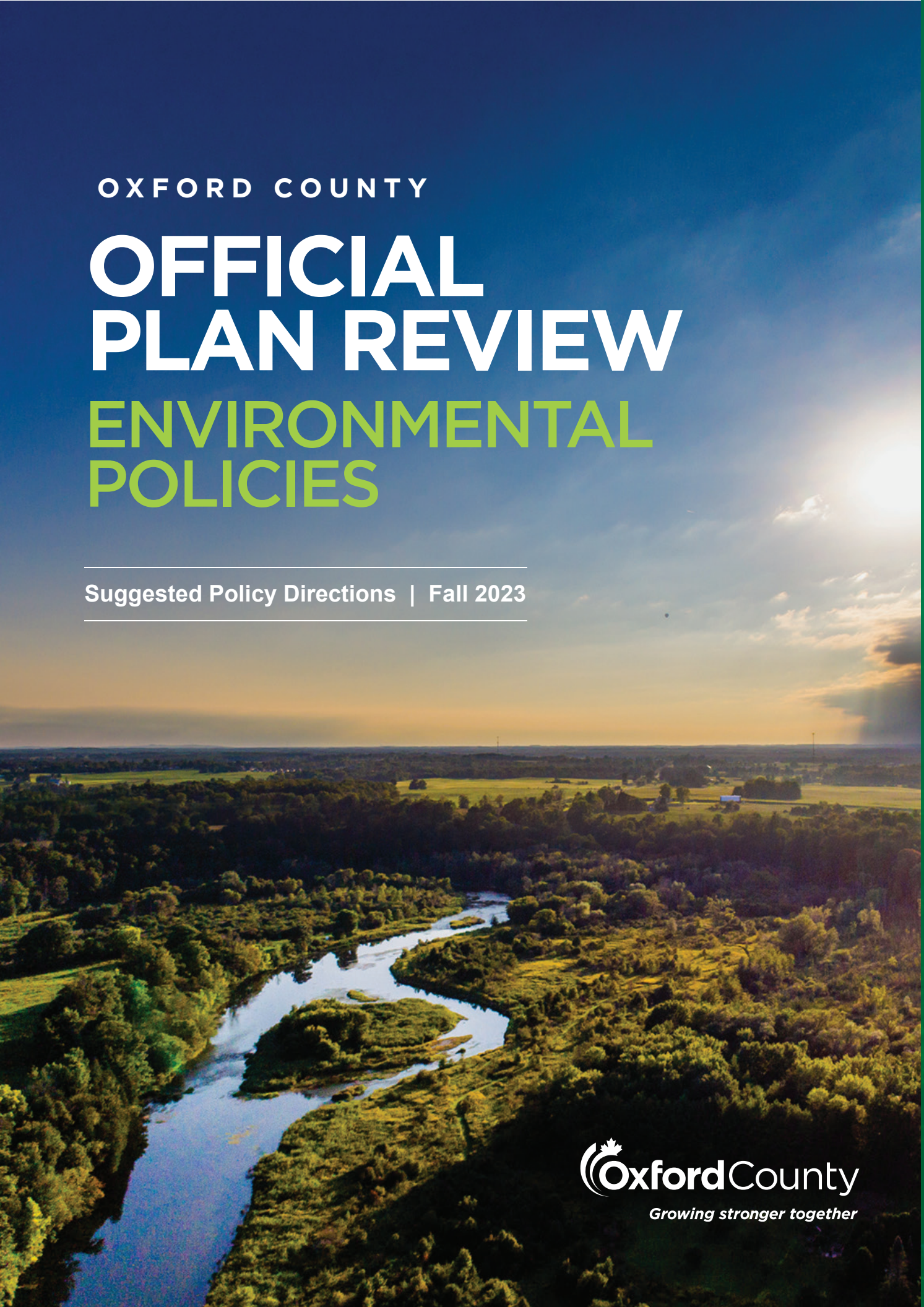
OXFORD COUNTY

OFFICIAL PLAN REVIEW

ENVIRONMENTAL POLICIES

Suggested Policy Directions | Fall 2023



Oxford County

Growing stronger together

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Executive Summary

This paper represents a discussion on the update of the environmental policies within the Official Plan and includes discussion on many of the key considerations, opportunities, challenges, and benefits associated with community planning for natural heritage systems and other aspects of the natural environment, including biodiversity and climate change mitigation and adaptation. This paper is intended to help inform discussion and feedback on suggested policy directions that will, in turn, be used to inform and support the development of draft updates to the environmental policies in the County Official Plan (OP).

This paper has been informed by initial engagement and community feedback as well as extensive background review, and includes discussion of the various requirements, technical considerations, and opportunities for updating the environmental policies in the OP.

The development of this policy paper has also been based on the Provincial direction provided in the Provincial Policy Statement, 2020 (PPS). It is also recognized, that the Province is in the process of reviewing/updating the PPS, as well as 'A Place to Grow – Growth Plan for the Greater Golden Horseshoe', which may ultimately require some further refinement to the draft policies that are developed as part of this update process.

This paper specifically focuses on the topics of:

- natural heritage systems,
- water resource,
- open space,
- soil resources,
- natural hazards, and,
- addressing a changing climate including energy efficiency and air quality.

While the PPS establishes minimum requirements for planning for various matters of provincial interest related to the natural environment (e.g., natural heritage systems, water resource systems, natural hazards, etc.), the County may also choose to establish more protective policies than the PPS, based on the local circumstances and objectives, provided doing so would not conflict with any other policy of the PPS. In this regard, it is noted that the existing Official Plan policies are already more protective and proactive than the minimum provincial requirements, in some cases.

There are a number of directions included in this paper which, as proposed, would continue to go beyond the minimum PPS requirements to help achieve Oxford's strategic goal of preservation and enhancement of the natural environment, including climate change mitigation and adaptation. More specifically these directions are intended to:

- Inform policy development that supports community biodiversity and climate goals,
- Help recognize the local context, vulnerabilities and opportunities related to environmental protection, management and enhancement,
- Incorporate and encourage conservation and restoration of natural areas and ecosystems,
- Support sustainable land use practices which can help reduce habitat fragmentation, promote green infrastructure, and enhance biodiversity,

- Incorporate approaches to support climate resilience into the OP, such as encouraging infrastructure improvements, enhanced flood mitigation, and adaptation strategies that protect communities and natural systems,
- Increase resilience, as biodiversity and climate planning can help improve and mitigate the impacts of climate-related disasters and ecological shifts,
- Contribute to improving health and well-being as improved air and water quality, access to green spaces, and reduced heat islands enhance residents' quality of life,
- Support the reduction of greenhouse gas emissions and promotion of renewable energy, sustainable development practices, and incorporation of green infrastructure, and,
- Promote education and engagement, as increasing awareness and involving the community in conservation efforts are essential for long-term success.

Suggested Environmental Policy Directions Summary

There are a range of suggested policy directions that have been identified for further consideration as part of the proposed updates to the environmental policies in the County OP. These policy directions are outlined at the end of each Section of this paper, with some focused on addressing minimum Provincial requirements and others on reflecting local studies, goals and opportunities. Generally, these suggested policy directions include:

- Identifying a natural heritage system and related policies to protect all ecologically important features, not just those that are 'provincially significant', as virtually all of the remaining natural cover in Oxford is important for sustaining ecological and hydrological functions to support biodiversity and minimize the risks/impacts from a changing climate,
- Creating a new policy framework to incorporate a water resource system into the OP, building from existing OP policies and source water protection plans. As Oxford is an entirely ground water dependent community, it is of critical importance that the quality and quantity of the County's water sources be protected, improved, and restored. Updating the water resource policies in the Official Plan provides an opportunity to consider appropriate measures to further protect both the County's municipal drinking water supplies and surface and groundwater features such as rivers and streams, wetlands, areas of ground water recharge and discharge (seeps and springs),
- Updating open space policies to encourage the use of master planning and secondary planning for parks, in part to respond to changes resulting from Bill 23, reviewing and, where necessary, updating the uses permitted in the open space designation. Also, to provide greater emphasis on the role of and planning for trails, including recognition of County and Area municipal standards and studies and their role as part of the active transportation network,
- Revising the existing soil policies to reflect legislative changes with respect to 'excess soils', while also continuing to protect the high-quality agricultural soils that Oxford is known for,
- Updating policies for natural hazards to ensure development continues to be directed away from areas of natural hazards, where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards. This includes incorporating updates from the Conservation Authorities Act, as well as the Provincial standards for hazardous forest types, and,
- Incorporating new policies to help address and prepare for a changing climate, including updates relating to energy efficiency and air quality. This includes encouraging increased density and promoting compact urban form, considering efficient design and building orientation, supporting increased walkability and efficient use of hard and soft services, improving energy conservation, and promoting net zero development to help reduce

development pressure on surrounding agricultural and environmental features and reduce the production and release of carbon dioxide and other greenhouse gases as part of development related practices.

Feedback and discussion on these suggested directions is intended to help improve, refine, and confirm the overall approach and will to help support the development of a future 'consultation draft' of policies which will include draft mapping updates for the OP.

SHARE YOUR FEEDBACK:

All feedback on this paper will help inform development of a detailed set of draft policies, including mapping (where applicable), which will be release for further community engagement and discussion, including with the Area Municipalities, community groups (e.g., Agricultural and Planning Advisory Committee) and the public.

Complete the survey or submit a question on Speak Up Oxford
Email questions or feedback to OPUpdate@oxfordcounty.ca

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Introduction

This paper is intended to help inform discussion and feedback on suggested policy directions that will, in turn, be used to inform and support the development of draft updates to the environmental policies in the County Official Plan (OP). The Oxford OP is the primary document for guiding land use planning across the County.

This paper specifically focuses on the following policy topics:

- natural heritage systems,
- water resources,
- open space,
- soil resources,
- natural hazards, and,
- addressing a changing climate, including energy efficiency and air quality.

Scope of this Policy Paper

The Planning Act requires municipalities to regularly review their OP to ensure that it:

- conforms with and does not conflict with provincial plans,
- has regard for matters of provincial interest, and,
- is consistent with the Provincial Policy Statement (PPS).

As such, this discussion paper has been produced to provide background on the various Federal and Provincial legislative and policy requirements and how they will guide, inform and influence proposed updates to the OP's environmental policies. It also considers other Area Municipal and County plans, strategies and initiatives which that are related to and support potential updates to the OP environmental policies. This paper is organized by policy area, generally aligning with those in the existing OP, as well as the PPS.

The overall direction to proceed with review and update of the 'environmental resource policies' in the OP was provided by County Council on May 25, 2022, as discussed in CP 2022-48.

This paper provides an overview of changes to the Planning Act, PPS, Conservation Authorities Act and other related environmental legislation and policies that require and/or warrant consideration as part of the proposed updates to the OP environmental policies, including some of recent the Planning Act changes (e.g. Bill 23 and 39), where applicable.

This paper concludes with a brief overview of the next steps in the OP review process.

Planning Framework in Ontario

Planning Act

The Planning Act is provincial legislation that sets out the ground rules for land use planning in Ontario. The purpose of the Act is to establish planning processes and requirements that provide for a land use planning system that is led by provincial policy. As part of this, the Act requires integration of matters of provincial interest into provincial and municipal planning decisions. It also establishes and recognizes the decision-making authority and accountability of municipal councils in planning.

Provincial Policy Statement (PPS)

This policy paper is currently based on the Provincial direction on land use planning provided in the Provincial Policy Statement, 2020 (PPS). However, it is recognized, that the Province is in the process of reviewing/updating the PPS, as well as the 'A Place to Grow – Growth Plan for the Greater Golden Horseshoe', which may ultimately require further changes or refinements to draft policies for updating the Official Plan to ensure consistency. However, it is noted that the proposed draft PPS changes released to date have also been considered in the development of the environmental policy directions and are discussed, where applicable. This paper has also considered the comments and submissions from Oxford County to the province in response to the PPS review consultations to date.

Oxford Official Plan

The Oxford OP provides the land use planning direction for both the County and the eight Area Municipalities that comprise the County of Oxford. The policies and land use schedules contained in the OP establish the overall vision and land use strategy for growth and development in Oxford. This is accomplished by setting out locational, development review and other requirements for a full range of land uses (e.g. residential, commercial, industrial, institutional, parks and recreation, agriculture, etc.) and providing direction with respect to matters such as the provision of infrastructure and public services, the protection of agricultural land, and natural and cultural heritage features, and avoiding, or mitigating the potential impacts from, natural and man made hazards.

June 2022 - Visioning and Engagement Summary

In June of 2022 County staff initiated work on the Phase 2 OP update with a community survey and presentations to each of the Area Municipal Councils. This was intended to provide an early opportunity for input and ideas to inform the policy development process and scope.

The results from the feedback received indicated a number of common areas of interest/concern by respondents, including:

- A desire and general support for improving/ increasing protection of natural spaces, rivers and streams,
- General support for planning for watershed health, restoration, and improvement of rivers, streams, and water resources,
- Protect natural spaces to support species that inhabit those areas, including species at risk,

- Ensure the farming community is involved in policy development and be clear on how policies and recommendations will, or will not, impact and support farmers,
- Incorporate and reflect parts of the community's sustainability plan (Future Oxford) in the OP
- Recognize that the rivers and valleys in the County provide important recreational opportunities with many trails, canoeing opportunities, and more,
- Improve and provide clarity regarding environmental study requirements, as generally implemented through development processes, and develop technical guidance to support implementation,
- Public parks and community green spaces are highly valued and provide opportunities for recreation, supporting health and wellness, and access to nature. These values should be recognized and these areas protected for long-term public use, and,
- A desire for increased number and amount of parks and greenspace within Oxford.

