

Draft 2024 Oxford Water and Wastewater Master Plan

Executive Summary

July 6, 2023



**2024 Oxford Water and Wastewater Master Plan
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1.0 INTRODUCTION

The County of Oxford (“the County”) has commenced a Water and Wastewater Master Plan (W/WW MP) in order to develop, evaluate and determine a long term water and wastewater approach to manage current servicing needs as well as accommodate future projected population and employment growth to the year of 2046.

1.1 Background

The County owns 17 municipal drinking water systems and 11 municipal wastewater systems which includes, but is not limited to, approximately 735 km of distribution watermains, 34 water treatment plants, 42 water reservoirs/storage towers, 6 water booster stations, 61 active groundwater supply wells, 600+ km of sewers and forcemains, 36 sewage pumping stations, 9 wastewater treatment plants, SCADA systems, 4 bulk water stations and a biosolids management facility.

The County holds full municipal authority and is responsible for all water and wastewater system services, including water treatment, wastewater treatment, water distribution and wastewater collection, as per Section 11(11) of the Municipal Act, 2001.

1.2 Master Plan Goals

The following goals were developed for the W/WW MP:

1. Provide water and wastewater strategies to service existing settlement areas and growth to the year 2046;
2. Develop water and wastewater strategies that are consistent with and conform to Provincial policies/legislation and support the County’s Official Plan and strategic initiatives;
3. Identify options for optimizing the effectiveness of the existing water and wastewater infrastructure; and
4. Develop an integrated multi-year water and wastewater capital implementation plan which affords infrastructure reliability, redundancy and sustainability.

1.3 Study Area

The Study Area below incorporates the County’s entire geographical region which includes its eight Area Municipalities - Township of Blandford-Blenheim, Township of East Zorra-Tavistock, Town of Ingersoll, Township of Norwich, Township of South-West Oxford, Town of Tillsonburg, City of Woodstock, and Township of Zorra. The Study Area is made up of rural areas, settlement clusters and smaller urban centres which cover approximately 2,000 km² as shown in Figure ES-1.1.

In order to provide the necessary land use planning and servicing basis for the settlement expansions that are required to accommodate this growth, the County and some Area Municipalities have recently initiated and/or completed a number of Secondary Plans. The Secondary planning processes are shown in Figure ES-1.2.

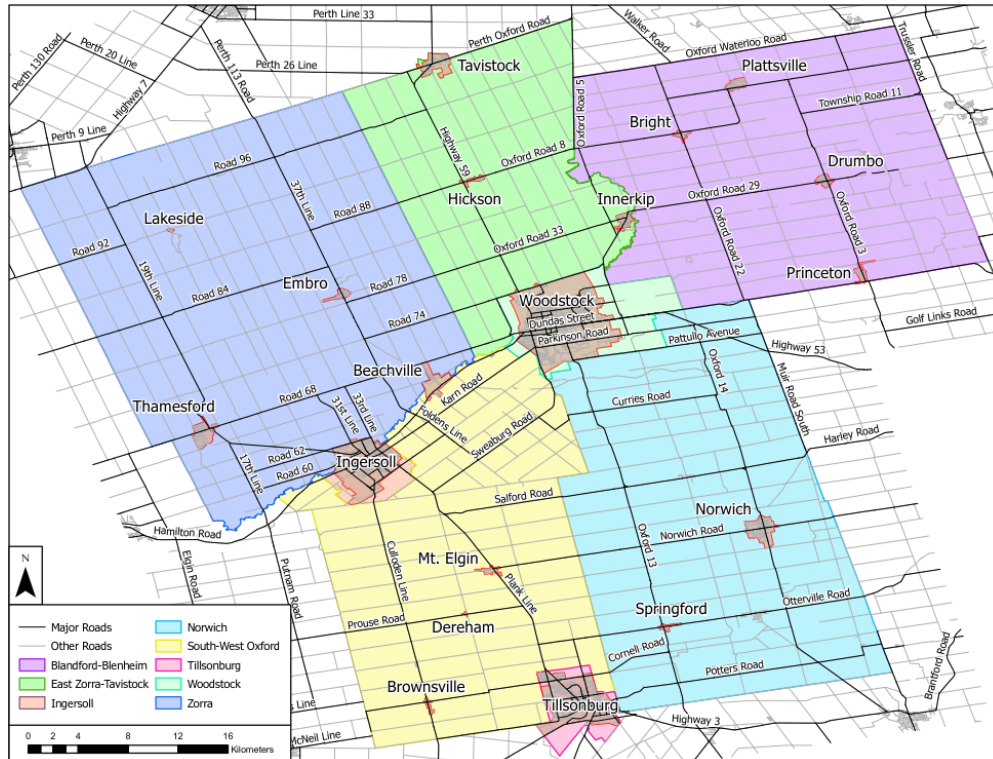


Figure ES-1.1: Water and Wastewater Master Plan Study Area

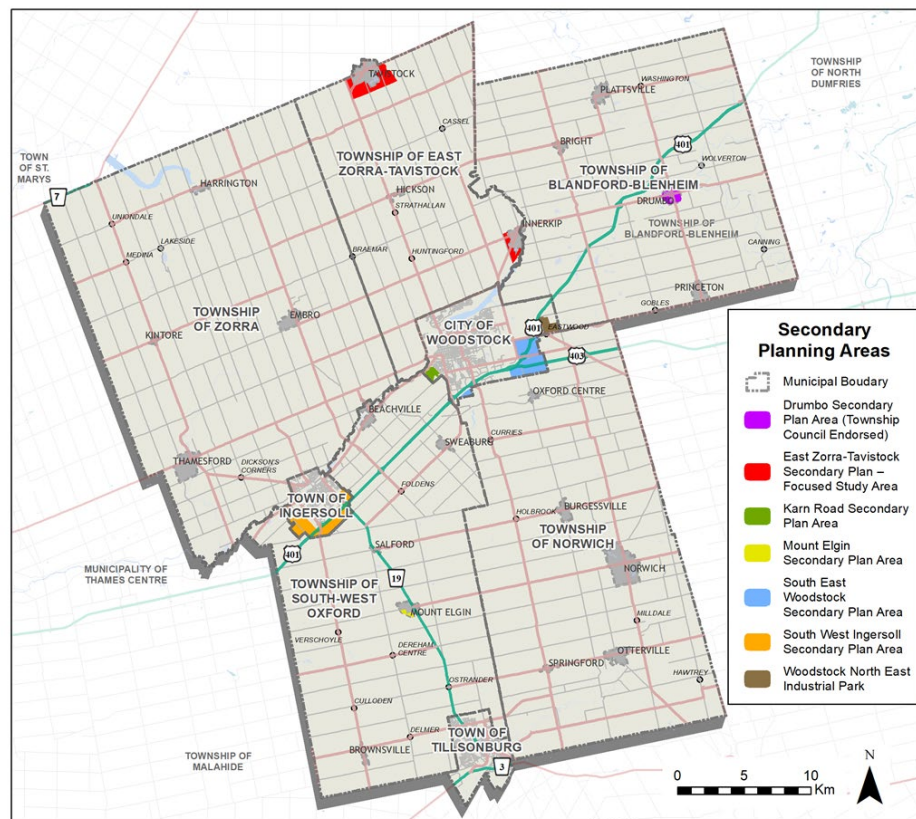


Figure ES-1.2: Oxford County's Secondary Planning Areas

2.0 MASTER PLANNING PROCESS

2.1 Class Environmental Assessment and Master Plan Process

The Master Plan process provides the basis for developing long-range water and wastewater servicing plans which integrates infrastructure requirements for existing / future land use and evaluates all reasonable servicing alternatives with considerations to natural, social, and economic environments (“triple bottom line”).

