

TOWNSHIP OF Wilmot

NEW OFFICIAL PLAN
Stormwater Management Background Report

DRAFT

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1.0 Introduction and Purpose of the Discussion Paper

This section provides an overview of what an Official Plan is and how it is operationalized. It introduces the Township's new Official Plan process, the discussion papers, and the purpose of this discussion paper.

1.1 What is an Official Plan?

An Official Plan is a comprehensive document, intended for long-term use, that shapes the future of a municipality by establishing how land in the community will be used. It outlines the goals, objectives, and policies for sustainable, efficient, growth within Wilmot Township. All development and public works in the Township must conform to the Official Plan.

The legislative ability for municipalities to enact an Official Plan arises from the Provincial *Planning Act.* All policies in the Official Plan must conform to this higher-order Provincial legislation. The Township of Wilmot is in the process of crafting a new Official Plan which will guide growth and development within Wilmot to the year 2051. For the past two decades, growth in Wilmot has been shaped by both the Region of Waterloo's Official Plan and the Wilmot Official Plan. With recent provincial legislation that removed planning authority from the Region of Waterloo, Wilmot has the opportunity to create a made for Wilmot Official Plan. This will incorporate the best of our past and present Official Plan policies, while charting out the future of Wilmot to the year 2051. A new Official Plan is being created to replace the existing Township and Regional Official Plans and align with the 2024 Provincial Planning Statement.

The new Official Plan will build on the Township's long-term vision for growth with a renewed focus on complete communities. This will include a range and mix of housing, employment opportunities, schools, recreational amenities, options for servicing, roads, and active transportation while protecting natural heritage features and farmland.

1.2 Township of Wilmot New Official Plan Process

The creation of Wilmot's New Official Plan will occur over a year-long period with several touchpoints for community consultation.



Figure 1: Graphic showing the Wilmot New Official Plan Process

Phase 1 of the project included drafting the Consultation Strategy, and early conversations the project team held with Wilmot residents to inform the process. A series of one-on-one conversations were had between residents and interested members of the public to lay the foundation for the project. Notice of the project initiation was provided to agencies and Indigenous communities. The Township of Wilmot project team hosted a booth at the 2025 New Hamburg Fall Fair, where we began to shape a vision for what Wilmot's new Official Plan could look like. Following those initial early touchpoints with the community, a formal Public Workshop was held on September 23, 2025 to gather thoughts from the public on the vision and fundamental principles that form the foundation of the new Official Plan.

Phase 2 of the Official Plan involves conducting Background Research and Study Preparation, which includes the release of seven draft discussion papers for public and stakeholder review and comment. At this time, a Special Meeting of Council will be held to formally introduce the project to the community and offer tangible research that will help focus community conversations on the themes of housing, commercial needs, employment, transportation, water and wastewater, stormwater management, and

urban design. Based on public feedback, the draft discussion papers will be reviewed and finalized. What we've heard will inform a series of policy directions which will inform Phase 3 of the project.

Phase 3 of Wilmot's new Official Plan is the drafting of policies and land use maps. These draft policies and maps will be published as draft and shared with Wilmot residents, stakeholders, and Indigenous communities for any further suggestions and input. A copy of the draft Official Plan will be forwarded to the Ministry of Municipal Affairs and Housing for their review as part of Phase 3 of the project.

Phase 4 of the project involves the formal adoption of Wilmot's new Official Plan by the Township of Wilmot's Council. Once Council adopts Wilmot's new Official Plan, the Official Plan will be forwarded to the Ministry of Municipal Affairs and Housing for the Minister's review and approval. After ministerial approval, the Township's new Official Plan will be in effect and replace both existing Township and Regional Official Plans.

1.3 What are the Discussion Papers?

A series of seven background supporting studies have been developed to support the creation of Wilmot's New Official Plan. Each of the discussion papers covers a key theme for the project, including:

- Housing Needs Study
- Commercial Needs Analysis
- Employment Projections and Employment Land Needs Analysis
- Transportation
- Water, Wastewater Servicing Strategy
- Stormwater Servicing Strategy
- Urban Design

The discussion papers will form the basis of the first phase of consultation for the project and assist Wilmot Township in developing the preliminary policy directions for the New Official Plan.

1.4 Purpose of this Discussion Paper

This Discussion Paper will create the foundation for the Township's Stormwater Servicing Strategy. It is intended to generate discussion around water quality/quantity, climate change mitigation, and source water protection, and how policy can support these objectives through source protection plans and infrastructure/capital projects.

This Discussion Paper sets forth several considerations and recommendations for stormwater management policies in Wilmot's New Official Plan. New policies will serve as a guide for future infrastructure planning that will promote an integrated approach to stormwater management within the Township.

2.0 Legislative Overview

This section provides an overview of the provincial legislative context which informs the basis of creating Wilmot's New Official Plan.

2.1 Planning Act

The *Planning Act* is the overarching Provincial legislation which governs land use planning in Ontario. It establishes the respective roles of the Province and municipalities regarding land use planning and provides the basis for municipalities to create and use various planning tools, such as Official Plans and Zoning By-laws. The Act also sets out regulations for how planning processes are to be carried out, including mandatory dates for the completion of tasks, such as deciding on a planning application and setting the date for a public meeting. Notably, in Section 2, the Act establishes "matters of provincial interest", which municipalities must have regard to when carrying out land use planning. These matters include (but are not limited to) protection of ecological systems, protection of agricultural and natural resources, conservation of cultural history, provision of a full range of housing, the accessibility for persons with disabilities, and the orderly development of safe and healthy communities. It is important to note that all planning decisions and policies made by a municipality (or other planning authority) must conform to the *Planning Act*, as well as provincial plans, as outlined in Section 2.1 of the Act. Further, Section 3 of the Act requires that all planning decisions shall be consistent with the Provincial Planning Statement.

