



**COMMUNITY STORMWATER MASTER  
PLAN UPDATE**  
Municipal Class Environmental Assessment

October 2023

Prepared for:  
Middlesex Centre

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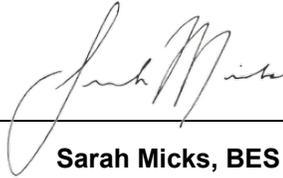
## Community Stormwater Master Plan Update

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# **1 Introduction and Study Background**

## **1.1 Background**

The Municipality of Middlesex Centre retained Stantec Consulting Ltd. to complete an update of the Middlesex Centre Settlement Area Stormwater Master Plan (2020 Master Plan), previously issued in July 2020.

The objective of the 2020 Master Plan was to identify necessary stormwater drainage system improvements to better service the existing community, and to provide a stormwater servicing strategy to accommodate future growth and development. The overall study area includes ten Settlement Areas: Arva; Ballymote; Birr; Bryanston; Denfield; Ilderton; Komoka; Kilworth; Lobo and Melrose. The objectives of the 2020 Master Plan process were to:

- Provide adequate drainage servicing and stormwater treatment for existing and future development areas
- Protect the natural environment
- Reduce negative impacts on affected properties
- Minimize stormwater servicing costs.

The purpose of this update of the Master Plan is to revise the recommended solution for the Kilworth-Komoka Settlement Area, specifically regarding the Komoka Drain No. 1.

The existing municipal drains are not designed in accordance with the current Municipal storm sewer design standards. Runoff from most of this catchment is conveyed by Komoka Drain No. 1 and the Tunks Lane Municipal Drain to privately-owned ponds located south of Glendon Drive. Furthermore, SWM reports for previously completed developments in the Komoka Settlement Area suggest that the local soils are highly permeable, resulting in lower runoff volumes than other similar urbanized areas located within the municipality.

The 2020 Master Plan identified stormwater infrastructure required to mitigate the possibility of flooding and erosion, provide adequate stormwater treatment, and protect against impacts to the downstream receiving water systems.



### **1.1.1 2020 Middlesex Centre Settlement Area Stormwater Master Plan Preferred Solution**

The 2020 Master Plan evaluated six alternative solutions for improvements to the Komoka Drain No. 1. The Master Plan recommended combining the following two alternatives as the preferred alternative (Alternative 6):

- **Alternative 3 – Pond Location 1 with Komoka Road Outlet** - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor untreated flows are conveyed southward to a proposed SWM pond at Location 1, which provides both water quality treatment and peak flow control. The proposed pond discharges to a proposed outlet storm sewer on Komoka Road that conveys the treated flows southward to the Thames River. The proposed storm sewer must cross the existing natural gas pipeline easements and a new outfall to the Thames River must be constructed.
- **Alternative 5 – Pond Location 6 with Thames River Outlet** - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor flows are conveyed southward on Komoka Road to the existing Komoka Provincial Park pond. Water quality treatment is provided upstream of the pond outfall by a proposed treatment train. Stormwater is conveyed to the Thames River by the existing park pond outlet.

As noted, the combination of these two alternatives resulted in the following preferred alternative:

- **Alternative 6 – Combine Alternatives 3 and 5** - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor untreated flows are conveyed southward to a proposed SWM pond at Location 1, which provides both water quality treatment and peak flow control. The proposed pond discharges to a proposed outlet storm sewer on Glendon Drive that conveys the treated flows southward to the Komoka Provincial Park pond. The proposed storm sewer must cross the existing oil pipeline easement. Stormwater is conveyed to the Thames River by the existing park pond outlet.

In summary, the recommendations for stormwater treatment and discharge were to locate the stormwater management facility on the west side of Komoka Road and direct treated flows southward to the Komoka Provincial Park pond. The preferred alternative also recommended maintaining this pond location but change the outlet to a piped outlet constructed along Komoka Road discharging directly into the Thames River as a contingency plan, should permitting and approvals not be secured for the Komoka Provincial Park pond.