In this regard, preparation of the 2024 W/WW MP followed the Municipal Class Environmental Assessment (Class EA) process which is an approved planning and design process under the *Ontario Environmental Assessment Act, 1990*. The W/WW MP was developed following Approach #1 of the Municipal Class EA process which involves a broad scope and a high level of assessment of the projects identified in the Study Area. Projects were identified and classified into schedules based on the type of undertakings and related activities (A, A+, B, C).

The W/WW MP serves to satisfy Phases 1 (identify the problem) and 2 (identify alternative solutions to the problem) of the five-phase Municipal Class EA planning and design process. While the Class EA requirements for Schedule A and A+ were fulfilled through the above approach, other project-specific investigations may be required to satisfy additional Class EA requirements (Phases 3 & 4) before implementation of certain individual projects (i.e. Schedule B and C Class EA Studies).

2.2 Problem and Opportunity Statement

The County has defined the following as its statement of the problem/opportunity to be addressed by the W/WW MP:

“To identify preferred water and wastewater servicing strategies to meet Oxford’s growth needs to 2046 as well as provide effective on-going continuity to existing serviced settlement areas across Oxford County as appropriate.”

The W/WW MP will afford on-going servicing continuity for the communities (designated as settlement areas in the Oxford County Official Plan), including fully serviced (municipal) large urban centres and villages, which are intended to be the primary focus for future growth and development, as well as partially serviced villages. The W/WW MP was directed to assume that any rural villages that are privately serviced and/or rural clusters will remain on such servicing given growth is limited to minor infilling in these areas.

The 2024 W/WW MP was developed to service planned population and employment growth forecasts to the year 2046 which are based on the approved 2020 Oxford County Phase 1 Comprehensive Review. As part of the water and wastewater servicing assessment, a sensitivity analysis was also undertaken to evaluate the potential impacts of higher than forecasted growth on the County’s water and wastewater infrastructure needs. The purpose of this analysis was to provide the County with additional information and direction necessary to adjust the infrastructure improvement plans to accommodate higher than forecasted growth should it be identified through upcoming forecast updates, or otherwise materialize over the planning period.

3.0 PUBLIC CONSULTATION AND ENGAGEMENT

In keeping with the principles of the Municipal Class EA process, the W/WW MP featured a high degree of public and stakeholder involvement. The Class EA process requires stakeholder consultation to incorporate input from interested or impacted groups. Potential stakeholders included but were not limited to public, review agencies, Indigenous Communities, Oxford County Internal staff and Council departments, Area Municipality Councils and staff, and Railways, Transit Agencies, Utilities, etc.

The following summarizes the public announcements and consultation opportunities for public and agency input and participation in the study:

- Notice of Study Commencement in March 2022;
- News releases, radio ads, and social media posts;
- Two virtual Public Consultation Centres, in September 2022 and June 2023;
- Six in person consultation events at Canada's Outdoor Farm Show in Woodstock (September 2022), Ribfest in Tillsonburg (September 2022), Ingersoll Town Council Chambers (September 2022, March 2023), Oxford Council Chambers in Woodstock (March 2023), and Tillsonburg Council Chambers (March 2023);
- Updates and references to the study through the Oxford County website and "Speak-Up Oxford" (<https://oxfordcounty.ca/wwwmp>);
- Five advisory committee meetings with the Internal Technical Review Committee (InTAC) (April 2022, April & May 2023) and External Technical Review Committee (ExTAC) (April 2022, June 2023); and
- Presentations to Oxford County County.

Agencies, stakeholders, and Indigenous Communities were notified at key points in the study process, and they were encouraged to provide any information they felt was necessary for the Project Team to consider during the study. All comments received from agencies, stakeholders and Indigenous Communities were recorded and considered throughout the Master Plan process.

4.0 MASTER PLANNING PRINCIPLES

To review the issues and opportunities in the County with regards to water and wastewater servicing to the period to 2046, the following principles shown in the table below were developed by the County.

Table ES-4.1: Oxford County Water and Wastewater Master Planning Principles

2024 Water and Wastewater Master Plan
Integrate growth management planning and infrastructure servicing in a manner which ensures alignment with County’s Official Plan and Strategic Initiatives
Offer infrastructure solutions that recognize potential for growth beyond current planning horizons
Develop infrastructure systems which meet the County’s established asset level of service framework and MECP legislative requirements
Maximize the use of available existing capacity in infrastructure, while considering sustainable infrastructure expansions
Provide reliability, redundancy, and security in the infrastructure systems, including consideration of reserve capacity
Optimize pumping and storage infrastructure to maintain level of service under emergency conditions
Recommend proven, reliable, financially, and sustainable technologies that meet long-term servicing requirements
Recognize water conservation and efficiency measures to support environmental sustainability
Consider infrastructure operating and maintenance costs, including full lifecycle costing, to evaluate overall long-term financial implications and sustainability

5.0 WATER AND WASTEWATER SERVICING STRATEGY DEVELOPMENT

The process of determining Oxford County’s long term water and wastewater servicing needs involved a number of tasks and evaluation processes that were undertaken as part of the W/WW MP process. Some of the key tasks undertaken included:

- Analyzing planning information and undertaking growth sensitivity analyses;
- Establishing existing system conditions;
- Identifying issues and constraints for each system;
- Developing design criteria and projections of future water demands and wastewater flows;
- Assessing existing and future infrastructure capacity;
- Assessing risk;
- Developing servicing evaluation criteria;
- Developing alternative servicing concepts;
- Evaluating alternative servicing strategies; and
- Determining preferred servicing strategy, implementation, and phasing.

There are potential considerations that will influence the County’s ability to provide water and wastewater services with its current infrastructure and these will have to be considered in planning existing and future works as summarized in Table ES-5.1.

Table ES-5.1: Summary of Major Water and Wastewater System Considerations

Water System	Wastewater System
<ul style="list-style-type: none"> • Changes in water quality requirements • Variability in individual well yields • Power Interruptions • Climate Change – lowering of water table • Source water protection – human impacts on water quality and quantity 	<ul style="list-style-type: none"> • Changes to regulated effluent quality • Changes in discharge requirements due to the receiving stream’s assimilative capacity. • Power Interruptions • Climate Change – increased sewer infiltration/inflow, flood levels impacting facilities

6.0 PREFERRED WATER SERVICING STRATEGY

6.1 Overall Water Strategy Summary

The preferred water servicing strategy ensures the County’s municipal drinking water systems have adequate water supply, water treatment capacity, sufficient water system storage and pumping/transmission capabilities to the year 2046. The strategy was based on a combination of servicing alternatives which included:

- Optimizing existing well supply and water distribution conveyance infrastructure.
- Extending existing water distribution systems (watermain extensions, new booster pumping stations, new storage facilities, system interconnections) to service infill areas and employment lands.
- Developing new well supplies and expanding existing water treatment plant capacities.
- Ongoing source water protection initiatives and continuation of water conservation best management practices.
- Focusing growth and development within designated settlement areas, including fully serviced (municipal) large urban centers and villages as well as partially serviced (municipal) villages.

Specific alternatives for each drinking water system were then further developed based on the type of issue found within each system as summarized in Table ES-6.1.