Establishing Policy Directions

Considerations and directions for the development of policies are focused on six main policy areas, based on the structure of the existing OP and Province requirements (PPS), and include:

- Natural Heritage System
- Water Resource System
- Open Space
- Soils
- Natural Hazards
- Energy Efficiency, Air Quality and Climate Change

At the end of each main section there is a summary of suggested policy directions which are informed by both the discussion and related technical information. The directions are intended to represent and inform future policy development.

Natural Heritage System

Planning for natural heritage using a systems-based approach is a strategic way to help address biodiversity loss, potential negative impacts from land use change and the uncertainties of climate change. The intent being to ensure the County's natural heritage system can sustain present and future generations, while also working toward achievement of a 'net environmental gain' over time.

Protecting natural heritage systems is key to maintaining and enhancing environmental health and ecological integrity, long-term quality of life, and the various local economic benefits that are dependent on the ecological goods and services (e.g., food, water, timber, air purification, soil creation, and pollination, etc.) that the natural heritage system provides.

Natural heritage systems are "made up of natural heritage features and areas (e.g., woodlands, wetlands), as well as linkages intended to support natural processes and maintain connectivity, which is necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial parks and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state,

areas that support hydrologic functions, and working landscapes (i.e., agriculture) that enable ecological functions to continue" (PPS, 2020).

Oxford Natural Heritage Systems Study

The Oxford Natural Heritage System Study (ONHSS) provides a science-based approach for understanding the existing inventory of natural heritage features and areas within Oxford, and how these features work together as part of a landscape level terrestrial (land-based) system which also connects to neighbouring municipalities and among the watersheds and subwatersheds they are also a part of. The inclusion of information from the ONHSS, as a background document, will be used to help inform the basis for updating the natural heritage policies in the OP. Similarly, as the natural heritage system also interacts and is interdependent with the water resource system, the OP policies will also reflect this through the update.

With this policy paper the County is also releasing an updated (2023) draft Oxford Natural Heritage System Study (ONHSS), which builds from the 2016 study and includes an analysis of landscape level changes over a 10 year monitoring period. The study identifies the County's 'ecologically important' natural heritage features and areas and components of a broader natural heritage system using updated information and provides recommendations on various measures to protect, restore, and where possible, improve the system and its component features and areas. This updated technical information has been used to inform the discussion regarding natural heritage features and areas below, along with some of the directions for policy development.

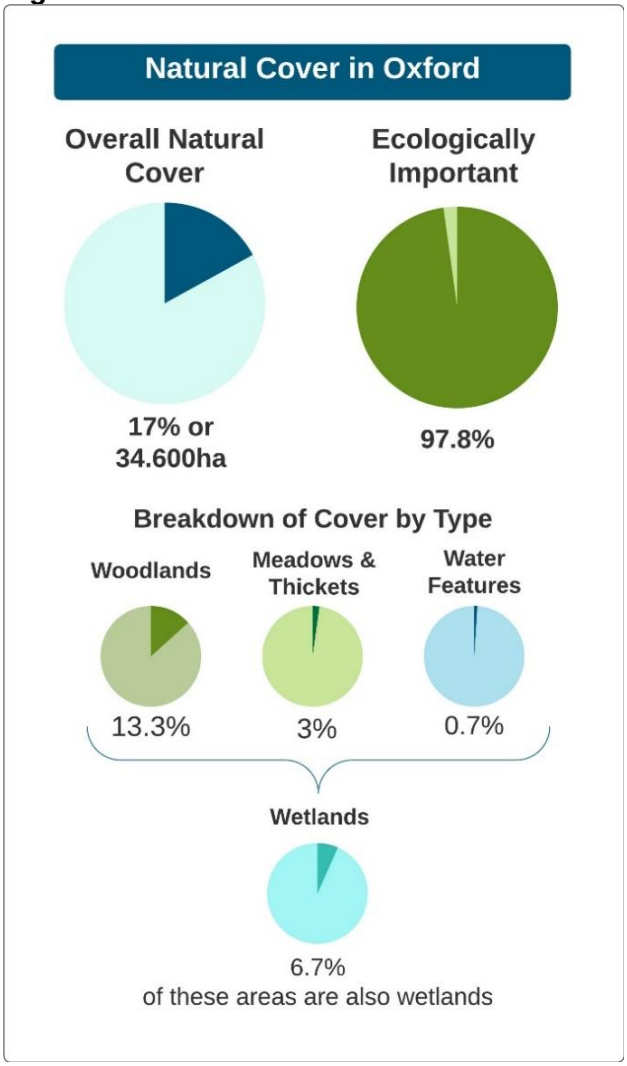
As shown in Figure 1. below the ONHSS found that approximately 34,600 hectares, or 17%, of the County's total land area is covered by natural vegetation, of which approximately 97.8% was determined to be 'ecologically important'.

The majority of the County's remaining natural cover is comprised of woodlands (13.3%), with meadows and/or thickets representing another roughly 3%, and 0.6% being made up of aquatic or water features. Roughly 6.7% of the County's total 17% cover is also wetlands that are associated with many of the above noted woodland, meadows or aquatic features.

This analysis does not fully consider the potential role of these natural areas with respect to connectivity functions and linkages. Habitat functions, including the presence of unique characteristics such as areas of ground water discharge (seeps and springs), presence of species at risk or other significant species would are other ecological considerations that are beyond the scope of the current ONHSS.

In many respects virtually all of the remaining natural cover, rivers and streams in Oxford can be considered "ecologically important" as their ecological and hydrological functions contribute to and support Oxford's overall ecological health and biodiversity.

Figure 1. Natural Cover in Oxford



As discussed in more detail below, natural woodland and wetland cover in the County are both already below the minimums suggested by the literature as being necessary to maintain critical ecosystem functions. Further, meadows and thickets are important successional communities that provide habitat for a wide range of declining species that are tied to biodiversity loss, including pollinator species.

It is important to understand that the benefit of protecting these natural areas goes beyond just the requirement to be consistent with the PPS and general community support for protecting natural heritage. These natural areas also provide a range of ecological goods and services (e.g. groundwater protection, water treatment, flood control, air quality improvement, temperature moderation etc.) and contribute to overall community health and well-being (i.e. by providing access to nature and opportunities for outdoor recreation and relaxation). As such, maintaining, enhancing and restoring these features and areas is key to both ensuring consistency with the PPS policy requirements and ensuring they are able to continue to provide these additional environmental and community benefits.

The challenge in rural and urbanizing areas (like Oxford) is how to effectively protect and manage the remaining natural heritage areas, while still accommodating growth and intensification within settlements and also supporting the long term protection and vibrancy of agricultural areas. To help address this, Future Oxford calls for the establishment of a new natural heritage system framework in the OP to increase and connect green space to support biodiversity and protect significant natural features in Oxford.

Understanding Landscape Level Changes 2010-2020

Within the ONHSS, there are several key findings that arise from review of the trends in landscape level change over the last decade, including:

- There have been gains in woodland, meadow and thicket coverage across Oxford, in a large part due to successional changes (e.g., from meadow/thicket to woodland), with some of the meadow and thicket gains stemming from changing agricultural practices, retirement of fragile lands, etc.
- The woodland gains do not offset the overall woodland loss, more specifically:

- ❖ in terms of area more than 400 ha have been lost over the 10-year period, with only over 300 ha of true woodland gains, and,
- ❖ in terms of functional loss, it is important to understand that successional gains do not fully offset the woodland losses (even if the areas were like for like) in part due to the greater range of ecological functions that mature, large woodlands provide (e.g., woodland interior functions, carbon sequestration, etc.). It will take decades for younger succession wooded areas to succeed into mature forests and to comparable functional services.

- There has also been an increase in water features, particularly over the 2015 to 2020 period, that includes a notable increase in ponds, including from aggregate extraction. These types of water features may represent opportunities for future restoration efforts focused on the creation of wetlands and improving/ providing higher quality fish habitat.

Land Use Planning and Biodiversity

One of the purposes of identifying and protecting, enhancing and restoring natural heritage systems is to support their ecological functions (e.g., production of food and water; regulating temperature, flooding and filtering water; fixing nitrogen, oxygen production etc.) and biodiversity for the long term. Biodiversity generally refers to the variety of all living things and their interactions and is often broken into three groups': ecosystem diversity, species diversity and genetic diversity. Natural heritage systems planning focuses primarily on aspects of ecosystem diversity and to a lesser extent species diversity, with limited consideration of genetic diversity.

Land use planning tools and approaches can help to support and protect biodiversity by:

- Using various planning tools to identify and protect natural heritage features and areas for the long term (e.g. land use designations and zoning), including directing development away from ecologically important areas and/or requiring appropriate studies and measures to ensure development proposed within or adjacent to such areas will not have a negative impact,
- Establishing appropriate mitigation requirements (e.g., buffers, enhancement and restoration measures, water balance requirements, etc.) to help maintain and enhance natural heritage features and areas,
- Promoting incorporation of ecosystem considerations into community design/new development (i.e., using native species, incorporating pollinator species, managing invasive species, etc.), and,
- Serving as an education and integration tool for other municipal and agency requirements and processes/programs (i.e., CA regulations, by-laws, stewardship programs, etc.)

Recognition and inclusion of biodiversity in any updated OP policies, together with the updated natural heritage inventory in the ONHSS, would also help to inform other environmental related plans, tools and initiatives (e.g., expanding stewardship, partnership and education programs, establishing goals and targets for restoration and biodiversity initiatives, management directives for municipal programs, property and infrastructure etc.). These could potentially be further detailed and expanded upon through the development of a Biodiversity Strategy, as identified in Future Oxford sustainability plan, if deemed necessary and/or appropriate.

Incorporating a Natural Heritage System into the Official Plan

The PPS requires that municipalities protect natural heritage features and areas for the long term and identify natural heritage systems within their official plans, recognizing that these systems may vary in size and form in settlement areas and agricultural areas. At minimum this requires identifying and protecting the following natural heritage features and areas:

- Provincially Significant Wetlands and Coastal Wetlands,
- Significant Woodlands,
- Significant Valleylands,
- Significant Wildlife Habitat,
- Provincial Areas of Natural and Scientific Interest,

as well as recognizing linkages and ensuring that fish habitat and habitats for species at risk are protected in accordance with Provincial and Federal requirements.

The PPS prohibits development in provincially significant wetlands and only permits development in other natural heritage features and areas where it is demonstrated that there will be no negative impact to the natural heritage feature or area and its ecological functions.

To ensure consistency with the current PPS natural heritage policies, the OP must include, at minimum:

- Identification of natural heritage systems and ways in which the biodiversity, connectivity and ecological functions of the system will be maintained, restored or improved,
- Identification and protection of natural heritage features and areas and their ecological functions, which at minimum includes those features and areas that are considered 'significant' per the PPS (i.e. as listed above),
- Protection of these same features, areas and ecological functions from incompatible land uses and activities through planning documents and related tools, and,
- Provision of a clear and reasonable mechanism for assessing the impact of proposed development on these features, areas, their adjacent lands and ecological functions, in order to demonstrate 'no negative impact' as defined by the PPS.

While the PPS establishes minimum requirements for the protection of 'significant' natural heritage features and areas, the County may establish, and is generally encouraged to consider, more protective policies than the PPS based on the local circumstances and objectives, provided doing so would not conflict with any other policy of the PPS. In this regard, it is noted that the existing Official Plan policies are already more protective and proactive than the minimum provincial requirements, in some cases.

Potential options in this regard may include:

- Identifying natural heritage features for protection beyond those that meet provincial criteria for significance (i.e., those that are ecologically important locally),
- Being more protective of features that are based on Provincial criteria for significance, and,
- Providing more detailed requirements to support local goals and objectives to protect, enhance and restore natural heritage features and areas.

Maintaining a 'Net Gain' principle

The OP currently includes goals and supporting policies aimed at maintaining an overall 'net environmental gain' through the protection and conservation of existing natural features, the maintenance of existing ecological functions and the creation of new environmental features, wherever possible.

This is a key principle that should be maintained in the OP and supported by additional principles and policies, to address 'offsetting' or 'compensation' at appropriate scales. This existing policy approach may be further supported by clarifying that there not only be no net loss of Oxford's

natural heritage system, including the natural heritage features and areas and linkages that comprise the system, but also a net gain in size and functionally over the long term.

Maintaining the net gain principle will help address the gradual loss of features and areas which do not meet the criteria to be 'significant' under the PPS, or in situations where development is otherwise permitted within significant natural heritage features and areas, and it results in their removal (in whole or in part). It may also form the basis to support a greater minimum level of protection for natural heritage features and areas beyond the minimums set out in the PPS, including those that are ecologically important.

In addition, the net gain principle and updated natural heritage policies may also recognize the role of natural heritage features with respect to addressing the impacts of a changing climate (i.e., their ability to sequester carbon and its release when features are removed or disrupted). This would be in keeping with the sustainability framework that is part of Future Oxford but would be beyond the minimum requirements of the PPS.

Natural Heritage and Agriculture

Agriculture is a key contributor to Oxford's economic vitality and overall sustainability and also occupies the majority of its land base. Accordingly, updates to the County's natural heritage systems policies also need to recognize and support the ability of agricultural land uses to continue, as required by the PPS. As such, the primary focus of identifying natural heritage systems in the agricultural landscape will be on recognizing existing features and areas and how they are connected and to ensure that new non-agricultural development is generally directed away from such areas or requires appropriate studies to ensure there will be no negative impacts.

It is recognized that the bulk of the natural features and areas in Oxford are located within the agricultural area and that these areas present many of the best opportunities to increase natural cover, ecological function, and/or biodiversity through the implementation of stewardship, enhancement and restoration initiatives (e.g., working with farmers and rural residents where there is interest and support).

It will be important to provide clarity on how agriculture operations and natural heritage requirements are intended to work together and how they integrate with other Provincial and Federal requirements. For example, the PPS specifically exempts 'works subject to the Drainage Act' from the definition of 'development'. So, OP requirements are not applicable to works subject to the Drainage Act (e.g., cleaning and maintaining drains), which would be beneficial to clarify through any updates to the natural heritage policies. That said, other applicable law/legislation (e.g., Fisheries Act, Conservation Authorities Act, Endangered Species Act) must still be met where applicable.