## Community Stormwater Master Plan Update Introduction and Study Background

The Master Plan noted the following:

*“Should the required permits and approvals, including the Provincial Parks and Conservation Reserves Class Environmental Assessment, not be secured for the proposed Park pond outlet, an alternate outlet may be constructed along Komoka Road as shown in Alternative 3. While this alternative is less-preferred due to the costs associated with constructing the sewer along Komoka Road, as well as the added environmental impacts associated with the new outlet to the Thames River, it should be considered as a contingency in the event the appropriate approvals cannot be secured. It is noted that a scoped Environmental Impact Study should be undertaken to assess impacts to sensitive habitats along the Thames River associated with the new outlet, along with required permits through the Upper Thames River Conservation Authority.”*

### 1.2 Purpose of the Update

Following the issuance of the Master Plan, several issues were identified with the proposed solution:

- The outlet from the Komoka Provincial Park pond to the Thames River is in a poor condition and there is concern that it may be impacted by additional flow volume
- The water level in the Komoka Provincial Park pond may be impacted by additional flows and fluctuations in water level may occur which may have impacts on the pond and surrounding areas
- There is potential for Species at Risk in the Komoka Provincial Park pond and the preferred solution could impact them.

Due to these issues and the complexities associated with mitigation and obtaining permits and approvals associated with the original preferred solution, the Municipality is proceeding with Alternative 3. Additional information about Alternative 3 is provided in **Section 3.2**.

### 1.3 Study Area

As noted, the Master Plan study area included ten Settlement Areas within the Municipality of Middlesex Centre, with this update focusing on improvements within the Komoka-Kilworth area. A study area map is provided in Figure 1.