Table ES-6.1: Summary of Solutions Reviewed for Water Issues

Issues	Servicing Solutions Reviewed
Water Supply	Additional standby production well Interconnection with another system Specialized well rehabilitation Water conservation

Issues	Servicing Solutions Reviewed
Water Treatment	Treatment at well site Treatment at centralized site (multiple wells) Treatment technologies (as applicable)
Water Distribution and Booster Pumping	Refurbish/upsized existing watermains New watermains Refurbish existing or build new BPS/standpipe Revise existing or create new pressure zones
Water Storage	In-ground Storage (and associated BPS) Elevated Storage
Risk	Backup power generation Source water protection and emerging water quality threats System redundancy and reliability

6.2 Servicing Requirements by System

As detailed in Table ES-6.2 (located on page ES-13), the preferred water servicing strategy has identified numerous water capital projects which are required to service existing needs and anticipated growth (infill areas, current/future secondary planning areas) in Oxford County to the year 2046. The overall water capital program from 2024 to 2046 has been estimated to be approximately \$245 million (2023 dollars).

Key servicing requirements for each municipal drinking water system (DWS) are as follow:

- **Ingersoll DWS**
 - Trunk watermain extensions/upsizing, New Booster Pumping Station, New Elevated Water Storage, Water Quality Improvement Pilot
- **Tillsonburg DWS**
 - Upgrades to Wells 3 and Well 7A treatment facilities, Replacements of Wells 1A and 2, 6A, and 11, Standby Power, Water Storage Expansion, Trunk watermain extensions/upsizing, Source Water Protection.
- **Woodstock DWS**
 - Standby Power, Southside Water Treatment Plant Replacement, Feedermain Twinning, Upgrades to Wells 6 and 9, Trunk watermain extensions/upsizing, New Water Booster Pumping Stations, Pressure Zone Boundary Adjustments, Source Water Protection.
- **Norwich**
 - **Oxford South DWS (Norwich, Springford and Otterville)**
 - Norwich Well 4 Water Treatment Plant Filtration Upgrades and Storage, New Standby Well supply.

- **Blandford Blenheim**
 - **Drumbo-Princeton DWS**
 - Standby power to existing wells, trunk watermain extensions/upsizing, new well supply, new Water treatment plant with filtration.
 - **Plattsville DWS**
 - Water treatment plant filtration upgrades, New Standby Well supply.
 - **Bright DWS**
 - Plattsville to Bright Water System Interconnection, Well 5 Decommissioning.
- **South-West Oxford**
 - **Mount Elgin DWS**
 - Mount Elgin Water Treatment Plant Optimization, Trunk Watermain Interconnection to Ingersoll Water System.
 - **Beachville DWS**
 - New Standby Well Supply and Water Storage.
 - **Brownsville DWS**
 - Water Quality Improvements, Water Treatment Plant Filtration.
 - **Dereham Centre DWS**
 - Water infrastructure refurbishment
- **East-Zorra Tavistock**
 - **Innerkip DWS**
 - Water infrastructure refurbishment.
 - **Tavistock DWS**
 - New Well Supply, New Treatment Plant with Onsite Storage, Trunk watermain extensions/upsizing, Water Treatment Plant Filtration Upgrades, Water Tower Rehabilitation.
 - **Hickson DWS**
 - Water infrastructure refurbishment.
- **Zorra**
 - **Thamesford DWS**
 - Trunk watermain extensions, Water Reservoir Contact Time Enhancements (reallocation to Storage).
 - **Embro DWS**
 - Water Reservoir Contact Time Enhancements (reallocation to Storage, Water Storage Enhancements at Embro Water Treatment Plant.
 - **Lakeside DWS**
 - Water infrastructure refurbishment.

7.0 PREFERRED WASTEWATER SERVICING STRATEGY

7.1 Overall Strategy Description

The preferred wastewater servicing strategy ensures the County’s municipal wastewater systems have sufficient wastewater conveyance capabilities and wastewater treatment capacity to the year 2046. The strategy was based on a combination of servicing alternatives which included:

- Optimizing existing wastewater collection and treatment plant infrastructure;
- Extending existing wastewater collection systems (sewer mains extensions, new/upsized forcemains, new/upgraded sewage pumping stations, system interconnections) to service infill areas and employment lands.
- Rehabilitating aging trunk sewers and initiating sewer system inflow and infiltration reduction best management practices.
- Expanding existing water treatment plant capacities.
- Focusing growth and development within designated settlement areas, including fully serviced (municipal) large urban centers and villages as well as partially serviced (municipal) villages.

Specific alternatives for each wastewater system were then further developed based on the type of issue found within each system as summarized in Table ES-7.1.

Table ES-7.1: Summary of Solutions Reviewed for Wastewater Issues

Component	Solutions Reviewed
Wastewater Collection and Conveyance	Trunk Sewers and Local Gravity Sewers Sanitary Pumping Station Forcemain Siphon (gravity flow underneath river) Infiltration and Inflow Control and Reduction
Wastewater Treatment	Headworks and Septage receiving facilities Liquid Treatment of wastewater (primary and secondary treatment) Tertiary Treatment (if required) to reduce nutrients in wastewater Wastewater effluent disinfection Biosolids Management (treatment, storage, disposal) Wet weather flow treatment (in some cases)

7.2 Detailed Servicing Requirements

As detailed in Table ES-7.2 (located on page ES-23), the preferred wastewater servicing strategy has identified numerous wastewater capital projects which are required to service existing needs and anticipated growth (infill areas, current/future secondary planning areas) in Oxford County to the year 2046. The overall wastewater 2024 - 2046 capital program is estimated at approximately \$329 million (2023 dollars).

Key servicing requirements for each municipal wastewater system (WWS) are as follow:

- **Ingersoll WWS**
 - Trunk sewer extensions/upsizing, New Sewage Pumping Stations, New Forcemains, New Trunk sewer river crossing, Wastewater Treatment Plant Headworks Upgrades.
- **Tillsonburg WWS**
 - Wastewater Treatment Plant Capacity Expansion (Phase 2), Trunk sewer rehabilitation, Upgrades to Sewage Pumping Stations, Forcemain Upgrades, Trunk sewer extensions/upsizing.
- **Woodstock WWS**
 - Trunk sewer extensions/upsizing, New Forcemains, New/Upgraded Sewage Pumping Stations, Wastewater Treatment Plant Upgrades, Brick Pond Trunk sewer realignment, Sewer Inflow and Infiltration Reduction.
- **Blandford Blenheim**
 - **Drumbo WWS**
 - Wastewater Treatment Plant Capacity Expansion (Phase 2), Standby power to SPS locations.
 - **Plattsville WWS**
 - Wastewater Treatment Plant Optimization, Lagoon biosolids removal and berm repair, Trunk sewer extensions, forcemain twinning and capacity review.
- **Norwich WWS**
 - Wastewater Treatment Plant Capacity Expansion (Phase 2), Lagoon biosolids removal and berm repair.
- **South-West Oxford**
 - **Mount Elgin WWS**
 - Wastewater Treatment Plant Capacity Expansion (Phase 3 / 4), Ingersoll to Mount Elgin Wastewater System Interconnection (Forcemain).
- **East-Zorra Tavistock**
 - **Tavistock WWS**
 - Wastewater Treatment Plant Capacity Expansion (Phase 2), Sewage Pumping Station Capacity Upgrades, Trunk sewer extensions/upsizing, Sewer System Inflow and Infiltration Reduction.
 - **Innerkip WWS**
 - Upsizing/Twinning of Forcemain to Woodstock.
- **Zorra**
 - **Thamesford WWS**
 - Wastewater Treatment Plant Upgrades.
 - **Embro WWS**
 - Sewage Pumping Station Capacity Upgrades, Upsizing/Twinning of Forcemain to Woodstock.