It will also need to be clear that various other agricultural activities (e.g., maple syrup production, rotation of crops in existing fields within valleylands/other linkage areas, woodlot management etc.) are not restricted by the OP policies, but may still be subject to other regulations (e.g., County's Woodland By-law or area municipal tree protection by-law requirements).

Natural Heritage Features and Areas

Areas of Natural and Scientific Interest (ANSIs)

Areas of natural and scientific interest (ANSIs) are identified and evaluated by the Province. ANSIs are areas of land and water containing unique natural landscapes or features that have been identified as having life or earth science values related to protection, scientific study or education. There are two types of ANSIs (i.e., life science and earth science) and they are classified as provincially, regionally, or locally significant based on their evaluation. In Oxford County there are:

- 16 Life science ANSIs (6 provincially significant and 10 regionally significant)
- 7 Earth science ANSIs (all are provincially significant)

At present the OP includes Life Science ANSIs as natural heritage features and Earth Science ANSIs as part of the Open Space designation. Based on PPS requirements and related provincial guidance, all ANSIs are natural heritage features and areas, and all of these should form part of the natural heritage system, but with different development review criteria.

Wetlands

Current estimates suggest that more than 70% of overall wetland cover, and 85% of historic wetland wetlands greater than 10 ha haver been in lost in southwestern Ontario, including Oxford County. Wetlands are particularly important for long term protection, given their important contributions to stream flows, ability to attenuate and regulate floodwaters, filter pollutants, reduce erosion, and support groundwater recharge, in addition to providing important habitats for fish and wildlife.

The updated ONHSS study indicates that only 6.78% of the County remains in wetland. As indicated in Table 1 below, at the individual area municipal level, the Township of Blandford-Blenheim has the highest wetland cover at 14.04% and the Town of Tillsonburg has the lowest at 0.9%. Further, the ONHSS recognizes a minimum target of 10% wetland cover at a watershed/County scale and 6% at a sub watershed or area municipal scale. This helps to ensure a bare minimum level of wetland coverage is distributed throughout the landscape to maintain hydrological functions. It is also acknowledged that minimum levels of coverage, depending on their size, configuration, connectivity and locations may not necessarily be sufficient to maintain the local biodiversity of species reliant on wetland features for part or all of their life cycle.

Table 1. Wetland Cover

Name	Wetland Area ha	Municipal Area ha	% Wetland Cover by Municipality
Blandford-Blenheim	5,407	38,498	14.04%
East Zorra-Tavistock	981	24,242	4.05%
Ingersoll	63	1,888	3.34%
Norwich	1,960	42,547	4.61%
South-west Oxford	1,911	36,581	5.22%

Tillsonburg	20	2,204	0.90%
Woodstock	377	5,823	6.48%
Zorra	3,186	53,159	5.99%
Corporate Oxford	**13,905**	**204,943**	**6.78%**

Source. ONHSS 2023

This highlights the ecological importance of the remaining wetland features in Oxford, as well as the need to continue to support restoration and enhancement of wetlands, including through existing programs and partnerships, such as:

- 2018 Managed Forest Program for County owned forests,
- Oxford Clean Water Program,
- Reforest Oxford, and,
- Local projects lead by Ducks Unlimited and the Thames Talbot Land Trust, among others.

Roughly 40% of wetlands in Oxford are currently evaluated as being 'provincially significant', either as a single wetland, or more commonly as part of a wetland complex. Provincially significant wetlands are determined through the completion of an evaluation following the Ontario Wetland Evaluation System (OWES). Revisions to OWES made by the Province at the end of 2022, will likely result in the 'provincially significant' classification being lost for some, and potentially most, of the wetlands in the County over time and represents a significant risk for increased wetland loss in the County and Southern Ontario overall. As such, policies that only focus on the protection of 'provincially significant' wetlands' (i.e. the minimum required by the PPS) are likely to become less and less effective over time.

With the exception of Blandford Blenheim (which is in the Grand River Watershed and the Nith River and Whiteman's Creek subwatersheds), the County has a very low level of wetland coverage. When considering the benefits wetlands provide, particularly in relation to managing and reducing the impacts of flooding, helping maintain or improve water quality, and providing important habitats, further wetland loss should be avoided and restoration of wetland areas to improve ecosystem diversity and spatial distribution promoted through the OP, wherever possible.

As such, it is suggested that the OP updates establish policy requirements to protect all wetlands. This should include consideration of smaller wetlands (i.e. <0.5ha), as well as ground water dependant wetlands such as seep and springs as part of the development review process, which in part due to the complexing changes to OWES, may now be at even greater risk of loss. Small and groundwater dependant wetlands were not specifically mapped through the ONHSS as they can be difficult to identify and at the time the study was completed. Some of these may have been captured through the previous OWES framework from a complexing perspective (i.e. ensuring ecosystem/hydrological considerations would be captured) if development was proposed within or adjacent to these areas.

Conservation Authorities Act and Wetlands

Wetlands continue to be regulated by Conservation Authorities and works near or in wetland areas continue to be subject to the permitting requirements under the Conservation Authorities Act. While the Province has proposed potential changes, where municipalities may be delegated permitting responsibilities specific to development in the future, these changes are still awaiting the regulations necessary to bring them into force.

Overall OP policy updates regarding wetlands and other natural heritage features should be established recognizing there is still some overlap with Conservation Authority requirements and work to align these requirements and related processes to the extent possible to avoid potential duplication and confusion with respect to process.

Woodlands

Woodlands are treed areas that provide environmental and economic benefits to both the landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, and provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products (PPS, 2020). Based on the PPS definitions, woodlands include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels. Woodlands may be delineated according to the Forestry Act definition or the Province's Ecological Land Classification system definition for "forest".

The PPS, 2020 only permits development in 'significant' woodlands where it is demonstrated the there will be no negative impact on the feature or its ecological or hydrological functions. Woodlands are considered to be significant where "they are ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history" (PPS, 2020). These are to be identified using criteria established by the Province.

In this regard, the ONHSS report establishes 13 criteria for evaluating the significance of vegetation patches, including woodlands, which are based on the Provincial criteria. Table 2 highlights the total woodland cover in hectares for the County and each of the area municipalities.

Table 2. Woodland Cover

Name	Woodland Area ha	Municipal Area ha	% Woodland Cover by Municipality
Blandford-Blenheim	7,382	38,498	19.17%
East Zorra-Tavistock	2,124	24,242	8.76%
Ingersoll	177	1,888	9.36%
Norwich	5,381	42,547	12.65%
South-west Oxford	3,901	36,581	10.66%
Tillsonburg	438	2,204	19.86%
Woodstock	673	5,823	11.56%
Zorra	7,233	53,159	13.61%
Corporate Oxford	**27,308**	**204,943**	**13.32%**

Source. ONHSS, 2023

The majority of the identified woodland features meet the Provincial criteria for significance, in addition to the criteria for being ecologically important (12.78%), so would be considered to be 'significant' woodlands in accordance with the PPS. A smaller subset meet the criteria to be considered ecologically important locally (0.25%), but not 'significant', with the remainder representing candidate features for ecological importance (0.29%).

Woodland interior currently makes up only 16% of the total woodland area and 2.13% of Corporate Oxford County, whereas it is generally recommended that there be at least 10% woodland interior cover by watershed (i.e., County level scale). Woodland interior refers to areas inside of a woodland that are at least 100m from an edge and can provide important ecological functions and support a different range of species diversity (e.g., area-sensitive forest birds which require the protective core of a woodland to nest successfully, away from the edge habitat that is more prone to high predation, wind damage and alien species invasion).

In summary, virtually all the remaining woodland features in Oxford are ecologically important and would also be 'significant' woodlands based on the Provincial criteria. Further, their configuration or shape generally lacks large continuous shapes that provide sufficient interior to support a greater range of ecosystem functions. As such, it is suggested that protecting woodland features overall, combined with strategic enhancement and restoration of features (e.g., to increase woodland interior, enlarge woodland shapes and sizes) would be reasonable approaches to protecting, maintaining and enhancing the natural heritage system as well as supporting long term biodiversity within the County in accordance with the PPS.

The current OP policies also speak to the role and economic importance of forestry activities and woodlot management in the County and support responsible forestry management practices and environmental stewardship of woodland areas within the County. It is suggested that any revised policies continue to support this goal, but also reflect changes in other County and Area Municipal policies and by-laws, urban forestry considerations as well as evolving stewardship, enhancement and restoration considerations.

Oxford Woodlands Conservation By-law

The County Woodlands Conservation By-law is an important tool with respect to retaining and enhancing woodlands in Oxford. The By-law identifies woodlands and sets out definitions for the purpose of protecting trees. It also identifies tree species to be protected; sets out the requirements for obtaining permits to harvest trees; and outlines exemptions to the By-law and/or the process for obtaining an exemption from the provisions of the By-law. The OP already recognizes the purpose and role of the Woodland Conservation by-law and this should be maintained.

Urban Forest Management – Protecting Trees and Canopy Cover

An urban forest is a valuable asset that forms part of a community's green infrastructure, specifically within settlements. Urban forests include not only those treed areas which represent part of woodlands or other natural heritage features, but also includes all other trees (e.g., trees along streets, in parks, infrastructure corridors, on private property, etc.) within a settlement area. These trees represent green assets which help sustain the community by filtering air pollution, improving water quality, providing shade, contributing to flood control, reducing local energy use, sequestering carbon, and providing opportunities for access to nature. Trees have been shown to save municipalities millions of dollars in air pollution control and storm water management and

have been directly linked to improved human health and higher property values. As part of the update to the OP, it is suggested that the policies recognize the importance of maintaining and managing urban forests (i.e., all trees in settlements) and encourage urban forest best management practices, including support for existing area municipal initiatives.

It is suggested that updated OP policies recognize the importance of urban forests and support and encourage area municipal initiatives (e.g., local tree by-laws, streetscape design, tree protection measures, etc.). which help implement urban forest practices, maximize vegetative cover, and promote native species, including the development and implementation of standards to support landscaping requirements for site plan/subdivision, infrastructure projects, etc. as well as other potential measures. Similarly, it is suggested that the existing OP policies that recognize avoiding or reducing the amount of tree removal and providing tree plantings in right of ways or on adjacent land (subject to landowner permission) to help mitigate impacts resulting from the widening or construction of County roads be maintained. Overall, these types of policies help support implementation and build from the natural heritage and climate related directions provided in the PPS.

Wildlife Habitat

The provision of habitat is one of the primary ecological functions of the natural heritage system. The protection and management of wildlife habitat, whether it be 'significant' per PPS or locally important, is fundamental to maintaining self-sustaining populations of wildlife and, therefore, biodiversity. Significant, in relation to wildlife habitat means "ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system" (PPS, 2020). Overall, there are four general categories of significant wildlife habitat including: seasonal concentration areas, rare vegetation communities or specialized habitat for wildlife, habitats of species of conservation concern, and animal movement corridors.

Significant wildlife habitat can overlap with natural features and areas (e.g. wetlands, woodlands, valleylands) specifically identified in the PPS, as well as other vegetation types (e.g. meadows and thickets). Significant wildlife habitat can be assessed as part of broader comprehensive studies (e.g. watershed/sub-watershed studies or secondary plans), or at a site level as part of environmental studies to support proposals for development. Due to data limitations (i.e. species data) the ONHSS does not specifically assess or identify significant wildlife habitat, but does include information that can be used to help identify areas of potential based on vegetation patch sizes and configuration (e.g. minimum area, interior forest, etc.). This data can also be used to help inform and guide stewardship and restoration initiatives.

The PPS, 2020 only permits development within or adjacent to 'significant wildlife habitat' where it is demonstrated there will be no negative impact on the feature or its ecological functions. These requirements are generally reflected within the existing OP policies but may benefit from clarification to help support implementation.

It is suggested that the focus for significant wildlife habitat policies be primarily on identification/protection as part of urbanization/secondary planning and similar development or where non-agricultural uses may be proposed, with policies in the agricultural area primarily focusing on stewardship and incentives for protection of such features where they are outside of settlements.

Recognizing the Role of Road Ecology

Roads contribute to the fragmentation of natural heritage systems and can interfere with the dispersal and movement of wildlife and result in, or contribute cumulatively to, serious impacts to wildlife including: large scale habitat loss, degradation and barriers to wildlife movement, wildlife mortality that can reduce or even eliminate local populations over time, and contribute to the spread of invasive species. Road ecology refers to the study of the interactions between the environment and roads.

Considering and recognizing the impacts existing roads have on the natural heritage system, as well as considering future impacts when planning for new roads, provides opportunities to plan to mitigate existing and avoid future impacts. As such, it is suggested that consideration of road ecology principles and mitigation approaches (e.g. wildlife signage, exclusion fencing and eco passages, traffic calming, road design, etc.) in areas of higher risk to wildlife be encouraged through the OP policies. Additional guidance would likely need to be developed to help identify areas of higher/greater risk of wildlife mortality and fragmentation.

Thickets and Meadows

Thickets and Meadow are both examples of early successional habitats that usually turn into woodlands over time. Thickets are dominated by shrubs and young or stunted trees, whereas meadows are dominated by grasses and broad-leaved herbaceous plants and a scattering of shrubs and trees. Meadow marshes and wet meadows along watercourses may be more permanent habitats as the standing water and frequent flooding and ice scour keeps trees and shrubs from establishing when compared to dryer sites which usual turn into shrub thickets and woodlands. It is important to note that many of the species dependant on these habitats (bird, insects, small mammals, etc.) are declining, and those dependant on larger patches are becoming increasingly uncommon with a growing number of species being recognised as species at risk.

