Preliminary Constraints Assessment – Water Resources and Natural Heritage Technical Report (Final Report)

Refinement of the Focused Study Area and Identification of a Preliminary Settlement Area Boundary Expansion (SABE)
Project # TPB198127

Prepared for:

The Regional Municipality of Peel
10 Peel Centre Drive, Suite A and B, Brampton, ON L6T 4B9

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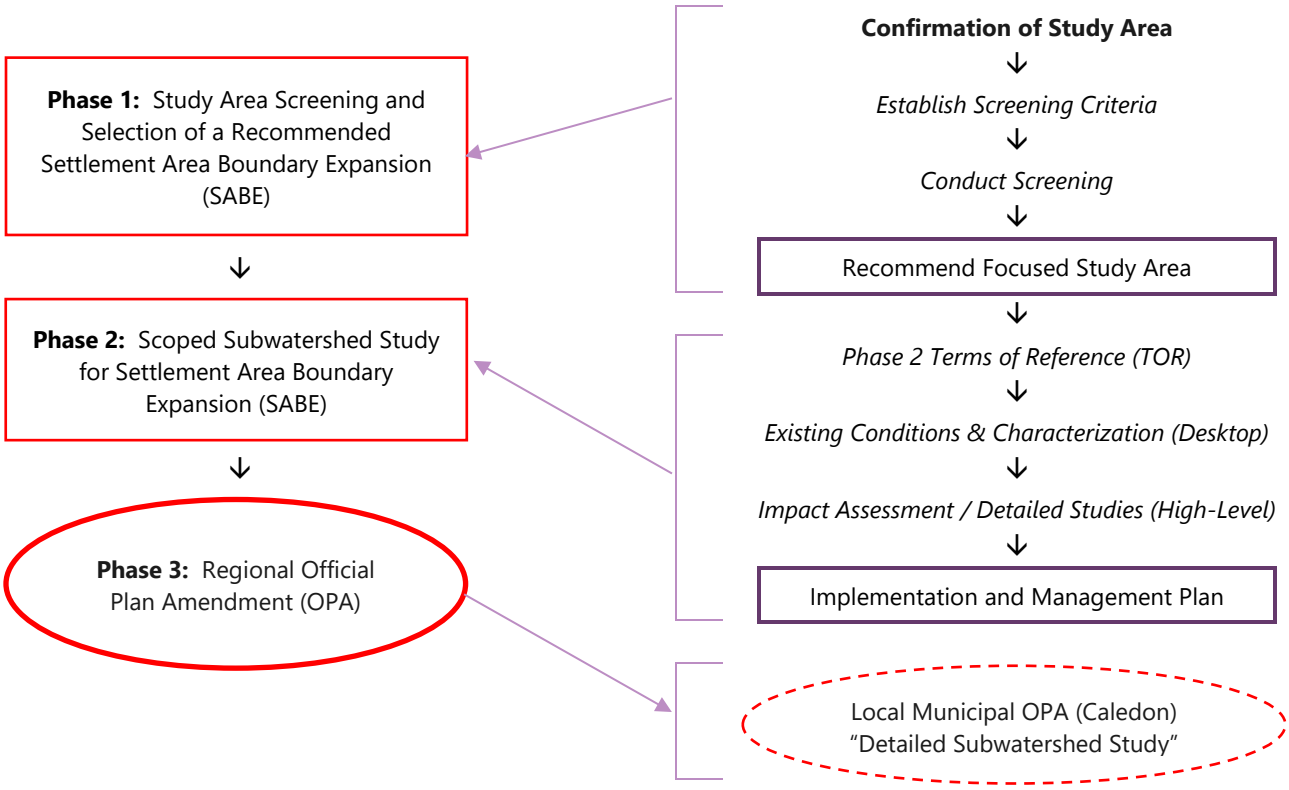
1.0 Project Overview and Context

The Regional Municipality of Peel (Peel Region) has initiated an Environmental Screening and Scoped Subwatershed Study to provide water resources and natural heritage input to support a Settlement Area Boundary Expansion (SABE) Study that will determine where new settlement area growth is proposed in Peel. The Environmental Screening and Scoped Subwatershed Study (Scoped SWS) is one of several technical studies that will inform the SABE. The results of the Screening and Scoped SWS and SABE Study will then be used to develop a Regional Official Plan Amendment (ROPA) for the settlement area boundary. Formal consultation will occur as part of the Regional Official Plan Review (Peel 2041) the Region is conducting to update the Regional Official Plan in conformity with provincial plans and policy. The SABE study and ROPA will define the area of planned growth in Peel Region and the related environmental management policies, at a level sufficient to confirm the principle of development at a regional scale. This approach will ensure that water resources and natural heritage features are protected, restored or improved, and will set the basis for a future local municipal official plan amendment (LOPA), led by the Town of Caledon. The LOPA will be supported by a detailed subwatershed study to be completed at a time appropriate to the anticipated timing of the LOPA.