7.3 Supporting Policy and Strategic Projects

In addition to water and wastewater capital projects identified, a number of supporting policies and strategies were also identified to be developed over the Master Plan period as shown in Table ES-7.3.

Table ES-7.3: Total Cost of Policy Development and Strategic Projects

Project Description	1-5 Year	6-10 Year	+10 Year	Total
Fire Rated Systems Policy	\$50,000			\$50,000
Backup Power Prioritization Policy	\$35,000			\$35,000
Servicing Upgrades Policy	\$75,000	\$75,000	\$150,000	\$300,000
Connected Systems Rate Servicing Policy	\$75,000	\$75,000	\$75,000	\$225,000
2029 Water and Wastewater Master Plan	\$450,000			\$450,000
2034 Water and Wastewater Master Plan		\$450,000		\$450,000
2039 Water and Wastewater Master Plan			\$450,000	\$450,000
2044 Water and Wastewater Master Plan			\$450,000	\$450,000
2029 DC W/WW Technical Study		\$100,000		\$100,000
2034 DC W/WW Technical Study		\$100,000		\$100,000
2039 DC W/WW Technical Study			\$100,000	\$100,000
2044 DC W/WW Technical Study			\$100,000	\$100,000
TOTAL	\$685,000	\$800,000	\$1,325,000	\$2,810,000

8.0 IMPLEMENTATION

The preferred short and long term water and wastewater servicing strategies will be implemented in accordance with each project’s respective Class EA schedule:

- Schedule A/A+ projects will move directly forward to design and construction based on the designated schedule.
- Schedule B projects identified will proceed through separate stand-alone studies (a Project File Report will be completed for public filing) or as part of an integrated planning process under the Planning Act in order to satisfy Class EA requirements.
- Schedule C projects identified will continue to Phases 3 and 4 of the Class EA process and have an Environmental Study Report (ESR) completed for public filing. It is anticipated that these Schedule C projects will review and update Phases 1 and 2 of the Class EA process as part of the project scope.

During the subsequent steps of project implementation, primarily during detailed design, the following requirements will be considered:

- Finalization of property requirements;
- Refinement of infrastructure alignment, sizing, facility siting and costing;

- Refinement of construction methodologies;
- Completion of additional supporting investigations as required such as geotechnical, hydro-geotechnical and site specific environmental studies;
- Review and mitigation of potential construction related impacts; and
- Completion of all approval requirements including, but not limited to, provincial approvals (MECP, MNR), local municipality approvals (site plans, building permits), and conservation authority approvals.

Given the growth-related nature of the servicing strategies, these capital programs will also form the foundation for the water and wastewater components of Oxford County's Development Charges (DC) By-Law as part of the County's Integrated Growth Management Process shown below. Along with the Water and Wastewater Development Charges Technical Report, the 2024 Water and Wastewater Master Plan provides recommendations, provides supporting information, and identifies the capital requirements for the Oxford County DC By-Law which will be updated for 2024.

The respective projects identified in the 2024 W/WW MP will also provide a baseline for Oxford County's future capital budgets.

Table ES-6.2 - Detailed Water Capital Implementation Plan

Town of INGERSOLL WATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 1,500,000	\$ 375,000	\$ 375,000	\$ 750,000
960307 ING	Groundwater Modelling	\$ 170,000	\$ 170,000		
NEW	Water Quality Improvements	\$ 700,000	\$ 350,000	\$ 350,000	
260300 ING	Specialized Well Rehabilitation Program	\$ 430,000	\$ 185,000	\$ 30,000	\$ 215,000
DISTRIBUTION - VACANT LANDS WITHIN URBAN BOUNDRY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
960325 ING	Watermain Replacements	\$ 30,325,000	\$ 8,284,000	\$ 7,347,000	\$ 14,694,000
960335 ING	Watermain (Cast Iron) Replacements	\$ 2,140,000	\$ 2,140,000		
NEW	Thames Street South Trunk Watermain Extension from CNR to Holcroft	\$ 324,000	\$ 324,000		
SOUTH THAMES RESIDENTIAL AREA					
NEW	Trunk Watermain on Hamilton Road from internal lands to existing water distribution system (Oakwood ??)	\$ 900,000	\$ 900,000		
NEW	Trunk Watermain through internal lands from Hamilton Road to north of CNR (near Thomas Street/Wallace Line)	\$ 720,000	\$ 720,000		
DISTRIBUION - EMPLOYMENT AREAS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
WALLACE LINE INDUSTRIAL PARK					
960337 ING	Wallace Line Trunk Watermain from Robinson Road to north of CNR (D)	\$ 220,000	\$ 220,000		
	Wallace Line Trunk Watermain from Robinson Road to north of CNR (C)	\$ 1,980,000	\$ 1,980,000		
SOUTHWEST INDUSTRIAL PARK					
Second Feed	Wallace Line Second Feedermain from Robinson Road to Hwy 401 (D)	\$ 45,000		\$ 45,000	
NEW	Wallace Line Second Feedermain from Robinson Road to Hwy 401 (C)	\$ 450,000		\$ 450,000	
NEW	Second Feedermain Hwy 401 Crossing - Wallace Line to Union Street (D)	\$ 162,500		\$ 162,500	
NEW	Second Feedermain Hwy 401 Crossing - Wallace Line to Union Street (C)	\$ 1,625,000		\$ 1,625,000	
NEW	Union Road Trunk Watermain from Hwy 401 crossing to Curry Road (D)	\$ 128,250		\$ 128,250	
NEW	Union Road Trunk Watermain from Hwy 401 crossing to Curry Road (C)	\$ 1,282,500		\$ 1,282,500	
NEW	Curry Road Trunk Watermain from Union Road to future water tower site (D)	\$ 286,920		\$ 286,920	
NEW	Curry Road Trunk Watermain from Union Road to future water tower site (C)	\$ 2,869,200		\$ 2,869,200	
NEW	Elevated Water Storage Tank (D)	\$ 340,888			\$ 340,888
NEW	Elevated Water Storage Tank (C)	\$ 3,067,991			\$ 3,067,991
TOTAL		\$ 49,667,248	\$ 15,648,000	\$ 14,951,370	\$ 19,067,878

Tillsonburg WATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 1,500,000	\$ 375,000	\$ 375,000	\$ 750,000
260200 WATER TBURG	Specialized Well Rehabilitation Program	\$ 841,300	\$ 342,700	\$ 166,200	\$ 332,400
960200 TBURG	Well 7A - Filtration Upgrades (C)	\$ 1,500,000	\$ 1,500,000		
960201 TBURG	Well 3 Facility Upgrade (D)	\$ 415,000	\$ 415,000		
960201 TBURG	Well 3 Facility Upgrade (C)	\$ 2,300,000	\$ 2,300,000		
NEW	Backup Power for North Street Pumphouse	\$ 465,000	\$ 465,000		
NEW	Replacement of Well 6A	\$ 150,000	\$ 150,000		
960211 TBURG	Broadway Secondary Transmission Main Feed	\$ 1,309,000	\$ 1,309,000		
NEW	Mall Rd Replacement Wells for Wells 1a and 2	\$ 465,000		\$ 465,000	
NEW	Bell Mill Replacement Well for Well 11	\$ 642,000	\$ 642,000		
NEW	Well 12 capacity increase feasibility study	\$ 321,000			\$ 321,000
NEW	Well 4 and 5 Treatability Study	\$ 100,000	\$ 100,000		
DISTRIBUTION					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Secondary Elevated Storage	\$ 2,272,586			\$ 4,545,171
NEW	Watermain West Town Line from Simcoe Street to Pot	\$ 639,000		\$ 639,000	
960235 TBURG	Watermain Replacements	\$ 20,518,000	\$ 7,678,000	\$ 4,280,000	\$ 8,560,000
NEW	Victoria Wood Subdivision Watermain on Street I from Westin Drive to Street F	\$ 300,000	\$ 300,000		
NEW	Victoria Wood Subdivision Watermain on Grandview Drive (near Quarter Townline) West to Street A then N to Concession Street W.	\$ 675,000	\$ 675,000		
960213 TBURG	Cranberry Road Watermain Extension from Beckett Blvd North to Town Limits (C)	\$ 1,309,000	\$ 1,309,000		
NEW	North End Watermain Looping	\$ 1,711,800	\$ 1,711,800		