The OP policies do not currently specifically address meadows and thickets, but do include provisions for habitat protection (i.e., significant wildlife habitat and/or locally significant). This existing approach builds from the PPS which requires municipalities to have policies for the protection of 'Significant Wildlife Habitat' which can include meadows and thickets of sufficient size and use by certain species to meet Provincial criteria.

The ONHSS report has identified areas of existing thickets and meadows, and while there are over 800 thicket patches, and more than 1700 meadow patches in Oxford, only 26% of all thickets and 10% of all meadows met ONHSS size criteria for ecological importance locally. It is noted that very few of these areas would have potential as Significant Wildlife Habitat based on Provincial size criteria for certain bird habitats (only 5 thickets and 3 meadows). However, these features are also often associated with larger connected patches that include more than one vegetation type (i.e., woodland, meadow, thicket, etc.). This association can contribute to the overall ecologic function and ecosystem diversity of the larger patch.

Similar to the approach for significant wildlife habitat, it is suggested that the policy focus for meadows and thickets be on identification/protection as part of secondary planning for settlement expansions, or where other larger non-agricultural uses may be proposed, with policies for the agricultural area primarily focusing on stewardship and incentives for protection of such features (i.e., voluntary measures).

Promoting Pollinators

Meadows and thickets also provide important habitats for pollinators. Pollinators refers to a group of species that pollinate (move pollen from a flower to another flower) over 90% of all flowering plants (including many agricultural crops such as canola, soybean, sunflower, alfalfa, cucumbers, tomato, pumpkin, apples, peaches, cherries, berries, etc.), and primarily include bees, flies, butterflies, moths, and other insects, although birds, bats and other animals can also be pollinators. Many pollinator species are under pressure from habitat loss, loss of food sources, disease, and the use of pesticides.

Education and stewardship opportunities focused on pollinators have increased in recent years as awareness of species declines has become more widespread, and this has included creation of various programs that municipalities can also choose to participate in (note: some of the area municipalities in Oxford have already been participating in such programs).

As such, it is suggested that related opportunities for education, outreach, and stewardship to help aid natural heritage protection efforts and support local biodiversity be encouraged in the OP policies. Support for the development of landscaping standards which are inclusive of native pollinator plant species as part of development approvals, infrastructure standards, and related tools may also be encouraged.

Valleylands

Valleylands are often described as the “backbone” of watersheds, given their linear connectivity, range of habitats and ecological functions. Valleylands are defined as “areas that occur in a valley or other landform depression that has water flowing through or standing for some period of the year” (PPS, 2020). Valleylands are ‘significant’ where they are ecologically important in terms of the feature, its functions, representation or amount, and contributing to the quality and diversity of an identifiable natural heritage system (PPS, 2020). Easily recognizable valleylands in Oxford include the valleys associated with the Nith River, Thames River, and Big Otter Creek.

The PPS, 2020 permits development within or adjacent to ‘significant valleylands’ only where it is demonstrated the there will be no negative impact on the feature or its ecological functions.

The ONHSS identifies significant valley lands based on the criteria established through Provincial guidance. This includes consideration of groundwater functions, landform prominence, distinct geomorphic landforms, degree of naturalness, unique vegetation communities, and linkage functions. Policy development for the areas these features requires careful consideration to ensure:

- Protection of areas of natural vegetation (e.g., woodlands, wetlands, meadows) within valleys, including those which provide riparian functions for rivers and streams is supported,
- Recognition of the connectivity and important linkage functions valleylands provide, including where they run through settlement areas,
- Alignment with other applicable legislation and requirements (e.g., natural hazards and the corresponding requirements under the Conservation Authorities Act),
- Ensuring that policies do not impact existing agricultural uses/activities that fall within valleylands, and,
- Consideration of potential for restoration and enhancement, including from a water quality, fish habitat, linkage function and/or climate resiliency perspective (e.g., shoreline areas, connecting features, reestablishment of floodplains, etc),

Oxford's valleylands represent important and complex areas given their ecological and hydrological importance, in addition to their cultural, social and economic roles both currently and historically.

Fish habitat

The PPS requires that development and site alteration not be permitted in fish habitat, except in accordance with provincial and federal requirements (includes federal requirements under the Fisheries Act).

The Fisheries Act has undergone a number of changes which have included: moving away from having Conservation Authorities in Ontario issue some approvals under the Fisheries Act for the protection of fish habitat; modernization of how the prohibition against the harmful alteration, disruption or destruction of fish habitat is assessed and processed by the Department of Fisheries and Oceans (DFO); and reinstatement of comprehensive protections for all fish and fish habitat.

Similarly, there can also be permitting requirements, timing windows and related standards stemming from Provincial requirements such as from the Fish and Wildlife Conservation Act and\or the Endangered Species Act. Ultimately these, and other legislative requirements, need to be addressed through development proposals (where they apply) which also needs to be reflected in the OP policies.

Provincial guidance also recommends protection of watercourses based on thermal regime (stream temperature classification) through implementing minimum areas of natural vegetative cover (also referred to as buffers) within the shorelines or riparian areas of rivers and streams, where development is proposed. This typically ranges from approximately 15 m (49 feet) for warm water streams (subject to demonstrating no negative impact) to 30 m (98) ft for cold water streams. These same areas may also be part of floodplains and/or otherwise restricted from being developed. Furthermore, many of the current environmental studies completed as part of development applications in the County are already including buffers from rivers and streams. Approaches for buffers as part of mitigation approaches are also discussed further below.

Updating the OP policies also presents any opportunity to encourage and support restoration and enhancement of aquatic systems in order to help improve fish habitat, including encouraging the removal of barriers for fish passage, where there may be opportunities through development proposals, municipal infrastructure projects, etc. Often these types of projects not only benefit fish, but also support improving the stream/water course, re-establishing a more natural stream morphology, as well as water quality and quantity. They can also represent opportunities to invest in green infrastructure in place of traditional built infrastructure (e.g., restoring floodplains in place of using or replacing dams and weirs).

Habitats for Species at Risk

The PPS, 2020 requires that development and site alteration not be permitted in habitat of endangered species and threatened species, except in accordance with Provincial and Federal requirements.

Provincially this refers to the requirements under the Endangered Species Act, 2008. Federally this refers to the Species at Risk Act. The Department of Fisheries and Oceans looks after matters involving aquatic species at risk (e.g., fish and mussels) in addition to requirements for fish habitat,

all other federally listed species are administered by the Ministry of Environment and Climate Change.

The current OP policies are based on older PPS requirements which refer to significant habitat of endangered and threatened species, so will need to be updated to reflect the PPS, 2020. While the PPS requirements for endangered species and threatened species are not specifically proposed to change, the draft PPS released by the Province has proposed to remove habitat of endangered species and threatened species from the definition of 'natural heritage features and areas' in the PPS. The purpose of this proposed change remains unclear. As such, staff are trying to get a better understanding of the technical impact of this proposed change and the implications it may have from a policy implementation perspective (e.g., whether the OP would still be required to include adjacent land policies for environmental studies, etc.)

Recognizing Linkages and Connectivity

One of the key elements of a "natural heritage system" approach is the inclusion of linkages or corridors, with the aim of maintaining or enhancing the connectivity of the system. Loss of connectivity, also called landscape fragmentation, refers to the process where large, interconnected natural areas are converted to a series of smaller, often isolated natural areas. Goals for natural heritage systems should focus on halting fragmentation and focusing on enhancing and restoring connectivity where opportunities exist.

The PPS requires that, as part of planning for natural heritage systems, linkages between and among natural heritage features and areas, surface water features and ground water features are recognized. The PPS also recognises that linkages can occur at a variety of scales, from the site level to the regional level. This means that the OP policies will need to consider linkages at a variety of scales and also how these linkages function in relation to the natural heritage system, as well as the water resource system.

The ONHSS has considered vegetation connectivity between and among existing features as part of the criteria for identifying significant and ecologically important features. This information combined with valleylands analysis represents starting point for understanding some of the existing connectivity within the Oxford landscape. There are also a number of other considerations with respect to linkages, including their size, shape, length and width, proximity to other features, other attributes (e.g., slopes, vegetation, etc.) and whether the linkage may also function as habitat. The surrounding land use context (both existing and planned/proposed) is another consideration when developing policies for linkages to maintain or improve connectivity, as:

- The identification of linkages in agricultural areas can be used to help encourage and inform stewardship opportunities, however, such efforts should not impede or impact agricultural uses,
- In urban or urbanizing areas linkages should be maintained, enhanced and restored, and should be considered as part of secondary planning exercises as well as site specific applications, including for non-agricultural uses.

It is suggested that the OP policies incorporate linkage policies that address the details noted above, while incorporating flexibility to recognize the differences between the agricultural and urbanizing landscapes within the County.

Environmental Studies

The PPS requires that municipalities have a clear and reasonable mechanism for assessing the impact of proposed development and/or site alteration on natural heritage features and areas and their adjacent lands and ecological functions, to demonstrate that there will be no negative impact of these features and functions. This is typically achieved through establishing adjacent land and environmental study requirements. Often the study requirements refer to the scoping and preparation of an 'Environmental Impact Study' or EIS. The existing OP policies already contain study requirements for EISs. However, it is suggested that these policies be updated to:

- Reflect changes in Provincial minimum standards and guidance (e.g., adjacent lands),
- Provide greater clarity and consistency for establishing the scope of EISs,
- Support improving the process associated with the review of EISs,
- Establish certain minimum expectations in terms of mitigation approaches that are to be incorporated into EISs, based on existing practices that are already being recommended/ implemented as part of local development applications (e.g., buffers, enhancement/restoration approaches, use of timing windows, etc.), and,
- Provide clear policy direction with respect to the requirements for the preparation of environmental studies for agricultural uses and activities, including where the policies do not apply.

What are adjacent lands?

Adjacent lands are defined in the PPS as "those lands contiguous to a specific natural heritage feature or area where it is likely that development or site alteration would have a negative impact on the feature or area. The extent of the adjacent lands may be recommended by the Province or based on municipal approaches which achieve the same objectives". This essentially flags the areas within the potential impacts of a proposed development needs to be further assessed (i.e., through an environmental impact study)

Since the last update of the natural heritage requirements in the OP, the Province updated its standards regarding adjacent lands. So, it is suggested that any OP updates reflect the current Provincial adjacent lands standards as outlined in Table 3 below.

Table 3. Adjacent lands

Feature Type	Current OP Requirement	Provincial Standard (NHRM, 2012)
Significant Wetlands	120 m (393 ft)	120 m (393 ft)
Significant Woodlands	50 m (164 ft)	120 m (393 ft)
Significant Wildlife Habitat	50 m (164 ft)	120 m (393 ft)
Habitat for Species At Risk	100 m (328 ft)	120 m (393 ft)
Fish habitat	50 m (164 ft)	120 m (393 ft)
ANSIs Life Science	50 m (164 ft)	120 m (393 ft)
ANSIs Earth Science	50 m (164 ft)	50 m (164 ft)
Valleylands	50 m (164 ft)	120 m (393 ft)
Local features	50 m (164 ft)	n/a

A reduced adjacent land requirement (i.e., 50 m or 164 ft) may be maintained for local ecologically important features (i.e., that are not significant in accordance with the PPS) that are identified in the Official Plan. However, this lower requirement would likely apply to less than 5% of all features in the natural heritage system and these features may also still overlap with the adjacent lands of other significant features. In such cases the furthest distance would likely be considered, in addition to any other scoping or waving criteria.

Clarifying the EIS Process

Recently, there have been many changes to legislation, policy and process under the Planning Act and related legislation. Updates to study requirements in the OP should reflect these changes, including those to the Conservation Authorities Act, which restrict commenting/review with respect to natural heritage (i.e., are now limited to natural hazards).

Other considerations to update, refine and clarify the requirements and process for EISs include:

- Formally recognizing the process of scoping an EIS through a terms of reference to establish a study scope and minimize delays in the development process,
- Support the development of an EIS guideline to enhance implementation, create greater efficiencies and consistency of requirements, provide a further resource for the development community (applicants, developers, consultants, etc.) to assist in the preparation, submission and review of an EIS,
- Review of the scoping criteria and align requirements with proposed changes to the natural heritage policies overall, as well as the water resource system and natural hazards policies where they integrate, or may be addressed through the submission of a singular report,
- Review the circumstances where EIS requirements maybe reduced (scoped) or waived,
- Establish policies which help guide or direct the implementation of the recommendations of EISs, including incorporation into detailed design processes (i.e., site plan, subdivision registration) where applicable, and,
- Retain and update the policies which recognize the various scales at which an EIS may be completed and how these integrate and should inform subsequent studies or applications (e.g., secondary plans, site specific applications, sub-watershed studies, etc.).

Establishing Minimum Mitigation Approaches

Generally, the PPS (2020) states that development may only be permitted within or adjacent to natural heritage features and areas where it is demonstrated that there will be ‘no negative impact’ to the feature(s), or it’s ecological and hydrological functions. One of the ways to do this through an EIS is by proposing and implementing ‘mitigation’. Mitigation as it relates to natural heritage conservation, typically reflects a continuum based on avoidance, minimization, and compensation. Avoiding impacts is always the preferred option, followed by minimizing impacts. Compensation (i.e., offsetting) for unavoidable impacts may not be an option for some features or functions due to their complexity and, where it is considered, should only be explored when all options to avoid and minimize have been carefully considered and deemed not feasible.

Providing clear expectations on mitigation approaches can also help support greater efficiencies in the development review process and minimize the amount of time and effort involved in revising development proposals.

