2,386,000	121,000	112,000	127,000	133,000	1,228,000	133,000	129,000	131,000	135,000	137,000
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	100,000	-	-	-	-	100,000	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	1,400,000	-	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	661,309	2,286,000	121,000	112,000	127,000	133,000	1,128,000	133,000	129,000	131,000	135,000	137,000
Total Capital Financing	2,061,309	2,386,000	121,000	112,000	127,000	133,000	1,228,000	133,000	129,000	131,000	135,000	137,000



Chapter 5

Overview of Expenditures and Revenues



5. Overview of Expenditures and Revenues

5.1 Water Operating Expenditures

In this report, the operating budget for 2020 and 2021 were provided by staff. The forecast water budget figures (2022 to 2030) are inflated from the 2021 operating budgets. The costs for each component of the operating budget have been reviewed with staff to establish forecast inflationary adjustments. For 2022-2023, the inflationary factor applied to most of the expenditures have been assumed to increase at a rate of 1.0% annually. For the remainder of the forecast period (2024-2030), these expenditures are assumed to increase at 2.0% annually. Operating expenditures that involve utilities, fuels, chemicals and materials & supplies have been inflated by 2.0% annually for 2022-2023, and 5% thereafter. Note that annual contributions have been provided to the capital reserves in order to minimize the need for additional debt to finance the capital program. Also included are any existing debenture expenditures and contributions to reserve funds.

Water purchases from the Union Water Board to services Wards 1 & 2, have been calculated based on rates included in the 2018 Union Water Board Rate Study for 2021-2024 and have then been inflated by 4% annually thereafter. The water purchases also anticipate the need to purchase additional water to service the growth anticipated within Wards 1 & 2. Table 5-1 provides for the forecasted water purchases over the forecast period.

5.2 Water Operating Revenues

The Town has base charges and miscellaneous revenue sources to help contribute towards operating expenditures. These miscellaneous revenues, including building leases, water meter sales, hook up charges, inspections fees and buy-in fees, have been assumed to remain constant each year over the forecast period. Tables 5-2 and 5-3 provide for the water systems revenues in Wards 1 & 2 and Wards 3 & 4, respectively.



Table 5-1
Town of Essex
Purchased Water Forecast – Water – Wards 1 & 2
(Inflated \$)

Water Purchase from Union Water	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ward 1 & 2											
Total Billable Volumes	781,705	798,445	817,885	829,585	834,985	842,185	849,385	856,405	863,425	870,445	873,865
Assumed Water Loss	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Total Purchased Water	816,081	833,557	853,852	866,066	871,704	879,220	886,737	894,066	901,394	908,723	912,293
Union Water Rates	0.6458	0.6716	0.6985	0.7264	0.7555	0.7857	0.8171	0.8498	0.8838	0.9192	0.9560
Total	\$527,025	\$559,817	\$596,415	\$629,110	\$658,572	\$690,803	\$724,553	\$759,777	\$796,652	\$835,298	\$872,152

Note that the total purchased water is a gross up from the billable water by the average annual water loss of 4.4%.



Table 5-2
Town of Essex
Operating Budget Forecast – Water – Wards 1 & 2
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55300 - Union Water - Water Supply	722,565	535,726	596,415	629,110	658,572	690,803	724,553	759,777	796,652	835,298	872,152
Utilities, Insurance and Property Taxes											
54300 - Insurance - Buildings	115	119	120	120	120	120	120	120	120	120	120
54310 - Insurance - Vehicles	833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General	2,302	3,530	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
Distribution/Transmission:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	83,903	98,000	99,000	100,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	20,806	20,806	21,000	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300
58900 - Amounts Allocated from Other Departments	39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies											
51100 - Office Supplies	400	150	150	150	150	150	150	150	150	150	150
51105 - Computer Hardware and Software	750	400	400	400	410	420	430	440	450	460	470
51115 - Memberships	2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel	4,500	7,000	7,100	7,200	7,600	8,000	8,400	8,800	9,200	9,700	10,200
51190 - Materials and Supplies - Other	2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters	25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment	250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services											
53605 - System Access Fee - Automatic Vehicle Locator	760	910	920	930	950	970	990	1,010	1,030	1,050	1,070
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	1,800	1,820	1,840	1,880	1,920	1,960	2,000	2,040	2,080	2,120
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	3,800	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
52350 - Repairs and Maintenance - Equipment (Labour)	150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)	150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains	35,000	30,000	30,300	30,600	31,200	31,800	32,400	33,000	33,700	34,400	35,100
52620 - Repairs and Maintenance - Hydrants	7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves	2,500	4,000	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700



Table 5-2 (Cont'd)
Town of Essex
Operating Budget Forecast – Water – Wards 1 & 2
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
52660 - Repairs and Maintenance - Water Meters	25,000	27,500	27,800	28,100	28,700	29,300	29,900	30,500	31,100	31,700	32,300
52690 - Repairs and Maintenance - Private Water Service	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime	10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50500 - Canada Pension Plan - Employer Contribution	4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution	1,700	1,702	1,720	1,740	1,770	1,810	1,850	1,890	1,930	1,970	2,010
50520 - Employer Health Insurance	2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums	1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums	12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums	3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms	1,210	2,420	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
50720 - Training and Tuition Refund	2,789	700	710	720	730	740	750	770	790	810	830
50740 - Meals	100	100	100	100	100	100	100	100	100	100	100
50750 - Mileage	100	100	100	100	100	100	100	100	100	100	100
Uncollectible Taxes and Accounts Receivable											
54700 - Uncollectible Accounts Receivable - Water	2,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	4,696	5,900	6,000	6,100	6,400	6,700	7,000	7,400	7,800	8,200	8,600
54120 - Utilities - Gas	1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water	606	606	620	630	660	690	720	760	800	840	880
54200 - Communications - Telephone	4,500	4,500	4,500	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200
54300 - Insurance - Buildings	197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles	3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General	9,330	14,307	14,400	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600
54400 - Payments-in-Lieu of Taxes	-	100	100	100	100	100	100	100	100	100	100
Sub Total Operating	1,202,153	1,045,216	1,111,005	1,148,740	1,190,382	1,234,903	1,281,243	1,329,377	1,379,662	1,431,918	1,482,802
Capital-Related											
Existing Debt (Principal) - Non-Growth Related	509	526	543	560	287	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	74	57	40	23	5	-	-	-	-	-	-
Transfer to Capital Reserve	1,432,008	1,462,797	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	1,432,591	1,463,379	583	583	291	-	-	-	-	-	-
Total Expenditures	2,634,744	2,508,596	1,111,588	1,149,323	1,190,674	1,234,903	1,281,243	1,329,377	1,379,662	1,431,918	1,482,802



Table 5-2 (Cont'd)
Town of Essex
Operating Budget Forecast – Water – Wards 1 & 2
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	756,332	793,872	836,299	869,323	894,382	922,705	951,803	981,424	1,011,849	1,043,099	1,069,433
Other Revenue											
Investment and Other Income											
47800 - Miscellaneous Revenue	125	125	125	125	125	125	125	125	125	125	125
User Fees and Service Charges											
46415 - Water - Miscellaneous	-	-	-	-	-	-	-	-	-	-	-
46420 - Water Meter Sales and Inspection	5,600	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
46430 - Water Hook-Up Charges	8,400	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600
46450 - Watermain Buy-Ins	5,000	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	725,815	540,231	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,501,272	1,378,929	881,124	914,148	939,207	967,530	996,628	1,026,249	1,056,674	1,087,924	1,114,258
Water Billing Recovery - Operating	1,133,472	1,129,667	230,464	235,175	251,466	267,373	284,615	303,128	322,988	343,995	368,544
Lifecycle Reserve Contribution (\$)		36,063	971,827	992,611	992,662	995,904	1,006,450	1,015,736	1,023,955	1,031,309	1,029,640
Water Billing Recovery - Total	1,133,472	1,165,730	1,202,291	1,227,786	1,244,128	1,263,278	1,291,065	1,318,864	1,346,943	1,375,303	1,398,184



Table 5-3
Town of Essex
Operating Budget Forecast – Water – Wards 3 & 4
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	393,271	405,069	409,100	413,200	421,500	429,900	438,500	447,300	456,200	465,300	474,600
55250 - Ontario Clean Water Agency - Other Operating Costs	71,400	42,000	42,400	42,800	43,700	44,600	45,500	46,400	47,300	48,200	49,200
55265 - Ontario Clean Water Agency - Drinking Water Quality Management System	2,550	2,550	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
55450 - Contractors	9,000	15,000	15,200	15,400	15,700	16,000	16,300	16,600	16,900	17,200	17,500
Miscellaneous Services											
53650 - Weed Control Services	8,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	7,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	100,311	116,600	117,800	119,000	121,400	123,800	126,300	128,800	131,400	134,000	136,700
54120 - Utilities - Gas	5,891	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	8,500	8,700
54300 - Insurance - Buildings	13,587	13,976	14,100	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300
54310 - Insurance - Vehicles	833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General	2,302	3,531	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
54400 - Payments-in-Lieu of Taxes	-	252	250	250	260	270	280	290	300	310	320
Distribution/Transmission:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	88,931	100,000	101,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900	117,200
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	21,028	21,028	21,200	21,400	21,800	22,200	22,600	23,100	23,600	24,100	24,600
58900 - Amounts Allocated from Other Departments	39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies											
51100 - Office Supplies	400	100	100	100	100	100	100	100	100	100	100
51105 - Computer Hardware and Software	750	250	250	250	260	270	280	290	300	310	320
51115 - Memberships	2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel	4,500	6,500	6,600	6,700	7,000	7,400	7,800	8,200	8,600	9,000	9,500
51190 - Materials and Supplies - Other	2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters	25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment	250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services											
53605 - System Access Fee - Automatic Vehicle Locator	760	910	920	930	950	970	990	1,010	1,030	1,050	1,070
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750



Table 5-3 (Cont'd)
Town of Essex
Operating Budget Forecast – Water – Wards 3 & 4
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	3,500	3,500	3,500	3,600	3,700	3,800	3,900	4,000	4,100	4,200
52350 - Repairs and Maintenance - Equipment (Labour)	150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)	150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains	20,000	23,000	23,200	23,400	23,900	24,400	24,900	25,400	25,900	26,400	26,900
52620 - Repairs and Maintenance - Hydrants	7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves	2,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
52660 - Repairs and Maintenance - Water Meters	20,000	25,500	25,800	26,100	26,600	27,100	27,600	28,200	28,800	29,400	30,000
52690 - Repairs and Maintenance - Private Water Service	27,000	35,000	35,400	35,800	36,500	37,200	37,900	38,700	39,500	40,300	41,100
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime	10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50400 - Benefits and Overhead Distributed	15,355	15,355	15,500	15,700	16,000	16,300	16,600	16,900	17,200	17,500	17,900
50500 - Canada Pension Plan - Employer Contribution	4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution	1,700	1,702	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
50520 - Employer Health Insurance	2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums	1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums	12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums	3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms	1,140	1,000	1,010	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160
50720 - Training and Tuition Refund	2,789	500	510	520	530	540	550	560	570	580	590
50740 - Meals	100	100	100	100	100	100	100	100	100	100	100
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	3,378	4,000	4,100	4,200	4,400	4,600	4,800	5,000	5,300	5,600	5,900
54120 - Utilities - Gas	1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water	400	500	510	520	550	580	610	640	670	700	740
54200 - Communications - Telephone	4,500	3,000	3,000	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700
54300 - Insurance - Buildings	197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles	3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General	8,639	13,247	13,400	13,500	13,800	14,100	14,400	14,700	15,000	15,300	15,600
54400 - Payments-in-Lieu of Taxes	-	64	60	60	60	60	60	60	60	60	60
Sub Total Operating	1,093,704	1,138,475	1,150,160	1,161,790	1,186,750	1,212,210	1,238,170	1,264,930	1,292,190	1,319,850	1,348,330
Capital-Related											
Existing Debt (Principal) - Non-Growth Related	2,564	2,650	2,739	2,831	2,635	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	448	361	272	180	84	-	-	-	-	-	-
Transfer to Capital Reserve	1,656,953	1,619,489	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Sub Total Capital Related	1,659,964	1,622,500	153,011	153,011	152,720	150,000	150,000	150,000	150,000	150,000	150,000
Total Expenditures	2,753,668	2,760,974	1,303,171	1,314,801	1,339,470	1,362,210	1,388,170	1,414,930	1,442,190	1,469,850	1,498,330



Table 5-3 (Cont'd)
Town of Essex
Operating Budget Forecast – Water – Wards 3 & 4
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	820,420	845,505	871,756	900,725	925,134	946,245	969,162	993,973	1,019,389	1,045,425	1,069,213
Other Revenue											
User Fees and Service Charges											
46945 - Building Leases and Rentals	6,000	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120
Investment and Other Income											
47800 - Miscellaneous Revenue	125	125	125	125	125	125	125	125	125	125	125
User Fees and Service Charges											
46415 - Water - Miscellaneous	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400
46420 - Water Meter Sales and Inspection	6,157	6,157	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200
46430 - Water Hook-Up Charges	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800
46450 - Watermain Buy-Ins	2,800	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
46945 - Building Leases and Rentals	8,329	8,496	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	610,448	614,718	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,473,479	1,513,320	924,901	953,870	978,279	999,390	1,022,307	1,047,118	1,072,534	1,098,570	1,122,358
Water Billing Recovery - Operating	1,280,189	1,247,655	378,270	360,931	361,191	362,820	365,863	367,812	369,656	371,280	375,972
Lifecycle Reserve Contribution (\$)		56,855	951,254	995,788	1,017,782	1,034,790	1,051,710	1,071,095	1,090,701	1,110,643	1,124,980
Water Billing Recovery - Total	1,280,189	1,304,510	1,329,524	1,356,718	1,378,973	1,397,610	1,417,574	1,438,907	1,460,357	1,481,923	1,500,951



5.3 Wastewater Operating Expenditures

Similar to water, the wastewater operating expenditures for 2020 and 2021 are based on operating budget information. Most of the forecasted expenditures have been adjusted over the forecast period by an annual inflationary factor of 1.0% for 2022-2023, and by 2.0% for 2024-2030. Operating expenditures that involve utilities, fuels, chemicals and hydro have been inflated by 2.0% annually for 2022-2023 and 5.0% annually thereafter. Also included are contributions to the capital reserves. For Ward 4, existing and future annual debt payments have also been included.

5.4 Wastewater Operating Revenues

The operating revenue for the wastewater program comes mainly from base charges along with volumetric revenue from customers. A small amount of revenue is also generated from sewer frontage charges and rental revenue. These revenues are assumed to remain constant over the forecast period. Tables 5-4, 5-5, and 5-6 outline the operating budget the Essex wastewater systems for Wards 1, 3, and 4.



Table 5-4
Town of Essex
Operating Budget Forecast – Wastewater – Ward 1
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	249,000	256,470	259,000	261,600	266,800	272,100	277,500	283,100	288,800	294,600	300,500
55250 - Ontario Clean Water Agency - Other Operating Costs	64,335	120,000	121,200	122,400	124,800	127,300	129,800	132,400	135,000	137,700	140,500
55310 - Garbage Collection Fees - Ward 1	300	300	300	300	310	320	330	340	350	360	370
55400 - Garbage Disposal (Tipping Fees)	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
External Transfers											
55900 - Donations, Grants	2,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
Materials and Supplies											
51105 - Computer Hardware and Software	792	250	250	250	260	270	280	290	300	310	320
51190 - Materials and Supplies - Other	30,000	30,000	30,300	30,600	31,200	31,800	32,400	33,000	33,700	34,400	35,100
Miscellaneous Services											
53650 - Weed Control Services	10,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Repairs and Maintenance											
52900 - Repairs and Maintenance - Other	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	100,218	118,400	120,800	123,200	129,400	135,900	142,700	149,800	157,300	165,200	173,500
54120 - Utilities - Gas	3,917	5,300	5,400	5,500	5,800	6,100	6,400	6,700	7,000	7,400	7,800
54140 - Utilities - Water	6,138	6,138	6,200	6,300	6,400	6,500	6,600	6,700	6,800	6,900	7,000
54200 - Communications - Telephone	4,200	4,600	4,600	4,600	4,700	4,800	4,900	5,000	5,100	5,200	5,300
54300 - Insurance - Buildings	10,088	10,376	10,500	10,600	10,800	11,000	11,200	11,400	11,600	11,800	12,000
54310 - Insurance - Vehicles	209	215	220	220	220	220	220	220	220	220	220
54320 - Insurance - General	595	912	920	930	950	970	990	1,010	1,030	1,050	1,070
54400 - Payments-in-Lieu of Taxes	19,364	20,704	20,900	21,100	21,500	21,900	22,300	22,700	23,200	23,700	24,200
Collection/Conveyance:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	68,030	68,030	68,700	69,400	70,800	72,200	73,600	75,100	76,600	78,100	79,700
External Transfers											
55900 - Donations, Grants	15,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	15,361	16,000	16,200	16,400	16,700	17,000	17,300	17,600	18,000	18,400	18,800
58900 - Amounts Allocated from Other Departments	26,044	27,094	27,400	27,700	28,300	28,900	29,500	30,100	30,700	31,300	31,900
Materials and Supplies											
51100 - Office Supplies	100	1,000	1,010	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160
51105 - Computer Hardware and Software	250	250	250	250	260	270	280	290	300	310	320
51110 - Postage and Courier	10	10	10	10	10	10	10	10	10	10	10
51115 - Memberships	305	280	280	280	290	300	310	320	330	340	350
51150 - Vehicles - Fuel	1,000	1,300	1,330	1,360	1,430	1,500	1,580	1,660	1,740	1,830	1,920
51190 - Materials and Supplies - Other	2,700	1,000	1,020	1,040	1,090	1,140	1,200	1,260	1,320	1,390	1,460
51800 - Office Equipment	40	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	100	150	150	150	150	150	150	150	150	150	150



Table 5-4 (Cont'd)
Town of Essex
Operating Budget Forecast – Wastewater – Ward 1
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Miscellaneous Services											
53510 - Advertising	50	50	50	50	50	50	50	50	50	50	50
53605 - System Access Fee - Automatic Vehicle Locator	160	230	230	230	230	230	230	230	230	230	230
53650 - Weed Control Services	-	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	400	400	400	400	410	420	430	440	450	460	470
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	200	200	200	200	200	200	200	200	200	200	200
52300 - Repairs and Maintenance - Vehicles (Labour)	500	500	510	520	530	540	550	560	570	580	590
52305 - Repairs and Maintenance - Vehicles (Parts)	600	600	610	620	630	640	650	660	670	680	690
52350 - Repairs and Maintenance - Equipment (Labour)	50	50	50	50	50	50	50	50	50	50	50
52355 - Repairs and Maintenance - Equipment (Parts)	50	50	50	50	50	50	50	50	50	50	50
52900 - Repairs and Maintenance - Other	70,000	70,000	70,700	71,400	72,800	74,300	75,800	77,300	78,800	80,400	82,000
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	26,376	27,191	27,500	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000
50150 - Salaries and Wages - Overtime	1,000	880	890	900	920	940	960	980	1,000	1,020	1,040
50500 - Canada Pension Plan - Employer Contribution	854	987	1,000	1,010	1,030	1,050	1,070	1,090	1,110	1,130	1,150
50510 - Employment Insurance - Employer Contribution	358	358	360	360	370	380	390	400	410	420	430
50520 - Employer Health Insurance	514	530	540	550	560	570	580	590	600	610	620
50530 - Workplace Safety and Insurance Board Premiums	263	709	720	730	740	750	770	790	810	830	850
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	1,664	1,708	1,730	1,750	1,790	1,830	1,870	1,910	1,950	1,990	2,030
50550 - Health Insurance Premiums	2,072	2,072	2,090	2,110	2,150	2,190	2,230	2,270	2,320	2,370	2,420
50560 - Life Insurance Premiums	691	736	740	750	770	790	810	830	850	870	890
50700 - Clothing and Uniforms	240	240	240	240	240	240	240	240	240	240	240
50720 - Training and Tuition Refund	587	587	590	600	610	620	630	640	650	660	670
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	117,500	144,100	147,000	149,900	157,400	165,300	173,600	182,300	191,400	201,000	211,100
54120 - Utilities - Gas	0	0	-	-	-	-	-	-	-	-	-
54140 - Utilities - Water	497	600	610	620	650	680	710	750	790	830	870
54200 - Communications - Telephone	960	2,150	2,170	2,190	2,230	2,270	2,320	2,370	2,420	2,470	2,520
54310 - Insurance - Vehicles	626	644	650	660	670	680	690	700	710	720	730
54320 - Insurance - General	1,728	2,650	2,700	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400
54400 - Payments-in-Lieu of Taxes	-	103	100	100	100	100	100	100	100	100	100
Sub Total Operating	898,036	1,010,604	1,023,510	1,036,480	1,065,640	1,095,800	1,126,800	1,158,910	1,192,230	1,226,870	1,262,920
Capital-Related											
Existing Debt (Principal) - Growth Related	109,791	112,730	115,749	118,848	122,031	125,298	128,654	-	-	-	-
Existing Debt (Interest) - Growth Related	21,435	18,495	15,477	12,377	9,195	5,927	2,572	-	-	-	-
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related	409,038	420,281	431,833	443,703	455,899	468,430	481,307	346,957	-	-	-
Existing Debt (Interest) - Non-Growth Related	91,722	80,479	68,927	57,057	44,861	32,330	19,454	7,198	-	-	-
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	1,101,121	1,135,678	285,149	330,634	354,548	384,035	-	-	-	-	-
Sub Total Capital Related	1,733,107	1,767,663	917,134	962,620	986,534	1,016,021	631,986	354,156	-	-	-
Total Expenditures	2,631,143	2,778,267	1,940,644	1,999,100	2,052,174	2,111,821	1,758,786	1,513,066	1,192,230	1,226,870	1,262,920



Table 5-4 (Cont'd)
Town of Essex
Operating Budget Forecast – Wastewater – Ward 1
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	730,087	758,610	786,434	813,223	837,546	865,256	893,740	922,732	952,526	983,143	1,008,554
Other Revenue:											
User Fees and Service Charges											
46970 - Land Leases and Rentals	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Amounts Added to Taxes and Special Levies											
43220 - Sewer Frontage and Connection Charges	13,016	13,016	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Contributions from Development Charges Reserve Fund	131,226	131,226	131,226	131,226	131,226	131,226	131,226	-	-	-	-
Contributions from Reserves / Reserve Funds	813,985	898,495	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,693,314	1,806,347	935,659	962,449	986,772	1,014,482	1,042,966	940,732	970,526	1,001,143	1,026,554
Wastewater Billing Recovery - Operating	937,829	971,920	1,004,985	1,036,652	1,065,402	1,097,339	715,820	572,333	221,704	225,727	236,366
Lifecycle Reserve Contribution (\$)							413,887	589,877	973,432	1,002,754	1,019,618
Wastewater Billing Recovery - Total	937,829	971,920	1,004,985	1,036,652	1,065,402	1,097,339	1,129,707	1,162,211	1,195,135	1,228,481	1,255,984



Table 5-5
Town of Essex
Operating Budget Forecast – Wastewater – Ward 3
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	89,927	92,624	93,600	94,500	96,400	98,300	100,300	102,300	104,300	106,400	108,500
55250 - Ontario Clean Water Agency - Other Operating Costs	2,500	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
External Transfers											
55900 - Donations, Grants	5,000	2,500	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
Materials and Supplies											
51190 - Materials and Supplies - Other	30,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
Miscellaneous Services											
53650 - Weed Control Services	5,000	7,000	7,100	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300
Repairs and Maintenance											
52900 - Repairs and Maintenance - Other	4,500	4,500	4,500	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	63,201	91,500	93,300	95,200	100,000	105,000	110,300	115,800	121,600	127,700	134,100
54300 - Insurance - Buildings	2,706	2,783	2,800	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500
54310 - Insurance - Vehicles	209	215	220	220	220	220	220	220	220	220	220
54320 - Insurance - General	576	884	890	900	920	940	960	980	1,000	1,020	1,040
54400 - Payments-in-Lieu of Taxes	-	39	40	40	40	40	40	40	40	40	40
Collection/Conveyance:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	22,329	22,329	22,600	22,800	23,300	23,800	24,300	24,800	25,300	25,800	26,300
55250 - Ontario Clean Water Agency - Other Operating Costs	3,000	-	-	-	-	-	-	-	-	-	-
External Transfers											
55900 - Donations, Grants	5,000	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex		5,650	5,700	5,800	5,900	6,000	6,100	6,200	6,300	6,400	6,500
58900 - Amounts Allocated from Other Departments		27,065	27,300	27,600	28,200	28,800	29,400	30,000	30,600	31,200	31,800
Materials and Supplies											
51100 - Office Supplies	100	50	50	50	50	50	50	50	50	50	50
51105 - Computer Hardware and Software	250	250	250	250	260	270	280	290	300	310	320
51110 - Postage and Courier	10	10	10	10	10	10	10	10	10	10	10
51115 - Memberships	305	280	280	280	290	300	310	320	330	340	350
51150 - Vehicles - Fuel	1,000	1,500	1,530	1,560	1,640	1,720	1,810	1,900	2,000	2,100	2,210
51190 - Materials and Supplies - Other	950	500	510	520	550	580	610	640	670	700	740
51800 - Office Equipment	40	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	100	150	150	150	150	150	150	150	150	150	150



Table 5-5 (Cont'd)
Town of Essex
Operating Budget Forecast – Wastewater – Ward 3
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Miscellaneous Services											
53510 - Advertising	50	50	50	50	50	50	50	50	50	50	50
53605 - System Access Fee - Automatic Vehicle Locator	160	230	230	230	230	230	230	230	230	230	230
53650 - Weed Control Services	1,800	3,000	3,030	3,060	3,120	3,180	3,240	3,300	3,370	3,440	3,510
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	400	250	250	250	260	270	280	290	300	310	320
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	200	500	510	520	530	540	550	560	570	580	590
52300 - Repairs and Maintenance - Vehicles (Labour)	500	500	510	520	530	540	550	560	570	580	590
52305 - Repairs and Maintenance - Vehicles (Parts)	600	800	810	820	840	860	880	900	920	940	960
52350 - Repairs and Maintenance - Equipment (Labour)	50	50	50	50	50	50	50	50	50	50	50
52355 - Repairs and Maintenance - Equipment (Parts)	50	50	50	50	50	50	50	50	50	50	50
52900 - Repairs and Maintenance - Other	25,000	25,000	25,300	25,600	26,100	26,600	27,100	27,600	28,200	28,800	29,400
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	26,376	27,191	27,500	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000
50150 - Salaries and Wages - Overtime	1,000	880	890	900	920	940	960	980	1,000	1,020	1,040
50500 - Canada Pension Plan - Employer Contribution	854	987	1,000	1,010	1,030	1,050	1,070	1,090	1,110	1,130	1,150
50510 - Employment Insurance - Employer Contribution	358	358	360	360	370	380	390	400	410	420	430
50520 - Employer Health Insurance	514	530	540	550	560	570	580	590	600	610	620
50530 - Workplace Safety and Insurance Board Premiums	263	709	720	730	740	750	770	790	810	830	850
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	1,664	1,708	1,730	1,750	1,790	1,830	1,870	1,910	1,950	1,990	2,030
50550 - Health Insurance Premiums	2,072	2,072	2,090	2,110	2,150	2,190	2,230	2,270	2,320	2,370	2,420
50560 - Life Insurance Premiums	691	736	740	750	770	790	810	830	850	870	890
50700 - Clothing and Uniforms	240	240	240	240	240	240	240	240	240	240	240
50720 - Training and Tuition Refund	587	250	250	250	260	270	280	290	300	310	320
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	5,440	6,100	6,200	6,300	6,600	6,900	7,200	7,600	8,000	8,400	8,800
54120 - Utilities - Gas	0	0	-	-	-	-	-	-	-	-	-
54140 - Utilities - Water	(0)	(0)	-	-	-	-	-	-	-	-	-
54200 - Communications - Telephone	1,000	2,600	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
54310 - Insurance - Vehicles	565	581	590	600	610	620	630	640	650	660	670
54320 - Insurance - General	1,671	2,562	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
Sub Total Operating	308,808	374,764	379,890	385,020	397,110	409,400	422,210	435,520	449,360	463,700	478,470



Table 5-5 (Cont'd)
Town of Essex
Operating Budget Forecast – Wastewater – Ward 3
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	489,471	437,282	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Sub Total Capital Related	489,471	437,282	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Total Expenditures	798,278	812,046	429,890	435,020	447,110	459,400	472,210	485,520	499,360	513,700	528,470
Revenues											
Base Charge	281,362	291,241	302,486	316,830	327,396	333,944	341,797	351,027	360,489	370,190	378,864
Other Revenue:											
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	203,619	234,046	-	-	-	-	-	-	-	-	-
Total Operating Revenue	484,981	525,286	302,486	316,830	327,396	333,944	341,797	351,027	360,489	370,190	378,864
Wastewater Billing Recovery - Operating	313,298	286,759	127,404	118,190	119,714	125,456	130,413	134,493	138,871	143,510	149,606
Lifecycle Reserve Contribution (\$)		41,228	216,782	245,691	259,573	264,536	268,578	274,927	281,082	287,079	291,839
Wastewater Billing Recovery - Total	313,298	327,988	344,186	363,881	379,286	389,992	398,991	409,420	419,953	430,590	441,445



Table 5-6
Town of Essex
Operating Budget Forecast – Wastewater – Ward 4
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	102,067	105,129	106,200	107,300	109,400	111,600	113,800	116,100	118,400	120,800	123,200
55250 - Ontario Clean Water Agency - Other Operating Costs	2,500	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
55340 - Garbage Collection Fees - Ward 4 External Transfers	215	215	220	220	220	220	220	220	220	220	220
55900 - Donations, Grants	7,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
Materials and Supplies											
51190 - Materials and Supplies - Other	10,000	10,000	10,200	10,400	10,900	11,400	12,000	12,600	13,200	13,900	14,600
Miscellaneous Services											
53650 - Weed Control Services	6,000	6,000	6,100	6,200	6,300	6,400	6,500	6,600	6,700	6,800	6,900
Repairs and Maintenance											
52900 - Repairs and Maintenance - Other	4,000	4,000	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	73,622	73,622	75,100	76,600	80,400	84,400	88,600	93,000	97,700	102,600	107,700
54200 - Communications - Telephone	954	954	960	970	990	1,010	1,030	1,050	1,070	1,090	1,110
54300 - Insurance - Buildings	802	825	830	840	860	880	900	920	940	960	980
54310 - Insurance - Vehicles	209	215	220	220	220	220	220	220	220	220	220
54320 - Insurance - General	577	885	890	900	920	940	960	980	1,000	1,020	1,040
54400 - Payments-in-Lieu of Taxes	-	981	990	1,000	1,020	1,040	1,060	1,080	1,100	1,120	1,140
Collection/Conveyance:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	32,503	38,000	38,400	38,800	39,600	40,400	41,200	42,000	42,800	43,700	44,600
External Transfers											
55900 - Donations, Grants	7,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	8,031	8,031	8,100	8,200	8,400	8,600	8,800	9,000	9,200	9,400	9,600
58900 - Amounts Allocated from Other Departments	26,044	27,094	27,400	27,700	28,300	28,900	29,500	30,100	30,700	31,300	31,900
Materials and Supplies											
51100 - Office Supplies	100	50	50	50	50	50	50	50	50	50	50
51105 - Computer Hardware and Software	250	250	250	250	260	270	280	290	300	310	320
51110 - Postage and Courier	10	10	10	10	10	10	10	10	10	10	10
51115 - Memberships	305	280	280	280	290	300	310	320	330	340	350
51150 - Vehicles - Fuel	1,000	1,350	1,380	1,410	1,480	1,550	1,630	1,710	1,800	1,890	1,980
51190 - Materials and Supplies - Other	1,700	1,000	1,020	1,040	1,090	1,140	1,200	1,260	1,320	1,390	1,460
51800 - Office Equipment	40	40	40	40	40	40	40	40	40	40	40
51840 - Small Tools	100	150	150	150	150	150	150	150	150	150	150



Table 5-6 (Cont'd)
Town of Essex
Operating Budget Forecast – Wastewater – Ward 4
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Miscellaneous Services											
53510 - Advertising	50	50	50	50	50	50	50	50	50	50	50
53605 - System Access Fee - Automatic Vehicle Locator	160	230	230	230	230	230	230	230	230	230	230
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	400	250	250	250	260	270	280	290	300	310	320
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	200	500	510	520	530	540	550	560	570	580	590
52300 - Repairs and Maintenance - Vehicles (Labour)	500	500	510	520	530	540	550	560	570	580	590
52305 - Repairs and Maintenance - Vehicles (Parts)	600	800	810	820	840	860	880	900	920	940	960
52350 - Repairs and Maintenance - Equipment (Labour)	50	50	50	50	50	50	50	50	50	50	50
52355 - Repairs and Maintenance - Equipment (Parts)	50	50	50	50	50	50	50	50	50	50	50
52900 - Repairs and Maintenance - Other	30,000	15,000	15,200	15,400	15,700	16,000	16,300	16,600	16,900	17,200	17,500
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	26,376	27,191	27,500	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000
50150 - Salaries and Wages - Overtime	1,000	880	890	900	920	940	960	980	1,000	1,020	1,040
50500 - Canada Pension Plan - Employer Contribution	854	987	1,000	1,010	1,030	1,050	1,070	1,090	1,110	1,130	1,150
50510 - Employment Insurance - Employer Contribution	358	358	360	360	370	380	390	400	410	420	430
50520 - Employer Health Insurance	514	530	540	550	560	570	580	590	600	610	620
50530 - Workplace Safety and Insurance Board Premiums	263	709	720	730	740	750	770	790	810	830	850
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	1,664	1,708	1,730	1,750	1,790	1,830	1,870	1,910	1,950	1,990	2,030
50550 - Health Insurance Premiums	2,072	2,072	2,090	2,110	2,150	2,190	2,230	2,270	2,320	2,370	2,420
50560 - Life Insurance Premiums	691	736	740	750	770	790	810	830	850	870	890
50700 - Clothing and Uniforms	240	240	240	240	240	240	240	240	240	240	240
50720 - Training and Tuition Refund	587	250	250	250	260	270	280	290	300	310	320
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	6,816	7,800	7,960	8,120	8,530	8,960	9,410	9,880	10,370	10,890	11,430
54140 - Utilities - Water	253	300	310	320	340	360	380	400	420	440	460
54200 - Communications - Telephone	1,000	1,650	1,670	1,690	1,720	1,750	1,790	1,830	1,870	1,910	1,950
54310 - Insurance - Vehicles	626	644	650	660	670	680	690	700	710	720	730
54320 - Insurance - General	1,727	2,648	2,670	2,700	2,750	2,810	2,870	2,930	2,990	3,050	3,110
54400 - Payments-in-Lieu of Taxes	-	475	480	480	490	500	510	520	530	540	550
Sub Total Operating	363,080	357,189	361,970	366,830	377,140	387,780	398,780	410,100	421,760	433,960	446,380



Table 5-6 (Cont'd)
Town of Essex
Operating Budget Forecast – Wastewater – Ward 4
(Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital-Related											
Existing Debt (Principal) - Growth Related	42,093	43,224	44,386	45,579	46,804	23,872	-	-	-	-	-
Existing Debt (Interest) - Growth Related	6,288	5,157	3,995	2,802	1,577	319	-	-	-	-	-
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related	225,504	231,840	238,356	245,057	251,949	105,959	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	34,946	28,610	22,093	15,392	8,501	1,415	-	-	-	-	-
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	8,329	8,662	9,009	9,369	9,744
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	4,000	3,667	3,320	2,960	2,585
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	675,320	764,314	320,457	348,428	367,858	543,323	200,000	200,000	200,000	200,000	200,000
Sub Total Capital Related	984,150	1,073,145	629,287	657,258	676,688	674,888	212,329	212,329	212,329	212,329	212,329
Total Expenditures	1,347,230	1,430,334	991,257	1,024,088	1,053,828	1,062,668	611,109	622,429	634,089	646,289	658,709
Revenues											
Base Charge	298,785	309,823	320,667	331,294	340,606	350,158	360,235	370,860	381,767	389,402	397,190
Other Revenue:											
Amounts Added to Taxes and Special Levies	-	-	-	-	-	-	-	-	-	-	-
43220 - Sewer Frontage and Connection Charges	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130
Contributions from Development Charges Reserve Fund	-	48,380	48,380	48,380	48,380	24,190	-	-	-	-	-
Contributions from Reserves / Reserve Funds	471,575	472,454	-	-	-	-	-	-	-	-	-
Total Operating Revenue	818,489	878,788	417,177	427,804	437,116	422,478	408,365	418,990	429,897	437,532	445,320
Wastewater Billing Recovery - Operating	528,741	551,546	574,080	596,284	616,712	640,190	202,744	203,439	204,193	208,757	213,389
Lifecycle Reserve Contribution (\$)							461,517	485,521	509,735	525,568	544,248
Wastewater Billing Recovery - Total	528,741	551,546	574,080	596,284	616,712	640,190	664,261	688,960	713,928	734,325	757,637



Chapter 6

Pricing Structures

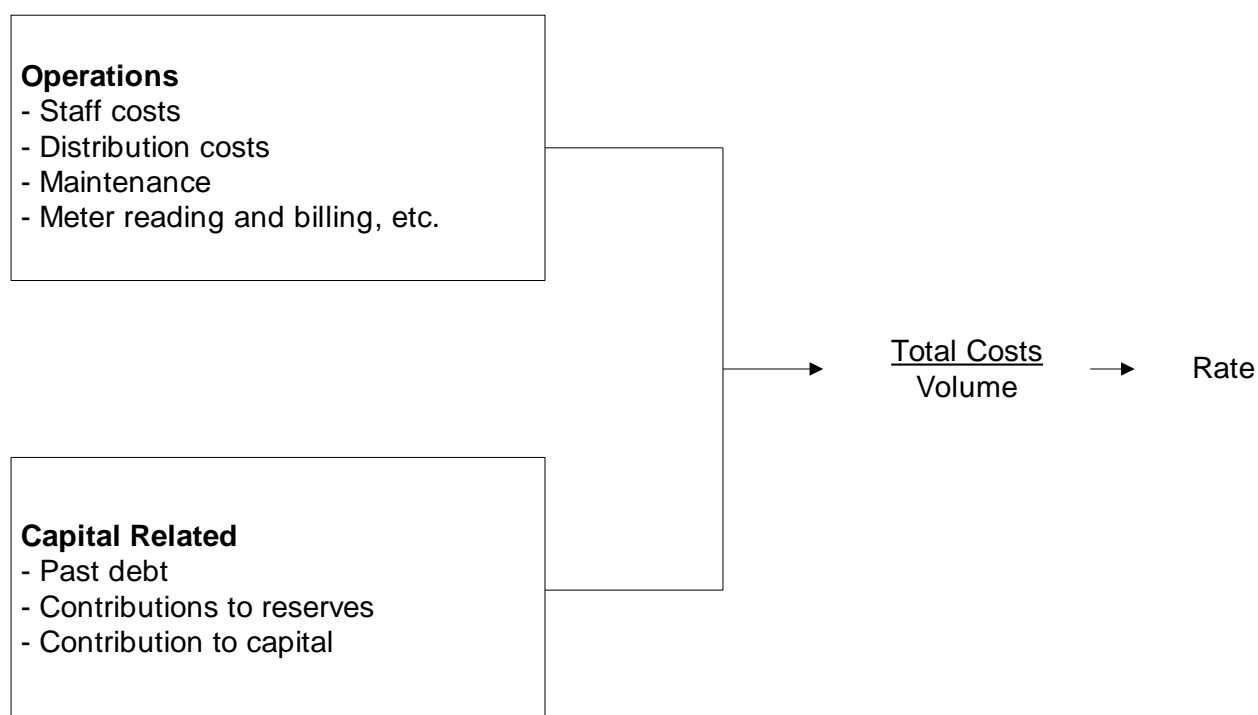


6. Pricing Structures

6.1 Introduction

Rates, in their simplest form, can be defined as total costs to maintain the utility function divided by the total expected volume to be generated for the period. Total costs are usually a combination of operating costs (e.g. staff costs, distribution costs, maintenance, administration, etc.) and capital-related costs (e.g. past debt to finance capital projects, transfers to reserves to finance future expenditures, etc.). The schematic below provides a simplified illustration of the rate calculation for water.

“Annual Costs”



These operating and capital expenditures will vary over time. Examples of factors that will affect the expenditures over time are provided below.

Operations

- Inflation;



- Increased maintenance as system ages; and
- Changes to provincial legislation.

Capital Related

- New capital will be built as areas expand;
- Replacement capital needed as system ages; and
- Financing of capital costs are a function of policy regarding reserves and direct financing from rates (pay as you go), debt and user pay methods (development charges, *Municipal Act*).

6.2 Alternative Pricing Structures

Throughout Ontario, and as well, Canada, the use of pricing mechanisms varies between municipalities. The use of a particular form of pricing depends upon numerous factors, including Council preference, administrative structure, surplus/deficit system capacities, economic/demographic conditions, to name a few.

Municipalities within Ontario have two basic forms of collecting revenues for water purposes, those being through incorporation of the costs within the tax rate charged on property assessment and/or through the establishment of a specific water rate billed to the customer. Within the rate methods, there are five basic rate structures employed along with other variations:

- Flat Rate (non-metered customers);
- Constant Rate;
- Declining Block Rate;
- Increasing (or Inverted) Block Rate;
- Hump Back Block Rate; and
- Base Charges.

The definitions and general application of the various methods are as follows:

Property Assessment: This method incorporates the total costs of providing water into the general requisition or the assessment base of the municipality. This form of collection is a "wealth tax," as payment increases directly with the value of property owned and bears no necessary relationship to actual consumption. This form is easy to



administer as the costs to be recovered are incorporated in the calculation for all general services, normally collected through property taxes.

Flat Rate: This rate is a constant charge applicable to all customers served. The charge is calculated by dividing the total number of user households and other entities (e.g. businesses) into the costs to be recovered. This method does not recognize differences in actual consumption but provides for a uniform spreading of costs across all users. Some municipalities define users into different classes of similar consumption patterns, that is, a commercial user, residential user and industrial user, and charge a flat rate by class. Each user is then billed on a periodic basis. No meters are required to facilitate this method, but an accurate estimate of the number of users is required. This method ensures set revenue for the collection period but is not sensitive to consumption, hence may cause a shortfall or surplus of revenues collected.

Constant Rate: This rate is a volume-based rate, in which the consumer pays the same price per unit consumed, regardless of the volume. The price per unit is calculated by dividing the total cost of the service by the total volume used by total consumers. The bill to the consumer climbs uniformly as the consumption increases. This form of rate requires the use of meters to record the volume consumed by each user. This method closely aligns the revenue recovery with consumption. Revenue collected varies directly with the consumption volume.

Declining Block Rates: This rate structure charges a successively lower price for set volumes, as consumption increases through a series of "blocks." That is to say that within set volume ranges, or blocks, the charge per unit is set at one rate. Within the next volume range, the charge per unit decreases to a lower rate, and so on. Typically, the first, or first and second blocks cover residential and light commercial uses. Subsequent blocks normally are used for heavier commercial and industrial uses. This rate structure requires the use of meters to record the volume consumed by each type of user. This method requires the collection and analysis of consumption patterns by user classification to establish rates at a level which does not over or under collect revenue from rate payers.

Increasing or Inverted Block Rates: The increasing block rate works essentially the same way as the declining block rate, except that the price of water in successive blocks increases rather than declines. Under this method the consumer's bill rises faster with higher volumes used. This rate structure also requires the use of meters to



record the volume consumed by each user. This method requires, as with the declining block structure, the collection and analysis of consumption patterns by user classification to establish rates at a level which does not over or under collect from rate payers.

The Hump Back Rate: The hump back rate is a combination of an increasing block rate and the declining block rate. Under this method the consumer's bill rises with higher volumes used up to a certain level and then begins to fall for volumes in excess of levels set for the increasing block rate.

6.3 Assessment of Alternative Pricing Structures

The adoption by a municipality or utility of any one particular pricing structure is normally a function of a variety of administrative, social, demographic and financial factors. The number of factors, and the weighting each particular factor receives, can vary between municipalities. The following is a review of some of the more prevalent factors.

Cost Recovery

Cost recovery is a prime factor in establishing a particular pricing structure. Costs can be loosely defined into different categories: operations, maintenance, capital, financing and administration. These costs often vary between municipalities and even within a municipality, based on consumption patterns, infrastructure age, economic growth, etc.

The pricing alternatives defined earlier can all achieve the cost recovery goal, but some do so more precisely than others. Fixed pricing structures, such as Property Assessment and Flat Rate, are established on the value of property or on the number of units present in the municipality, but do not adjust in accordance with consumption. Thus, if actual consumption for the year is greater than projected, the municipality incurs a higher cost of production, but the revenue base remains static (since it was determined at the beginning of the year), thus potentially providing a funding shortfall. Conversely, if the consumption level declines below projections, fixed pricing structures will produce more revenue than actual costs incurred.



The other pricing methods (declining block, constant rate, increasing block) are consumption-based and generally will generate revenues in proportion to actual consumption.

Administration

Administration is defined herein as the staffing, equipment and supplies required to support the undertaking of a particular pricing strategy. This factor not only addresses the physical tangible requirements to support the collection of the revenues, but also the intangible requirements, such as policy development.

The easiest pricing structure to support is the Property Assessment structure. As municipalities undertake the process of calculating property tax bills and the collection process for their general services, the incorporation of the water costs into this calculation would have virtually no impact on the administrative process and structure.

The Flat Rate pricing structure is relatively easy to administer as well. It is normally calculated to collect a set amount, either on a monthly, quarterly, semi-annual or annual basis, and is billed directly to the customer. The impact on administration centres mostly on the accounts receivable or billing area of the municipality, but normally requires minor additional staff or operating costs to undertake.

The three remaining methods, those being Increasing Block Rate, Constant Rate and Declining Block Rate, have a more dramatic effect on administration. These methods are dependent upon actual consumption and hence involve a major structure in place to administer. First, meters must be installed in all existing units in the municipality, and units to be subsequently built must be required to include these meters. Second, meter readings must be undertaken periodically. Hence staff must be available for this purpose or a service contract must be negotiated. Third, the billings process must be expanded to accommodate this process. Billing must be done per a defined period, requiring staff to produce the bills. Lastly, either through increased staffing or by service contract, an annual maintenance program must be set up to ensure meters are working effectively in recording consumed volumes.

The benefit derived from the installation of meters is that information on consumption patterns becomes available. This information provides benefit to administration in calculating rates which will ensure revenue recovery. Additionally, when planning what services are to be constructed in future years, the municipality or utility has documented



consumption patterns distinctive to its own situation, which can be used to project sizing of growth-related works.

Equity

Equity is always a consideration in the establishment of pricing structures but its definition can vary depending on a municipality's circumstances and based on the subjective interpretation of those involved. For example: is the price charged to a particular class of rate payer consistent with those of a similar class in surrounding municipalities; through the pricing structure does one class of rate payer pay more than another class; should one pay based on ability to pay, or on the basis that a unit of water costs the same to supply no matter who consumes it; etc.? There are many interpretations. Equity therefore must be viewed broadly in light of many factors as part of achieving what is best for the municipality as a whole.

Conservation

In today's society, conservation of natural resources is increasingly being more highly valued. Controversy continuously focuses on the preservation of non-renewable resources and on the proper management of renewable resources. Conservation is also a concept which applies to a municipality facing physical limitations in the amount of water which can be supplied to an area. As well, financial constraints can encourage conservation in a municipality where the cost of providing each additional unit is increasing.

Pricing structures such as property assessment and flat rate do not, in themselves, encourage conservation. In fact, depending on the price which is charged, they may even encourage resource "squandering," either because consumers, without the price discipline, consume water at will, or the customer wants to get his money's worth and hence adopts more liberal consumption patterns. The fundamental reason for this is that the price paid for the service bears no direct relationship to the volume consumed and hence is viewed as a "tax," instead of being viewed as the price of a purchased commodity.

The Declining Block Rate provides a decreasing incentive towards conservation. By creating awareness of volumes consumed, the consumer can reduce his total costs by restricting consumption; however, the incentive lessens as more water is consumed, because the marginal cost per unit declines as the consumer enters the next block



pricing range. Similarly, those whose consumption level is at the top end of a block have less incentive to reduce consumption.

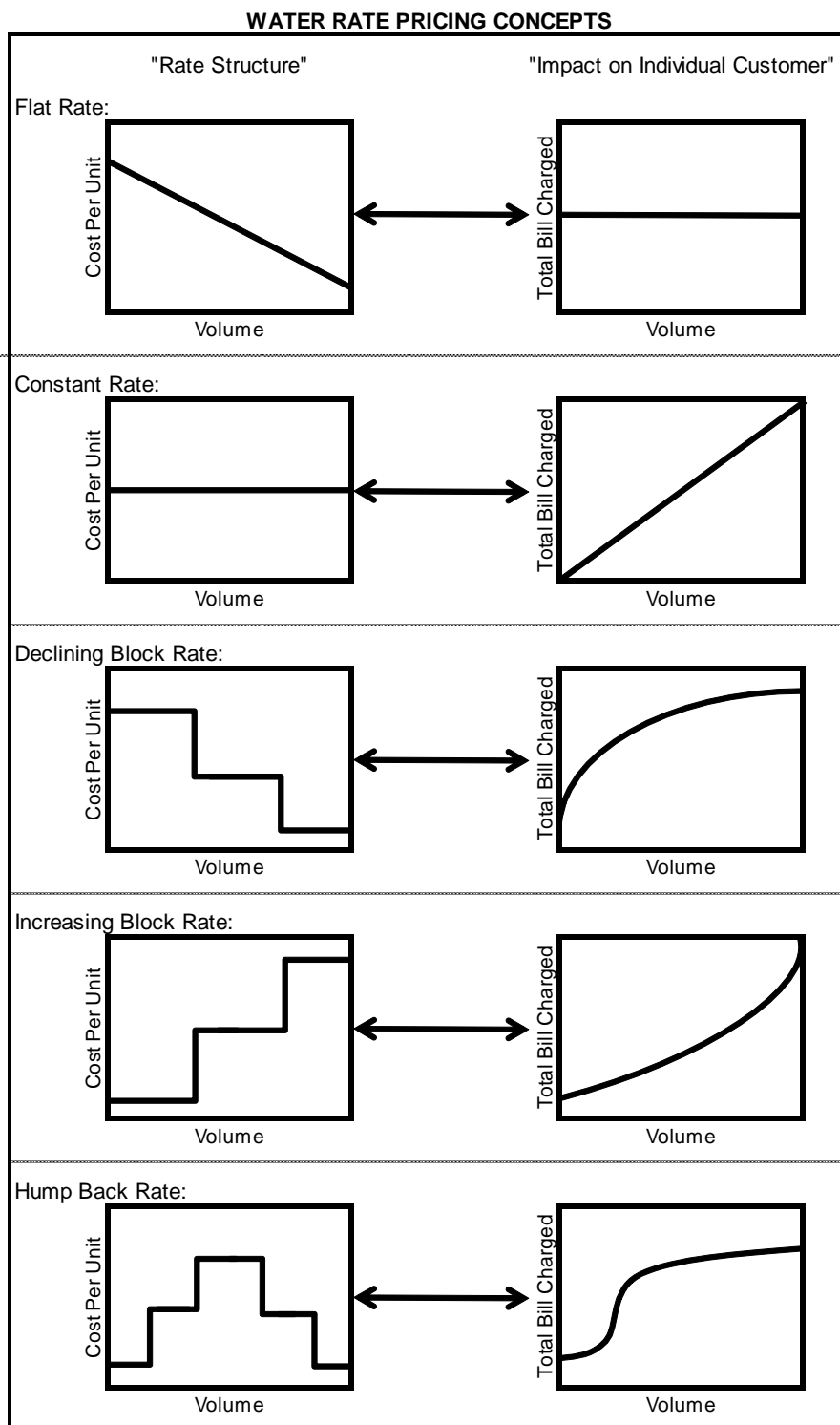
The Constant Rate structure presents the customer with a linear relationship between consumption and the cost thereof. As the consumer pays a fixed cost per unit, his bill will vary directly with the amount consumed. This method presents tangible incentive for consumers to conserve water. As metering provides direct feedback as to usage patterns and the consumer has direct control over the total amount paid for the commodity, the consumer is encouraged to use only those volumes that are reasonably required.

The Inverted Block method presents the most effective pricing method for encouraging conservation. Through this method, the price per unit consumed increases as total volumes consumed grow. The consumer becomes aware of consumption through metering with the charges increasing dramatically with usage. Hence, there normally is awareness that exercising control over usage can produce significant savings. This method not only encourages conservation methods, but may also penalize legitimate high-volume users if not properly structured.

Figure 6-1 provides a schematic representation of the various rate structures (note property tax as a basis for revenue recovery has not been presented for comparison, as the proportion of taxes paid varies in direct proportion to the market value of the property). The graphs on the left-hand side of the figure present the cost per unit for each additional amount of water consumed. The right-hand side of the figure presents the impact on the customer's bill as the volume of water increases. Following the schematic is a table summarizing each rate structure.