Tillsonburg WATER SYSTEM

DISTRIBTUION - EMPLOYMENT AREAS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
Innovation Park Industrial Lands					
NEW	Watermain looping VanNorman St watermain loop (off HWY 3)	\$ 540,000			\$ 540,000
Rokeby Sideroad Industrial Lands					
NEW	Vienna Road Watermain Extension from Rouse Street to South on Vienna Rd.	\$ 271,250		\$ 271,250	
TOTAL		\$ 40,517,521	\$ 19,272,500	\$ 6,196,450	\$ 15,048,571

City of WOODSTOCK WATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 2,000,000	\$ 500,000	\$ 500,000	\$ 1,000,000
NEW	Strik Drain Stormwater Management Facility	\$ 550,000	\$ 550,000		
260100 WDSTK	Specialized Well Rehabilitation Program	\$ 2,000,000	\$ 500,000	\$ 500,000	\$ 1,000,000
960159 WDSTK	Thornton to Woodstock Feedermain Replacement (D)	\$ 1,000,000	\$ 1,000,000		
960159 WDSTK	Thornton to Woodstock Feedermain Replacement (C)	\$ 10,000,000	\$ 10,000,000		
NEW	Zone 1 Pressure Reducing Valve Control Building to Southside Supply	\$ 300,000	\$ 300,000		
NEW	Thornton to HWY 401 crossing Feedermain Upgrade (RELINING 401 CROSSING)	\$ 1,206,000	\$ 1,206,000		
NEW	Thornton WTP High Lift Pumping Upgrades	\$ 100,000		\$ 100,000	
	Well 9 and Well 6 upgrades at Southside WTP	\$ 350,000		\$ 350,000	
NEW	Southside WTP Revitalization Study	\$ 200,000		\$ 200,000	
NEW	Tower Generators	\$ 300,000		\$ 300,000	
DISTRIBUTION - VACANT LANDS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
Karn Rd Secondary Plan Area					
960154 WDSTK	Karn Rd (Zone 6) Booster Pumping Station (D)	\$ 400,000	\$ 400,000		
960154 WDSTK	Karn Rd (Zone 6) Booster Pumping Station (C)	\$ 4,000,000	\$ 4,000,000		
960134 WDSTK	Watermain from Karn Rd Booster Pumping Station west to Anderson Street, east along Karn Road and looping back to Booster Pumping Station	\$ 1,845,000	\$ 1,845,000		
NEW	Realignment of Zone 1 supply transmission main and 450 mm reservoir drain through Karn Road Subdivision	\$ 450,000	\$ 450,000		
Existing Distribution System					
960120 WDSTK	Decommissioning of 0.8 MG Bowerhill Reservoir	\$ 750,000	\$ 750,000		
NEW	Bowerhill Reservoir Expansion (Zone 1)	\$ 6,817,757			\$ 6,817,757
NEW	Zone 2 Second Feedermain Trunk from Karn Road Booster Pumping Station to new expanded Zone 2 (northwest of Athlone service area)	\$ 270,000	\$ 270,000		
960141 WDSTK	Watermain Replacements (City)	\$ 38,047,000	\$ 9,547,000	\$ 9,500,000	\$ 19,000,000
960153 WDSTK	Watermain Replacements (County)	\$ 13,240,000	\$ 3,310,000	\$ 3,310,000	\$ 6,620,000
960155 WDSTK	Zone 3 Booster Pumping Station (D)	\$ 376,026		\$ 376,026	
960155 WDSTK	Zone 3 Booster Pumping Station (C)	\$ 2,506,842		\$ 2,506,842	
960163 WDSTK	County Road 17 / 11 th Line Watermain (D)	\$ 144,000		\$ 144,000	
960163 WDSTK	County Road 17 / 11 th Line Watermain (C)	\$ 1,440,000		\$ 1,440,000	
960164 WDSTK	11th Line Watermain Replacement (D)	\$ 144,000		\$ 144,000	
960164 WDSTK	11th Line Watermain Replacement (C)	\$ 1,440,000		\$ 1,440,000	
NEW	Zone 3 Pressure Reducing Valve Control Building to northern Zone 1 area (near Nellis Booster Pumping Station)	\$ 200,000		\$ 200,000	
East Woodstock Secondary Plan Area					
NEW	Township Rd 3 Waterman from Oxford Road 4 to EPA woodlot area	\$ 1,240,000	\$ 1,240,000		

City of WOODSTOCK WATER SYSTEM

DISTRIBUTION - EMPLOYMENT LANDS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
North East Industrial Park					
960135 WDSTK	Toyota Easement Watermain from Elevated Storage tower to west side of Hwy 401 (C)	\$ 1,096,000	\$ 1,096,000		
NEW	Toyota Easement Hwy 401 Watermain Crossing (C)	\$ 1,116,000	\$ 1,116,000		
NEW	Easement Watermain from east side of Hwy 401 to west limit of Corlett site (D)	\$ 43,000	\$ 43,000		
NEW	Easement Watermain from east side of Hwy 401 to west limit of Corlett site (C)	\$ 388,000	\$ 388,000		
NEW	Street C Watermain from Corlett site to Blandford Road (D)	\$ 12,000	\$ 12,000		
NEW	Street C Watermain from Corlett site to Blandford Road (C)	\$ 112,000	\$ 112,000		
NEW	Blandford Rd Watermain from Street C to Township Road #2 (D)	\$ 23,000			\$ 23,000
NEW	Blandford Rd Watermain from Street C to Township Road #2 (C)	\$ 207,000			\$ 207,000
South East Industrial Park					
960135 WDSTK	PHASE II				
	WM 400 mm on Patullo (~ 150 m east of Alyea Street/ opposite SPS to Southwest Limit of study area) 790 meters & WM 400 mm on Patullo (Southwest Limit of study area to Middletown Line) 944 meters (D)	\$ 164,000	\$ 164,000		
	WM 400 mm on Patullo (~ 150 m east of Alyea Street/ opposite SPS to Southwest Limit of study area) 790 meters & WM 400 mm on Patullo (Southwest Limit of study area to Middletown Line) 944 meters (C)	\$ 1,475,000	\$ 1,475,000		
	Middletown Line Watermain from Patullo Avenue to Street A (D)	\$ 7,000	\$ 7,000		
	Middletown Line Watermain from Patullo Avenue to Street A (C)	\$ 65,000	\$ 65,000		
	PHASE III				
	Street A service corridor to Street B (D)	\$ 10,000			\$ 10,000
	Street A service corridor to Street B (C)	\$ 100,000			\$ 100,000
	Street A Watermain from Middletown Line to Service Corridor (D)	\$ 10,000			\$ 10,000
	Street A Watermain from Middletown Line to Service Corridor (C)	\$ 100,000			\$ 100,000
	Service corridor Watermain from Street A to Hwy 403 (D)	\$ 4,000			\$ 4,000
	Service corridor Watermain from Street A to Hwy 403 (C)	\$ 36,000			\$ 36,000
	Street B Watermain from Street A to Patullo Avenue (D)	\$ 5,000			\$ 5,000
	Street B Watermain from Street A to Patullo Avenue (C)	\$ 45,000			\$ 45,000
TOTAL		\$ 96,334,625	\$ 40,346,000	\$ 21,010,868	\$ 34,977,757