Ecological Buffers

Municipalities outside of areas subject to Provincial plans (i.e. Greenbelt Plan, A Place to Grow, Growth Plan for the Greater Golden Horseshoe (APTG)) can choose whether to establish additional direction on mitigation approaches, based on sound science, as well as Provincial and Federal guidance. Within the above noted Provincial Plan areas the Province has established certain additional requirements which form minimums for mitigation, including for vegetation protection zones (aka. ecological buffers), which municipalities are required to incorporate into their planning documents, including official plans. More specifically this includes:

- From the Greenbelt Plan, 2017, in the case of wetlands, seepage areas and springs, fish habitat, permanent and intermittent streams, lakes and significant woodlands, the vegetation protection zone shall be a minimum of 30 m (98 ft) measured from the outside boundary of the key natural heritage feature or key hydrologic feature,
- From the APTG, 2020, vegetation protection zones:
    - Must be of sufficient width to protect the key natural heritage feature or hydrologic feature and its functions from the impacts of the proposed change,
    - are established to achieve and be maintained as natural self-sustaining vegetation, and,
    - for fish habitat, and significant woodlands, are no less than 30 m (98 ft) measured from the outside boundary of the key natural heritage feature or key hydrologic feature.

The functional role of ecological buffers is to help mitigate impacts from development by contributing to the protection of water quality and temperature, infiltration, ground water recharge and discharge functions; and reducing sun scald and wind throw impact on vegetation communities and behavioural impacts for wildlife. All of these factors can impact ecosystem and species diversity. Provincial guidance documents that support implementation of the PPS policies (e.g., Natural Heritage Reference Manual), and other municipal approaches outside of Provincial plan areas, include minimums such as:

- 30 m (98 ft) for provincially significant wetlands and locally significant wetlands,
- 10 m (33 ft) to 30 m (98 ft) for significant woodlands,
- 30 m (98 feet) for cold water streams, and,
- 10 m (33ft) to 15 m (49 feet) for warm water streams.

In Oxford, recommendations for ecological buffers are already commonplace in EISs being prepared for development applications and have also been incorporated into the OP as part of existing secondary plan policies for Woodstock (30 m (98 ft) for significant wetlands, 15 m (49 ft) for woodlands and 5 m (16 ft) for meadows and thickets that are wildlife habitat. As such, consideration of standardizing the expectation for the inclusion of buffer requirements is being suggested for inclusion through the OP review. This may include establishing specific minimums (i.e., including numbers) for specific natural heritage features (e.g., wetlands, fish habitat, woodlands) or simply requiring that buffer widths be established through EISs.

Other mitigation considerations

Similarly, there are a number of other considerations that may be included in the OP as part of the mitigation requirements and/or approaches in an EIS, these include:

- Invasive species management (addressing, removing and/or preventing the establishment of invasive species as part of planting plans and enhancement opportunities),

- Timing windows (avoiding activities during times of year where certain species are more sensitive or impacted, there are federal legislative requirements for both migratory bird and fish timing windows),
- Promoting use and incorporation of native species (incorporation of native species helps support local biodiversity and can also help support invasive species management),
- Road ecology (avoiding or mitigating wildlife mortality and habitat fragmentation resulting from new or increased traffic on roads, through adaptive road design in identified high risk areas),
- Bird friendly building/development (adaptive designs to reduce bird mortality resulting from building and site designs, including window collisions), and,
- General enhancement and restoration of natural heritage features and areas.

Other Supporting Initiatives and Measures

Leveraging community participation, input, and support to assist with the protection, restoration, and enhancement of the natural heritage system (as well as the water resource system) is an essential component for comprehensive and effective implementation and supporting the sustainability of the natural heritage system over the long term. OP policies may encourage or support a wide range of additional measures and activities, such as:

- Supporting the preservation, conservation, protection and enhancement of the natural environment through community-based leadership and initiatives (e.g., Clean Water Program),
- Promoting corporate and community sustainability by participating and contributing to the implementation of corporate and community sustainability programs and strategies (e.g., Future Oxford),
- Encouraging community participation on environmental matters, including through participation on, Council appointed committees (e.g., Agricultural and Planning Advisory Committee, Woodstock Environmental Advisory Committee, etc.),
- Undertaking and participating in educational initiatives and stewardship activities which raise the profile and understanding of the natural environment locally, and,
- Helping to promote awareness of immerging issues and management challenges (e.g., invasive species, pollinators, etc.).

Similarly, efforts to advance public private partnerships for greater protection of natural areas through land securement efforts, stewardship programs, and related projects are often driven by local leaders and community members, although participation and leadership from municipalities can also help support program and project success. This can include support for municipal initiatives including development of land securement strategies and coordinated plans for restoration and enhance of natural areas. It is suggested that the OP recognize the importance and contribution of such programs and projects and also encourage public, private partnerships to help protect our natural spaces from development as the community continues to grow.

To maximize the effectiveness of County and Area Municipal efforts and investments to protect and improve the natural heritage system, consideration should be given to the development of restoration strategies that could:

- Examine underlying threats to ecosystem health,
- Define restoration goals and establish targets from a sustainability perspective, and,
- Develop criteria for prioritization to guide restoration and management plans and projects, including land securement and related initiatives.

Such an initiative could be combined with and complement related community goals in Future Oxford, such as the preparation of a biodiversity strategy.

Suggested Policy Directions

The following provides a summary of the various policy directions currently being suggested to inform the development of draft policies for the establishment of a natural heritage system (NHS) in the OP. These suggested directions are intended to address the minimum requirements of the PPS while also building from the additional considerations, opportunities and challenges discussed above.

Updating goals and objectives

- Maintain and expand the current OP goal for the natural heritage system policies to support the achievement of a 'net environmental gain' for Oxford's natural heritage system, as well as the natural heritage features, areas and linkages it is comprised of,
- Establish supporting goals and objectives which seek to maintain, enhance and restore the natural heritage system in Oxford County and support Oxford's biodiversity,
- Recognize the relationship between natural heritage systems, water resource systems and the surrounding environment (e.g., agricultural areas, urban areas and resource extraction areas) and provide clarity on the applicability of policies in these areas; and
- Support efforts to restore and enhance natural spaces to improve and increase biodiversity in Oxford.

Addressing minimum PPS requirements

- Identify a natural heritage system recognizing the variations (e.g., feature type, size, degree of connectivity, etc.) in the natural heritage system between settlement areas and prime agricultural areas,
- Incorporate policies which reflect the minimum PPS requirements for Provincially Significant Wetlands (i.e. no development), Significant Woodlands, Significant Valleylands, Significant Wildlife Habitat, and Significant Areas of Natural and Scientific Interest (i.e. no development unless it is demonstrated that there will be no negative impact to the feature or its ecological functions),
- Develop policies which reflect the PPS requirements for linkages, including recognizing where there are linkages between and among both the natural heritage system and water resource system,
- Ensure appropriate integration with current provincial and federal requirements for fish habitat and endangered and threatened species based on the PPS (2020), and incorporate any related changes from the 2023 review of the PPS,
- Incorporate provisions for environmental study requirements, including establishing what constitutes 'adjacent land' based on Provincial standards, and,
- Provide clarity on how the natural heritage policies will not limit the ability of agricultural uses to continue.

Incorporating Ecological Important features into the NHS

- Include policies for the identification and protection of additional natural heritage features and areas (i.e., beyond the PPS minimum), based on local considerations (e.g., ecological importance etc.) including:
    - ❖ Protection of regionally significant ANSI features,
    - ❖ Protection of all wetland features and their ecological functions; including:
        - ▪ Addressing features which may be locally significant and/or unevaluated wetlands,

        - Addressing the role and importance of small (<0.5 ha) wetland features; and,
    - ❖ Protection of all woodlands and their ecological functions for the long term, and consider options for varying level of protection for significant woodlands, ecologically important and candidate features,
    - ❖ Incorporating meadows and thickets as a natural heritage feature within Oxford's natural heritage system, with consideration of:
        - Provincial criteria for significant wildlife habitat and options for varying levels of protection based on the ecological importance of such features, and,

- Enhancement of the net environmental gain principle by providing further direction for the protection of wetlands, woodlands, wildlife habitat, meadows, and thickets,
- Ensure policy approach for significant valleylands differentiates areas containing other natural heritage features from those occupied by existing agricultural (i.e., cultivated areas) or other land uses,
- Include policy direction on the identification and assessment of linkages (e.g., based on size, shape, length and width, proximity to other features etc.) and their functions, with a focus on maintaining or enhance connectivity and recognizing that linkages may also function as habitat. This would include the development of supporting implementation tools and guidance (e.g., mapping),
- Encourage the restoration and enhancement of valleyland areas, including efforts that would support improving water quality, fish habitat, linkages and connectivity and/or assist with climate resiliency (e.g., flood attenuation), where opportunities exist,
- Align OP policies with applicable regulatory requirements under the Conservation Authorities Act to minimize duplication of effort and align standards and requirements where possible,
- Encourage mitigation standards based on thermal regime (stream temperature) to help maintain water quality and temperature conditions necessary for fish communities, and,
- Recognize the interrelationship between fish habitat and surface water features and encourage the removal and/or modification of structural barriers to fish passage to restore natural stream processes, improve fish habitat, water quality, and ecosystem functions, where possible.

Environmental Impact Study (EIS) Requirements

- Establish direction for ecological buffers and encourage other mitigative standards and approaches based on Provincial and Federal requirements and guidance,
- Update requirements for EISs provide greater clarity and consistency for establishing the scope of EISs and support improving the process associated with the review of EISs,
- Establish policies which help guide or direct the implementation of the recommendations of EISs, including incorporation into detailed design processes where applicable, and,
- Support the development of an EIS guideline to enhance implementation, create greater efficiencies and consistency of requirement provide a further resource for the development community (applicants, developers, consultants, etc.) to assist in the preparation, submission, and review of EISs.

Other Considerations

- Support efforts to restore and enhance natural heritage features and areas, including the development of targets and plans/strategies to support increasing wetland and woodland cover and quality in Oxford County,
- Support and encourage the consideration of road ecology principles and practices as part of secondary planning and infrastructure projects to help mitigate, reduce and avoid wildlife mortality in identified areas of greater risk through improved design and planning,

- Support and encourage the consideration of County and Area Municipal initiatives (e.g. strategies, programs, standards and/or other tools) which help to promote urban forest practices, habitat creation, maximize vegetative cover etc. as part of development, infrastructure projects, and stewardship activities. Some examples may include:
    - ❖ Implementation of best practices for use of pollinator and native plant species,
    - ❖ Consideration of opportunities to restore and enhance habitats and species diversity, as part of mitigation and enhancement approaches,
- Encouraging consideration of best management practices for construction where new watercourse crossings are proposed, to protect water quality and support the improvement and restoration of fish habitat; and
- Supporting the development of comprehensive strategies (e.g., restoration, biodiversity, etc.) to increase the amount, quality, and function of the natural heritage in the County over the long term.
- Update policies to support the expansion and enhanced protection of the natural heritage system through land securement tools, where opportunities exist (e.g., through conservation easements, stewardship agreements or third-party partnerships); and,
- Recognize the threats and challenges with invasive species and provide supportive direction on potential programs and measures.

Water Resource System

As Oxford is an entirely ground water dependant community, it is of critically importance that the quality and quantity of the County's water sources be protected, improved, and restored.

The PPS recognizes using the watershed as the ecologically meaningful scale for integrated and long-term planning. In the Oxford context this includes the broader ecosystems that form part of the Nith, Upper Thames, Big Otter, Catfish Creek and other watersheds and sub-watersheds and also provide many ecological goods and services (e.g., assimilating discharge from the community's wastewater treatment facilities, providing water for agriculture and other industries, providing protection from flooding, sequestering carbon etc.).

Together with the Oxford's Water and Wastewater Master Plan and supporting implementation tools, the OP policies for water resources should help ensure that water resources continue to be available to meet and accommodate current demands, future growth, sustain the natural heritage system, and have resilience to deal with a changing climate.

There have been a number of changes to the water resource policies as contained in the 2020 PPS, including:

- Requiring that municipalities identify water resources systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed,
- Planning for the efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality,
- Implementing necessary restrictions on development and site alteration to ensure sensitive surface water features and sensitive ground water features and their related hydrologic functions will be protected, improved or restored, which may require mitigated measures and/or alternative development approaches, and,

- Ensure stormwater management practices prevent increases in contaminant loads, minimize erosion and changes in water balance including using low impact development and green infrastructure.

Watershed Planning

Watershed planning is a multidisciplinary approach for managing natural heritage and water resources that is based on ecology, engineering, land use planning, and sound resource management. Protection, maintenance, and restoration of natural heritage and water resources and their related functions is integral to watershed planning. Effective watershed planning also involves a cross-jurisdictional coordination of efforts to assess cumulative and cross-watershed impacts. There continues to be an emphasis on the need for watershed planning to inform land-use planning. Although this can certainly be accomplished through comprehensive watershed scale studies, it can also be accomplished through the use of equivalent studies (e.g., secondary plans combined with master environmental servicing plans) or scoped studies (sub-watershed or smaller catchment areas) in many cases.

The OP currently includes policies which speak to watershed and sub-watershed planning but will require updating to reflect the current scope and breadth of the current PPS requirements, including consideration of the proposed PPS changes that were released by the Province as part of the 2023 review. Watershed planning, including existing information, can also be used to help inform the identification and refinement of a water resource system.

Identifying a Water Resource System

The PPS requires that a water resource system be identified in the Official Plan and describes water resources systems as consisting of:

- surface water features, including shoreline areas,
- ground water features and areas,
- hydrologic functions, and,
- natural heritage features and areas

which are necessary for the ecological and hydrological integrity of the watershed.

The PPS defines surface water features as “water-related features on the earth’s surface, including headwaters, rivers, stream channels, inland lakes, seepage areas, recharge/discharge areas, springs, wetlands, and associated riparian lands that can be defined by their soil moisture, soil type, vegetation, or topographic characteristics”.

Ground water features are also defined in the PPS as “water-related features in the earth’s subsurface, including recharge/discharge areas, water tables, aquifers and unsaturated zones that can be defined by surface and subsurface hydrogeological investigations”. Examples of ground water features include significant groundwater recharge areas, vulnerable aquifers, and areas which contribute significant amounts of discharge to surface water features and wetlands, including headwater features.