Figure 6-1





RATE STRUCTURE	COST PER UNIT AS VOLUME CONSUMPTION INCREASES	IMPACT ON CUSTOMER BILL AS VOLUME CONSUMPTION INCREASES
Flat Rate	Cost per unit decreases as more volume consumed	Bill remains the same no matter how much volume is consumed
Constant Rate	Cost per unit remains the same	Bill increases in direct proportion to consumption
Declining Block	Cost per unit decreases as threshold targets are achieved	Bill increases at a slower rate as volumes increases
Increasing Block	Cost per unit increases as threshold targets are achieved	Bill increases at a faster rate as volumes increase
Hump Back Rate	Combination of an increasing block at the lower consumption volumes and then converts to a declining block for the high	Bill increases at a faster rate at the lower consumption amounts and then slows as volumes increase

6.4 Rate Structures in Ontario

In a past survey of over 170 municipalities (approximately half of the municipalities who provide water and/or sewer), all forms of rate structures are in use by Ontario municipalities. The most common rate structure is the constant rate (for metered municipalities). Most municipalities (approximately 92%) who have volume rate structures also impose a base monthly charge.

Historically, the development of a base charge often reflected either the recovery of meter reading/billing/collection costs, plus administration or those costs plus certain fixed costs (such as capital contributions or reserve contributions). More recently, many municipalities have started to establish base charges based on ensuring a secure portion of the revenue stream which does not vary with volume consumption. Selection of the quantum of the base charge is a matter of policy selected by individual municipalities.



6.5 Recommended Rate Structures

Based on the foregoing, it is recommended that the same rate structures be continued in the future.

In order to meet the needs for water, it is recommended that the water base charges be increased by 2% per year over the forecast period for Wards 1 & 2 and Wards 3 & 4. This results in an initial \$0.39 increase in the monthly base charge for all wards. The volume rates (as calculated in Chapter 7) are anticipated to increase at 1% per year from over the forecast period. The forecast of water base charges are presented in Table 6-1.

As for wastewater, it is recommended that the base charges increase by 2% per year over forecast period for all wards. The wastewater volume rates (calculated in Chapter 7) are anticipated to increase by 2% per year for Wards 1 & 3, and 3% annually for Ward 4.

The above increases are recommended to ensure that the Town can fund the capital and operating costs with little to no need for additional debentures. The forecast base charges and corresponding revenue are provided in Table 6-2.



Table 6-1
Town of Essex
Base Charge Forecast – Water

Water	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	6,608	6,608	6,608	6,608	6,608	6,608	6,608	6,608	6,608	6,608	6,608
New	65	194	340	451	506	556	611	670	729	788	817
Total Customers	6,673	6,802	6,948	7,059	7,114	7,164	7,219	7,278	7,337	7,396	7,425
Total Annual Revenue	\$1,576,752	\$1,639,377	\$1,708,055	\$1,770,049	\$1,819,516	\$1,868,950	\$1,920,964	\$1,975,397	\$2,031,238	\$2,088,523	\$2,138,646

Wards 1 & 2 - Essex & Colchester North	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160	3,160
New	41	134	242	307	337	377	417	456	495	534	553
Subtotal Customers	3,201	3,294	3,402	3,467	3,497	3,537	3,577	3,616	3,655	3,694	3,713
Monthly Base Charge	\$19.69	\$20.08	\$20.49	\$20.90	\$21.31	\$21.74	\$22.17	\$22.62	\$23.07	\$23.53	\$24.00
Annual Base Charge	\$236.28	\$241.01	\$245.83	\$250.74	\$255.76	\$260.87	\$266.09	\$271.41	\$276.84	\$282.38	\$288.02
Total Annual Revenue	\$756,332	\$793,872	\$836,299	\$869,323	\$894,382	\$922,705	\$951,803	\$981,424	\$1,011,849	\$1,043,099	\$1,069,433

Wards 3 & 4 - Colchester South & Harrow	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448	3,448
New	24	60	98	144	169	179	194	214	234	254	264
Subtotal Customers	3,472	3,508	3,546	3,592	3,617	3,627	3,642	3,662	3,682	3,702	3,712
Monthly Base Charge	\$19.69	\$20.08	\$20.49	\$20.90	\$21.31	\$21.74	\$22.17	\$22.62	\$23.07	\$23.53	\$24.00
Annual Base Charge	\$236.28	\$241.01	\$245.83	\$250.74	\$255.76	\$260.87	\$266.09	\$271.41	\$276.84	\$282.38	\$288.02
Total Annual Revenue	\$820,420	\$845,505	\$871,756	\$900,725	\$925,134	\$946,245	\$969,162	\$993,973	\$1,019,389	\$1,045,425	\$1,069,213



Table 6-2
Town of Essex
Base Charge Forecast – Wastewater

Wastewater	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	5,163	5,163	5,163	5,163	5,163	5,163	5,163	5,163	5,163	5,163	5,163
New	63	154	241	329	384	434	489	548	607	654	677
Subtotal Customers	5,226	5,317	5,404	5,492	5,547	5,597	5,652	5,711	5,770	5,817	5,840
Total Annual Revenue	\$1,310,233	\$1,359,674	\$1,409,586	\$1,461,346	\$1,505,548	\$1,549,358	\$1,595,772	\$1,644,619	\$1,694,782	\$1,742,735	\$1,784,608

Ward 1 - Essex Service Area	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903	2,903
New	39	94	143	185	215	255	295	334	373	412	431
Subtotal Customers	2,942	2,997	3,046	3,088	3,118	3,158	3,198	3,237	3,276	3,315	3,334
Monthly Base Charge	\$20.68	\$21.09	\$21.52	\$21.95	\$22.38	\$22.83	\$23.29	\$23.75	\$24.23	\$24.71	\$25.21
Annual Base Charge	\$248.16	\$253.12	\$258.19	\$263.35	\$268.62	\$273.99	\$279.47	\$285.06	\$290.76	\$296.57	\$302.51
Total Annual Revenue	\$730,087	\$758,610	\$786,434	\$813,223	\$837,546	\$865,256	\$893,740	\$922,732	\$952,526	\$983,143	\$1,008,554

Ward 3 - Colchester South Service Area	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069	1,069
New	11	27	47	77	92	92	96	104	112	120	124
Subtotal Customers	1,080	1,096	1,116	1,146	1,161	1,161	1,165	1,173	1,181	1,189	1,193
Monthly Base Charge	\$21.71	\$22.14	\$22.59	\$23.04	\$23.50	\$23.97	\$24.45	\$24.94	\$25.44	\$25.95	\$26.46
Annual Base Charge	\$260.52	\$265.73	\$271.05	\$276.47	\$282.00	\$287.64	\$293.39	\$299.26	\$305.24	\$311.35	\$317.57
Total Annual Revenue	\$281,362	\$291,241	\$302,486	\$316,830	\$327,396	\$333,944	\$341,797	\$351,027	\$360,489	\$370,190	\$378,864

Ward 4 - Harrow Service Area	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191	1,191
New	13	33	51	67	77	87	98	110	122	122	122
Subtotal Customers	1,204	1,224	1,242	1,258	1,268	1,278	1,289	1,301	1,313	1,313	1,313
Monthly Base Charge	\$20.68	\$21.09	\$21.52	\$21.95	\$22.38	\$22.83	\$23.29	\$23.75	\$24.23	\$24.71	\$25.21
Annual Base Charge	\$248.16	\$253.12	\$258.19	\$263.35	\$268.62	\$273.99	\$279.47	\$285.06	\$290.76	\$296.57	\$302.51
Total Annual Revenue	\$298,785	\$309,823	\$320,667	\$331,294	\$340,606	\$350,158	\$360,235	\$370,860	\$381,767	\$389,402	\$397,190



Chapter 7

Analysis of Water and Wastewater Rates and Policy Matters



7. Analysis of Water and Wastewater Rates and Policy Matters

7.1 Introduction

To summarize the analysis undertaken thus far, Chapter 2 reviewed capital-related issues and responds to the provincial directives to maintain and upgrade infrastructure to required levels. Chapter 4 provided a review of capital financing options to which water and wastewater reserve contributions will be the predominant basis for financing future capital replacement. Chapter 5 established the 10-year operating forecast of expenditures including an annual capital reserve contribution. The base charge revenues are to ensure that there is a level of guaranteed revenue recovered regardless of the amount of volume used by customers (as per section 6.5, these have been increased for inflation at 2% per year over the forecast period). This chapter will provide for the calculation of the volume rates over the forecast period. These calculations will be based on the net operating expenditures (the variable costs) provided in Chapter 5, divided by the water consumption forecast and wastewater volumes provided in section 1.8.

7.2 Water Rates

Based on the discussion of rate structures provided in section 6.5 and the recommendation to continue with the present structures, the rates are calculated by taking the net recoverable amounts from Tables 5-1 and 5-2 (the product of total expenditures less non-rate revenues and deduct the base charge amounts provided in section 6.5) and completes the calculation by dividing them by the volumes resulting in the forecasted rates. The volume rates are anticipated to increase by 1% per year over the forecast period. The volume rates are presented in Table 7-1 for Wards 1 & 2 and Table 7-2 for Wards 3 & 4. Detailed calculations of the volume rates are provided in Appendix C. A summary of the recommended base charge and volume rates along with the total annual bill for an average residential user with a usage of 180 m³ per year for Wards 1 & 2 and 145 m³ for Wards 3 & 4 are as follows:



Table 7-1
Town of Essex
Water Rate Summary – Wards 1 & 2
Annual Customer Water Bill – Based on 180 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$19.69	\$20.08	\$20.49	\$20.90	\$21.31	\$21.74	\$22.17	\$22.62	\$23.07	\$23.53	\$24.00
Constant Rate	\$1.45	\$1.46	\$1.47	\$1.48	\$1.49	\$1.50	\$1.52	\$1.54	\$1.56	\$1.58	\$1.60
Annual Base Rate Bill	\$236.28	\$241.01	\$245.83	\$250.74	\$255.76	\$260.87	\$266.09	\$271.41	\$276.84	\$282.38	\$288.02
Volume	180	180	180	180	180	180	180	180	180	180	180
Annual Volume Bill	\$261.00	\$262.80	\$264.60	\$266.40	\$268.20	\$270.00	\$273.60	\$277.20	\$280.80	\$284.40	\$288.00
Total Annual Bill	\$497.28	\$503.81	\$510.43	\$517.14	\$523.96	\$530.87	\$539.69	\$548.61	\$557.64	\$566.78	\$576.02
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		0.7%	0.7%	0.7%	0.7%	0.7%	1.3%	1.3%	1.3%	1.3%	1.3%
%Increase - Total Annual Bill		1.3%	1.3%	1.3%	1.3%	1.3%	1.7%	1.7%	1.6%	1.6%	1.6%

Table 7-2
Town of Essex
Water Rate Summary – Wards 3 & 4
Annual Customer Water Bill – Based on 145 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$19.69	\$20.08	\$20.49	\$20.90	\$21.31	\$21.74	\$22.17	\$22.62	\$23.07	\$23.53	\$24.00
Constant Rate	\$1.63	\$1.65	\$1.67	\$1.69	\$1.71	\$1.73	\$1.75	\$1.77	\$1.79	\$1.81	\$1.83
Annual Base Rate Bill	\$236.28	\$241.01	\$245.83	\$250.74	\$255.76	\$260.87	\$266.09	\$271.41	\$276.84	\$282.38	\$288.02
Volume	145	145	145	145	145	145	145	145	145	145	145
Annual Volume Bill	\$236.35	\$239.25	\$242.15	\$245.05	\$247.95	\$250.85	\$253.75	\$256.65	\$259.55	\$262.45	\$265.35
Total Annual Bill	\$472.63	\$480.26	\$487.98	\$495.79	\$503.71	\$511.72	\$519.84	\$528.06	\$536.39	\$544.83	\$553.37
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
%Increase - Total Annual Bill		1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%



7.3 Wastewater Rates

Similar to water, the calculation of the wastewater rates takes the net recoverable amounts from Tables 5-3, 5-4 and 5-5 and completes the calculation by dividing them by the volumes in each ward, resulting in the forecast rates. Detailed calculations are provided in Appendix D. It is recommended that the wastewater volume rates for Ward 1 increase by 2% per year over the forecast period. It is recommended that the volume rates for Ward 3 increase at an annual rate of 3% for 2021-2025, and 2% annually thereafter (2026-2030). The wastewater rates for Ward 4 are recommended to increase by 3% per year over the forecast period.

Tables 7-3, 7-4 and 7-5 summarize the recommended rates for wastewater and provide the average annual bill for a residential customer who utilizes 180 m³ per year for Ward 1, 130 m³ per year for Ward 3, and 160 m³ per year for Ward 4.



Table 7-3
Town of Essex
Wastewater Rate Summary – Ward 1
Annual Customer Wastewater Bill – Based on 180 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$20.68	\$21.09	\$21.52	\$21.95	\$22.38	\$22.83	\$23.29	\$23.75	\$24.23	\$24.71	\$25.21
Constant Rate	\$1.44	\$1.47	\$1.50	\$1.53	\$1.56	\$1.59	\$1.62	\$1.65	\$1.68	\$1.71	\$1.74
Annual Base Rate Bill	\$248.16	\$253.12	\$258.19	\$263.35	\$268.62	\$273.99	\$279.47	\$285.06	\$290.76	\$296.57	\$302.51
Volume	180	180	180	180	180	180	180	180	180	180	180
Annual Volume Bill	\$259.20	\$264.60	\$270.00	\$275.40	\$280.80	\$286.20	\$291.60	\$297.00	\$302.40	\$307.80	\$313.20
Total Annual Bill	\$507.36	\$517.72	\$528.19	\$538.75	\$549.42	\$560.19	\$571.07	\$582.06	\$593.16	\$604.37	\$615.71
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		2.1%	2.0%	2.0%	2.0%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%
%Increase - Total Annual Bill		2.0%	2.0%	2.0%	2.0%	2.0%	1.9%	1.9%	1.9%	1.9%	1.9%

Table 7-4
Town of Essex
Wastewater Rate Summary – Ward 3
Annual Customer Wastewater Bill – Based on 130 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$21.71	\$22.14	\$22.59	\$23.04	\$23.50	\$23.97	\$24.45	\$24.94	\$25.44	\$25.95	\$26.46
Constant Rate	\$2.20	\$2.27	\$2.34	\$2.41	\$2.48	\$2.55	\$2.60	\$2.65	\$2.70	\$2.75	\$2.81
Annual Base Rate Bill	\$260.52	\$265.73	\$271.05	\$276.47	\$282.00	\$287.64	\$293.39	\$299.26	\$305.24	\$311.35	\$317.57
Volume	130	130	130	130	130	130	130	130	130	130	130
Annual Volume Bill	\$286.00	\$295.10	\$304.20	\$313.30	\$322.40	\$331.50	\$338.00	\$344.50	\$351.00	\$357.50	\$365.30
Total Annual Bill	\$546.52	\$560.83	\$575.25	\$589.77	\$604.40	\$619.14	\$631.39	\$643.76	\$656.24	\$668.85	\$682.87
%Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
%Increase - Volume Rate		3.2%	3.1%	3.0%	2.9%	2.8%	2.0%	1.9%	1.9%	1.9%	2.2%
%Increase - Total Annual Bill		2.6%	2.6%	2.5%	2.5%	2.4%	2.0%	2.0%	1.9%	1.9%	2.1%



Table 7-5
Town of Essex
Wastewater Rate Summary – Ward 4
Annual Customer Wastewater Bill – Based on 160 m³ of Volume

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$20.68	\$21.09	\$21.52	\$21.95	\$22.38	\$22.83	\$23.29	\$23.75	\$24.23	\$24.71	\$25.21
Constant Rate	\$1.93	\$1.99	\$2.05	\$2.11	\$2.17	\$2.24	\$2.31	\$2.38	\$2.45	\$2.52	\$2.60
Annual Base Rate Bill	\$248.16	\$253.12	\$258.19	\$263.35	\$268.62	\$273.99	\$279.47	\$285.06	\$290.76	\$296.57	\$302.51
Volume	160	160	160	160	160	160	160	160	160	160	160
Annual Volume Bill	\$308.80	\$318.40	\$328.00	\$337.60	\$347.20	\$358.40	\$369.60	\$380.80	\$392.00	\$403.20	\$416.00
Total Annual Bill	\$556.96	\$571.52	\$586.19	\$600.95	\$615.82	\$632.39	\$649.07	\$665.86	\$682.76	\$699.77	\$718.51
% Increase - Base Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
% Increase - Volume Rate		3.1%	3.0%	2.9%	2.8%	3.2%	3.1%	3.0%	2.9%	2.9%	3.2%
% Increase - Total Annual Bill		2.6%	2.6%	2.5%	2.5%	2.7%	2.6%	2.6%	2.5%	2.5%	2.7%



Chapter 8

Recommendations



8. Recommendations

As presented within this report, capital and operating expenditures have been identified and forecast over a ten-year period for water and wastewater services.

Based upon the foregoing, the following recommendations are identified for consideration by Town Council:

1. That Council provide for the recovery of all water and wastewater costs through full cost recovery rates.
2. That Council consider the Capital Plan for water and wastewater as provided in Tables 2-1 through 2-5 and the associated Capital Financing Plan as set out in Tables 4-1 through 4-5.
3. That Council consider the base charges provided in Table 6-1 for water and Table 6-2 for wastewater.
4. That Council consider the volume rates for water and wastewater as provided in Tables 7-1 through 7-5.



Appendices



Appendix A

Water System Inventory Data



Table A-1-1
Town of Essex
Water Service – Wards 1 &2
Water Meters, Machinery, and Equipment

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1632	ES: Water - Admin	1&2	Diesel Air Compressor	Essex Water Service Shop	2005	10	2021	22,320	0	suggested for 10 year capital forecast	22,320
1633	ES: Water - Admin	1&2	Front End Loader	Essex Water Service Shop	2000	10	2021	6,820	0	suggested for 10 year capital forecast	6,820
1634	ES: Water - Admin	1&2	Noise Leak Correlator	Essex Water Service Shop	2004	10	2021	33,670	0	suggested for 10 year capital forecast	33,670
2741	ES: Water - Admin	1&2	Water Meter Reader w/Charge	0	2008	20	2028	10,350	7	suggested for 10 year capital forecast	10,350
23252	ES: Water - Distribution/Transmission	1&2	Mag Meter	Ward 1	2009	15	2024	8,100	3	suggested for 10 year capital forecast	8,100
23263	ES: Water - Admin	1&2	AVL Guidance System	0	2009	3	2021	4,690	0	suggested for 10 year capital forecast	4,690
23553	ES: Water - Admin	1&2	DL Receiver & Transmitter	Water Dept	2010	20	2030	10,480	9	suggested for 10 year capital forecast	10,480
Total								96,430		0	96,430



Table A-1-2
Town of Essex
Water Service – Wards 1 & 2
Water Vehicles

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Vehicle Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1668	ES: Water - Admin	1&2/3&4	Truck	120 Sinasac St W	2006	8	2021	24,020	0	suggested for 10 year capital forecast	24,020
1669	ES: Water - Admin	1&2/3&4	Truck	120 Sinasac St W	2008	7	2021	18,450	0	suggested for 10 year capital forecast	18,450
24109	ES: Water - Admin	1&2/3&4	Pickup Truck	Sinasac St	2011	10	2021	17,910	0	suggested for 10 year capital forecast	17,910
24392	ES: Water - Admin	1&2/3&4	2012 Dodge Ram	Water Treatment Plant (OCWA)	2012	10	2022	12,910	1	suggested for 10 year capital forecast	12,910
24731	ES: Water - Admin	1&2/3&4	2014 Dodge Ram	Water Department	2014	8	2022	13,000	1	suggested for 10 year capital forecast	13,000
25057	ES: Water - Admin	1&2/3&4	Truck	120 Sinasac St W	2015	10	2025	24,580	4	suggested for 10 year capital forecast	24,580
25821	ES: Water - Distribution/Transmission	1&2/3&4	Pickup Truck	Water/Sanitary Sewer	2018	10	2028	18,410	7	suggested for 10 year capital forecast	18,410
Total								129,280		-	129,280



**Table A-1-3
Town of Essex
Water Service – Wards 1 & 2
Watermains**

Asset ID	Category	Segment	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1215	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	60	2025	51,040	4	suggested for 10 year capital forecast	51,040
1216	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	60	2025	1,616,930	4	suggested for 10 year capital forecast	1,616,930
1217	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Laird Avenue	0	1&2	1965	48	2021	1,211,550	0	suggested for 10 year capital forecast	1,211,550
1218	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	49	2021	146,300	0	suggested for 10 year capital forecast	146,300
1219	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	50	2021	2,118,200	0	suggested for 10 year capital forecast	2,118,200
1220	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	50	2021	822,510	0	suggested for 10 year capital forecast	822,510
1221	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	50	2021	242,240	0	suggested for 10 year capital forecast	242,240
1222	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1965	80	2045	204,680	24	10,822	-
1223	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1975	50	2025	1,879,280	4	suggested for 10 year capital forecast	1,879,280
1224	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1975	50	2025	1,560,910	4	suggested for 10 year capital forecast	1,560,910
1225	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1975	50	2025	1,456,320	4	suggested for 10 year capital forecast	1,456,320
1226	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	1999	80	2079	48,540	58	1,422	-
1227	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1999	80	2079	23,420	58	686	-
1228	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	1999	80	2079	3,678,960	58	107,744	-
1229	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	1999	80	2079	6,897,670	58	202,010	-
1230	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1999	80	2079	1,564,970	58	45,833	-
1231	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	1999	80	2079	7,551,380	58	221,155	-
1232	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1999	80	2079	147,460	58	4,319	-
1233	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	1999	80	2079	2,118,690	58	62,049	-
1234	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1999	80	2079	104,170	58	3,051	-
1235	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	1999	80	2079	431,570	58	12,639	-
1236	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	1999	80	2079	192,590	58	5,640	-
1237	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	2000	80	2080	49,060	59	1,424	-
1238	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	2000	80	2080	23,680	59	687	-
1239	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	2000	80	2080	3,718,770	59	107,928	-
1240	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	2000	80	2080	6,972,320	59	202,354	-
1241	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	2000	80	2080	1,581,910	59	45,911	-



Table A-1-3 (Cont'd)

Asset ID	Category	Segment	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1242	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	2000	80	2080	7,633,100	59	221,531	-
1243	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	2000	80	2080	149,050	59	4,326	-
1244	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	2000	80	2080	2,141,620	59	62,155	-
1245	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	2000	80	2080	105,300	59	3,056	-
1246	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Col.N.	0	1&2	2000	80	2080	436,240	59	12,661	-
1247	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Union Wards 1 & 2 - Essex	0	1&2	2000	80	2080	194,680	59	5,650	-
23280	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Clark Street	Secord Ave to Erie Ave	1&2	2009	80	2089	158,320	68	4,280	-
23771	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ST. PAUL ST	Brien Ave W to Wellington	1&2	2010	80	2090	42,330	69	1,136	-
23772	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ST. JAMES ST	Brien Ave W to Wellington	1&2	2010	80	2090	42,510	69	1,141	-
23773	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ST. JAMES ST	Wellington to Fairview	1&2	2010	80	2090	46,150	69	1,239	-
23774	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	LANGTRY ST	Brien Ave W to Wellington	1&2	2010	80	2090	41,620	69	1,117	-
23775	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	LANGTRY ST	Wellington to Fairview	1&2	2010	80	2090	45,100	69	1,211	-
23776	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	WELLINGTON AV W	Talbot St S to St Paul	1&2	2010	80	2090	27,510	69	739	-
23777	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	WELLINGTON AV W	St Paul to St James	1&2	2010	80	2090	26,470	69	711	-
23778	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	WELLINGTON AV W	St James to Langtry	1&2	2010	80	2090	25,590	69	687	-
24314	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Goodburn Court	Township to Townsview	1&2	2012	80	2092	37,120	71	983	-
24404	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	SOUTH TALBOT ROAD	WARD 1	1&2	2012	50	2062	43,430	41	1,562	-
24405	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	SOUTH TALBOT ROAD	WARD 1	1&2	2012	50	2062	41,720	41	1,501	-
24407	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	MAIDSTONE AVENUE WEST	WARD 1	1&2	2012	80	2092	126,350	71	3,348	-
24566	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Laird Avenue (150mm)	South Talbot to Alice	1&2	2013	50	2063	74,710	42	2,646	-
24567	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Laird Avenue (200mm)	South Talbot to Alice	1&2	2013	50	2063	749,570	42	26,548	-
24756	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Mortion Avenue	Ward 1	1&2	2014	80	2094	83,210	73	2,177	-
24757	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Mortion Avenue	Ward 1	1&2	2014	80	2094	10,480	73	274	-
24758	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Mortion Avenue	Ward 1	1&2	2014	80	2094	9,980	73	261	-
24759	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Mortion Avenue	Ward 1	1&2	2014	80	2094	10,680	73	279	-
24760	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Mortion Avenue	Ward 1	1&2	2014	80	2094	25,120	73	657	-
24777	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Brien Avenue W	Ward 1	1&2	2014	80	2094	22,780	73	596	-
24778	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Brien Avenue W	Ward 1	1&2	2014	80	2094	8,900	73	233	-
24869	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	JENNER	LAIRD AND ILER	1&2	2014	80	2094	27,360	73	716	-
24870	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	JENNER	LAIRD AND ILER	1&2	2014	80	2094	27,640	73	723	-
24871	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	940	73	25	-
24872	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	JENER	ILIRAND BRIEN AVE W	1&2	2014	80	2094	58,250	73	1,524	-
24874	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	1,420	73	37	-
24875	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	1,060	73	28	-
24876	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	1,030	73	27	-
24877	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	1,380	73	36	-
24878	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	390	73	10	-
24879	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	ILER	ALICE AND JENNER	1&2	2014	80	2094	370	73	10	-
25018	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Irwin Ave to Fairview Ave E	1&2	2015	80	2095	41,880	74	1,089	-
25020	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Irwin Ave to Fairview Ave E	1&2	2015	80	2095	5,380	74	140	-
25021	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Talbot St S to Irwin Ave	1&2	2015	80	2095	59,500	74	1,547	-
25022	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Irwin Ave to Fairview Ave E	1&2	2015	80	2095	7,090	74	184	-
25023	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Talbot St S to Irwin Ave	1&2	2015	80	2095	19,420	74	505	-
25024	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Talbot St S to Irwin Ave	1&2	2015	80	2095	5,760	74	150	-
25025	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Talbot St S to Irwin Ave	1&2	2015	80	2095	2,580	74	67	-
25026	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Irwin Ave to Fairview Ave E	1&2	2015	80	2095	3,330	74	87	-
25029	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Gosfield Townline	Irwin Ave to Fairview Ave E	1&2	2015	80	2095	35,550	74	925	-
25121	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Wellington & Fairview Ave W	1&2	2015	80	2095	1,210	74	31	-
25122	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Wellington & Fairview Ave W	1&2	2015	80	2095	480	74	12	-



Table A-1-3 (Cont'd)

Asset ID	Category	Segment	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
25123	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James and Langtry	1&2	2015	80	2095	41,710	74	1,085	-
25124	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Langtry & Westlawn	1&2	2015	80	2095	35,940	74	935	-
25125	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Langtry & Westlawn	1&2	2015	80	2095	7,010	74	182	-
25126	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Langtry and Westlawn	1&2	2015	80	2095	2,850	74	74	-
25127	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Kimball Dr to Hanlan St S	1&2	2015	80	2095	59,400	74	1,545	-
25128	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Kimball Dr to Hanlan St S	1&2	2015	80	2095	24,780	74	644	-
25129	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Houghton to Fairview	1&2	2015	80	2095	1,500	74	39	-
25130	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Hanlan to Kimball	1&2	2015	80	2095	4,200	74	109	-
25131	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	35,860	74	933	-
25132	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	5,440	74	141	-
25133	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	11,030	74	287	-
25134	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	28,270	74	735	-
25135	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	4,450	74	116	-
25136	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	8,940	74	233	-
25137	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	740	74	19	-
25138	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	St James to Talbot St S	1&2	2015	80	2095	3,130	74	81	-
25139	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Kimball Dr to Hanlan St S	1&2	2015	80	2095	2,310	74	60	-
25140	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	Kimball Dr to Hanlan St S	1&2	2015	80	2095	2,970	74	77	-
25141	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Westlawn	Brien Ave to Fairview	1&2	2015	80	2095	7,400	74	192	-
25142	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Westlawn	Westlawn & Kimball	1&2	2015	80	2095	8,120	74	211	-
25143	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Westlawn	Westlawn & Kimball	1&2	2015	80	2095	47,370	74	1,232	-
25144	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Westlawn	Westlawn & Kimball	1&2	2015	80	2095	3,620	74	94	-
25145	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Fairview Avenue West	South Talbot	1&2	2015	80	2095	16,780	74	436	-
25146	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Westlawn	Brien Ave W & Fairview	1&2	2015	80	2095	2,700	74	70	-
Total									59,443,300		1,415,784	11,105,280



Table A-1-4
Town of Essex
Water Service – Wards 1 & 2
Water Hydrants

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
512	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	380 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
513	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	332 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
514	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	290 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
515	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	246 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
516	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Talbot and Gosfield Townline	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
517	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	319 Irwin Ave	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
518	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	273 Irwin Ave	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
519	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	237 Irwin Ave	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
520	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	193 Irwin Ave	1994	40	2034	4,480	13	395	-
521	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	299 Gosfield Townline	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
522	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	333 Gosfield Townline	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
523	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	8 Parklane	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
524	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	11 Willow Cres	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
525	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	27 Oak Dr	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
526	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	66 Oak Dr	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
527	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1 Meadow Lane	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
528	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Meadow Lane	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
529	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	100 Oak Dr	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
530	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	124 Oak Dr	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
531	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	48 Parklane	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
532	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	28 Parklane	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
533	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	193 Oak Dr	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
534	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	173 Oak Dr	1989	40	2029	4,480	8	suggested for 10 year capital forecast	4,480
535	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	294 Woodview Dr	1997	40	2037	4,460	16	328	-
536	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	262 Woodview Dr	1997	40	2037	4,460	16	328	-
537	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	226 Woodview Dr	1997	40	2037	4,460	16	328	-
538	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	198 Woodview Dr	1997	40	2037	4,460	16	328	-
539	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	285 Fairview Ave W	1997	18	2021	4,460	0	suggested for 10 year capital forecast	4,460
540	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	247 Fairview Ave W	1997	40	2037	4,460	16	328	-
541	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	209 Fairview Ave W	1997	18	2021	4,460	0	suggested for 10 year capital forecast	4,460
542	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	105 Fairview Ave W	1989	26	2021	4,480	0	suggested for 10 year capital forecast	4,480
543	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Fairview and Langtry	1965	50	2021	6,600	0	suggested for 10 year capital forecast	6,600
544	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Essex Arena: 26 Fairview Ave W	1965	50	2021	6,600	0	suggested for 10 year capital forecast	6,600
546	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Fairview Ave W H. N. Church	2000	40	2040	4,520	19	288	-
547	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Fairview Ave W and Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
548	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	45 Fairview Ave E	2006	40	2046	4,500	25	230	-
549	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	105 Fairview Ave E	2006	40	2046	4,500	25	230	-
550	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	151 Fairview Ave E	2006	40	2046	4,500	25	230	-
551	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	195 Fairview Ave E	2006	40	2046	4,500	25	230	-
552	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	241 Fairview Ave E	2006	40	2046	4,500	25	230	-
553	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	281 Fairview Ave E	2006	40	2046	4,500	25	230	-
554	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	315 Fairview Ave E	2006	40	2046	4,500	25	230	-
555	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	346 Maidstone Ave E	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
556	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	314 Maidstone Ave E	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
557	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	274 Maidstone Ave E	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
558	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	246 Maidstone Ave E	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
559	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	271 Brien Ave E	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
560	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	245 Brien Ave E	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
561	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	209 Brien Ave E	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
562	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	187 Brien Ave E	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
563	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	143 Brien Ave E	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
564	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	90 Gosfield Townline	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
565	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	130 Gosfield Townline	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
566	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	158 Gosfield Townline	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
567	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Gosfield Townline and Frances Crt	1985	40	2025	4,480	4	suggested for 10 year capital forecast	4,480
568	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	76 Stanley St	1965	48	2021	6,600	0	suggested for 10 year capital forecast	6,600
569	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	52 Stanley St	1965	48	2021	6,600	0	suggested for 10 year capital forecast	6,600
570	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	123 Cranbrook Crt	2002	40	2042	4,450	21	262	-
571	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Cranberry Crt	2002	40	2042	4,450	21	262	-
572	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	64 Maple Row	1965	48	2021	6,600	0	suggested for 10 year capital forecast	6,600
573	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	18 Maple Row	1965	48	2021	6,600	0	suggested for 10 year capital forecast	6,600
574	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	105 Irwin Ave	1965	48	2021	6,600	0	suggested for 10 year capital forecast	6,600
575	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	49 Irwin Ave	1965	48	2021	6,600	0	suggested for 10 year capital forecast	6,600
576	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	122 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
577	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	82 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
578	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	48 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
579	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
580	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	38 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
581	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	70 Talbot St S	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
582	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	102 Talbot St N	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
583	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	138 Talbot St N	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
584	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Talbot St N and Maidstone Ave	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
585	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	224 Talbot St N	2000	40	2040	4,520	19	288	-
586	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	244 Talbot St N High School	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
587	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	244 Talbot St N High School North Entrance	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
588	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	328 Talbot St N Essex Ford	1975	40	2021	5,150	0	suggested for 10 year capital forecast	5,150
589	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	346 Talbot St N	1975	38	2021	5,150	0	suggested for 10 year capital forecast	5,150
590	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	190 Talbot St S	1975	38	2021	5,150	0	suggested for 10 year capital forecast	5,150
593	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	47 Brien Ave W	2004	20	2024	4,510	3	suggested for 10 year capital forecast	4,510
594	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	78 Brien Ave W	2004	20	2024	4,510	3	suggested for 10 year capital forecast	4,510
595	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	124 Westlawn Dr	1984	29	2021	4,460	0	suggested for 10 year capital forecast	4,460
596	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	100 Westlawn Dr	1984	29	2021	4,460	0	suggested for 10 year capital forecast	4,460
597	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	125 Brien Ave W	2004	20	2024	4,510	3	suggested for 10 year capital forecast	4,510
598	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	153 Brien Ave W	2004	20	2024	4,510	3	suggested for 10 year capital forecast	4,510
599	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Hanlan St and Brien Ave W	1989	24	2021	4,480	0	suggested for 10 year capital forecast	4,480
600	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	162 Iler Ave	1975	38	2021	5,150	0	suggested for 10 year capital forecast	5,150
601	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	121 Margaret Brown Crt	1990	23	2021	4,430	0	suggested for 10 year capital forecast	4,430
602	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Iler Lodge (W. End)	2000	20	2021	4,520	0	suggested for 10 year capital forecast	4,520
603	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Iler Lodge (E. End)	1975	38	2021	5,150	0	suggested for 10 year capital forecast	5,150



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
604	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Iler Ave and Jenner St	1975	39	2021	5,150	0	suggested for 10 year capital forecast	5,150
605	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	32 Alice St	1992	21	2021	4,450	0	suggested for 10 year capital forecast	4,450
606	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	18 Alice St N	1992	21	2021	4,450	0	suggested for 10 year capital forecast	4,450
607	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	60 Alice St N	1992	21	2021	4,450	0	suggested for 10 year capital forecast	4,450
608	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Laird Ave and Alice St	2007	6	2021	4,480	0	suggested for 10 year capital forecast	4,480
609	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	63 Laird Ave	1960	53	2021	6,990	0	suggested for 10 year capital forecast	6,990
610	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	105 Laird Ave	1991	22	2021	4,440	0	suggested for 10 year capital forecast	4,440
611	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	90 Laird Ave (Alley Behind)	1988	25	2021	4,490	0	suggested for 10 year capital forecast	4,490
612	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	141 Laird Ave	1958	55	2021	7,270	0	suggested for 10 year capital forecast	7,270
613	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	34 Hanlan St S	2004	9	2021	4,510	0	suggested for 10 year capital forecast	4,510
614	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10 Hanlan St N	2004	9	2021	4,510	0	suggested for 10 year capital forecast	4,510
615	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	247 Laird Ave	1958	55	2021	7,270	0	suggested for 10 year capital forecast	7,270
616	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	275 Laird Ave	1985	28	2021	4,480	0	suggested for 10 year capital forecast	4,480
617	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	337 Laird Ave	1958	55	2021	7,270	0	suggested for 10 year capital forecast	7,270
618	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	28 Milne St	1975	80	2055	5,150	34	210	-
619	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	280 Iler Ave	1975	80	2055	5,150	34	210	-
620	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	320 Iler Ave	1975	80	2055	5,150	34	210	-
621	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	356 Iler Ave	1975	80	2055	5,150	34	210	-
622	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	355 Brien Ave W	1975	80	2055	5,150	34	210	-
623	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	68 Edward St	1975	80	2055	5,150	34	210	-
624	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	299 Kelly St	1975	80	2055	5,150	34	210	-
625	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	257 Kelly St	1975	80	2055	5,150	34	210	-
626	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	54 Milne St	1975	80	2055	5,150	34	210	-
627	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	319 Brien Ave W	1975	80	2055	5,150	34	210	-
628	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	279 Brien Ave W	1975	80	2055	5,150	34	210	-
629	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	91 Milne St Right Side of House	1975	80	2055	5,150	34	210	-
630	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	231 Brien Ave W Corner Lot	2001	80	2081	4,470	60	129	-
631	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	205 Brien Ave W	2001	80	2081	4,470	60	129	-
632	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	114 Queen Crt	1975	80	2055	5,150	34	210	-



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
633	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	114 Kim St	1975	80	2055	5,150	34	210	-
634	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	118 Michael Dr	1975	80	2055	5,150	34	210	-
635	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	168 Patrick Cres	1975	80	2055	5,150	34	210	-
636	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	128 Patrick Cres	1975	80	2055	5,150	34	210	-
637	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	179 Arthur Ave	1975	80	2055	5,150	34	210	-
638	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	155 Arthur Ave	1985	80	2065	4,480	44	154	-
639	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	127 Arthur Ave	1985	80	2065	4,480	44	154	-
640	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	89 Arthur Ave	1985	80	2065	4,480	44	154	-
641	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	69 Arthur Ave	1985	80	2065	4,480	44	154	-
642	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Arthur Ave and Maple Row	1985	80	2065	4,480	44	154	-
643	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Arthur Ave and Irwin Ave	1985	80	2065	4,480	44	154	-
644	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Gordon St	1985	80	2065	4,480	44	154	-
645	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Gordon St and Station St (Post Office)	1965	80	2045	6,600	24	349	-
646	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	86 Wilson Ave	1965	80	2045	6,600	24	349	-
647	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	64 Wilson Ave	1965	80	2045	6,600	24	349	-
648	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Wilson Ave and Station St	1965	80	2045	6,600	24	349	-
649	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Arthur Ave and Fox St	1965	80	2045	6,600	24	349	-
650	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	61 Centre St and Russell St	1992	80	2072	4,450	51	140	-
651	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	284 Centre St	2002	80	2082	4,450	61	127	-
652	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	322 Centre St	2002	80	2082	4,450	61	127	-
653	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Centre St and Hanlan St	2002	80	2082	4,450	61	127	-
654	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Mine St and Centre St	2002	80	2082	4,450	61	127	-
657	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Victoria Ave (Fire Hall)	1983	80	2063	4,490	42	159	-
659	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	48 Victoria Ave	1965	80	2045	6,600	24	349	-
660	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	87 Victoria Ave	1983	80	2063	4,490	42	159	-
661	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	145 Victoria Ave	1983	80	2063	4,490	42	159	-
662	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	185 Victoria Ave	1983	80	2063	4,490	42	159	-
663	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	221 Victoria Ave	1983	80	2063	4,490	42	159	-
664	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Victoria Ave and Viscount Parkway	1983	80	2063	4,490	42	159	-
665	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	317 Victoria Ave	1983	80	2063	4,490	42	159	-
666	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Victoria Ave and S Talbot Rd	1983	80	2063	4,490	42	159	-
667	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	S Talbot St N	1983	80	2063	4,490	42	159	-
668	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	38 Cameron Ave	1988	80	2068	4,490	47	148	-
669	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	76 Cameron Ave	1988	80	2068	4,490	47	148	-
670	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	118 Cameron Ave	1988	80	2068	4,490	47	148	-
671	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	37 Medora Ave	1988	80	2068	4,490	47	148	-
672	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	44 Medora Ave	1988	80	2068	4,490	47	148	-
673	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	168 Albert St	1988	80	2068	4,490	47	148	-
674	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	170 Harvey St	1988	80	2068	4,490	47	148	-
675	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	210 Bell Ave	1988	80	2068	4,490	47	148	-
676	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	104 Thomas St	1988	80	2068	4,490	47	148	-
677	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	142 Thomas St	1988	80	2068	4,490	47	148	-
678	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	166 Thomas St	1988	80	2068	4,490	47	148	-
679	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	190 Brock St	1988	80	2068	4,490	47	148	-
680	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Bell St and Thomas St	1988	80	2068	4,490	47	148	-
681	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	182 Forest Ave	1999	80	2079	4,470	58	131	-
682	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	121 Bell Ave	1985	80	2065	4,480	44	154	-
683	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	15 Allen Ave	1985	80	2065	4,480	44	154	-
684	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	345 Allen Ave	1985	80	2065	4,480	44	154	-
685	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Allen and Maidstone Ave (Waddick Fuel)	1985	80	2065	4,480	44	154	-
686	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	150 Maidstone Ave E	1985	80	2065	4,480	44	154	-
687	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	150 Golfway	1995	80	2075	4,450	54	136	-
688	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	82 Townsview	1995	80	2075	4,450	54	136	-
689	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	46 Townsview	1995	80	2075	4,450	54	136	-
690	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	82 Maidstone Ave	1995	80	2075	4,450	54	136	-
691	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	39 Maidstone Ave	1985	80	2065	4,480	44	154	-



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
692	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	41 Orchard Park	1985	80	2065	4,480	44	154	-
693	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	69 Orchard Park	1985	80	2065	4,480	44	154	-
694	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Maidstone Ave W (Hitchcocks)	1975	80	2055	5,150	34	210	-
695	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	492 County Rd 8	1985	80	2065	4,480	44	154	-
696	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	230 Maidstone Ave W	1985	80	2065	4,480	44	154	-
697	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	260 Maidstone Ave W	1985	80	2065	4,480	44	154	-
698	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	404 Maidstone Ave W	1985	80	2065	4,480	44	154	-
699	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	182 Stanton Crt	1985	80	2065	4,480	44	154	-
700	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	67 Stanton Crt	1985	80	2065	4,480	44	154	-
701	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	93 Stanton Crt	1985	80	2065	4,480	44	154	-
702	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	157 Stanton Crt	1985	80	2065	4,480	44	154	-
703	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	150 Dowsell St	1985	80	2065	4,480	44	154	-
704	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	166 Gail St	1985	80	2065	4,480	44	154	-
705	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	34 Hanlan St S	1985	80	2065	4,480	44	154	-
706	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Centre St and Victor St	1989	80	2069	4,480	48	146	-
707	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Turnhout Cres	2008	80	2088	4,570	67	124	-
708	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	9 Queensway	1975	80	2055	5,150	34	210	-
709	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	41 Queensway	1975	80	2055	5,150	34	210	-
710	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2 Kingsway	1995	80	2075	4,450	54	136	-
711	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	38 Kingsway	1995	80	2075	4,450	54	136	-
712	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	86 Kingsway	1995	80	2075	4,450	54	136	-
713	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Behind Essex Free Press	2005	80	2085	4,490	64	125	-
714	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	College Ave	1999	80	2079	4,470	58	131	-
715	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Civic Centre S	1975	80	2055	5,150	34	210	-
716	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Civic Centre N	1975	80	2055	5,150	34	210	-
717	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	238 Lester St	2002	80	2082	4,450	61	127	-
718	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Hanlan St at Soccer Field	2002	80	2082	4,450	61	127	-
719	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Holy Names School	2002	80	2082	4,450	61	127	-
720	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	North Malden and Batten Sideroad	1999	80	2079	4,470	58	131	-
721	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	North Malden and Pinkerton Sideroad	1999	80	2079	4,470	58	131	-
722	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	North Malden and 13th Concession	1999	80	2079	4,470	58	131	-
723	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	3833 North Malden	1999	80	2079	4,470	58	131	-
724	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	North Malden and Hyland Sideroad	1999	80	2079	4,470	58	131	-
725	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	North Malden and Gesto Sideroad	1999	80	2079	4,470	58	131	-
726	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	3654 North Malden	1999	80	2079	4,470	58	131	-
727	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	3616 North Malden	1999	80	2079	4,470	58	131	-
728	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13510 13th Concession	1999	80	2079	4,470	58	131	-
729	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13500 13th Concession	1999	80	2079	4,470	58	131	-
730	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13490 13th Concession	1999	80	2079	4,470	58	131	-
731	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13482 13th Concession	1999	80	2079	4,470	58	131	-
732	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13002 Hyland Sideroad	1999	80	2079	4,470	58	131	-
733	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13414 13th Concession	1999	80	2079	4,470	58	131	-
734	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13396 13th Concession	1999	80	2079	4,470	58	131	-
735	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13360 13th Concession	1999	80	2079	4,470	58	131	-
736	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	13330 13th Concession	1999	80	2079	4,470	58	131	-
737	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2211 Gesto Sideroad	1999	80	2079	4,470	58	131	-
738	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2141 Gesto Sideroad	1999	80	2079	4,470	58	131	-
739	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2003 Gesto Sideroad	1999	80	2079	4,470	58	131	-
740	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1248 Gesto Sideroad	1999	80	2079	4,470	58	131	-
741	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1181 Gesto Sideroad	1999	80	2079	4,470	58	131	-
742	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1141 Gesto Sideroad	1999	80	2079	4,470	58	131	-
743	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	3122 Adams Ave	1999	80	2079	4,470	58	131	-
744	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2995 County Rd 12	1999	80	2079	4,470	58	131	-
745	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2949 County Rd 12	1999	80	2079	4,470	58	131	-
746	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2917 County Rd 12	1999	80	2079	4,470	58	131	-



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
747	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 12 and Batten Sideroad	1999	80	2079	4,470	58	131	-
748	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2875 County Rd 12	1999	80	2079	4,470	58	131	-
749	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2835 County Rd 12	1999	80	2079	4,470	58	131	-
750	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2823 County Rd 12	1999	80	2079	4,470	58	131	-
751	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2807 County Rd 12	1999	80	2079	4,470	58	131	-
752	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 12 and Mole Sideroad	1999	80	2079	4,470	58	131	-
753	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2739 County Rd 12	1999	80	2079	4,470	58	131	-
754	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2723 County Rd 12	1999	80	2079	4,470	58	131	-
755	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2695 County Rd 12	1999	80	2079	4,470	58	131	-
756	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2675 County Rd 12	1999	80	2079	4,470	58	131	-
757	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2656 County Rd 12	1999	80	2079	4,470	58	131	-
758	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2651 County Rd 12	1999	80	2079	4,470	58	131	-
759	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2637 County Rd 12	1999	80	2079	4,470	58	131	-
760	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2623 County Rd 12	1999	80	2079	4,470	58	131	-
761	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2611 County Road 12	1999	80	2079	4,470	58	131	-
762	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2603 County Rd 12	1999	80	2079	4,470	58	131	-
763	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2575 County Rd 12	1999	80	2079	4,470	58	131	-
764	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2549 County Rd 12	1999	80	2079	4,470	58	131	-
765	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2529 County Rd 12	1999	80	2079	4,470	58	131	-
766	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 12 and County Rd 15	1999	80	2079	4,470	58	131	-
767	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2467 County Rd 12	1999	80	2079	4,470	58	131	-
768	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2441 County Rd 12	1999	80	2079	4,470	58	131	-
769	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2423 County Rd 12	1999	80	2079	4,470	58	131	-
770	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2391 County Rd 12	1999	80	2079	4,470	58	131	-
771	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 12 and Brush Sideroad	1999	80	2079	4,470	58	131	-
772	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2333 County Rd 12	1999	80	2079	4,470	58	131	-
773	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2302 County Rd 12	1999	80	2079	4,470	58	131	-
774	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2276 County Rd 12	1999	80	2079	4,470	58	131	-
775	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	2265 County Rd 12	1999	80	2079	4,470	58	131	-
776	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1091 Tremblay Sideroad	2000	80	2080	4,520	59	131	-
777	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1068 Brush Sideroad	2000	80	2080	4,520	59	131	-
778	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1983 Brush Sideroad	2000	80	2080	4,520	59	131	-
779	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1951 South Malden Rd	2000	80	2080	4,520	59	131	-
780	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1888 South Malden Rd	2000	80	2080	4,520	59	131	-
781	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	South Malden Rd and Mole Rd	2000	80	2080	4,520	59	131	-
782	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	South Malden Rd and Ferriss Rd	2000	80	2080	4,520	59	131	-
783	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1741 South Malden Rd	2000	80	2080	4,520	59	131	-
784	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1711 South Malden Rd	2000	80	2080	4,520	59	131	-
785	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	South Malden Rd and Gesto Sideroad	2000	80	2080	4,520	59	131	-
786	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1646 South Malden Rd	2000	80	2080	4,520	59	131	-
787	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1588 South Malden Rd	2000	80	2080	4,520	59	131	-
788	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1526 South Malden Rd	2000	80	2080	4,520	59	131	-
789	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1487 S Malden Rd	2000	80	2080	4,520	59	131	-
790	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 15 and South Malden Rd	2000	80	2080	4,520	59	131	-
791	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	South Malden Rd and Brush Rd	2000	80	2080	4,520	59	131	-
792	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1345 South Malden Rd	2000	80	2080	4,520	59	131	-
793	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	South Malden Rd and Tremblay Rd	2000	80	2080	4,520	59	131	-
794	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1225 South Malden Rd	2000	80	2080	4,520	59	131	-
795	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	South Malden Rd and County Rd 11	2000	80	2080	4,520	59	131	-
796	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1090 County Rd 15	2000	80	2080	4,520	59	131	-
797	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10993 10th Concession	2000	80	2080	4,520	59	131	-
798	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10883 10th Concession	2000	80	2080	4,520	59	131	-
799	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10867 10th Concession	2000	80	2080	4,520	59	131	-
850	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1099 County Rd 23	1999	80	2079	4,470	58	131	-
851	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	1019 County Rd 23	1999	80	2079	4,470	58	131	-



Table A-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
852	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10061 County Rd 23	1999	80	2079	4,470	58	131	-
853	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10037 County Rd 23	1999	80	2079	4,470	58	131	-
854	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	10019 County Rd 23	1999	80	2079	4,470	58	131	-
855	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 23 and 10th Concession	1999	80	2079	4,470	58	131	-
856	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	9059 County Rd 23	1999	80	2079	4,470	58	131	-
857	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	9031 County Rd 23	1999	80	2079	4,470	58	131	-
858	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 23 and 9th Concession	1999	80	2079	4,470	58	131	-
859	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	8055 County Rd 23	1999	80	2079	4,470	58	131	-
860	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 23 and 8th Concession	1999	80	2079	4,470	58	131	-
861	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	7043 County Rd 23	1999	80	2079	4,470	58	131	-
862	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 23 and County Rd 18	1999	80	2079	4,470	58	131	-
863	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 23 and Heritage Village	1999	80	2079	4,470	58	131	-
864	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	County Rd 23 and 6th Concession	1999	80	2079	4,470	58	131	-
865	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	7th Concession and Smith Sideroad	1996	80	2076	4,460	55	134	-
866	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	7229 7th Concession	1996	80	2076	4,460	55	134	-
867	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	7292 7th Concession	2002	80	2082	4,450	61	127	-
24043	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	114 St. Paul St	2010	20	2030	9,000	9	suggested for 10 year capital forecast	9,000
24044	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	114 St. James St	2010	20	2030	900	9	suggested for 10 year capital forecast	900
24045	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Wellington & St James	2010	40	2050	9,000	29	412	-
24046	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	92 St. Paul	2010	20	2030	9,000	9	suggested for 10 year capital forecast	9,000
24047	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	120 Langtry	2010	20	2030	9,000	9	suggested for 10 year capital forecast	9,000
24197	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	9567 County Road 13	2011	40	2051	18,310	30	818	-
24315	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Goodburn Court	2012	20	2032	5,380	11	550	-
24316	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Goodburn Crt	2012	20	2032	5,380	11	550	-
24625	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrants	1&2	Laird Avenue	2013	50	2063	166,120	42	5,884	-
24641	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie	2013	80	2093	11,840	72	312	-
24643	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Hydrants (2) on Kael	2013	80	2093	5,550	72	146	-
24761	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Ward 1	2014	80	2094	10,420	73	273	-
24762	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Ward 1	2014	80	2094	10,420	73	273	-
24779	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Ward 1	2014	80	2094	7,560	73	198	-
24782	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	Ward 1	2014	80	2094	12,900	73	338	-
24867	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	JENNER	1&2	LAIRD AND ILER	2014	80	2094	15,270	73	400	-
24868	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	JENNER	1&2	LAIRD AND ILER	2014	80	2094	15,270	73	400	-
24873	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	JENNER	1&2	LAIRD AND ILER	2014	80	2094	810	73	21	-
25027	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	FH-0614-5384	2015	80	2095	3,190	74	83	-
25028	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	1&2	FH-0615-5383	2015	80	2095	3,190	74	83	-
25115	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	123 Fairview Avenue West	1&2	Fairview and Langtry	2015	80	2095	11,180	74	291	-
25116	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Fairview Avenue West	1&2	105 Fairview Ave W	2015	80	2095	11,180	74	291	-
25117	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Fairview Avenue West	1&2	146 Talbot St S	2015	80	2095	11,180	74	291	-
25118	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Fairview Ave W	1&2	154 Langtry	2015	80	2095	11,180	74	291	-
25119	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Fairview Avenue West	1&2	169 Fairview Ave W	2015	80	2095	11,180	74	291	-
25120	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Fairview Avenue West	1&2	123 Fairview Ave W	2015	80	2095	11,180	74	291	-
Total										1,814,360		47,255	459,750