Township of NORWICH WATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 300,000	\$ 75,000	\$ 75,000	\$ 150,000
260400 Water Townships	Specialized Well Rehabilitation Program	\$ 140,000	\$ 20,000	\$ 40,000	\$ 80,000
NORWICH					
NEW	New Standpipe at Main St WTF (Well 4)	\$ 2,272,586		\$ 2,272,586	
960429 Manganese Filtration Townships	New Filtration Facility at Main St WTF (D)	\$ 361,454	\$ 361,454		
960429 Manganese Filtration Townships	New Filtration Facility at Main St WTF (C)	\$ 3,253,087		\$ 3,253,087	
NEW	New Water Supply	\$ 1,571,400			\$ 1,571,400
DISTRIBUTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
960400 Townsh	Watermain Replacements (Townships)	\$ 1,953,000	\$ 1,953,000		
960402 New As	New Asset Supply/Linear Watermain Replacements (Townships)	\$ 600,000	\$ 150,000	\$ 150,000	\$ 300,000
TOTAL		\$ 10,451,527	\$ 2,559,454	\$ 5,790,673	\$ 2,101,400

Township of Blandford Blenheim WATER SYSTEMS

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034-2046
NEW	Water Efficiency/Buy-Back Program	\$ 300,000	\$ 75,000.00	\$ 75,000.00	\$ 150,000.00
960429 Manganese Filtration Townships	Manganese Filtration (Townships) - Plattsville (D)	\$ 426,159	\$ 426,159.00		
960429 Manganese Filtration Townships	Manganese Filtration (Townships) - Plattsville (C)	\$ 2,841,059	\$ 2,841,059.00		
BRIGHT					
NEW	Bright to Plattsville Interconnecting Watermain	\$ 4,417,500			\$ 4,417,500
NEW	Bright Well 5 Abandonment Study	\$ 150,000			\$ 150,000
PLATTSVILLE					
NEW	Land Acquisition for new WTF for Manganese Treatment	\$ 400,000	\$ 400,000		
NEW	New Well Supply	\$ 1,571,400			\$ 1,571,400
NEW	Backup Generation at WTF	\$ 427,646		\$ 427,646	
DRUMBO-PRINCETON					
NEW	New Well Supply	\$ 1,167,000	\$ 1,167,000		
NEW	Provide backup generation to Wells 1 and 2A	\$ 300,000	\$ 150,000	\$ 150,000	
NEW	Water Treatment Plant Land Acquisition		\$ 400,000		
NEW	Water Treatment Plant Relocation (D)		\$ 701,283		
NEW	Water Treatment Plant Relocation (C)		\$ 4,675,217		
DISTRIBUTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034-2046
NEW	Plattsville N Boundary Trunk Watermain Extension Hoffstetter Rd North to limit	\$ 333,250	\$ 333,250		
NEW	Applewood Trunk Watermain Upsizing	\$ 82,500	\$ 82,500		
NEW	Princeton Roper Street Trunk Watermain Upsizing	\$ 232,250	\$ 232,250		
960400 Townships	Watermain Replacements (Townships)	\$ 150,000	\$ 150,000		
TOTAL		\$ 18,575,264.00	\$ 11,633,718.00	\$ 652,646.00	\$ 6,288,900.00

Township of South-West Oxford WATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 300,000	\$ 75,000	\$ 75,000	\$ 150,000
260400 Water Townships	Specialized Well Rehabilitation Program	\$ 100,000	\$ 10,000	\$ 30,000	\$ 60,000
960422 TWSP	Water Quality Improvements (Brownsville)	\$ 100,000	\$ 100,000		
960429 Manganese Filtration Townships	Manganese Filtration (Brownsville)	\$ 2,565,878		\$ 2,565,878	
MOUNT ELGIN					
NEW	Graydon Facility Enhancement / Optimization	\$ 200,000	\$ 200,000		
NEW	Ingersoll to Mt Elgin Watermain Connection (D)	\$ 1,093,575			\$ 1,093,575
BEACHVILLE					
NEW	Additional Well Supply and Standpipe	\$ 1,935,014		\$ 1,935,014	
TOTAL		\$ 6,294,467	\$ 385,000	\$ 4,605,892	\$ 1,303,575

Township of East Zorra-Tavistock WATER SYSTEMS

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 300,000	\$ 75,000	\$ 75,000	\$ 150,000
260400 Water Townships	Specialized Well Rehabilitation Program	\$ 100,000	\$ 10,000	\$ 30,000	\$ 60,000
960429 Manganese Filtration Townships	Manganese Filtration (Townships)	\$ 5,592,871		\$ 5,592,871	
TAVISTOCK					
NEW	Tower CT Enhancement Study	\$ 30,000	\$ 30,000		
960437-TAV	New Well Supply - Well #4 and Storage (D)	\$ 511,081	\$ 511,081		
960437-TAV	New Well Supply - Well #4 and Storage (C)	\$ 4,599,729	\$ 4,599,729		
960462-TAV	Water Tower Rehabilitation and Repainting (D)	\$ 400,000		\$ 400,000	
960462-TAV	Water Tower Rehabilitation and Repainting (C)	\$ 3,600,000		\$ 3,600,000	
DISTRIBUTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
960400 Township Distribution Replacement	Watermain Replacements (Townships)	\$ 1,895,400	\$ 1,053,000	\$ -	\$ 842,400
960402 New Asset Supply/Linear	New Asset Supply/Linear Watermain Replacements (Townships)	\$ 440,000	\$ 170,000	\$ 90,000	\$ 180,000
TOTAL		\$ 17,469,081	\$ 6,448,810	\$ 9,787,871	\$ 1,232,400

Township of ZORRA WATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Water Efficiency/Buy-Back Program	\$ 300,000	\$ 75,000	\$ 75,000	\$ 150,000
960400 Water Townships	Specialized Well Rehabilitation Program	\$ 130,000	\$ 10,000	\$ 40,000	\$ 80,000
THAMESFORD					
NEW	Reservoir and Tower CT Enhancement Study	\$ 300,000	\$ 300,000		
EMBRO					
NEW	Reservoir CT Enhancement Upgrades	\$ 300,000	\$ 300,000		
NEW	Embros - Storage Expansion	\$ 568,146		\$ 568,146	
DISTRIBUTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
960400 Township Distribution Replacement	Watermain Replacements (Townships)	\$ 3,342,000	\$ 867,000	\$ 825,000	\$ 1,650,000
NEW	Watermain Trunk Extension on Oxford Road 2 to west of Banner Road (Thamesford)	\$ 1,007,500	\$ 1,007,500		
Total		\$ 5,947,646	\$ 2,559,500	\$ 1,508,146	\$ 1,880,000