# Community Stormwater Master Plan Update Introduction and Study Background

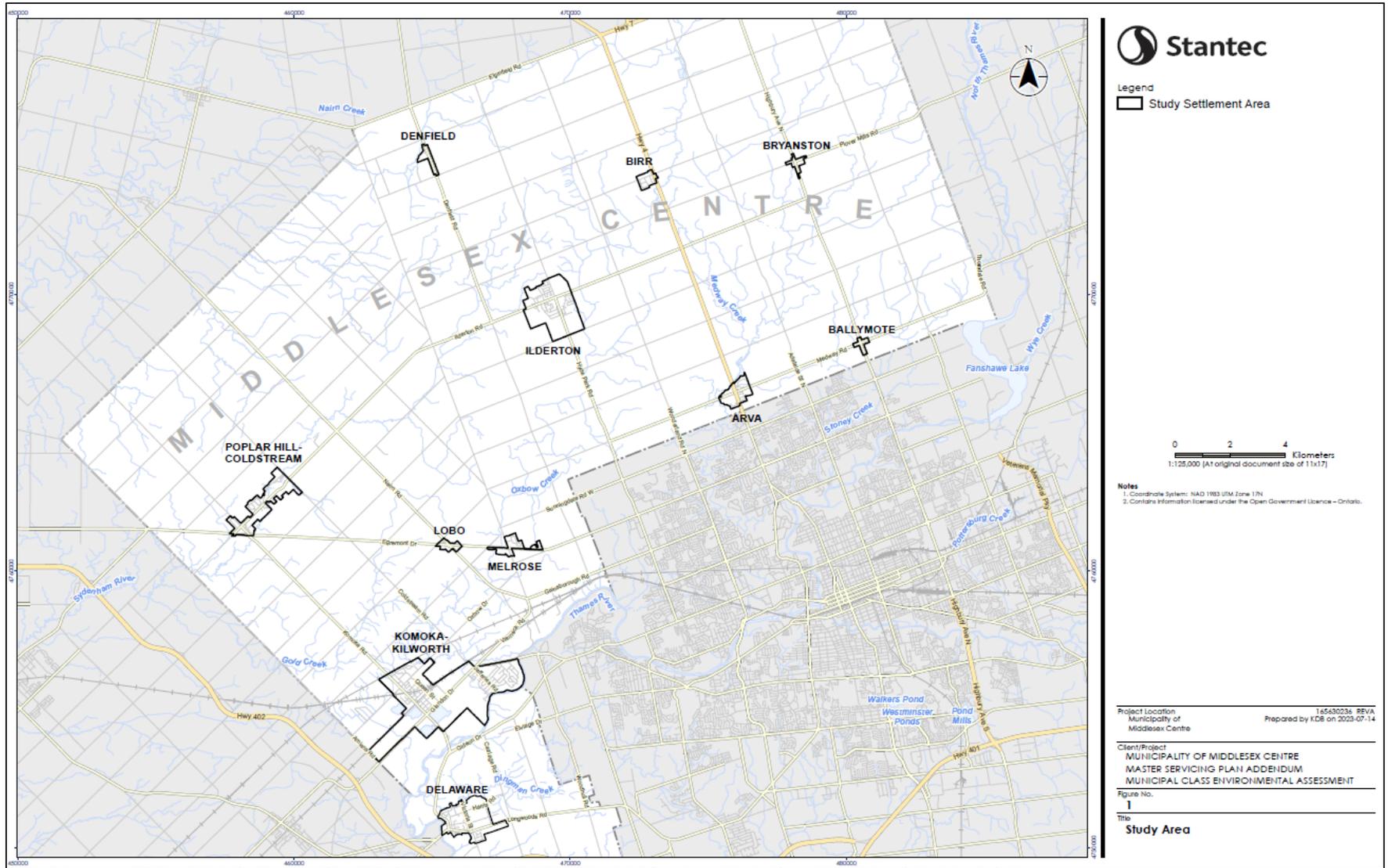


Figure 1: Study Area



## **1.4 Municipal Class Environmental Assessment Process**

All municipalities in Ontario are subject to the provisions of the Environmental Assessment Act (EA Act) and its requirement to prepare an EA for applicable public works projects. The Ontario Municipal Engineers Association (MEA) “Municipal Class Environmental Assessment” document (October 2000 as amended) provides municipalities with a five-phase planning procedure approved under the EA Act to plan and undertake all municipal infrastructure projects in a manner that protects the environment as defined in the Act. The 2020 Master Plan followed the Municipal Class EA process as amended in 2015. The five phases are as described below:

- Phase 1: Review background planning and policy documents. Identify study area needs, problems, and opportunities.
- Phase 2: Prepare physical description of the study area and inventory of natural, social, and economic environments. Identify and evaluate all reasonable alternative solutions.
- Phase 3: Identify and evaluate alternative designs for the preferred solution.
- Phase 4: Document the process with an Environmental Study Report (ESR).
- Phase 5: Implement the project (detailed design and construction).

The Municipal Class EA process and associated documentation serves as a public statement of the decision-making process followed by municipalities for the planning and implementation of necessary infrastructure.

### **1.4.1 Project Planning Schedules**

Since municipal infrastructure projects can vary in their potential for environmental effects, projects have been classified as Schedule A, Schedule A+, Schedule B, Schedule C. The types of projects and activities are intended to be categorized based on the magnitude of their anticipated environmental impact. In specific cases, however, a project may have a greater environmental impact than indicated by the Schedule. It is the responsibility of the proponent to identify the appropriate schedule for a given project, and to review the applicability of the chosen schedule at various stages throughout the project. Each of the schedules requires a different level of documentation and review to satisfy the requirements of the Class EA, and thus comply with the *EA Act* as noted below.

**Schedule A** projects are limited in scale, have minimal adverse impacts on the natural and social environments, and include the majority of municipal sewage, stormwater management, water operations, and maintenance activities. These projects are pre-approved and may be implemented without following the procedures outlined in the Class EA planning process. Examples of Schedule A projects include watermain and sewer extensions where all such facilities are located within the municipal road allowance or an existing utility corridor. As such, these projects are pre-approved and subsequently do not require any further planning and public consultation.



## **Community Stormwater Master Plan Update Introduction and Study Background**

**Schedule A+** projects are similarly pre-approved under the Municipal Class EA but require that potentially affected parties be notified prior to implementation. The public has a right to comment to municipal officials or their council on the project; however, considering that the projects are pre-approved, there is no appeal process to the Minister of the Environment, Conservation and Parks on these projects. It should be noted that amendments to the EA Act enacted through Bill 108 exempt Schedule A and A+ projects from the requirements of the EA Act.