Table A-2-1
Town of Essex
Water Service – Wards 3 & 4
Water Facilities

Asset ID	Category	Segment	Department	Name	Location	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1777	ES: Water - Distribution/Transmission	Buildings (Water Tower)	Water	Water Tower	Erie Street	2001	0	2021	48,800	0	suggested for 10 year capital forecast	48,800
2714	ES: Water - Treatment	Buildings	Water - H/CS WTP	Harrow Colchester South Water Treatment Plan	Sullivan Street S/S	2001	50	2051	1,568,270	30	70,023	-
2717	ES: Water - Treatment	Buildings	Water - H/CS WTP	Harrow Colchester South Water Treatment PI	Cty. Road 50W N/S	1973	39	2021	105,870	0	suggested for 10 year capital forecast	105,870
23243	ES: Water - Distribution/Transmission	Buildings (Water Tower)	Water	Harrow Colchester South Water Tower	Harrow	2009	0	2021	0	0	suggested for 10 year capital forecast	-
23246	ES: Water - Treatment	Buildings	Water - H/CS WTP	Harrow Colchester South Water Treatment Plant	H/CS WTP	2009	8	2021	12,930	0	suggested for 10 year capital forecast	12,930
23499	ES: Water - Admin	Buildings	Water	Water Department Office/Shop	120 Sinasac W	2010	50	2060	41,940	39	1,559	-
Total									1,777,810		71,582	167,600

Table A-2-2
Town of Essex
Water Service – Wards 3 & 4
Land Improvements

Asset ID	Category	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
23247	ES: Water - Treatment	Entrance Gate	Harrow Colchester South Water Treatment PI	2009	20	2029	5,560	8	suggested for 10 year capital forecast	5,560
24783	ES: Water - Treatment	Reservoir at Harrow WTP	Harrow	2014	75	2089	462,470	68	12,501	-
Total							468,030		12,501	5,560



**Table A-2-3
Town of Essex
Water Service – Wards 3 & 4
Watermains**

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1263	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	75,190	0	suggested for 10 year capital forecast	75,190
1264	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	154,740	0	suggested for 10 year capital forecast	154,740
1265	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	152,640	0	suggested for 10 year capital forecast	152,640
1266	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1965	60	2025	84,930	4	suggested for 10 year capital forecast	84,930
1267	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760
1268	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	53,560	0	suggested for 10 year capital forecast	53,560
1269	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760
1270	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760
1271	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760
1272	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760
1273	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760
1274	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	92,620	0	suggested for 10 year capital forecast	92,620
1275	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	89,390	0	suggested for 10 year capital forecast	89,390
1276	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	113,000	0	suggested for 10 year capital forecast	113,000
1277	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	125,930	0	suggested for 10 year capital forecast	125,930



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1278	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	96,850	0	suggested for 10 year capital forecast	96,850
1279	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	96,850	0	suggested for 10 year capital forecast	96,850
1280	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	125,930	0	suggested for 10 year capital forecast	125,930
1281	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	113,000	0	suggested for 10 year capital forecast	113,000
1282	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	59	2021	89,390	0	suggested for 10 year capital forecast	89,390
1283	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	92,620	0	suggested for 10 year capital forecast	92,620
1284	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	43,290	0	suggested for 10 year capital forecast	43,290
1285	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	96,850	0	suggested for 10 year capital forecast	96,850
1286	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	93,610	0	suggested for 10 year capital forecast	93,610
1287	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	46,520	0	suggested for 10 year capital forecast	46,520
1288	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	92,620	0	suggested for 10 year capital forecast	92,620
1289	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	89,390	0	suggested for 10 year capital forecast	89,390
1290	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1965	60	2025	304,510	4	suggested for 10 year capital forecast	304,510
1291	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	43,290	0	suggested for 10 year capital forecast	43,290
1292	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	35,990	0	suggested for 10 year capital forecast	35,990
1293	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	60	2021	49,760	0	suggested for 10 year capital forecast	49,760



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1294	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	118,590	13	10,450	-
1295	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	119,450	13	10,526	-
1296	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	101,170	13	8,915	-
1297	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	92,170	13	8,122	-
1298	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	175,320	13	15,449	-
1299	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	127,030	13	11,194	-
1300	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	303,780	13	26,769	-
1301	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	39,580	13	3,488	-
1302	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	260,910	13	22,991	-
1303	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	428,950	13	37,798	-
1304	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	229,770	13	20,247	-
1305	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	347,940	13	30,660	-
1306	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	331,360	13	29,199	-
1307	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	406,090	13	35,784	-
1308	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	65,440	13	5,766	-
1309	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	284,780	13	25,094	-
1310	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	152,890	13	13,472	-
1311	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	186,330	13	16,419	-
1312	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	94,880	13	8,361	-
1313	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	223,330	13	19,679	-
1314	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	138,740	13	12,226	-
										suggested for 10 year capital forecast	
1315	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1959	60	2021	82,770	0		82,770
1316	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	80,880	13	7,127	-
1317	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	63,870	13	5,628	-
1318	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	74,590	13	6,573	-
1319	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	114,600	13	10,098	-
1320	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	118,920	13	10,479	-
1321	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	82,330	13	7,255	-
1322	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	62,870	13	5,540	-
1323	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	62,870	13	5,540	-
1324	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	60	2034	71,020	13	6,258	-
										suggested for 10 year capital forecast	
1325	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	50	2021	58,210	0		58,210
										suggested for 10 year capital forecast	
1326	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	50	2021	67,010	0		67,010
										suggested for 10 year capital forecast	
1327	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	50	2021	62,250	0		62,250
										suggested for 10 year capital forecast	
1328	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	50	2021	62,250	0		62,250
										suggested for 10 year capital forecast	
1329	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1959	50	2021	242,680	0		242,680



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1330	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	50	2024	114,600	3	suggested for 10 year capital forecast	114,600
1331	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1959	50	2021	242,680	0	suggested for 10 year capital forecast	242,680
1332	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	50	2024	167,980	3	suggested for 10 year capital forecast	167,980
1333	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	50	2024	128,230	3	suggested for 10 year capital forecast	128,230
1334	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1959	50	2021	1,590,170	0	suggested for 10 year capital forecast	1,590,170
1335	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	50	2021	1,095,010	0	suggested for 10 year capital forecast	1,095,010
1336	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1958	50	2021	379,260	0	suggested for 10 year capital forecast	379,260
1342	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	50	2024	49,060	3	suggested for 10 year capital forecast	49,060
1343	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	50	2024	168,150	3	suggested for 10 year capital forecast	168,150
1344	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1959	50	2021	3,940	0	suggested for 10 year capital forecast	3,940
1345	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	50	2024	106,950	3	suggested for 10 year capital forecast	106,950
1346	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1963	50	2021	195,270	0	suggested for 10 year capital forecast	195,270
1347	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	50	2037	78,940	16	5,814	-
1348	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	50	2037	36,250	16	2,670	-
1349	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	50	2037	33,280	16	2,451	-
1350	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	50	2037	55,400	16	4,080	-
1351	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	50	2037	33,280	16	2,451	-
1352	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	50	2037	55,810	16	4,110	-
1353	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	115,920	50	3,689	-
1354	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1970	80	2050	251,630	29	11,519	-
1355	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	8,970	32	382	-
1356	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	33,800	32	1,440	-
1357	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1980	80	2060	165,100	39	6,137	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1358	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	91,930	50	2,926	-
1359	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2000	80	2080	256,180	59	7,435	-
1360	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1997	80	2077	353,560	56	10,553	-
1361	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	682,210	57	20,167	-
1362	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	90,510	57	2,676	-
1363	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	571,550	57	16,896	-
1364	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	586,260	57	17,331	-
1365	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	348,450	55	10,503	-
1366	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	292,530	55	8,818	-
1367	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	772,490	55	23,285	-
1368	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	310,510	55	9,360	-
1369	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	141,630	55	4,269	-
1370	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	141,670	57	4,188	-
1371	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	192,110	55	5,791	-
1372	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	350,520	57	10,362	-
1373	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1997	80	2077	343,430	56	10,250	-
1374	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	61,290	50	1,950	-
1375	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	53,400	51	1,680	-
1376	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	83,890	51	2,639	-
1377	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	18,700	51	588	-
1378	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	18,050	51	568	-
1379	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	62,380	51	1,962	-
1380	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	39,100	51	1,230	-
1381	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	18,700	51	588	-
1382	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	11,130	51	350	-
1383	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	85,860	51	2,701	-
1384	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	17,000	50	541	-
1385	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	12,610	50	401	-
1386	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	32,690	50	1,040	-
1387	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	504,750	57	14,921	-
1388	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	129,960	57	3,842	-
1389	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1997	80	2077	177,570	56	5,300	-
1390	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	284,280	57	8,404	-
1391	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	259,840	55	7,832	-
1392	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	762,700	57	22,546	-
1393	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	36,520	33	1,522	-
1394	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	38,900	33	1,622	-
1395	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	63,820	33	2,660	-
1396	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	20,830	33	868	-
1397	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	67,810	33	2,827	-
1398	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	39	2021	81,700	0	suggested for 10 year capital forecast	81,700
1399	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	79,220	33	3,302	-
1400	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	68,090	33	2,838	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1401	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	85,400	33	3,560	-
1402	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	91,590	33	3,818	-
1403	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	20,070	33	837	-
1404	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	67,720	33	2,823	-
1405	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	299,770	33	12,496	-
1406	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	66,200	33	2,760	-
1407	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	61,910	33	2,581	-
1408	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	146,940	33	6,125	-
1409	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	222,260	33	9,265	-
1410	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	206,190	33	8,595	-
1411	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	84,550	33	3,525	-
1412	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	45,170	33	1,883	-
1413	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	76,840	33	3,203	-
1414	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	174,420	33	7,271	-
1415	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	52,210	33	2,176	-
1416	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	108,900	33	4,540	-
1417	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	121,350	33	5,059	-
1418	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	74,180	33	3,092	-
1419	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	124,490	33	5,190	-
1420	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	139,520	33	5,816	-
1421	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	75,510	33	3,148	-
1422	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	96,060	33	4,004	-
1423	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	96,060	33	4,004	-
1424	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	96,060	33	4,004	-
1425	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	43,080	33	1,796	-
1426	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	35,850	33	1,494	-
1427	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	35,850	33	1,494	-
1428	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	47,080	33	1,963	-
1429	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	96,060	33	4,004	-
1430	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	97,960	33	4,084	-
1431	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	96,060	33	4,004	-
1432	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	96,060	33	4,004	-
1433	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	35,850	33	1,494	-
1434	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	35,850	33	1,494	-
1435	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	47,080	33	1,963	-
1436	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	73,330	33	3,057	-
1437	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	65,530	33	2,732	-
1438	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	49,840	33	2,078	-
1439	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	47,170	33	1,966	-
1440	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	51,550	33	2,149	-
1441	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	31,860	33	1,328	-
1442	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	56,110	33	2,339	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1443	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	78,080	33	3,255	-
1444	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	90,260	33	3,763	-
1445	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	82,170	33	3,425	-
1446	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	79,220	33	3,302	-
1447	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	211,840	51	6,664	-
1448	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	102,610	51	3,228	-
1449	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	87,920	50	2,798	-
1450	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	407,820	57	12,056	-
1451	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	77,380	57	2,287	-
1452	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	482,230	57	14,255	-
1453	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	639,560	53	19,682	-
1454	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	394,940	53	12,154	-
1455	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1997	80	2077	267,720	56	7,991	-
1456	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	671,180	57	19,841	-
1457	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	641,480	57	18,963	-
1458	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2000	80	2080	476,890	59	13,841	-
1459	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2000	80	2080	251,890	59	7,310	-
1460	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1976	80	2056	251,410	35	10,057	-
1461	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	436,700	57	12,909	-
1462	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	143,990	33	6,002	-
1463	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	726,100	57	21,464	-
1464	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	529,230	55	15,953	-
1465	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	159,160	51	5,007	-
1466	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	85,080	51	2,676	-
1467	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	54,510	32	2,323	-
1468	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	19,540	32	833	-
1469	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	56,970	32	2,428	-
1470	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	19,540	32	833	-
1471	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	31,670	32	1,349	-
1472	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1973	80	2053	21,600	32	920	-
1473	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2000	80	2080	100,760	59	2,924	-
1474	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1976	80	2056	41,780	35	1,671	-
1475	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	103,730	51	3,263	-
1476	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	73,260	51	2,305	-
1477	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	313,490	57	9,267	-
1478	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	308,180	57	9,110	-
1479	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	79,580	50	2,532	-
1480	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	72,050	50	2,293	-
1481	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	82,740	51	2,603	-
1482	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	21,980	50	699	-
1483	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	82,220	50	2,617	-
1484	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	86,610	51	2,725	-
1485	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	107,870	50	3,433	-
1486	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	43,080	33	1,796	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1487	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	47,080	33	1,963	-
1488	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	75,510	33	3,148	-
1489	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	35,850	33	1,494	-
1490	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	73,620	33	3,069	-
1491	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	35,850	33	1,494	-
1492	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	75,510	33	3,148	-
1493	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	29,950	33	1,249	-
1494	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	22,630	33	943	-
1495	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	30,910	33	1,289	-
1496	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	33,670	33	1,404	-
1497	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	30,620	33	1,276	-
1498	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	44,890	33	1,871	-
1499	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	20,920	33	872	-
1500	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1978	80	2058	43,220	37	1,664	-
1501	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1978	80	2058	43,220	37	1,664	-
1502	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1987	80	2067	78,940	46	2,641	-
1503	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	31,750	50	1,010	-
1504	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	68,270	55	2,058	-
1505	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	41,030	55	1,237	-
1506	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1974	80	2054	22,160	33	924	-
1507	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	42,160	57	1,246	-
1508	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	443,200	55	13,360	-
1509	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	207,260	55	6,248	-
1510	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	381,170	57	11,268	-
1511	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	113,890	55	3,433	-
1512	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	81,640	55	2,461	-
1513	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	126,270	57	3,733	-
1514	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	110,550	57	3,268	-
1515	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	242,750	57	7,176	-
1516	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	123,530	50	3,931	-
1517	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1993	80	2073	56,010	52	1,742	-
1518	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	60,520	55	1,824	-
1519	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	40,720	55	1,227	-
1520	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	33,320	49	1,073	-
1521	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	29,990	49	966	-
1522	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	85,300	49	2,747	-
1523	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	91,300	49	2,940	-
1524	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	39,990	49	1,288	-
1525	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	66,640	49	2,146	-
1526	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	33,320	49	1,073	-
1527	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	93,440	51	2,939	-
1528	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	39,030	51	1,228	-
1529	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	20,070	51	631	-
1530	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	81,620	51	2,568	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1531	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	54,000	51	1,699	-
1532	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	130,630	51	4,109	-
1533	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	85,290	51	2,683	-
1534	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	37,600	51	1,183	-
1535	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	17,120	51	539	-
1536	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	72,350	51	2,276	-
1537	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	23,840	51	750	-
1538	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	35,660	51	1,122	-
1539	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	60,040	50	1,911	-
1540	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	17,730	51	558	-
1541	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	31,280	51	984	-
1542	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	220,110	50	7,005	-
1543	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	30,220	50	962	-
1544	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	24,220	50	771	-
1545	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	54,950	50	1,749	-
1546	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	45,180	50	1,438	-
1547	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	30,020	50	955	-
1548	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	39,380	50	1,253	-
1549	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	30,940	50	985	-
1550	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	67,980	50	2,163	-
1551	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	21,880	50	696	-
1552	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	42,740	50	1,360	-
1553	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	271,840	57	8,036	-
1554	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	48,280	57	1,427	-
1555	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	600,750	57	17,759	-
1556	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	444,530	55	13,400	-
1557	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	109,530	57	3,238	-
1558	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	105,350	57	3,114	-
1559	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	131,890	57	3,899	-
1560	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	43,480	57	1,285	-
1561	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	21,330	57	631	-
1562	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	50,940	57	1,506	-
1563	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	49,410	57	1,461	-
1564	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1990	80	2070	137,210	49	4,419	-
1565	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1999	80	2079	718,530	58	21,043	-
1566	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1999	80	2079	51,370	58	1,504	-
1567	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1999	80	2079	51,370	58	1,504	-
1568	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	244,720	50	7,788	-
1569	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	341,620	50	10,871	-
1570	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	202,330	51	6,365	-
1571	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	170,200	51	5,354	-
1572	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	151,120	53	4,651	-
1573	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	414,320	50	13,185	-
1574	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2002	80	2082	342,830	61	9,778	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1575	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	391,730	57	11,580	-
1576	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	452,790	57	13,385	-
1577	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	159,780	57	4,723	-
1578	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	473,840	55	14,283	-
1579	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	474,370	57	14,023	-
1580	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	637,280	55	19,210	-
1581	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	569,090	55	17,154	-
1582	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	103,650	51	3,261	-
1583	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	88,390	53	2,720	-
1584	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	114,940	53	3,537	-
1585	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	48,880	53	1,504	-
1586	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2003	80	2083	45,230	62	1,279	-
1587	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	97,660	51	3,072	-
1588	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	86,180	51	2,711	-
1589	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	30,600	51	963	-
1590	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2003	80	2083	45,230	62	1,279	-
1591	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1984	80	2064	48,300	43	1,685	-
1592	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	392,420	50	12,488	-
1593	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	262,140	55	7,902	-
1594	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	38,880	51	1,223	-
1595	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	71,270	51	2,242	-
1596	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	34,170	51	1,075	-
1597	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1996	80	2076	177,360	55	5,346	-
1598	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	323,930	51	10,190	-
1599	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	42,710	51	1,344	-
1600	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	227,790	51	7,166	-
1601	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	575,900	57	17,024	-
1602	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	910,700	57	26,921	-
1603	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	65,490	57	1,936	-
1604	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	663,620	57	19,617	-
1605	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	124,760	51	3,925	-
1606	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	43,940	51	1,382	-
1607	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	80,410	53	2,475	-
1608	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	43,440	53	1,337	-
1609	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	97,970	53	3,015	-
1610	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	2000	80	2080	102,420	59	2,972	-
1611	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	43,020	51	1,353	-
1612	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	84,500	51	2,658	-
1613	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	39,500	51	1,243	-
1614	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	50,210	51	1,580	-
1615	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	75,010	51	2,360	-
1616	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	43,170	51	1,358	-
1617	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	77,460	51	2,437	-
1618	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1992	80	2072	64,450	51	2,028	-



Table A-2-3 (Cont'd)

Asset ID	Category	Segment	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1619	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	148,600	50	4,729	-
1620	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	331,540	50	10,551	-
1621	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	314,810	50	10,018	-
1622	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	471,420	50	15,002	-
1623	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	163,190	50	5,193	-
1624	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	491,350	50	15,636	-
1625	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	120,670	53	3,713	-
1626	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1998	80	2078	58,550	57	1,731	-
1627	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	93,070	50	2,962	-
1628	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	82,040	50	2,611	-
1629	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	62,290	50	1,982	-
1630	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1991	80	2071	40,570	50	1,291	-
1631	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Harrow Colchester S. - Ward 3	3&4	1994	80	2074	530,180	53	16,316	-
24409	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	DRUMMOND	3&4	2012	5	2021	147,700	0	suggested for 10 year capital forecast	147,700
24636	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Clark Street	3&4	2012	50	2062	47,120	41	1,695	-
24640	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Kael Drive	3&4	2013	80	2093	148,580	72	3,912	-
24644	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road	3&4	2013	80	2093	274,310	72	7,222	-
24645	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road	3&4	2013	80	2093	9,380	72	247	-
25376	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Loricon Court	3&4	2017	80	2097	20,370	76	524	-
25446	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Loricon Court	3&4	2017	80	2097	25,400	76	653	-
25492	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	53,670	76	1,380	-
25493	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	59,850	76	1,539	-
25494	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	47,740	76	1,227	-
25495	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	9,160	76	235	-
25496	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	10,970	76	282	-
25497	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	78,570	76	2,020	-
25498	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	2,220	76	57	-
25499	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	2,360	76	61	-
25500	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	3,660	76	94	-
25501	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	2,490	76	64	-
25502	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	10,380	76	267	-
25503	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	1,710	76	44	-
25504	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	7,560	76	194	-
25505	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	1,430	76	37	-
25506	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	9,450	76	243	-
25507	ES: Water - Distribution/Transmission	Linear Assets (Watermains)	Erie Road North	3&4	2017	80	2097	600	76	15	-
Total								57,911,290		1,848,428	9,011,030



Table A-2-4
Town of Essex
Water Service – Wards 3 & 4
Water Hydrants

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
800	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9960 9th Concession	2000	80	2080	4,520	59	131	-
801	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9948 9th Concession	2000	80	2080	4,520	59	131	-
802	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9940 9th Concession	2000	80	2080	4,520	59	131	-
803	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9932 9th Concession	2000	80	2080	4,520	59	131	-
804	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9912 9th Concession	2000	80	2080	4,520	59	131	-
805	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9896 9th Concession	2000	80	2080	4,520	59	131	-
806	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9889 9th Concession	2000	80	2080	4,520	59	131	-
807	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9879 9th Concession	2000	80	2080	4,520	59	131	-
808	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9th Concession and Ferriss Rd	2000	80	2080	4,520	59	131	-
809	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9735 9th Concession	2000	80	2080	4,520	59	131	-
810	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9th Concession and Coulter Rd	2000	80	2080	4,520	59	131	-
811	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	9611 9th Concession	2000	80	2080	4,520	59	131	-
812	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8950 8th Concession	2000	80	2080	4,520	59	131	-
813	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8893 8th Concession	2000	80	2080	4,520	59	131	-
814	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8854 8th Concession	2000	80	2080	4,520	59	131	-
815	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8th Concession and Ferriss Rd	2000	80	2080	4,520	59	131	-
816	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8783 8th Concession	2000	80	2080	4,520	59	131	-
817	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8702 8th Concession	2000	80	2080	4,520	59	131	-
818	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8683 8th Concession	2000	80	2080	4,520	59	131	-
819	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8th Concession and Coulter Rd	2000	80	2080	4,520	59	131	-
820	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8622 8th Concession	2000	80	2080	4,520	59	131	-
821	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8th Concession and Giardini Rd	2000	80	2080	4,520	59	131	-
822	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8577 8th Concession	2000	80	2080	4,520	59	131	-
823	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8526 8th Concession	2000	80	2080	4,520	59	131	-
824	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	8th Concession and County Rd 15	2000	80	2080	4,520	59	131	-
825	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7071 Giardini Rd	2000	80	2080	4,520	59	131	-
826	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7047 Giardini Rd	2000	80	2080	4,520	59	131	-
827	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7029 Giardini Rd	2000	80	2080	4,520	59	131	-
828	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7003 Giardini Rd	2000	80	2080	4,520	59	131	-
829	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7938 Giardini Rd	2000	80	2080	4,520	59	131	-
830	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7880 Giardini Rd	2000	80	2080	4,520	59	131	-
831	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 18 and McCormick Rd	1999	80	2079	4,470	58	131	-
832	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7793 County Rd 18	1999	80	2079	4,470	58	131	-
833	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7695 County Rd 18	1999	80	2079	4,470	58	131	-
834	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7675 County Rd 18	1999	80	2079	4,470	58	131	-
835	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 18 and Giardini Rd	1999	80	2079	4,470	58	131	-
836	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7585 County Rd 18	1999	80	2079	4,470	58	131	-
837	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7510 County Rd 18	1999	80	2079	4,470	58	131	-
838	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 18 and County Rd 15	1999	80	2079	4,470	58	131	-
839	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7457 County Rd 18	1999	80	2079	4,470	58	131	-
840	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	7417 County Rd 18	1999	80	2079	4,470	58	131	-
841	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6978 6th Concession	2000	80	2080	4,520	59	131	-
842	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6950 6th Concession	2000	80	2080	4,520	59	131	-
843	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6894 6th Concession	2000	80	2080	4,520	59	131	-
844	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6837 6th Concession	2000	80	2080	4,520	59	131	-
845	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6th Concession and McCormick Rd N	2000	80	2080	4,520	59	131	-
846	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6th Concession and McCormick Rd S	2000	80	2080	4,520	59	131	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
847	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6675 6th Concession	2000	80	2080	4,520	59	131	-
848	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6615 6th Concession	2000	80	2080	4,520	59	131	-
849	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5165 McCormick Rd	2000	80	2080	4,520	59	131	-
868	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 18 and Britton Rd	2002	80	2082	4,450	61	127	-
869	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 18 and Rizzo Nicola	1996	80	2076	4,460	55	134	-
870	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6350 County Rd 11	1996	80	2076	4,460	55	134	-
871	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6th Concession and Smith Sideroad	1996	80	2076	4,460	55	134	-
872	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6th Concession and County Rd 11	1996	80	2076	4,460	55	134	-
873	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	6th Concession and Rizzo Nicola	1996	80	2076	4,460	55	134	-
874	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession and Drummond Sideroad	1996	80	2076	4,460	55	134	-
875	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5306 County Rd 11	1996	80	2076	4,460	55	134	-
876	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession and County Rd 11	1996	80	2076	4,460	55	134	-
877	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5601 5th Concession	1998	80	2078	4,460	57	132	-
878	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession and Ferriss Rd	1998	80	2078	4,460	57	132	-
879	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession 200 M. E. of Ferriss Rd	1998	80	2078	4,460	57	132	-
880	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession and McCormick Rd	1998	80	2078	4,460	57	132	-
881	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4125 McCormick Rd	1998	80	2078	4,460	57	132	-
882	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5862 5th Concession	1998	80	2078	4,460	57	132	-
883	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession and Johnson Rd	1998	80	2078	4,460	57	132	-
884	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	5th Concession and County Rd 23	1998	80	2078	4,460	57	132	-
885	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4977 4th Concession	2003	80	2083	4,460	62	126	-
886	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4965 4th Concession	2003	80	2083	4,460	62	126	-
887	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4955 4th Concession	1998	80	2078	4,460	57	132	-
888	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4906 4th Concession	1998	80	2078	4,460	57	132	-
889	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4872 4th Concession	1998	80	2078	4,460	57	132	-
890	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4040 Hickory Acres	1998	80	2078	4,460	57	132	-
891	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4th Concession and Hickory Acres	1998	80	2078	4,460	57	132	-
892	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4th Concession and McCormick Rd	1998	80	2078	4,460	57	132	-
893	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3155 McCormick Rd	1998	80	2078	4,460	57	132	-
894	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4th Concession and McCormick Rd W Int	1998	80	2078	4,460	57	132	-
895	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4708 4th Concession	1998	80	2078	4,460	57	132	-
896	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4th Concession and County Rd 11	1996	80	2076	4,460	55	134	-
897	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3189 County Rd 11	1996	80	2076	4,460	55	134	-
898	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3187 County Rd 11	1996	80	2076	4,460	55	134	-
899	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3114 County Rd 11	1996	80	2076	4,460	55	134	-
900	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3047 County Rd 11	1996	80	2076	4,460	55	134	-
901	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4th Concession and Drummond Rd	1998	80	2078	4,460	57	132	-
902	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Drummond Road 75 M N of 3rd Concession	1998	80	2078	4,460	57	132	-
903	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Drummond Rd and 4th Concession	1998	80	2078	4,460	57	132	-
904	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	4th Concession and Smith Sideroad	1998	80	2078	4,460	57	132	-
905	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3rd Concession and Smith Sideroad	1998	80	2078	4,460	57	132	-
906	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Pollards Trucking	1995	80	2075	4,450	54	136	-
907	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	79 3rd Concession	2000	80	2080	4,520	59	131	-
908	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Aspen Gardens	1980	80	2060	6,120	39	227	-
909	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3rd Concession and McLean Sideroad	2000	80	2080	4,520	59	131	-
910	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3175 McLean Sideroad	2000	80	2080	4,520	59	131	-
911	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3rd Concession and Ferriss Sideroad	2000	80	2080	4,520	59	131	-
912	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2080 Ferriss Sideroad	1991	80	2071	4,440	50	141	-
913	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2050 Ferriss Sideroad	1991	80	2071	4,440	50	141	-
914	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3670 3rd Concession	1998	80	2078	4,460	57	132	-
915	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3714 3rd Concession	1998	80	2078	4,460	57	132	-
916	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3rd Concession and McCormick Sideroad	1998	80	2078	4,460	57	132	-
917	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3854 3rd Concession	1998	80	2078	4,460	57	132	-
918	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3932 3rd Concession	1998	80	2078	4,460	57	132	-
919	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3926 Suffolk Lane	1998	80	2078	4,460	57	132	-
920	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3936 Suffolk Lane	1998	80	2078	4,460	57	132	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
921	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	3942 Suffolk Lane	1998	80	2078	4,460	57	132	-
922	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1418 County Rd 23	1998	80	2078	4,460	57	132	-
923	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 20 and County Rd 23	1997	80	2077	4,460	56	133	-
924	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2914 County Rd 20	1994	80	2074	4,480	53	138	-
925	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2842 County Rd 20	1994	80	2074	4,480	53	138	-
926	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 20 and McCormick Sideroad	1994	80	2074	4,480	53	138	-
927	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2702 County Rd 20	1991	80	2071	4,440	50	141	-
928	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2664 County Rd 20	1991	80	2071	4,440	50	141	-
929	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2649 County Rd 20	1991	80	2071	4,440	50	141	-
930	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 20 and Ferriss Sideroad	1991	80	2071	4,440	50	141	-
931	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Research Station	1960	80	2040	6,990	19	446	-
932	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Research Station	1960	80	2040	6,990	19	446	-
933	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Research Station	1960	80	2040	6,990	19	446	-
934	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Research Station	1960	80	2040	6,990	19	446	-
935	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2579 County Rd 20	1960	80	2040	6,990	19	446	-
936	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1455 Ridge Rd	1998	80	2078	4,460	57	132	-
937	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Huffman Rd and Ridge Rd	1998	80	2078	4,460	57	132	-
938	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1638 Huffman Rd	1998	80	2078	4,460	57	132	-
939	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1655 Huffman Rd	1998	80	2078	4,460	57	132	-
940	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1689 Huffman Rd	1998	80	2078	4,460	57	132	-
941	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1729 Huffman Rd	1998	80	2078	4,460	57	132	-
942	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Huffman Rd and Iler Rd	1998	80	2078	4,460	57	132	-
943	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	100 M North of 1120 Ridge Rd	1998	80	2078	4,460	57	132	-
944	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Ridge Rd and Gore Rd	1998	80	2078	4,460	57	132	-
945	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Ridge Rd (between County Road 50 and Gore Rd)	1998	80	2078	4,460	57	132	-
946	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie Rd (Suljas)	1975	80	2055	5,150	34	210	-
947	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie Rd and Gore Rd	1975	80	2055	5,150	34	210	-
948	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	183 Erie Rd	1975	80	2055	5,150	34	210	-
949	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie Rd and Draper St	1975	80	2055	5,150	34	210	-
950	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie Rd and Harrison St	1975	80	2055	5,150	34	210	-
951	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie Rd (100 M N or County Rd 50)	1975	80	2055	5,150	34	210	-
952	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W (100 M W of Erie Rd)	1975	80	2055	5,150	34	210	-
953	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Ogden St (Between Clitherow St and Erie St)	1975	80	2055	5,150	34	210	-
954	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	755 Clitherow St	1975	80	2055	5,150	34	210	-
955	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Clitherow St and Draper St	1975	80	2055	5,150	34	210	-
956	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Clitherow St and Harrison St	1975	80	2055	5,150	34	210	-
957	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Clitherow St at Water Plant	1975	80	2055	5,150	34	210	-
958	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 (100 M West of Clitherow St)	1975	80	2055	5,150	34	210	-
959	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	290 Clitherow St	1975	80	2055	5,150	34	210	-
960	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	22 Sullivan St	1975	80	2055	5,150	34	210	-
961	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Sullivan St and Bagot St	1975	80	2055	5,150	34	210	-
962	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	340 Bagot St	1975	80	2055	5,150	34	210	-
963	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	48 County Rd 50	1975	80	2055	5,150	34	210	-
964	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	405 Bagot St	1975	80	2055	5,150	34	210	-
965	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	525 Bagot St	1975	80	2055	5,150	34	210	-
966	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	625 Bagot St	1975	80	2055	5,150	34	210	-
967	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	42 Laura Cres	2000	80	2080	4,520	59	131	-
968	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Between Hope Cres and Laura Cres	2000	80	2080	4,520	59	131	-
969	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	42 Hope Cres	2000	80	2080	4,520	59	131	-
970	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Sydenham St and Draper St	1975	80	2055	5,150	34	210	-
971	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Sydenham St and Harrison St	1975	80	2055	5,150	34	210	-
972	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	420 Sydenham St	1975	80	2055	5,150	34	210	-
973	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	305 Sydenham	1975	80	2055	5,150	34	210	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
974	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Sydenham St and Sullivan St	1975	80	2055	5,150	34	210	-
975	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Sullivan St and Jackson St	1975	80	2055	5,150	34	210	-
976	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	306 Jackson St	1975	80	2055	5,150	34	210	-
977	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	79 County Rd 50 W	1975	80	2055	5,150	34	210	-
978	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	400 Jackson St	1975	80	2055	5,150	34	210	-
979	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	495 Jackson St	1975	80	2055	5,150	34	210	-
980	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	630 Jackson St	1975	80	2055	5,150	34	210	-
981	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	97 County Rd 50 W	1975	80	2055	5,150	34	210	-
982	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	End of Richardson Lane	1975	80	2055	5,150	34	210	-
983	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	560 Dunn Rd	1975	80	2055	5,150	34	210	-
984	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	465 Dunn Rd	1975	80	2055	5,150	34	210	-
985	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	430 Dunn Rd	1975	80	2055	5,150	34	210	-
986	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	395 Dunn Rd	1975	80	2055	5,150	34	210	-
987	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	205 Dunn Rd	1975	80	2055	5,150	34	210	-
988	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	135 Dunn Rd	1975	80	2055	5,150	34	210	-
989	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	115 Adelaide St	1975	80	2055	5,150	34	210	-
990	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	250 Prado St	1975	80	2055	5,150	34	210	-
991	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W and Prado St	1975	80	2055	5,150	34	210	-
992	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	136 County Rd 50 W	1975	80	2055	5,150	34	210	-
993	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	230 Herring Ave	1975	80	2055	5,150	34	210	-
994	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	130 Adelaide St	1975	80	2055	5,150	34	210	-
995	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	160 Adelaide St	1975	80	2055	5,150	34	210	-
996	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	195 Ferriss St	1975	80	2055	5,150	34	210	-
997	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 at End of Ferriss St	1975	80	2055	5,150	34	210	-
998	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	170 County Rd 50 W	1975	80	2055	5,150	34	210	-
999	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W and Walnut St	1975	80	2055	5,150	34	210	-
1000	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Adelaide St and Walnut St	1975	80	2055	5,150	34	210	-
1001	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	109 Little Essex Beach	1975	80	2055	5,150	34	210	-
1002	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	End of Keshore Lane	1975	80	2055	5,150	34	210	-
1003	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 100 M West of County Rd 23	1975	80	2055	5,150	34	210	-
1004	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	End of Maple Grove Dr	1975	80	2055	5,150	34	210	-
1005	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	965 Maple Grove Dr	1975	80	2055	5,150	34	210	-
1006	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	980 Waters Beach Rd	1975	80	2055	5,150	34	210	-
1007	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	960 County Rd 50 E	1975	80	2055	5,150	34	210	-
1008	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	969 Breezeway Beach	1975	80	2055	5,150	34	210	-
1009	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 East at End of Breezeway Beach	1975	80	2055	5,150	34	210	-
1010	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	955 Twin Gable Dr	1975	80	2055	5,150	34	210	-
1011	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	780 Dolson Rd	1975	80	2055	5,150	34	210	-
1012	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	928 Iler Beach Rd	1975	80	2055	5,150	34	210	-
1013	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	922 Twin Gables Dr	1975	80	2055	5,150	34	210	-
1014	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	913 County Rd 50 E	1975	80	2055	5,150	34	210	-
1015	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	896 County Rd 50 E	1975	80	2055	5,150	34	210	-
1016	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	850 County Rd 50 E	1975	80	2055	5,150	34	210	-
1017	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Clark Beach Rd	1975	80	2055	5,150	34	210	-
1018	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	817 County Rd 50 E	1975	80	2055	5,150	34	210	-
1019	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	775 County Rd 50 E	1975	80	2055	5,150	34	210	-
1020	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	829 Maple Leaf Dr	1975	80	2055	5,150	34	210	-
1021	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	791 Maple Leaf Dr	1975	80	2055	5,150	34	210	-
1022	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	769 Bluewater Beach	1975	80	2055	5,150	34	210	-
1023	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	728 County Rd 50 E	1975	80	2055	5,150	34	210	-
1024	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	727 Cloverdale Beach	1975	80	2055	5,150	34	210	-
1025	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	125 Island View Lane	1999	80	2079	4,470	58	131	-
1026	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	687 County Rd 50 E	1975	80	2055	5,150	34	210	-
1027	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	675 Evergreen Beach Rd	1975	80	2055	5,150	34	210	-
1028	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	647 Springwater Beach Rd	1975	80	2055	5,150	34	210	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1029	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	664 County Rd 50 E	1975	80	2055	5,150	34	210	-
1030	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	594 County Rd 50	1975	80	2055	5,150	34	210	-
1031	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 E and Ridge Rd	1975	80	2055	5,150	34	210	-
1032	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	581 Poplar Bluff	1975	80	2055	5,150	34	210	-
1033	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	617 Poplar Bluff	1975	80	2055	5,150	34	210	-
1034	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	536 County Rd 50 E	1975	80	2055	5,150	34	210	-
1035	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	121 Oxley Beach Rd	1975	80	2055	5,150	34	210	-
1036	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	501 County Rd 50 E	1975	80	2055	5,150	34	210	-
1037	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	464 County Rd 50 E	1975	80	2055	5,150	34	210	-
1038	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	423 County Rd 50 E	1975	80	2055	5,150	34	210	-
1039	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	389 Craig Beach Rd	1975	80	2055	5,150	34	210	-
1040	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	388 County Rd 50 E	1975	80	2055	5,150	34	210	-
1041	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	355 Lonsbery Beach Rd	1975	80	2055	5,150	34	210	-
1042	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	350 County Rd 50 E	1975	80	2055	5,150	34	210	-
1043	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	304 County Rd 50 E	1975	80	2055	5,150	34	210	-
1044	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	203 Holiday Bluff	1975	80	2055	5,150	34	210	-
1045	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	272 County Rd 50 E	1975	80	2055	5,150	34	210	-
1046	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	220 County Rd 50 E	1975	80	2055	5,150	34	210	-
1047	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	End of Caboto Park Rd	2005	80	2085	4,490	64	125	-
1048	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	189 McCormick Beach Rd	1975	80	2055	5,150	34	210	-
1049	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	178 County Rd 50 E	1975	80	2055	5,150	34	210	-
1050	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	139 Baldwin Beach Rd	1975	80	2055	5,150	34	210	-
1051	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	140 County Rd 50 E	1975	80	2055	5,150	34	210	-
1052	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	117 Baldwin Point Rd	1975	80	2055	5,150	34	210	-
1053	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	105 County Rd 50 E	1975	80	2055	5,150	34	210	-
1054	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	145 Island View	1999	80	2079	4,470	58	131	-
1055	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	93 Klies Beach	1975	80	2055	5,150	34	210	-
1056	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	68 County Rd 50 E	1975	80	2055	5,150	34	210	-
1057	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	199 County Rd 50 E	1975	80	2055	5,150	34	210	-
1058	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Westchester Beach Rd and County Road 50 W	1991	80	2071	4,440	50	141	-
1059	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	104 Westchester Beach Rd	1991	80	2071	4,440	50	141	-
1060	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	186 Westchester Beach Rd	1991	80	2071	4,440	50	141	-
1061	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	224 Westchester Beach Rd	1991	80	2071	4,440	50	141	-
1062	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	229 County Rd 50 W	1991	80	2071	4,440	50	141	-
1063	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W at Star Beach Rd	1991	80	2071	4,440	50	141	-
1064	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	227 Star Beach Rd	1991	80	2071	4,440	50	141	-
1065	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	101 McLain Rd	1991	80	2071	4,440	50	141	-
1066	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Dahinda Dr at Bend	1991	80	2071	4,440	50	141	-
1067	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W at Colchester Country Club	1991	80	2071	4,440	50	141	-
1068	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	263 Colchester Country Club	1991	80	2071	4,440	50	141	-
1069	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	283 Shawondasse Blvd	1991	80	2071	4,440	50	141	-
1070	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Shawondasse Blvd at County Rd 50 W	1991	80	2071	4,440	50	141	-
1071	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	287 County Rd 50 W	1991	80	2071	4,440	50	141	-
1072	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	284 Marsden Beach	1991	80	2071	4,440	50	141	-
1073	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	308 County Rd 50 W	1991	80	2071	4,440	50	141	-
1074	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	325 County Rd 50 E	1991	80	2071	4,440	50	141	-
1075	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W and Wright Rd	1991	80	2071	4,440	50	141	-
1076	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Wright Rd and Erie Aire Beach Rd	1991	80	2071	4,440	50	141	-
1077	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	411 Cornwall Beach	1991	80	2071	4,440	50	141	-
1078	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 at End of Lakecrest Beach Rd	1991	80	2071	4,440	50	141	-
1079	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	453 Lakecrest Beach	1991	80	2071	4,440	50	141	-
1080	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	469 Lakecrest Beach	1991	80	2071	4,440	50	141	-
1081	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	520 Lypps Beach Rd	1992	80	2072	4,450	51	140	-
1082	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	501 Lypps Beach Rd	1992	80	2072	4,450	51	140	-
1083	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	528 County Rd 50 W	1992	80	2072	4,450	51	140	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1084	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	127 Argyle Beach	1992	80	2072	4,450	51	140	-
1085	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	523 Argyle Beach	1992	80	2072	4,450	51	140	-
1086	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	124 Windsor Ave	1992	80	2072	4,450	51	140	-
1087	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W and Allison Ave	1992	80	2072	4,450	51	140	-
1088	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	108 Allison Ave	1992	80	2072	4,450	51	140	-
1089	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	569 Lakeview Ave	1992	80	2072	4,450	51	140	-
1090	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	137 Maple Ave	1992	80	2072	4,450	51	140	-
1091	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W and Pigeon Beach	1992	80	2072	4,450	51	140	-
1092	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	104 Pigeon Beach	1992	80	2072	4,450	51	140	-
1093	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	118 Pleasure Beach	1992	80	2072	4,450	51	140	-
1094	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	105 Pleasure Beach	1992	80	2072	4,450	51	140	-
1095	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	149 Ambassador Beach	1992	80	2072	4,450	51	140	-
1096	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	634 County Rd 50 W	1992	80	2072	4,450	51	140	-
1097	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Beverly Blvd and Santa Ana Ave	1992	80	2072	4,450	51	140	-
1098	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Beverly Blvd and Sunset Ave	1992	80	2072	4,450	51	140	-
1099	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Beverly Blvd and Lakewood Ave	1992	80	2072	4,450	51	140	-
1100	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Beverly Blvd and Beach Ave	1992	80	2072	4,450	51	140	-
1101	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	131 Santa Monica Blvd	1992	80	2072	4,450	51	140	-
1102	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Wilshire Pl and Santa Monica Blvd	1992	80	2072	4,450	51	140	-
1103	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Bondy Lane (First House)	1992	80	2072	4,450	51	140	-
1104	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	134 Belcroft	1992	80	2072	4,450	51	140	-
1105	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	685 Fox Pl	1992	80	2072	4,450	51	140	-
1106	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W at End of Nottingham	1992	80	2072	4,450	51	140	-
1107	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	140 Nottingham	1992	80	2072	4,450	51	140	-
1108	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	123 Nottingham	1992	80	2072	4,450	51	140	-
1109	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	157 Roseanne Dr	1992	80	2072	4,450	51	140	-
1110	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	136 Roseanne Dr	1992	80	2072	4,450	51	140	-
1111	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	117 Roseanne Dr	1992	80	2072	4,450	51	140	-
1112	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	139 Crystal Lane	1992	80	2072	4,450	51	140	-
1113	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	105 Crystal Lane	1992	80	2072	4,450	51	140	-
1114	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	107 Maple Ave	1992	80	2072	4,450	51	140	-
1115	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	153 Maple Ave	1992	80	2072	4,450	51	140	-
1116	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	728 County Rd 50 W	1992	80	2072	4,450	51	140	-
1117	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	747 County Rd 50 W	1992	80	2072	4,450	51	140	-
1118	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Levergood Beach and Erie Shores Dr	1992	80	2072	4,450	51	140	-
1119	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	824 County Rd 50 W	1992	80	2072	4,450	51	140	-
1120	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	County Rd 50 W and County Rd 41	1992	80	2072	4,450	51	140	-
1121	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	885 Erie Blue	1992	80	2072	4,450	51	140	-
1122	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Roseborough and Concession 3	1991	80	2071	4,440	50	141	-
1123	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Richmond Coach Lines- Roseborough Rd	1991	80	2071	4,440	50	141	-
1124	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	516 Roseborough	1991	80	2071	4,440	50	141	-
1125	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Atlas Tube- North of Building	1995	80	2075	4,450	54	136	-
1126	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Atlas Tube- South Parking Lot	1995	80	2075	4,450	54	136	-
1127	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Secord and Clark St	1959	80	2039	7,110	18	474	-
1128	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Erie Rd N and Clark St	1991	80	2071	4,440	50	141	-
1129	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Sinasac St W and Roseborough	1959	80	2039	7,110	18	474	-
1130	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	227 Sinasac St W	1959	80	2039	7,110	18	474	-
1131	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	137 Sinasac St W	1959	80	2039	7,110	18	474	-
1132	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Concession 3 and Queen St	1959	80	2039	7,110	18	474	-
1133	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	600 Queen St	1959	80	2039	7,110	18	474	-
1134	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	460 Queen St	1991	80	2071	4,440	50	141	-
1135	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1 Collo Dr	1980	80	2060	6,120	39	227	-
1136	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	410 Queen St	2004	80	2084	4,510	63	127	-
1137	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	49 Delta Dr	2001	80	2081	4,470	60	129	-
1138	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Queen St and Sinasac St E	2004	80	2084	4,510	63	127	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1139	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	35 Sinasac St E	1959	80	2039	7,110	18	474	-
1140	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	155 Sinasac St E	2008	80	2088	4,570	67	124	-
1141	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	215 Sinasac St E	1973	80	2053	5,320	32	227	-
1142	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	208 Arthur St S	1973	80	2053	5,320	32	227	-
1143	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	E Limit of Munger St	1959	80	2039	7,110	18	474	-
1144	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	161 Munger St E	1959	80	2039	7,110	18	474	-
1145	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Munger St and Walnut St N	1959	80	2039	7,110	18	474	-
1146	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Queen St and Munger St W	2004	80	2084	4,510	63	127	-
1147	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Victoria St and Munger St W	1959	80	2039	7,110	18	474	-
1148	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Munger St W and Erie St N	1959	80	2039	7,110	18	474	-
1149	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	361 Munger St W	1976	80	2056	5,670	35	227	-
1150	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Roseborough Rd and Munger St W	1976	80	2056	5,670	35	227	-
1151	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Roseborough Rd and Centre St W	1976	80	2056	5,670	35	227	-
1152	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	346 Centre St W	1976	80	2056	5,670	35	227	-
1153	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	104 Secord Ave	1959	80	2039	7,110	18	474	-
1154	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	149 Centre St W	1976	80	2056	5,670	35	227	-
1155	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Centre St E and Queen St	2004	80	2084	4,510	63	127	-
1156	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Centre St E and Walnut St N	1959	80	2039	7,110	18	474	-
1157	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Centre St and Church St	1959	80	2039	7,110	18	474	-
1158	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	N Limit of Herdman St	1959	80	2039	7,110	18	474	-
1159	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	469 King St E	1988	80	2068	4,490	47	148	-
1160	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	305 King St E	1988	80	2068	4,490	47	148	-
1161	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	209 King St E	1988	80	2068	4,490	47	148	-
1162	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	189 King St E	1988	80	2068	4,490	47	148	-
1163	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	57 King St E	1994	80	2074	4,480	53	138	-
1164	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	13 King St W	1994	80	2074	4,480	53	138	-
1165	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	43 King St W	1998	80	2078	4,460	57	132	-
1166	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	103 King St W	1998	80	2078	4,460	57	132	-
1167	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	165 King St W (Renaud Ford Sales)	1998	80	2078	4,460	57	132	-
1168	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	223 King St W	1998	80	2078	4,460	57	132	-
1169	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	338 King St W	1998	80	2078	4,460	57	132	-
1170	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	399 King St W	1998	80	2078	4,460	57	132	-
1171	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2430 County Rd 20 W	1986	80	2066	4,480	45	152	-
1172	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2414 County Rd 20 W	1986	80	2066	4,480	45	152	-
1173	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	283 Maple St	1996	80	2076	4,460	55	134	-
1174	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	243 Maple St	1996	80	2076	4,460	55	134	-
1175	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Northwest Corner of Maple St and Erie Rd S	2006	80	2086	4,500	65	124	-
1176	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Maple St and Victoria St S	1959	80	2039	7,110	18	474	-
1177	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Maple St and McAfee St	1959	80	2039	7,110	18	474	-
1178	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Harrow Arena Parking Lot	2003	80	2083	4,460	62	126	-
1179	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Wellington St and McAfee St	1959	80	2039	7,110	18	474	-
1180	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Wellington St and Victoria St	1959	80	2039	7,110	18	474	-
1181	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Corner of Wellington St and Erie St S	2006	80	2086	4,500	65	124	-
1182	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	249 Wellington St	1996	80	2076	4,460	55	134	-
1183	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	333 Wellington St	1996	80	2076	4,460	55	134	-
1184	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	59 Shepley Crt	1996	80	2076	4,460	55	134	-
1185	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	19 Shepley Crt	1996	80	2076	4,460	55	134	-
1186	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	East Limit of Kael	2005	80	2085	4,490	64	125	-
1187	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1585 Erie Rd S	2006	80	2086	4,500	65	124	-
1188	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	West Parking Lot of Harrowood	1985	80	2065	4,480	44	154	-
1189	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Mulberry St in Harrowood	1985	80	2065	4,480	44	154	-
1190	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Poplar St in Harrowood	1985	80	2065	4,480	44	154	-
1191	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	116 Fernwood Dr	1992	80	2072	4,450	51	140	-
1192	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	25 Treeline Crt	1992	80	2072	4,450	51	140	-
1193	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	177 Fernwood Dr	1992	80	2072	4,450	51	140	-



Table A-2-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Ward	Location	Year Installed	Estimated Life	Replacement Year	Total Hydrant Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1194	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	144 Woodland Dr	1992	80	2072	4,450	51	140	-
1195	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	178 Woodland Dr	1992	80	2072	4,450	51	140	-
1196	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	222 Woodland Dr	1992	80	2072	4,450	51	140	-
1197	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	204 Murdoch St	1992	80	2072	4,450	51	140	-
1198	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	129 Arthur St	1973	80	2053	5,320	32	227	-
1199	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	218 Arthur St	1959	80	2039	7,110	18	474	-
1200	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	246 Pearson Dr	1973	80	2053	5,320	32	227	-
1201	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	340 Arthur St	1973	80	2053	5,320	32	227	-
1202	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	231 Sunset Dr	1994	80	2074	4,480	53	138	-
1203	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	223 Sunset Dr	1994	80	2074	4,480	53	138	-
1204	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	205 Sunset Dr	1994	80	2074	4,480	53	138	-
1205	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	205 Dubas Ave	1997	80	2077	4,460	56	133	-
1206	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	221 Dubas Ave	1997	80	2077	4,460	56	133	-
1207	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1 Briarwood Cres	1994	80	2074	4,480	53	138	-
1208	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	35 Briarwood Cres	1994	80	2074	4,480	53	138	-
1209	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	308 Given Rd	1973	80	2053	5,320	32	227	-
1210	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	138 Given Rd	1959	80	2039	7,110	18	474	-
1211	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Walnut St S at West End of Murdoch St	1959	80	2039	7,110	18	474	-
1212	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	257 Erie Rd S	2006	80	2086	4,500	65	124	-
1213	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	1635 Erie Rd S	2006	80	2086	4,500	65	124	-
1214	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Pollard Dr and Erie Rd S	2006	80	2086	4,500	65	124	-
24214	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	2215 Roseborough	2011	40	2051	27,630	30	1,234	-
24641	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Erie	2013	80	2093	11,840	72	312	-
24643	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Hydrant	3&4	Hydrants (2) on Kael	2013	80	2093	5,550	72	146	-
25374	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Loricon Court	3&4	Roseborough to End	2017	80	2097	8,680	76	223	-
25375	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Loricon Court	3&4	Roseborough to End	2017	80	2097	8,680	76	223	-
25508	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Erie Road North	3&4	Clark to Sinasac	2017	80	2097	10,770	76	277	-
25510	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Erie Road North	3&4	Clark to Sinasac	2017	80	2097	5,790	76	149	-
25511	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Erie Road North	3&4	Centre to Munger	2017	80	2097	10,770	76	277	-
25512	ES: Water - Distribution/Transmission	Linear Assets (Hydrants)	Water	Erie Road North	3&4	King Street to Centre	2017	80	2097	10,770	76	277	-
Total										2,035,150		75,301	0