Table ES-7.2 - Detailed Wastewater Capital Implementation Plan

Town of INGERSOLL WASTEWATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Sanitary Trunk Sewer Infiltration and Inflow Reduction	\$ 17,200,000	\$ 4,300,000	\$ 4,300,000	\$ 8,600,000
NEW	WWTP Headworks Upgrades	\$ 14,000,000			\$ 14,000,000
NEW	Digester Biogas Project	\$ 450,000	\$ 450,000		
COLLECTION					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
950330 ING	Sanitary Sewer Replacements	\$ 23,639,000	\$ 5,117,000	\$ 6,174,000	\$ 12,348,000
950332 ING	Sanitary Sewer Relining	\$ 3,040,000	\$ 760,000	\$ 760,000	\$ 1,520,000
NEW	Second Sanitary Trunk Crossing of Thames River	\$ 1,372,500		\$ 150,000	\$ 1,222,500
SOUTH THAMES RESIDENTIAL AREA					
NEW	Hamilton Road Sanitary Sewer from service lands to east of Ingersoll Street and north to existing 675 mm Trunk Sewer	\$ 475,000	\$ 475,000		
NEW	Sanitary Sewer through internal lands from Hamilton Road to north of CNR (near Thomas Street/Wallace Line)	\$ 760,000	\$ 760,000		
COLLECTION - EMPLOYMENT LANDS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
WALLACE LINE INDUSTRIAL PARK					
950336 - ING SW INDUSTRIAL PARK	Wallace Line Sanitary Sewer from Robinson Road to north of CNR (D)	\$ 110,000	\$ 110,000		
950336 - ING SW INDUSTRIAL PARK	Wallace Line Sanitary Sewer from Robinson Road to north of CNR (C)	\$ 1,100,000	\$ 1,100,000		
SOUTHWEST INDUSTRIAL PARK (areas B1a,B1b,B1c,B2,C1)					
NEW	Union Road Sanitary Sewer from Culloden Line to Curry Road	\$ 527,800		\$ 527,800	
NEW	Curry Road Sanitary Sewer from Union Road to west limit of CPR	\$ 964,100		\$ 964,100	
NEW	CPR Easement Sanitary Sewer from Curry Road to West Sewage Pumping Station - south of Hwy 401	\$ 557,525		\$ 557,525	
NEW	West Sewage Pumping Station - south of Hwy 401 (area B1a)	\$ 5,625,000		\$ 5,625,000	
NEW	Easement Forcemain Hwy 401 crossing from West Sewage Pumping Station to Clarke Road area (existing system)	\$ 925,750		\$ 925,750	
NEW	Curry Road Sanitary Sewer from east limit of CPR to Plank Line	\$ 923,025		\$ 923,025	
NEW	Plank Line Sewage Pumping Station (south of Hwy 401) (in area C1)	\$ 4,500,000		\$ 4,500,000	
NEW	Easement Forcemain from Plank Line Sewage Pumping Station to West Sewage Pumping Station	\$ 895,125		\$ 895,125	
TOTAL		\$ 77,064,825	\$ 13,072,000	\$ 26,302,325	\$ 37,690,500

Tillsonburg WASTEWATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Sanitary Trunk Sewer Infiltration and Inflow Reduction	\$ 1,200,000	\$ 300,000	\$ 300,000	\$ 600,000
NEW	Tillsonburg Wastewater Treatment Plant Phase II Capacity Expansion (D)	\$ 1,387,448			\$ 1,387,448
NEW	Tillsonburg Wastewater Treatment Plant Phase II Capacity Expansion (C)	\$ 13,874,485			\$ 13,874,485
NEW	Climate change resiliency study (flooding/barricades)	\$ 150,000			\$ 150,000
NEW	Sanitary Gravity Trunk Line replacement and upsizing from Vienna Rd to Wastewater Treatment Plant	\$ 600,000	\$ 200,000	\$ 400,000	
NEW	Gravity inlet trunk sewer replacement to WWTP	\$ 127,500	\$ 127,500		
COLLECTION					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
950226 TBURG	Sanitary Sewer Replacements	\$ 14,956,000	\$ 5,690,000	\$ 1,788,000	\$ 7,478,000
NEW	Stoney Creek Trunk Sewer Rehabilitation from Quarter Town Line to Concession Street West	\$ 600,000	\$ 200,000	\$ 400,000	
NEW	John Pound forcemain replacement and upsizing	\$ 575,000	\$ 575,000		
NEW	John Pound SPS capacity enhancements (D)	\$ 118,000	\$ 118,000		
NEW	John Pound SPS capacity enhancements (C)	\$ 214,000		\$ 214,000	
950216 TBURG	Cranberry Road Sanitary Trunk extension on Tilson Ave from North of Beckett Blvd to North Town Limit	\$ 856,000		\$ 856,000	
NEW	Loraine Ave Sanitary Trunk Upsizing	\$ 577,500			\$ 577,500
COLLECTION - EMPLOYMENT LANDS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
Rokeby Sideroad Industrial Lands					
NEW	Rouse St SPS upgrades	\$ 1,500,000		\$ 1,500,000	
TOTAL		\$ 36,735,933	\$ 7,210,500	\$ 5,458,000	\$ 24,067,433

City of WOODSTOCK WASTEWATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Sanitary Trunk Sewer Infiltration and Inflow Reduction	\$ 2,000,000	\$ 500,000	\$ 500,000	\$ 1,000,000
NEW	Woodstock WWTP Operational Upgrades	\$ 12,500,000		\$ 12,500,000	
NEW	Thames Valley SPS Capacity Review (D)	\$ 200,000		\$ 200,000	
NEW	Thames Valley SPS (C)	\$ 2,052,000			\$ 2,052,000
Linear Existing Projects					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Brick Pond Sanitary Trunk Sewer Re-alignment Class EA Study			\$ 214,000	
NEW	Brick Pond Sanitary Trunk Sewer Re-alignment Class	\$ 4,066,000		\$ 4,066,000	
950173 WDSTK	Sanitary Sewer Replacement (OR 59 & Fairway) - (D)	\$ 25,000	\$ 25,000		
950173 WDSTK	Sanitary Sewer Replacement (OR 59 & Fairway) - (C)	\$ 225,000	\$ 225,000		
950174 WDSTK	Sanitary Sewer Replacements - County Projects	\$ 6,060,000	\$ 2,760,000	\$ 1,100,000	\$ 2,200,000
950158 WDSTK	Sanitary Sewer Replacements - City Projects	\$ 39,987,000	\$ 9,987,000	\$ 10,000,000	\$ 20,000,000
950162 WDSTK	11th Line Sanitary Sewer (D)	\$ 62,500		\$ 62,500	
950162 WDSTK	11th Line Sanitary Sewer (C)	\$ 625,000		\$ 625,000	
950140 WDSTK	Northwest Trunk Upsizing	\$ 250,000	\$ 250,000		
COLLECTION - VACANT LANDS					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
Karn Rd Secondary Plan Area					
960154 WDSTK	Gravity / Siphon Upsize	\$ 545,000		\$ 545,000	
East Woodstock Secondary Plan Area					
NEW	East Trunk Sewer	\$ 907,500	\$ 907,500		
NEW	Extension of East Trunk Sewer	\$ 775,000	\$ 775,000		
950163 WDSTK	Lansdowne Sewage Pumping Station (C)	\$ 3,000,000	\$ 3,000,000		
NEW	West Trunk Sewer	\$ 742,500	\$ 742,500		