With respect to significant groundwater recharge areas, these areas can include:

- Areas which support municipal drinking water supplies, as identified in an Assessment Report and as required under the Clean Water Act, 2006;

- Areas identified through a sub-watershed plan or equivalent in accordance with provincial guidelines due to their ecological significance, such as areas of land that are responsible for replenishing groundwater systems that directly support sensitive areas like cold water streams and wetlands.

The scope of the existing OP policies along with related terminology regarding water resources will also need to be updated to reflect the above provincial policy requirements and will need to consider any proposed changes to the PPS as part of the current Provincial review (i.e., which appears to be proposing similar language to that in APTG).

The OP currently has policies which speak to protection of water quality and quantity, including protection of municipal drinking water supplies through source water protection tools. While these policies are not based on a specific 'systems approach' they do speak to:

- Encouraging water courses and drainage systems to remain open and in a natural state and incorporating naturalized and vegetative buffers, and that any proposed modifications to a surface water feature is necessary and meets applicable requirements under the Conservation Authorities Act, as well as other applicable Provincial and Federal legislation,
- Requiring enhancement and protection of surface water features where development abuts a watercourse, including through the use of setbacks/buffers, retaining existing vegetation, incorporating erosion and sediment control measures during construction, improving water quality from storm water runoff through enhanced filtration as part of landscaping requirements; etc.,
- As part of consent applications, allows for the imposition of conditions to: require fencing around surface water features to prevent livestock access; establish buffer or filter strips around surface water features and drainage systems; and apply setbacks for development and private servicing from natural heritage features and areas, as well as surface water features,
- Consideration and requiring studies to understanding cumulative impacts of water quantity which may result from development, and,
- Supporting municipal by-laws to address water conservation and efficiency, in addition to education and outreach.

The purpose and intent of many of the existing policies remain appropriate and should be incorporated into an updated 'systems based' policy framework in the OP.

Source Water Protection

The Clean Water Act, 2006 required the development of Source Protection Plans (SPP) based on detailed background technical studies with a view to protecting municipal drinking water supplies from drinking water threats. Protection of the County's municipal drinking water supplies for the long term is critical to securing a long term, potable, water supply to meet the needs of existing and future residents and businesses as the County continues to grow.

SPP development has been based on watershed-based approaches, including the preparation of Assessment Reports which provide detailed technical information that informs each of the SPPs and form part of the approved plans. The Assessment Reports identify the designated vulnerable areas and associated drinking water threats and issues for the Source Protection Area to which they apply. The various drinking water threats and issues are defined by a series of technical rules which are set out as a regulation under the Clean Water Act, 2006.

The goal of the SPP policies is to ensure drinking water threats either never become, or cease to be, a significant drinking water threat. As such, the SPPs contain policies which are intended to eliminate or reduce the potential risks posed by those identified threats and issues. There are four SPPs that apply within Oxford County:

- Grand River Source Protection Plan
- Catfish Creek Source Protection Plan
- Long Point Region Source Protection Plan
- Thames-Sydenham and Region Source Protection Plan

Each Plan has been approved by the Province and have been in force and effect for some time. As such, the various requirements of the SPPs are already being applied to the review of development throughout the County.

The County's OP policies pertaining to source water protection were recently updated through OPA 282 and are currently in force and effect. These changes updated the County's OP to reflect the current legislative and regulatory framework pertaining to source protection and, the four approved SPPs in Oxford. In addition, the policies help to increase awareness of the SPP policies that are applicable to development in Oxford and assist in integrating specific SPP requirements into the development review process.

Further updates to the source water protection policies in the OP are not being proposed as part of the OP update. However, staff note that these policies may be reorganized/renumbered to ensure they fit within the updated policy framework overall.

Additional Water Resource Policy Considerations

The purpose of establishing a water resource system under the PPS is to contribute to the protection, improvement, and restoration of the quality and quantity of water. That said, the breadth of considerations for surface water features and ground water features goes beyond the mandate and purpose of source water protection and, as such, the identification and protection of Oxford's water resource system should also consider:

- Identification of a water resource system (e.g., ground water and surface water features) in the OP for information and context and to help represent the portions and elements of the water resource system where some characterization has been completed, or other information exists,
- Recognizing that watershed planning projects and appropriate or equivalent studies may also be used to identify additional and refine features forming part of the water resource system. This may also include secondary planning exercises and supporting studies, as these studies help inform the basis for growth and development in the community and can also provide additional information on surface water and groundwater features,
- Acknowledging the role of Master Planning in addressing the PPS requirement that sewage and water service systems are financially viable, comply with regulatory requirements, can be sustained by the water resource system, and protect human health and the natural environment,
- Including policies that encourage/require maintaining water balances for natural and hydrological features (e.g. maintaining the existing amounts, duration and seasonality of water runoff to/infiltrated by sensitive natural heritage and hydrological features such as seeps and springs and internally draining areas) and promote appropriate infiltration as a means of helping supporting protection of hydrological functions, and integrate these requirements with natural heritage system requirements, where development is proposed,

- Promoting the removal of barriers and hard surfaces to enhance and restore surface water features and their hydrological functions, including flood attenuation and reduction of erosion,
- Recognizing and incorporating best management practices into development to support water quality (e.g., salt management plans), and,
- Encouraging all municipalities to consider the development of guidelines/ standards for water efficiency and conservation initiatives such as:
    - ❖ Landscaping and maintenance practices that minimize water consumption and reduce the use of potable water for irrigation associated with development,
    - ❖ Disconnecting downspouts from the sewer system in areas of existing neighborhoods and encourage implementation of low impact development alternatives to manage runoff,
    - ❖ Preventing, minimizing and retrofitting infrastructure from inadvertently intercepting and conveying ground water, reducing servicing efficiency and impacting local hydrological functions, through incorporation of appropriate mitigation measures and design,
    - ❖ Increasing the use of low maintenance and drought tolerant landscaping at municipal facilities and as part of development proposals,
    - ❖ Alternative water supply and demand management systems such as rainwater harvesting and grey water reuse as part of new municipal facilities and development proposals,
    - ❖ Exceed Ontario Building Code minimums for water conservation by applying progressive nationally recognized sustainable design standards,
    - ❖ Reductions in water consumption will be encouraged through upgrading/retrofitting of existing buildings and facilities, and,
    - ❖ Encouraging education, outreach and stewardship to help support maintaining and improving water quality (e.g., nitrates, phosphorus, reducing the use and reliance on chlorides (salt), etc.) as well as water quantity.

Stormwater Management

Stormwater is the rainwater and meltwater from snow that flows off hard surfaces and flows into our waterways or is absorbed into the soil. As communities grow and urbanize there are requirements in place to ensure there are enough spaces for these processes to happen. Poor stormwater management can lead to increased erosion, ground water table fluctuations, poor water quality, pollution and property damage caused by flooding.

Some natural features and their functions, like waterways and wetlands, can be restored or enhanced to more efficiently store and filter stormwater runoff and attenuate flood waters in place of more expensive engineered solutions. Other natural areas can further complement human-built infrastructure by providing other benefits and services, like shade, carbon sequestration, and habitats. Integration of these features with traditional infrastructure provides opportunities to capitalize on the function and benefits of these natural assets while also finding efficiencies, reducing long term maintenance costs and mitigating the impacts of changing weather patterns.

While there are existing stormwater management policies in the OP, they predate the inclusion of stormwater policy direction in the PPS and lack some of the details required to be consistent with current provincial policy. That said, a few of the existing requirements for stormwater management reports and retention/detention ponds remain relevant and should be carried forward into the update policies.

Under the PPS planning for stormwater management is required to:

- Be integrated with planning for sewage and water services and ensure that systems are optimized, feasible and financially viable over the long term,

- Minimize, or, where possible, prevent increases in contaminant (pollution) loads,
- Minimize erosion and changes in water balance,
- Prepare for the impacts of a changing climate through the effective management of stormwater, including the use of green infrastructure,
- Mitigate risks to human health, safety, property and the environment,
- Maximize the extent and function of vegetative and pervious surfaces, and,
- Promote stormwater management best practices, including stormwater attenuation and re-use, water conservation and efficiency, and low impact development.

Green Infrastructure is defined in the PPS as "natural and human-made elements that provide ecological and hydrological functions and processes. Green infrastructure can include components such as natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs".

Low impact development (LID) is currently defined within APTG, 2020 and the Province is proposing to incorporate this definition into the PPS through the 2023 PPS review. LID means an approach to stormwater management that seeks to manage rain and other precipitation as close as possible to where it falls to mitigate the impacts of increased runoff and stormwater pollution. It typically includes a set of site design strategies and distributed, small-scale structural practices to mimic the natural hydrology to the greatest extent possible through infiltration, evapotranspiration, harvesting, filtration, and detention of stormwater. Low impact development can include, for example: bioswales, vegetated areas at the edge of paved surfaces, permeable pavement, rain gardens, green roofs, and exfiltration systems".

At minimum the PPS requirements will need to be reflected in the Official Plan. That said, it needs to be recognized that stormwater management is an area of Area Municipal responsibility in Oxford. As such, input from the Area Municipalities with respect to the potential consideration of any additional policy direction/support with respect to stormwater management will be essential for ensuring such policy directions align with and support local implementation.

In developing potential updates to the stormwater management policies, some suggested additional potential policy directions that could be considered include:

- Encouraging area municipalities to prepare/ utilize stormwater management master planning and secondary planning processes to enhance standards, identify areas for improvement and the incorporation of green infrastructure,
- Encouraging incorporation of LID into stormwater management design, as well as approaches to maintain water balances and the sustainability of the hydrological cycle through incorporation of green infrastructure into development and other related mitigative approaches,
- Clarifying policies regarding detention and retention facilities for stormwater management, including that such facilities should be located outside of natural heritage features or their buffers to natural heritage features,
- Recognizing that controlled discharge from stormwater facilities to receiving wetlands and watercourses is permitted, while ensuring that the quality and quantity of the receiving waterbody/feature is maintained or enhanced, and,
- Consider the impacts of a changing climate, including implications of urban flooding as part of secondary planning, master planning or similar exercises. Urban flooding refers to flooding which results when urban landscapes cannot absorb excess water after storm events but is not necessarily connected to overland flooding from surface water features.

Suggested Policy Directions

The following provides a summary of the various policy directions currently being suggested to inform the development of draft policies for the establishment of water resource system in the OP. These suggested directions are intended to address the minimum requirements of the PPS while also building from the additional considerations, opportunities and challenges discussed above.

Updating Goals and Objectives

- Revise the existing goals and objectives to protect, maintain, enhance and restore the quality and quantity of the water resource system, as well as the incorporation of planning for green infrastructure, promoting water efficiency and conservation, and adaptive designs which integrate with and support the County's water resource and natural heritage systems,
- Acknowledge the surface water features, ground water features, hydrologic functions and natural heritage features and areas, which are necessary for the ecological and hydrological integrity of the watershed,
- Recognize the important role the water resource system plays in mitigating the impacts of climate change by protecting and enhancing natural features, surface water features and groundwater features,
- Support identification, characterization and maintaining hydrologic functions and connections among groundwater features, natural features, and surface water features including shoreline areas, and,
- Emphasize the role and importance of and enhance proactive watershed and sub-watershed planning to support protection of the water resource system and to maintain, restore and enhance the quality and quantity of water.

Addressing Minimum Requirements of the PPS

- Update the existing watershed planning policies in the OP to reflect the PPS requirements and related guidance including that Oxford and its area municipalities shall protect, improve or restore the quality and quantity of water by:
    - ❖ Using the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering cumulative impacts of development,
    - ❖ Minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts,
    - ❖ Evaluating and preparing for the impacts of a changing climate to water resource systems at the watershed level,
    - ❖ Identifying water resource systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed,
    - ❖ Maintaining linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features, including shoreline areas,
    - ❖ Implementing necessary restrictions on development and site alteration to protect all municipal drinking water supplies and designated vulnerable areas; and protect, improve, or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions, and,
    - ❖ Planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality.

- Update the existing stormwater management policies in the OP to require that stormwater management:
    - ❖ Be integrated with planning for sewage and water services and ensure that systems are optimized, feasible and financially viable over the long term,
    - ❖ Minimize, or, where possible, prevent increases in contaminant loads,
    - ❖ Minimize erosion and changes in water balance, and prepare for the impacts of a changing climate through the effective management of stormwater, including the use of green infrastructure,
    - ❖ Mitigate risks to human health, safety, property, and the environment,
    - ❖ Maximize the extent and function of vegetative and pervious surfaces,
    - ❖ Promote stormwater management best practices, including stormwater attenuation and re-use, water conservation and efficiency, and low impact development,
    - ❖ Ensure stormwater management practices minimize stormwater volumes and contaminant loads and maintain or increase the extent of vegetative and pervious surfaces, and,
    - ❖ Establish directions and implementation tools to support water balance analysis to be completed as part of stormwater management design, including considerations for maintaining or restoring water balances to demonstrate 'no negative impact' to natural heritage features and areas, surface water features and groundwater features including their ecological and hydrological functions.

Additional Considerations

- Encourage consideration of stormwater management master planning and secondary planning processes as a means of enhancing standards and identifying areas for improvement and opportunities to incorporate green infrastructure,
- Recognize that incorporation of low impact development measures would need to consider and be designed to suit the specific site conditions (e.g., soils) and should be informed by appropriate studies and standards,
- Include development criteria to support protection of hydrological functions and integrate these requirements with natural heritage system requirements,
- Promote restoration of surface water features, including the removal of barriers and hard surfaces to enhance and restore surface water features, and their hydrological functions including flood attenuation and reduction of erosion, through development and infrastructure projects,
- Encourage education, outreach and stewardship to help support maintaining and improving water quality, as well as water quantity, and,
- Encourage water conservation and efficiency through programs and standards, including County and Area municipal infrastructure and capital projects, as well as development, where opportunities exist.