**Schedule B** projects have the potential for some adverse environmental effects. Proponents are required, at a minimum, to complete phases one and two of the planning process. Schedule B requires mandatory consultation with Indigenous Communities, directly affected public and relevant review agencies, to ensure that they are aware of the project and that their concerns are identified and considered and documenting the assessment requirements in a Project File Report. Schedule B projects generally include improvements and minor expansions to existing facilities as well as new smaller scale projects.

**Schedule C** projects have the potential for significant environmental effects and must proceed through the full planning and documentation process. This includes mandatory consultation with Indigenous Communities, directly affected public and relevant review agencies, to ensure that they are aware of the project and that their concerns are identified and considered. An Environmental Study Report must be prepared and filed for review by Indigenous Communities, the public and review agencies. Schedule C projects generally include the construction of new facilities and major expansions to existing facilities.

The Municipal Class EA Document was updated in 2023, which reclassified the project schedules in the process to Eligible for Screening to Exempt, Schedule B, and Schedule C. Schedule A and Schedule A+ projects are now generally categorized as Eligible for Screening to Exempt, and do not require any further planning and public consultation.

### **1.4.2 Master Plan Approach**

Master Plans are long range plans that integrate infrastructure requirements for existing and future land use with EA planning principles. These plans examine an infrastructure system(s) or group of related projects in order to outline a framework for planning for subsequent projects and/or developments over the long-term. This approach recognizes that there are real benefits in terms of better planning when long range comprehensive studies are undertaken over logical planning units, such as at the regional level, and that proponents who undertake such studies can build on the recommendations and conclusions contained in them.

The 2020 Master Plan followed Approach 2 of the MCEA document, which involves the completion of a Master Plan document at the conclusion of Phases 1 and 2, fulfilling the requirements for Schedule B projects.

## **1.5 Consultation Overview**

Consultation is a vital part of the Class EA process. As part of the 2020 Master Plan update process, a stakeholder contact list was developed, which included relevant provincial and federal agencies, affected



## **Community Stormwater Master Plan Update Introduction and Study Background**

landowners, local communities, general public and Indigenous communities to notify them of the Master Plan process and to solicit input.

The consultation requirements for Schedule B projects were completed as part of the 2020 Master Plan, following the process for Approach #2 projects. Additional consultation for this update is not required.

### **1.5.1 Section 16 Order Process**

The Section 16 Order Process, the ability to order a higher level of study, was completed under the 2020 Master Plan, and is not available for this update. However, interested persons may provide written comments to the Municipality of Middlesex Centre for a response using the following contact information:

Robert Cascaden, P.Eng.  
Director of Public Works and Engineering  
Municipality of Middlesex Centre  
10227 Ilderton Road  
Ilderton, ON, N0M 2A0  
Tel: 519-666-0190 Ext. 5245  
Email: [cascaden@middlesexcentre.ca](mailto:cascaden@middlesexcentre.ca)



## 2 Problem & Opportunity Statement

The problem and opportunities identified in the 2020 Master Plan remains unchanged. The Problem and Opportunity Statement for the Middlesex Centre Settlement Area Stormwater Master Plan is as follows:

*The Master Plan shall assess the existing drainage conditions throughout the Settlement Areas and develop an environmentally sound and sustainable strategy for addressing existing issues and accommodating future growth. The objective is to develop a Master Plan for the identified Settlement Areas that balances the following responsibilities:*

- *Reduce negative impacts of flooding on properties*
- *Provide adequate stormwater treatment*
- *Minimize stormwater servicing costs*
- *Protect the natural environment*

It is noted that while properly functioning storm drainage infrastructure is crucial in protecting property from flood damage and may help mitigate lot-level drainage issues, this Master Plan does not specifically address certain lot-level concerns such as high groundwater (i.e., sump pumps running continually).



### **3 Alternative Solutions**

The 2020 Master Plan identified the following alternative solutions for the Komoka Drain No. 1.:

- Alternative 1 – Do Nothing
  - Komoka Drain No. 1 continues to discharge to the existing pond network on the west side of Komoka Road. Runoff from the Tunks Lane Drain continues to discharge to the existing pond on east side of Komoka Road. This alternative does not provide the necessary drainage infrastructure or SWM controls to manage the runoff from the proposed Glendon Drive improvements and does not mitigate potential negative impacts on downstream private ponds.
  