City of WOODSTOCK WASTEWATER SYSTEM

Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
North East Industrial Park					
950150 WDSTK	Sewage Pumping Station A (D)	\$ 228,000	\$ 228,000		
	Sewage Pumping Station A (C)	\$ 2,000,000	\$ 2,000,000		
	Dundas Street Forcemain from Houser's Lane (MH SA 992) to Water Tower site (C)	\$ 2,100,244	\$ 2,100,244		
	Toyota Easement Forcemain from Water Tower Site to west side of Hwy 401 (C)	\$ 424,696	\$ 424,696		
	Hwy 401 Forcemain Crossing (C)	\$ 424,080	\$ 424,080		
	Street C Forcemain from east side of Hwy 401 to SPS A (Blandford Road) (D)	\$ 90,000	\$ 90,000		
	Street C Forcemain from east side of Hwy 401 to SPS A (Blandford Road) (C)	\$ 813,000	\$ 813,000		
	Blandford Road Forcemain from Street C to SPS A (D)	\$ 20,000	\$ 20,000		
	Blandford Road Forcemain from Street C to SPS A (C)	\$ 180,000	\$ 180,000		
	Southeast Sanitary Trunk Oversizing Capacity Assessment	\$ 100,000	\$ 100,000		
	Southeast Sanitary Trunk Oversizing SA752051-SA751578 west of Butler	\$ 3,342,000			\$ 3,342,000
South East Industrial Park					
950152 WDSTK	PHASE II				
	Patullo Avenue Sanitary main from Alyea SPS to southwest limit of South East Secondary Plan Area (D)	\$ 100,000	\$ 100,000		
	Patullo Avenue Sanitary main from Alyea SPS to southwest limit of South East Secondary Plan Area (C)	\$ 917,000	\$ 917,000		
	Patullo Avenue Sanitary main from South East Secondary Plan Area to Middletown Line (D)	\$ 50,000	\$ 50,000		
	Patullo Avenue Sanitary main from South East Secondary Plan Area to Middletown Line (C)	\$ 431,000	\$ 431,000		
	Middletown Line Sanitary main from Patullo Avenue to Street A (C)	\$ 169,000	\$ 169,000		
950151 WDSTK	Southeast Trunk Sanitary Condition assessment	\$ 100,000	\$ 100,000		

City of WOODSTOCK WASTEWATER SYSTEM

	Patullo Avenue South East Sanitary Trunk Oversizing from South Trunk Sewer (MH SA754367) to South Trunk Sewer (MH SA755111) (D)	\$ 189,945			\$ 189,945
	Patullo Avenue South East Sanitary Trunk Oversizing from South Trunk Sewer (MH SA754367) to South Trunk Sewer (MH SA755111) (C)	\$ 1,899,450			\$ 1,899,450
	TOTAL	\$ 87,814,915	\$ 27,319,020	\$ 29,812,500	\$ 30,683,395

Township of NORWICH WASTEWATER SYSTEM

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
	Sanitary Trunk Sewer Infiltration and Inflow Reduction	\$ 5,160,000	\$ 1,290,000	\$ 1,290,000	\$ 2,580,000
NORWICH					
950409-NOR	Norwich Lagoon Biosolids Clean-out	\$ 1,000,000		\$ 1,000,000	
950410 -NOR	Norwich Lagoon Berm Repair	\$ 100,000	\$ 100,000		
950412-NOR	Norwich Wastewater Treatment Plant Capacity Expansion - Phase II (D)	\$ 1,250,000	\$ 1,250,000		
950412-NOR	Norwich Wastewater Treatment Plant Capacity Expansion - Phase II (C)	\$ 10,500,000	\$ 10,500,000		
COLLECTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NORWICH					
950450-NOR	Sanitary Sewer Replacements	\$ 3,915,000	\$ 1,200,000	\$ 905,000	\$ 1,810,000
TOTAL		\$ 21,925,000	\$ 14,340,000	\$ 3,195,000	\$ 4,390,000

Township of Blandford Blenheim WASTEWATER SYSTEMS

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
PLATTSVILLE					
950607-PLAT	Plattsville Lagoon Biosolids Clean-out	\$ 910,000	\$ 910,000		
950608-PLAT	Plattsville Lagoon Berm Repair	\$ 100,000	\$ 100,000		
NEW	Plattsville WWTP Operational Enhancement	\$ 1,000,000	\$ 1,000,000		
DRUMBO					
950810-DRUMBO	Drumbo Wastewater Treatment Capacity Expansion (Phase II) - (D)	\$ 100,000	\$ 100,000		
950810-DRUMBO	Drumbo Wastewater Treatment Capacity Expansion (Phase II) - (C)	\$ 500,000	\$ 500,000		
COLLECTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
PLATTSVILLE					
950650-PLAT	Plattsville Sanitary Sewer Replacements	\$ 2,932,800	\$ 1,497,600	\$ 478,400	\$ 956,800
NEW	Plattsville FM Twinning and SPS capacity review			\$ 125,000	
TOTAL		\$ 5,667,800	\$ 4,107,600	\$ 603,400	\$ 956,800

Township of South-West Oxford WASTEWATER SYSTEMS

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
MOUNT ELGIN					
950905 MT ELGIN	Mt. Elgin Wastewater Treatment Plant Capacity Expansion Phase 3 and 4 (C)	\$ 2,679,600	\$ 2,679,600		
NEW	Sanitary Forcemain Connection to Ingersoll	\$ 10,990,000			\$ 10,990,000
COLLECTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
MOUNT ELGIN					
NEW	Sanitary Sewer Upgrades	\$ 400,000	\$ 100,000	\$ 100,000	\$ 200,000
NEW	Forcemain Upsizing	\$ 891,250	\$ 891,250		
TOTAL		\$ 14,960,850	\$ 3,670,850	\$ 100,000	\$ 11,190,000

Township of East Zorra-Tavistock WASTEWATER SYSTEMS

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
NEW	Sanitary Trunk Sewer Infiltration and Inflow Reduction	\$ 8,600,000	\$ 2,150,000	\$ 2,150,000	\$ 4,300,000
TAVISTOCK					
950504-TAV	Tavistock Wastewater Treatment Plant Capacity Expansion to x m3/d (D)	\$ 5,250,000	\$ 5,250,000		
950504-TAV	Tavistock Wastewater Treatment Plant Capacity Expansion to x m3/d (C)	\$ 35,000,000	\$ 35,000,000		
NEW	Tavistock Lagoon Cell Clean Out	\$ 3,400,000			\$3,400,000
INNERKIP					
NEW	Woodstock to Innerkip Interconnecting Sanitary Forcemain Twinning	\$ 6,480,000	\$ 6,480,000		
COLLECTION - VACANT LANDS WITHIN URBAN BOUNDARY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
TAVISTOCK					
950550-TAV	Tavistock Sanitary Sewer Replacements	\$ 3,141,000	\$ 1,821,000	\$ 440,000	\$ 880,000
950513-TAV	William Street Sewage Pumping Station Capacity Expansion (D)	\$ 725,000	\$ 725,000		
950513-TAV	William Street Sewage Pumping Station Capacity Expansion (C)	\$ 6,525,000	\$ 6,525,000		
Total		\$ 69,121,000	\$ 57,951,000	\$ 2,590,000	\$ 8,580,000

Township of ZORRA WASTEWATER SYSTEMS

CAPACITY					
Project ID	Project Description	Cost	2024-2028	2029-2033	2034 - 2046
THAMESFORD					
950718 THAMES	WWTP Upgrades (C)	\$ 3,800,000	\$ 3,800,000		
EMBRO					
NEW	Woodstock to Embro Interconnecting Sanitary Forcemain - enhancements	\$ 11,625,000			\$ 11,625,000
NEW	Embro SPS - enhancements	\$ 750,000			\$ 750,000
TOTAL		\$ 16,175,000	\$ 3,800,000	\$ -	\$ 12,375,000