Table A-2-5
Town of Essex
Water Service – Wards 3 & 4
Water Vehicles

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Vehicle Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1668	ES: Water - Admin	1&2/3&4	Truck	120 Sinasac St W	2006	8	2021	24,020	0	suggested for 10 year capital forecast	24,020
1669	ES: Water - Admin	1&2/3&4	Truck	120 Sinasac St W	2008	7	2021	18,450	0	suggested for 10 year capital forecast	18,450
24109	ES: Water - Admin	1&2/3&4	Pickup Truck	Sinasac St	2011	10	2021	17,910	0	suggested for 10 year capital forecast	17,910
24392	ES: Water - Admin	1&2/3&4	2012 Dodge Ram	Water Treatment Plant (2012	10	2022	12,910	1	suggested for 10 year capital forecast	12,910
24731	ES: Water - Admin	1&2/3&4	2014 Dodge Ram	Water Department	2014	8	2022	13,000	1	suggested for 10 year capital forecast	13,000
25057	ES: Water - Admin	1&2/3&4	Truck	120 Sinasac St W	2015	10	2025	24,580	4	suggested for 10 year capital forecast	24,580
25821	ES: Water - Distribution/Transmission	1&2/3&4	Pickup Truck	Water/Sanitary Sewer	2018	10	2028	18,410	7	suggested for 10 year capital forecast	18,410
Total								129,280		0	129,280



Table A-2-6
Town of Essex
Water Service – Wards 3 & 4
Water Meters, Machinery, and Equipment

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1677	ES: Water - Admin	3&4	Water Meter Heads	Harrow Water Dept	2007	30	2037	536,310	16	39,499	-
1678	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2008	30	2038	384,160	17	26,880	-
1679	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2008	30	2038	77,300	17	5,409	-
1680	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2008	30	2038	108,600	17	7,599	-
1681	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2007	30	2037	274,830	16	20,241	-
1682	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2006	30	2036	71,150	15	5,537	-
1683	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2005	30	2035	40,420	14	3,339	-
1684	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2004	30	2034	49,910	13	4,398	-
1685	ES: Water - Admin	3&4	Water Meter Registers	Harrow Water Dept	2007	30	2037	133,030	16	9,798	-
1686	ES: Water - Distribution/Transmission	3&4	Water Meter Interface Units	Harrow Water Dept	2006	30	2036	339,990	15	26,460	-
1687	ES: Water - Distribution/Transmission	3&4	Water Meter Interface Units	Harrow Water Dept	2005	30	2035	75,980	14	6,276	-
1688	ES: Water - Admin	3&4	Meter Reading Gun	Harrow Water Dept	2007	30	2037	4,090	16	301	-
1689	ES: Water - Admin	3&4	Magnatrak Locator & Case	Harrow Water Dept	2007	30	2037	1,460	16	108	-
1690	ES: Water - Admin	3&4	Magnatrak Case	Harrow Water Dept	2007	30	2037	1,460	16	108	-
1691	ES: Water - Admin	3&4	Mobile Meter Reading Unit	Harrow Water Dept	2006	30	2036	210,210	15	16,360	-
1692	ES: Water - Admin	3&4	Reading Unit & Charger	Harrow Water Dept	2008	30	2038	10,350	17	724	-
1693	ES: Water - Admin	3&4	Adapter for Programmer	Harrow Water Dept	2006	30	2036	810	15	63	-
1694	ES: Water - Admin	3&4	SS Gate Key	Harrow Water Dept	2006	30	2036	4,610	15	359	-
1695	ES: Water - Admin	3&4	Eclipse Sampling Station	Harrow Water Dept	2006	30	2036	1,420	15	111	-
1696	ES: Water - Admin	3&4	Diffusing Dechlorinator	Harrow Water Dept	2004	30	2034	5,210	13	459	-
1697	ES: Water - Admin	3&4	Adv Probe Readall	Harrow Water Dept	2004	30	2034	4,570	13	403	-
1698	ES: Water - Distribution/Transmission	3&4	3/4 Neoprene GSKT	Harrow Water Dept	2008	30	2038	1,380	17	97	-
1699	ES: Water - Admin	3&4	Radio Antenna - 6' Cable	Harrow Water Dept	2008	30	2038	520	17	36	-
23244	ES: Water - Treatment	3&4	Ladder on Alum Tank	H/CS WTP	2009	20	2029	4,280	8	suggested for 10 year capital forecast	4,280
23245	ES: Water - Treatment	3&4	Control Valve	0	2009	20	2029	4,270	8	suggested for 10 year capital forecast	4,270



Table A-2-6 (Cont'd)

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
23248	ES: Water - Treatment	3&4	Alumn Feed Pumps	0	2009	20	2029	10,790	8	suggested for 10 year capital forecast	10,790
23249	ES: Water - Treatment	3&4	Chlorine Analyzer Unit	0	2009	15	2024	26,110	3	suggested for 10 year capital forecast	26,110
23537	ES: Water - Treatment	3&4	Clarifier Feed Water	H/CS WTP	2010	80	2090	4,510	69	121	-
23538	ES: Water - Treatment	3&4	Data Communication	H/CS WTP	2010	20	2030	1,930	9	suggested for 10 year capital forecast	1,930
23539	ES: Water - Treatment	3&4	Low Lift Pump #2	H/CS WTP	2010	20	2030	2,560	9	suggested for 10 year capital forecast	2,560
23540	ES: Water - Treatment	3&4	Generator Transfer Switch & C	H/CS WTP	2010	30	2040	36,050	19	2,299	-
23541	ES: Water - Treatment	3&4	High Lift Pump #3	H/CS WTP	2010	30	2040	14,770	19	942	-
23542	ES: Water - Treatment	3&4	Electrical Maintenance System	H/CS WTP	2010	20	2030	800	9	suggested for 10 year capital forecast	800
23543	ES: Water - Treatment	3&4	Surge Relief Valve	H/CS WTP	2010	20	2030	7,510	9	suggested for 10 year capital forecast	7,510
23544	ES: Water - Treatment	3&4	Jet Wash Valves	H/CS WTP	2010	20	2030	1,440	9	suggested for 10 year capital forecast	1,440
23545	ES: Water - Treatment	3&4	Chlorinator	H/CS WTP	2010	20	2030	18,780	9	suggested for 10 year capital forecast	18,780
23546	ES: Water - Treatment	3&4	Layne Vertical Pump	H/CS WTP	2010	20	2030	11,950	9	suggested for 10 year capital forecast	11,950
23547	ES: Water - Treatment	3&4	Low Lift Sump	H/CS WTP	2010	10	2021	540	0	suggested for 10 year capital forecast	540
23548	ES: Water - Treatment	3&4	Ballasts	H/CS WTP	2010	15	2025	920	4	suggested for 10 year capital forecast	920
23549	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Harrow Water Dept	2010	30	2040	119,500	19	7,622	-
23550	ES: Water - Distribution/Transmission	3&4	Water Meters	Water Dept	2010	30	2040	1,070	19	68	-
23551	ES: Water - Distribution/Transmission	3&4	Water Meters	Water Dept	2010	30	2040	1,310	19	84	-
23552	ES: Water - Distribution/Transmission	3&4	Water Meters	Water Dept	2010	30	2040	650	19	41	-



Table A-2-6 (Cont'd)

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
23749	ES: Water - Treatment	3&4	Conduit & Cable	Harrow WTP	2010	30	2040	3,670	19	234	-
23750	ES: Water - Treatment	3&4	Reliance 20hp motor	Harrow WTP	2010	20	2030	1,270	9	suggested for 10 year capital forecast	1,270
24110	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Water Dept	2011	30	2041	25,660	20	1,569	-
24111	ES: Water - Admin	3&4	Laptop	Sinasac St	2011	5	2021	4,690	0	suggested for 10 year capital forecast	4,690
24112	ES: Water - Admin	3&4	Laptop	Sinasac St	2011	5	2021	4,690	0	suggested for 10 year capital forecast	4,690
24113	ES: Water - Admin	3&4	Laptop	Sinasac St	2011	5	2021	4,690	0	suggested for 10 year capital forecast	4,690
24377	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Water Dept	2012	30	2042	45,200	21	2,657	-
24378	ES: Water - Admin	3&4	Radio Antenna	Harrow Water Department	2012	30	2042	730	21	43	-
24379	ES: Water - Admin	3&4	Coppersetter	Harrow Water Department	2012	30	2042	2,370	21	139	-
24380	ES: Water - Admin	3&4	Hydrant Setter	Harrow Water Department	2012	10	2022	870	1	suggested for 10 year capital forecast	870
24381	ES: Water - Admin	3&4	Battery Charger	harrow Water Department	2012	5	2021	260	0	suggested for 10 year capital forecast	260
24382	ES: Water - Distribution/Transmission	3&4	Top Lid	Harrow Water Dept	2012	30	2042	970	21	57	-
24383	ES: Water - Distribution/Transmission	3&4	Water Meters	Harrow Water Dept	2012	30	2042	390	21	23	-
24384	ES: Water - Distribution/Transmission	3&4	Water Meters	Harrow Water Dept	2012	30	2042	250	21	15	-
24389	ES: Water - Admin	3&4	Pipeline Locator	Harrow Water Dept	2012	8	2021	6,030	0	suggested for 10 year capital forecast	6,030
24393	ES: Water - Distribution/Transmission	3&4	Singer Valve	Harrow/CS WTP	2012	25	2037	7,770	16	572	-
24394	ES: Water - Distribution/Transmission	3&4	Plant Effluent Turbidity Meter	Harrow/CS WTP	2012	10	2022	1,930	1	suggested for 10 year capital forecast	1,930
24395	ES: Water - Distribution/Transmission	3&4	Milltronics Miltiranger Level con	Harrow/CS WTP	2012	15	2027	1,650	6	suggested for 10 year capital forecast	1,650
24403	ES: Water - Treatment	3&4	LOW LIFT VALUE REPLACEMENT	H/CS WATER TREATMENT PL	2012	50	2062	320	41	12	-



Table A-2-6 (Cont'd)

Asset ID	Category	Ward	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
24412	ES: Water - Treatment	3&4	TRASH PUMP	HARROW WTP	2012	10	2022	6,030	1	suggested for 10 year capital forecast	6,030
24455	ES: Water - Admin	3&4	Computer	120 Sinasac	2012	4	2021	2,420	0	suggested for 10 year capital forecast	2,420
24479	ES: Water - Treatment	3&4	Scott Air Pack	H/CS WTP	2013	10	2023	3,660	2	suggested for 10 year capital forecast	3,660
24480	ES: Water - Treatment	3&4	Control Cable	H/CS WTP	2013	10	2023	14,740	2	suggested for 10 year capital forecast	14,740
24481	ES: Water - Treatment	3&4	Chlorinator Regulator & Rebuild Kits	H/CS WTP	2013	15	2028	5,740	7	suggested for 10 year capital forecast	5,740
24482	ES: Water - Treatment	3&4	Generator	H/CS WTP	2013	35	2048	66,270	27	3,200	-
24485	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Water Dept	2013	30	2043	47,200	22	2,673	-
24732	ES: Water - Distribution/Transmission	3&4	Water Meter Heads	Water Dept	2014	30	2044	58,480	23	3,197	-
24788	ES: Water - Treatment	3&4	Sample Stations	H/CS WTP	2014	25	2039	19,050	18	1,271	-
Total								2,944,510		201,402	150,550



Appendix B

Wastewater System Inventory Data



Table B-1-1
Town of Essex
Wastewater Facilities – Ward 1

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
2712	ES: Sanitary Sewer - Treatment/Disposal	Buildings	Sanitary Sewers	Colchester North Wastewater Treatment Plant	3980/4000 North Malden Road	1	2001	75	2076	14,699,830	55	443,102	-
3501	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	ESSEX WW PS#3	Pumping Station 3	1	1984	82	2066	84,986	45	2,882	-
3502	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	ESSEX WW PS#4	Pumping Station 4	1	1984	50	2034	1,256,600	13	110,730	-
23535	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	Flow Meter	Pumping Station #4	1	2010	25	2035	17,024	14	1,406	-
24615	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	Swing Check Valve	Pump Station 4	1	2013	20	2033	3,510	12	332	-
Total										16,061,950		558,452	0



**Table B-1-2
Town of Essex
Wastewater Forcemains – Ward 1**

Asset ID	Category	Segment	Department	Name	Location	Ward	Length (m)	Diameter (mm)	Material	Year Installed	Estimated Life	Replacement Year	Total Forcemain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19445	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Lakeshore Forcemain	0	1		tba		1984	50	2034	598,880	13	52,772	-
19446	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	CN Forcemain	0	1		tba		2008	50	2058	576,510	37	22,200	-
19448	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	CS Forcemain	0	1		tba		1988	50	2038	674,430	17	47,190	-
25724	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	South Talbot Road North	Victoria to Centre	1		tba		2017	80	2097	116,840	76	3,004	-
25725	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	South Talbot Road North	Brien Avenue West to Fairview Avenue West	1		tba		2017	80	2097	268,090	76	6,892	-
25726	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Fairview Avenue West	Woodview to Michael Drive	1		tba		2017	80	2097	126,300	76	3,247	-
25727	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Fairview Avenue West	Harian Street South to Woodview	1		tba		2017	80	2097	403,130	76	10,363	-
25728	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Fairview Avenue West	Kimball Drive to Hanlan	1		tba		2017	80	2097	166,820	76	4,289	-
25729	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Fairview Avenue West	Kimball Drive to Hanlan	1		tba		2017	80	2097	21,220	76	546	-
25730	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	South Talbot Road North	Centre to Laird	1		tba		2017	80	2097	126,740	76	3,258	-
25731	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Fairview Avenue West	Michael to South Talbot Road S	1		tba		2017	80	2097	133,710	76	3,437	-
25732	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	South Talbot Road North	Iler to Brien Avenue	1		tba		2017	80	2097	201,130	76	5,171	-
25733	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	South Talbot Road North	Laird to Iler	1		tba		2017	80	2097	139,960	76	3,598	-
25734	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Forcemain	0	0		tba		2017	80	2097	106,810	76	2,746	-
25735	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	Forcemain	0	0		tba		2017	80	2097	108,390	76	2,786	-
25736	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Forcemain)	Sanitary Sewers	South Talbot Road North	Diane to Victoria Avenue	1		tba		2017	80	2097	381,110	76	9,797	-
Total							0						4,150,070		181,295	0



Table B-1-3
Town of Essex
Wastewater Lagoons – Ward 1

Asset ID	Category	Segment	Department	Name	Ward	Year Installed	Estimated Life	Replacement Year	Total Lagoon Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
19444	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Lagoons)	Sanitary Sewers	NE Lagoons (Lakeshore)	0	1984	50	2034	3,117,692	13	274,726	-
Total									3,117,692		274,726	0



**Table B-1-4
Town of Essex
Sanitary Sewers – Ward 1**

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5679	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Albert St	Medora Ave W To Maidstone Ave W	1	1985	100	2085	26,423	64	736	-
5680	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Albert St	Medora Ave W To Maidstone Ave W	1	1985	100	2085	27,876	64	776	-
5681	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Albert St	Medora Ave W To Maidstone Ave W	1	1985	100	2085	29,215	64	813	-
5682	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Albert St	Medora Ave W To Maidstone Ave W	1	1985	100	2085	33,986	64	946	-
5683	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Albert St	Medora Ave W To Maidstone Ave W	1	1985	100	2085	32,378	64	901	-
5684	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Albert St	End To Medora Ave W	1	1985	100	2085	43,813	64	1,220	-
5685	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St N	Laird Ave To Centre St	1	2002	100	2102	53,862	81	1,348	-
5686	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St N	Centre St To Victoria Ave	1	2002	100	2102	30,381	81	761	-
5687	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St N	Centre St To Victoria Ave	1	2002	100	2102	33,502	81	839	-
5688	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St S	Laird Ave To Iler Ave	1	2002	100	2102	33,253	81	832	-
5689	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St S	Laird Ave To Iler Ave	1	2002	100	2102	27,143	81	679	-
5690	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St S	Laird Ave To Iler Ave	1	2002	100	2102	27,796	81	696	-
5691	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Alice St S	Iler Ave To Brien Ave W	1	2002	100	2102	58,059	81	1,453	-
5692	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	100	2087	54,825	66	1,503	-
5693	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Cranberry Court To Gordon	1	1984	100	2084	30,066	63	844	-
5694	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twn	1	1984	100	2084	51,042	63	1,432	-
5695	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twn	1	1984	100	2084	39,424	63	1,106	-
5696	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twn	1	1984	100	2084	47,249	63	1,326	-
5697	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Arthur Ave To Maidstone Ave	1	1984	60	2044	11,033	23	603	-
5698	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Talbot St S To Irwin Ave	1	1984	100	2084	22,565	63	633	-
5699	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Irwin Ave To Maple Row	1	1984	100	2084	40,768	63	1,144	-
5700	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Maple Row To Cranberry Court	1	1984	100	2084	21,296	63	598	-
5701	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Stanley To Wilson	1	1984	100	2084	45,021	63	1,263	-
5702	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur Ave	Stanley To Wilson	1	1984	100	2084	40,735	63	1,143	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5703	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bell	Forest St To Allen Ave	1	1987	100	2087	80,597	66	2,210	-
5704	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bell	Brock To Forest Ave	1	1985	100	2085	25,086	64	698	-
5705	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bell	Brock To Forest Ave	1	1985	100	2085	30,107	64	838	-
5706	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bell	Thomas Ave To Brock	1	1985	100	2085	52,839	64	1,471	-
5707	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bell	Harvey To Thomas Ave	1	1985	100	2085	43,995	64	1,225	-
5708	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Blake St	Thomas Ave To Brock	1	1995	100	2095	34,150	74	888	-
5709	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Talbot St S To Irwin Ave	1	1984	100	2084	38,385	63	1,077	-
5710	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Stanley St To Gosfield Tw'n	1	1984	80	2064	89,200	43	3,112	-
5711	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Stanley St To Gosfield Tw'n	1	1984	80	2064	78,000	43	2,721	-
5712	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Cranbrook Ct To Stanley St	1	1984	80	2064	60,432	43	2,108	-
5713	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Maple Row To Cranbrook Court	1	1984	80	2064	66,264	43	2,312	-
5714	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Irwin Ave To Maple Row	1	1984	80	2064	69,200	43	2,414	-
5715	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Gosfield Tw'n To Dowswell St	1	1971	46	2021	41,370	0	suggested for 10 year capital forecast	41,370
5716	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Dowswell St To Stanton Court	1	1971	46	2021	35,000	0	suggested for 10 year capital forecast	35,000
5717	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Dowswell St To Stanton Court	1	1971	46	2021	45,090	0	suggested for 10 year capital forecast	45,090
5718	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Pine St To Stanton Court	1	1971	46	2021	45,760	0	suggested for 10 year capital forecast	45,760
5719	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Stanton Court To Pine St	1	1971	46	2021	48,090	0	suggested for 10 year capital forecast	48,090
5720	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Pine St To Maidstone Ave E	1	1971	46	2021	17,805	0	suggested for 10 year capital forecast	17,805
5721	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Pine St To Maidstone Ave E	1	1971	46	2021	15,510	0	suggested for 10 year capital forecast	15,510
5722	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Pine St To Maidstone Ave E	1	1971	46	2021	47,380	0	suggested for 10 year capital forecast	47,380
5723	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave E	Pine St To Maidstone Ave E	1	1971	46	2021	47,175	0	suggested for 10 year capital forecast	47,175
5724	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Milne To Queen Court	1	1976	60	2036	36,485	15	2,839	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5725	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Talbot St S To St. Paul St	1	2002	100	2102	43,433	81	1,087	-
5726	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Michael Dr To Edward	1	1976	60	2036	42,630	15	3,318	-
5727	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	St. James St To Jenner	1	2002	100	2102	49,139	81	1,230	-
5728	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Langtry St To Westlawn Dr	1	1985	100	2085	54,238	64	1,510	-
5729	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Hanlan St S To Westlawn Dr	1	1985	100	2085	43,005	64	1,197	-
5730	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Hanlan St S To Westlawn Dr	1	1985	100	2085	44,232	64	1,231	-
5731	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Hanlan St S To Westlawn Dr	1	1985	100	2085	51,456	64	1,432	-
5732	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Edward To Talbot St S	1	1976	60	2036	45,200	15	3,518	-
5733	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Kim Ct To Michael Dr	1	1976	60	2036	44,615	15	3,472	-
5734	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Queen Court To Kim Court	1	1976	60	2036	49,070	15	3,819	-
5735	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	2000	80	2080	52,764	59	1,531	-
5736	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	2000	80	2080	52,968	59	1,537	-
5737	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	1984	80	2064	44,568	43	1,555	-
5738	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brock St	Blake St To Bell Ave	1	1985	100	2085	36,387	64	1,013	-
5739	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brock St	Blake St To Bell Ave	1	1985	100	2085	32,063	64	893	-
5740	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cameron Ave	Malott St To Maidstone Ave E	1	1985	100	2085	46,314	64	1,289	-
5741	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cameron Ave	Fox St N To Station St	1	1985	100	2085	36,458	64	1,015	-
5742	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cameron Ave	Talbot St N To Fox St S	1	1985	100	2085	38,376	64	1,068	-
5743	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cameron Ave	Talbot St N To Fox St S	1	1985	100	2085	40,232	64	1,120	-
5744	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cameron Ave	Station St To Malott St	1	1985	100	2085	39,457	64	1,098	-
5745	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cameron Ave	Station St To Malott St	1	1985	100	2085	44,937	64	1,251	-
5746	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Russell St To Day St	1	2002	100	2102	45,045	81	1,128	-
5747	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Milne St To South Talbot St N	1	1982	60	2042	11,562	21	680	-
5748	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Milne St To South Talbot St N	1	1982	100	2082	38,370	61	1,094	-
5749	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Milne St To South Talbot St N	1	1982	100	2082	58,410	61	1,666	-
5750	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Milne St To South Talbot St N	1	1982	100	2082	54,615	61	1,558	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5751	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Milne St To South Talbot St N	1	1982	100	2082	53,360	61	1,522	-
5752	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Talbot Rd N To Alice St N	1	2002	100	2102	29,206	81	731	-
5753	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Talbot Rd N To Alice St N	1	2002	100	2102	13,630	81	341	-
5754	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Alice St N To Russell St	1	2002	100	2102	51,348	81	1,285	-
5755	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Day St To Victor St	1	2002	100	2102	49,204	81	1,232	-
5756	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Victor St To Turnhout Cres	1	2002	100	2102	42,714	81	1,069	-
5757	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Turnhout Cres To Turnhout Cres	1	1982	100	2082	43,696	61	1,246	-
5758	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Turnhout Cres To Hanlan St N	1	1982	100	2082	39,607	61	1,130	-
5759	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Hanlan St N To Milne St	1	1982	100	2082	33,563	61	957	-
5760	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Hanlan St N To Milne St	1	1982	100	2082	41,393	61	1,181	-
5761	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St	Hanlan St N To Milne St	1	1982	100	2082	33,384	61	952	-
5762	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	College St	North East End To Maidstone Ave W	1	1985	100	2085	51,465	64	1,433	-
5763	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Road 8	Allen Ave To South Talbot St	1	2008	100	2108	51,385	87	1,251	-
5764	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Road 8	Allen Ave To South Talbot St	1	2008	100	2108	45,005	87	1,096	-
5765	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Road 8	Allen Ave To South Talbot St	1	2008	100	2108	35,520	87	865	-
5766	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cranberry Ct	Arthur Ave To Brien Ave	1	2001	100	2101	28,205	80	710	-
5767	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cranberry Ct	Arthur Ave To Brien Ave	1	2001	100	2101	12,821	80	323	-
5768	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cranberry Ct	Arthur Ave To Brien Ave	1	2001	100	2101	37,332	80	939	-
5769	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Day St	Laird Ave To Centre St	1	1985	100	2085	33,165	64	923	-
5770	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Day St	South End To Laird Ave	1	1985	100	2085	24,872	64	692	-
5771	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Day St	Laird Ave To Centre St	1	1985	100	2085	36,430	64	1,014	-
5772	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Day St	Centre St To Victoria Ave	1	1985	100	2085	37,595	64	1,047	-
5773	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Day St	Centre St To Victoria Ave	1	1985	100	2085	38,740	64	1,078	-
5774	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dowswell St	Fairview Ave E To Gail Crescent	1	1973	100	2073	51,640	52	1,606	-
5775	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dowswell St	Gail Crescent To Brien Ave E	1	1973	44	2021	50,910	0	suggested for 10 year capital forecast	50,910
5776	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Earl Ct	Kingsway To South End	1	1989	100	2089	49,735	68	1,344	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5777	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Laird Ave To Centre St	1	1985	100	2085	46,718	64	1,301	-
5778	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Laird Ave To Centre St	1	1985	100	2085	4,115	64	115	-
5779	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Laird Ave To Centre St	1	1985	100	2085	5,102	64	142	-
5780	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Centre St To Victoria Ave	1	2002	100	2102	15,271	81	382	-
5781	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Centre St To Victoria Ave	1	1985	100	2085	24,332	64	677	-
5782	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Centre St To Victoria Ave	1	1985	100	2085	17,735	64	494	-
5783	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Edward St	Iler Ave To Kelly	1	1976	60	2036	50,465	15	3,927	-
5784	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Edward St	Kelly To Brien Ave W	1	1976	60	2036	16,638	15	1,295	-
5785	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Essex Pollution Control Plant	County Rd 8 To North Malden Rd	1	2004	60	2064	71,681	43	2,501	-
5786	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Essex Pollution Control Plant	County Rd 8 To North Malden Rd	1	2004	60	2064	79,594	43	2,777	-
5787	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Essex Pollution Control Plant	County Rd 8 To North Malden Rd	1	2004	60	2064	67,788	43	2,365	-
5788	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Essex Pollution Control Plant	County Rd 8 To North Malden Rd	1	2004	60	2064	7,534	43	263	-
5789	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Pine St To Maidstone Ave E	1	1973	60	2033	53,615	12	5,070	-
5790	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Pine St To Maidstone Ave E	1	1973	60	2033	45,705	12	4,322	-
5791	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Pine St To Maidstone Ave E	1	1973	60	2033	45,655	12	4,317	-
5792	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Pine St To Maidstone Ave E	1	1973	60	2033	53,985	12	5,105	-
5793	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Dowswell St To Pine St	1	1973	60	2033	47,545	12	4,496	-
5794	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Dowswell St To Pine St	1	1973	60	2033	45,725	12	4,324	-
5795	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Dowswell St To Pine St	1	1973	60	2033	45,635	12	4,315	-
5796	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Dowswell St To Pine St	1	1973	60	2033	37,985	12	3,592	-
5797	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Dowswell St To Pine St	1	1973	60	2033	39,290	12	3,715	-
5798	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Gosfield Ave To Dowswell St	1	1973	60	2033	45,505	12	4,303	-
5799	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave	Gosfield Ave To Dowswell St	1	1973	60	2033	45,025	12	4,258	-
5800	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave E	Gosfield Twn To Irwin Ave	1	1983	100	2083	50,455	62	1,427	-
5801	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave E	Irwin Ave To Talbot Rd S	1	1983	80	2063	48,538	42	1,719	-
5802	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave E	Dowswell St To Gosfield Ave	1	1983	100	2083	58,304	62	1,649	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5803	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr.	Fairview To Oak Dr.	1	1997	100	2097	54,758	76	1,408	-
5804	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Woodview To Michael Dr	1	1983	100	2083	33,847	62	957	-
5805	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Woodview To Michael Dr	1	1983	100	2083	29,986	62	848	-
5806	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview	1	1983	100	2083	59,389	62	1,680	-
5807	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview	1	1983	100	2083	77,022	62	2,179	-
5808	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview	1	1983	100	2083	67,482	62	1,909	-
5809	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	St James St To Langtry St	1	1983	80	2063	63,980	42	2,266	-
5810	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Langtry St To Westlawn Dr	1	1983	80	2063	58,254	42	2,063	-
5811	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Westlawn Dr To Kimball Dr	1	1983	80	2063	58,128	42	2,059	-
5812	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St	1	1983	80	2063	60,839	42	2,155	-
5813	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St	1	1983	80	2063	59,842	42	2,119	-
5814	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Westlawn Dr To Kimball Dr	1	1983	100	2083	39,006	62	1,103	-
5815	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Westlawn Dr To Kimball Dr	1	1983	100	2083	45,336	62	1,282	-
5816	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St	1	1983	80	2063	11,074	42	392	-
5817	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St	1	1983	80	2063	8,127	42	288	-
5818	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Westlawn Dr To Kimball Dr	1	1983	80	2063	38,941	42	1,379	-
5819	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St	1	1983	80	2063	13,669	42	484	-
5820	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Talbot St S To St James	1	1983	80	2063	72,618	42	2,572	-
5821	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fairview Ave W	Talbot St S To St James	1	1983	80	2063	70,182	42	2,486	-
5822	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	100	2087	42,723	66	1,172	-
5823	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	100	2087	43,531	66	1,194	-
5824	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	100	2087	26,137	66	717	-
5825	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Forest Ave	Thomas Ave To Bell Ave	1	1989	100	2089	48,161	68	1,302	-
5826	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Forest Ave	Thomas Ave To Bell Ave	1	1989	100	2089	13,353	68	361	-
5827	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Forest Ave	Thomas Ave To Bell Ave	1	1989	100	2089	43,099	68	1,165	-
5828	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fox St N	Cameron To Medora	1	1985	100	2085	26,461	64	737	-
5829	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fox St N	Station St To Cameron	1	1985	100	2085	30,381	64	846	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5830	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Francis Court	Gosfield Twn To West End	1	1984	100	2084	58,233	63	1,634	-
5831	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gail St	Dowsell St To East End	1	1973	60	2033	46,915	12	4,436	-
5832	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Galos Dr	East End To Galos Dr	1	2006	100	2106	18,175	85	446	-
5833	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Galos Dr	Townsvlew Crt To Maidstone Ave	1	2006	100	2106	74,331	85	1,826	-
5834	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Galos Dr	West End To Galos Dr	1	2006	100	2106	48,979	85	1,203	-
5835	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Golfway Dr	Golfway To Townsvlew	1	1991	100	2091	39,165	70	1,044	-
5836	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Golfway Dr	Maidstone Ave To Golfway	1	1991	100	2091	38,296	70	1,021	-
5837	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	Fox To Station St	1	1984	100	2084	35,579	63	998	-
5838	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	South End To Gordon	1	1984	100	2084	6,199	63	174	-
5839	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	South End To Gordon	1	1984	100	2084	24,191	63	679	-
5840	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	Station St To Scratch	1	1984	100	2084	36,759	63	1,031	-
5841	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	Scratch To Arthur	1	1984	100	2084	51,131	63	1,435	-
5842	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	Scratch To Arthur	1	1984	100	2084	23,881	63	670	-
5843	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gordon Ave	Wilson To Gordon	1	1984	100	2084	38,690	63	1,086	-
5844	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Ave E	Francis To Arthur	1	1984	80	2064	95,770	43	3,341	-
5845	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Ave E	Francis To Arthur	1	1984	80	2064	96,399	43	3,363	-
5846	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Ave E	Brien Ave To Francis	1	1984	80	2064	66,105	43	2,306	-
5847	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Rd W	Talbot To Irwin Ave	1	1983	100	2083	63,008	62	1,782	-
5848	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Rd W	Irwin Ave To Fairview	1	1983	100	2083	56,513	62	1,599	-
5849	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Rd W	Fairview To Brien Ave	1	1983	100	2083	38,977	62	1,103	-
5850	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Rd W	Talbot To Lester	1	1983	100	2083	59,070	62	1,671	-
5851	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Rd W	Talbot To Lester	1	1983	100	2083	48,265	62	1,365	-
5852	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Rd W	Talbot To Lester	1	1983	100	2083	57,845	62	1,636	-
5853	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Townline	Fairview To Brien Ave	1	1987	100	2087	45,350	66	1,244	-
5854	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Townline	Fairview To Brien Ave	1	1987	100	2087	42,170	66	1,156	-
5855	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gosfield Townline	Fairview To Brien Ave	1	1987	100	2087	46,025	66	1,262	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5856	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave	Gosfield Twnln to Dowswell	1	1987	100	2087	12,205	66	335	-
5857	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St	Centre St To Victoria Ave	1	1982	100	2082	34,250	61	977	-
5858	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St	Centre St To Victoria Ave	1	1982	100	2082	35,560	61	1,014	-
5859	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St	Laird Ave To Centre St	1	1982	100	2082	31,650	61	903	-
5860	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St	Laird Ave To Centre St	1	1982	100	2082	31,659	61	903	-
5861	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	Brien Ave To Fairview	1	1983	100	2083	57,167	62	1,617	-
5862	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	Brien Ave To Fairview	1	1983	100	2083	56,694	62	1,604	-
5863	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	Brien Ave To Fairview	1	1983	100	2083	57,305	62	1,621	-
5864	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	South East End To Fairview	1	2003	100	2103	9,768	82	243	-
5865	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	South East End To Fairview	1	2003	100	2103	31,295	82	780	-
5866	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	Laird Ave To Iler Ave	1	1996	100	2096	32,806	75	848	-
5867	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	Iler Ave To Brien Ave	1	1983	100	2083	43,841	62	1,240	-
5868	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hanlan St S	Iler Ave To Brien Ave	1	1983	100	2083	41,003	62	1,160	-
5869	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harvey St	Medora To Bell Ave	1	1985	100	2085	50,050	64	1,393	-
5870	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harvey St	Medora To Bell Ave	1	1985	100	2085	49,637	64	1,382	-
5871	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harvey St	Medora To Bell Ave	1	1985	100	2085	50,234	64	1,398	-
5872	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harvey St	Bell Ave To Maidstone Ave	1	1985	100	2085	11,759	64	327	-
5873	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Houghton St	West End To Kimball Dr	1	2006	100	2106	27,072	85	665	-
5874	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Talbot To Alice	1	2002	100	2102	40,707	81	1,019	-
5875	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Alice To Jenner	1	2002	100	2102	33,647	81	842	-
5876	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Alice To Jenner	1	2002	100	2102	32,430	81	812	-
5877	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Margaret Brown To Hanlan St	1	1983	60	2043	42,835	22	2,426	-
5878	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Laird To Iler Ave	1	1996	100	2096	11,785	75	305	-
5879	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Laird Ave to Iler Ave	1	1975	60	2035	31,728	14	2,621	-
5880	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Laird Ave to Iler Ave	1	1975	60	2035	42,594	14	3,518	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5881	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Iler Ave to Kelly	1	1975	60	2035	76,548	14	6,323	-
5882	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Jenner St To Margaret Brown	1	1996	100	2096	26,325	75	681	-
5883	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Jenner St To Margaret Brown	1	1983	60	2043	54,670	22	3,096	-
5884	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Jenner St To Margaret Brown	1	1983	60	2043	55,425	22	3,139	-
5885	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Margaret Brown To Jenner St	1	2002	100	2102	58,463	81	1,464	-
5886	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Margaret Brown To Hanlan St	1	1996	100	2096	55,150	75	1,426	-
5887	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Milne To Edward	1	1972	60	2032	55,518	11	5,673	-
5888	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Milne To Edward	1	1972	60	2032	73,986	11	7,560	-
5889	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Milne To Edward	1	1972	60	2032	73,698	11	7,530	-
5890	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Iler Ave	Edward To South Talbot Rd S	1	1972	60	2032	56,946	11	5,819	-
5891	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Fairview To Gosfield	1	1983	100	2083	64,692	62	1,830	-
5892	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Brien Ave To Wellington	1	1983	60	2043	93,512	22	5,296	-
5893	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Wellington To Fairview	1	1983	60	2043	92,264	22	5,225	-
5894	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Wellington To Fairview	1	1983	60	2043	66,544	22	3,768	-
5895	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Gosfield To Florian	1	1983	100	2083	52,588	62	1,488	-
5896	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Gosfield To Florian	1	1983	100	2083	49,797	62	1,409	-
5897	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Gosfield To Florian	1	1983	100	2083	52,360	62	1,481	-
5898	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Gosfield To Florian	1	1983	100	2083	38,400	62	1,086	-
5899	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Gosfield To Florian	1	1983	100	2083	32,740	62	926	-
5900	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Gosfield To Florian	1	1983	100	2083	38,400	62	1,086	-
5901	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave	Talbot To Florian	1	1983	100	2083	36,340	62	1,028	-
5902	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave N	Arthur Ave To Brien Ave	1	1984	100	2084	59,573	63	1,672	-
5903	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Irwin Ave N	Arthur Ave To Brien Ave	1	1984	100	2084	58,299	63	1,636	-
5904	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jenner St	Laird Ave To Iler Ave	1	2002	80	2082	47,412	61	1,352	-
5905	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jenner St	Laird Ave To Iler Ave	1	2002	80	2082	48,438	61	1,382	-
5906	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jenner St	Iler Ave To Brien Ave	1	2002	80	2082	45,900	61	1,309	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5907	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jenner St	Iler Ave To Brien Ave	1	2002	80	2082	43,332	61	1,236	-
5908	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	29,502	85	725	-
5909	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	19,930	85	490	-
5910	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	13,935	85	342	-
5911	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	34,565	85	849	-
5912	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	47,255	85	1,161	-
5913	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	12,535	85	308	-
5914	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Joan Flood Dr	Woodview To East End	1	2006	100	2106	24,075	85	591	-
5915	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kelly St	Milne St To Edward	1	1974	100	2074	51,178	53	1,575	-
5916	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kelly St	Milne St To Edward	1	1974	100	2074	51,249	53	1,577	-
5917	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kelly St	Milne St To Edward	1	1974	100	2074	42,027	53	1,293	-
5918	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Keown St	Victoria Ave To West End	1	2002	100	2102	40,744	81	1,020	-
5919	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Keown St	Victoria Ave To West End	1	2002	100	2102	44,495	81	1,114	-
5920	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kim Ct	Brien Ave W To East End	1	1976	100	2076	36,134	55	1,089	-
5921	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kim Ct	Brien Ave W To East End	1	1976	100	2076	30,639	55	924	-
5922	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kimball Dr	North End To Fairview	1	2006	100	2106	49,829	85	1,224	-
5923	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kimball Dr	North End To Fairview	1	2006	100	2106	25,728	85	632	-
5924	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kingsway Parkway	Earl Ct To Kingsway	1	1989	100	2089	35,772	68	967	-
5925	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kingsway Parkway	Earl Ct To Kingsway	1	1989	100	2089	34,921	68	944	-
5926	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kingsway Parkway	Earl Ct To Kingsway	1	1989	100	2089	28,416	68	768	-
5927	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kingsway Parkway	Viscount Pkwy To Kingsway	1	1989	100	2089	34,597	68	935	-
5928	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kingsway Parkway	Kingsway To Earl Ct	1	1989	100	2089	34,291	68	927	-
5929	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kingsway Parkway	Kingsway To Earl Ct	1	1989	100	2089	9,212	68	249	-
5930	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Talbot Rd To Alice St	1	1985	100	2085	54,685	64	1,522	-
5931	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Alice St To Russell St	1	1985	100	2085	63,751	64	1,775	-
5932	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Jenner St To Day St	1	1985	100	2085	34,106	64	949	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5933	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	South End To Laird Ave	1	1985	100	2085	6,190	64	172	-
5934	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Day St To Scott St	1	1985	100	2085	40,091	64	1,116	-
5935	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Victor St To Hanlan St	1	1982	100	2082	43,912	61	1,252	-
5936	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Victor St To Hanlan St	1	1982	100	2082	41,459	61	1,183	-
5937	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Scott St To Hanlan St	1	1985	100	2085	47,512	64	1,323	-
5938	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Hanlan St To Milne St	1	1982	100	2082	46,475	61	1,326	-
5939	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Hanlan St To Milne St	1	1982	100	2082	30,885	61	881	-
5940	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Hanlan St To Milne St	1	1982	100	2082	48,760	61	1,391	-
5941	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Milne St To Talbot	1	1982	100	2082	55,740	61	1,590	-
5942	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Milne St To Talbot	1	1982	100	2082	46,665	61	1,331	-
5943	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Milne St To Talbot	1	1982	100	2082	55,280	61	1,577	-
5944	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Milne St To Talbot	1	1982	100	2082	44,590	61	1,272	-
5945	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laird Ave	Milne St To Talbot	1	1982	100	2082	12,350	61	352	-
5946	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Langtry St	Brien Ave W To Wellington	1	1983	100	2083	57,058	62	1,614	-
5947	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Langtry St	Wellington To Fairview	1	1983	100	2083	39,442	62	1,116	-
5948	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Langtry St	Wellington To Fairview	1	1983	100	2083	39,391	62	1,114	-
5949	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lester St	Gosfield Twn To North End	1	1983	100	2083	9,146	62	259	-
5950	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lester St	Gosfield Twn To North End	1	1983	100	2083	61,485	62	1,739	-
5951	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lester St	Gosfield Twn To North End	1	1983	100	2083	29,643	62	838	-
5952	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Arthur Ave To Brien Ave	1	1983	100	2083	104,301	62	2,950	-
5953	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Arthur Ave To Brien Ave	1	1983	100	2083	101,527	62	2,872	-
5954	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Arthur Ave To Brien Ave	1	1983	100	2083	109,877	62	3,108	-
5955	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Arthur Ave To Brien Ave	1	1983	100	2083	104,329	62	2,951	-
5956	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Arthur Ave To Brien Ave	1	1983	100	2083	106,562	62	3,014	-
5957	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Fairview To Brien Ave	1	1983	80	2063	81,520	42	2,887	-
5958	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Brien Ave To Fairview	1	1983	80	2063	83,372	42	2,953	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5959	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Albert St	1	1985	100	2085	43,877	64	1,221	-
5960	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Albert St	1	1985	100	2085	44,953	64	1,251	-
5961	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Albert St To Bell Ave	1	1985	100	2085	71,801	64	1,999	-
5962	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Gosfield Ave	1	1984	100	2084	54,304	63	1,524	-
5963	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Gosfield Ave	1	1984	100	2084	34,024	63	955	-
5964	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Gosfield Ave	1	1984	100	2084	91,200	63	2,559	-
5965	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Gosfield Ave	1	1984	100	2084	84,264	63	2,364	-
5966	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Cameron Ave To Galos Dr	1	1984	100	2084	87,536	63	2,456	-
5967	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Medora Ave W	1	1985	100	2085	77,536	64	2,158	-
5968	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Medora Ave W	1	1985	100	2085	81,720	64	2,275	-
5969	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Medora Ave W To Talbot Rd N	1	1985	100	2085	69,008	64	1,921	-
5970	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Medora Ave W	1	1985	100	2085	78,336	64	2,181	-
5971	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Medora Ave W	1	1985	100	2085	23,077	64	642	-
5972	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Medora Ave W To Golfway Dr	1	1985	100	2085	74,912	64	2,085	-
5973	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Golfway Dr To Cameron Ave	1	1984	100	2084	69,312	63	1,945	-
5974	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Golfway Dr To Cameron Ave	1	1985	100	2085	77,840	64	2,167	-
5975	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave E	Bell Ave To Allen Ave	1	1985	100	2085	36,802	64	1,025	-
5976	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Row	Arthur Ave To Brien Ave E	1	1984	100	2084	59,605	63	1,672	-
5977	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Row	Arthur Ave To Brien Ave E	1	1984	100	2084	59,178	63	1,660	-
5978	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Margaret Brown Court	End To Iler Ave	1	1996	100	2096	20,605	75	533	-
5979	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Meadow Lane	Oak Dr To End	1	1990	100	2090	52,300	69	1,404	-
5980	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Meadow Lane	Oak Dr To End	1	1990	100	2090	39,725	69	1,066	-
5981	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave E	Talbot Rd N To Fox St	1	1985	100	2085	43,964	64	1,224	-
5982	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave E	Talbot Rd N To Fox St	1	1985	100	2085	10,382	64	289	-
5983	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave E	South End To Fox St	1	1985	100	2085	12,723	64	354	-
5984	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave E	Talbot Rd N To Fox St	1	1985	100	2085	32,736	64	911	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5985	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave E	Fox St To Maidstone Ave	1	1985	100	2085	44,180	64	1,230	-
5986	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave W	Thomas St To Harvey St	1	1985	100	2085	23,138	64	644	-
5987	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave W	Talbot Rd N To Albert St	1	1985	100	2085	29,102	64	810	-
5988	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Medora Ave W	Albert St To Harvey St	1	1985	100	2085	43,978	64	1,224	-
5989	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Allen Ave To South Talbot St	1	2008	100	2108	46,595	87	1,134	-
5990	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Allen Ave To South Talbot St	1	2008	100	2108	35,905	87	874	-
5991	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Allen Ave To South Talbot St	1	2008	100	2108	35,075	87	854	-
5992	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Allen Ave To South Talbot St	1	2008	100	2108	35,875	87	873	-
5993	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maidstone Ave	Allen Ave To South Talbot St	1	2008	100	2108	50,625	87	1,233	-
5994	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Michael Dr	Patrick Cres To Fairview Ave	1	1976	60	2036	27,750	15	2,160	-
5995	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Michael Dr	Patrick Cres To Patrick Cres	1	1976	60	2036	24,670	15	1,920	-
5996	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Michael Dr	Patrick Cres To Patrick Cres	1	1976	60	2036	46,245	15	3,599	-
5997	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Michael Dr	Brien Ave W To Patrick Cres	1	1976	60	2036	43,330	15	3,372	-
5998	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Milne St	Kelly To Brien Ave W	1	1998	100	2098	61,772	77	1,579	-
5999	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Milne St	Laird Ave To Iler Ave	1	1972	60	2032	27,467	11	2,807	-
6000	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Milne St S	Centre St To Victoria Ave	1	1982	100	2082	46,770	61	1,334	-
6001	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Milne St S	Laird Ave To Centre St	1	1982	100	2082	45,839	61	1,307	-
6002	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Meadow Lane To Woodview Dr	1	1990	100	2090	19,895	69	534	-
6003	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Meadow Lane To Woodview Dr	1	1990	100	2090	17,440	69	468	-
6004	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Meadow Lane To Woodview Dr	1	1990	100	2090	61,075	69	1,640	-
6005	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Park Lane	1	1990	100	2090	54,820	69	1,472	-
6006	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Park Lane	1	1990	100	2090	32,405	69	870	-
6007	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Park Lane	1	1990	100	2090	16,620	69	446	-
6008	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Park Lane	1	1990	100	2090	37,785	69	1,014	-
6009	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Park Lane	1	1990	100	2090	46,655	69	1,253	-
6010	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Park Lane	1	1990	100	2090	29,480	69	791	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6011	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Woodview Dr To Park Lane	1	1990	100	2090	42,495	69	1,141	-
6012	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Oak Dr 20 To Meadow Lane	1	1990	100	2090	45,825	69	1,230	-
6013	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Oak Dr 20 To Meadow Lane	1	1990	100	2090	62,810	69	1,686	-
6014	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Park Lane To Willow Cres	1	1990	100	2090	47,270	69	1,269	-
6015	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Oak Dr	Willow Cres To Oak Dr	1	1990	100	2090	19,910	69	535	-
6016	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Park Lane	Park Lane To Oak Dr	1	1990	100	2090	30,695	69	824	-
6017	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Park Lane	Oak Dr To Park Lane	1	1990	100	2090	38,980	69	1,046	-
6018	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Park Lane	Gosfield Twn To Oak Dr	1	1990	100	2090	21,595	69	580	-
6019	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Park Lane	Park Lane To Oak Dr	1	1990	100	2090	49,705	69	1,334	-
6020	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Park Lane	Oak Dr To Park Lane	1	1990	100	2090	49,680	69	1,334	-
6021	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Parking Lot	North End To Wilson Ave	1	1984	100	2084	31,001	63	870	-
6022	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Parking Lot	North End To Wilson Ave	1	1984	100	2084	26,151	63	734	-
6023	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Patrick Cres.	Michael Dr To Patrick Cres.	1	1976	60	2036	38,921	15	3,029	-
6024	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Patrick Cres.	Michael Dr To Michael Dr	1	1976	60	2036	14,739	15	1,147	-
6025	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Patrick Cres.	Michael Dr To Michael Dr	1	1976	60	2036	51,385	15	3,999	-
6026	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Patrick Cres.	Patrick Cres. To Michael Dr	1	1976	60	2036	30,428	15	2,368	-
6027	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Willow Cr	Oak Dr To End	1	1990	60	2050	30,740	29	1,407	-
6028	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pumping Station	Talbot Rd N To Talbot Rd N	1	1983	80	2063	15,082	42	534	-
6029	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pumping Station	Maidstone Ave To North End	1	1983	80	2063	25,793	42	914	-
6030	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen Ct	Brien Ave W To End	1	1976	60	2036	33,384	15	2,598	-
6031	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen Ct	Brien Ave W To End	1	1976	60	2036	30,776	15	2,395	-
6032	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queensway St	Queensway To West End	1	1989	100	2089	13,616	68	368	-
6033	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queensway St	Viscount Pkwy To Queensway	1	1989	100	2089	48,847	68	1,320	-
6034	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queensway St	Viscount Pkwy To Queensway	1	1989	100	2089	25,164	68	680	-
6035	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queensway St	Queensway To East End	1	1989	100	2089	12,582	68	340	-
6036	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Russell St	Laird Ave To Centre St	1	1985	100	2085	53,016	64	1,476	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6037	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Russell St	Centre St To Victoria Ave	1	1985	100	2085	60,513	64	1,685	-
6038	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	Victoria Ave To Diane Cres	1	1982	100	2082	64,435	61	1,838	-
6039	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Rear Rd	Victoria Ave To Diane Cres	1	1982	100	2082	64,274	61	1,833	-
6040	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	Victoria Ave To Diane Cres	1	1982	100	2082	66,696	61	1,902	-
6041	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	Victoria Ave To Diane Cres	1	1982	100	2082	21,252	61	606	-
6042	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	Victoria Ave To Diane Cres	1	1982	100	2082	60,956	61	1,739	-
6043	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	South Talbot Rd To South Talbot Rd	1	2004	100	2104	29,120	83	722	-
6044	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	South Talbot Rd To South Talbot Rd	1	2004	100	2104	42,075	83	1,043	-
6045	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd	Malden Rd To Diane Cres	1	2004	100	2104	72,395	83	1,795	-
6046	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	Malden Rd To Diane Cres	1	2004	100	2104	77,398	83	1,919	-
6047	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	Centre St To Victoria Ave	1	1982	100	2082	11,794	61	336	-
6048	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	Centre St To Victoria Ave	1	1982	100	2082	67,498	61	1,925	-
6049	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	Diane Cres To Victoria Ave	1	2004	100	2104	5,933	83	147	-
6050	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	Diane Cres To Victoria Ave	1	2004	100	2104	12,118	83	300	-
6051	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	Malden Rd To Malden Rd	1	2004	100	2104	64,891	83	1,609	-
6052	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd N	South Talbot Rd To South Talbot Rd	1	2004	100	2104	4,380	83	109	-
6053	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd S	Iler Ave To Laird Ave	1	1972	100	2072	95,033	51	2,990	-
6054	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd S	Brien Ave W To Iler Ave	1	1974	100	2074	62,957	53	1,937	-
6055	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd S	Brien Ave W To Iler Ave	1	1974	100	2074	62,086	53	1,911	-
6056	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	South Talbot Rd S	Laird Ave To Centre St	1	1982	100	2082	84,869	61	2,421	-
6057	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	St James St	Brien Ave W To Wellington	1	1983	100	2083	48,203	62	1,363	-
6058	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	St James St	Wellington To Fairview Ave W	1	1983	100	2083	37,605	62	1,064	-
6059	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	St James St	Wellington To Fairview Ave W	1	1983	100	2083	39,978	62	1,131	-
6060	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	St Paul St	Brien Ave W To Wellington	1	1983	100	2083	53,815	62	1,522	-
6061	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanley St	Arthur Ave To Brien Ave E	1	1984	100	2084	53,392	63	1,498	-
6062	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanley St	Arthur Ave To Brien Ave E	1	1984	100	2084	46,116	63	1,294	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6063	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Brien Ave E To Stanton Crt	1	1979	100	2079	21,835	58	639	-
6064	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Brien Ave E To Stanton Crt	1	1979	100	2079	15,010	58	440	-
6065	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	7,720	58	226	-
6066	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	33,440	58	979	-
6067	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	30,980	58	907	-
6068	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	55,265	58	1,619	-
6069	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	9,355	58	274	-
6070	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	57,210	58	1,675	-
6071	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Stanton Crt	Stanton Crt To Stanton Crt	1	1979	100	2079	50,410	58	1,476	-
6072	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Station St	Wilson To Gordon	1	1984	100	2084	0	63	0	-
6073	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Iler Ave To Brien Ave W	1	1984	100	2084	53,537	63	1,502	-
6074	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Brien Ave W To Wellington	1	1984	100	2084	37,635	63	1,056	-
6075	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Brien Ave W To Wellington	1	1984	100	2084	21,909	63	615	-
6076	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Wellington To Vimy Ct	1	1983	100	2083	21,048	62	595	-
6077	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Vimy Ct To Fairview Ave	1	1983	100	2083	32,613	62	923	-
6078	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Arthur Ave To Iler Ave	1	1984	100	2084	39,696	63	1,114	-
6079	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Medora Ave W To Cameron Ave	1	1985	100	2085	17,528	64	488	-
6080	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Victoria Ave To Cameron Ave	1	1985	100	2085	40,114	64	1,117	-
6081	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Fairview Ave To Gosfield Twn	1	1983	100	2083	58,572	62	1,657	-
6082	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Gosfield Twn To Irwin Ave	1	1983	100	2083	57,711	62	1,632	-
6083	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Gosfield Twn To Irwin Ave	1	1983	100	2083	62,760	62	1,775	-
6084	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Gosfield Twn To Irwin Ave	1	1983	100	2083	60,155	62	1,702	-
6085	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Gosfield Twn To Irwin Ave	1	1983	100	2083	50,789	62	1,437	-
6086	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Irwin Ave To East End	1	1983	100	2083	54,612	62	1,545	-
6087	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Irwin Ave To East End	1	1983	100	2083	47,285	62	1,338	-
6088	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd	Irwin Ave To East End	1	1983	100	2083	45,763	62	1,294	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6089	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sdrr	1	1985	100	2085	57,780	64	1,609	-
6090	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sdrr	1	1985	100	2085	51,944	64	1,446	-
6091	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sdrr	1	1985	100	2085	58,119	64	1,618	-
6092	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sdrr	1	1985	100	2085	53,878	64	1,500	-
6093	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sdrr	1	1985	100	2085	57,814	64	1,609	-
6094	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Hopgood Sdrr To North End	1	1985	100	2085	46,608	64	1,297	-
6095	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Hopgood Sdrr To North End	1	1985	100	2085	44,099	64	1,228	-
6096	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Talbot Rd N	Hopgood Sdrr To North End	1	1985	100	2085	43,012	64	1,197	-
6097	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Thomas St	Forest Ave To Victoria Ave	1	2002	100	2102	58,510	81	1,465	-
6098	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Thomas St	Blake St To Bell	1	1985	100	2085	38,737	64	1,078	-
6099	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Thomas St	Blake St To Bell	1	1985	100	2085	42,342	64	1,179	-
6100	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Thomas St	Medora Ave W To Blake St	1	1985	100	2085	63,290	64	1,762	-
6101	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Townsvlew Ct	Golfway Dr To Galos Dr	1	1991	100	2091	25,516	70	680	-
6102	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Townsvlew Ct	West End To Golfway Dr	1	1991	100	2091	51,282	70	1,368	-
6103	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Townsvlew Ct	Golfway Dr To Galos Dr	1	2006	100	2106	97,459	85	2,394	-
6104	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Turnhout Cres.	Centre St To Turnhout Cres.	1	1982	100	2082	27,660	61	789	-
6105	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Turnhout Cres.	Turnhout Cres. To Turnhout Cres.	1	1982	100	2082	36,481	61	1,041	-
6106	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Turnhout Cres.	Turnhout Cres. To Turnhout Cres.	1	1982	100	2082	6,857	61	196	-
6107	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Turnhout Cres.	Turnhout Cres. To Centre St	1	1982	100	2082	22,922	61	654	-
6108	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	40,805	83	1,012	-
6109	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	39,375	83	976	-
6110	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	28,650	83	710	-
6111	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	53,898	83	1,336	-
6112	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	49,176	83	1,219	-
6113	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	97,926	83	2,428	-
6114	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	31,297	83	776	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6115	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	62,139	83	1,541	-
6116	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	58,938	83	1,461	-
6117	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	11,174	83	277	-
6118	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	47,447	83	1,176	-
6119	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	63,934	83	1,585	-
6120	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	22,340	83	554	-
6121	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Un-Developed Mady	South Talbot Rd To Malden Rd	1	2004	100	2104	46,770	83	1,160	-
6122	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victor St	Laird To Centre St	1	1985	100	2085	54,215	64	1,509	-
6123	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victor St	Centre St To Victoria Ave	1	1985	100	2085	49,331	64	1,373	-
6124	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Milne St To Viscount Pkwy	1	1982	100	2082	25,500	61	727	-
6125	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Day St To Keown St	1	2002	100	2102	27,218	81	681	-
6126	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Hanlan St To Victor St	1	1982	100	2082	48,039	61	1,370	-
6127	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Hanlan St To Victor St	1	1982	100	2082	54,755	61	1,562	-
6128	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Victor St To Hanlan St	1	1984	100	2084	45,623	63	1,280	-
6129	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Alice St To Russell St	1	2002	100	2102	46,281	81	1,159	-
6130	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Talbot St N To Alice St	1	2002	100	2102	44,500	81	1,114	-
6131	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Talbot St N To Alice St	1	2002	100	2102	17,479	81	438	-
6132	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Thomas Ave To Day St	1	2002	100	2102	31,796	81	796	-
6133	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Milne St To Hanlan St	1	1982	100	2082	45,150	61	1,288	-
6134	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Milne St To Hanlan St	1	1982	100	2082	42,350	61	1,208	-
6135	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Milne St To Hanlan St	1	1982	100	2082	49,055	61	1,399	-
6136	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Viscount Pkwy To South Talbot Rd S	1	1982	100	2082	49,445	61	1,410	-
6137	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Viscount Pkwy To South Talbot Rd S	1	1982	100	2082	27,175	61	775	-
6138	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Viscount Pkwy To South Talbot Rd S	1	1985	100	2085	56,585	64	1,575	-
6139	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria Ave	Viscount Pkwy To South Talbot Rd S	1	1982	100	2082	54,700	61	1,560	-
6140	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Virny Court	Talbot St S To End	1	1983	100	2083	11,727	62	332	-
6141	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Viscount Pkwy	Queensway To Kingsway	1	1989	100	2089	33,854	68	915	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6142	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Viscount Pkwy	Victoria Ave To Queensway	1	1989	100	2089	34,131	68	923	-
6143	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington Ave W	Talbot St S To St Paul	1	1983	100	2083	31,716	62	897	-
6144	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington Ave W	St Paul To St James	1	1983	100	2083	45,299	62	1,281	-
6145	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Westlawn Dr.	Brien Ave W To Fairview Ave W	1	1985	80	2065	66,402	44	2,283	-
6146	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Westlawn Dr.	Brien Ave W To Fairview Ave W	1	1985	80	2065	57,918	44	1,992	-
6147	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Westlawn Dr.	Brien Ave W To Fairview Ave W	1	1985	80	2065	64,380	44	2,214	-
6148	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Talbot St To Fox St	1	1984	100	2084	9,884	63	277	-
6149	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Talbot St To Fox St	1	1984	100	2084	18,833	63	528	-
6150	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Fox St To Station St	1	1984	100	2084	57,218	63	1,605	-
6151	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	100	2084	57,566	63	1,615	-
6152	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	100	2084	44,857	63	1,259	-
6153	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	100	2084	42,371	63	1,189	-
6154	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	100	2084	27,993	63	785	-
6155	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	37,202	68	1,006	-
6156	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	23,045	68	623	-
6157	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Joan Flood Dr	1	1989	100	2089	23,634	68	639	-
6158	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	60,044	68	1,623	-
6159	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	57,156	68	1,545	-
6160	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	35,008	68	946	-
6161	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	61,105	68	1,652	-
6162	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodview Dr	Joan Flood Dr To Oak Dr	1	1989	100	2089	37,609	68	1,017	-
24342	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	60	2072	2,810	51	88	-
24343	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	60	2072	12,630	51	397	-
24344	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	60	2072	11,550	51	363	-
24345	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	60	2072	3,070	51	97	-
24346	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	60	2072	13,770	51	433	-