The graphic below illustrates the various phases and associated primary steps to initially assess, screen and select a recommended SABE location (based in south Caledon), followed by a Scoped SWS (tailored to the needs of Peel Region's OPA) and ultimately to provide technical recommendations for the ROPA, setting the ground work for the detailed local study of water resources and natural systems (future detailed Subwatershed Study).

Process Flow Diagram



This report presents the findings and recommendations provided as input to the Settlement Area Boundary Expansion Study Phase A: Focus Study Area. The analyses conducted to-date have focused on identifying key environmental features and constraints within the overall study area, related to the terrestrial features, aquatic features, hydrogeologic and surface water systems. The environmental features and systems identified through this screening exercise documented herein have been integrated with the findings from a parallel study process led by Hemson, involving additional technical studies such as servicing, transportation, agricultural, cultural heritage, and climate change, to identify constraints, needs, and opportunities, to define a Focus Study Area (FSA) and subsequently a preliminary settlement area boundary expansion (SABE) for further evaluation and refinement in Phase 2 of this study process. The Phase 1 Environmental Screening study component (this report) has provided information to ensure the FSA identified for the SABE has sufficient area, accounting for natural heritage and water resource system requirements, to accommodate the Region's growth requirements and enable one or more settlement area expansions to be further evaluated and identified, following the completion of Phases 2 and 3 of this study.

The following summarizes the key tasks undertaken for Phase 1 of this study:

Task 1: Study Area Definition
Task 2: Establish Evaluation Criteria
Task 3: Conduct and Document Screening Evaluation
Task 4: Integration with Parallel Studies
Task 5: Focus Study Area Review and Verification
Task 6: Document Findings and Conclusions, and Confirm Scope for Phase 2

2.0 Policy Framework

The SABE project being led by Hemson and the associated Environmental Screening and Scoped SWS are Regional projects requiring conformity with, and are guided by, provincial and regional policies. In recognition that the next stages of the planning process will be led by local municipal policies (Caledon), the Wood Team has had regard for these policies and direction provided at the local municipal level to support alignment with, and provide preliminary direction for, future work. A list of key plans and policy documents, applicable to the current Phase 1 work, is provided in Table 2.1 and is briefly discussed in the subsequent sections.

Table 2.1. Summary of Key Statutes and Policies Applicable to the Current Study Stage

Legislation or Policy Document	Key Sections
Provincial Policy Statement (2020)	Section 2.1 (Natural Heritage) Section 2.2 (Water)
Growth Plan for the Greater Golden Horseshoe	Section 4.2.1 (Water Resource Systems) Section 4.2.2 (Natural Heritage System) Section 4.2.3 (Key Hydrologic Features, Key Hydrologic Areas and Key Natural Heritage Features)
Greenbelt Plan	3.2 (Natural System)
Region of Peel Official Plan (2018)	Chapter 2 (The Natural Environment) Chapter 3, Section 3.4 (Water Resources) Chapter 7, Section 7.10.2.12 (Expansion to the Urban Boundary)
Town of Caledon Official Plan (2018)	Section 3.2 Ecosystem Planning and Management Section 3.1 Sustainability Section 5.7 Environmental Policy Areas
Conservation Authorities Act (1990): O.Reg. 166/06 Toronto and Region Conservation Authority O.Reg. 160/06 Credit Valley Conservation Authority	Regulation of development, interference with wetlands and alterations to shorelines and watercourses.
Fisheries Act (2019)	Sections 34 and 35 (Fish and Fish Habitat Protection and Pollution Prevention)
Species at Risk Act (2002)	Section 32 (Measures to Protect Listed Wildlife Species)
Endangered Species Act (2007)	Section 10 (Prohibitions on damage to habitat, etc.)

2.1 Provincial Policy Statement

The Provincial Policy Statement (PPS) (2020) is issued under Section 3 of the *Planning Act*. The PPS provides direction on matters of provincial interest related to land use planning and development. The PPS provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural environment. The PPS recognizes the complex inter-relationships among economic, environmental and social factors in planning and embodies principles of good planning for the creation of complete, healthy, and liveable communities. All land use decisions (provincial and municipal) must be consistent with the PPS.