The *Planning Act, Part III – Official Plans* sets out how Official Plans shall be created by a municipality, with respect to content and process.

16 (1) An official plan shall contain,

(a) goals, objectives and policies established primarily to manage and direct physical change and the effects on the social, economic, built and natural environment of the municipality or part of it, or an area that is without municipal organization;

(a.1) such policies and measures as are practicable to ensure the adequate provision of affordable housing;

(b) a description of the measures and procedures for informing and obtaining the views of the public in respect of,

(i) proposed amendments to the official plan or proposed revisions of the plan,

(ii) proposed zoning by-laws,

(iii) proposed plans of subdivision, and

(iv) proposed consents under section 53; and

(c) such other matters as may be prescribed.

Section 17 of the *Planning Act* sets out that "*the Minister is the approval authority in respect of the approval of a plan as an official plan*" and outlines a prescribed process the Township of Wilmot must follow in the preparation of a new Official Plan. Specifically, the Township must provide for consultation and a public meeting, an open house, and adequate notice provided for each.

(15) In the course of the preparation of a plan, the council shall ensure that,

(a) the appropriate approval authority is consulted on the preparation of the plan and given an opportunity to review all supporting information and material and any other prescribed information and material, even if the plan is exempt from approval;

(b) the prescribed public bodies are consulted on the preparation of the plan and given an opportunity to review all supporting information and material and any other prescribed information and material;

(c) adequate information and material, including a copy of the current proposed plan, is made available to the public, in the prescribed manner, if any; and

(d) at least one public meeting is held for the purpose of giving the public an opportunity to make representations in respect of the current proposed plan. 2006, c. 23, s. 9 (2).

(16) If the plan is being revised under section 26 or amended in relation to a development permit system, the council shall ensure that at least one open house is held for the purpose of giving the public an opportunity to review and ask questions about the information and material made available under clause (15) (c).

The creation of Wilmot's new Official Plan must be done in conformity with the *Planning Act* and the legislated process outlined above.

2.2 Provincial Planning Statement, 2024

The Provincial Planning Statement, 2024 ("PPS") is a guiding policy document that provides direction on a variety of planning and land use matters in the province. The legal basis for conformity to the PPS is rooted in Section 3 of the *Planning Act*, which requires that all planning decisions be consistent with the minimum standards set out in the PPS. The Provincial Planning Statement outlines that "Official plans are the most important vehicle for implementation of the Provincial Planning Statement and for achieving comprehensive, integrated and long-term planning."

The PPS puts forward policy regarding housing, infrastructure, resource management, and public health. Pertinent policies for the new Wilmot Official Plan include adjustments to municipal planning boundaries, regulations regarding employment areas, agricultural protection, and population growth targets. Specific policy guidance is provided by the PPS, as it relates to planning for people and homes.

2.1.3 At the time of creating a new official plan and each official plan update, sufficient land shall be made available to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of at least 20 years, but not more than 30 years, informed by provincial guidance. Planning for infrastructure, public service facilities, strategic growth areas and employment areas may extend beyond this time horizon.

Furthermore, the PPS provides general policies for implementation and interpretation as it relates to the creation of Wilmot's new Official Plan.

6.1.5 Official plans shall identify provincial interests and set out appropriate land use designations and policies. Official plans shall provide clear, reasonable and attainable policies to protect provincial interests and facilitate development in suitable areas.

In order to protect provincial interests, planning authorities shall keep their official plans up-to date with the Provincial Planning Statement. The policies of the Provincial Planning Statement continue to apply after adoption and approval of an official plan.

Finally, once Wilmot's new Official Plan has been approved by the minister, the PPS sets out a requirement for ongoing monitoring of the Official Plan's implementation.

The PPS includes several policies specifically pertaining to stormwater management and protection of the water resources system. Of note, these policies encourage planning for stormwater management at the watershed scale, require that planning authorities incorporate climate change considerations in the planning of stormwater management systems, and restrict development and site alteration near sensitive surface water features and groundwater features which may require mitigative measures and/or alternative development approaches. For example, Section 2.9, Energy Conservation, Air Quality and Climate Change, provides environmental guidance for stormwater management in times of a changing climate.

2.9.1 Planning authorities shall plan to reduce greenhouse gas emissions and prepare for the impacts of a changing climate through approaches that:

(b) incorporate climate change considerations in planning for and the development of infrastructure, including stormwater management systems, and public service facilities.

Section 3.6, Sewage, Water and Stormwater, provides direction for planning for Stormwater servicing.

3.6.8 Planning for stormwater management shall:

(a) be integrated with planning for sewage and water services and ensure that systems are optimized, retrofitted as appropriate, feasible and financially viable over their full life cycle;

(b) minimize, or, where possible, prevent or reduce increases in stormwater volumes and contaminant loads;

(c) minimize erosion and changes in water balance including through the use of green infrastructure;

(d) mitigate risks to human health, safety, property and the environment;

(e) maximize the extent and function of vegetative and pervious surfaces;

(f) promote best practices, including stormwater attenuation and re-use, water conservation and efficiency, and low impact development; and

(g) align with any comprehensive municipal plans for stormwater management that consider cumulative impacts of stormwater from development on a watershed scale.

3.0 Local Stormwater Servicing Context

Stormwater management requirements have evolved rapidly over the past decade, requiring that stormwater management go beyond historic practices of mitigating flooding and erosion, and providing stormwater quality control. Recent draft guidelines from Ministry of the Environment, Conservation and Parks (MECP) formalize requirements for integrating stormwater management at source to maintain pre-development water balance. These criteria are formalized in the Municipal Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA), which also requires that municipalities monitor and maintain their storm infrastructure and submit reports to MECP accordingly. Within the Township of Wilmot, requirements to maintain water balance are intrinsically linked to source protection policies. Stormwater management requirements in the current Official Plan, Township of Wilmot infrastructure standards and specifications, and the CLI-ECA are stated in this section. These policies are important to note as they provide guidance on maintaining water quality and quantity, as well as the prevention of erosion and flooding.