Open Space

Provision of and convenient access to open spaces, including parks and trails, and associated recreational opportunities, is an essential part of building complete communities and supporting healthy and active communities.

The existing OP policies include a land use designation for open space which includes parks and areas for recreation, stormwater management facilities, earth science ANSIs and areas of natural hazards (flooding). The existing purpose of the Open Space designation is to minimize hazards to human health or safety, minimize property damage, provide linkages connecting the natural

heritage system, and to provide opportunities for both private and public recreation. It also captures and include certain natural heritage features and areas (such as local features) that are not currently addressed through the environmental protection designation.

It is also noted that the existing open space policies encourage the use of the open space designation to incorporate pedestrian and cycling pathways into proposed and, where feasible, existing development. These pathways can link development to other components of natural heritage system or to areas of commerce and employment, but don't currently reflect County or Area Municipal studies, goals or objectives, nor do they specifically support active transportation.

Similarly, the existing open space designation and policies can also apply to recreational uses located outside of settlement areas. However, the agricultural policies also speak to these uses being 'non agricultural uses' based on the requirements of the PPS. As such, it is suggested that any updates to the open space policies in the OP seek to provide greater clarity between the function and role of the agricultural and open space designations and how they are intended to work together to improve consistency in implementation of the OP policies.

In addition, the Province recently made changes to the Planning Act (i.e. through Bill 23) with respect to how parks are planned for, how much and what land municipalities may require for parks and/or collect cash in lieu of. Given that the existing OP policies also apply to parks, these changes will also warrant further consideration as part of the review and update of those policies.

Planning for Parks

The OP policies for park/leisure planning within the County's Large Urban Centres (Woodstock, Tillsonburg and Ingersoll) and rural settlements are already well structured to support planning for new and expanded park spaces and to implement the new Provincial parkland direction in the Planning Act, as:

- They establish a park hierarchy including, community parks, neighborhood parks and other parks,
- Reflect parkland dedication by-law minimums pursuant to the provisions of the Planning Act
- Provide a standard for land acquisition and criteria where cash-in-lieu may be provided as an alternative to land acquisitions,
- Speak to the condition of the lands needing to satisfy minimum standards (e.g., drainage, grading, and shape) to support the intended function of the park and provides development standards for municipal parks,
- Provides direction under what circumstances natural heritage features may be considered as part of parkland dedication,

It should be noted that, while these policies are not technically located within the OP policies specific to the Open Space designation, they are typically implemented through the Open Space designation. As such, it is suggested that these policies also be reviewed and updated as part of this process to ensure the above noted parkland planning and implementation matters are appropriately addressed and that they continue to work together with the updated Open Space policies.

Some other parkland related considerations that should be looked at in as a result of the changes incorporated into the Planning Act through Bill 23 include having the Open Space policies recognize the role of park master plans and secondary plans in comprehensive planning for and

informing the location, purpose, and configuration of new parks as well as facility types and needs identified by the area municipalities. There is also an opportunity to encourage areas of open space (where appropriate) to be used for community gardens and urban agricultural opportunities to support providing greater access to local food, help contribute to greater food security, and support related Future Oxford goals.

Planning for Trails

For many, access to trails is essential to everyday life for recreation, health and mobility. Inclusive, connected, sustainable trail networks offer diverse experiences, provide access to nature, foster an active and healthy lifestyle, and showcase a community's natural and cultural assets. In the Oxford context, the trail network also helps provide opportunities to meet increasing demand for a range of recreation opportunities such as walking, cycling, hiking, jogging, cross-country skiing, canoeing and equestrian activities.

Oxford's trail networks are dynamic and are designed, built, and maintained by a range of partners, including the County and Area Municipalities, as well as local groups and agencies (i.e., Conservation Authorities). Trail planning at present is undertaken through a range and mix of projects and initiatives, including:

- Oxford County Trails Master Plan (2014);
- Oxford County Cycling Master Plan (2022);
- Area Municipal park and trail master plans and trail projects (various);
- Enhancement of trails along river corridors and other conservation areas owned/maintained by Conservation Authorities;
- Trail plans/management by local groups/clubs and other associations; and
- Consideration of new/improved trail connections and active transportation opportunities through development applications and secondary planning exercises.

Overall it is suggested that the OP be revised to recognize the various County and Area Municipal studies, goals and objectives for a coordinated trails network that provides opportunities for recreation, as well as part of a broad connected network that supports active transportation. In addition, there should be greater emphasis on the importance of considering these types of connections as part of comprehensive planning for growth (e.g., secondary plans). Further direction should also be considered with respect to how and where trails would be permitted within various land use designations in the OP, including those for natural heritage and open space. Further considerations for the planning of trails may include:

- Encouraging strategic acquisition/permission of lands for the expansion of trails where opportunities exist (e.g., rail and hydro corridors);
- Clarifying requirements for trail standards, particularly for where trails are proposed as part of development; and
- Recognizing the role and importance of the trail system as part of Oxford's active transportation network.

Suggested Policy Directions

The following provides a summary of the various policy directions currently being suggested to inform the development of draft policies for the OP in relation to open space, trails and parks. These suggested directions are intended to address the minimum requirements of the PPS while also building from the additional considerations, opportunities and challenges discussed above.

Updating Goals and Objectives

- Recognize the role of the Official Plan in supporting planning for, protecting and enhancing, trails, parks and open spaces for current and future generations,
- Establish objectives to support the development of a connected open space system of trails and parks that provides residents with exposure to, awareness of, and interaction with nature and contributes to community health and wellness,
- Support the development of a cohesive and comprehensive County-wide trail system that will connect people and places through a network that is both off-road and supported by on-road links where necessary,
- Support the unique park and trail needs created by ongoing growth including residential intensification within settlements, , while also placing emphasis on promoting walkability and alternative modes of transportation,
- Encourage restoration and environmental enhancement in appropriate open space and park locations, and,
- Support addressing food security through encouraging community gardens, where opportunities exist.

Addressing minimum requirements of the PPS

- Promote healthy, active communities by:
    - ❖ Planning public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction and facilitate active transportation and community connectivity,
    - ❖ Planning and providing for a full range and equitable distribution of publicly accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources,
    - ❖ Providing opportunities for public access to shorelines, and,
    - ❖ Recognizing provincial parks, conservation reserves, and other protected areas, and minimizing negative impacts on these areas.

Additional Considerations

- Encourage the use of parks and trails master planning and secondary planning exercises to support the identification of parkland and facility needs and locations, implementation of the park hierarchy, and wise use and management of publicly accessible parks, open spaces and trails,
- Clarify how trails, including trail head areas, are to be addressed from a land use perspective (i.e., applicable land use designations, including those for natural heritage and open space);
- Consider opportunities for inclusion of green infrastructure in facility design and maintenance when managing areas of open space and parks,
- Recognize the role and importance of the existing trail networks to the community, including through the County and Area municipal trails plans, studies, and projects,
- Recognize how local trails interconnect with trails in Provincial Parks and Conservation Areas and other community destinations,
- Encourage consideration of opportunities for urban agriculture, gardens, and other forms of using open space to help address food security, where appropriate, and,
- Encourage consideration of land acquisition opportunities to support the enhancement of the trail network (e.g., abandoned rail and utility corridors).

Soils as a Sustainable Resource

The existing OP policies recognize the prevalence of high-quality and arable soils within the County and speak to the importance of protecting soils and the removal of topsoil and peat extraction. Further, Oxford's Clean Water Program also includes programs and funding support for addressing erosion and drainage issues (e.g., working with farmers to address drainage issues in fields to reduce and prevent erosion) that help to preserve and maintain the high-quality agricultural soil in the County.

Healthy soil provides many economic and environmental benefits including, but not limited to, improved crop growth, yield and quality, water and nutrient retention, resilience, biodiversity and climate change adaptation and mitigation.

For the above reasons, the current OP policies would benefit from review and update to ensure they continue to focus on and promote healthy soils and soil management and integrate relevant legislative changes (e.g., excess soils), best management practices and stewardship opportunities (e.g. support for the clean water program, federal cover crop programs and similar initiatives). A key focus of the updates would be to ensure the policies reflect recent Provincial legislative changes with respect to managing excess soil.

Recognizing and Managing Excess Soils

Managing excess soil is critical to protecting human health and the environment as our communities continue to grow. Excess soils are those that are not required at an individual construction or development site and must be moved to a new location. In some cases, excess soil may be temporarily stored at another location before being brought to a final site where soils are applied.

Given the extent to which challenges with managing excess soil have been occurring Province wide, the Province has recently made updates to the legislative and policy framework for excess soil management. Requirements take a life-cycle management approach, which includes placing greater responsibility on source sites where soil is excavated, documenting soil quality (i.e., soil chemistry and ensuring it is free from contamination and garbage/construction debris) and recognizing opportunities for excess soil re-use.

How excess soil is managed and disposed also has implications for greenhouse gas emissions, with trucks moving excess soil across communities. Other issues include the quality of excess soil, and the need to protect the environment, water, and agriculture. It is suggested that the OP update include policies to encourage and support the consideration/implementation of best management practices for excess soil (i.e., for a beneficial re-use purpose) for development, site alternation, and infrastructure, where appropriate.

Suggested Policy Directions

The following provides a summary of the policy directions currently being suggested to inform the development of draft policies for the OP in relation to soils and soils management. These suggested directions are intended to address the minimum requirements of the PPS while also building from the additional considerations, opportunities and challenges discussed above.

Updating Goals and Objectives

- Maintain the focus and intent of the existing OP policies that Oxford's land resource and particularly the topsoil should be conserved so that it may sustain future generations.

Additional Considerations

- Recognize best management practices and stewardship opportunities, including the existing Clean Water Program,
- Reflect the Provincial regulatory requirements for excess soil in accordance with Ontario Regulation 406/19 under the Environmental Protection Act,
- Encourage best management practices for excess soil generated and fill received during development, site alteration, and infrastructure projects to:
    - ❖ Reuse excess soil on-site or locally to the maximum extent possible,
    - ❖ Establish temporary storage sites as close to soil reuse sites to reduce transportation and environmental impacts such as greenhouse gas emissions, and,
    - ❖ Ensure excess soil placement at receiving sites are required to demonstrate that the activity will not have a negative impact on existing land uses, the natural environment, surrounding land uses and cultural heritage resources,
- Encourage Area Municipalities to develop or update municipal site alteration and fill by-laws; and,
- Encourage municipal projects to reuse soils and minimize offsite disposal, where it is technically feasible, recognizing that identifying opportunities re-use opportunities and efficiencies early in the site design process is critical to successful reuse of soils.

Natural Hazards

The PPS, 2020 requires development to be directed away from areas of natural hazards where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards. To ensure the safety of residents and property, as well as the environment, it is important to identify areas that may be at greater risk to unacceptable health and safety risks, including those resulting from extreme weather events and changing weather patterns. This includes lands that are or may be impacted by:

- flooding
- erosion hazards & areas of steep slopes
- unstable soils and bedrock, and
- hazardous forest types for wildland fire

The PPS also requires that municipalities prepare for the impacts of a changing climate that may further increase the risk associated with natural hazards. Little to no substantial changes to the PPS natural hazard policies are anticipated through the current PPS review by the Province. Although future updates, particularly for flooding, may occur as the Province advances implementation of Ontario's Flooding Strategy, 2020 and will need to be monitored going forward.

Generally, the PPS requires that development be directed away from areas of natural hazards where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards, with some limited provisions to permit development and/or site alteration where appropriate mitigation/ risk reduction can be achieved. The review and update of the natural hazard portion of the OP will focus on ensuring that mapping (where applicable) is up to date, and that the OP contains up to date policies which reflect Provincial requirements, align with Conservation Authority processes and regulations, and integrate local

planning considerations where opportunities exist. This is discussed further with respect to the various natural hazards below.

Flood Hazards

For municipalities, flooding events contribute to increased public liability, escalating public costs related to the installation, maintenance, replacement or upgrade of protection works required to protect vulnerable developments, and mounting public expense to address past development decisions. As a result, careful consideration must be given where development or infrastructure is proposed in proximity to areas which may be subject to flooding and recognizing that these areas may be subject to greater or additional risks from changing weather patterns.

Currently the OP identifies flood lines on the respective land use plans for each of the Area Municipalities (Schedules B-1, B-2, E-1, E-3, I-1, N-1, N-2, S-1, T-1, W-1, Z-1, Z-2) and includes more detailed flood schedules for Plattsville (B-4) and Ingersoll (I-5) which delineate a two zone flood approach. There are corresponding OP policies for both the one zone and two zone areas (where applicable) which generally direct development away from these areas, as required by the PPS. There are also references and requirements within these policies that are dated and not longer reflect the current requirements of the Conservation Authorities Act and the PPS.

The OP policies also direct that flood prone areas be designated as 'open space' and require the implementing zoning by-law to identify such lands in a manner that reflects their susceptibility to flooding and restricts the range of uses permitted accordingly.

Erosion Hazards & Areas of Steep Slopes

Erosion hazards are areas where there is a loss of land, due to human or natural processes, that pose a threat to life and/or property and typically include areas of steep slopes. Erosion hazards reflect areas prone to river and stream bank erosion, as well as areas with slope stability issues related to the valleys through which rivers flow. As flood risks shift and weather patterns change, so can the areas that are more prone to new or greater erosion than experienced historically.

The OP currently identifies areas of known erosion hazards lands on Schedule C-2. The existing policies generally direct development to locations outside of these areas, while also establishing technical requirements (e.g., geotechnical studies) to help assess risk, delineate limits, and inform addressing other legislative requirements, including those under the Conservation Authorities Act. Some of the references within the policies are out of date with the PPS and other legislative requirements and will need to be updated.