The PPS provides guidance for the long-term, wise use and management of resources including the protection and management of natural heritage and water resources (Section 2.0). The PPS provides specific policy direction on significant wetlands, endangered and threatened species, fish habitat, significant woodlands, significant valleylands, significant areas of natural and scientific interest (ANSI) and significant wildlife habitat. It also provides guidance for the protection, improvement and restoration of the quality and quantity of water resources. The PPS recognizes that the linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features are to be maintained. It states that watersheds are the ecologically meaningful scale for integrated and long-term planning.

The PPS also provides direction relating to natural hazards, so as to ensure that development is directed away from areas of natural hazards where there is an unacceptable risk to public health or safety or property damage. It is also to ensure that development does not create new or aggravate existing hazards.

2.2 Growth Plan for the Greater Golden Horseshoe

The Growth Plan for the Greater Golden Horseshoe (the Growth Plan) was developed to respond to, and prepare for, challenges of continued rapid growth in this important geographic area of Ontario. First introduced in 2006 (The Growth Plan for the Greater Golden Horseshoe 2006), the current in-force Plan came into effect in 2019.

The Growth Plan recognizes the importance and values of growth and provides direction with respect to where and how growth should occur; it also provides structure to ensure that growth considers community health (e.g., complete communities), additional values and functions are protected, and resources used appropriately (e.g., Natural Heritage, Water Resources, Agriculture, etc.). To this end, the Growth Plan sets out guiding principles to inform how growth should occur, provide direction for protection and conservation, and embed climate change and alternative growth management approaches into land use planning for the Greater Golden Horseshoe.

The Growth Plan provides direction for 'Protecting What is Valuable' (Section 4.2) within the Growth Plan Area. It is through the policies of the Growth Plan that municipalities are directed to undertake watershed planning to ensure a comprehensive and integrated approach to protecting, enhancing or restoring water quality and quantity; identify a Water Resource System (WRS) comprised of 'key hydrologic features' and 'key hydrologic areas'; and complete subwatershed studies to inform development planning (Section 4.2.1).

A Natural Heritage System has been mapped for the Growth Plan Area outside of settlement areas by the Province (the 'Regional Natural Heritage System for the Growth Plan for the Greater Golden Horseshoe'). Policies of the Growth Plan direct municipalities to incorporate the NHS into their Official Plans (Section 4.2.2) to protect the ecological and hydrologic functions of the features or areas. The Growth Plan provides policies for development and protection of 'key natural heritage features' (Section 4.2.3) within the Natural Heritage System and outside the Natural Heritage System (outside of Settlement Areas).

The Growth Plan states that if a settlement area is expanded to include the Natural Heritage System for the Growth Plan, the portion within the revised settlement area boundary will be designated in official plans and continue to be protected in a manner that ensures that connectivity between, and the diversity and functions of, the natural heritage features will be maintained, restored, or enhanced (Policy 4.2.2.7). Within settlement areas, municipalities are to identify an NHS (or similar system) and continue to protect natural heritage features and areas in a manner consistent with the PPS (Policy 4.2.3.6).

2.3 Greenbelt Plan

The Greenbelt was established in 2005 as part of the broader strategy of the Growth Plan (2006); the current plan was updated as part of a comprehensive provincial plan review process and came into effect in 2017.

The Greenbelt Plan identifies where development should not occur to ensure permanent protection of the agricultural land base, and the ecological and hydrological features and functions that occur in the rural landscape of the Greenbelt Plan Area. The Oak Ridges Moraine Conservation Plan (ORMCP) and the Niagara Escarpment Plan (NEP) similarly identify areas where development should not occur with a focus on areas defined by geologic and physiography that support agriculture, hydrologic and ecological form, function and value to Ontario in addition to their aesthetic and recreational values.

The Natural System within the Protected Countryside of the Greenbelt Plan Area is comprised of a Water Resource System and a Natural Heritage System. These two systems often overlap as a result of the interrelationship between hydrologic and ecological features and functions. The Natural Heritage System is made up of core areas and linkages and builds upon the natural systems of the NEP and the ORMCP. The Water Resource System is made up of groundwater and surface water features and areas which support ecological and human water needs.