Various documents, specific to the Township, provide guidance and criteria for the planning and design of storm infrastructure. The following section provides an overview of the relevant municipal documents and identifies areas that need to be considered as part of Wilmot's New Official Plan.

3.1 Region of Waterloo Official Plan, 2025

The Waterloo Regional Official Plan, 2025 ("ROP") was the Official Plan of the Region of Waterloo, which is an upper-tier municipality that encompasses a federation of lower-tier municipalities, including the Township of Wilmot. Historically, the Region of Waterloo was the approval authority for the Township of Wilmot's Official Plan, and Wilmot was required to conform to that plan.

As of January 1, 2025, the Waterloo Regional Official Plan became a Local Plan of the Township of Wilmot. A new Official Plan is being created to replace the existing

Township and Regional Official Plans and align with the 2024 Provincial Planning Statement. Wilmot's new Official Plan will incorporate the best of the Region of Waterloo's Official Plan policies, while charting out the future of Wilmot Township's growth to the year 2051.

Historically, strong stormwater guidance had been provided by the province and implemented through the Regional Official Plan. With the removal of planning authority from the Region, the creation of new stormwater policies within Wilmot's New Official Plan will be important.

The Regional Official Plan provided direction for the creation of Watershed Studies, Source Water and Wellhead Protection, and Stormwater Management requirements as part of new development. Wilmot's New Official Plan will take direction from the robust range of policies that were included in the Regional Official Plan to create new policies for Wilmot that carry forward stormwater best management practices in compliance with new Provincial guidance.

3.2 Township of Wilmot Official Plan, 2024

Wilmot's current Official Plan, outlines general land use policies in Chapter 6, which include infrastructure and servicing planning related to wastewater, water supply, and waste management. Section 6.8 states "the Township, in conjunction with the Region, will ensure that all new development is serviced by adequate and effective water, wastewater and storm water facilities in accordance with sound engineering practices and technologies that aim to protect human health and the natural environment."

Section 6.8.2 of the Official Plan addresses the use of private wells, noting that they may be permitted for certain infill developments but are restricted in sensitive areas. It emphasizes the importance of water conservation, ensuring an adequate municipal water supply, and conducting appropriate studies to confirm that private wells will not negatively impact groundwater resources.

Section 6.9 establishes specific stormwater management policies to mitigate downstream flooding, flooding on adjacent lands, and ensure that the discharge of stormwater will not adversely impact watercourses. Stormwater management is crucial to protect the quality and quantity of water in water courses and mitigate the impacts of development on the environment and water resources systems. The standards that are set out in the Official Plan further aim to encourage developers to plan, design, and construct development to minimize vegetation removal, grading and soil compaction, sediment erosion, and impervious surfaces.

Section 8.6 of the Official Plan provides policies specific to Source Water Protection. This section of the Official Plan notes that the township is reliant on groundwater resources to supply the majority of its drinking water, hence protecting existing and future sources of drinking-water from incompatible land uses and contamination is essential. This section also provides direct references and excerpts from the Region's Source Water Protection Plan, particularly the location of Source Water Protection Areas, Wellhead Protection Sensitivity Areas, High Microbial Risk Management Zones, and Recharge Areas. This section of the Official Plan also includes commitments to apply the source water protection policies of the Regional Official Plan for reviewing development applications, and commitments to reviewing and updating the township's Zoning By-Law to confirm to specific chapters of the Regional Official Plan.

3.3 Township of Wilmot Infrastructure Standards and Specifications

The Township of Wilmot's Infrastructure Standards and Specifications, published in 2022, provides design criteria and best management practices. This document outlines engineering and design standards for municipal infrastructure projects, including general requirements for subdivision and site plan submissions, lot grading, roadway and utility design, stormwater and sanitary systems, erosion control, municipal consent procedures, and standard drawings. The Wilmot Infrastructure Standards and Specifications shall continue to provide guidance for stormwater management system designs, in accordance with accepted Ministry Guidelines or best practices and in

conformity of the Township's CLI-ECA as approved in 2023 and as updates are completed. The Wilmot Infrastructure Standards and Specifications is currently under revision.

3.4 CLI-ECA for The Corporation of the Township of Wilmot

The Municipal Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) is a municipal document for a stormwater management system that provides a single, consolidated environmental approval. The Township's CLI-ECA was issued by the Ministry of the Environment, Conservation and Parks (MECP) and confers upon Wilmot the authority to make changes to the system when requirements in the CLI-ECA are met, and to approve alterations to stormwater infrastructure that meet certain requirements. The CLI-ECA further outlines obligations on the part of the municipality, regarding the monitoring of the stormwater management infrastructure for performance, the maintenance of the stormwater management infrastructure, responses to emergency situations, and reporting to the Ministry on the foregoing.

For Wilmot, this document is divided into six schedules and one Appendix. Schedule A discusses system information, such as the system owner. Schedule B provides a description of the municipal stormwater management system, outlining the sewage works within it. Wilmot's stormwater management system is separate from the sanitary sewage system. The CLI-ECA states, "This ECA covers the entire Municipal SWM System owned and operated by the Township of Wilmot. This ECA does not cover municipal drains, municipally or privately owned sewage works on industrial or commercial land."