- Alternative 2 –SWM Pond Location 4 with Thames River Outlet
  - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor untreated flows are conveyed southward to a proposed SWM pond at Location 4, which provides both water quality treatment and peak flow control. The proposed pond discharges via a proposed outlet structure to the neighbouring downstream Komoka Provincial Park pond. Stormwater is conveyed to the Thames River by the existing pond outlet structure.
  - The proposed conveyance on Komoka Road will likely consist of a combination of culverts and ditches and will provide sufficient capacity to convey the peak major flow. The existing pond at Location 4 is privately owned and would need to be acquired by the municipality.
  
- Alternative 3 –Pond Location 1 with Komoka Road Outlet
  - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor untreated flows are conveyed southward to a proposed SWM pond at Location 1, which provides both water quality treatment and peak flow control. The proposed pond discharges to a proposed outlet storm sewer on Komoka Road that conveys the treated flows southward to the Thames River. The proposed storm sewer must cross the existing natural gas pipeline easements and a new outfall to the Thames River must be constructed.



## Community Stormwater Master Plan Update Alternative Solutions

- Alternative 4 –Pond Location 1 with Municipal Drain Outlet
  - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor untreated flows are conveyed southward to a proposed SWM pond at Location 1, which provides both water quality treatment and peak flow control. The proposed pond discharges to a new municipal drain comprised of a series of proposed culverts that would link the downstream privately owned ponds. The proposed culverts would be constructed in accordance with the Drainage Act and the downstream ponds would remain in private ownership. The proposed culverts must cross the existing oil and natural gas pipeline easements and a new outfall to the Thames River must be constructed. Periodic inspection of the proposed culverts would be required to verify that they are free of accumulated debris.
  
- Alternative 5 – Pond Location 6 with Thames River Outlet
  - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor flows are conveyed southward on Komoka Road to the existing Komoka Provincial Park pond. Water quality treatment is provided upstream of the pond outfall by a proposed treatment train. Stormwater is conveyed to the Thames River by the existing park pond outlet.
  
- Alternative 6 – Combine Alternatives 3 and 5
  - The proposed Glendon Drive storm sewer collects the runoff from the future streetscape improvements, Komoka Drain No. 1, and the Tunks Lane Drain. Runoff from the Tunks Lane future development is treated by on-site SWM controls that discharge to the proposed Glendon Drive storm sewer. Both major and minor untreated flows are conveyed southward to a proposed SWM pond at Location 1, which provides both water quality treatment and peak flow control. The proposed pond discharges to a proposed outlet storm sewer on Komoka Road that conveys the treated flows southward to the Komoka Provincial Park pond. The proposed storm sewer must cross the existing oil pipeline easement. Stormwater is conveyed to the Thames River by the existing park pond outlet.

As noted in Section 1.1.1, the 2020 Master Plan Preferred Solution was to proceed with Alternative 6, combining Alternatives 3 and 5. Since issuing the 2020 Master Plan, the Municipality of Middlesex Centre determined they will proceed with Alternative 3, due to complexity surrounding the permitting and design of Alternative 5, and concerns raised from key stakeholders.



### 3.1 Revised Alternative 3

Alternative 3 as presented in the 2020 Master Plan proposed the following:

- Construct a storm sewer along Glendon Drive
- Install a stormwater management pond at Location 1
- Construct a storm sewer on Komoka Road from stormwater management pond to outfall to the Thames River
- Construct a new outfall at the Thames River

Following the issuance of the Master Plan, several issues were identified with the proposed solution. It was identified that the outlet from the Komoka Provincial Park pond to the Thames River is in a poor condition and there is concern that it may be negatively impacted by additional flow volume. Concern was expressed regarding the water level in the Komoka Provincial Park pond, and the impacts additional flows and fluctuations in water level may have on the pond and surrounding areas. In addition, there is potential for Species at Risk to occur within the Komoka Provincial Park pond, which the 2020 Master Plan preferred solution could negatively impact. Due to these issues and the complexities in associated with mitigation and obtaining permits and approvals associated with the original preferred solution, the Municipality is proceeding with Alternative 3.