The Greenbelt Plan provides policies specific to Natural Systems within the Protected Countryside (Natural Heritage System, Section 3.2.2; Water Resource System, Section 3.2.3), and polices which apply across the entire Greenbelt Plan Area for Key Hydrologic Features (Section 3.2.4) and Key Natural Heritage Features and Key Hydrologic Features (Section 3.2.5). Where settlement expansion is proposed to occur outside of the Protected Countryside, the Policies of Section 3.2.5 will apply.

The Natural Heritage System of the Greenbelt Plan Area connects to systems beyond the Greenbelt (e.g., the Growth Plan NHS); policies for these External Connections are also provided to ensure a connected landscape system (Section 3.2.6).

2.4 Conservation Authorities Act

The Conservation Authorities Act, R.S.O. 1990, c. C.27 was enacted by the Province to guide the conservation, restoration, development and management of natural resources in watersheds in Ontario. The legislation was recently modernized through changes introduced in Schedule 4 of the Building Better Communities and Conserving Watersheds Act, 2017.

Section 28 of the *Conservation Authorities Act* enables Conservation Authorities to develop and administer regulations relating to development and activities in, or adjacent to, river or stream valleys, Great Lakes and inland lakes shorelines, watercourses, hazardous lands and wetlands. In 2006, the Minister of Natural Resources and Forestry approved individual "Development, Interference and Alteration" Regulations for all Conservation Authorities consistent with Ontario Regulation 97/04 (i.e., Generic Regulation). It was at that time, that the Minister approved Toronto Region Conservation Authority's regulation, Ontario Regulation 166/06, and Credit Valley Conservation Authority's regulation, Ontario Regulation 160/06. Ontario Regulation 166/06 and Ontario Regulation 160/06 specify that permission is required from Toronto Region Conservation Authority and Credit Valley Conservation (respectively) to:

- Develop in river or stream valleys, wetlands and adjacent lands (i.e., other areas where development could interfere with the hydrologic function of a wetland), shorelines or hazardous lands and associated allowances;
- Alter a river, creek, stream or watercourse; or
- Interfere with a wetland.

The administration of the regulation is guided by Conservation Authority Board-approved policies of the respective Conservation Authorities. These policies complement the Natural Hazard policies of the PPS (Section 3.1 of the PPS).

If it can be demonstrated to the satisfaction of TRCA and CVC that the proposed work meets Board-approved policies and will not affect the control of flooding, erosion, dynamic beaches or pollution or the conservation of land, TRCA and CVC may grant permission for the proposed work.

The Policy documents also outline the Authority's plan input and review role.

2.5 Fisheries Act

The Fisheries Act protects fish and fish habitats, including prohibiting the deposit of deleterious substances into waters frequented by fish. This includes sedimentation of watercourses during construction activities. Projects or activities in or near water that support fish and fish habitat must be assessed to determine if the project or activity will result in Harmful Alteration, Disruption or Destruction (HADD) of fish habitat; where a HADD occurs, an authorization under the Act is required.

As defined in the Fisheries Act, **fish** includes parts of fish; shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and the eggs, sperm, spawn, larvae, spat; and juvenile stages of fish, shellfish, crustaceans and marine animals. **Fish habitat** means water frequented by fish and any other areas on which fish depend directly or indirectly to carry out their life processes, including spawning grounds and nursery, rearing, food supply and migration areas.

2.6 Species at Risk Act

Enacted in 2002, the Species at Risk Act (SARA) provides legal protection for federally-listed species at risk (i.e., listed by the Committee on the Status of Endangered Wildlife in Canada; COSEWIC) on federally-owned and federally-funded lands. The Act helps to protect sensitive species from becoming extinct by securing actions for their recovery. Projects for which SARA applies are to assess the potential for the project or activities of the project to contravene the prohibitions of the Act. Where a contravention may occur, consultation with the appropriate federal agency is to be undertaken and an authorization or permit may be required.

2.7 Endangered Species Act

Sections 9 and 10 of the Endangered Species Act prohibit harming, harassing or killing individuals of provincially-listed endangered or threatened species at risk and their habitat. Special concern species do not receive the legal protections afforded to endangered and threatened species, however they are recognized under the Province's Significant Wildlife Habitat categories and protected through the Provincial Policy Statement. Projects or activities are to consider the potential presence of species at risk and assess their potential to impact individuals or habitats of the species in accordance with the requirements of the Act. Where a project or activity has the potential to impact a species, consultation with the Ministry of Environment, Conservation and Parks (MECP) is to be undertaken to determine mechanisms to avoid, mitigate impacts; where these cannot be achieved, a permit may be required.