Schedule B then goes into detail about stormwater infrastructure in the Township, providing information such as:

- Location
- Watershed/sub watershed
- Outlet location
- Level of treatment for suspended solids
- Treatment for other contaminants, as required

- Catchment area
- Level of volume control

Schedule C provides a list of amendment notices to the ECA. Schedule D is labeled as "General" and is divided into multiple sections. Section 1 includes definitions to be followed. Section 2 describes the general conditions. Section 3 outlines alterations to the stormwater management system. The remaining sections in Schedule D discuss the authorizations to alter existing stormwater infrastructure. Schedule E outlines operating conditions, including general operations, the duties of owners and operating authorities, operations and maintenance, the monitoring plan, reporting, record keeping, review of the approval, source water protection, and a storm sewer catchment asset inventory. Schedule F addresses residue management. Appendix A of the CLI-ECA provides details regarding the functional criteria for stormwater management infrastructure, specifically related to water budget, water quality, erosion control, flood control, and volume control.

4.0 Key Topics for Discussion

In this section, stormwater management requirements, climate change mitigation and adaption approaches, and source water protection are discussed as found in Wilmot's current Official Plan, along with other relevant documentation. Existing gaps between the Town's current Official Plan, the Region's former policies, and new provincial guidance from the PPS will need to be addressed.

4.1 How Will the Stormwater Servicing Strategy Be Used?

The Stormwater Servicing Strategy will incorporate planning best practices for stormwater management. It will be integrated with planning for other municipal sewage and water services to ensure that systems are optimized and financially viable over their full life cycle. The strategy will be designed to:

- Minimize erosion and changes in water balance including using green infrastructure (natural and engineered features such as parks, microforests, green roofs, bioswales, and permeable pavers)
- Mitigate risks to human health, safety, property, and the environment
- Maximize the extent and function of vegetative and pervious surfaces
- Promote best management practices, including stormwater attenuation and re-use, water conservation and efficiency, and low-impact development (i.e., bioswales, rain gardens, permeable pavers, and infiltration trenches). This is based on ministry approved methodologies and is approved within the Infrastructure Standards and specifications. Low impact development components will be part of an overall treatment train approach and will be considered based on the ability for long-term effectiveness and maintenance.
- Review the placement of facilities and seek to consolidate facilities where appropriate.
- Align with any comprehensive municipal plans for stormwater management that consider cumulative impacts of stormwater from development on a watershed scale

- The Township's Infrastructure Standards and Specifications provide criteria and policies regarding the planning, design, operation, maintenance, and financing of the Township's storm infrastructure. The information provided below summarizes key information in this regard, which is not reflected in the Township's current Official Plan. The following topics have been outlined for discussion purposes and consideration in the drafting of Wilmot's New Official Plan.
- Development applications will be required to evaluate the placement and sizing of stormwater management facilities based on a sub-watershed need and not based on property ownership. Facilities shall be located where they can be readily maintained with ownership of the facility access to the facilities as well as all piping relative to the facility under Township Ownership.

4.2 Stormwater Infrastructure Design Criteria

Wilmot will be responsible for implementing requirements for stormwater quality and quantity to reduce the additional volume of rainwater that is generated by increased development, while protecting the existing environment and both private and public property from flooding.

Stormwater management techniques are usually more effective when applied at the source. New provincial guidance for municipalities provides direction for mandating Low Impact Development, bringing stormwater management closer to the source. All new developments must incorporate enhanced stormwater quality controls in accordance with Ministry of Environment, Conservation, and Parks standards and the Township's CLI-ECA. These controls must be supported by detailed design documentation, risk assessments, and operations and maintenance plans to safeguard aquatic habitats and drinking water sources.

Further, new developments will be required to implement approved controls that maintain post development flows to appropriate levels based on either pre-development flows, the capacity of the receiving system, or other approved studies where available,

peak flows to the lesser of the pre-development levels or the capacity of the receiving system. Additionally, developments must ensure the presence of legal storm outlets and obtain Environmental Compliance Approval (ECA) for Low Impact Development (LID) designs under the Ontario Water Resources Act. Functionally, stormwater systems must be designed to manage minor flows using components like storm sewers, catch basins, ditches, and culverts, following Township and Regional standards. Storm sewers must have sizing that accommodates upstream development and meets a minimum 1-in-5-year storm event standard unless otherwise specified in approved drainage plans.

Finally, when implementing green infrastructure, wherever feasible and appropriate, species native to the region will be used in roadside plantings, stormwater management facilities, and park naturalization projects.

Flood Management

New developments must assess and mitigate flood risks by limiting street flooding depth and velocity, ensuring safe emergency access, and complying with the Grand River Conservation Authority, the Ministry of Natural Resources and Forestry, and CSA standards. Developers must assess and reduce erosion risks based on site conditions and regulatory guidelines, using appropriate modeling, protective measures, and documentation to ensure stability and ecological integrity of receiving watercourses. As part of this, they must manage peak flow control as per watershed/subwatershed plans, municipal criteria being a minimum 100-year-return storm (except for site-specific considerations and proximity to receiving water bodies), municipal guidelines and standards, Individual/Class EA, ECA, Master Plan, as appropriate for the type of project.

Things To Think About

- Major roadways must safely convey storm runoff, with grading designed to direct flows to public outlets and prevent flooding, using alternative methods if standard grading isn't feasible. Overland flow from rear yards must be directed to public

roadways or legal outlets through swales or catch basins, with designs that ensure safe conveyance of up to 100-year storm events while preventing erosion and flooding.

- Hydrologic and hydraulic modeling for stormwater management in the Township must follow approved standards and models, with clear documentation of objectives, assumptions, and validation methods.
- Flood management facility designs must include stage/storage/discharge relationships, facility cross-sections, and maintenance access, with all work meeting Township and agency requirements.
- Development near watercourses must follow strict design and access standards, including naturalized landscaping by qualified professionals, restricted private access, and roadway crossings designed per MTO and CSA guidelines.

4.3 Managing Groundwater

As outlined in the Region of Waterloo's Official Plan, groundwater accounts for approximately 75% of the region's drinking water supply. To protect and maintain the quality and quantity of groundwater aquifers and drinking water, the Plan provides comprehensive source water protection guidelines. Wilmot recognizes that the provision of an adequate and reliable supply of potable water is a necessity to all residents of both the Township and the Region, and has provided a protective policy framework

around recharge since 2003.