The revised Alternative 3 and Preferred Solution will include the following revisions:

- Construct storm sewer on Komoka Road from stormwater management pond to outfall to the Thames River

### 3.2 Komoka Drain No. 1 Recommended Solution

The revised recommended solution for the Komoka-Kilworth Settlement Area, Komoka Drain No. 1, is outlined in Table 1, and displayed in Figure 2. The 2020 Master Plan followed Approach 2 of the MCEA document, which involves the completion of a Master Plan document at the conclusion of Phases 1 and 2, fulfilling the requirements for Schedule B projects.

**Table 1: MCEA Schedule**

<b>Proposed Work</b>	<b>MCEA Schedule</b>
Construct a storm sewer along Glendon Drive	Schedule A/A+
Install a stormwater management pond at Location 1	Schedule B – Completed as part of the 2020 Master Plan
Construct a storm sewer on Komoka Road from stormwater management pond to outfall to the Thames River	Schedule A/A+
Construct a new outfall at the Thames River	Schedule B – Completed as part of the 2020 Master Plan



# Community Stormwater Master Plan Update Alternative Solutions

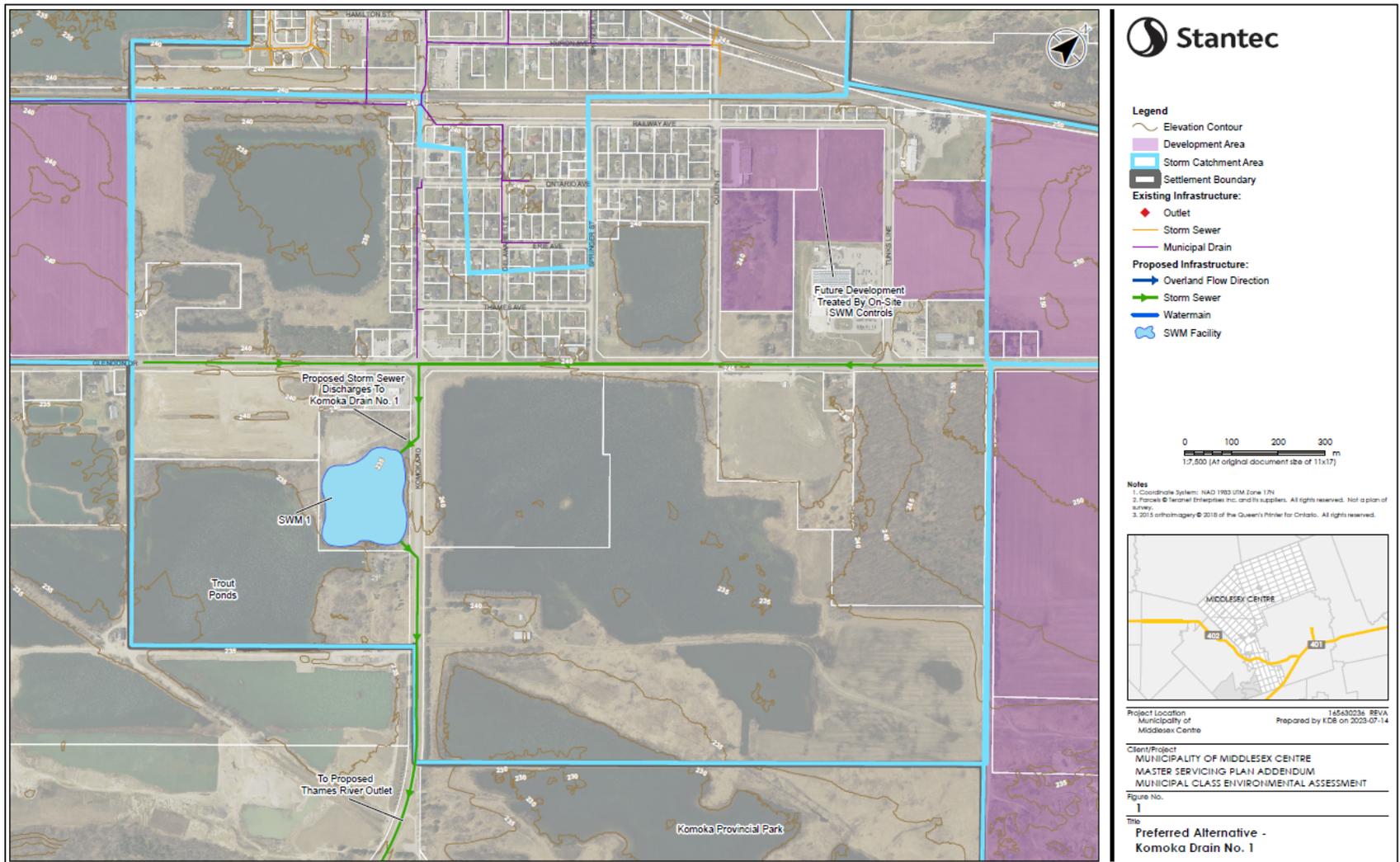


Figure 2: Recommended Solution – Komoka Drain No. 1



## 4 Review of Existing Conditions, Environmental Impacts and Proposed Mitigation

There has not been a significant change to the background conditions presented in the 2020 Master Plan. The following section identifies the policies and conditions that *have* changed since the previous Master Plan.

### 4.1 Planning Policy and Municipal Guidelines / Standards Review

#### 4.1.1 Provincial Policy Statement

The *Provincial Policy Statement (PPS)* (2020), issued under Section 3 of the *Planning Act*, sets a policy foundation for regulating the development and use of land. It provides direction on matters of provincial interest and supports the enhancement of the quality of life for all citizens of Ontario, while still maintaining environmental integrity. In accordance with Section 3 of the *Planning Act*, decisions affecting planning matters shall have regard for the PPS. The PPS establishes a framework to build strong communities while ensuring development patterns are efficient and optimize the use of land, resources, and public investment in infrastructure.