2.8 Region of Peel Official Plan

The Region of Peel Official Plan ("ROP") is the key planning document guiding the long-term growth and development of the Region. It speaks to key systems (e.g., Greenlands, transportation) and lays out the framework for land use planning and implementation.

Several sections of the OP provide direction with respect to the natural environment and natural resources within the Region. Chapter 2 addresses the Natural Environment, providing goals and policies associated with large environmental systems (e.g., air quality, groundwater, watersheds, Niagara Escarpment), the Greenlands System in Peel, Hazards (human and natural), restoration, and management and stewardship of the Greenlands. This chapter sets the direction for protection of natural environment features and functions in the Region.

The Regional Official Plan implements the Provincial Policy Statement's (PPS) natural heritage system policies by providing policy direction for the protection of natural heritage and water resource features through the Greenlands System's Core Areas, Natural Areas and Corridors (NAC) and Potential Natural Areas and Corridors (PNAC) policy framework. Core Areas of the Greenlands System are identified and shown on Schedule A to the Region of Peel Official Plan. In accordance with the Plan, development and site alteration are not permitted within Core Areas with limited exceptions (Policy 2.3.2.6).

The Regional Official Plan directs the area municipalities to identify and protect Core Areas in conformity with the Plan and provincial policy and to further interpret, identify and protect NAC and PNAC features and areas in the local official plans in accordance with provincial policy (Policies 2.3.2.4 and 2.3.2.11).

Chapter 3 of the ROP sets policies related to resources (e.g., aggregate, agricultural). While much of this chapter does not have specific policies relating to the natural environment, the section on Water Resources (Section 3.4) has direct and important considerations for the water resource system of Peel and by extension, influence on some natural heritage features and functions.

Also of relevance to the current work, Chapter 7 (Implementation), Section 7.10.2.12 lays out the process through which settlement boundary expansions will be prepared. The S.A.B.E. project, to which Phase 1 of the natural environment work contributes is being guided by these policies and contributions by the Wood team have been prepared to support their approach.

2.9 Town of Caledon Official Plan

The area municipal official plans in Peel further interpret, identify and protect natural heritage features and areas in accordance with provincial and regional policy direction.

Section 1.3.1 of the Caledon Official Plan states the following: *[The] Official Plan is a statement of principles, goals, objectives and policies intended to guide future land use, physical development and change, and the effects on the social, economic, and natural environment within the Town of Caledon.* General policies with respect to natural environment are presented in Section 3.2 (Ecosystem Planning and Management); Section 5.7 speaks specifically to Environmental Policy Areas identified in the Town. These sections set out objectives, a framework for system planning, identify key components of the system in Caledon and identify allowable uses. Water resources are addressed through Sections 3.1 (Sustainability) and Section 3.2 (Ecosystem Planning and Management).

The Town of Caledon Official Plan's Ecosystem Framework incorporates and refines the components of the Regional Greenlands System, as defined in the Region of Peel Official Plan, in a manner which conforms with the policy direction in the Regional Plan and in accordance with provincial policy. The Ecosystem Framework establishes policy requirements for Natural Core Areas, Natural Corridors, Supportive Natural

Systems, and Natural Linkages. Natural Core Areas and Natural Corridors are designated Environmental Policy Area (EPA) on Schedule A to the Town of Caledon Official Plan. Development and site alteration are not permitted within the EPA designation with limited exceptions.

Ecosystem components which are not currently designated EPA, and which are identified through more detailed environmental studies as warranting protection, may be excluded from development in order to satisfy the Town's environmental policies and performance measures. The Town's Ecosystem Framework components identified through studies as warranting protection are generally placed in an EPA designation, subject to the policies of the Caledon Official Plan. The Town of Caledon Ecosystem Framework components are categorized in Table 3.1 of the Caledon Official Plan.

As the project is a Regional planning project, conformity with Town of Caledon policies is not directly required; however consideration has been, and will continue to be, given to the Town's policies to facilitate a smooth transition to the local municipal planning processes (e.g., a detailed subwatershed study, secondary plans, etc.).

3.0 Approach

3.1 Phase 1 Environmental Screening of Study Area

The Study Area initially considered in the Phase 1 Environmental Screening stage included all lands in Peel outside settlement areas and outside the Greenbelt (ref. Figure 1). Consideration may be given through future planning stages for minor rural settlement boundary expansions; these will be addressed if / as appropriate by the Region. It is recognized that the natural environment and water resources features and functions extend beyond the Study Area. Connections with natural heritage systems beyond the Study Area (e.g., into the Greenbelt) and in adjacent municipalities will need to be considered, as appropriate, to inform the screening process. Outcomes of the screening assessment are shown for the lands occurring within the Study Area.