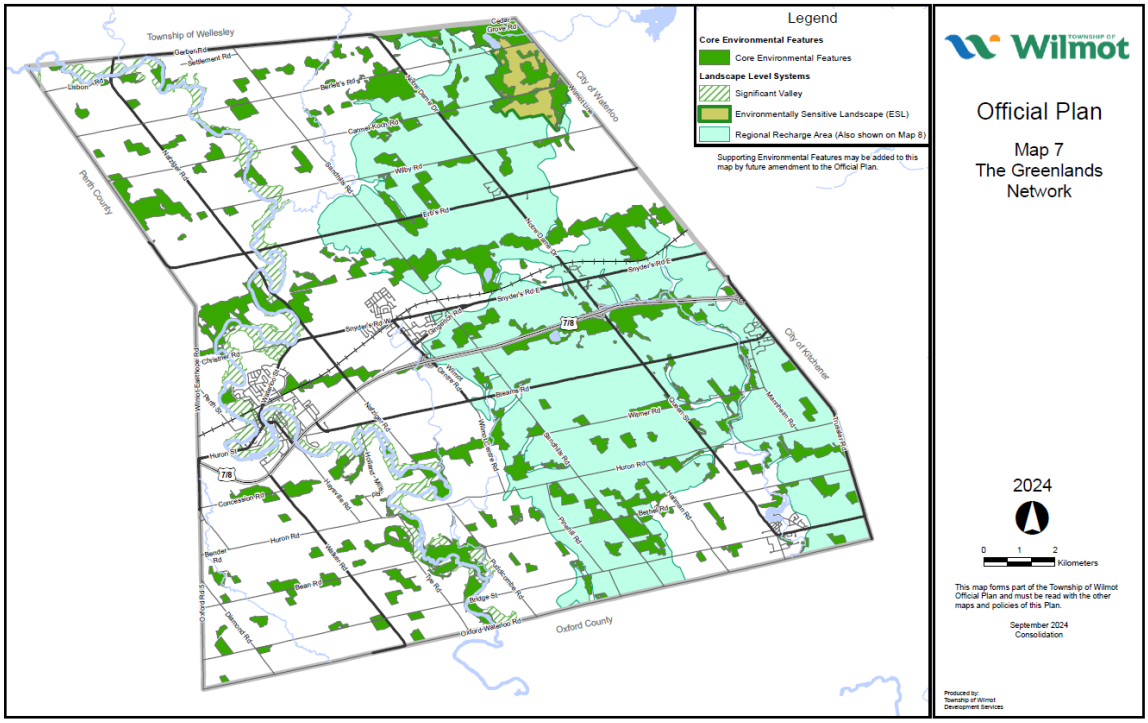


Figure 2: A map of Wilmot's Greenlands Network including the Regional Recharge Areas

Map 7 of Wilmot's current Official Plan identifies Regional Recharge Areas. These are large environmental features consisting of considerable deposits of sand and gravel that allow for the infiltration of substantial quantities of rainfall and snowmelt deep into the ground. Regional Recharge Areas sustain a wide range of aquatic habitats and ecosystems within the Greenlands Network and serve to replenish deep underground aquifers that serve as a source for a significant share of the Township's drinking water.

These areas should be protected from land use practices and hazardous chemicals and/or substances that could negatively impact the quality and quantity of water within and available to the aquifers that contribute to municipal water services.

Things To Think About

- How to characterize the protection of water quality and the stormwater contaminants to be assessed (e.g., suspended solids, nutrients, bacteria, water temperature) for potential impact on the natural environment, and control as necessary.
- Influence and impact of seasonally high groundwater levels on the siting of stormwater infiltration facilities and construction of basements.
- How Wilmot shall protect, improve, or restore the quality and quantity of stormwater and ground water.
- Managing stormwater by minimizing, or, where possible, preventing or reducing increases in stormwater volumes and contaminant loads.
- Improve the level of water quality control currently provided on-site.
- Identification of stormwater best management practices that maintain or enhance the quality, quantity, and distribution of stormwater, including infiltration measures, and minimize stormwater volumes and contaminant loads.

4.4 Climate Change Mitigation and Adaptation

In 2014, the Intergovernmental Panel on Climate Change stated that “warming of the climate system is unequivocal.” Evidence of climate change has amassed since that time, in the form of observed increases in temperature, rising sea levels, loss of snow and ice, increased number and size of wildfires, increased droughts, and shifting precipitation patterns on the global scale. The Government of Canada issued a National Issues Report specifically related to the impacts and adaptation issues. Observed evidence of climate change impacts to Canada’s water cycle include melting ice, thawing permafrost, shorter duration of snow cover, increasing precipitation and a transition from snow to rain, changes in the timing of water availability, and changes in the nature of extreme events.

It is projected that these impacts will impact Canada’s water cycle, resulting in reduced water availability in southern basins, particularly in the summer, increasing the frequency and intensity of water-related extremes, and reducing water quality and

contributing to more harmful algae blooms. Some specific impacts of anticipated changes to Canada's water cycle caused by climate change include:

- Increased nutrients in water systems and incidences of harmful algae blooms;
- Decreased water availability during hotter months for energy and food production;
- Disruption of farming and industrial operations, and disruption of natural ecosystem patterns;
- Increased flood and shoreline erosion events;
- Damaged infrastructure and increased operating costs; and
- Increased property and casualty insurance payments.

Given the Township's dependence on groundwater and the importance of its natural ecosystems, building climate resilience and ensuring the long-term protection of water resources are critical to maintaining public health, biodiversity, and future prosperity.