Policies relevant to water and wastewater infrastructure include the requirement for infrastructure to be provided in a coordinated, efficient, and cost-effective manner that considers impacts from climate change while accommodating projected needs (Policy 1.6.1). These systems are meant to be sustainable, feasible, financially viable, in compliance with all regulatory requirements, and integrated with land use considerations across all stages of the planning process (Policy 1.6.6). The service shall promote the efficient use and optimization of existing services, ensure the systems are reliable, promote efficiency, and integrate land use considerations throughout the process.

The preferred alternatives and supporting recommendations will meet the objectives of the PPS by providing for infrastructure that is appropriate to address lands designated for future development within identified settlement areas, protects the natural environment and protects public health and safety.

### 4.2 Natural Environment

As part of the Municipal Class EA process, a review of natural heritage features was undertaken for the 2020 Master Plan to characterize the significance and sensitivity of the natural features in the study area, identify potential environmental effects and recommend appropriate measures to avoid or minimize potential negative impacts on the surrounding environment.

The review was conducted through a desktop review of available federal and provincial databases and is intended to provide a general framework for future projects. The existing conditions identified in the 2020 Master Plan remain unchanged. Prior to construction, field investigation may be required to confirm the presence of Species at Risk (SAR) or Significant Wildlife Habitat, and if proposed works may endanger



## **Community Stormwater Master Plan Update Review of Existing Conditions, Environmental Impacts and Proposed Mitigation**

SAR habitat or Significant Wildlife Habitat, a permit will be required under the *Species at Risk Act/Endangered Species Act*.

### **4.3 Drinking Water Source Protection Plan**

Drinking Water Source Protection represents the first barrier in the protection of drinking water. Protecting surface and ground water from becoming contaminated or overused will ensure a sufficient supply of clean, safe drinking water. The Clean Water Act 2006 (CWA) is intended to protect existing and future sources of drinking water as part of the government's overall commitment to protecting human health and the environment. The CWA sets out a framework for source protection planning on a watershed basis with Source Protection Areas established based on the watershed boundaries of Ontario's 36 Conservation Authorities.