Table B-1-4 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
24347	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Goodburn Court	Townsvew to Townsvew	1	2012	60	2072	11,550	51	363	-
24735	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Morton Avenue	Joan flood Drive to end	1	2014	80	2094	33,220	73	869	-
24736	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Morton Avenue	Joan flood Drive to end	1	2014	80	2094	14,010	73	367	-
24737	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Morton Avenue	Joan flood Drive to end	1	2014	80	2094	14,840	73	388	-
24738	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Morton Avenue	Joan flood Drive to end	1	2014	80	2094	13,080	73	342	-
24739	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Morton Avenue	Joan flood Drive to end	1	2014	80	2094	17,040	73	446	-
24766	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W (Ext in 2014)	Hanlan to Milne	1	2014	80	2094	19,350	73	506	-
24767	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Ave W (Ext in 2014)	Hanlan to Milne	1	2014	80	2094	28,750	73	752	-
25737	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	89,060	76	2,290	-
25738	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Stanton Court to Pine	1	2017	80	2097	56,360	76	1,449	-
25739	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Dowswell to Stanton Court	1	2017	80	2097	26,700	76	686	-
25740	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Gosfield to Dowswell	1	2017	80	2097	5,930	76	152	-
25741	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Aevnue	1	2017	80	2097	7,320	76	188	-
25742	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	97,360	76	2,503	-
25743	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Stanton to Pine	1	2017	80	2097	94,920	76	2,440	-
25744	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Dowswell to Stanton	1	2017	80	2097	93,630	76	2,407	-
25745	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Gosfield to Dowswell	1	2017	80	2097	68,750	76	1,767	-
25746	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	31,930	76	821	-
25747	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	29,200	76	751	-
Total										21,968,214		716,947	394,090



**Table B-1-5
Town of Essex
Wastewater Manholes – Ward 1**

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4045	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Walker Rd to Felicia Lane	1	1982	83	2065	3,800	44	131	-
4054	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Albert St	1	1985	80	2065	3,800	44	131	-
4055	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Albert St	1	1985	80	2065	3,800	44	131	-
4056	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Albert St	1	1985	80	2065	3,800	44	131	-
4057	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Albert St	1	1985	80	2065	3,800	44	131	-
4058	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Alice St N	1	2002	80	2082	3,800	61	108	-
4059	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Alice St N	1	2002	80	2082	3,800	61	108	-
4060	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Alice St N	1	2002	80	2082	3,800	61	108	-
4061	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Alice St N	1	2002	80	2082	3,800	61	108	-
4062	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Alice St N	1	2002	80	2082	3,800	61	108	-
4063	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Alice St N	1	2002	80	2082	3,800	61	108	-
4064	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Allen Ave	1	1987	80	2067	3,800	46	127	-
4065	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	80	2067	3,800	46	127	-
4066	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	80	2067	3,800	46	127	-
4067	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	80	2067	3,800	46	127	-
4068	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allen Ave	Bell Ave To Maidstone Ave W	1	1987	80	2067	3,800	46	127	-
4073	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Talbot St N To Fox St	1	1984	81	2065	3,800	44	131	-
4074	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Gordon To Laird Ave	1	1984	81	2065	3,800	44	131	-
4075	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Gordon To Laird Ave	1	1984	81	2065	3,800	44	131	-
4076	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Medora Ave To Maidstone Ave	1	1985	80	2065	3,800	44	131	-
4077	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cameron Ave	Cameron Ave To Medora Ave	1	1985	80	2065	3,800	44	131	-
4078	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Talbot St N To Albert St	1	1985	80	2065	3,800	44	131	-
4079	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Talbot St S To Alice St	1	2002	80	2082	3,800	61	108	-
4090	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Talbot St S To Irwin Ave	1	1984	81	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4091	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Irwin Ave To Maple Row	1	1984	81	2065	3,800	44	131	-
4092	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Maple Row To Cranberry Court	1	1984	81	2065	3,800	44	131	-
4093	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Gordon To Stanley	1	1984	81	2065	3,800	44	131	-
4094	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Stanley To Wilson	1	1984	81	2065	3,800	44	131	-
4095	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twin	1	1984	81	2065	3,800	44	131	-
4096	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twin	1	1984	81	2065	3,800	44	131	-
4097	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twin	1	1984	81	2065	3,800	44	131	-
4098	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Wilson To Gosfield Twin	1	1984	81	2065	3,800	44	131	-
4117	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bell Ave	Forest To Allen Ave	1	1987	80	2067	3,800	46	127	-
4118	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bell Ave	Harvey To Maidstone Ave W	1	1985	80	2065	3,800	44	131	-
4119	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harvey St	Medora Ave W To Bell Ave	1	1985	80	2065	3,800	44	131	-
4120	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harvey St	Medora Ave W To Bell Ave	1	1985	80	2065	3,800	44	131	-
4121	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bell Ave	Forest Ave To Brock	1	1985	80	2065	3,800	44	131	-
4130	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Blake St	Thomas To Brock	1	1985	80	2065	3,800	44	131	-
4135	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Michael Dr To Edward	1	1976	89	2065	3,800	44	131	-
4139	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Ave	Brien Ave E To Fracis Court	1	1984	81	2065	3,800	44	131	-
4140	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave	Stanley To Gosfield Twin	1	1984	81	2065	3,800	44	131	-
4141	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave	Stanley To Gosfield Twin	1	1984	81	2065	3,800	44	131	-
4142	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave	Cranbrook Court To Stanley	1	1984	81	2065	3,800	44	131	-
4143	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave	Irwin Ave To Maple Row	1	1984	81	2065	3,800	44	131	-
4144	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Brien Ave E To Irwin Ave	1	1984	81	2065	3,800	44	131	-
4145	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Talbot Rd S To Brien Ave E	1	1984	81	2065	3,800	44	131	-
4146	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Pine To Maidstone Ave E	1	1971	94	2065	3,800	44	131	-
4147	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Pine To Maidstone Ave E	1	1971	94	2065	3,800	44	131	-
4148	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Pine To Maidstone Ave E	1	1971	94	2065	3,800	44	131	-
4149	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Pine To Maidstone Ave E	1	1971	94	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4150	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Stanton Court To Pine	1	1971	94	2065	3,800	44	131	-
4151	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Stanton Court To Brien Ave E	1	1979	86	2065	3,800	44	131	-
4152	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Doswell To Stanton Court	1	1971	94	2065	3,800	44	131	-
4153	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Gosfield Twin To Doswell	1	1971	94	2065	3,800	44	131	-
4154	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave E	Gosfield Twin To Doswell	1	1971	94	2065	3,800	44	131	-
4155	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	1996	80	2076	3,800	55	115	-
4156	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	2000	80	2080	3,800	59	110	-
4157	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	2000	80	2080	3,800	59	110	-
4158	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Hanlan St S To Milne	1	2000	80	2080	3,800	59	110	-
4159	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Kim Court To Michael Dr	1	1975	90	2065	3,800	44	131	-
4160	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Queen Court To Kim Court	1	1976	89	2065	3,800	44	131	-
4161	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Brien Ave W To Milne St	1	2000	80	2080	3,800	59	110	-
4162	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Westlawn To Hanlan St S	1	1985	80	2065	3,800	44	131	-
4163	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Westlawn To Hanlan St S	1	1985	80	2065	3,800	44	131	-
4164	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Westlawn To Hanlan St S	1	1985	80	2065	3,800	44	131	-
4165	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	St James To Jenner	1	2002	80	2082	3,800	61	108	-
4166	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Alice St To St James	1	2002	80	2082	3,800	61	108	-
4167	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W	Talbot St S To St Paul	1	2002	80	2082	3,800	61	108	-
4168	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brock St	Blake To Bell Ave	1	1985	80	2065	3,800	44	131	-
4169	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brock St	Blake To Bell Ave	1	1985	80	2065	3,800	44	131	-
4170	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brock St	Brock St To Bell Ave	1	1985	80	2065	3,800	44	131	-
4171	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Talbot St N To Cameron Ave	1	1985	80	2065	3,800	44	131	-
4172	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cameron Ave	Talbot St N To Fox St	1	1985	80	2065	3,800	44	131	-
4173	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cameron Ave	Fox St To Station St	1	1985	80	2065	3,800	44	131	-
4174	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cameron Ave	Fox St To Station St	1	1985	80	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4175	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cameron Ave	Station St To Malott St	1	1985	80	2065	3,800	44	131	-
4176	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cameron Ave	Malott St To Maidstone Ave E	1	1985	80	2065	3,800	44	131	-
4177	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Milne To South Talbot St N	1	1982	83	2065	3,800	44	131	-
4178	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Milne To South Talbot St N	1	1982	83	2065	3,800	44	131	-
4179	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Milne To South Talbot St N	1	1982	83	2065	3,800	44	131	-
4180	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Milne To South Talbot St N	1	1982	83	2065	3,800	44	131	-
4181	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4182	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4183	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4184	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Centre St To Hanlan St S	1	1982	83	2065	3,800	44	131	-
4185	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Centre St To Turnout Crescent	1	1982	83	2065	3,800	44	131	-
4186	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Victor St To Turnout Crescent	1	2002	80	2082	3,800	61	108	-
4187	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4191	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Talbot St N To Alice St	1	2002	80	2082	3,800	61	108	-
4192	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Russell St To Day St	1	2002	80	2082	3,800	61	108	-
4193	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Victor St To Turnout Crescent	1	2002	80	2082	3,800	61	108	-
4194	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Victor St To Turnout Crescent	1	2002	80	2082	3,800	61	108	-
4195	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Alice St To Centre St	1	2002	80	2082	3,800	61	108	-
4196	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Talbot St N To Alice St	1	2002	80	2082	3,800	61	108	-
4227	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	College St	Talbot Rd N To Maidstone Ave W	1	1985	80	2065	3,800	44	131	-
4288	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur Ave	Maple Row To Cranberry Court	1	2001	80	2081	3,800	60	109	-
4289	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cranberry Ct	Arthur Ave To End	1	2001	80	2081	3,800	60	109	-
4290	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cranberry Ct	Arthur Ave To End	1	2001	80	2081	3,800	60	109	-
4291	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cranberry Ct	Arthur Ave To End	1	2001	80	2081	3,800	60	109	-
4315	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Day St	Laird Ave To Centre St	1	2002	80	2082	3,800	61	108	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4316	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Day St	Centre St To Victoria Ave	1	1985	80	2065	3,800	44	131	-
4318	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dowswell St	Gail Crescent To Brien Ave E	1	1973	92	2065	3,800	44	131	-
4319	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dowswell St	Fairview Ave E To Gail Crescent	1	1973	92	2065	3,800	44	131	-
4344	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Earl Ct	Kingsway To End	1	1989	80	2069	3,800	48	124	-
4347	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Laird Ave To Centre St	1	1985	80	2065	3,800	44	131	-
4348	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Laird Ave To Centre St	1	1985	80	2065	3,800	44	131	-
4349	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Laird Ave To Centre St	1	1985	80	2065	3,800	44	131	-
4350	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Centre St To Victoria Ave	1	1985	80	2065	3,800	44	131	-
4351	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Centre St To Victoria Ave	1	1985	80	2065	3,800	44	131	-
4352	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Centre St To Victoria Ave	1	1985	80	2065	3,800	44	131	-
4353	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Edward St	Iler Ave To Kelly Maidstone Ave E To Brien Ave E	1	1976	89	2065	3,800	44	131	-
4354	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Talbot Rd N To Medora Ave E	1	1976	89	2065	3,800	44	131	-
4356	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Medora Ave E	1	2004	80	2084	3,800	63	107	-
4357	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot Rd N To Medora Ave E	1	2004	80	2084	3,800	63	107	-
4378	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Michael Dr To South Talbot St S	1	1976	89	2065	3,800	44	131	-
4379	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Pine To Maidstone Ave E	1	1973	92	2065	3,800	44	131	-
4380	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Pine To Maidstone Ave E	1	1973	92	2065	3,800	44	131	-
4381	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Pine To Maidstone Ave E	1	1973	92	2065	3,800	44	131	-
4382	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Dowswell St To Pine St	1	1973	92	2065	3,800	44	131	-
4383	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Gosfield Ave To Dowswell	1	1973	92	2065	3,800	44	131	-
4384	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Dowswell St To Pine St	1	1973	92	2065	3,800	44	131	-
4385	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Dowswell St To Pine St	1	1973	92	2065	3,800	44	131	-
4386	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Dowswell St To Pine St	1	1973	92	2065	3,800	44	131	-
4387	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Gosfield Ave To Dowswell St	1	1973	92	2065	3,800	44	131	-
4388	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Gosfield Ave To Dowswell St	1	1973	92	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4389	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Gosfield Ave To Dowsell	1	1973	92	2065	3,800	44	131	-
4390	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Kimball Dr To Hanlan St S	1	2006	80	2086	3,800	65	105	-
4391	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Woodview Dr To Michael Dr	1	1997	80	2077	3,800	56	113	-
4392	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Irwin Ave To Gosfield Twin	1	1983	82	2065	3,800	44	131	-
4393	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Talbot St S To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4394	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Gosfield Twin To Dowsell St	1	1983	82	2065	3,800	44	131	-
4395	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Hanlan St S To Woodview Dr	1	1983	82	2065	3,800	44	131	-
4396	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave E	Kimball Dr To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4397	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Talbot St S To St James	1	1983	82	2065	3,800	44	131	-
4398	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Talbot St S To St James	1	1983	82	2065	3,800	44	131	-
4399	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	St James To Langtry	1	1983	82	2065	3,800	44	131	-
4400	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Langtry To Westlawn	1	1983	82	2065	3,800	44	131	-
4401	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Woodview Dr To Michael Dr	1	1983	82	2065	3,800	44	131	-
4402	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview Dr	1	1983	82	2065	3,800	44	131	-
4403	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview Dr	1	1983	82	2065	3,800	44	131	-
4404	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview Dr	1	1983	82	2065	3,800	44	131	-
4405	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Brien Ave W To Fairview Ave W	1	1983	82	2065	3,800	44	131	-
4406	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4407	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4408	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Langtry To Westlawn	1	1983	82	2065	3,800	44	131	-
4409	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4410	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4411	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Kimball Dr To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4412	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fairview Ave W	Hanlan St S To Woodview Dr	1	2005	80	2085	3,800	64	106	-
4413	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fernwood Dr	Walnut St To Treeline Court	1	1992	80	2072	3,800	51	120	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4414	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fernwood Dr	Walnut St To Treeline Court	1	1992	80	2072	3,800	51	120	-
4440	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Forest Ave	Thomas To Bell Ave	1	1989	80	2069	3,800	48	124	-
4441	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Forest Ave	Thomas To Bell Ave	1	1989	80	2069	3,800	48	124	-
4442	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Forest Ave	Thomas To Bell Ave	1	1989	80	2069	3,800	48	124	-
4443	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Forest Ave	Bell ave To Brock	1	1985	80	2065	3,800	44	131	-
4444	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fox St N	Cameron Ave To Medora Ave E	1	1985	80	2065	3,800	44	131	-
4445	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Fox St N	Station St To Cameron Ave	1	1985	80	2065	3,800	44	131	-
4446	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Frances Ct	Gosfield Twin To End	1	1984	81	2065	3,800	44	131	-
4447	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gail St	Dowswell To End	1	1973	92	2065	3,800	44	131	-
4448	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Galos Dr	Maidstone Ave E To End	1	2006	80	2086	3,800	65	105	-
4449	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Galos Dr	Maidstone Ave E To End	1	2006	80	2086	3,800	65	105	-
4457	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Golfway Dr	Maidstone Ave E To Townsview	1	1991	80	2071	3,800	50	121	-
4458	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gordon Ave	Fox St S To Station St	1	1984	81	2065	3,800	44	131	-
4459	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gordon Ave	Station St To Scratch	1	1984	81	2065	3,800	44	131	-
4460	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gordon Ave	Station St To Scratch	1	1984	81	2065	3,800	44	131	-
4461	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gordon Ave	Scratch St To Arthur Ave	1	1984	81	2065	3,800	44	131	-
4462	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Ave E	Francis Court To Arthur Ave	1	1984	81	2065	3,800	44	131	-
4463	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Ave E	Francis Court To Arthur Ave	1	1984	81	2065	3,800	44	131	-
4464	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Rd W	Oak Dr To Talbot St S	1	2003	80	2083	3,800	62	107	-
4465	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Rd W	Oak Dr To Talbot St S	1	1983	82	2065	3,800	44	131	-
4466	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Rd W	Oak Dr To Talbot St S	1	1983	82	2065	3,800	44	131	-
4467	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Rd W	Fairview Ave E To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4468	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Rd W	Fairview Ave E To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4469	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Townline	Fairview Ave E To Brien Ave E	1	1987	80	2067	3,800	46	127	-
4470	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Townline	Fairview Ave E To Brien Ave E	1	1987	80	2067	3,800	46	127	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4471	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Townline	Fairview Ave E To Brien Ave E	1	1987	80	2067	3,800	46	127	-
4472	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Townline	Fairview Ave E To Brien Ave E	1	1987	80	2067	3,800	46	127	-
4477	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Laird Ave To Iler Ave	1	1996	80	2076	3,800	55	115	-
4478	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Laird Ave To Iler Ave	1	1996	80	2076	3,800	55	115	-
4479	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Laird Ave To Iler Ave	1	1996	80	2076	3,800	55	115	-
4480	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Laird Ave To Iler Ave	1	1996	80	2076	3,800	55	115	-
4481	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Victoria Ave To Centre St	1	1982	83	2065	3,800	44	131	-
4482	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Victoria Ave To Centre St	1	1982	83	2065	3,800	44	131	-
4483	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Laird Ave To Iler Ave	1	1983	82	2065	3,800	44	131	-
4484	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Iler Ave To Brien Ave W	1	1983	82	2065	3,800	44	131	-
4485	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Brien Ave W To Fairview Ave W	1	1983	82	2065	3,800	44	131	-
4486	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Brien Ave W To Fairview Ave W	1	1983	82	2065	3,800	44	131	-
4487	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hanlan St	Brien Ave W To Fairview Ave W	1	1983	82	2065	3,800	44	131	-
4504	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Houghton St	Brien Ave W To Milne	1	2006	80	2086	3,800	65	105	-
4505	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Jenner To Margaret Brown Court	1	1983	82	2065	3,800	44	131	-
4506	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Jenner To Margaret Brown Court	1	1996	80	2076	3,800	55	115	-
4507	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Kelly To Brien Ave W	1	1976	89	2065	3,800	44	131	-
4508	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Margaret Brown Court To Hanlan St S	1	1983	82	2065	3,800	44	131	-
4509	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Edward To South Talbot St S	1	1972	93	2065	3,800	44	131	-
4510	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Milne To Edward	1	1972	93	2065	3,800	44	131	-
4511	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Milne To Edward	1	1972	93	2065	3,800	44	131	-
4512	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Jenner To Margaret Brown Court	1	1983	82	2065	3,800	44	131	-
4513	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Edward To South Talbot St S	1	1975	90	2065	3,800	44	131	-
4514	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Jenner To Margaret Brown Court	1	2002	80	2082	3,800	61	108	-
4515	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Laird Ave To Iler Ave	1	2002	80	2082	3,800	61	108	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4516	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Alice St To Jenner	1	2002	80	2082	3,800	61	108	-
4517	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Alice St To Jenner	1	2002	80	2082	3,800	61	108	-
4518	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Iler Ave	Talbot St To Alice St	1	2002	80	2082	3,800	61	108	-
4519	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Florian Dr To Talbot St S	1	1983	82	2065	3,800	44	131	-
4520	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Florian Dr To Talbot St S	1	1983	82	2065	3,800	44	131	-
4521	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Arthur Ave To Brien Ave E	1	1984	81	2065	3,800	44	131	-
4522	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Brien Ave E To Wellington St	1	1983	82	2065	3,800	44	131	-
4523	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Wellington St To Fairview Ave E	1	1983	82	2065	3,800	44	131	-
4524	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Talbot S S To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4525	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Gosfield Twin To Florian Dr	1	1983	82	2065	3,800	44	131	-
4526	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Gosfield Twin To Florian Dr	1	1983	82	2065	3,800	44	131	-
4527	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Gosfield Twin To Florian Dr	1	1983	82	2065	3,800	44	131	-
4528	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Gosfield Twin To Florian Dr	1	1983	82	2065	3,800	44	131	-
4529	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Gosfield Twin To Florian Dr	1	1983	82	2065	3,800	44	131	-
4530	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Irwin Ave	Fairview Ave E To Gosfield Twin	1	1983	82	2065	3,800	44	131	-
4535	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Jenner St	Iler Ave To Brien Ave W	1	2002	80	2082	3,800	61	108	-
4536	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Jenner St	Laird Ave To Iler Ave	1	2002	80	2082	3,800	61	108	-
4537	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Joan Flood Dr	Woodview Dr To End	1	2006	80	2086	3,800	65	105	-
4538	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Joan Flood Dr	Woodview Dr To End	1	2006	80	2086	3,800	65	105	-
4539	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Joan Flood Dr	Woodview Dr To End	1	2006	80	2086	3,800	65	105	-
4540	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Joan Flood Dr	Woodview Dr To End	1	2006	80	2086	3,800	65	105	-
4541	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Joan Flood Dr	Woodview Dr To End	1	2006	80	2086	3,800	65	105	-
4547	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kelly St	Milne To Edward	1	1974	91	2065	3,800	44	131	-
4548	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kelly St	Milne To Edward	1	1974	91	2065	3,800	44	131	-
4549	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kelly St	Milne To Edward	1	1974	91	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4550	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Keown St	Victoria Ave To End	1	2002	80	2082	3,800	61	108	-
4551	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Keown St	Victoria Ave To End	1	2002	80	2082	3,800	61	108	-
4552	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kim Crt	Brien Ave W To End	1	1976	89	2065	3,800	44	131	-
4553	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kim Crt	Brien Ave W To End	1	1976	89	2065	3,800	44	131	-
4554	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kimball Dr	End To Fairview Ave W	1	2006	80	2086	3,800	65	105	-
4555	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kimball Dr	End To Fairview Ave W	1	2006	80	2086	3,800	65	105	-
4575	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kingsway Pky	Kingsway To Earl Court	1	1989	80	2069	3,800	48	124	-
4576	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kingsway Pky	Earl Court To Kingsway	1	1989	80	2069	3,800	48	124	-
4577	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kingsway Pky	Earl Court To Kingsway	1	1989	80	2069	3,800	48	124	-
4578	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kingsway Pky	Kingsway To Earl Court	1	1989	80	2069	3,800	48	124	-
4579	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kingsway Pky	Earl Court To Kingsway	1	1989	80	2069	3,800	48	124	-
4580	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Victor St To Hanlan St N	1	1982	83	2065	3,800	44	131	-
4581	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Victor St To Hanlan St N	1	1982	83	2065	3,800	44	131	-
4582	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Victor St To Hanlan St N	1	1982	83	2065	3,800	44	131	-
4583	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4584	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4585	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4586	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Milne To South Talbot St S	1	1982	83	2065	3,800	44	131	-
4587	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Milne To South Talbot St S	1	1982	83	2065	3,800	44	131	-
4588	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Milne To South Talbot St S	1	1982	83	2065	3,800	44	131	-
4589	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Milne To South Talbot St S	1	1982	83	2065	3,800	44	131	-
4590	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
4591	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Jenner To Day St	1	2002	80	2082	3,800	61	108	-
4592	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Alice St To Russell St	1	1985	80	2065	3,800	44	131	-
4593	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Talbot St To Alice St	1	1985	80	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4594	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Jenner To Day St	1	2002	80	2082	3,800	61	108	-
4595	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Day St To Scott St	1	1985	80	2065	3,800	44	131	-
4596	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Day St To Scott St	1	1985	80	2065	3,800	44	131	-
4597	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laird Ave	Scott St To Victor Sts	1	2002	80	2082	3,800	61	108	-
4615	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Langtry	Wellington St To Fairview Ave W	1	1983	82	2065	3,800	44	131	-
4616	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Langtry	Brien Ave W To Wellington St	1	1983	82	2065	3,800	44	131	-
4617	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Langtry	Brien Ave W To Wellington St	1	1983	82	2065	3,800	44	131	-
4622	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lester St	Gosfield Twin To End	1	2003	80	2083	3,800	62	107	-
4623	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lester St	Gosfield Twin To End	1	2003	80	2083	3,800	62	107	-
4624	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lester St	Gosfield Twin To End	1	2003	80	2083	3,800	62	107	-
4635	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Golfway To Cameron Ave	1	1991	80	2071	3,800	50	121	-
4636	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Cameron Ave To Galos Dr	1	2006	80	2086	3,800	65	105	-
4637	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Brien ave E To Fairview Ave E	1	1983	82	2065	3,800	44	131	-
4638	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Brien ave E To Fairview Ave E	1	1983	82	2065	3,800	44	131	-
4639	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Arthur Ave To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4640	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Arthur Ave To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4641	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Arthur Ave To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4642	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Arthur Ave To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4643	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Arthur Ave To Brien Ave E	1	1983	82	2065	3,800	44	131	-
4644	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Arthur Ave	1	1983	82	2065	3,800	44	131	-
4645	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Arthur Ave	1	1985	80	2065	3,800	44	131	-
4646	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Arthur Ave	1	1984	81	2065	3,800	44	131	-
4647	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Arthur Ave	1	1984	81	2065	3,800	44	131	-
4648	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Golfway To Cameron Ave	1	1984	81	2065	3,800	44	131	-
4649	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Golfway To Cameron Ave	1	1985	80	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4650	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot St N To Medora Ave E	1	1985	80	2065	3,800	44	131	-
4651	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot St N To Medora Ave E	1	1985	80	2065	3,800	44	131	-
4652	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot St N To Medora Ave E	1	1985	80	2065	3,800	44	131	-
4653	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot St N To Medora Ave E	1	1985	80	2065	3,800	44	131	-
4654	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot St N To Medora Ave E	1	1985	80	2065	3,800	44	131	-
4655	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Albert To Bell Ave	1	1985	80	2065	3,800	44	131	-
4656	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Bell Ave To Allen Ave	1	1985	80	2065	3,800	44	131	-
4657	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Bell Ave To Allen Ave	1	1985	80	2065	3,800	44	131	-
4658	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Galos Dr To Arthur Ave	1	1985	80	2065	3,800	44	131	-
4659	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Golfway To Cameron Ave	1	1985	80	2065	3,800	44	131	-
4660	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave E	Talbot St N To Albert	1	1985	80	2065	3,800	44	131	-
4676	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Arthur Ave To Brien Ave E	1	1975	90	2065	3,800	44	131	-
4677	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Margaret Brown Crt	Iler Ave To End	1	1996	80	2076	3,800	55	115	-
4678	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Margaret Brown Crt	Iler Ave To End	1	1996	80	2076	3,800	55	115	-
4701	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Medora Ave E	Talbot St N To Fox St S	1	1985	80	2065	3,800	44	131	-
4702	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Medora Ave W	Albert To Harvey	1	1985	80	2065	3,800	44	131	-
4703	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Medora Ave W	Harvey To Blake	1	1985	80	2065	3,800	44	131	-
4704	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Medora Ave W	Talbot St N To Albert	1	1985	80	2065	3,800	44	131	-
4705	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Medora Ave W	Talbot St N To Albert	1	1985	80	2065	3,800	44	131	-
4706	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Michael Dr	Brien Ave W To Patrick Crescent	1	1976	89	2065	3,800	44	131	-
4707	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Michael Dr	Patrick Crescent To Patrick Crescent	1	1976	89	2065	3,800	44	131	-
4708	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Michael Dr	Patrick Crescent To Fairview Ave W	1	1976	89	2065	3,800	44	131	-
4711	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Milne St	Victoria Ave To Centre St	1	1982	83	2065	3,800	44	131	-
4712	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Milne St	Centre St To Laird Ave	1	1982	83	2065	3,800	44	131	-
4713	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Milne St S	Iler Ave To Kelly	1	1972	93	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4714	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Milne St S	Laird Ave To Kelly	1	1972	93	2065	3,800	44	131	-
4715	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Milne St S	Iler Ave To Kelly	1	1998	80	2078	3,800	57	112	-
4753	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Park St To Park St	1	1990	80	2070	3,800	49	122	-
4754	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Woodview Dr To Park St	1	1990	80	2070	3,800	49	122	-
4755	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Meadow Lane To Woodview Dr	1	1990	80	2070	3,800	49	122	-
4756	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Meadow Lane To Woodview Dr	1	1990	80	2070	3,800	49	122	-
4757	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Oak Dr To Meadow Lane	1	1990	80	2070	3,800	49	122	-
4758	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Oak Dr To Meadow Lane	1	1990	80	2070	3,800	49	122	-
4759	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Willow Crescent To Oak Dr	1	1990	80	2070	3,800	49	122	-
4760	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Woodview Dr To Park St	1	1990	80	2070	3,800	49	122	-
4761	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Willow Crescent To Oak Dr	1	1990	80	2070	3,800	49	122	-
4762	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Willow Crescent To Oak Dr	1	1990	80	2070	3,800	49	122	-
4763	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Park St To Park St	1	1990	80	2070	3,800	49	122	-
4764	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Park St To Park St	1	1990	80	2070	3,800	49	122	-
4765	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Park St To Park St	1	1990	80	2070	3,800	49	122	-
4766	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Oak Dr	Park St To Park St	1	1990	80	2070	3,800	49	122	-
4769	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Park Lane	Oak Dr To Oak Dr	1	1990	80	2070	3,800	49	122	-
4770	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Park Lane	Oak Dr To Oak Dr	1	1990	80	2070	3,800	49	122	-
4771	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Park Lane	Oak Dr To Oak Dr	1	1990	80	2070	3,800	49	122	-
4772	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Park Lane	Oak Dr To Oak Dr	1	1990	80	2070	3,800	49	122	-
4773	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Park Lane	Gosfield Twin To Oak Dr	1	1990	80	2070	3,800	49	122	-
4774	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Wilson To Victoria Ave	1	1984	81	2065	3,800	44	131	-
4775	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Station St To Wilson Ave	1	1984	81	2065	3,800	44	131	-
4778	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Patrick Crs	Michael Dr To Michael Dr	1	1976	89	2065	3,800	44	131	-
4779	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Patrick Crs	Michael Dr To Michael Dr	1	1976	89	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4780	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Patrick Crs	Michael Dr To Michael Dr	1	1976	89	2065	3,800	44	131	-
4781	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Patrick Crs	Michael Dr To Michael Dr	1	1976	89	2065	3,800	44	131	-
4790	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pine Cr	End To Oak Dr	1	1990	80	2070	3,800	49	122	-
4844	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Russell St	Laird Ave To Centre St	1	2002	80	2082	3,800	61	108	-
4845	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Russell St	Centre St To Victoria Ave	1	1985	80	2065	3,800	44	131	-
4902	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Talbot Rd N To Diane Crescent	1	1982	83	2065	3,800	44	131	-
4903	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Talbot Rd N To Diane Crescent	1	1982	83	2065	3,800	44	131	-
4904	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Talbot Rd N To Diane Crescent	1	1982	83	2065	3,800	44	131	-
4905	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Talbot Rd N To Diane Crescent	1	1982	83	2065	3,800	44	131	-
4906	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Talbot Rd N To Diane Crescent	1	1982	83	2065	3,800	44	131	-
4907	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Talbot Rd N To Diane Crescent	1	1982	83	2065	3,800	44	131	-
4908	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	South Talbot Rd N To Victoria Ave	1	1982	83	2065	3,800	44	131	-
4909	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	South Talbot Rd	1	2004	80	2084	3,800	63	107	-
4910	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Maidstone Ave W To End	1	2004	80	2084	3,800	63	107	-
4911	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Maidstone Ave W To End	1	2004	80	2084	3,800	63	107	-
4912	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Maidstone Ave W To End	1	2004	80	2084	3,800	63	107	-
4913	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd N	Victoria Ave To Centre St	1	1982	83	2065	3,800	44	131	-
4914	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd N	North Malden Drive To Diane	1	2004	80	2084	3,800	63	107	-
4915	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd N	North Malden Drive To Diane	1	2004	80	2084	3,800	63	107	-
4916	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd N	Talbot Rd N To Malden Rd	1	2004	80	2084	3,800	63	107	-
4917	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd N	South Talbot Rd N To Malden Rd	1	2004	80	2084	3,800	63	107	-
4918	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd S	Laird Ave To Iler Ave	1	1972	93	2065	3,800	44	131	-
4919	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd S	Iler Ave To Brien Ave W	1	1974	91	2065	3,800	44	131	-
4920	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd S	Iler Ave To Brien Ave W	1	1974	91	2065	3,800	44	131	-
4921	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd S	Iler Ave To Brien Ave W	1	1974	91	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4922	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd S	Centre St To Laird Ave	1	1982	83	2065	3,800	44	131	-
4923	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd S	Iler Ave To Brien Ave W	1	2005	80	2085	3,800	64	106	-
4924	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	St. James St	Wellington St To Fairview Ave W	1	1983	82	2065	3,800	44	131	-
4925	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	St. James St	St Paul To Langtry St	1	1983	82	2065	3,800	44	131	-
4926	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	St. James St	Brien Ave W To Wellington St	1	1983	82	2065	3,800	44	131	-
4927	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington Ave W	Talbot St S To St Paul	1	1983	82	2065	3,800	44	131	-
4928	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	St. Paul St	Brien Ave W To Wellington St	1	1983	82	2065	3,800	44	131	-
4929	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanley St	Arthur Ave To Brien Ave E	1	1984	81	2065	3,800	44	131	-
4930	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanley St	Arthur Ave To Brien Ave E	1	1984	81	2065	3,800	44	131	-
4931	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Brien Ave E To Stanton Court	1	1979	86	2065	3,800	44	131	-
4932	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Brien Ave E To Stanton Court	1	1979	86	2065	3,800	44	131	-
4933	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4934	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4935	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4936	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4937	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4938	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4939	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Stanton Ct	Stanton Court To Stanton Court	1	1979	86	2065	3,800	44	131	-
4944	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Station St	Gordon To Wilson	1	1984	81	2065	3,800	44	131	-
4969	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Talbot St S To Iler Ave	1	1984	81	2065	3,800	44	131	-
4970	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Iler Ave To Brien Ave	1	1984	81	2065	3,800	44	131	-
4971	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Brien Ave To Wellington St	1	1984	81	2065	3,800	44	131	-
4972	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Brien Ave To Wellington St	1	1985	80	2065	3,800	44	131	-
4973	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Victoria Ave To Cameron Ave	1	1985	80	2065	3,800	44	131	-
4974	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St N	Cameron Ave To Medora Ave E	1	1983	82	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4975	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Wellington St To Vimy Court	1	1983	82	2065	3,800	44	131	-
4976	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Vimy Court To Fairview Ave	1	1983	82	2065	3,800	44	131	-
4977	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Irwin Ave To End	1	1983	82	2065	3,800	44	131	-
4978	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Irwin Ave To End	1	1983	82	2065	3,800	44	131	-
4979	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Irwin Ave To End	1	1983	82	2065	3,800	44	131	-
4980	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Gosfield Twin To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4981	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Gosfield Twin To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4982	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Gosfield Twin To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4983	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Gosfield Twin To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4984	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gosfield Ave	Talbot St S To Irwin Ave	1	1983	82	2065	3,800	44	131	-
4985	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot St S	Fairview Ave To Gosfield Twin	1	1983	82	2065	3,800	44	131	-
4986	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sideroad	1	1985	80	2065	3,800	44	131	-
4987	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sideroad	1	1985	80	2065	3,800	44	131	-
4988	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sideroad	1	1985	80	2065	3,800	44	131	-
4989	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Maidstone Ave To Hopgood Sideroad	1	1985	80	2065	3,800	44	131	-
4990	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Hopgood Sideroad To End	1	1985	80	2065	3,800	44	131	-
4991	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Hopgood Sideroad To End	1	1985	80	2065	3,800	44	131	-
4992	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Hopgood Sideroad To End	1	1985	80	2065	3,800	44	131	-
4993	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd N	Hopgood Sideroad To End	1	1985	80	2065	3,800	44	131	-
4994	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bell Ave	Harvey To Thomas	1	1985	80	2065	3,800	44	131	-
4995	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Thomas St	Blake To Bell Ave	1	1985	80	2065	3,800	44	131	-
4996	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Thomas St	Blake To Bell Ave	1	1985	80	2065	3,800	44	131	-
4997	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Thomas St	Medora Ave To Blake	1	1985	80	2065	3,800	44	131	-
4998	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Thomas St	Victoria Ave To Forest	1	2002	80	2082	3,800	61	108	-
4999	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvieview Ct	End To Golfway	1	1991	80	2071	3,800	50	121	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5000	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvlew Ct	Golfway To 81 Townsvlew	1	1991	80	2071	3,800	50	121	-
5001	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvlew Ct	Golfway To 81 Townsvlew	1	1991	80	2071	3,800	50	121	-
5002	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvlew Ct	81 Townsvlew To End	1	2006	80	2086	3,800	65	105	-
5003	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvlew Ct	0	1	2006	80	2086	3,800	65	105	-
5004	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvlew Ct	81 Townsvlew To End	1	2006	80	2086	3,800	65	105	-
5005	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Galos	Maidstone Ave E To End	1	2006	80	2086	3,800	65	105	-
5006	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Townsvlew Ct	81 Townsvlew To End	1	2006	80	2086	3,800	65	105	-
5008	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Turnout Crs	Centre St To Centre St	1	1982	83	2065	3,800	44	131	-
5009	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Turnout Crs	Centre St To Centre St	1	1982	83	2065	3,800	44	131	-
5010	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Turnout Crs	Centre St To Centre St	1	1982	83	2065	3,800	44	131	-
5011	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5012	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5013	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5014	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5015	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5016	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Maidstone Ave W To End	1	2004	80	2084	3,800	63	107	-
5017	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Maidstone Ave W To End	1	2004	80	2084	3,800	63	107	-
5018	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	South Talbot Rd	Maidstone Ave W To End	1	2004	80	2084	3,800	63	107	-
5019	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5020	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5021	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5022	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maidstone Ave W	Allen Ave To Highway #3	1	2004	80	2084	3,800	63	107	-
5023	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Un-Developed Mady	0	1	2004	80	2084	3,800	63	107	-
5024	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victor St	Laird Ave To Centre St	1	2002	80	2082	3,800	61	108	-
5025	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victor St	Centre St To Victoria Ave	1	1985	80	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5026	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Victor St To Hanlan St N	1	1982	83	2065	3,800	44	131	-
5027	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
5028	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
5029	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
5030	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Hanlan St N To Milne	1	1982	83	2065	3,800	44	131	-
5031	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Viscount Parkway To South Talbot Rd N	1	1982	83	2065	3,800	44	131	-
5032	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Viscount Parkway To South Talbot Rd N	1	1982	83	2065	3,800	44	131	-
5033	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Viscount Parkway To South Talbot Rd N	1	1982	83	2065	3,800	44	131	-
5034	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	South Talbot Rd N To Highway #3	1	1982	83	2065	3,800	44	131	-
5035	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Viscount Parkway To South Talbot Rd N	1	1982	83	2065	3,800	44	131	-
5036	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Victor St To Hanlan St N	1	1982	83	2065	3,800	44	131	-
5037	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Thomas To Day St	1	1985	80	2065	3,800	44	131	-
5038	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Keown To Victor Sts	1	2002	80	2082	3,800	61	108	-
5039	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Thomas To Day St	1	1985	80	2065	3,800	44	131	-
5040	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Alice St To Russell St	1	2002	80	2082	3,800	61	108	-
5041	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Talbot St N To Alice St	1	2002	80	2082	3,800	61	108	-
5042	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria Ave	Talbot St N To Alice St	1	2002	80	2082	3,800	61	108	-
5047	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Vimy Ct	Talbot S S To End	1	1983	82	2065	3,800	44	131	-
5048	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Viscount Pky	Queensway To Kingsway	1	1989	80	2069	3,800	48	124	-
5049	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Viscount Pky	Viscount Parkway To End	1	1989	80	2069	3,800	48	124	-
5050	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Viscount Pky	Queensway To Queensway	1	1989	80	2069	3,800	48	124	-
5051	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Viscount Pky	Viscount Parkway To End	1	1989	80	2069	3,800	48	124	-
5052	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Viscount Pky	Queensway To Queensway	1	1989	80	2069	3,800	48	124	-
5053	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Viscount Pky	Queensway To Kingsway	1	1989	80	2069	3,800	48	124	-
5079	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington Ave W	Talbot St S To St Paul	1	1983	82	2065	3,800	44	131	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5087	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Westlawn Dr	Brien Ave W To 115 Westlawn Dr	1	2002	80	2082	3,800	61	108	-
5088	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Westlawn Dr	Brien Ave W To 115 Westlawn Dr	1	2002	80	2082	3,800	61	108	-
5089	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Westlawn Dr	Brien Ave W To 115 Westlawn Dr	1	2002	80	2082	3,800	61	108	-
5092	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Talbot St N To Fox St N	1	1984	81	2065	3,800	44	131	-
5093	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Talbot St N To Fox St N	1	1984	81	2065	3,800	44	131	-
5094	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Fox St S To Station ST	1	1984	81	2065	3,800	44	131	-
5095	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Station St To Scratch St	1	1984	81	2065	3,800	44	131	-
5096	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	81	2065	3,800	44	131	-
5097	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	81	2065	3,800	44	131	-
5098	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilson Ave	Scratch St To Arthur Ave	1	1984	81	2065	3,800	44	131	-
5107	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5108	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5109	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5110	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5111	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5112	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5113	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
5114	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodview Dr	Fairview Ave W To Oak Dr	1	1997	80	2077	3,800	56	113	-
24340	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	80	2092	5,250	71	139	-
24341	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Goodburn Court	Townsvie to Townsvie	1	2012	80	2092	5,250	71	139	-
24740	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Morton Avenue	Joan Flood Drive to End	1	2014	80	2094	12,020	73	314	-
24741	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Morton Avenue	Joan Flood Drive to End	1	2014	80	2094	12,020	73	314	-
24742	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Morton Avenue	Joan Flood Drive to End	1	2014	80	2094	12,020	73	314	-
24768	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W (Ext in 2014)	Milne to hanlan	1	2014	80	2094	3,660	73	96	-
24769	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Ave W (Ext in 2014)	Milne to hanlan	1	2014	80	2094	3,660	73	96	-



Table B-1-5 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
25748	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Gosfield to Dowswell	1	2017	80	2097	13,180	76	339	-
25749	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Gosfield to Dowswell	1	2017	80	2097	13,180	76	339	-
25750	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Dowswell to Stanton	1	2017	80	2097	13,180	76	339	-
25751	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Dowswell to Stanton	1	2017	80	2097	13,180	76	339	-
25752	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Dowswell to Stanton	1	2017	80	2097	13,180	76	339	-
25753	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Stanton Court to Pine	1	2017	80	2097	13,180	76	339	-
25754	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	13,180	76	339	-
25755	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	13,180	76	339	-
25756	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brien Avenue East	Pine to Maidstone Avenue	1	2017	80	2097	13,180	76	339	-
Total										1,950,900		62,750	0



Town B-1-6
Town of Essex
Wastewater Machinery & Equipment – Ward 1

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Machinery Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6372	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Filing Cabinet	CN WWTP	1	2006	20	2026	2,570	5	suggested for 10 year capital forecast	2,570
15502	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Portable Jib Crane	CN WWTP	1	2008	20	2028	12,090	7	suggested for 10 year capital forecast	12,090
15506	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Miltronics Level Transmitter & Transducer	CN WWTP	1	2006	10	2021	3,570	0	suggested for 10 year capital forecast	3,570
15507	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Lab Equipment - DO Analyzer	CN WWTP	1	2006	10	2021	2,070	0	suggested for 10 year capital forecast	2,070
23536	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Colchester North Wastewater Treatment Plant	CN WWTP	1	2010	10	2021	12,790	0	suggested for 10 year capital forecast	12,790
24374	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	UV Bulbs	Essex Waste Water Treatment Plant	1	2012	7	2021	11,020	0	suggested for 10 year capital forecast	11,020
24375	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Printer/fax machine	Essex Waste Water Treatment Plant	1	2012	3	2021	2,460	0	suggested for 10 year capital forecast	2,460
24376	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Metering Pump	Essex Waste Water Treatment Plan	1	2012	8	2021	4,200	0	suggested for 10 year capital forecast	4,200
24618	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Sludge MagMeter	Essex WWTP	1	2013	20	2033	2,550	12	241	-
24619	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Impeller	Essex WWTP	1	2013	20	2033	1,200	12	113	-
24730	ES: Sanitary Sewers - Collection/Conveyance	Machinery and Equipment	Sanitary Sewers	2014 Dodge Ram	Water Department	1	2014	8	2022	8,210	1	suggested for 10 year capital forecast	8,210
Total										62,730		355	58,980



Table B-1-7
Town of Essex
Wastewater Vehicles – Ward 1

Asset ID	Category	Name	Location	Year Installed	Estimated Life	Replacement Year	Total Vehicle Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
1670	ES: Sanitary Sewer - Treatment/Disposal	Truck	Pollution Control Plant- 4000 North Malden Rd	2008	10	2021	35,120	0	suggested for 10 year capital forecast	35,120
Total							35,120		-	35,120