Things to Think About

- The Township contains a diverse range of environmental features that form part of a broader Greenlands Network described in the Regional Official Plan. This natural system provides economic, ecological, and social benefits and contributes to the overall quality of life. It also supports and enhances air, land, and water quality, and maintains biological diversity. The maintenance, enhancement, and restoration of the ecological function and hydrological function of the Greenlands Network is therefore vital.
- The Protected Countryside identifies a continuous band of productive agricultural lands and valuable environmentally sensitive landscapes surrounding the north, west, and south sides of the Urban Area designation. Lands within this area contain a large concentration of prime agricultural areas and key natural heritage features, such as woodlands, wetlands, streams, and portions of the Grand River Valley that provide habitat for a range of plants and wildlife. These features and areas

collectively provide essential ecosystem services that increase our resilience to climate change.

- The Region, in collaboration with the business community, other levels of government, and post-secondary institutions, should promote research and innovation in areas such as adaptation to climate change, water supply, efficient water use and re-use, air quality improvement, energy conservation, waste reduction and management, and ecological restoration.
- Planning authorities shall plan to reduce greenhouse gas emissions and prepare for the impacts of a changing climate through approaches that: incorporate climate change considerations in planning for and the development of infrastructure, including stormwater management systems and public service facilities.
- The Township will ensure that employment areas are planned and designed to: incorporate high levels of energy efficiency, green infrastructure, and, where appropriate, low-impact development techniques.

4.5 Source Water Protection

Source water protection policies in both Wilmot and the Region of Waterloo's Official Plan are discussed. The region is heavily reliant on groundwater as a source of drinking water. Source water protection is a crucial consideration to protect water from contamination. Source water protection areas are laid out in maps and are defined in the Wilmot Official Plan as wellhead protection sensitivity areas, high microbial risk management zones, and regional recharge areas. Specific policies are provided in the Township of Wilmot's Official Plan and the Region of Waterloo's Official Plan. Recently, municipalities have become more involved in administering Source Water Protection policies through the planning process. The reliance on groundwater for drinking water within the Region, combined with the heightened role of municipalities in protecting source water, highlight the importance of incorporating appropriate policies into the new Official Plan.

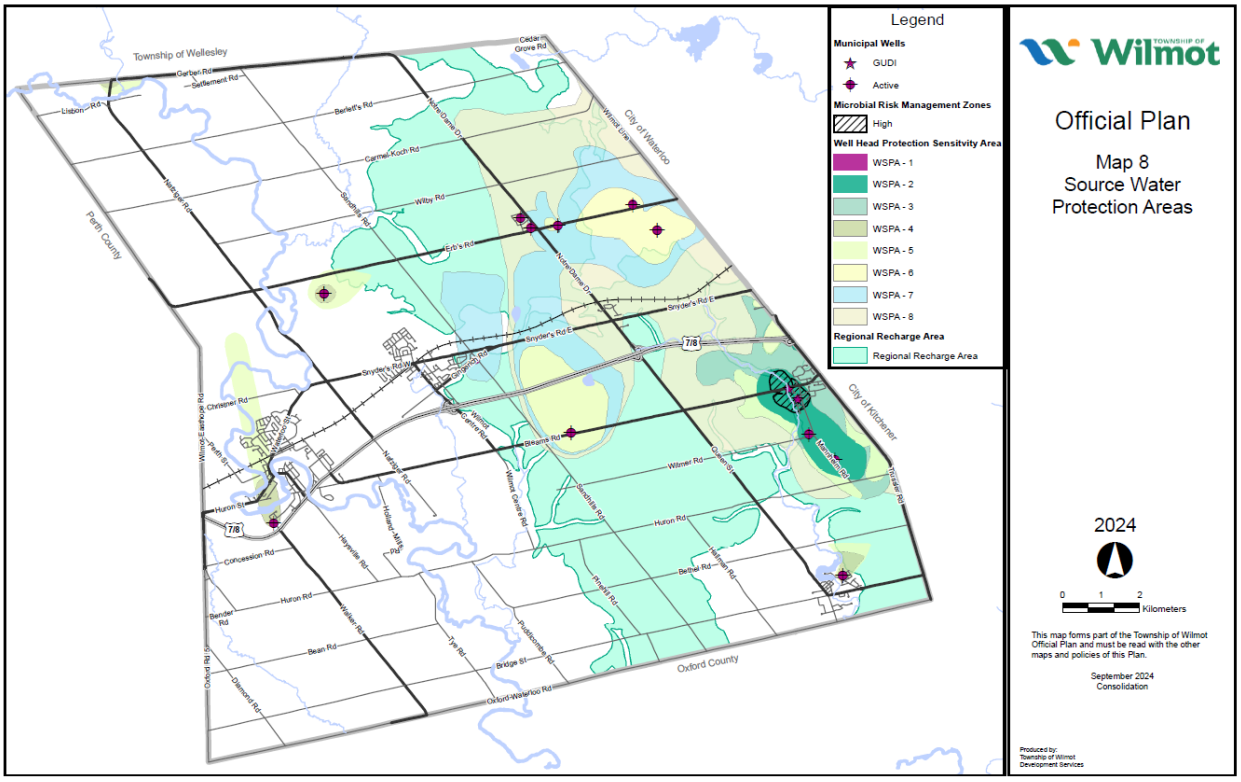


Figure 3: A Map of Wilmot's Source Water Protection Areas

Source Water Protection Areas are designated on Map 8 of Wilmot's current Official Plan. These areas are significant in that they contribute water or are near municipal water service wells and surface water intakes that are vulnerable to contamination and/or depletion from incompatible land uses. Within the Township of Wilmot, Source Water Protection Areas consist of: 1) Wellhead Protection Sensitivity Areas; 2) High Microbial Risk Management Zones; and 3) Regional Recharge Areas.