The Municipality of Middlesex Centre is located within the Upper Thames River Source Protection Area, the St. Clair Region Source Protection Area, and the Lower Thames River Source Protection Area, which together make up the Thames-Sydenham Source Protection Region (TSSPR). Areas within the Thames-Sydenham Source Protection Region (TSSPR) are subject to the policies of the Upper Thames River Source Protection Plan (SPP), which was approved in 2015 under the CWA.

The Ontario Source Protection information Atlas provided through the Ministry of Environment, Conservation and Parks identify the Komoka-Kilworth Settlement Area to be within a Significant Groundwater Recharge Area (SGRA), and a Highway Vulnerable Aquifer (HVA).

SGRAs are areas considered significant in maintaining the water level within an aquifer through the infiltration of surface water (rain and snow). HVAs are aquifers that are considered easily affected by both human and natural processes.

#### **4.3.1 Vulnerable Areas Policies**

Within vulnerable areas, policies under the Clean Water Act mandate the management and, in some cases, prohibit of certain land use activities, from fuel storage, pesticide use and storage, agricultural activities, creation/operation of municipal infrastructure, and many more. Municipalities and other levels of government are responsible for implementing policies of SPP through Official Plan and Zoning Bylaw updates, Risk Management Plans, through the appointment of a Risk Management Officer (RMO), and through prescribed instruments (such as an Environmental Compliance Approval (ECA) issued by the MECP for municipal infrastructure activities). RMOs are responsible for reviewing new development applications, planning, or building permits that may impact SWP areas, and for establishing legally binding Risk Management Plans with properties where activities identified as significant threat activities occur. The MECP implements the policies of the SPP by requiring supplementary source protection reporting and design and operational requirements as part of an ECA.



## **4.4 Cultural Environment**

### **4.4.1 Archaeological Resources**

Recommendations for archaeological assessment prior to design and construction will be identified early in the detailed design phase.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out an archaeological assessment, in compliance with Section 48(1) of the Ontario Heritage Act.

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must cease all activities immediately and notify the police or coroner. If the coroner does not suspect foul play in the disposition of the remains, in accordance with Ontario Regulation 30/11 the coroner shall notify the Registrar, Ontario Ministry of Public and Business Service Delivery, which administers provisions of that Act related to burial sites. In situations where human remains are associated with archaeological resources, the Ministry of Citizenship and Multiculturalism should also be notified (at [archaeology@ontario.ca](mailto:archaeology@ontario.ca)) to ensure that the archaeological site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.

### **4.4.2 Built Heritage Resources and Cultural Heritage Landscapes**

The storm drainage solutions identified in this update are not likely to impact built cultural heritage or cultural heritage landscapes. Where the potential for impact exists, recommendations for more detailed assessments will be identified during detailed design.



## **5 Project Implementation**

The implementation of the recommended improvements in the update will generally be triggered by the following:

- Infrastructure failure or works required immediately to address public health/safety risks
- Projects required during development applications to allow development to proceed
- Improvements that can be coordinated with required road maintenance or other capital projects
- The availability of municipal funding
- The ability to secure Provincial and/or Federal level funding (i.e., future infrastructure funding programs, Gas Tax programs, etc.)
- Permit Requirements

Approvals will be required prior to the construction of any new storm sewers and related appurtenances or where replacement works require modification to sizing/capacity or modification to the drainage areas, particularly for systems currently defined under the *Drainage Act*, which are presently excluded from MECP approval requirements.

Section 28 permits will be required from the Upper Thames Region Conservation Authority for any modifications to existing outlets, or for the installation of new outlets within Conservation Authority regulated lands. Permitting and/or Registration will be required for any activities that have the potential for disruption to habitat for Endangered or Threatened Species under the *Endangered Species Act*, through the MNRF.

### **5.1 Proposed Environmental Mitigation**

The Environmental Mitigation and Recommendations outlined in the 2020 Master Plan remain relevant to this update. Assuming appropriate mitigation measures are followed, these impacts will be preventable or minimal to the surrounding environment.



## **6 Closing**

Provided that all appropriate environmental and engineering permitting, and approvals are obtained, the Municipality may proceed with detailed design and implementation (Phase 5).