**Table B-2-1
Town of Essex
Sanitary Sewers – Ward 3**

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6642	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut Lane	0	3	1989	100	2089	11,906	68	322	-
6643	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Adelalde St	Prado St To Herring St	3	1989	80	2069	39,409	48	1,285	-
6644	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Adelalde St	Prado St To Herring St	3	1989	80	2069	57,440	48	1,873	-
6645	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Adelalde St	Dunn St To Prado St	3	1989	80	2069	73,986	48	2,412	-
6646	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Adelalde St	Ferriss Ave To Walnut Lane	3	1989	100	2089	74,237	68	2,007	-
6647	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Adelalde St	Herring St To Ferriss Ave	3	1989	80	2069	85,543	48	2,789	-
6648	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Adelalde St	Adelalde St To End	3	1989	100	2089	69,915	68	1,890	-
6649	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allision Ave	Windsor Ave To Lakeview Ave	3	1989	100	2089	25,258	68	683	-
6650	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allision Ave	County Road 50 To Lakeview Ave	3	1989	100	2089	42,643	68	1,153	-
6651	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allision Ave	County Road 50 To Windsor Ave	3	1989	100	2089	54,783	68	1,481	-
6652	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Allision Ave	County Road 50 To Lakeview Ave	3	1989	100	2089	56,203	68	1,519	-
6653	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ambassador Beach Rd	Santa Ana Ave To Ambassador Beach Rd	3	1989	80	2069	43,032	48	1,403	-
6654	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ambassador Beach Rd	Ambassador Beach Rd To Circle V1	3	1989	80	2069	64,185	48	2,093	-
6655	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ambassador Beach Rd	Santa Ana Ave To Ambassador Beach Rd	3	1989	80	2069	77,689	48	2,533	-
6656	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bagot St	Murdoch St To Sullivan St	3	1989	100	2089	35,180	68	951	-
6657	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bagot St	Murdoch St To Sullivan St	3	1989	100	2089	36,806	68	995	-
6658	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bagot St	Harrison St To Murdoch St	3	1989	100	2089	46,149	68	1,247	-
6659	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bagot St	Draper St To Harrison St	3	1989	100	2089	48,133	68	1,301	-
6660	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bagot St	Draper St To Harrison St	3	1989	100	2089	54,755	68	1,480	-
6661	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bagot St	Harrison St To Murdoch St	3	1989	100	2089	55,469	68	1,499	-
6662	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beach St	Ruthven Dr To Santa Ana Ave	3	1989	80	2069	58,080	48	1,894	-
6663	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beach St	Ruthven Dr To Santa Ana Ave	3	1989	80	2069	62,086	48	2,024	-
6664	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bellcreeft Dr	Washington Ct To Fox Pl	3	1989	100	2089	41,313	68	1,117	-
6665	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bellcreeft Dr	Fox Pl To Ruthven Dr	3	1989	100	2089	58,902	68	1,592	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6666	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bellcreeft Dr	County Road 50 To Washington Ct	3	1989	100	2089	51,399	68	1,389	-
6667	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bellcreeft Dr	County Road 50 To Washington Ct	3	1989	100	2089	54,407	68	1,471	-
6668	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	County Road 50 To Santa Ana Ave	3	2005	100	2105	7,412	84	183	-
6669	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Santa Ana Ave To Santa Monica Dr	3	2005	100	2105	42,427	84	1,047	-
6670	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Sunset Ave To Lakewood Ave	3	2005	100	2105	54,802	84	1,352	-
6671	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Santa Ana Ave To Santa Monica Dr	3	2005	100	2105	56,828	84	1,402	-
6672	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Beverly Blvd To Beach St	3	1989	100	2089	6,223	68	168	-
6673	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bondy Lane	0	3	1989	100	2089	43,715	68	1,182	-
6674	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bondy Lane	County Road 50 To Beverly Blvd	3	1989	100	2089	46,098	68	1,246	-
6675	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bondy Lane	County Road 50 To Beverly Blvd	3	1989	100	2089	49,834	68	1,347	-
6676	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Chester Rd To Star Beach Rd	3	1989	80	2069	28,175	48	919	-
6677	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Cook's Rd To Westchester Ave	3	1989	80	2069	55,825	48	1,820	-
6678	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Cook's Rd To Westchester Ave	3	1989	80	2069	79,590	48	2,595	-
6679	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Westchester Ave To End	3	1989	80	2069	93,072	48	3,034	-
6680	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Circle V-1 Rd	Circle V-1 Rd To Pleasure Beach Rd	3	1989	80	2069	26,176	48	853	-
6681	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Circle V-1 Rd	Circle V-1 Rd To Pleasure Beach Rd	3	1989	80	2069	46,675	48	1,522	-
6682	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Circle V-1 Rd	Circle V-1 Rd To Pleasure Beach Rd	3	1989	80	2069	49,328	48	1,608	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6666	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bellcreeft Dr	County Road 50 To Washington Ct	3	1989	100	2089	51,399	68	1,389	-
6667	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bellcreeft Dr	County Road 50 To Washington Ct	3	1989	100	2089	54,407	68	1,471	-
6668	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	County Road 50 To Santa Ana Ave	3	2005	100	2105	7,412	84	183	-
6669	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Santa Ana Ave To Santa Monica Dr	3	2005	100	2105	42,427	84	1,047	-
6670	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Sunset Ave To Lakewood Ave	3	2005	100	2105	54,802	84	1,352	-
6671	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Santa Ana Ave To Santa Monica Dr	3	2005	100	2105	56,828	84	1,402	-
6672	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Beverly Blvd	Beverly Blvd To Beach St	3	1989	100	2089	6,223	68	168	-
6673	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bondy Lane	0	3	1989	100	2089	43,715	68	1,182	-
6674	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bondy Lane	County Road 50 To Beverly Blvd	3	1989	100	2089	46,098	68	1,246	-
6675	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Bondy Lane	County Road 50 To Beverly Blvd	3	1989	100	2089	49,834	68	1,347	-
6676	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Chester Rd To Star Beach Rd	3	1989	80	2069	28,175	48	919	-
6677	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Cook's Rd To Westchester Ave	3	1989	80	2069	55,825	48	1,820	-
6678	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Cook's Rd To Westchester Ave	3	1989	80	2069	79,590	48	2,595	-
6679	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Chester Rd.	Westchester Ave To End	3	1989	80	2069	93,072	48	3,034	-
6680	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Circle V-1 Rd	Circle V-1 Rd To Pleasure Beach Rd	3	1989	80	2069	26,176	48	853	-
6681	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Circle V-1 Rd	Circle V-1 Rd To Pleasure Beach Rd	3	1989	80	2069	46,675	48	1,522	-
6682	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Circle V-1 Rd	Circle V-1 Rd To Pleasure Beach Rd	3	1989	80	2069	49,328	48	1,608	-
6683	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Clitherow St	Draper St To Harrison St	3	1989	100	2089	17,023	68	460	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6684	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Clitherow St	Sullivan St To Murdoch St	3	1989	100	2089	38,061	68	1,029	-
6685	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Clitherow St	Sullivan St To Murdoch St	3	1989	100	2089	41,280	68	1,116	-
6686	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Clitherow St	Ogden St To Draper St	3	1989	100	2089	51,197	68	1,384	-
6687	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Clitherow St	Ogden St To Draper St	3	1989	100	2089	52,259	68	1,413	-
6688	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Clitherow St	Draper St To Harrison St	3	1989	100	2089	62,947	68	1,702	-
6689	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cook's Rd	End To Chester Rd	3	1989	80	2069	6,916	48	225	-
6690	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cook's Rd	End To Chester Rd	3	1989	80	2069	12,404	48	404	-
6691	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cook's Rd	End To Chester Rd	3	1989	80	2069	13,069	48	426	-
6692	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cook's Rd	Chester Rd To End	3	1989	80	2069	17,017	48	555	-
6693	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cook's Rd	End To Chester Rd	3	1989	100	2089	74,110	68	2,003	-
6694	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cornwall Ct	Cornwall Beach Rd To End	3	1989	80	2069	74,280	48	2,422	-
6695	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cornwall Ct	Cornwall Beach Rd To End	3	1989	80	2069	77,136	48	2,515	-
6696	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd 13	Ogden St To Draper St	3	1989	100	2089	50,093	68	1,354	-
6697	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd 13	Ogden St To Draper St	3	1989	100	2089	51,521	68	1,393	-
6698	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	County Road 50 To Wawa Cres.	3	1989	100	2089	6,806	68	184	-
6699	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Herring St To Ferriss Ave	3	1989	100	2089	30,503	68	825	-
6700	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Cook's Rd To Westchester Rd	3	1989	100	2089	32,999	68	892	-
6701	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Cook's Rd To Westchester Rd	3	1989	100	2089	35,725	68	966	-
6702	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Wabasso Rd To Shawondasee Blvd	3	1989	100	2089	37,638	68	1,017	-
6703	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Westchester Rd To McClain Blvd	3	1989	100	2089	38,296	68	1,035	-
6704	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	McClain Blvd To Westchester Rd	3	1989	100	2089	44,053	68	1,191	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6705	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Wabasso Rd To Shawondasee Blvd	3	1989	100	2089	46,168	68	1,248	-
6706	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Ambassador Beach Rd To Beverly Blvd	3	1989	100	2089	46,572	68	1,259	-
6707	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd No. 50	Ambassador Beach Rd To Beverly Blvd	3	1989	100	2089	50,130	68	1,355	-
6708	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Beach Rd	Crystal Crt To County Road 50	3	1989	100	2089	38,841	68	1,050	-
6709	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Beach Rd	Crystal Crt To County Road 50	3	1989	100	2089	39,551	68	1,069	-
6710	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Beach Rd	County Road 50 To Crystal Crt	3	1989	100	2089	52,668	68	1,424	-
6711	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Crt	County Road 50 To Crystal Crt	3	1989	100	2089	56,033	68	1,515	-
6712	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Beach Rd	County Road 50 To Crystal Crt	3	1989	100	2089	58,228	68	1,574	-
6713	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Crt	Crystal Lane To Crystal Beach Rd	3	1989	100	2089	23,078	68	624	-
6714	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Lane	County Road 50 To Crystal Crt	3	1989	100	2089	4,169	68	113	-
6715	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Lane	County Road 50 To Crystal Crt	3	1989	100	2089	22,429	68	606	-
6716	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Lane	County Road 50 To Crystal Crt	3	1989	100	2089	45,584	68	1,232	-
6717	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McCarthy Rd	0	3	1989	100	2089	39,692	68	1,073	-
6718	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Lane	County Road 50 To Crystal Crt	3	1989	100	2089	49,092	68	1,327	-
6719	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Lane	County Road 50 To Crystal Crt	3	1989	100	2089	53,232	68	1,439	-
6720	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Crystal Lane	County Road 50 To Crystal Crt	3	1989	100	2089	58,720	68	1,587	-
6721	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gloucester Dr.	Lakeview Ave To Gloucester Dr	3	1989	80	2069	3,505	48	114	-
6722	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cumberland Way	Gloucester Dr To Wellesley Dr	3	1989	80	2069	6,164	48	201	-
6723	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cloucester Dr	Lakeview Ave To Gloucester Dr	3	1989	80	2069	6,884	48	224	-
6724	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gloucester Dr	Lakeview Ave To Gloucester Dr	3	1989	80	2069	7,049	48	230	-
6725	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gloucester Dr	Lakeview Ave To Gloucester Dr	3	1989	80	2069	20,407	48	665	-
6726	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cumberland Way	Wellesley Dr To Lypps Beach Rd	3	1989	80	2069	55,643	48	1,814	-
6727	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cumberland Way	Gloucester Dr To Wellesley Dr	3	1989	80	2069	70,938	48	2,313	-
6728	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dahinda Dr	End To County Road 50	3	1989	100	2089	13,813	68	373	-
6729	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dahinda Dr	End To County Road 50	3	1989	80	2069	27,433	48	894	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6730	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dahinda Dr	End To County Road 50	3	1989	100	2089	22,419	68	606	-
6731	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dahinda Dr	End To County Road 50	3	1989	100	2089	28,853	68	780	-
6732	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dahinda Dr	Star Beach Rd To Dahinda Dr	3	1989	80	2069	47,369	48	1,544	-
6733	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dahinda Dr	County Road 50 To End	3	1989	100	2089	43,160	68	1,167	-
6734	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Dunn Rd To Jackson St	3	1989	100	2089	29,027	68	785	-
6735	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Erie Rd To Clitherow St	3	1989	100	2089	30,179	68	816	-
6736	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Bagot St To Sydenham St	3	1989	100	2089	30,400	68	822	-
6737	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Sydenham St To Jackson St	3	1989	100	2089	32,707	68	884	-
6738	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Clitherow St To Bagot St	3	1989	100	2089	33,445	68	904	-
6739	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Sydenham St To Jackson St	3	1989	100	2089	33,793	68	913	-
6740	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Clitherow St To Bagot St	3	1989	100	2089	34,457	68	931	-
6741	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Dunn Rd To Jackson St	3	1989	100	2089	35,447	68	958	-
6742	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Erie Rd To Clitherow St	3	1989	100	2089	36,185	68	978	-
6743	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Draper St	Bagot St To Sydenham St	3	1989	100	2089	38,916	68	1,052	-
6744	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn St	Murdoch St To Adelaide St	3	1989	80	2069	32,234	48	1,051	-
6745	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn Rd	Ogden St To Draper St	3	1989	100	2089	43,132	68	1,166	-
6746	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn St	Draper St To Harrison St	3	1989	100	2089	44,650	68	1,207	-
6747	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn Rd	Ogden St To Draper St	3	1989	100	2089	44,885	68	1,213	-
6748	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn St	County Road 50 To Dunn Rd	3	1989	100	2089	47,536	68	1,285	-
6749	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn St	Harrison St To County Road 50	3	1989	80	2069	53,721	48	1,751	-
6750	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn St	Draper St To Harrison St	3	1989	100	2089	59,258	68	1,602	-
6751	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dunn St	Murdoch St To Adelaide St	3	1989	80	2069	84,658	48	2,760	-
6752	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Erie Shores Dr To Crystal Beach Rd	3	1989	100	2089	4,224	68	114	-
6753	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Erie Shores Dr To Crystal Beach Rd	3	1989	100	2089	5,445	68	147	-
6754	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Crystal Beach Rd To McCarthy Rd	3	1989	100	2089	5,852	68	158	-
6755	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Erie Shores Dr To Crystal Beach Rd	3	1989	100	2089	6,127	68	166	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6756	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Erie Shores Dr To Crystal Beach Rd	3	1989	100	2089	17,573	68	475	-
6757	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Crystal Beach Rd To McCarthy Rd	3	1989	100	2089	18,227	68	493	-
6758	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Cornwall Crt To Cornwall Beach Rd	3	1989	80	2069	37,041	48	1,208	-
6759	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Erie Shores Dr To Crystal Beach Rd	3	1989	100	2089	24,255	68	656	-
6760	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	End To Nottingham Dr	3	1989	80	2069	42,540	48	1,387	-
6761	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Erie Shores Dr To Crystal Beach Rd	3	1989	100	2089	68,805	68	1,860	-
6762	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Dahinda Dr To Shawondasee Blvd	3	1989	80	2069	99,778	48	3,253	-
6763	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Aire Beach Rd	County Road 50 To Erie Aire Beach Rd	3	1989	80	2069	5,664	48	185	-
6764	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cornwall Ct	Cornwall Crt To Cornwall Beach Rd	3	1989	80	2069	8,784	48	286	-
6765	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wright Rd	0	3	1989	80	2069	21,480	48	700	-
6766	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Cornwall Ct	0	3	1989	80	2069	26,336	48	859	-
6767	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Aire Beach Rd	Erie Aire Beach Rd To End	3	1989	80	2069	79,808	48	2,602	-
6768	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Aire Beach Rd	Wright Rd To End	3	1989	80	2069	84,960	48	2,770	-
6769	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Shores Dr	Erie Shores Dr To Levergood Lane	3	1989	100	2089	12,660	68	342	-
6770	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Shores Dr	End To Erie Shores Dr	3	1989	100	2089	53,800	68	1,454	-
6771	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Shores Dr	End To Erie Shores Dr	3	1989	100	2089	55,850	68	1,510	-
6772	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Shores Dr	Levergood Lane To End	3	1989	100	2089	67,397	68	1,822	-
6773	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ferris Ave	County Road 50 To Adelaide St	3	1989	100	2089	34,766	68	940	-
6774	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ferris Ave	County Road 50 To Adelaide St	3	1989	100	2089	49,200	68	1,330	-
6775	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ferris Ave	County Road 50 To Adelaide St	3	1989	100	2089	53,025	68	1,433	-
6776	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fox Place	Washington Ct To Belcreek Dr	3	1989	100	2089	38,562	68	1,042	-
6777	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fox Place	Nottingham Dr To Washington Ct	3	1989	100	2089	40,440	68	1,093	-
6778	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gloucester Dr	County Road 50 To Cumberland Way	3	1989	100	2089	59,676	68	1,613	-
6779	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Gloucester Dr	Wellesley Dr To Gloucester Dr.	3	1989	100	2089	61,509	68	1,663	-
6780	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harrison St	Sydenham St To Jackson St	3	1989	100	2089	28,929	68	782	-
6781	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harrison St	Jackson St To Dunn St	3	1989	100	2089	30,691	68	830	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6782	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harrison St	Clitherow St To Bagot St	3	1989	100	2089	31,067	68	840	-
6783	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harrison St	Clitherow St To Bagot St	3	1989	100	2089	33,281	68	900	-
6784	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harrison St	Jackson St To Dunn St	3	1989	100	2089	34,160	68	923	-
6785	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Harrison St	Sydenham St To Jackson St	3	1989	100	2089	36,890	68	997	-
6786	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Herring Ave	County Road 50 To Adelaide St	3	1989	100	2089	37,807	68	1,022	-
6787	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Herring Ave	County Road 50 To Adelaide St	3	1989	100	2089	44,782	68	1,211	-
6788	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Herring Ave	County Road 50 To Adelaide St	3	1989	100	2089	57,387	68	1,551	-
6789	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Hope Cr	Bagot St To Sydenham St	3	2000	100	2100	46,154	79	1,167	-
6790	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Sullivan St To Richardson Lane	3	1989	100	2089	20,877	68	564	-
6791	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Richardson Lane To Murdoch St	3	1989	100	2089	37,342	68	1,009	-
6792	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Richardson Lane To Murdoch St	3	1989	100	2089	45,599	68	1,233	-
6793	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Draper St To Harrison St	3	1989	100	2089	53,485	68	1,446	-
6794	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Harrison St To Murdoch St	3	1989	100	2089	53,945	68	1,458	-
6795	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Harrison St To Murdoch St	3	1989	100	2089	54,495	68	1,473	-
6796	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Jackson St	Draper St To Harrison St	3	1989	100	2089	56,315	68	1,522	-
6797	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	Kayoshik Rd To Wabasso Rd	3	1989	100	2089	21,832	68	590	-
6798	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kayoshik Rd	Kayoshik Rd To Shawondasee Blvd	3	1989	100	2089	55,803	68	1,508	-
6799	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lake St.	End To Lake St	3	1989	100	2089	19,895	68	538	-
6800	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lake St.	Lake St To Marsden Beach Rd	3	1989	100	2089	22,753	68	615	-
6801	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakecrest Ct	End To Lakecrest Beach	3	1989	80	2069	60,840	48	1,983	-
6802	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakecrest Ct	End To Lakecrest Beach	3	1989	80	2069	83,080	48	2,709	-
6803	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakecrest Ct	End To Lakecrest Beach	3	1989	80	2069	86,408	48	2,817	-
6804	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakecrest Ct	Lakecrest Beach Rd To Cornwall Beach Rd	3	1989	80	2069	108,424	48	3,535	-
6805	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakecrest Ct	Lakecrest Beach Rd To Cornwall Beach Rd	3	1989	80	2069	111,592	48	3,638	-
6806	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pigeon Beach Rd	0	3	1989	80	2069	9,722	48	317	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6807	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakeview Ave	Pigeon Beach Rd To End	3	1989	80	2069	24,301	48	792	-
6808	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pegeon Beach Rd	0	3	1989	80	2069	29,205	48	952	-
6809	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakeview Ave	Seymour PI To Gloucester Dr	3	1989	80	2069	37,983	48	1,238	-
6810	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakeview Ave	Seymour PI To End	3	1989	80	2069	53,110	48	1,731	-
6811	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pegeon Beach Rd	0	3	1989	80	2069	68,647	48	2,238	-
6812	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakeview Ave	End To Allision Ave	3	1989	80	2069	72,798	48	2,373	-
6813	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakewood Ave	Beverly Blvd To Santa Ana Ave	3	1989	100	2089	31,326	68	847	-
6814	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lakewood Ave	Beverly Blvd To Santa Ana Ave	3	1989	100	2089	31,518	68	852	-
6815	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Laura Ct	End To Sydenham St	3	2000	100	2100	44,885	79	1,135	-
6816	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Levergood Ct	End To Levergood Lane	3	1989	100	2089	34,921	68	944	-
6817	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Levergood Lane	Levergood Ct To Erie Shores Dr	3	1989	100	2089	29,084	68	786	-
6818	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Levergood Lane	County Road 50 To Levergood Ct	3	1989	100	2089	35,024	68	947	-
6819	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lincoln Ct	Nottingham Dr To Nottingham Dr	3	1989	100	2089	41,102	68	1,111	-
6820	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lincoln Ct	Nottingham Dr To Nottingham Dr	3	1989	100	2089	59,751	68	1,615	-
6821	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	68,124	48	2,221	-
6822	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	79,149	48	2,580	-
6823	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	80,633	48	2,629	-
6824	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	82,362	48	2,685	-
6825	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	County Road 50 To Allision Ave	3	1989	100	2089	36,646	68	991	-
6826	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	County Road 50 To Allision Ave	3	1989	100	2089	51,611	68	1,395	-
6827	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	County Road 50 To Allision Ave	3	1989	100	2089	53,575	68	1,448	-
6828	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	County Road 50 To Allision Ave	3	1989	100	2089	54,243	68	1,466	-
6829	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Marsden Beach Rd	County Road 50 To End	3	1989	80	2069	6,867	48	224	-
6830	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Marsden Beach Rd	Lake St To County Road 50	3	1989	100	2089	38,831	68	1,050	-
6831	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Marsden Beach Rd	End To County Road 50	3	1989	100	2089	39,880	68	1,078	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6832	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McCarthy Dr	End To McCarthy Rd	3	1992	100	2092	26,635	71	706	-
6833	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McClain Blvd	County Road 50 To Star Beach Rd	3	1989	100	2089	52,165	68	1,410	-
6834	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McClain Blvd	County Road 50 To Star Beach Rd	3	1989	100	2089	55,578	68	1,502	-
6835	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Jackson St To Dunn Rd	3	1989	100	2089	4,314	68	117	-
6836	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Jackson St To Dunn Rd	3	1989	100	2089	33,366	68	902	-
6837	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Clitherow St To Bagot St	3	1989	100	2089	32,330	68	874	-
6838	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Clitherow St To Bagot St	3	1989	100	2089	34,670	68	937	-
6839	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd 50	Sydenham St To Jackson St	3	1989	100	2089	38,632	68	1,044	-
6840	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	County Rd 50	Sydenham St To Jackson St	3	1989	100	2089	39,177	68	1,059	-
6841	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Bagot St To Sydenham St	3	1989	100	2089	35,925	68	971	-
6842	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Bagot St To Sydenham St	3	1989	100	2089	38,555	68	1,042	-
6843	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Jackson St To Dunn Rd	3	1989	100	2089	46,758	68	1,264	-
6844	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Erie Rd To Clitherow St	3	1989	100	2089	43,920	68	1,187	-
6845	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Nottingham Dr	Lincoln Crt To Fox Pl	3	1989	100	2089	25,897	68	700	-
6846	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Nottingham Dr	Lincoln Crt To Fox Pl	3	1989	100	2089	29,850	68	807	-
6847	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Nottingham Dr	County Road 50 To Fox Pl	3	1989	100	2089	51,618	68	1,395	-
6848	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Nottingham Dr	County Road 50 To Fox Pl	3	1989	100	2089	45,214	68	1,222	-
6849	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Nottingham Dr	County Road 50 To Fox Pl	3	1989	100	2089	45,444	68	1,228	-
6850	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ogden St	Erie Rd To Clitherow St	3	1989	100	2089	22,781	68	616	-
6851	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pigeon Beach Rd	County Road 50 To Pigeon Beach Rd	3	1989	80	2069	19,826	48	646	-
6852	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pigeon Beach Rd	County Road 50 To Pigeon Beach Rd	3	1989	80	2069	23,476	48	765	-
6853	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pigeon Beach Rd	County Road 50 To Pigeon Beach Rd	3	1989	80	2069	42,504	48	1,386	-
6854	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pigeon Beach Rd	County Road 50 To Pigeon Beach Rd	3	1989	80	2069	72,554	48	2,365	-
6855	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pleasure Beach Rd	Circle V-1 Rd To Circle V-2 Rd	3	1989	80	2069	9,035	48	295	-
6856	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pleasure Beach Rd	Pleasure Beach Rd To Pigeon Beach Rd	3	1989	80	2069	14,223	48	464	-
6857	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pleasure Beach Rd	Pleasure Beach Rd To Pleasure Beach Rd	3	1989	80	2069	26,235	48	855	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6858	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pleasure Beach Rd	Horseshoe V To Pleasure Beach Rd	3	1989	80	2069	48,503	48	1,581	-
6859	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pleasure Beach Rd	Circle V-2 Rd To Pleasure Beach Rd	3	1989	80	2069	80,876	48	2,637	-
6860	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Prado Dr	County Road 50 To Adelaide St	3	1989	100	2089	39,410	68	1,065	-
6861	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Prado Dr	County Road 50 To Adelaide St	3	1989	100	2089	48,053	68	1,299	-
6862	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Prado Dr	County Road 50 To Adelaide St	3	1989	100	2089	51,296	68	1,387	-
6863	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Richardson Lane	End To Jackson St	3	1989	100	2089	23,453	68	634	-
6864	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Richardson Lane	End To Jackson St	3	1989	100	2089	42,197	68	1,141	-
6865	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseanne Dr	Roseanne Dr To Nottingham Dr	3	1992	100	2092	16,704	71	443	-
6866	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseanne Dr	County Road 50 To End	3	1989	100	2089	18,913	68	511	-
6867	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseanne Dr	McCarthy Rd To Roseanne Dr	3	1992	100	2092	30,336	71	804	-
6868	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseanne Dr	County Road 50 To End	3	1992	100	2092	40,298	71	1,068	-
6869	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseanne Dr	County Road 50 To End	3	1992	100	2092	53,472	71	1,417	-
6870	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseanne Dr	County Road 50 To End	3	1992	100	2092	53,824	71	1,426	-
6871	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	5,456	48	178	-
6872	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Shawondasee Blvd To Wabasso Rd	3	1989	80	2069	10,346	48	337	-
6873	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	12,688	48	414	-
6874	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Shawondasee Blvd To Wabasso Rd	3	1989	80	2069	11,970	48	390	-
6875	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	14,264	48	465	-
6876	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	100	2089	30,527	68	825	-
6877	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Marsden Beach Rd To Martin Lane	3	1989	80	2069	54,912	48	1,790	-
6878	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	61,136	48	1,993	-
6879	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	66,312	48	2,162	-
6880	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Shawondasee Blvd To Marsden Beach Rd	3	1989	80	2069	73,360	48	2,392	-
6881	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	86,448	48	2,818	-
6882	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	92,272	48	3,008	-
6883	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	102,584	48	3,344	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6884	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	ROW	Martin Lane To Wright Rd	3	1989	80	2069	103,984	48	3,390	-
6885	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ruthven Dr	End To Bellcreeft Dr	3	1989	100	2089	14,697	68	397	-
6886	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Ruthven Dr	Bellcreeft Dr To End	3	1989	80	2069	34,670	48	1,130	-
6887	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Ana Ave	Santa Ana Ave To End	3	1989	80	2069	8,283	48	270	-
6888	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Ana Ave	Santa Ana Ave To End	3	1989	100	2089	15,233	68	412	-
6889	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Ana Ave	Sunset Ave To Lakewood Ave	3	1989	100	2089	37,060	68	1,002	-
6890	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Ana Ave	Beverly Blvd To Sunset Ave	3	1989	100	2089	44,105	68	1,192	-
6891	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Ana Ave	Beverly Blvd To Sunset Ave	3	1989	100	2089	53,510	68	1,446	-
6892	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Monica Blvd	County Road 50 To Wilshire Pl	3	1989	100	2089	29,864	68	807	-
6893	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Monica Blvd	County Road 50 To Wilshire Pl	3	1989	100	2089	39,508	68	1,068	-
6894	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Santa Monica Blvd	Wilshire Pl To Beverly Blvd	3	1989	100	2089	57,763	68	1,561	-
6895	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	Shawondasee Blvd To Shawondasee Blvd	3	1989	80	2069	10,717	48	349	-
6896	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	End To Shawondasee Blvd	3	1989	80	2069	11,984	48	391	-
6897	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	Shawondasee Blvd To Shawondasee Blvd	3	1989	80	2069	21,133	48	689	-
6898	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	Kayoshik Rd To Wawa Cres.	3	1989	80	2069	48,937	48	1,595	-
6899	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	Wawa Cres. To County Road 50	3	1989	80	2069	68,537	48	2,234	-
6900	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shawondasee Blvd	Shawondasee Blvd To Kayoshik Rd	3	1989	80	2069	70,175	48	2,288	-
6901	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Star Beach Rd	End To Star Beach Rd	3	1989	100	2089	15,012	68	406	-
6902	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Star Beach Rd	McClain Blvd To End	3	1989	80	2069	35,756	48	1,166	-
6903	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Star Beach Rd	End To McClain Blvd	3	1989	80	2069	41,083	48	1,339	-
6904	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sullivan St	Bagot St To Sydenham St	3	1989	100	2089	27,227	68	736	-
6905	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sullivan St	Sydenham St To Jackson St	3	1989	100	2089	31,711	68	857	-
6906	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sullivan St	Sydenham St To Jackson St	3	1989	100	2089	34,122	68	922	-
6907	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sullivan St	Bagot St To Sydenham St	3	1989	100	2089	41,496	68	1,122	-
6908	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sullivan St	Clitherow St To Bagot St	3	1989	100	2089	42,747	68	1,156	-
6909	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Ave	Beverly Blvd To Santa Ana Ave	3	1989	100	2089	43,419	68	1,174	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6910	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Murdoch St To Sullivan St	3	2000	100	2100	38,578	79	976	-
6911	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St	Laura Cres To Hope Cres	3	1989	100	2089	39,410	68	1,065	-
6912	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Murdoch St To Sullivan St	3	2000	100	2100	40,227	79	1,017	-
6913	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Hope Cres. To Draper St	3	1989	100	2089	40,547	68	1,096	-
6914	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Harrison St To Murdoch St	3	1989	100	2089	49,505	68	1,338	-
6915	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Draper St To Harrison St	3	1989	100	2089	50,017	68	1,352	-
6916	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Harrison St To Murdoch St	3	1989	100	2089	52,762	68	1,426	-
6917	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sydenham St.	Draper St To Harrison St	3	1989	100	2089	52,908	68	1,430	-
6918	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wabasso Rd	Wawa Cres. To Shawondasee Blvd	3	1989	80	2069	14,119	48	460	-
6919	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wabasso Rd	County Road 50 To Wawa Cres.	3	1989	100	2089	13,931	68	377	-
6920	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wabasso Rd	County Road 50 To Wawa Cres.	3	1989	100	2089	50,478	68	1,365	-
6921	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut Lane	County Road 50 To Adelaide St	3	1989	100	2089	49,416	68	1,336	-
6922	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut Lane	County Road 50 To Adelaide St	3	1989	100	2089	53,538	68	1,447	-
6923	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Washington Ct	Bellcreeft Dr To Fox Pl	3	1989	100	2089	12,469	68	337	-
6924	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Washington Ct	Bellcreeft Dr To Fox Pl	3	1989	100	2089	54,638	68	1,477	-
6925	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wawa Cres	Wawa Cres. To Shawondasee Blvd	3	1989	100	2089	27,472	68	743	-
6926	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wawa Cres	Wawa Cres. To Shawondasee Blvd	3	1989	100	2089	27,810	68	752	-
6927	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Westchester Rd	County Road 50 To Chester Rd	3	1989	60	2049	8,455	28	397	-
6928	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Westchester Rd	County Road 50 To Chester Rd	3	1989	100	2089	32,360	68	875	-
6929	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Westchester Rd	County Road 50 To Chester Rd	3	1989	100	2089	38,488	68	1,040	-
6930	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wilshire Place	County Road 50 To Santa Monica Dr	3	1989	100	2089	50,290	68	1,359	-
6931	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Windsor Ave	County Road 50 To Allision Ave	3	1989	100	2089	34,879	68	943	-
6932	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Windsor Ave	County Road 50 To Allision Ave	3	1989	100	2089	47,385	68	1,281	-
6933	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Windsor Ave	County Road 50 To Allision Ave	3	1989	100	2089	50,238	68	1,358	-
6934	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wright Rd	County Road 50 To Erie Aire Beach Rd	3	2001	100	2101	2,260	80	57	-



Table B-2-1 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6935	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wright Rd	County Road 50 To Erie Aire Beach Rd	3	2001	100	2101	2,730	80	69	-
6936	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wright Rd	County Road 50 To Erie Aire Beach Rd	3	2001	100	2101	44,570	80	1,121	-
6937	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wright Rd	County Road 50 To Erie Aire Beach Rd	3	2001	100	2101	46,120	80	1,160	-
6938	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wright Rd	County Road 50 To Erie Aire Beach Rd	3	2001	100	2101	49,115	80	1,236	-
Total										12,403,530		359,040	0



Table B-2-2
Town of Essex
Wastewater Facilities – Ward 3

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
3495	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	CS WW PS#2	Pumping Station 2	3	1984	50	2034	84,986	13	7,489	-
3496	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	CS WW PS#3	Pumping Station 3	3	1984	50	2034	84,986	13	7,489	-
3497	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	CS WW PS#5	Pumping Station 5	3	1984	50	2034	84,986	13	7,489	-
3498	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	CS WW PS#6	Pumping Station 6	3	1984	50	2034	84,986	13	7,489	-
23519	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	Cyr's Beach Pump	0	3	2010	15	2025	3,791	4	suggested for 10 year capital forecast	3,791
24402	ES: Sanitary Sewer - Treatment/Disposal	Buildings	Sanitary Sewers	ROOF	COLCHESTER SOUTH WASTE WATER TREATMENT PLANT	3	2012	25	2037	22,010	16	1,621	-
Total										365,745		31,576	3,791



**Table B-2-3
Town of Essex
Wastewater Manholes – Ward 3**

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4049	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Adelaide St	3	1989	80	2069	3,800	48	124	-
4050	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Adelaide St	3	1989	80	2069	3,800	48	124	-
4051	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Adelaide St	3	1989	80	2069	3,800	48	124	-
4052	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Adelaide St	3	1989	80	2069	3,800	48	124	-
4053	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	Adelaide St	3	1989	80	2069	3,800	48	124	-
4080	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allison Ave	Maple Ave To Allison Ave	3	1989	80	2069	3,800	48	124	-
4081	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allison Ave	Maple St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4082	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allison Ave	Maple St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4083	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allison Ave	Maple St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4084	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ambassador Beach Rd	Ambassador Beach Rd To Ambassador Beach	3	1989	80	2069	3,800	48	124	-
4085	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ambassador Beach Rd	Ambassador Beach Rd To Ambassador Beach	3	1989	80	2069	3,800	48	124	-
4111	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bagot St	Harrison St To Draper St	3	1989	80	2069	3,800	48	124	-
4112	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bagot St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4113	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bagot St	Sullivan St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4114	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bagot St	Sullivan St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4115	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beach St	Beverly Blvd To Santa Ana Ave	3	1989	80	2069	3,800	48	124	-
4116	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beach St	Beverly Blvd To Santa Ana Ave	3	1989	80	2069	3,800	48	124	-
4122	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bellcreek Dr	Washington Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4123	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bellcreek Dr	Washington Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4124	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bellcreek Dr	Fox Place To Washington Court	3	1989	80	2069	3,800	48	124	-
4125	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bellcreek Dr	Ruthven Dr To Fox Place	3	1989	80	2069	3,800	48	124	-
4126	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beverly Blvd	Lakewood Ave To Beach St	3	1989	80	2069	3,800	48	124	-
4127	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beverly Blvd	Lakewood Ave To Beach St	3	1989	80	2069	3,800	48	124	-
4128	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beverly Blvd	Lakewood Ave To Sunset Ave	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4129	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beverly Blvd	Sunset Ave To Santa Monica Blvd	3	1989	80	2069	3,800	48	124	-
4131	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bondy Lane	Bellecreft Dr To Santa Monica Dr	3	1989	80	2069	3,800	48	124	-
4132	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bondy Lane	County Rd 50 W To Beach St	3	1989	80	2069	3,800	48	124	-
4133	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bondy Lane	County Rd 50 W To Beach St	3	1989	80	2069	3,800	48	124	-
4134	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Bondy Lane	County Rd 50 W To Beach St	3	1989	80	2069	3,800	48	124	-
4213	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Chester Rd	Cook's Rd To Westchester Rd	3	1989	80	2069	3,800	48	124	-
4214	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Chester Rd	Westchester Rd To End	3	1989	80	2069	3,800	48	124	-
4215	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Chester Rd	Westchester Rd To End	3	1989	80	2069	3,800	48	124	-
4222	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clithrow St	Ogden St To Draper St	3	1989	80	2069	3,800	48	124	-
4223	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clithrow St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4224	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clithrow St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4225	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clithrow St	Sullivan St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4226	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clithrow St	Sullivan St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4228	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cooks Rd	End To Chester Rd	3	1989	80	2069	3,800	48	124	-
4229	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cooks Rd	End To Chester Rd	3	1989	80	2069	3,800	48	124	-
4230	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cooks Rd	End To Chester Rd	3	1989	80	2069	3,800	48	124	-
4231	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cooks Rd	End To Chester Rd	3	1989	80	2069	3,800	48	124	-
4232	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cornwall Cr	Wright Rd To Cornwall Beach	3	1989	80	2069	3,800	48	124	-
4233	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cornwall Cr	Wright Rd To Cornwall Beach	3	1989	80	2069	3,800	48	124	-
4234	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cornwall Cr	Cornwall Beach To Lakecrest Beach	3	1989	80	2069	3,800	48	124	-
4235	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cornwall Cr	Cornwall Beach To Lakecrest Beach	3	1989	80	2069	3,800	48	124	-
4236	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cornwall Cr	Cornwall Beach To Lakecrest Beach	3	1989	80	2069	3,800	48	124	-
4259	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 13	(Wilson Drain) To	3	1989	80	2069	3,800	48	124	-
4260	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 13	(Wilson Drain) To	3	1989	80	2069	3,800	48	124	-
4261	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 13	(Wilson Drain) To	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4262	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Prado St	Adelaide St To County Rd 50 W	3	1988	80	2068	3,800	47	125	-
4263	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Adelaide St To County Rd 50 W	3	1988	80	2068	3,800	47	125	-
4264	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Adelaide St To County Rd 50 W	3	1988	80	2068	3,800	47	125	-
4265	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Herring St To Ferriss Rd	3	1989	80	2069	3,800	48	124	-
4266	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Prado St To Herring St	3	1989	80	2069	3,800	48	124	-
4267	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Prado St To Herring St	3	1989	80	2069	3,800	48	124	-
4268	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Prado St To Herring St	3	1989	80	2069	3,800	48	124	-
4269	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Adelaide St	Herring St To Ferriss Rd	3	1989	80	2069	3,800	48	124	-
4270	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Westchester Rd To McLean Sideroad	3	1989	80	2069	3,800	48	124	-
4271	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Westchester Rd To McLean Sideroad	3	1989	80	2069	3,800	48	124	-
4272	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Cook's Rd To Westchester Rd	3	1989	80	2069	3,800	48	124	-
4273	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Cook's Rd To Westchester Rd	3	1989	80	2069	3,800	48	124	-
4274	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	McLean Sideroad To Dahinda Dr	3	1989	80	2069	3,800	48	124	-
4275	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Shawondasee Blvd To Marsden Beach Rd	3	1989	80	2069	3,800	48	124	-
4276	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Dahinda Dr To Wabasso Rd	3	1989	80	2069	3,800	48	124	-
4277	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Westchester Rd To McLean Sideroad	3	1989	80	2069	3,800	48	124	-
4278	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Wabasso Rd To Shawondasee Blvd	3	1989	80	2069	3,800	48	124	-
4279	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Beverly Blvd	Santa Ana Ave To County Rd 50 W	3	2005	80	2085	3,800	64	106	-
4280	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Ambassador Beach Rd To Beverly Blvd	3	2005	80	2085	3,800	64	106	-
4281	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 50	Ambassador Beach Rd To Beverly Blvd	3	2005	80	2085	3,800	64	106	-
4292	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4293	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4294	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4295	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4296	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4297	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4298	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4299	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4300	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Crt	Crystal Lane To Crystal Beach Rd	3	1989	80	2069	3,800	48	124	-
4301	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Crt	Crystal Lane To Crystal Beach Rd	3	1989	80	2069	3,800	48	124	-
4302	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McCarthy Rd	Crystal Lane To Roseann Dr	3	1992	80	2072	3,800	51	120	-
4303	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Lane	McCarthy Rd To Crystal Beach Rd	3	1989	80	2069	3,800	48	124	-
4304	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Lane	McCarthy Rd To Crystal Beach Rd	3	1989	80	2069	3,800	48	124	-
4305	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cumberland Way	Gloucester Dr To Seymour Place	3	1989	80	2069	3,800	48	124	-
4321	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	County Rd 13 (Erie) To Clitherow St	3	1989	80	2069	3,800	48	124	-
4322	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4323	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4324	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Bagot St To Sydenham St	3	1989	80	2069	3,800	48	124	-
4325	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Sydenham St To Jackson St	3	1989	80	2069	3,800	48	124	-
4326	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Sydenham St To Jackson St	3	1989	80	2069	3,800	48	124	-
4327	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Jackson St To Dunn Rd	3	1989	80	2069	3,800	48	124	-
4328	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Jackson St To Dunn Rd	3	1989	80	2069	3,800	48	124	-
4336	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	Dunn Rd To Jackson St	3	1989	80	2069	3,800	48	124	-
4337	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	Adelaide St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4338	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	Draper St To Ogden St	3	1989	80	2069	3,800	48	124	-
4339	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	Draper St To Ogden St	3	1989	80	2069	3,800	48	124	-
4340	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	Harrison St To Draper St	3	1989	80	2069	3,800	48	124	-
4341	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	County Rd 50 W To Harrison St	3	1989	80	2069	3,800	48	124	-
4342	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	County Rd 50 W To Harrison St	3	1989	80	2069	3,800	48	124	-
4343	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dunn St	Adelaide St To Murdoch St	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4345	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Beach Rd To Crystal Lane	3	1989	80	2069	3,800	48	124	-
4346	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Crystal Beach Rd	Crystal Beach Rd To Crystal Lane	3	1989	80	2069	3,800	48	124	-
4358	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Aire Beach Rd	Wright Rd To End	3	1989	80	2069	3,800	48	124	-
4359	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Aire Beach Rd	Wright Rd To End	3	1989	80	2069	3,800	48	124	-
4360	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Aire Beach Rd	Wright Rd To End	3	1989	80	2069	3,800	48	124	-
4361	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Shores Dr	Levergood Dr To End	3	1989	80	2069	3,800	48	124	-
4362	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Shores Dr	Levergood Dr To End	3	1989	80	2069	3,800	48	124	-
4363	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Shores Dr	Levergood Dr To End	3	1989	80	2069	3,800	48	124	-
4364	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Shores Dr	End To Levergood Dr	3	1989	80	2069	3,800	48	124	-
4365	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Shores Dr	End To Levergood Dr	3	1989	80	2069	3,800	48	124	-
4454	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gloucester Dr	Cumberland Way To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4455	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gloucester Dr	Cumberland Way To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4456	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gloucester Dr	Cumberland Way To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4488	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4489	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Sydenham St To Jackson St	3	1989	80	2069	3,800	48	124	-
4490	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Sydenham St To Jackson St	3	1989	80	2069	3,800	48	124	-
4491	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4492	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4493	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Harrison St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4494	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Harrison St	Jackson St To Dunn Rd	3	1989	80	2069	3,800	48	124	-
4495	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	3rd Concession	Drummond Rd To Roseborough	3	1976	89	2065	3,800	44	131	-
4496	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	3rd Concession	Drummond Rd To Roseborough	3	1976	89	2065	3,800	44	131	-
4497	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	3rd Concession	Drummond Rd To Roseborough	3	1976	89	2065	3,800	44	131	-
4498	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	3rd Concession	Drummond Rd To Roseborough	3	1976	89	2065	3,800	44	131	-
4499	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	3rd Concession	Drummond Rd To Roseborough	3	1976	89	2065	3,800	44	131	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4500	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Herring St	Adelaide St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4501	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Herring St	Adelaide St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4502	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Herring St	Adelaide St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4503	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Hope Cr	End To Sydenham St	3	2000	80	2080	3,800	59	110	-
4531	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Jackson St	Harrison St To Draper St	3	1989	80	2069	3,800	48	124	-
4532	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Jackson St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4533	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Jackson St	Richardson Lane To Jackson St	3	1989	80	2069	3,800	48	124	-
4534	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Jackson St	Richardson Lane To Murdoch St	3	1989	80	2069	3,800	48	124	-
4545	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kayoshik Rd	Shawondasee Blvd To Shawondasee Blvd	3	1989	80	2069	3,800	48	124	-
4546	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kayoshik Rd	Shawondasee Blvd To Shawondasee Blvd	3	1989	80	2069	3,800	48	124	-
4598	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lake St	Lake St To Marsden Beach Rd	3	1989	80	2069	3,800	48	124	-
4599	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lake St	End To Marsden Beach Rd	3	1989	80	2069	3,800	48	124	-
4600	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lake St	End To Marsden Beach Rd	3	1989	80	2069	3,800	48	124	-
4601	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakecrest Ct	End To Lakecrest Beach Rd	3	1989	80	2069	3,800	48	124	-
4602	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakecrest Ct	End To Lakecrest Beach Rd	3	1989	80	2069	3,800	48	124	-
4603	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakecrest Ct	Lakecrest Beach Rd To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4604	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakecrest Ct	Lakecrest Beach Rd To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4605	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakeview Ave	Lakeview Ave To Pigeon Beach Rd	3	1989	80	2069	3,800	48	124	-
4606	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakeview Ave	Allison Ave To End	3	1989	80	2069	3,800	48	124	-
4607	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakeview Ave	Pigeon Beach Rd To End	3	1989	80	2069	3,800	48	124	-
4608	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakeview Ave	Pigeon Beach Rd To End	3	1989	80	2069	3,800	48	124	-
4609	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Allison Ave	Lakeview Ave To Maple St	3	1989	80	2069	3,800	48	124	-
4610	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakeview Ave	End To Seymour Place	3	1989	80	2069	3,800	48	124	-
4611	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cumberland Way	Wellesley Dr To Gloucester Dr	3	1989	80	2069	3,800	48	124	-
4612	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakeview Ave	Lypps Beach Rd To Lypps Beach Rd	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4613	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakewood Ave	Santa Ana Ave To Beverly Blvd	3	1989	80	2069	3,800	48	124	-
4614	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lakewood Ave	Santa Ana Ave To Beverly Blvd	3	1989	80	2069	3,800	48	124	-
4618	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Laura Cr	End To Sydenham St	3	2000	80	2080	3,800	59	110	-
4625	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Levergood Crt	Levergood Lane To End	3	1989	80	2069	3,800	48	124	-
4626	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Levergood Lane	Erie Shores Dr To Levergood Dr	3	1989	80	2069	3,800	48	124	-
4627	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Levergood Lane	Levergood Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4628	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lincoln Ct	Lincoln Court To Nottingham Dr	3	1989	80	2069	3,800	48	124	-
4629	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lincoln Ct	Lincoln Court To Nottingham Dr	3	1989	80	2069	3,800	48	124	-
4631	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	3,800	48	124	-
4632	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	3,800	48	124	-
4633	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	3,800	48	124	-
4634	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lypps Beach Rd	Lypps Beach Rd To End	3	1989	80	2069	3,800	48	124	-
4661	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4662	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4663	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4664	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4680	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Marsden Beach Rd	Lake St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4681	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Marsden Beach Rd	Lake St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4682	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Marsden Beach Rd	Lake St To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4690	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McCarthy Dr	McCarthy Dr To County Rd 50 W	3	1982	83	2065	3,800	44	131	-
4691	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McCarthy Dr (Crystal Lane)	Counry Rd 50 W To Crystal Lane	3	1989	80	2069	3,800	48	124	-
4692	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McCarthy Dr (Crystal Lane)	Counry Rd 50 W To Crystal Lane	3	1989	80	2069	3,800	48	124	-
4693	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McCarthy Dr	McCarthy Dr To End	3	1989	80	2069	3,800	48	124	-
4694	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McCarthy Dr (Crystal Lane)	Counry Rd 50 W To Crystal Lane	3	1989	80	2069	3,800	48	124	-
4695	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McClain Blvd	6th Concession To 7th Concession	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4731	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Dunn Rd To Jackson St	3	1989	80	2069	3,800	48	124	-
4732	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4733	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Sydenham St To Bagot St	3	1989	80	2069	3,800	48	124	-
4734	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Jackson St To Sydenham St	3	1989	80	2069	3,800	48	124	-
4735	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Jackson St To Sydenham St	3	1989	80	2069	3,800	48	124	-
4736	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	County Rd 13 (Erie) To Clithrow	3	1989	80	2069	3,800	48	124	-
4737	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Dunn Rd To Jackson St	3	1989	80	2069	3,800	48	124	-
4738	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4739	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4740	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Dunn Rd To Jackson St	3	1989	80	2069	3,800	48	124	-
4747	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Nottingham Dr	Fox Place To Lincoln Court	3	1989	80	2069	3,800	48	124	-
4748	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Nottingham Dr	Lincoln Court To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4749	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Nottingham Dr	Lincoln Court To Lincoln Court	3	1989	80	2069	3,800	48	124	-
4750	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Nottingham Dr	Lincoln Court To Lincoln Court	3	1989	80	2069	3,800	48	124	-
4751	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Nottingham Dr	Lincoln Court To Lincoln Court	3	1989	80	2069	3,800	48	124	-
4752	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Nottingham Dr	End To Fox Place	3	1989	80	2069	3,800	48	124	-
4767	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ogden St	County Rd 13 (Erie) To Clithrow	3	1989	80	2069	3,800	48	124	-
4768	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ogden St	County Rd 13 (Erie) To Clithrow	3	1989	80	2069	3,800	48	124	-
4786	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pigeon Beach Rd	County Rd 50 W To End	3	1989	80	2069	3,800	48	124	-
4787	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pigeon Beach Rd	County Rd 50 W To End	3	1989	80	2069	3,800	48	124	-
4788	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pigeon Beach Rd	County Rd 50 W To End	3	1989	80	2069	3,800	48	124	-
4789	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pigeon Beach Rd	County Rd 50 W To End	3	1989	80	2069	3,800	48	124	-
4791	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pleasure Beach Rd	Pleasure Beach Rd To Pleasure Beach Rd	3	1989	80	2069	3,800	48	124	-
4792	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pleasure Beach Rd	Pleasure Beach Rd To Pleasure Beach Rd	3	1989	80	2069	3,800	48	124	-
4793	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pleasure Beach Rd	Pleasure V To Horseshoe V	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4794	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pleasure Beach Rd	Pleasure Beach Rd To Pleasure Beach Rd	3	1989	80	2069	3,800	48	124	-
4795	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pleasure Beach Rd	Pleasure Beach Rd To Pleasure Beach Rd	3	1989	80	2069	3,800	48	124	-
4815	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ricardson Lane	Ricardson Lane To End	3	1989	80	2069	3,800	48	124	-
4816	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ricardson Lane	Ricardson Lane To End	3	1989	80	2069	3,800	48	124	-
4817	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseann Dr	End To County Rd 50 W	3	1992	80	2072	3,800	51	120	-
4818	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseann Dr	End To County Rd 50 W	3	1992	80	2072	3,800	51	120	-
4819	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseann Dr	End To County Rd 50 W	3	1992	80	2072	3,800	51	120	-
4820	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseann Dr	End To County Rd 50 W	3	1992	80	2072	3,800	51	120	-
4821	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseann Dr	End To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4822	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseann Dr	End To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4836	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	County Rd 20	Drummond Rd To Roseborough	3	1975	90	2065	3,800	44	131	-
4837	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4838	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4839	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4840	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4841	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4842	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4843	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	ROW	Martin Lane To End	3	1989	80	2069	3,800	48	124	-
4846	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lincoln Ct	Lincoln Court To Nottingham Dr	3	1989	80	2069	3,800	48	124	-
4847	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Ruthven Dr	Ruthven Dr To Bellicreft Dr	3	1989	80	2069	3,800	48	124	-
4848	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Ana Ave	Sunset Ave To Beverly Blvd	3	1989	80	2069	3,800	48	124	-
4849	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Ana Ave	Sunset Ave To Beverly Blvd	3	1989	80	2069	3,800	48	124	-
4850	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Ana Ave	Sunset Ave To Beverly Blvd	3	1989	80	2069	3,800	48	124	-
4851	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Ana Ave	End To Lakewood Ave	3	1989	80	2069	3,800	48	124	-
4852	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Ana Ave	End To Lakewood Ave	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4853	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Ana Ave	End To Lakewood Ave	3	1989	80	2069	3,800	48	124	-
4854	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Monica Dr	Wilshire Place To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4855	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Santa Monica Dr	Wilshire Place To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4856	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Scott Lane	Ferris Rd To Walnut St	3	1982	83	2065	3,800	44	131	-
4857	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Scott Lane	Ferris Rd To Walnut St	3	1982	83	2065	3,800	44	131	-
4864	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shawondasee Blvd	Wabasso Rd To Kavoshik Rd	3	1989	80	2069	3,800	48	124	-
4865	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shawondasee Blvd	Wabasso Rd To Kavoshik Rd	3	1989	80	2069	3,800	48	124	-
4866	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shawondasee Blvd	Wawa Crescent To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4867	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shawondasee Blvd	Wabasso Rd To Kavoshik Rd	3	1989	80	2069	3,800	48	124	-
4868	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shawondasee Blvd	Wawa Crescent To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4869	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shawondasee Blvd	Wawa Crescent To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
4940	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Star Beach Rd	End To McLean Sideroad	3	1989	80	2069	3,800	48	124	-
4941	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Star Beach Rd	End To McLean Sideroad	3	1989	80	2069	3,800	48	124	-
4942	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Star Beach Rd	McLean Sideroad To End	3	1989	80	2069	3,800	48	124	-
4943	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Star Beach Rd	McLean Sideroad To End	3	1989	80	2069	3,800	48	124	-
4946	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sullivan St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4947	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sullivan St	Clitherow St To Bagot St	3	1989	80	2069	3,800	48	124	-
4948	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sullivan St	Bagot St To Sydenham St	3	1989	80	2069	3,800	48	124	-
4949	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sullivan St	Sydenham St To Jackson St	3	1989	80	2069	3,800	48	124	-
4950	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sullivan St	Sydenham St To Jackson St	3	1989	80	2069	3,800	48	124	-
4951	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sullivan St	Sullivan St To Jackson St	3	1989	80	2069	3,800	48	124	-
4952	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Ave	Santa Ana Ave To Beverly Blvd	3	1989	80	2069	3,800	48	124	-
4961	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sydenham St	Draper St To Ogden St	3	1989	80	2069	3,800	48	124	-
4962	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sydenham St	Draper St To Ogden St	3	1989	80	2069	3,800	48	124	-
4963	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sydenham St	Harrison St To Draper St	3	1989	80	2069	3,800	48	124	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4964	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sydenham St	Murdoch St To Harrison St	3	1989	80	2069	3,800	48	124	-
4965	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sydenham St	Sullivan St To Murdoch St	3	1989	80	2069	3,800	48	124	-
4966	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sydenham St	Sullivan St To Murdoch St	3	1989	80	2069	3,800	48	124	-
5054	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wabasso Rd	Shawondasee Blvd To Kayoshik Rd	3	1989	80	2069	3,800	48	124	-
5055	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wabasso Rd	Wabasso Rd To Shawondasee Blvd	3	1989	80	2069	3,800	48	124	-
5056	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wabasso Rd	Wawa Crescent To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5057	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wabasso Rd	Wawa Crescent To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5058	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walker Rd	12th Concession To County Rd 11	3	1982	83	2065	3,800	44	131	-
5059	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut Lane	Adelaide St To End	3	1989	80	2069	3,800	48	124	-
5060	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut Lane	Walnut Lane To Adelaide St	3	1989	80	2069	3,800	48	124	-
5061	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut Lane	Walnut Lane To Adelaide St	3	1989	80	2069	3,800	48	124	-
5071	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Washington Ct	Fox Place To Bellcreeft Dr	3	1989	80	2069	3,800	48	124	-
5072	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Washington Ct	Fox Place To Bellcreeft Dr	3	1989	80	2069	3,800	48	124	-
5073	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Washington Ct	Fox Place To Bellcreeft Dr	3	1989	80	2069	3,800	48	124	-
5074	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wawa Cr	Wabasso Rd To Shawondasee Blvd	3	1989	80	2069	3,800	48	124	-
5075	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wawa Cr	Wabasso Rd To Shawondasee Blvd	3	1989	80	2069	3,800	48	124	-
5086	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Westchester Rd	Chester Rd To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5090	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilshire Pl	Santa Monica Blvd To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5091	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wilshire Pl	Wilshire Place To Santa Monica Dr	3	1989	80	2069	3,800	48	124	-
5099	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Windsor Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5100	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Windsor Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5101	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Windsor Ave	Allison Ave To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
5115	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	2001	80	2081	3,800	60	109	-
5116	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	2001	80	2081	3,800	60	109	-
5117	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	2001	80	2081	3,800	60	109	-