High Microbial Risk Management Zones identify areas where the underlying groundwater is the most vulnerable to disease-causing organisms. These zones surround municipal water service wells supplied by Groundwater Under the Direct Influence of Surface Water (GUDI). GUDI wells draw groundwater that is directly connected to and dependent upon surface water in locations where contaminants in the surface water may not be filtered adequately by the overlying soil or subsurface before entering the well.

Wellhead Protection

Wellhead Protection Sensitivity Areas are classified from 1 to 8, as designated on Map 8 of this Plan. This classification allows for varying degrees of management relative to the vulnerability of the underlying groundwater to contamination, the importance of the well to the capacity of the municipal water services, and the length of time groundwater within the area will take to reach the municipal water service well.

Watershed Planning Studies

Watershed planning studies will be used to identify potential impacts of change to the following areas:

- water budget;
- peak runoff flows;
- runoff volumes;
- time distribution of stormwater runoff;
- flood levels and velocities;
- floodplain storage;
- existing storm water management facilities;
- capacities of existing downstream works;
- floodplain buildings and structures;
- erosion and sedimentation of stream systems;
- surface water quality;
- groundwater quantity and quality;
- water supply aquifer;
- infiltration;
- recharge;
- discharge;
- baseflow;

- wetlands;
- significant woodlands and other ecosystems;
- significant flora and fauna, including Habitat of Endangered Species and Threatened Species;
- aquatic habitat and fisheries; and
- recreation.

As part of the watershed planning study requirements, there will be consideration and recommendations for rehabilitation measures for a system which is already impacted.

Things to Think About

- Wilmot is reliant on groundwater resources to supply all of its drinking water at this time. Protecting existing and future sources of drinking water from incompatible land uses and from contamination that could hinder groundwater recharge is essential to maintaining human health, economic prosperity, and a high quality of life. The Township will maintain, and wherever feasible, enhance the quality and quantity of water infiltration and recharge to groundwater aquifers. The Township will support the Region in implementing land use planning decisions to protect the quality and quantity of drinking water resources, and to limit development and site alteration that could adversely affect drinking water supplies drawn from the Grand River and from groundwater resources.
- A component of environmental management is watershed planning for drainage basins. This provides a unique opportunity to understand the characteristics of ground and surface water resources, evaluate interrelated natural habitats, identify appropriate locations for development, and establish measures to prevent adverse impacts on natural systems. Watershed planning also recognizes that the Region and Township are part of a larger water resources and natural system. The Township recognizes the direct relationship between human activities and impacts

on water and other natural resources. Planning from a watershed perspective allows recommendations to to prevent or minimize those impacts.

4.6 Other Considerations

This section provides a synopsis of other considerations to be mindful of as Wilmot's New Official Plan is developed. It includes an overview of the duties and responsibilities the Township has, as well as emerging green infrastructure best practices.

Duties and Responsibilities

As part of the Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) process, Wilmot has inherited duties and responsibilities for system operations. The following information is quoted directly from the CLI-ECA Schedule E, Section 2.0:

2.1 The Owner, Prescribed Persons, and any Operating Authority shall ensure the following:

2.1.1 At all times that the Sewage Works within the Authorized System are in service, the Sewage Works are: a) Operated in accordance with the requirements under the EPA and OWRA, and b) Maintained in a state of good repair.

2.1.2 The Authorized System is operated by persons that are familiar with the requirements of this Approval.

2.1.3 All sampling, testing, monitoring, and reporting requirements under the EPA and this Approval that relate to the Authorized System are complied with.

2.1.4 All necessary steps are taken to ensure that operations of the Sewage Works and any associated physical structures do not constitute a safety or health hazard to the general public.

2.1.5 Where a Stormwater Management Facility ceases to function as a Stormwater Management Facility, whether by intent, accident, or otherwise (e.g., a CSO or an

SSO), a workplan shall be developed that includes local community notification, plans for rehabilitating the Stormwater Management Facility to proper function in a reasonable time, identification of actions that will be taken to prevent reoccurrences, and timelines for implementing the workplan.

2.1.6 That operations and maintenance activities are undertaken at the frequency and in conformance with the procedures set out in the O&M Manual. a) A Prescribed Person or Operating Authority shall only undertake operations and maintenance activities where they have been delegated the authority to undertake such activities by the Owner or the Owner has expressly approved the activity(ies).

2.2 For clarity, the requirements outlined in the above conditions 2.1 for Prescribed Persons and any Operating Authority only apply to Sewage Works within the Authorized System where they are responsible for the operation.

2.3 The Owner, Prescribed Persons, and Operating Authority shall take all reasonable steps to minimize and ameliorate any Adverse Effect on the Natural Environment or impairment of the quality of water of any waters resulting from the operation of the Authorized System, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.

- The duties of owners and operating authorities as quoted from the CLI-ECA are important to highlight as it clarifies and defines accountability. Stormwater management securities serve as a financial guarantee for stormwater management monitoring and maintenance. Through policy, the Township can guide development in accordance with these duties and responsibilities.

Green Infrastructure

Current Provincial Policies and stormwater management criteria emphasize implementing green infrastructure as part of a stormwater management system. Green

infrastructure and low-impact development best management practices are implemented at-source and serve to reduce runoff volume by promoting groundwater recharge and/or intercepting stormwater for reuse, enhancing water quality through the filtration and/or infiltration of runoff, and enhance erosion control for watercourses. Green infrastructure represents a key component for enhancing the resiliency of drainage infrastructure and contributing to adaptation and mitigation of climate change impacts. Wilmot's new Official Plan will require policies which strengthen the requirement to incorporate green infrastructure and low-impact development best management practices into the stormwater management system and provide Wilmot with a funding mechanism to support the operation and maintenance requirements under the CLI-ECA.

5.0 Emerging Policy Directions

There are several emerging policy directions which should be considered based on the analysis in this discussion paper.