Unstable Soils and Bedrock

Unstable soils and bedrock (also referred to as karst topography) represent areas that, due to natural processes, can create underground gaps or air pockets. These areas can pose greater risk to quickly erode or compress such that they may not be able to support structures or may result in the formation of sink holes.

Currently the OP identifies areas of known potential unstable soils on Schedule C-2. The existing policies generally permit development only where the risks associated with unstable soils can be avoided or, in the case of existing development, successfully mitigated. The OP does not currently include policies or mapping with respect to unstable bedrock/ karst topography.

Assessing and addressing risks in relation to unstable soils and bedrock as part of development is generally achieved through completion of technical studies (e.g., geotechnical reports) which inform the design of a development proposal. The OP currently has policies which speak to these requirements for unstable soils, and it is suggested that these be expanded to also speak to areas of unstable bedrock. Opportunities to streamline requirements and reduce duplication of requirements for various natural hazards, as well as align with other legislative requirements, should also be considered.

Hazardous Forest Types

After flooding, wildland fires are the second most frequent type of reported natural disaster in Canada, and the risks, costs and impacts to the public as well as to municipalities continue to increase. As such, the PPS includes requirements that development be directed outside of areas considered unsafe, due to the presence of hazardous forest types for wildland fire, unless mitigation measures are implemented.

Currently there are no policies with the Official Plan that speak to hazardous forest types for wildland fire, and so these PPS requirements will need to be addressed as part of the proposed OP updates.

Based on the vegetation assessment undertaken as part of the ONHSS, 2023 are about 1500 ha of vegetation communities within woodland areas County wide that may have some potential for greater risk in relation to wildfire. This generally includes areas dominated by coniferous species (e.g., pines, spruces, etc.) and represents slightly less than 6% of the total woodland cover in the County. These areas may warrant additional study/management if development were to be proposed within or adjacent to them, in part to better understand the types of tree species and forest conditions, as the degree of risk is directly related to the tree species and conditions present.

These vegetation communities are largely dispersed across the County and typically represent smaller portions of larger contiguous natural heritage features with more than 45% of them being less than 1 ha in size. Less than 5% of these features are more than 10ha and represent the larger conifer plantations within the County.

As such the suggested policy approach would be to require the assessment of risks and requirements for mitigation approaches (e.g., woodlot management, setbacks, or separation of uses), which would only be required based on the applicable provincial guidance and where development is proposed. This approach would also allow these requirements to be integrated into other concurrent studies (like EISs) for site specific applications, or as part of broader community planning exercises, including secondary plans for settlements.

Suggested Policy Directions

The following provides a summary of the policy directions currently being suggested to inform the development of draft policies for the OP in relation to natural hazards. These suggested directions are intended to address the minimum requirements of the PPS while also building from the additional considerations, opportunities and challenges discussed above.

Updating Goals and Objectives

- Maintain the existing goals and objectives to facilitate a safe and healthy environment by identifying various environmental constraints applying land use restrictions or, where appropriate, requiring effective mitigating measures as a requirement of development.
- Recognize the impacts of a changing climate that may increase the risk associated with natural hazards.

Addressing minimum requirements of the PPS

- Clarify policies for unstable soils, erosion hazards and steep slopes and flood prone areas to reflect the PPS, as well as other applicable legislative requirements.
- Establish new policies and mapping which address areas of unstable bedrock building from the existing policies framework for unstable soils.
- Prohibit certain sensitive land uses from locating within areas of natural hazards where risks are not mitigatable or sites are unsuitable, in accordance with the PPS 2020 (i.e., institutional and emergency service uses).
- Maintain the existing flood policy framework (mostly one-zone with area specific two zone flood policies where it is applicable), incorporating updates based on revised natural hazard information from Conservation Authorities.
- Establish policy requirements based on the PPS and the Provincial Wildland Fire Risk Assessment and Mitigation Reference Manual with regards to the identification of areas of known and potential hazardous forest types for wildland fire and establish clear and reasonable mechanisms for assessing and mitigating risks at the secondary planning and/or development application stage.

Additional Considerations

- Reduce policy repetition and streamline requirements for addressing unstable soils and bedrock, along with other natural hazard policies where possible.
- Align OP requirements with those under the Conservation Authorities Act to reduce duplication and create efficiency in processes where possible.
- Update and clarify mapping to reflect flood prone areas on an environmental constraints schedule for general reference.
- Encourage the County and Area Municipalities to consider climate impacts and implications where municipal facilities are in flood prone areas to reduce the risks as part of ongoing maintenance or other capital works, and,
- Encourage study requirements for natural hazards to be integrated into and addressed as part of other existing study requirements (e.g., EIS, geotechnical studies, etc.) where applicable.

Energy Efficiency, Air Quality and Climate Change

Climate change can result in more frequent and intense storm and weather events (including heat and drought), increased pressure on water resources, and increased impacts (e.g., damages resulting from heat, wind, ice, flooding, and fire) and health effects from extreme heat.

Mitigating and adapting to the impacts of a changing climate requires a coordinated approach that considers ways to reduce and cease net carbon emissions, protect and restore carbon stores (e.g., natural heritage features and areas), sequester greenhouse gases (e.g., carbon dioxide) including through the use of green infrastructure, and mitigate and reduce the risks and impacts from extreme weather events.

Land use planning is one important tool that municipalities can be used to help to address climate change. Planning in advance for long-term, sustainable growth is critical, since decisions about how communities grow and are serviced can have implications for many years to come (as it directly influences the amount of carbon generated from people living, working, and travelling in those communities). As such, planning for land use pattern and related infrastructure that improves energy conservation and promotes carbon neutrality can support the development of more efficient and environmentally sustainable communities, which, in turn, will be more resilient to the impacts of a changing climate.

The PPS, 2020 requires that municipalities prepare for the 'impacts of a changing climate'. Impacts of a changing climate is specifically defined as "the present and future consequences from changes in weather patterns at local and regional levels including extreme weather events and increased climate variability." As part of the review of the PPS the Province has proposed changes to some of the implementing policies in relation to climate change, but not the definition of impacts of a changing climate. However, both the 2020 PPS and the updates to the PPS continue to:

- Require municipalities to plan to reduce greenhouse gas emissions and prepare for the impacts of a changing climate,
- Support achievement of compact, transit-supportive, walkable communities,
- Incorporate climate change considerations in planning for and the development of infrastructure, including stormwater management systems and public service facilities,
- Support energy conservation and efficiency,
- Promote green infrastructure, low impact development and active transportation,
- Protect the environment and air quality, and,
- Consider any additional approaches that help reduce greenhouse gas emissions and build community resilience to the impacts of a changing climate.

Sustainable and Resilient Communities

Increasing density and promoting compact urban form, efficient design and building orientation can reduce the costs of transportation, improve and support walkability, and increase the efficient use of hard and soft services, realize energy conservation efficiencies, promote net zero development and reduce development pressure on surrounding agricultural and environmental features, in addition to reducing the production and release of carbon dioxide and other greenhouse gases as part of development process.

These land use patterns also promote a mix of housing, including affordable housing, employment, recreation, parks and open spaces, and help support the financial well-being of municipalities over the long term, and minimize the undesirable effects of development, including impacts on air, water and other resources.

Land use patterns and transportation networks are directly interlinked, and this should be better recognized in the OP, through greater integration with applicable County and Area Municipal Transportation and Cycling Master Plans. This would help to support continued efforts to increase the share of sustainable modes of transport (e.g., active transportation and transportation demand management).

The PPS requires that municipalities consider the impacts of a changing climate and incorporate ways to adapt to or mitigate these impacts into planning for infrastructure (e.g., sewage, water and stormwater), to ensure that these systems can be sustained by the water resources upon

which they rely. As such, the Official Plan polices should help to ensure/promote comprehensively planning for infrastructure that incorporates green infrastructure and considers how best to mitigate or adapt to the impacts of a changing climate.

Additional policy considerations that may assist in this regard include:

- Encouraging best management practices for building and infrastructure construction that reduce waste generated and greenhouse gas emissions and increase the use of recycled material;
- Promote design and orientation that maximizes energy efficiency and conservation, and considers the mitigating effects of vegetation and green infrastructure through encouraging sustainable building design practices (e.g., Leadership in Energy and Environmental Design (LEED) certification and net -zero buildings);
- Encouraging the development of 'green development standards' to support sustainable building and community design and provide a consistent evaluation framework for assessing the sustainability of development proposals.
- Consider the role and benefits of green infrastructure including protection of the natural heritage features as discussed in above in the Natural Heritage System section, and,
- Comprehensively consider energy efficiency in the design of new communities through the planning process, including as part of secondary planning exercises.

Energy Generation, Conservation and Efficiency

The PPS requires that municipalities support energy conservation and efficiency, improve air quality, reduced greenhouse gas emissions, and prepare for the impacts of a changing climate. This incudes municipalities supporting opportunities for the development of energy supply (e.g. electricity generation facilities, transmission and distribution systems, district energy) as well as renewable energy systems and alternative energy systems to accommodate current and projected needs.

The community, through Future Oxford and the 100% Renewable Energy Plan, have established a framework which sets out targets and goals for energy generation, incorporation of renewable energy, and reducing greenhouse gas emissions through efficiencies and supporting the shift to greater electrification and reducing related green house gas emissions. The Oxford Renewable Energy Action Plan further establishes a road map for how the County as an organization, will contribute to the community goal of 100% renewable energy with respect to its own facilities.

As such, it is suggested that OP include policies that address the requirements of the PPS and encourage and support reducing energy dependence and greenhouse gas emission sources, increased renewable energy generation, energy efficiency, carbon neutrality and reducing greenhouse gas emissions (e.g., by encouraging businesses and homeowners to participate in programs that incentivize investment in energy and resource efficient technologies).

The current Provincial review of the PPS is also proposing greater clarification with respect to the location and scale of battery storage facilities in prime agricultural areas and limiting these (similarly to other land intensive energy uses like ground mounted solar) to only being permitted as an on-farm diversified use in prime agricultural areas, so this will also need to be reviewed and considered as part of this update.

Suggested Policy Directions

The following green text provides a summary of the policy directions currently being suggested to inform the development of draft policies for the OP in relation to Energy Efficiency, Air Quality and Climate Change. These suggested directions are intended to address the minimum requirements of the PPS while also building from the additional considerations, opportunities and challenges discussed above.

Updating Goals and Objectives

- Update existing goals and objectives to support planning for infrastructure, public services, built form, and communities that are adaptive and resilient to climatic and weather conditions that fall outside of historic norms.
- To support reduction of carbon emissions and energy loss that are unnecessary and locally produced, where appropriate.
- To support community goals to achieve 100% renewable energy and a carbon positive future.

Addressing minimum requirements of the PPS

- Support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and preparing for the impacts of a changing climate, by:
- Promoting compact built forms, and a structure of nodes and corridors,
- Supporting achievement of compact, transit-supportive, walkable communities through inclusion of active transportation and transit in and between residential, employment (including commercial and industrial) and institutional uses and other areas,
- Encouraging transit-supportive development and intensification to improve the mix of employment and housing uses to shorten commute journeys and decrease transportation congestion.
- Promoting building design and orientation which maximizes energy efficiency and conservation, and considers the mitigating effects of vegetation and green infrastructure; and
- Maximize vegetation within settlement areas, where feasible.
- Provide directions on planning requirements and integration with related requirements for battery storage facilities, learning from immerging examples of the technology, including incorporation of any updates resulting from the review of the PPS.

Additional Considerations

- Support opportunities to increase the resiliency of municipal infrastructure from natural hazards and the impacts of extreme weather events (flooding, fire, wind, ice, etc.)
- Encourage maximizing vegetative cover within settlements to take advantage of passive cooling, reducing urban heat island impacts, and improved air quality and supporting the use of native species.
- Support efforts to reduce waste and greenhouse gases created by construction and infrastructure related practices, including through improving standards.
- Establish policies to encourage the development of ‘green development standards’ to support sustainable building and community design and provide a consistent evaluation framework for assessing the sustainability of development proposals.
- Encourage the Area Municipalities to consider the potential development and implementation of other sustainability tools and related standards (e.g. green roof by-laws, bird-friendly building standards, etc.)
- Recognize and support the implementation of the Oxford Renewable Energy Action Plan, as well as the County’s Energy Management Plan and Green Fleet Plan to support corporate and community initiatives to achieve 100% renewable energy goals,

- Encourage new development to plan for buildings to be net-zero carbon and have an adaptable design which supports electrification (e.g. solar ready, EV ready, etc.),
- Encourage the retrofit and reuse of existing buildings to reduce waste and associated emissions,
- Facilitate and plan for renewable energy generation at appropriate locations and scales with applicable land use planning tools, and
- Encourage and support the design of communities to facilitate/require community energy considerations comprehensively through the planning process, including as part of secondary planning exercises.

Next Steps

This paper is intended to serve as a tool to help guide, inform, and facilitate discussions between the County, Area Municipalities, Agencies, and the broader community. All feedback received will help inform the future development of a detailed set of draft policy changes, including related mapping, which will be released for further community engagement and discussion as a next step in the process in 2024.

It is expected that any future updates to the environmental policies resulting from this process would generally apply to all lands within the County. Proposed mapping changes will be included with the draft environmental policies, which are to be developed and consulted on as a future next step in the process. The development of these draft policies and mapping will consider and incorporate the feedback received on the suggested environmental policy directions as part of this step in the process.

SHARE YOUR FEEDBACK:

All feedback on this paper will help inform development of a detailed set of draft policies, including mapping (where applicable), which will be release for further community engagement and discussion, including with the Area Municipalities, community groups (e.g., Planning and Agricultural Advisory Committee) and the public.

Complete the survey or submit a question on Speak Up Oxford
Email questions or feedback to OPUpdate@oxfordcounty.ca