Table B-2-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5118	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	2001	80	2081	3,800	60	109	-
5119	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	2001	80	2081	3,800	60	109	-
5120	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	2001	80	2081	3,800	60	109	-
5121	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	End To Erie Aire Beach Rd	3	1989	80	2069	3,800	48	124	-
5122	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wright Rd	Erie Aire Beach Rd To County Rd 50 W	3	1989	80	2069	3,800	48	124	-
Total										1,060,200		34,446	0



Table B-2-4
Town of Essex
Wastewater Machinery & Equipment – Ward 3

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Machinery Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
15503	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Submersible Pump	Colchester No. 3	3	2006	5	2021	6,400	0	suggested for 10 year capital forecast	6,400
15504	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Submersible Pump	Colchester	3	2008	5	2021	9,350	0	suggested for 10 year capital forecast	9,350
15505	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Submersible Pump	Crystal Beach St	3	2007	5	2021	5,810	0	suggested for 10 year capital forecast	5,810
23253	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Mag Meter	Ward 3	3	2009	15	2024	7,640	3	suggested for 10 year capital forecast	7,640
24155	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Sewage Pump #NP-3127	Ward 3	3	2011	30	2041	9,970	20	610	-
24385	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Submersible Pump	CS WW Lagoon PS#5	3	2012	20	2032	9,400	11	960	-
24401	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	FENCE AROUND CS WWTP	Colchester South Wastewater Treatment Plant	3	2012	25	2037	17,010	16	1,253	-
24613	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Portable Composite Sampler	Colchester Waste Water Lagoons	3	2013	20	2033	3,910	12	370	-
Total										69,490		3,193	29,200



Table B-3-1
Town of Essex
Wastewater Facilities – Ward 4

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
3499	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	HARROW WW PS#7	Pumping Station 7	4	2004	50	2054	84,986	33	3,543	-
14202	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	Sewage Pumping Station	2215 Roseborough	4	1974	105	2079	626,416	58	18,346	-
19443	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	SILVA PS	0	4	2004	50	2054	54,888	33	2,288	-
24614	ES: Sanitary Sewers - Collection/Conveyance	Buildings (Pumping Stations)	Sanitary Sewers	Pump @ PS#7	Pump Station 7	4	2013	20	2033	8,800	12	832	-
Total										775,090		25,009	0



**Table B-3-2
Town of Essex
Sanitary Sewers – Ward 4**

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6373	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	3rd Concession Rd	Queen St To Grant St	4	2004	60	2064	43,983	43	1,535	-
6374	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	3rd Concession Rd	Queen St To Grant St	4	2004	60	2064	43,226	43	1,508	-
6375	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	3rd Concession Rd	Queen St To Grant St	4	2004	60	2064	38,902	43	1,357	-
6376	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	3rd Concession Rd	Roseborough To Queen St	4	1975	60	2035	43,076	14	3,558	-
6377	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St N	King St. E. To Centre St	4	1975	60	2035	26,508	14	2,190	-
6378	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Munger St To Sinasac St	4	1975	80	2055	32,412	34	1,323	-
6379	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	80	2055	46,200	34	1,886	-
6380	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Eaeement	Centre St To Munger St	4	1975	80	2055	52,170	34	2,130	-
6381	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	Centre St To Munger St	4	1975	80	2055	28,944	34	1,181	-
6382	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Pearson Dr To Taylor Rd	4	1978	60	2038	39,650	17	2,774	-
6383	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Taylor Rd To End	4	1978	60	2038	48,450	17	3,390	-
6384	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Lawson Cr To Murdoch St	4	1977	60	2037	33,900	16	2,497	-
6385	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Lawson Cr To Murdoch St	4	1977	60	2037	15,795	16	1,163	-
6386	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Margaret Court To Lawson Cr	4	1976	60	2036	34,350	15	2,673	-
6387	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	King St To Margaret Court	4	1976	60	2036	38,970	15	3,033	-
6388	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	King St To Margaret Court	4	1976	60	2036	25,280	15	1,967	-
6389	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Murdoch St To Cooksey Lane	4	1978	60	2038	44,085	17	3,085	-
6390	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Arthur St S	Cooksy Lane To Pearson Dr	4	1978	60	2038	43,175	17	3,021	-
6391	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Briarwood Cr	Sunset Dr To End	4	1994	100	2094	27,006	73	707	-
6392	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Briarwood Cr	Sunset Dr To End	4	1994	100	2094	16,163	73	423	-
6393	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Briarwood Cr	Sunset Dr To End	4	1994	100	2094	36,514	73	955	-
6394	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St E	Herdman St To End	4	1975	60	2035	35,118	14	2,901	-
6395	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St E	Queen St To Walnut St	4	1975	60	2035	40,080	14	3,311	-
6396	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St E	Queen St To Walnut St	4	1975	60	2035	34,160	14	2,822	-
6397	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St E	Queen St To Walnut St	4	1975	60	2035	35,715	14	2,950	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6398	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Secord Ave To Roseborough	4	1975	60	2035	31,775	14	2,625	-
6399	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Secord Ave To Roseborough	4	1975	60	2035	33,515	14	2,768	-
6400	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Victoria St To Erie St	4	1975	60	2035	47,735	14	3,943	-
6401	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Victoria St To Erie St	4	1975	60	2035	41,910	14	3,462	-
6402	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Victoria St To Erie St	4	1975	60	2035	36,985	14	3,055	-
6403	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Queen St To Victoria St	4	1975	60	2035	36,360	14	3,003	-
6404	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Center St W	Queen St To Victoria St	4	1975	60	2035	32,275	14	2,666	-
6405	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St E	Church St To Arthur St	4	1976	60	2036	28,346	15	2,206	-
6406	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St E	Church St To Arthur St	4	1976	60	2036	24,708	15	1,923	-
6407	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St E	Arthur St To Herdman St	4	1975	80	2055	28,590	34	1,167	-
6408	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St E	Walnut St N To Church St	4	1975	60	2035	35,574	14	2,938	-
6409	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St E	Walnut St N To Church St	4	1975	60	2035	35,805	14	2,958	-
6410	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St W	Secord Ave To Roseborough	4	1976	60	2036	22,795	15	1,774	-
6411	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Centre St W	Secord Ave To Roseborough	4	1976	60	2036	19,538	15	1,521	-
6412	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Church St	Centre St To Munger St	4	1975	60	2035	27,570	14	2,277	-
6413	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Church St	Centre St To Munger St	4	1975	60	2035	28,482	14	2,353	-
6414	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Church St	King St To Centre St	4	1975	60	2035	43,052	14	3,556	-
6415	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Colio - Easement	Queen to End	4	1975	80	2055	54,576	34	2,228	-
6416	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Colio - Easement	Queen to End	4	1975	80	2055	50,256	34	2,051	-
6418	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Colio - Easement	Queen to End	4	1975	80	2055	18,810	34	768	-
6420	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Colio - Easement	Queen to End	4	1975	80	2055	23,208	34	947	-
6421	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Colio - Easement	Queen to End	4	1975	80	2055	50,130	34	2,046	-
6424	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Colio - Easement	Queen to End	4	1975	80	2055	37,638	34	1,536	-
6425	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Delta St	Queen St To End	4	1975	60	2035	35,541	14	2,936	-
6426	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dubas Ave	Sunset Dr To End	4	1997	100	2097	32,115	76	826	-
6427	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Dubas Ave	Sunset Dr To End	4	1997	100	2097	19,925	76	512	-
6428	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St N	Sinasac St To Clark St	4	1975	60	2035	43,259	14	3,573	-
6429	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St N	Sinasac St To Clark St	4	1975	60	2035	41,731	14	3,447	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6430	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St N	King St To Centre St	4	1975	60	2035	48,528	14	4,009	-
6431	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St N	Centre St To Munger St	4	1975	60	2035	31,475	14	2,600	-
6432	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St N	Centre St To Munger St	4	1975	60	2035	35,680	14	2,947	-
6433	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St N	Munger St To Sinasac St	4	1975	60	2035	53,345	14	4,406	-
6434	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	King St W To Maple Ave	4	1975	60	2035	43,000	14	3,552	-
6435	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	King St W To Maple Ave	4	1975	60	2035	39,610	14	3,272	-
6436	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	Maple Ave To Wellington St	4	1975	60	2035	32,881	14	2,716	-
6437	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	Kael Cr To Pollard Dr	4	1975	60	2035	35,941	14	2,969	-
6438	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	Wellington St To Kael Cr	4	1975	60	2035	44,975	14	3,715	-
6439	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	Kael Cr To Wellington St	4	1975	80	2055	50,088	34	2,045	-
6440	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie St S	Kael Cr To Wellington St	4	1975	80	2055	63,870	34	2,607	-
6441	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fernwood Dr	Walnut St To Treeline Court	4	1992	100	2092	31,744	71	841	-
6442	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fernwood Dr	Walnut St To Treeline Court	4	1992	100	2092	33,544	71	889	-
6443	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fernwood Dr	Treeline Court To Walnut St	4	1992	100	2092	39,955	71	1,059	-
6444	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Fernwood Dr	Treeline Court To Walnut St	4	1992	100	2092	33,723	71	893	-
6445	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Given Rd	Taylor Rd To Snake Lane	4	1975	60	2035	44,786	14	3,699	-
6446	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Given Rd	Walnut St To Taylor Rd	4	1975	60	2035	42,526	14	3,513	-
6447	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Given Rd	Walnut St To Taylor Rd	4	1975	60	2035	44,866	14	3,706	-
6448	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Given Rd	Walnut St To Taylor Rd	4	1975	60	2035	41,595	14	3,436	-
6449	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Herdman St	King St To Centre St	4	1975	80	2055	57,666	34	2,354	-
6450	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kael Cr	East End To Erie St	4	1975	80	2055	38,790	34	1,583	-
6451	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kael Cr	East End To Erie St	4	1975	80	2055	27,882	34	1,138	-
6452	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kael Cr	East End To Erie St	4	1975	80	2055	51,456	34	2,100	-
6453	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kael Cr	East End To Erie St	4	1975	80	2055	50,760	34	2,072	-
6454	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	Church St To Arthur St	4	1975	60	2035	44,081	14	3,641	-
6455	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	Church St To Arthur St	4	1975	60	2035	32,975	14	2,724	-
6456	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	Herdman St To Sunset Dr	4	1975	60	2035	45,717	14	3,776	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6457	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	Walnut St N To Church St	4	1975	60	2035	40,852	14	3,374	-
6458	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	Walnut St N To Church St	4	1975	60	2035	41,459	14	3,425	-
6459	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	Arthur St To Herdman St	4	1975	60	2035	58,450	14	4,828	-
6460	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	McAfee St To Walnut St N	4	1975	60	2035	38,825	14	3,207	-
6461	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St E	McAfee St To Walnut St N	4	1975	60	2035	37,415	14	3,091	-
6462	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	60	2035	49,707	14	4,106	-
6463	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	60	2035	47,160	14	3,896	-
6464	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	60	2035	47,118	14	3,892	-
6465	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	60	2035	25,272	14	2,088	-
6466	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	60	2035	18,325	14	1,514	-
6467	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Victoria St To Erie St	4	1975	60	2035	41,800	14	3,453	-
6468	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Victoria St To Erie St	4	1975	60	2035	42,170	14	3,483	-
6469	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Victoria St To Erie St	4	1975	60	2035	43,450	14	3,589	-
6470	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	McAfee St To Queen St	4	1975	60	2035	37,670	14	3,112	-
6471	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Queen St To Victoria St	4	1975	60	2035	33,425	14	2,761	-
6472	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W	Queen St To Victoria St	4	1975	60	2035	35,845	14	2,961	-
6473	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	57,904	14	4,783	-
6474	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	42,103	14	3,478	-
6475	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	8,300	14	686	-
6476	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	60,997	14	5,038	-
6477	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	61,288	14	5,063	-
6478	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	57,509	14	4,750	-
6479	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	46,328	14	3,827	-
6480	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	3,760	14	311	-
6481	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	King St W.	Sunset Dr To Ferriss Rd	4	1975	60	2035	19,740	14	1,631	-
6482	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lawson Cr	End To Arthur St	4	1977	60	2037	26,358	16	1,941	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6483	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Lawson Cr	End To Arthur St	4	1977	60	2037	11,172	16	823	-
6484	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	2000	100	2100	22,560	79	571	-
6485	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1996	100	2096	30,686	75	793	-
6486	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	100	2087	31,786	66	872	-
6487	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	100	2087	27,763	66	761	-
6488	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	100	2087	23,251	66	638	-
6489	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	100	2087	40,321	66	1,106	-
6490	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1975	100	2075	45,914	54	1,398	-
6491	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1975	100	2075	32,975	54	1,004	-
6492	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1975	100	2075	10,166	54	310	-
6493	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	100	2087	8,766	66	240	-
6494	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Wellington St To Shepley Court	4	1975	100	2075	39,753	54	1,211	-
6495	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Wellington St To Shepley Court	4	1975	100	2075	42,911	54	1,307	-
6496	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	McAfee St To Victoria St	4	1998	60	2058	42,785	37	1,648	-
6497	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	McAfee St To Victoria St	4	1998	60	2058	44,090	37	1,698	-
6498	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Victoria St S To Erie St	4	1998	60	2058	44,680	37	1,720	-
6499	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Victoria St S To Erie St	4	1998	60	2058	44,170	37	1,701	-
6500	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Maple Ave	Victoria St S To Erie St	4	1998	60	2058	44,365	37	1,708	-
6501	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Margaret Court	End To Arthur St	4	1977	60	2037	32,289	16	2,378	-
6502	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAfee St	Wellington St To End	4	1975	60	2035	33,300	14	2,751	-
6503	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAfee St	Maple Ave To Wellington St	4	1975	60	2035	33,159	14	2,739	-
6504	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	60	2035	32,364	14	2,673	-
6505	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	60	2035	13,348	14	1,103	-
6506	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	60	2035	28,266	14	2,335	-
6507	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	60	2035	26,499	14	2,189	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6508	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	McAffee St	King St To Maple Ave	4	1975	60	2035	32,364	14	2,673	-
6509	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E - Easement	Munger St To End	4	1976	60	2036	24,374	15	1,897	-
6510	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Munger St To End	4	1976	60	2036	24,073	15	1,873	-
6511	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Queen St To Walnut St	4	1976	60	2036	50,710	15	3,947	-
6512	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Queen St To Walnut St	4	1976	60	2036	52,660	15	4,098	-
6513	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Victoria St To Erie St	4	1976	60	2036	49,750	15	3,872	-
6514	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Victoria St To Erie St	4	1976	60	2036	49,815	15	3,877	-
6515	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Secord Ave To Roseborough	4	1976	60	2036	27,128	15	2,111	-
6516	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Secord Ave To Roseborough	4	1976	60	2036	25,963	15	2,021	-
6517	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Secord Ave To Roseborough	4	1976	60	2036	41,087	15	3,198	-
6518	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Erie St To Secord Ave	4	1976	60	2036	47,490	15	3,696	-
6519	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Queen St To Victoria St	4	1976	60	2036	48,780	15	3,796	-
6520	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St W	Queen St To Victoria St	4	1976	60	2036	56,370	15	4,387	-
6521	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Walnut St To Church St	4	1976	60	2036	42,250	15	3,288	-
6522	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Walnut St To Church St	4	1976	60	2036	41,270	15	3,212	-
6523	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Church St To Arthur St	4	1976	60	2036	41,120	15	3,200	-
6524	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Munger St E	Church St To Arthur St	4	1976	60	2036	42,244	15	3,288	-
6525	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Woodland Dr To Pearson Dr	4	1992	100	2092	22,508	71	596	-
6526	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Pearson Dr To Arthur St	4	1992	60	2052	56,847	31	2,478	-
6527	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Walnut St To End	4	1992	60	2052	29,154	31	1,271	-
6528	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Murdoch St	Walnut St To End	4	1992	60	2052	41,886	31	1,826	-
6529	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pearson Dr	Murdoch St To Arthur St	4	1977	60	2037	41,116	16	3,028	-
6530	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pearson Dr	Murdoch St To Arthur St	4	1977	60	2037	43,809	16	3,227	-
6531	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Kael Cr	End to Erie St	4	1977	60	2037	28,256	16	2,081	-
6532	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pollard Dr	Harrowood Dr To Erie St	4	1975	60	2035	29,615	14	2,446	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6533	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pollard Dr	Pollard Dr To Harrowood Dr	4	1975	80	2055	36,186	34	1,477	-
6534	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Pollard Dr	Pollard Dr To Harrowood Dr	4	1975	80	2055	52,146	34	2,129	-
6535	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Centre St To Munger St.	4	1975	60	2035	49,820	14	4,115	-
6536	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Sinasac St To Delta St	4	1975	60	2035	17,667	14	1,459	-
6537	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Sinasac St To Delta St	4	1975	60	2035	38,446	14	3,176	-
6538	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Delta St To Colio Dr	4	1975	60	2035	35,993	14	2,973	-
6539	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	King St To Centre St	4	1975	60	2035	42,502	14	3,511	-
6540	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Munger St To Sinasac St	4	1975	60	2035	34,559	14	2,855	-
6541	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession Rd	4	1975	80	2055	35,820	34	1,462	-
6542	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Colio Dr To 3rd Concession Rd.	4	1975	60	2035	43,076	14	3,558	-
6543	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Colio Dr To 3rd Concession Rd.	4	1975	60	2035	41,637	14	3,439	-
6544	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Colio Dr To 3rd Concession Rd.	4	1975	60	2035	45,487	14	3,757	-
6545	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Colio Dr To 3rd Concession Rd.	4	1975	60	2035	44,716	14	3,694	-
6546	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	44,373	14	3,665	-
6547	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	43,611	14	3,602	-
6548	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	43,541	14	3,597	-
6549	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	48,133	14	3,976	-
6550	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	80	2055	25,320	34	1,034	-
6551	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	80	2055	11,268	34	460	-
6552	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Colio Dr To 510 Queen	4	1975	60	2035	38,502	14	3,180	-
6553	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Queen St	Colio Dr To 510 Queen	4	1975	60	2035	3,577	14	295	-
6554	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	40,782	14	3,369	-
6555	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1976	80	2056	62,713	35	2,509	-
6556	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1976	80	2056	74,699	35	2,988	-
6557	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1976	80	2056	48,979	35	1,959	-
6558	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1976	80	2056	67,181	35	2,687	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6559	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1976	80	2056	47,744	35	1,910	-
6560	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1976	80	2056	53,480	35	2,139	-
6561	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1976	80	2056	68,171	35	2,727	-
6562	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1976	80	2056	13,735	35	549	-
6563	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1976	80	2056	66,185	35	2,648	-
6564	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Sinasac St To Clark St	4	1976	80	2056	62,337	35	2,494	-
6565	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Sinasac St To Clark St	4	1976	80	2056	60,601	35	2,424	-
6566	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Munger St To Sinasac St	4	1976	80	2056	69,234	35	2,770	-
6567	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Centre St To Munger St	4	1976	60	2036	40,288	15	3,135	-
6568	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Centre St To Munger St	4	1976	80	2056	44,794	35	1,792	-
6569	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Centre St To Munger St	4	1976	80	2056	34,155	35	1,366	-
6570	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Centre St To Munger St	4	1976	80	2056	9,412	35	377	-
6571	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Roseborough	Centre St To Munger St	4	1976	80	2056	32,941	35	1,318	-
6572	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Secord Ave	Sinasac St To Clark St	4	1975	60	2035	33,046	14	2,730	-
6573	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Secord Ave	Sinasac St To Clark St	4	1975	60	2035	39,400	14	3,255	-
6574	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Secord Ave	Sinasac St To Clark St	4	1975	60	2035	6,923	14	572	-
6575	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Secord Ave	Centre St To Munger St	4	1975	60	2035	34,345	14	2,837	-
6576	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Secord Ave	Centre St To Munger St	4	1975	60	2035	41,175	14	3,401	-
6577	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shepley Court	Wellington St To Maple Ave	4	2000	100	2100	42,187	79	1,067	-
6578	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shepley Court	Wellington St To Maple Ave	4	2000	100	2100	47,348	79	1,197	-
6579	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shepley Court	Wellington St To Maple Ave	4	2000	100	2100	40,777	79	1,031	-
6580	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shepley Court	Wellington St To Maple Ave	4	2000	100	2100	39,569	79	1,001	-
6581	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shepley Court	Wellington St To Maple Ave	4	2000	100	2100	38,944	79	985	-
6582	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Shepley Court	Wellington St To Maple Ave	4	2000	100	2100	47,931	79	1,212	-
6583	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Queen St To Walnut St	4	1975	60	2035	40,980	14	3,385	-
6584	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Queen St To Walnut St	4	1975	60	2035	41,280	14	3,410	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewer main Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6585	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Walnut St N To Arthur St	4	1975	60	2035	40,800	14	3,370	-
6586	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Walnut St N To Arthur St	4	1975	60	2035	46,950	14	3,878	-
6587	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Walnut St N To Arthur St	4	1975	60	2035	45,675	14	3,773	-
6588	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Walnut St N To Arthur St	4	1975	60	2035	46,160	14	3,813	-
6589	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St E	Walnut St N To Arthur St	4	1975	60	2035	45,495	14	3,758	-
6590	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	40,960	14	3,383	-
6591	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	44,525	14	3,678	-
6592	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	42,735	14	3,530	-
6593	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	28,155	14	2,326	-
6594	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Easement	0	4	1975	60	2035	40,935	14	3,381	-
6595	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Secord Ave To Roseborough Rd	4	1975	60	2035	41,919	14	3,463	-
6596	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Secord Ave To Roseborough Rd	4	1975	60	2035	36,679	14	3,030	-
6597	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Secord Ave To Roseborough Rd	4	1975	60	2035	41,402	14	3,420	-
6598	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Erie St To Secord Ave	4	1975	60	2035	46,718	14	3,859	-
6599	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Victoria St To Erie St	4	1975	60	2035	39,339	14	3,249	-
6600	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Victoria St To Erie St	4	1975	60	2035	40,204	14	3,321	-
6601	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Victoria St To Erie St	4	1975	60	2035	40,035	14	3,307	-
6602	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Queen St To Victoria St	4	1975	60	2035	33,817	14	2,793	-
6603	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sinasac St W	Queen St To Victoria St	4	1975	60	2035	34,295	14	2,833	-
6604	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	King St To Briarwood Cr	4	1997	100	2097	14,480	76	372	-
6605	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	King St To Briarwood Cr	4	1997	100	2097	32,970	76	848	-
6606	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	Briarwood Cr To Dubas Ave	4	1997	100	2097	23,040	76	592	-
6607	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	Briarwood Cr To Dubas Ave	4	1997	100	2097	41,885	76	1,077	-
6608	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	Dubas Ave To Cooksey Lane	4	1997	100	2097	40,175	76	1,033	-
6609	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	Dubas Ave To Cooksey Lane	4	1997	100	2097	15,260	76	392	-
6610	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Sunset Dr	Dubas Ave To Cooksey Lane	4	1997	100	2097	43,170	76	1,110	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6611	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Taylor Rd	Given Rd To Arthur St	4	1977	60	2037	58,492	16	4,308	-
6612	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Treeline Court	Fernwood Dr To End	4	1992	60	2052	33,624	31	1,466	-
6613	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria St N	Munger St To Sinasac St	4	1975	100	2075	32,820	54	999	-
6614	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria St N	Centre St To Munger St	4	1975	60	2035	46,351	14	3,829	-
6615	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria St N	Centre St To King St	4	1975	60	2035	32,548	14	2,689	-
6616	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria St S	King St To Maple Ave	4	1975	60	2035	27,829	14	2,299	-
6617	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria St S	King St To Maple Ave	4	1975	60	2035	29,337	14	2,423	-
6618	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Victoria St S	King St To Maple Ave	4	1975	60	2035	29,549	14	2,441	-
6619	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	60	2035	42,450	14	3,506	-
6620	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	60	2035	36,640	14	3,027	-
6621	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	60	2035	45,465	14	3,755	-
6622	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	60	2035	36,835	14	3,043	-
6623	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	King St To Fernwood Dr	4	1975	60	2035	35,410	14	2,925	-
6624	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	King St To Fernwood Dr	4	1975	60	2035	29,309	14	2,421	-
6625	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Fernwood Dr To Murdoch St	4	1975	60	2035	10,740	14	887	-
6626	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Fernwood Dr To Murdoch St	4	1975	60	2035	42,018	14	3,471	-
6627	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St N	Centre St To Munger St	4	1975	60	2035	51,089	14	4,220	-
6628	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St N	King St To Centre St	4	1975	60	2035	30,010	14	2,479	-
6629	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Murdoch St To Given Rd	4	1975	60	2035	45,585	14	3,765	-
6630	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Walnut St S	Murdoch St To Given Rd	4	1975	60	2035	44,260	14	3,656	-
6631	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	Shepley Court To Maple Ave	4	1997	100	2097	20,948	76	539	-
6632	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	Shepley Court To Maple Ave	4	1997	100	2097	35,302	76	908	-
6633	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	Shepley Court To Maple Ave	4	1997	100	2097	28,905	76	743	-
6634	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	McAfee St To Victoria St	4	1997	60	2057	36,759	36	1,442	-
6635	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	McAfee St To Victoria St	4	1997	60	2057	41,059	36	1,611	-
6636	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	Victoria St To Erie St	4	1997	60	2057	41,506	36	1,628	-



Table B-3-2 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Sewermain Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
6637	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	Victoria St To Erie St	4	1997	60	2057	38,775	36	1,521	-
6638	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Wellington St	Victoria St To Erie St	4	1997	60	2057	34,832	36	1,367	-
6639	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodland Dr	Fernwood Dr To Murdoch St	4	1992	100	2092	34,893	71	924	-
6640	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodland Dr	Fernwood Dr To Murdoch St	4	1992	100	2092	18,800	71	498	-
6641	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Woodland Dr	Murdoch St To End	4	1992	100	2092	45,332	71	1,201	-
24642	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Road	Erie (250mm)	4	2013	100	2113	633,230	92	15,108	-
24646	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Erie Road	0	4	2013	60	2073	39,160	52	1,218	-
25337	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	7,010	76	180	-
25338	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	12,330	76	317	-
25339	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	12,560	76	323	-
25340	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Mains)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	12,220	76	314	-
Total										10,798,179		662,712	0



**Table B-3-3
Town of Essex
Wastewater Manholes – Ward 4**

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4046	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	3rd Concession	4	1975	90	2065	3,800	44	131	-
4047	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	3rd Concession	4	1975	90	2065	3,800	44	131	-
4048	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sanitary Manhole	3rd Concession	4	1975	90	2065	3,800	44	131	-
4069	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4070	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4071	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St W	Queen St To Victoria Ave	4	1975	90	2065	3,800	44	131	-
4072	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St S	King St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4099	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St N	King St E To Centre St	4	1975	90	2065	3,800	44	131	-
4100	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St N	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4101	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St N	Arthur St To Herdman St	4	1975	90	2065	3,800	44	131	-
4102	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St N	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4103	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Munger St To End	4	1975	90	2065	3,800	44	131	-
4104	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St N	Munger St To Sinasac St	4	1975	90	2065	3,800	44	131	-
4105	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St N	Munger St To Sinasac St	4	1975	90	2065	3,800	44	131	-
4106	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St S	King St To Margaret Court	4	1976	89	2065	3,800	44	131	-
4107	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St S	Taylor Rd To End	4	1978	87	2065	3,800	44	131	-
4108	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St S	Cooksey Lane To Pearson Dr	4	1978	87	2065	3,800	44	131	-
4109	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St S	Lawson Cres To Murdoch St	4	1977	88	2065	3,800	44	131	-
4110	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Arthur St S	King St To Margaret Court	4	1976	89	2065	3,800	44	131	-
4136	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Briarwood Cr	Sunset Dr To End	4	1997	80	2077	3,800	56	113	-
4137	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Brianwood Cr	Sunset Dr To End	4	1997	80	2077	3,800	56	113	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4138	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Briarwood Cr	Sunset Dr To End	4	1997	80	2077	3,800	56	113	-
4188	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St W	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4189	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4190	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4197	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Walnut St To Church St	4	1975	90	2065	3,800	44	131	-
4198	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Walnut St To Church St	4	1975	90	2065	3,800	44	131	-
4199	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St N	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4200	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Queen St To Walnut St	4	1975	90	2065	3,800	44	131	-
4201	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Queen St To Walnut St	4	1975	90	2065	3,800	44	131	-
4202	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4203	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4204	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St E	Arthur St To Herdman St	4	1975	90	2065	3,800	44	131	-
4205	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St W	Secord Ave To Roseborough	4	1976	89	2065	3,800	44	131	-
4206	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St W	Secord Ave To Roseborough	4	1976	89	2065	3,800	44	131	-
4207	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4208	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4209	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St N	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4210	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4211	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Centre St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4282	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4283	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4284	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4285	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4286	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4287	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4306	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Gloucester Dr	Cumberland Way To County Rd 50 W	4	1989	80	2069	3,800	48	124	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4307	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cumberland Way	Wellesley To Gloucester Dr	4	1989	80	2069	3,800	48	124	-
4308	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Cumberland Way	Wellesley To Gloucester Dr	4	1989	80	2069	3,800	48	124	-
4309	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dahinda Dr	End To County Rd 50 W	4	1989	80	2069	3,800	48	124	-
4310	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dahinda Dr	End To County Rd 50 W	4	1989	80	2069	3,800	48	124	-
4311	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dahinda Dr	End To County Rd 50 W	4	1989	80	2069	3,800	48	124	-
4312	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dahinda Dr	End To County Rd 50 W	4	1989	80	2069	3,800	48	124	-
4313	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dahinda Dr	End To County Rd 50 W	4	1989	80	2069	3,800	48	124	-
4314	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dahinda Dr	End To County Rd 50 W	4	1989	80	2069	3,800	48	124	-
4317	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Delta St	Queen St To End	4	1975	90	2065	3,800	44	131	-
4320	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Draper St	Clitherow St To Bagot St	4	1989	80	2069	3,800	48	124	-
4329	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dubas Ave	Sunset Dr To End	4	1997	80	2077	3,800	56	113	-
4330	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Dubas Ave	Sunset Dr To End	4	1997	80	2077	3,800	56	113	-
4366	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	Erie St N To Maple Ave	4	1975	90	2065	3,800	44	131	-
4367	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	King St To Centre St	4	1975	90	2065	3,800	44	131	-
4368	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4369	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4370	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4371	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Wellington St To Kael Cr	4	1975	90	2065	3,800	44	131	-
4372	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Kael Cr To Pollard Dr	4	1975	90	2065	3,800	44	131	-
4373	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Maple Ave To Wellington St	4	1975	90	2065	3,800	44	131	-
4374	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Wellington St To Kael Cr	4	1975	90	2065	3,800	44	131	-
4375	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Kael Cr To Pollard Dr	4	1975	90	2065	3,800	44	131	-
4376	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	King St W To Maple Ave	4	1975	90	2065	3,800	44	131	-
4377	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4415	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4416	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4417	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4418	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4419	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4420	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4421	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Colio Dr	Queen St To End	4	1975	90	2065	3,800	44	131	-
4422	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Colio Dr	Queen St To End	4	1975	90	2065	3,800	44	131	-
4423	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Colio Dr	Queen St To End	4	1975	90	2065	3,800	44	131	-
4427	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Colio Dr	Queen St To End	4	1975	90	2065	3,800	44	131	-
4429	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Colio Dr To 510 Queen St	4	1975	90	2065	3,800	44	131	-
4430	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4431	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4432	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4433	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4434	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4435	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clark St	Secord Ave To Erie St	4	1975	90	2065	3,800	44	131	-
4436	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Clark St	Secord Ave To Erie St	4	1975	90	2065	3,800	44	131	-
4437	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4438	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4439	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4450	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Given Rd	Taylor Rd To Snake Lane	4	1975	90	2065	3,800	44	131	-
4451	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Given Rd	Walnut St To Taylor Rd	4	1975	90	2065	3,800	44	131	-
4452	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Given Rd	Walnut St To Taylor Rd	4	1975	90	2065	3,800	44	131	-
4453	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Given Rd	Walnut St To Taylor Rd	4	1975	90	2065	3,800	44	131	-
4542	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kael Dr	End To Erie St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4543	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kael Dr	End To Erie St	4	1975	90	2065	3,800	44	131	-
4544	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kael Dr	End To Erie St	4	1975	90	2065	3,800	44	131	-
4556	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St N	Centre St To King St	4	1975	90	2065	3,800	44	131	-
4557	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	90	2065	3,800	44	131	-
4558	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4559	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Walnut St To Church St	4	1975	90	2065	3,800	44	131	-
4560	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Walnut St To Walnut St	4	1975	90	2065	3,800	44	131	-
4561	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	McAfee St To Walnut St	4	1975	90	2065	3,800	44	131	-
4562	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	McAfee St To Walnut St	4	1975	90	2065	3,800	44	131	-
4563	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	King St To Centre St	4	1975	90	2065	3,800	44	131	-
4564	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4565	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4566	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4567	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	King St To Centre St	4	1975	90	2065	3,800	44	131	-
4568	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1975	90	2065	3,800	44	131	-
4569	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St	Erie St To Roseborough	4	1975	90	2065	3,800	44	131	-
4570	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4571	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4572	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Arthur St To Herdman St	4	1975	90	2065	3,800	44	131	-
4573	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Herdman St To Sunset Dr	4	1975	90	2065	3,800	44	131	-
4574	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	1975	90	2065	3,800	44	131	-
4619	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lawson Cr	End To Arthur St	4	1976	89	2065	3,800	44	131	-
4620	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lawson Cr	End To Arthur St	4	1976	89	2065	3,800	44	131	-
4621	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Lawson Cr	End To Arthur St	4	1976	89	2065	3,800	44	131	-
4665	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	80	2067	3,800	46	127	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4666	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	80	2067	3,800	46	127	-
4667	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	80	2067	3,800	46	127	-
4668	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	80	2067	3,800	46	127	-
4669	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1996	80	2076	3,800	55	115	-
4670	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1996	80	2076	3,800	55	115	-
4671	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	Maple Ave To Wellington St	4	1975	90	2065	3,800	44	131	-
4672	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	McAfee St To Victoria St	4	1975	90	2065	3,800	44	131	-
4673	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	McAfee St To Victoria St	4	1975	90	2065	3,800	44	131	-
4674	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4675	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4679	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Margaret Crt	End To Arthur St	4	1976	89	2065	3,800	44	131	-
4686	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4687	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	King St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4688	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	Maple Ave To Wellington St	4	1975	90	2065	3,800	44	131	-
4689	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	McAfee St	Wellington St To End	4	1975	90	2065	3,800	44	131	-
4716	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger Ave	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4717	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	Munger St To Sinasac St	4	1975	90	2065	3,800	44	131	-
4718	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4719	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Church St To Arthur St	4	1975	90	2065	3,800	44	131	-
4720	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Walnut St To Church St	4	1975	90	2065	3,800	44	131	-
4721	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Walnut St To Church St	4	1975	90	2065	3,800	44	131	-
4722	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Walnut St To Church St	4	1975	90	2065	3,800	44	131	-
4723	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Queen St To Walnut St	4	1975	90	2065	3,800	44	131	-
4724	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St E	Queen St To Walnut St	4	1975	90	2065	3,800	44	131	-
4725	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4726	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4727	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4728	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4729	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4730	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Munger St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4741	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Woodland Dr To Pearson Dr	4	1992	80	2072	3,800	51	120	-
4742	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Pearson Dr To Arthur St	4	1978	87	2065	3,800	44	131	-
4743	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Woodland Dr To Pearson Dr	4	1978	87	2065	3,800	44	131	-
4744	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Murdoch St To Given Rd	4	1975	90	2065	3,800	44	131	-
4745	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Walnut St To End	4	1975	90	2065	3,800	44	131	-
4746	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Murdoch St	Walnut St To End	4	1975	90	2065	3,800	44	131	-
4782	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pearson Dr	Murdoch St To Arthur St	4	1978	87	2065	3,800	44	131	-
4783	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pearson Dr	Murdoch St To Arthur St	4	1978	87	2065	3,800	44	131	-
4784	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pearson Dr	Murdoch St To Arthur St	4	1978	87	2065	3,800	44	131	-
4785	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pearson Dr	Murdoch St To Arthur St	4	1978	87	2065	3,800	44	131	-
4796	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4797	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4798	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St E	Sunset Dr To Ferriss Rd	4	2000	80	2080	3,800	59	110	-
4799	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Brien Ave W To End	4	1976	89	2065	3,800	44	131	-
4800	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Brien Ave W To End	4	1976	89	2065	3,800	44	131	-
4801	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	King St To Centre St	4	1975	90	2065	3,800	44	131	-
4802	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4803	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Munger St To Sinasac St	4	1975	90	2065	3,800	44	131	-
4804	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Sinasac St To Delta St	4	1975	90	2065	3,800	44	131	-
4805	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Sinasac St To Delta St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4806	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Delta St To Colio Dr	4	1975	90	2065	3,800	44	131	-
4807	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Colio Dr To 510 Queen St	4	1975	90	2065	3,800	44	131	-
4808	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	3rd Concession	Roseborough To Queen St	4	1975	90	2065	3,800	44	131	-
4809	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4810	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4811	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4812	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	510 Queen St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4813	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Colio Dr To 510 Queen St	4	1975	90	2065	3,800	44	131	-
4814	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Colio Dr To 510 Queen St	4	1975	90	2065	3,800	44	131	-
4823	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4824	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4825	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Centre St To Munger St	4	1976	89	2065	3,800	44	131	-
4826	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4827	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Centre St To Munger St	4	1976	89	2065	3,800	44	131	-
4828	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4829	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Centre St To Munger St	4	1976	89	2065	3,800	44	131	-
4830	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Clark St To 3rd Concession	4	1975	90	2065	3,800	44	131	-
4831	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4832	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4833	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Munger St To Sinasac St	4	1975	90	2065	3,800	44	131	-
4834	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4835	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Roseborough Rd	King St To Centre St	4	1975	90	2065	3,800	44	131	-
4860	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Secord Ave	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
4861	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Secord Ave	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4862	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Secord Ave	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4863	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Secord Ave	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4870	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shepley Crt	Wellington St To Maple Ave	4	1996	80	2076	3,800	55	115	-
4871	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shepley Crt	Wellington St To Maple Ave	4	1996	80	2076	3,800	55	115	-
4872	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shepley Crt	Wellington St To Maple Ave	4	1996	80	2076	3,800	55	115	-
4873	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1996	80	2076	3,800	55	115	-
4874	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	King St W	Erie St To Roseborough	4	1987	80	2067	3,800	46	127	-
4875	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1987	80	2067	3,800	46	127	-
4876	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Erie St To Wellington St	4	1975	90	2065	3,800	44	131	-
4877	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Maple Ave	Wellington St To Shepley Court	4	1975	90	2065	3,800	44	131	-
4878	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shepley Crt	Wellington St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4879	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shepley Crt	Wellington St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4880	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Shepley Crt	Wellington St To Maple Ave	4	1975	90	2065	3,800	44	131	-
4881	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Kael Cr	End To Erie St	4	1975	90	2065	3,800	44	131	-
4882	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pollard Dr	Pollard Dr To Harrowood	4	1975	90	2065	3,800	44	131	-
4883	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pollard Dr	Pollard Dr To Harrowood	4	1975	90	2065	3,800	44	131	-
4884	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Pollard Dr	Mulberry Dr To Pollard Dr	4	1975	90	2065	3,800	44	131	-
4885	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	90	2065	3,800	44	131	-
4886	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	90	2065	3,800	44	131	-
4887	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4888	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Queen St To Walnut St	4	1975	90	2065	3,800	44	131	-
4889	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Queen St To Walnut St	4	1975	90	2065	3,800	44	131	-
4890	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Queen St	Sinasac St To Delta St	4	1975	90	2065	3,800	44	131	-
4891	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4892	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-
4893	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St E	Walnut St To Arthur St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
4894	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St N	Sinasac St To Clark St	4	1975	90	2065	3,800	44	131	-
4895	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4896	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Queen St To Victoria St	4	1975	90	2065	3,800	44	131	-
4897	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4898	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
4899	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4900	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4901	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sinasac St W	Secord Ave To Roseborough	4	1975	90	2065	3,800	44	131	-
4953	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	King St To Briarwood Cr	4	1987	80	2067	3,800	46	127	-
4954	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	King St To Briarwood Cr	4	1987	80	2067	3,800	46	127	-
4955	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	King St To Briarwood Cr	4	1987	80	2067	3,800	46	127	-
4956	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	Briarwood Cr To Dubas Ave	4	1997	80	2077	3,800	56	113	-
4957	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	Briarwood Cr To Dubas Ave	4	1997	80	2077	3,800	56	113	-
4958	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	Dubas Ave To Cooksey Lane	4	1997	80	2077	3,800	56	113	-
4959	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	Dubas Ave To Cooksey Lane	4	1997	80	2077	3,800	56	113	-
4960	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Sunset Dr	Cooksey Lane To End	4	1997	80	2077	3,800	56	113	-
4967	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd	Given Rd To Arthur St	4	1978	87	2065	3,800	44	131	-
4968	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Talbot Rd	Given Rd To Arthur St	4	1984	81	2065	3,800	44	131	-
5007	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Treeline Crt	Fernwood Dr To End	4	1992	80	2072	3,800	51	120	-
5043	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St S	King St To Maple Ave	4	1975	90	2065	3,800	44	131	-
5044	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St S	Centre St To King St	4	1975	90	2065	3,800	44	131	-
5045	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St N	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-
5046	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Victoria St N	Munger St To Sinasac St	4	1975	90	2065	3,800	44	131	-
5062	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St N	King St To Centre St	4	1975	90	2065	3,800	44	131	-
5063	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St N	Centre St To Munger St	4	1975	90	2065	3,800	44	131	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
5064	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Fernwood Dr To Murdoch St	4	1992	80	2072	3,800	51	120	-
5065	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Given Rd To End	4	1975	90	2065	3,800	44	131	-
5066	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Murdoch St To Given Rd	4	1975	90	2065	3,800	44	131	-
5067	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Murdoch St To Given Rd	4	1975	90	2065	3,800	44	131	-
5068	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	Fernwood Dr To Murdoch St	4	1975	90	2065	3,800	44	131	-
5069	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	King St To Fernwood Dr	4	1975	90	2065	3,800	44	131	-
5070	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Walnut St S	King St To Fernwood Dr	4	1975	90	2065	3,800	44	131	-
5076	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	Shepley Court To Maple Ave	4	1996	80	2076	3,800	55	115	-
5077	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	Shepley Court To Maple Ave	4	1996	80	2076	3,800	55	115	-
5078	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	Shepley Court To Maple Ave	4	1996	80	2076	3,800	55	115	-
5080	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	McAfee St To Victoria St	4	1975	90	2065	3,800	44	131	-
5081	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	McAfee St To Victoria St	4	1975	90	2065	3,800	44	131	-
5082	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
5083	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
5084	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Wellington St	Victoria St To Erie St	4	1975	90	2065	3,800	44	131	-
5085	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie St S	Wellington St To Kael Cr	4	1975	90	2065	3,800	44	131	-
5102	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodland Dr	Murdoch St To End	4	1992	80	2072	3,800	51	120	-
5103	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodland Dr	Murdoch St To End	4	1992	80	2072	3,800	51	120	-
5104	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodland Dr	Fernwood Dr To Murdoch St	4	1992	80	2072	3,800	51	120	-
5105	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodland Dr	Fernwood Dr To Murdoch St	4	1992	80	2072	3,800	51	120	-
5106	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Woodland Dr	End To Fernwood Dr	4	1992	80	2072	3,800	51	120	-
24647	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Erie Road	0	4	2013	80	2093	69,020	72	1,817	-
25341	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	5,470	76	141	-
25342	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	5,470	76	141	-
25343	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	5,470	76	141	-



Table B-3-3 (Cont'd)

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Manhole Replacement Costs	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
25344	ES: Sanitary Sewers - Collection/Conveyance	Linear Assets (Manholes)	Sanitary Sewers	Loricon Court	Roseborough to End	4	2017	80	2097	5,470	76	141	-
Total										1,109,300		36,710	0



Table B-3-4
Town of Essex
Wastewater Machinery & Equipment – Ward 4

Asset ID	Category	Segment	Department	Name	Location	Ward	Year Installed	Estimated Life	Replacement Year	Total Machinery Replacement Cost	Years until Replacement	Annual Lifecycle Contribution	Amount to be included in 10 year Forecast
24616	ES: Sanitary Sewer - Treatment/Disposal	Machinery and Equipment	Sanitary Sewers	Housing for Aerator	H/CS WWTP	4	2013	20	2033	5,700	12	539	-
24617	ES: Sanitary Sewers - Collection/Conveyance	Machinery and Equipment	Sanitary Sewers	Backup Generator	H/CS WWTP	4	2013	20	2033	61,540	12	5,819	-
Total										67,240		6,358	0



Appendix C

Detailed Water Rate Calculations



Table C-1-1
Town of Essex
Water Service – Wards 1 & 2
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	8,500	-										
Backflow Prevention and Monitoring Program Wards 1/2 Maintenance	5,000	55,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Equipment Contingency Wards 1 and 2		97,000	8,500	8,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Lifecycle:		-										
Backflow Prevention and Monitoring Program Wards 1/2	6,999	-										
Gordon, Wilson, Fox, Station Street Main Replacement (cfwd WW-18-0009)	190,536	-										
Gordon, Wilson, Station Street Phase 1 (Construction)	850,000	-										
Pickup Truck Unit #607 Replacement	22,500	-										
Victor Watermain (ward 1)	140,000	25,000	25,000									
Irwin Watermain (Ward 1)	335,000	-										
Viscount Watermain (Ward 1 and 2)		160,000	160,000									
Replace Truck		23,750		23,750								
Meter Reading Software		17,000	17,000									
Lifecycle Asset Replacement		10,090,000		500,000	600,000	700,000	800,000	1,000,000	1,250,000	1,540,000	1,700,000	2,000,000
Studies:		-										
Water Rate Study	15,000	15,000					15,000					
Water Model Development and Master Plan		50,000		50,000								
Water Rate Financial Plan	3,500	3,500					3,500					
Growth Related:		-										
Hwy 3 Crossing		250,000		250,000								
Total Capital Expenditures	1,577,035	10,786,250	220,500	837,250	615,000	715,000	833,500	1,015,000	1,265,000	1,555,000	1,715,000	2,015,000



Table C-1-2
Town of Essex
Water Service – Wards 1 & 2
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	8,500	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 1/2 Maintenance	5,000	60,900	10,200	5,200	5,300	5,400	5,500	5,600	5,700	5,900	6,000	6,100
Equipment Contingency Wards 1 and 2	-	108,600	8,700	8,800	10,600	10,800	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle:												
Backflow Prevention and Monitoring Program Wards 1/2	6,999	-	-	-	-	-	-	-	-	-	-	-
Gordon, Wilson, Fox, Station Street Main Replacement (cfwd WW-18-0009)	190,536	-	-	-	-	-	-	-	-	-	-	-
Gordon, Wilson, Station Street Phase 1 (Construction)	850,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck Unit #607 Replacement	22,500	-	-	-	-	-	-	-	-	-	-	-
Victor Watermain (ward 1)	140,000	25,500	25,500	-	-	-	-	-	-	-	-	-
Irwin Watermain (Ward 1)	335,000	-	-	-	-	-	-	-	-	-	-	-
Viscount Watermain (Ward 1 and 2)	-	163,200	163,200	-	-	-	-	-	-	-	-	-
Replace Truck	-	24,700	-	24,700	-	-	-	-	-	-	-	-
Meter Reading Software	-	17,300	17,300	-	-	-	-	-	-	-	-	-
Lifecycle Asset Replacement	-	11,634,100	-	520,200	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Studies:												
Water Rate Study	15,000	16,600	-	-	-	-	16,600	-	-	-	-	-
Water Model Development and Master Plan	-	52,000	-	52,000	-	-	-	-	-	-	-	-
Water Rate Financial Plan	3,500	3,900	-	-	-	-	3,900	-	-	-	-	-
Growth Related:												
Hwy3 Crossing	-	260,100	-	260,100	-	-	-	-	-	-	-	-
Total Capital Expenditures	1,577,035	12,366,900	224,900	871,000	652,600	773,900	920,300	1,143,100	1,453,100	1,822,000	2,049,700	2,456,300
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	11,792,500	160,000	518,600	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Water Reserve	1,577,035	574,400	64,900	352,400	15,900	16,200	37,000	16,900	17,200	17,600	18,000	18,300
Total Capital Financing	1,577,035	12,366,900	224,900	871,000	652,600	773,900	920,300	1,143,100	1,453,100	1,822,000	2,049,700	2,456,300



Table C-1-3
Town of Essex
Water Service – Wards 1 & 2
Water General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	5,482,742	4,658,019	5,570,841	5,270,626	5,307,273	5,396,894	5,467,092	5,559,196	5,652,836	5,747,941	5,844,539
Transfer from Operating	1,432,008	1,462,797	-	-	-	-	-	-	-	-	-
Transfer to Capital	1,577,035	64,900	352,400	15,900	16,200	37,000	16,900	17,200	17,600	18,000	18,300
Transfer to Operating	725,815	540,231	-	-	-	-	-	-	-	-	-
Closing Balance	4,611,900	5,515,684	5,218,441	5,254,726	5,291,073	5,359,894	5,450,192	5,541,996	5,635,236	5,729,941	5,826,239
Interest	46,119	55,157	52,184	52,547	105,821	107,198	109,004	110,840	112,705	114,599	116,525

Table C-1-4
Town of Essex
Water Service – Wards 1 & 2
Water Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	4,006,558	4,046,624	3,961,914	4,459,292	4,863,354	5,200,282	5,419,144	5,405,382	5,084,922	4,390,566	3,457,978
Transfer from Operating	-	36,063	971,827	992,611	992,662	995,904	1,006,450	1,015,736	1,023,955	1,031,309	1,029,640
Transfer to Capital	-	160,000	518,600	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	4,006,558	3,922,687	4,415,140	4,815,202	5,098,316	5,312,886	5,299,394	4,985,218	4,304,477	3,390,175	2,049,618
Interest	40,066	39,227	44,151	48,152	101,966	106,258	105,988	99,704	86,090	67,803	40,992



Table C-1-5
Town of Essex
Water Service – Wards 1 & 2
Operating Budget Forecast (Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55300 - Union Water - Water Supply	722,565	535,726	596,415	629,110	658,572	690,803	724,553	759,777	796,652	835,298	872,152
Utilities, Insurance and Property Taxes											
54300 - Insurance - Buildings	115	119	120	120	120	120	120	120	120	120	120
54310 - Insurance - Vehicles	833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General	2,302	3,530	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
Distribution/Transmission:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	83,903	98,000	99,000	100,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	20,806	20,806	21,000	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300
58900 - Amounts Allocated from Other Departments	39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies											
51100 - Office Supplies	400	150	150	150	150	150	150	150	150	150	150
51105 - Computer Hardware and Software	750	400	400	400	410	420	430	440	450	460	470
51115 - Memberships	2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel	4,500	7,000	7,100	7,200	7,600	8,000	8,400	8,800	9,200	9,700	10,200
51190 - Materials and Supplies - Other	2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters	25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment	250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services											
53605 - System Access Fee - Automatic Vehicle Locator	760	910	920	930	950	970	990	1,010	1,030	1,050	1,070
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	1,800	1,820	1,840	1,880	1,920	1,960	2,000	2,040	2,080	2,120
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	3,800	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
52350 - Repairs and Maintenance - Equipment (Labour)	150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)	150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains	35,000	30,000	30,300	30,600	31,200	31,800	32,400	33,000	33,700	34,400	35,100