1. Protect key natural heritage and key hydrologic features and associated buffers, using Provincially identified features as a starting point for base environmental mapping.
2. Prohibit development and site alteration in core features being key natural heritage and key hydrologic features identified in the PPS.
3. Provide for the protection of additional linkages identified through the completion of Sub watershed Studies or Environmental Impact Studies.
4. Provide policy flexibility for essential infrastructure for which an Environmental Assessment has been completed or which are required as a condition of approval under the *Planning Act* for location in the Natural Heritage System.
5. Permit existing agricultural uses to continue in the Natural Heritage System.
6. Restrict development and site alteration in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.
7. Identify elements of the Natural Heritage System outside of key natural heritage and key hydrologic features as an overlay and require an environmental study prior to permitting development.
8. Include the latest mapping policies from source water protection plans and the Grand River Conservation Authority for key hydrologic areas and resources, including areas of significant and/or sensitive groundwater recharge, areas of surface water contributions and ecologically Significant Groundwater Recharge Areas.
9. Encourage low impact development (LID) techniques and green infrastructure development to increase rainwater infiltration, and support evapotranspiration

and filtration of water, in accordance with the Township's CLI-ECA and the hierarchal approach established in Provincial Guidelines, to the maximum extent possible.

10. Include policy which supports Emergency Preparedness Planning with respect to development, infrastructure, and systems to ensure access basic needs are designed in a way that mitigates the impacts of climate change and related extreme weather events.
11. Prioritize infrastructure design, location and maintenance around vulnerability for climate-change related consequences.

6.0 Next Steps

This Discussion Paper is one of seven papers that are being completed as part of Phase 2: Background Research and Study Preparation of the Township of Wilmot's New Official Plan process. These papers establish a foundation from which the Township will develop policy directions and generate discussion regarding stormwater-related issues and recommendations.

The Discussion Papers are being released in **DRAFT** form to inform public engagement in fall 2025. The Discussion Papers will be updated to reflect additional insights or items arising from public engagement and will include thematic summaries of input received (with a companion engagement report also being prepared). Those **FINAL** reports shall include recommended policy directions that will inform the development of the Township's New Official Plan.

The **FINAL** reports and policy directions shall be presented to Township Council as part of the meeting required under Section 26 of the *Planning Act*. This meeting is an open session to discuss revisions that may be required to the Township's Official Plan. It is one of several opportunities throughout this project where public input is needed and welcomed.

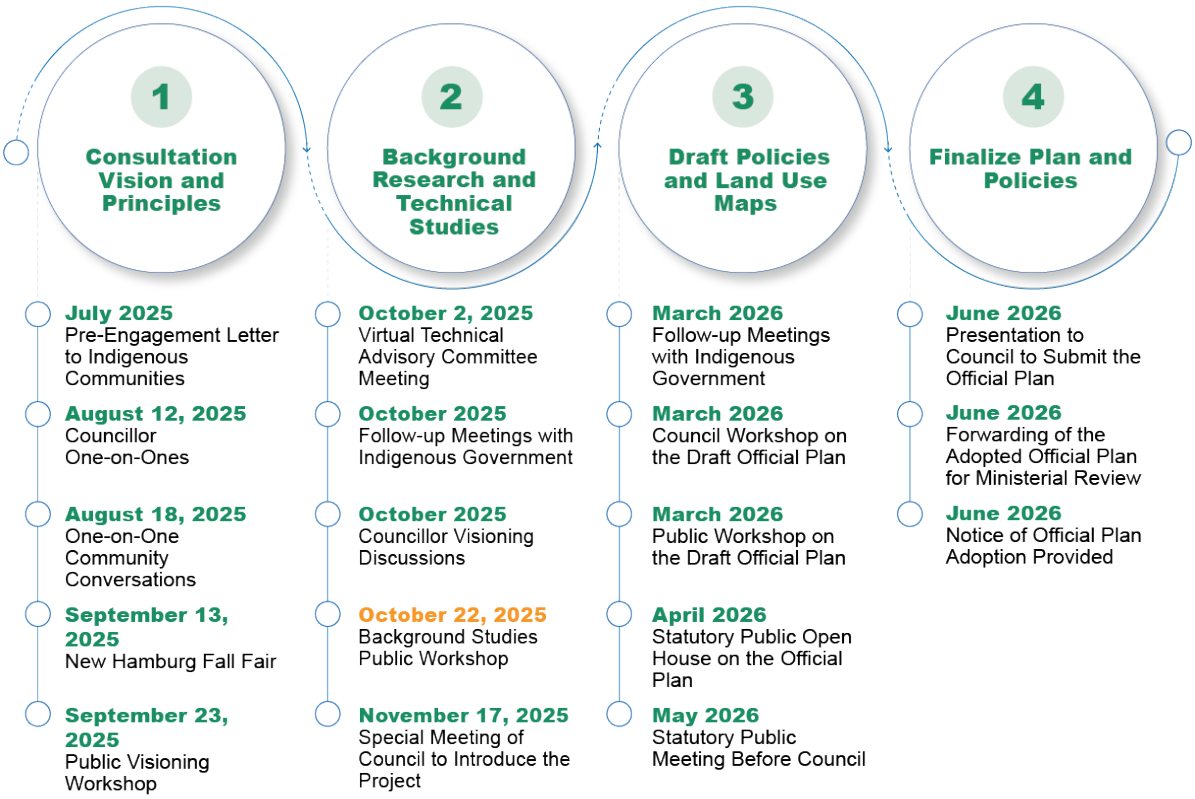


Figure 4: Study Process and Engagement Opportunities

These reports, together with public input, will serve as the basis for developing new stormwater management policy framework for Wilmot's New Official Plan. The draft New Official Plan will be released for review in 2026 and will include public events in addition to the statutory *Planning Act* process.