Table C-1-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
52620 - Repairs and Maintenance - Hydrants	7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves	2,500	4,000	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
52660 - Repairs and Maintenance - Water Meters	25,000	27,500	27,800	28,100	28,700	29,300	29,900	30,500	31,100	31,700	32,300
52690 - Repairs and Maintenance - Private Water Service	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime	10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50500 - Canada Pension Plan - Employer Contribution	4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution	1,700	1,702	1,720	1,740	1,770	1,810	1,850	1,890	1,930	1,970	2,010
50520 - Employer Health Insurance	2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums	1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums	12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums	3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms	1,210	2,420	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
50720 - Training and Tuition Refund	2,789	700	710	720	730	740	750	770	790	810	830
50740 - Meals	100	100	100	100	100	100	100	100	100	100	100
50750 - Mileage	100	100	100	100	100	100	100	100	100	100	100
Uncollectible Taxes and Accounts Receivable											
54700 - Uncollectible Accounts Receivable - Water	2,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	4,696	5,900	6,000	6,100	6,400	6,700	7,000	7,400	7,800	8,200	8,600
54120 - Utilities - Gas	1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water	606	606	620	630	660	690	720	760	800	840	880
54200 - Communications - Telephone	4,500	4,500	4,500	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200
54300 - Insurance - Buildings	197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles	3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General	9,330	14,307	14,400	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600
54400 - Payments-in-Lieu of Taxes	-	100	100	100	100	100	100	100	100	100	100
Sub Total Operating	1,202,153	1,045,216	1,111,005	1,148,740	1,190,382	1,234,903	1,281,243	1,329,377	1,379,662	1,431,918	1,482,802
<u>Capital-Related</u>											
Existing Debt (Principal) - Non-Growth Related	509	526	543	560	287	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	74	57	40	23	5	-	-	-	-	-	-
Transfer to Capital Reserve	1,432,008	1,462,797	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	1,432,591	1,463,379	583	583	291	-	-	-	-	-	-
Total Expenditures	2,634,744	2,508,596	1,111,588	1,149,323	1,190,674	1,234,903	1,281,243	1,329,377	1,379,662	1,431,918	1,482,802



Table C-1-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	756,332	793,872	836,299	869,323	894,382	922,705	951,803	981,424	1,011,849	1,043,099	1,069,433
Other Revenue											
Investment and Other Income											
47800 - Miscellaneous Revenue	125	125	125	125	125	125	125	125	125	125	125
User Fees and Service Charges											
46415 - Water - Miscellaneous	-	-	-	-	-	-	-	-	-	-	-
46420 - Water Meter Sales and Inspection	5,600	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
46430 - Water Hook-Up Charges	8,400	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600
46450 - Watermain Buy-Ins	5,000	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	725,815	540,231	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,501,272	1,378,929	881,124	914,148	939,207	967,530	996,628	1,026,249	1,056,674	1,087,924	1,114,258
Water Billing Recovery - Operating	1,133,472	1,129,667	230,464	235,175	251,466	267,373	284,615	303,128	322,988	343,995	368,544
Lifecycle Reserve Contribution (\$)		36,063	971,827	992,611	992,662	995,904	1,006,450	1,015,736	1,023,955	1,031,309	1,029,640
Water Billing Recovery - Total	1,133,472	1,165,730	1,202,291	1,227,786	1,244,128	1,263,278	1,291,065	1,318,864	1,346,943	1,375,303	1,398,184

Table C-1-6
Town of Essex
Water Service – Wards 1 & 2
Water Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Water Billing Recovery	1,133,472	1,165,730	1,202,291	1,227,786	1,244,128	1,263,278	1,291,065	1,318,864	1,346,943	1,375,303	1,398,184
Total Volume (m ³)	781,705	798,445	817,885	829,585	834,985	842,185	849,385	856,405	863,425	870,445	873,865
Constant Rate	1.45	1.46	1.47	1.48	1.49	1.50	1.52	1.54	1.56	1.58	1.60
Annual Percentage Change		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%



Table C-2-1
Town of Essex
Water Service – Wards 3 & 4
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Upgrades to Harrow-Colchester South Water Treatment Plant (cfwd WW-18-0010)	260,000	-										
CWWF Upgrades to Harrow-Colchester South WTP	326,833	-										
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	8,500	-										
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	165,000	782,500	177,500	195,000	205,000	205,000						
OCWA Capital Recommendations	540,000	1,440,000	442,000	431,000	387,000	120,000	10,000	10,000	10,000	10,000	10,000	10,000
Lifecycle:		-										
Queen Street (Phillip Ferris to Concession 3) Main Replacement	175,097	-										
Backflow Prevention and Monitoring Program Wards 3/4	6,999	-										
Backflow Prevention and Monitoring Program Wards 3/4 Maintenance	5,000	55,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Pickup Truck Unit #607 Replacement	22,500	-										
Queen Watermain (Ward 4)	340,000	-										
Replace Truck		23,750		23,750								
Meter Reading Software		17,000	17,000									
Equipment Contingency Wards 3 and 4		98,500	8,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Lifecycle Asset Replacement		8,860,000		500,000	600,000	750,000	850,000	950,000	1,050,000	1,200,000	1,360,000	1,600,000
Studies:												
Water Rate Study	15,000	15,000					15,000					
Water Model Development and Master Plan		50,000		50,000								
Water Rate Financial Plan	3,500	3,500					3,500					
Total Capital Expenditures	1,868,429	11,345,250	655,000	1,214,750	1,207,000	1,090,000	893,500	975,000	1,075,000	1,225,000	1,385,000	1,625,000



Table C-2-2
Town of Essex
Water Service – Wards 3 & 4
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Upgrades to Harrow-Colchester South Water Treatment Plant (cfwd WWT 18-0010)	260,000	-	-	-	-	-	-	-	-	-	-	-
CWWF Upgrades to Harrow-Colchester South WTP	326,833	-	-	-	-	-	-	-	-	-	-	-
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	8,500	-	-	-	-	-	-	-	-	-	-	-
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	165,000	823,400	181,100	202,900	217,500	221,900	-	-	-	-	-	-
OCWA Capital Recommendations	540,000	1,509,500	450,800	448,400	410,700	129,900	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle:												
Queen Street (Phillip Ferris to Concession 3) Main Replacement	175,097	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 3/4	6,999	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 3/4 Maintenance	5,000	60,900	10,200	5,200	5,300	5,400	5,500	5,600	5,700	5,900	6,000	6,100
Pickup Truck Unit #607 Replacement	22,500	-	-	-	-	-	-	-	-	-	-	-
Queen Watermain (Ward 4)	340,000	-	-	-	-	-	-	-	-	-	-	-
Replace Truck	-	24,700	-	24,700	-	-	-	-	-	-	-	-
Meter Reading Software	-	17,300	17,300	-	-	-	-	-	-	-	-	-
Equipment Contingency Wards 3 and 4	-	110,200	8,700	10,400	10,600	10,800	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle Asset Replacement	-	10,164,900	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Studies:												
Water Rate Study	15,000	16,600	-	-	-	-	16,600	-	-	-	-	-
Water Model Development and Master Plan	-	52,000	-	52,000	-	-	-	-	-	-	-	-
Water Rate Financial Plan	3,500	3,900	-	-	-	-	3,900	-	-	-	-	-
Total Capital Expenditures	1,868,429	12,783,400	668,100	1,263,800	1,280,800	1,179,800	986,500	1,098,100	1,234,800	1,435,300	1,655,300	1,980,900
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	10,164,900	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Water Reserve	1,868,429	2,618,500	668,100	743,600	644,100	368,000	48,000	28,200	28,700	29,300	30,000	30,500
Total Capital Financing	1,868,429	12,783,400	668,100	1,263,800	1,280,800	1,179,800	986,500	1,098,100	1,234,800	1,435,300	1,655,300	1,980,900



Table C-2-3
Town of Essex
Water Service – Wards 3 & 4
Water General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	3,498,276	2,703,116	3,070,185	2,501,351	2,027,323	1,845,510	1,986,460	2,150,425	2,317,159	2,486,617	2,658,749
Transfer from Operating	1,656,953	1,619,489	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Transfer to Capital	1,868,429	668,100	743,600	644,100	368,000	48,000	28,200	28,700	29,300	30,000	30,500
Transfer to Operating	610,448	614,718	-	-	-	-	-	-	-	-	-
Closing Balance	2,676,352	3,039,787	2,476,585	2,007,251	1,809,323	1,947,510	2,108,260	2,271,725	2,437,859	2,606,617	2,778,249
Interest	26,764	30,398	24,766	20,073	36,186	38,950	42,165	45,434	48,757	52,132	55,565

Table C-2-4
Town of Essex
Water Service – Wards 3 & 4
Water Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	6,563,387	6,629,021	6,752,735	7,255,627	7,690,862	8,054,781	8,314,092	8,461,820	8,493,352	8,341,615	7,983,496
Transfer from Operating	-	56,855	951,254	995,788	1,017,782	1,034,790	1,051,710	1,071,095	1,090,701	1,110,643	1,124,980
Transfer to Capital	-	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	6,563,387	6,685,876	7,183,789	7,614,714	7,896,844	8,151,071	8,295,902	8,326,816	8,178,054	7,826,957	7,158,076
Interest	65,634	66,859	71,838	76,147	157,937	163,021	165,918	166,536	163,561	156,539	143,162



Table C-2-5
Town of Essex
Water Service – Wards 3 & 4
Operating Budget Forecast (Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
<u>Operating Costs</u>											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	393,271	405,069	409,100	413,200	421,500	429,900	438,500	447,300	456,200	465,300	474,600
55250 - Ontario Clean Water Agency - Other Operating Costs	71,400	42,000	42,400	42,800	43,700	44,600	45,500	46,400	47,300	48,200	49,200
55265 - Ontario Clean Water Agency - Drinking Water Quality Management System	2,550	2,550	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
55450 - Contractors	9,000	15,000	15,200	15,400	15,700	16,000	16,300	16,600	16,900	17,200	17,500
Miscellaneous Services											
53650 - Weed Control Services	8,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	7,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	100,311	116,600	117,800	119,000	121,400	123,800	126,300	128,800	131,400	134,000	136,700
54120 - Utilities - Gas	5,891	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	8,500	8,700
54300 - Insurance - Buildings	13,587	13,976	14,100	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300
54310 - Insurance - Vehicles	833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General	2,302	3,531	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
54400 - Payments-in-Lieu of Taxes	-	252	250	250	260	270	280	290	300	310	320
Distribution/Transmission:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	88,931	100,000	101,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900	117,200
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	21,028	21,028	21,200	21,400	21,800	22,200	22,600	23,100	23,600	24,100	24,600
58900 - Amounts Allocated from Other Departments	39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies											
51100 - Office Supplies	400	100	100	100	100	100	100	100	100	100	100
51105 - Computer Hardware and Software	750	250	250	250	260	270	280	290	300	310	320
51115 - Memberships	2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel	4,500	6,500	6,600	6,700	7,000	7,400	7,800	8,200	8,600	9,000	9,500
51190 - Materials and Supplies - Other	2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters	25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment	250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services											
53605 - System Access Fee - Automatic Vehicle Locator	760	910	920	930	950	970	990	1,010	1,030	1,050	1,070



Table C-2-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	3,500	3,500	3,500	3,600	3,700	3,800	3,900	4,000	4,100	4,200
52350 - Repairs and Maintenance - Equipment (Labour)	150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)	150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains	20,000	23,000	23,200	23,400	23,900	24,400	24,900	25,400	25,900	26,400	26,900
52620 - Repairs and Maintenance - Hydrants	7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves	2,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
52660 - Repairs and Maintenance - Water Meters	20,000	25,500	25,800	26,100	26,600	27,100	27,600	28,200	28,800	29,400	30,000
52690 - Repairs and Maintenance - Private Water Service	27,000	35,000	35,400	35,800	36,500	37,200	37,900	38,700	39,500	40,300	41,100
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime	10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50400 - Benefits and Overhead Distributed	15,355	15,355	15,500	15,700	16,000	16,300	16,600	16,900	17,200	17,500	17,900
50500 - Canada Pension Plan - Employer Contribution	4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution	1,700	1,702	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
50520 - Employer Health Insurance	2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums	1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums	12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums	3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms	1,140	1,000	1,010	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160
50720 - Training and Tuition Refund	2,789	500	510	520	530	540	550	560	570	580	590
50740 - Meals	100	100	100	100	100	100	100	100	100	100	100
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	3,378	4,000	4,100	4,200	4,400	4,600	4,800	5,000	5,300	5,600	5,900
54120 - Utilities - Gas	1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water	400	500	510	520	550	580	610	640	670	700	740
54200 - Communications - Telephone	4,500	3,000	3,000	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700
54300 - Insurance - Buildings	197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles	3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General	8,639	13,247	13,400	13,500	13,800	14,100	14,400	14,700	15,000	15,300	15,600
54400 - Payments-in-Lieu of Taxes	-	64	60	60	60	60	60	60	60	60	60
Sub Total Operating	1,093,704	1,138,475	1,150,160	1,161,790	1,186,750	1,212,210	1,238,170	1,264,930	1,292,190	1,319,850	1,348,330
Capital-Related											
Existing Debt (Principal) - Non-Growth Related	2,564	2,650	2,739	2,831	2,635	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	448	361	272	180	84	-	-	-	-	-	-
Transfer to Capital Reserve	1,656,953	1,619,489	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Sub Total Capital Related	1,659,964	1,622,500	153,011	153,011	152,720	150,000	150,000	150,000	150,000	150,000	150,000
Total Expenditures	2,753,668	2,760,974	1,303,171	1,314,801	1,339,470	1,362,210	1,388,170	1,414,930	1,442,190	1,469,850	1,498,330



Table C-2-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	820,420	845,505	871,756	900,725	925,134	946,245	969,162	993,973	1,019,389	1,045,425	1,069,213
Other Revenue											
User Fees and Service Charges											
46945 - Building Leases and Rentals	6,000	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120
Investment and Other Income											
47800 - Miscellaneous Revenue	125	125	125	125	125	125	125	125	125	125	125
User Fees and Service Charges											
46415 - Water - Miscellaneous	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400
46420 - Water Meter Sales and Inspection	6,157	6,157	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200
46430 - Water Hook-Up Charges	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800
46450 - Watermain Buy-Ins	2,800	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
46945 - Building Leases and Rentals	8,329	8,496	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	610,448	614,718	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,473,479	1,513,320	924,901	953,870	978,279	999,390	1,022,307	1,047,118	1,072,534	1,098,570	1,122,358
Water Billing Recovery - Operating	1,280,189	1,247,655	378,270	360,931	361,191	362,820	365,863	367,812	369,656	371,280	375,972
Lifecycle Reserve Contribution (\$)		56,855	951,254	995,788	1,017,782	1,034,790	1,051,710	1,071,095	1,090,701	1,110,643	1,124,980
Water Billing Recovery - Total	1,280,189	1,304,510	1,329,524	1,356,718	1,378,973	1,397,610	1,417,574	1,438,907	1,460,357	1,481,923	1,500,951

Table C-2-6
Town of Essex
Water Service – Wards 3 & 4
Water Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Water Billing Recovery	1,280,189	1,304,510	1,329,524	1,356,718	1,378,973	1,397,610	1,417,574	1,438,907	1,460,357	1,481,923	1,500,951
Total Volume (m ³)	785,392	790,612	796,122	802,792	806,417	807,867	810,042	812,942	815,842	818,742	820,192
Constant Rate	1.63	1.65	1.67	1.69	1.71	1.73	1.75	1.77	1.79	1.81	1.83
Annual Percentage Change		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%



Appendix D

Detailed Wastewater Rate Calculations



Table D-1-1
Town of Essex
Wastewater Service – Ward 1
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Treatment - Ward 1 Contingency	70,000	885,000	77,500	87,500	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000
OCWA Capital Recommendations - Ward 1	75,000	1,091,000	138,000	137,000	207,000	87,000	87,000	87,000	87,000	87,000	87,000	87,000
Lifecycle:												
Grit Blower Replacement at Pollution Control Plant (cfwd SS-18-0008)	10,000	-										
Collection and Conveyance - Ward 1	30,000	570,000	40,000	50,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Studies:												
Sanitary Service Area Amendment (South of Hwy3)		21,000	21,000									
Total Capital Expenditures	185,000	2,567,000	276,500	274,500	357,000	237,000	237,000	237,000	237,000	237,000	237,000	237,000



Table D-1-2
Town of Essex
Wastewater Service – Ward 1
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Treatment - Ward 1 Contingency	70,000	989,000	79,000	91,000	96,000	97,000	99,000	101,000	103,000	105,000	108,000	110,000
OCWA Capital Recommendations - Ward 1	75,000	1,204,000	141,000	143,000	220,000	94,000	96,000	98,000	100,000	102,000	104,000	106,000
Lifecycle:												
Grit Blower Replacement at Pollution Control Plant (cfwd SS-18-0008)	10,000	-	-	-	-	-	-	-	-	-	-	-
Collection and Conveyance - Ward 1	30,000	640,000	41,000	52,000	64,000	65,000	66,000	68,000	69,000	70,000	72,000	73,000
Studies:												
Sanitary Service Area Amendment (South of Hwy3)	-	21,000	21,000	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	185,000	2,854,000	282,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	185,000	2,833,000	261,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000
Wastewater Reserve	-	21,000	21,000	-	-	-	-	-	-	-	-	-
Total Capital Financing	185,000	2,854,000	282,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000

Table D-1-3
Town of Essex
Wastewater Service – Ward 1
Wastewater General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	(731,903)	(449,215)	(235,362)	50,284	384,727	754,061	1,160,857	1,184,075	1,207,756	1,231,911	1,256,549
Transfer from Operating	1,101,121	1,135,678	285,149	330,634	354,548	384,035	-	-	-	-	-
Transfer to Capital	-	21,000	-	-	-	-	-	-	-	-	-
Transfer to Operating	813,985	898,495	-	-	-	-	-	-	-	-	-
Closing Balance	(444,767)	(233,032)	49,786	380,918	739,275	1,138,096	1,160,857	1,184,075	1,207,756	1,231,911	1,256,549
Interest	(4,448)	(2,330)	498	3,809	14,786	22,762	23,217	23,681	24,155	24,638	25,131



Table D-1-4
Town of Essex
Wastewater Service – Ward 1
Wastewater D.C. Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	(2,138,965)	(1,997,591)	(2,007,699)	(1,898,883)	(1,945,352)	(1,935,902)	(1,922,599)	(1,909,162)	(1,757,911)	(1,599,845)	(1,434,734)
Development Charge Proceeds	292,378	140,996	258,842	104,017	178,635	182,227	182,097	185,720	189,435	193,243	197,104
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	131,226	131,226	131,226	131,226	131,226	131,226	131,226	-	-	-	-
Closing Balance	(1,977,813)	(1,987,821)	(1,880,082)	(1,926,091)	(1,897,943)	(1,884,901)	(1,871,728)	(1,723,442)	(1,568,475)	(1,406,602)	(1,237,630)
Interest	(19,778)	(19,878)	(18,801)	(19,261)	(37,959)	(37,698)	(37,435)	(34,469)	(31,370)	(28,132)	(24,753)
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Table D-1-5
Town of Essex
Wastewater Service – Ward 1
Wastewater Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	2,362,485	2,199,260	1,957,642	1,688,359	1,321,442	1,086,751	842,266	1,008,936	1,353,350	2,090,777	2,865,722
Transfer from Operating	-	-	-	-	-	-	413,887	589,877	973,432	1,002,754	1,019,618
Transfer to Capital	185,000	261,000	286,000	380,000	256,000	261,000	267,000	272,000	277,000	284,000	289,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	2,177,485	1,938,260	1,671,642	1,308,359	1,065,442	825,751	989,153	1,326,813	2,049,781	2,809,531	3,596,340
Interest	21,775	19,383	16,716	13,084	21,309	16,515	19,783	26,536	40,996	56,191	71,927



Table D-1-6
Town of Essex
Wastewater Service – Ward 1
Operating Budget Forecast (Inflated \$)

Description	Budget	Budget	Forecast								
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	249,000	256,470	259,000	261,600	266,800	272,100	277,500	283,100	288,800	294,600	300,500
55250 - Ontario Clean Water Agency - Other Operating Costs	64,335	120,000	121,200	122,400	124,800	127,300	129,800	132,400	135,000	137,700	140,500
55310 - Garbage Collection Fees - Ward 1	300	300	300	300	310	320	330	340	350	360	370
55400 - Garbage Disposal (Tipping Fees)	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
External Transfers											
55900 - Donations, Grants	2,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
Materials and Supplies											
51105 - Computer Hardware and Software	792	250	250	250	260	270	280	290	300	310	320
51190 - Materials and Supplies - Other	30,000	30,000	30,300	30,600	31,200	31,800	32,400	33,000	33,700	34,400	35,100
Miscellaneous Services											
53650 - Weed Control Services	10,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Repairs and Maintenance											
52900 - Repairs and Maintenance - Other	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	100,218	118,400	120,800	123,200	129,400	135,900	142,700	149,800	157,300	165,200	173,500
54120 - Utilities - Gas	3,917	5,300	5,400	5,500	5,800	6,100	6,400	6,700	7,000	7,400	7,800
54140 - Utilities - Water	6,138	6,138	6,200	6,300	6,400	6,500	6,600	6,700	6,800	6,900	7,000
54200 - Communications - Telephone	4,200	4,600	4,600	4,600	4,700	4,800	4,900	5,000	5,100	5,200	5,300
54300 - Insurance - Buildings	10,088	10,376	10,500	10,600	10,800	11,000	11,200	11,400	11,600	11,800	12,000
54310 - Insurance - Vehicles	209	215	220	220	220	220	220	220	220	220	220
54320 - Insurance - General	595	912	920	930	950	970	990	1,010	1,030	1,050	1,070
54400 - Payments-in-Lieu of Taxes	19,364	20,704	20,900	21,100	21,500	21,900	22,300	22,700	23,200	23,700	24,200
Collection/Conveyance:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	68,030	68,030	68,700	69,400	70,800	72,200	73,600	75,100	76,600	78,100	79,700
External Transfers											
55900 - Donations, Grants	15,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	15,361	16,000	16,200	16,400	16,700	17,000	17,300	17,600	18,000	18,400	18,800
58900 - Amounts Allocated from Other Departments	26,044	27,094	27,400	27,700	28,300	28,900	29,500	30,100	30,700	31,300	31,900
Materials and Supplies											
51100 - Office Supplies	100	1,000	1,010	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160
51105 - Computer Hardware and Software	250	250	250	250	260	270	280	290	300	310	320
51110 - Postage and Courier	10	10	10	10	10	10	10	10	10	10	10
51115 - Memberships	305	280	280	280	290	300	310	320	330	340	350
51150 - Vehicles - Fuel	1,000	1,300	1,330	1,360	1,430	1,500	1,580	1,660	1,740	1,830	1,920
51190 - Materials and Supplies - Other	2,700	1,000	1,020	1,040	1,090	1,140	1,200	1,260	1,320	1,390	1,460
51800 - Office Equipment	40	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	100	150	150	150	150	150	150	150	150	150	150
Miscellaneous Services											
53510 - Advertising	50	50	50	50	50	50	50	50	50	50	50
53605 - System Access Fee - Automatic Vehicle Locator	160	230	230	230	230	230	230	230	230	230	230



Table D-1-8 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
53650 - Weed Control Services	-	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	400	400	400	400	410	420	430	440	450	460	470
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	200	200	200	200	200	200	200	200	200	200	200
52300 - Repairs and Maintenance - Vehicles (Labour)	500	500	510	520	530	540	550	560	570	580	590
52305 - Repairs and Maintenance - Vehicles (Parts)	600	600	610	620	630	640	650	660	670	680	690
52350 - Repairs and Maintenance - Equipment (Labour)	50	50	50	50	50	50	50	50	50	50	50
52355 - Repairs and Maintenance - Equipment (Parts)	50	50	50	50	50	50	50	50	50	50	50
52900 - Repairs and Maintenance - Other	70,000	70,000	70,700	71,400	72,800	74,300	75,800	77,300	78,800	80,400	82,000
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	26,376	27,191	27,500	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000
50150 - Salaries and Wages - Overtime	1,000	880	890	900	920	940	960	980	1,000	1,020	1,040
50500 - Canada Pension Plan - Employer Contribution	854	987	1,000	1,010	1,030	1,050	1,070	1,090	1,110	1,130	1,150
50510 - Employment Insurance - Employer Contribution	358	358	360	360	370	380	390	400	410	420	430
50520 - Employer Health Insurance	514	530	540	550	560	570	580	590	600	610	620
50530 - Workplace Safety and Insurance Board Premiums	263	709	720	730	740	750	770	790	810	830	850
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	1,664	1,708	1,730	1,750	1,790	1,830	1,870	1,910	1,950	1,990	2,030
50550 - Health Insurance Premiums	2,072	2,072	2,090	2,110	2,150	2,190	2,230	2,270	2,320	2,370	2,420
50560 - Life Insurance Premiums	691	736	740	750	770	790	810	830	850	870	890
50700 - Clothing and Uniforms	240	240	240	240	240	240	240	240	240	240	240
50720 - Training and Tuition Refund	587	587	590	600	610	620	630	640	650	660	670
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	117,500	144,100	147,000	149,900	157,400	165,300	173,600	182,300	191,400	201,000	211,100
54120 - Utilities - Gas	0	0	-	-	-	-	-	-	-	-	-
54140 - Utilities - Water	497	600	610	620	650	680	710	750	790	830	870
54200 - Communications - Telephone	960	2,150	2,170	2,190	2,230	2,270	2,320	2,370	2,420	2,470	2,520
54310 - Insurance - Vehicles	626	644	650	660	670	680	690	700	710	720	730
54320 - Insurance - General	1,728	2,650	2,700	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400
54400 - Payments-in-Lieu of Taxes	-	103	100	100	100	100	100	100	100	100	100
Sub Total Operating	898,036	1,010,604	1,023,510	1,036,480	1,065,640	1,095,800	1,126,800	1,158,910	1,192,230	1,226,870	1,262,920
Capital-Related											
Existing Debt (Principal) - Growth Related	109,791	112,730	115,749	118,848	122,031	125,298	128,654	-	-	-	-
Existing Debt (Interest) - Growth Related	21,435	18,495	15,477	12,377	9,195	5,927	2,572	-	-	-	-
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related	409,038	420,281	431,833	443,703	455,899	468,430	481,307	346,957	-	-	-
Existing Debt (Interest) - Non-Growth Related	91,722	80,479	68,927	57,057	44,861	32,330	19,454	7,198	-	-	-
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	1,101,121	1,135,678	285,149	330,634	354,548	384,035	-	-	-	-	-
Sub Total Capital Related	1,733,107	1,767,663	917,134	962,620	986,534	1,016,021	631,986	354,156	-	-	-
Total Expenditures	2,631,143	2,778,267	1,940,644	1,999,100	2,052,174	2,111,821	1,758,786	1,513,066	1,192,230	1,226,870	1,262,920



Table D-1-8 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	730,087	758,610	786,434	813,223	837,546	865,256	893,740	922,732	952,526	983,143	1,008,554
Other Revenue:											
User Fees and Service Charges											
46970 - Land Leases and Rentals	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Amounts Added to Taxes and Special Levies											
43220 - Sewer Frontage and Connection Charges	13,016	13,016	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Contributions from Development Charges Reserve Fund	131,226	131,226	131,226	131,226	131,226	131,226	131,226	-	-	-	-
Contributions from Reserves / Reserve Funds	813,985	898,495	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,693,314	1,806,347	935,659	962,449	986,772	1,014,482	1,042,966	940,732	970,526	1,001,143	1,026,554
Wastewater Billing Recovery - Operating	937,829	971,920	1,004,985	1,036,652	1,065,402	1,097,339	715,820	572,333	221,704	225,727	236,366
Lifecycle Reserve Contribution (\$)							413,887	589,877	973,432	1,002,754	1,019,618
Wastewater Billing Recovery - Total	937,829	971,920	1,004,985	1,036,652	1,065,402	1,097,339	1,129,707	1,162,211	1,195,135	1,228,481	1,255,984

Table D-1-7
Town of Essex
Wastewater Service – Ward 1
Wastewater Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Wastewater Billing Recovery	937,829	971,920	1,004,985	1,036,652	1,065,402	1,097,339	1,129,707	1,162,211	1,195,135	1,228,481	1,255,984
Total Volume (m ³)	651,270	661,170	669,990	677,550	682,950	690,150	697,350	704,370	711,390	718,410	721,830
Constant Rate	1.44	1.47	1.50	1.53	1.56	1.59	1.62	1.65	1.68	1.71	1.74
Annual Percentage Change		2%	2%	2%	2%	2%	2%	2%	2%	2%	2%



Table D-2-1
Town of Essex
Wastewater Service – Ward 3
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
OCWA Capital Recommendations - Ward 3	262,000	724,000	96,000	148,000	152,000	68,000	72,000	60,000	32,000	32,000	32,000	32,000
Lifecycle:		-										
CWWF Funding Projects	4,110	-										
CWWF Funding Projects, Upgrades to Ward 3 Lagoons and Pump Station (cfwd SS-18-0007)	45,898	-										
Treatment - Ward 3 Contingency	40,000	535,000	42,500	52,500	55,000	55,000	55,000	55,000	55,000	55,000	55,000	55,000
Collection and Conveyance - Ward 3	32,500	595,000	42,500	52,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500
Studies:		-										
Sanitary Sewer Masterplan Ward 3	92,399	-										
Total Capital Expenditures	476,907	1,854,000	181,000	253,000	269,500	185,500	189,500	177,500	149,500	149,500	149,500	149,500



Table D-2-2
Town of Essex
Wastewater Service – Ward 3
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
OCWA Capital Recommendations - Ward 3	262,000	785,000	98,000	154,000	161,000	74,000	79,000	68,000	37,000	37,000	38,000	39,000
Lifecycle:												
CWWF Funding Projects	4,110	-	-	-	-	-	-	-	-	-	-	-
CWWF Funding Projects, Upgrades to Ward 3 Lagoons and Pump Station (cfwd SS-18-0007)	45,898	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 3 Contingency	40,000	599,000	43,000	55,000	58,000	60,000	61,000	62,000	63,000	64,000	66,000	67,000
Collection and Conveyance - Ward 3	32,500	667,000	43,000	55,000	66,000	68,000	69,000	70,000	72,000	73,000	75,000	76,000
Studies:												
Sanitary Sewer Masterplan Ward 3	92,399	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	476,907	2,051,000	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	476,907	2,051,000	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000
Total Capital Financing	476,907	2,051,000	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000

Table D-2-3
Town of Essex
Wastewater Service – Ward 3
Wastewater General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	1,870,213	1,695,949	1,732,337	1,533,521	1,311,506	1,182,696	1,044,170	912,053	805,854	695,491	577,821
Transfer from Operating	489,471	437,282	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Transfer to Capital	476,907	184,000	264,000	285,000	202,000	209,000	200,000	172,000	174,000	179,000	182,000
Transfer to Operating	203,619	234,046	-	-	-	-	-	-	-	-	-
Closing Balance	1,679,157	1,715,185	1,518,337	1,298,521	1,159,506	1,023,696	894,170	790,053	681,854	566,491	445,821
Interest	16,792	17,152	15,183	12,985	23,190	20,474	17,883	15,801	13,637	11,330	8,916



Table D-2-4
Town of Essex
Wastewater Service – Ward 3
Wastewater D.C. Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	410,343	460,375	486,269	556,277	628,288	640,853	653,671	685,740	718,835	752,984	788,207
Development Charge Proceeds	45,474	21,080	64,500	65,790	-	-	18,624	19,000	19,384	19,768	20,160
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	455,817	481,455	550,769	622,067	628,288	640,853	672,295	704,740	738,219	772,752	808,367
Interest	4,558	4,815	5,508	6,221	12,566	12,817	13,446	14,095	14,764	15,455	16,167
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Table D-2-5
Town of Essex
Wastewater Service – Ward 3
Wastewater Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	1,011,643	1,021,759	1,073,617	1,303,303	1,564,484	1,860,538	2,167,576	2,484,876	2,814,999	3,158,003	3,513,983
Transfer from Operating	-	41,228	216,782	245,691	259,573	264,536	268,578	274,927	281,082	287,079	291,839
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	1,011,643	1,062,987	1,290,399	1,548,994	1,824,057	2,125,074	2,436,153	2,759,803	3,096,081	3,445,082	3,805,823
Interest	10,116	10,630	12,904	15,490	36,481	42,501	48,723	55,196	61,922	68,902	76,116



Table D-2-6
Town of Essex
Wastewater Service – Ward 3
Operating Budget (Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
<u>Operating Costs</u>											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	89,927	92,624	93,600	94,500	96,400	98,300	100,300	102,300	104,300	106,400	108,500
55250 - Ontario Clean Water Agency - Other Operating Costs	2,500	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
External Transfers											
55900 - Donations, Grants	5,000	2,500	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
Materials and Supplies											
51190 - Materials and Supplies - Other	30,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
Miscellaneous Services											
53650 - Weed Control Services	5,000	7,000	7,100	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300
Repairs and Maintenance											
52900 - Repairs and Maintenance - Other	4,500	4,500	4,500	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	63,201	91,500	93,300	95,200	100,000	105,000	110,300	115,800	121,600	127,700	134,100
54300 - Insurance - Buildings	2,706	2,783	2,800	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500
54310 - Insurance - Vehicles	209	215	220	220	220	220	220	220	220	220	220
54320 - Insurance - General	576	884	890	900	920	940	960	980	1,000	1,020	1,040
54400 - Payments-in-Lieu of Taxes	-	39	40	40	40	40	40	40	40	40	40
Collection/Conveyance:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	22,329	22,329	22,600	22,800	23,300	23,800	24,300	24,800	25,300	25,800	26,300



Table D-2-6 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
55250 - Ontario Clean Water Agency - Other Operating Costs	3,000	-	-	-	-	-	-	-	-	-	-
External Transfers											
55900 - Donations, Grants	5,000	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex		5,650	5,700	5,800	5,900	6,000	6,100	6,200	6,300	6,400	6,500
58900 - Amounts Allocated from Other Departments		27,065	27,300	27,600	28,200	28,800	29,400	30,000	30,600	31,200	31,800
Materials and Supplies											
51100 - Office Supplies	100	50	50	50	50	50	50	50	50	50	50
51105 - Computer Hardware and Software	250	250	250	250	260	270	280	290	300	310	320
51110 - Postage and Courier	10	10	10	10	10	10	10	10	10	10	10
51115 - Memberships	305	280	280	280	290	300	310	320	330	340	350
51150 - Vehicles - Fuel	1,000	1,500	1,530	1,560	1,640	1,720	1,810	1,900	2,000	2,100	2,210
51190 - Materials and Supplies - Other	950	500	510	520	550	580	610	640	670	700	740
51800 - Office Equipment	40	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	100	150	150	150	150	150	150	150	150	150	150
Miscellaneous Services											
53510 - Advertising	50	50	50	50	50	50	50	50	50	50	50
53605 - System Access Fee - Automatic Vehicle Locator	160	230	230	230	230	230	230	230	230	230	230
53650 - Weed Control Services	1,800	3,000	3,030	3,060	3,120	3,180	3,240	3,300	3,370	3,440	3,510
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	400	250	250	250	260	270	280	290	300	310	320
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	200	500	510	520	530	540	550	560	570	580	590
52300 - Repairs and Maintenance - Vehicles (Labour)	500	500	510	520	530	540	550	560	570	580	590
52305 - Repairs and Maintenance - Vehicles (Parts)	600	800	810	820	840	860	880	900	920	940	960
52350 - Repairs and Maintenance - Equipment (Labour)	50	50	50	50	50	50	50	50	50	50	50
52355 - Repairs and Maintenance - Equipment (Parts)	50	50	50	50	50	50	50	50	50	50	50
52900 - Repairs and Maintenance - Other	25,000	25,000	25,300	25,600	26,100	26,600	27,100	27,600	28,200	28,800	29,400
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	26,376	27,191	27,500	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000
50150 - Salaries and Wages - Overtime	1,000	880	890	900	920	940	960	980	1,000	1,020	1,040
50500 - Canada Pension Plan - Employer Contribution	854	987	1,000	1,010	1,030	1,050	1,070	1,090	1,110	1,130	1,150
50510 - Employment Insurance - Employer Contribution	358	358	360	360	370	380	390	400	410	420	430
50520 - Employer Health Insurance	514	530	540	550	560	570	580	590	600	610	620
50530 - Workplace Safety and Insurance Board Premiums	263	709	720	730	740	750	770	790	810	830	850
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	1,664	1,708	1,730	1,750	1,790	1,830	1,870	1,910	1,950	1,990	2,030



Table D-2-6 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
50550 - Health Insurance Premiums	2,072	2,072	2,090	2,110	2,150	2,190	2,230	2,270	2,320	2,370	2,420
50560 - Life Insurance Premiums	691	736	740	750	770	790	810	830	850	870	890
50700 - Clothing and Uniforms	240	240	240	240	240	240	240	240	240	240	240
50720 - Training and Tuition Refund	587	250	250	250	260	270	280	290	300	310	320
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	5,440	6,100	6,200	6,300	6,600	6,900	7,200	7,600	8,000	8,400	8,800
54120 - Utilities - Gas	0	0	-	-	-	-	-	-	-	-	-
54140 - Utilities - Water	(0)	(0)	-	-	-	-	-	-	-	-	-
54200 - Communications - Telephone	1,000	2,600	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
54310 - Insurance - Vehicles	565	581	590	600	610	620	630	640	650	660	670
54320 - Insurance - General	1,671	2,562	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
Sub Total Operating	308,808	374,764	379,890	385,020	397,110	409,400	422,210	435,520	449,360	463,700	478,470
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	489,471	437,282	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Sub Total Capital Related	489,471	437,282	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Total Expenditures	798,278	812,046	429,890	435,020	447,110	459,400	472,210	485,520	499,360	513,700	528,470
Revenues											
Base Charge	281,362	291,241	302,486	316,830	327,396	333,944	341,797	351,027	360,489	370,190	378,864
Other Revenue:											
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	203,619	234,046	-	-	-	-	-	-	-	-	-
Total Operating Revenue	484,981	525,286	302,486	316,830	327,396	333,944	341,797	351,027	360,489	370,190	378,864
Wastewater Billing Recovery - Operating	313,298	286,759	127,404	118,190	119,714	125,456	130,413	134,493	138,871	143,510	149,606
Lifecycle Reserve Contribution (\$)		41,228	216,782	245,691	259,573	264,536	268,578	274,927	281,082	287,079	291,839
Wastewater Billing Recovery - Total	313,298	327,988	344,186	363,881	379,286	389,992	398,991	409,420	419,953	430,590	441,445



Table D-2-7
Town of Essex
Wastewater Service – Ward 3
Wastewater Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Wastewater Billing Recovery	313,298	327,988	344,186	363,881	379,286	389,992	398,991	409,420	419,953	430,590	441,445
Total Volume (m ³)	142,408	144,488	147,088	150,988	152,938	152,938	153,458	154,498	155,538	156,578	157,098
Constant Rate	2.20	2.27	2.34	2.41	2.48	2.55	2.60	2.65	2.70	2.75	2.81
Annual Percentage Change		3%	3%	3%	3%	3%	2%	2%	2%	2%	2%



Table D-3-1
Town of Essex
Wastewater Service – Ward 4
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Upgrades to Ward 4 Lagoons and Pump Station (cfwd SS-18-0009)	115,000	-										
OCWA Capital Recommendations - Ward 4	750,000	1,070,600	39,600	8,000	8,000	10,000	1,000,000	5,000				
Lifecycle:		-										
CWWF Funding Projects	4,110	-										
Treatment - Ward 4 Cell Treatment	500,000	-										
Treatment - Ward 4 Cell Treatment (cfwd SS-18-0017/SS-17-0007)	500,000	-										
CWWF Upgrades to Harrow Lagoon and Pump Station (cfwd SS-18-0016)	45,417	-										
Treatment - Ward 4 Contingency	40,000	535,000	42,500	52,500	55,000	55,000	55,000	55,000	55,000	55,000	55,000	55,000
Collection and Conveyance - Ward 4	26,500	545,000	37,500	47,500	57,500	57,500	57,500	57,500	57,500	57,500	57,500	57,500
Studies:		-										
Harrow Sanitary Optimization Study (cfwd SS-18-0010)	80,282	-										
Total Capital Expenditures	2,061,309	2,150,600	119,600	108,000	120,500	122,500	1,112,500	117,500	112,500	112,500	112,500	112,500



Table D-3-2
Town of Essex
Wastewater Service – Ward 4
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrades:												
Upgrades to Ward 4 Lagoons and Pump Station (cfwd SS-18-0009)	115,000	-	-	-	-	-	-	-	-	-	-	-
OCWA Capital Recommendations - Ward 4	750,000	1,177,000	40,000	8,000	8,000	11,000	1,104,000	6,000	-	-	-	-
Lifecycle:												
CWWF Funding Projects	4,110	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 4 Cell Treatment	500,000	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 4 Cell Treatment (cfwd SS-18-0017/SS-17-0007)	500,000	-	-	-	-	-	-	-	-	-	-	-
CWWF Upgrades to Harrow Lagoon and Pump Station (cfwd SS-18-0016)	45,417	-	-	-	-	-	-	-	-	-	-	-
Treatment - Ward 4 Contingency	40,000	599,000	43,000	55,000	58,000	60,000	61,000	62,000	63,000	64,000	66,000	67,000
Collection and Conveyance - Ward 4	26,500	610,000	38,000	49,000	61,000	62,000	63,000	65,000	66,000	67,000	69,000	70,000
Studies:												
Harrow Sanitary Optimization Study (cfwd SS-18-0010)	80,282	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	2,061,309	2,386,000	121,000	112,000	127,000	133,000	1,228,000	133,000	129,000	131,000	135,000	137,000
Capital Financing												
Provincial/Federal Grants		-										
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	100,000	-	-	-	-	100,000	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	1,400,000	-	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	661,309	2,286,000	121,000	112,000	127,000	133,000	1,128,000	133,000	129,000	131,000	135,000	137,000
Total Capital Financing	2,061,309	2,386,000	121,000	112,000	127,000	133,000	1,228,000	133,000	129,000	131,000	135,000	137,000



Table D-3-3
Town of Essex
Wastewater Service – Ward 4
Schedule of Non-Growth-Related Debenture Repayments (Inflated \$)

Debenture Year	2020	Principal (Inflated)	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
2021		-		-	-	-	-	-	-	-	-	-
2022		-			-	-	-	-	-	-	-	-
2023		-				-	-	-	-	-	-	-
2024		-					-	-	-	-	-	-
2025		100,000						12,329	12,329	12,329	12,329	12,329
2026		-							-	-	-	-
2027		-								-	-	-
2028		-									-	-
2029		-										-
2030		-										
Total Annual Debt Charges	-	100,000	-	-	-	-	-	12,329	12,329	12,329	12,329	12,329

Table D-3-4
Town of Essex
Wastewater Service – Ward 4
Wastewater General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	209,480	(250,565)	(80,502)	129,234	354,169	600,807	16,453	85,122	159,244	232,809	303,765
Transfer from Operating	675,320	764,314	320,457	348,428	367,858	543,323	200,000	200,000	200,000	200,000	200,000
Transfer to Capital	661,309	121,000	112,000	127,000	133,000	1,128,000	133,000	129,000	131,000	135,000	137,000
Transfer to Operating	471,575	472,454	-	-	-	-	-	-	-	-	-
Closing Balance	(248,084)	(79,705)	127,955	350,662	589,026	16,130	83,453	156,122	228,244	297,809	366,765
Interest	(2,481)	(797)	1,280	3,507	11,781	323	1,669	3,122	4,565	5,956	7,335



Table D-3-5
Town of Essex
Wastewater Service – Ward 4
Wastewater D.C. Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	(132,082)	(58,467)	(64,745)	(44,109)	(56,481)	(68,911)	(56,152)	(11,977)	33,988	81,795	131,497
Development Charge Proceeds	74,194	42,744	69,453	36,568	37,302	38,050	44,410	45,298	46,203	47,124	48,062
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	48,380	48,380	48,380	48,380	24,190	-	-	-	-	-
Closing Balance	(57,888)	(64,104)	(43,672)	(55,922)	(67,560)	(55,051)	(11,742)	33,321	80,191	128,919	179,559
Interest	(579)	(641)	(437)	(559)	(1,351)	(1,101)	(235)	666	1,604	2,578	3,591
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Table D-3-6
Town of Essex
Wastewater Service – Ward 4
Wastewater Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	1,433,774	34,111	34,452	34,797	35,145	35,848	36,565	508,043	1,013,436	1,553,634	2,120,787
Transfer from Operating	-	-	-	-	-	-	461,517	485,521	509,735	525,568	544,248
Transfer to Capital	1,400,000	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	33,774	34,111	34,452	34,797	35,145	35,848	498,082	993,565	1,523,171	2,079,203	2,665,035
Interest	338	341	345	348	703	717	9,962	19,871	30,463	41,584	53,301



Table D-3-7
Town of Essex
Wastewater Service – Ward 4
Operating Budget Forecast (Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
<u>Operating Costs</u>											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	102,067	105,129	106,200	107,300	109,400	111,600	113,800	116,100	118,400	120,800	123,200
55250 - Ontario Clean Water Agency - Other Operating Costs	2,500	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
55340 - Garbage Collection Fees - Ward 4	215	215	220	220	220	220	220	220	220	220	220
External Transfers											
55900 - Donations, Grants	7,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
Materials and Supplies											
51190 - Materials and Supplies - Other	10,000	10,000	10,200	10,400	10,900	11,400	12,000	12,600	13,200	13,900	14,600
Miscellaneous Services											
53650 - Weed Control Services	6,000	6,000	6,100	6,200	6,300	6,400	6,500	6,600	6,700	6,800	6,900
Repairs and Maintenance											
52900 - Repairs and Maintenance - Other	4,000	4,000	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	73,622	73,622	75,100	76,600	80,400	84,400	88,600	93,000	97,700	102,600	107,700
54200 - Communications - Telephone	954	954	960	970	990	1,010	1,030	1,050	1,070	1,090	1,110
54300 - Insurance - Buildings	802	825	830	840	860	880	900	920	940	960	980
54310 - Insurance - Vehicles	209	215	220	220	220	220	220	220	220	220	220
54320 - Insurance - General	577	885	890	900	920	940	960	980	1,000	1,020	1,040
54400 - Payments-in-Lieu of Taxes	-	981	990	1,000	1,020	1,040	1,060	1,080	1,100	1,120	1,140
Collection/Conveyance:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	32,503	38,000	38,400	38,800	39,600	40,400	41,200	42,000	42,800	43,700	44,600
External Transfers											
55900 - Donations, Grants	7,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	8,031	8,031	8,100	8,200	8,400	8,600	8,800	9,000	9,200	9,400	9,600
58900 - Amounts Allocated from Other Departments	26,044	27,094	27,400	27,700	28,300	28,900	29,500	30,100	30,700	31,300	31,900
Materials and Supplies											
51100 - Office Supplies	100	50	50	50	50	50	50	50	50	50	50
51105 - Computer Hardware and Software	250	250	250	250	260	270	280	290	300	310	320
51110 - Postage and Courier	10	10	10	10	10	10	10	10	10	10	10
51115 - Memberships	305	280	280	280	290	300	310	320	330	340	350
51150 - Vehicles - Fuel	1,000	1,350	1,380	1,410	1,480	1,550	1,630	1,710	1,800	1,890	1,980



Table D-3-7 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
51190 - Materials and Supplies - Other	1,700	1,000	1,020	1,040	1,090	1,140	1,200	1,260	1,320	1,390	1,460
51800 - Office Equipment	40	40	40	40	40	40	40	40	40	40	40
51840 - Small Tools	100	150	150	150	150	150	150	150	150	150	150
Miscellaneous Services											
53510 - Advertising	50	50	50	50	50	50	50	50	50	50	50
53605 - System Access Fee - Automatic Vehicle Locator	160	230	230	230	230	230	230	230	230	230	230
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	400	250	250	250	260	270	280	290	300	310	320
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	200	500	510	520	530	540	550	560	570	580	590
52300 - Repairs and Maintenance - Vehicles (Labour)	500	500	510	520	530	540	550	560	570	580	590
52305 - Repairs and Maintenance - Vehicles (Parts)	600	800	810	820	840	860	880	900	920	940	960
52350 - Repairs and Maintenance - Equipment (Labour)	50	50	50	50	50	50	50	50	50	50	50
52355 - Repairs and Maintenance - Equipment (Parts)	50	50	50	50	50	50	50	50	50	50	50
52900 - Repairs and Maintenance - Other Salaries, Wages, Benefits and Personnel Expenses	30,000	15,000	15,200	15,400	15,700	16,000	16,300	16,600	16,900	17,200	17,500
50100 - Salaries and Wages - Full-Time	26,376	27,191	27,500	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000
50150 - Salaries and Wages - Overtime	1,000	880	890	900	920	940	960	980	1,000	1,020	1,040
50500 - Canada Pension Plan - Employer Contribution	854	987	1,000	1,010	1,030	1,050	1,070	1,090	1,110	1,130	1,150
50510 - Employment Insurance - Employer Contribution	358	358	360	360	370	380	390	400	410	420	430
50520 - Employer Health Insurance	514	530	540	550	560	570	580	590	600	610	620
50530 - Workplace Safety and Insurance Board Premiums	263	709	720	730	740	750	770	790	810	830	850
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	1,664	1,708	1,730	1,750	1,790	1,830	1,870	1,910	1,950	1,990	2,030
50550 - Health Insurance Premiums	2,072	2,072	2,090	2,110	2,150	2,190	2,230	2,270	2,320	2,370	2,420
50560 - Life Insurance Premiums	691	736	740	750	770	790	810	830	850	870	890
50700 - Clothing and Uniforms	240	240	240	240	240	240	240	240	240	240	240
50720 - Training and Tuition Refund	587	250	250	250	260	270	280	290	300	310	320
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	6,816	7,800	7,960	8,120	8,530	8,960	9,410	9,880	10,370	10,890	11,430
54140 - Utilities - Water	253	300	310	320	340	360	380	400	420	440	460
54200 - Communications - Telephone	1,000	1,650	1,670	1,690	1,720	1,750	1,790	1,830	1,870	1,910	1,950
54310 - Insurance - Vehicles	626	644	650	660	670	680	690	700	710	720	730
54320 - Insurance - General	1,727	2,648	2,670	2,700	2,750	2,810	2,870	2,930	2,990	3,050	3,110
54400 - Payments-in-Lieu of Taxes	-	475	480	480	490	500	510	520	530	540	550
Sub Total Operating	363,080	357,189	361,970	366,830	377,140	387,780	398,780	410,100	421,760	433,960	446,380



Table D-3-7 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital-Related											
Existing Debt (Principal) - Growth Related	42,093	43,224	44,386	45,579	46,804	23,872	-	-	-	-	-
Existing Debt (Interest) - Growth Related	6,288	5,157	3,995	2,802	1,577	319	-	-	-	-	-
New Growth Related Debt (Principal)	-	-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)	-	-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related	225,504	231,840	238,356	245,057	251,949	105,959	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	34,946	28,610	22,093	15,392	8,501	1,415	-	-	-	-	-
New Non-Growth Related Debt (Principal)	-	-	-	-	-	-	8,329	8,662	9,009	9,369	9,744
New Non-Growth Related Debt (Interest)	-	-	-	-	-	-	4,000	3,667	3,320	2,960	2,585
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	675,320	764,314	320,457	348,428	367,858	543,323	200,000	200,000	200,000	200,000	200,000
Sub Total Capital Related	984,150	1,073,145	629,287	657,258	676,688	674,888	212,329	212,329	212,329	212,329	212,329
Total Expenditures	1,347,230	1,430,334	991,257	1,024,088	1,053,828	1,062,668	611,109	622,429	634,089	646,289	658,709
Revenues											
Base Charge	298,785	309,823	320,667	331,294	340,606	350,158	360,235	370,860	381,767	389,402	397,190
Other Revenue:											
Amounts Added to Taxes and Special Levies	-	-	-	-	-	-	-	-	-	-	-
43220 - Sewer Frontage and Connection Charges	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130	48,130
Contributions from Development Charges Reserve Fund	-	48,380	48,380	48,380	48,380	24,190	-	-	-	-	-
Contributions from Reserves / Reserve Funds	471,575	472,454	-	-	-	-	-	-	-	-	-
Total Operating Revenue	818,489	878,788	417,177	427,804	437,116	422,478	408,365	418,990	429,897	437,532	445,320
Wastewater Billing Recovery - Operating	528,741	551,546	574,080	596,284	616,712	640,190	202,744	203,439	204,193	208,757	213,389
Lifecycle Reserve Contribution (\$)	-	-	-	-	-	-	461,517	485,521	509,735	525,568	544,248
Wastewater Billing Recovery - Total	528,741	551,546	574,080	596,284	616,712	640,190	664,261	688,960	713,928	734,325	757,637

Table D-3-8
Town of Essex
Wastewater Service – Ward 4
Wastewater Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Wastewater Billing Recovery	528,741	551,546	574,080	596,284	616,712	640,190	664,261	688,960	713,928	734,325	757,637
Total Volume (m ³)	273,959	277,159	280,039	282,599	284,199	285,799	287,559	289,479	291,399	291,399	291,399
Constant Rate	1.93	1.99	2.05	2.11	2.17	2.24	2.31	2.38	2.45	2.52	2.60
Annual Percentage Change		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%