3.2 Background Information Collection

Background information has been collected from and for areas within Peel Region, Town of Caledon, TRCA, and CVC for use in this study. The requested information is in the form of mapping, environmental monitoring data, modelling and analyses, and reporting. A data tracking sheet, summarizing the information requested and received is provided in Appendix A for reference.

3.3 Preliminary Environmental Constraint Categories

Natural environment features, functions and areas representing known or potential constraints to development have been identified to indicate areas where development may be constrained or precluded due to requirements for natural heritage and water resource system protection, restoration or enhancement. Constraint categories have been assigned based on policy requirements and use of 'best available' secondary source information (e.g., provincial plan and policy requirements, Regional and local official plan policy direction, mapped provincial, regional and conservation authority data). Mapping for some natural heritage features and areas is not available at a regional scale or requires detailed field surveys to be conducted to collect information (e.g., Species at Risk or Significant Wildlife Habitat) as such, these have not been included in the screening analysis. For the purposes of a screening assessment for a SABE at a regional scale, the level of accuracy and types of information available is considered appropriate.

It should be emphasized that the outcomes of the preliminary screening do not indicate that areas are 'unconstrained' or 'available for development'; rather, the intent of the preliminary screening is to provide direction for an additional level of assessment to be completed through the upcoming Scoped SWS. Preliminary constraint categories are as follows:

- **High Constraint**: Includes mapped natural environment features and areas with existing designations or *significance* that afford them protection under current provincial or municipal plans / policies. High Constraint areas represent features and areas that prohibit development. Presence and limits of features has been prepared using available mapping; confirmation and / or refinement of limits will be required through future planning stages, as additional, more detailed information becomes available.
- **Moderate Constraint**: Includes mapped natural environment features and areas that may, through future assessment represent constraints to development or are indicators of potentially significant functions. This category also includes portions of non-provincial Natural Heritage Systems outside of features captured under 'High Constraint' – this generally includes corridors and linkages, which may pose a constraint to development, but their exact location, width, etc. requires refinement through further levels of study. Moderate constraint areas may become high constraint or be assessed as posing little or no constraint (e.g., not present) to development, as additional information becomes known and based on the feature type and associated policies. These determinations are to be informed by future studies with appropriate levels of assessment / information.
- **Low Constraint**: Includes mapped natural environment areas that, based on current knowledge, do not represent constraints to development (i.e. do not preclude development), but may influence some aspects of land use planning decisions (e.g., densities, type of development) or may present additional study requirements, enhanced management requirements, etc. that could increase development complexity, management needs, or otherwise affect the planning and / or development processes.

Assignment of features and areas into the various constraint categories has been informed by Provincial and Regional policies, applicable legislation and has had regard for Town of Caledon policies.

As noted within each constraint description, constraint mapping and input to the screening assessment has been prepared using best available data. It is understood that the mapping available at this preliminary stage will, to varying degrees, require refinement through future planning stages as additional and more detailed information becomes available. It is not the intention of this screening study to determine the final or absolute boundaries of the recommended system, features or areas (e.g., regulatory floodplains); rather it is intended to support a SABE at a regional level which accounts for natural environment system requirements to ensure that sufficient development area is advanced through subsequent stages in the identification of the SABE.

3.4 Integrated Focused Study Area Selection Process

The Focused Study Area (FSA) is a subset of the initial Study Area, and through this study has been defined through the integration of separate but multi-disciplinary studies. This Phase 1 report presents the findings and recommendations for determining the FSA based upon the environmental features and constraints within the system; this has involved a multi-disciplinary review and compilation of the area's known terrestrial and aquatic features, hydrogeologic systems, erosion and flood hazards. Under a separate but parallel process led by Hemson, additional technical studies are considering a range of other requirements and considerations (e.g. transportation, water and wastewater servicing, climate change, cultural heritage, etc.) The information collected from these parallel studies has been compiled, and vetted by the respective study teams to confirm that the compiled information appropriately incorporates the information and findings specific to the respective studies, as well as to verify that the remaining potentially developable land would be sufficient to accommodate the growth needs for Peel Region following the completion of subsequent and more detailed studies.

The SABE team (Hemson-led) has developed a set of criteria rooted in key policy requirements to inform the FSA identification and delineation process. The Wood Team contributed to the preparation of natural environment criteria and provided constraint mapping as a primary input to the FSA delineation process.

4.0 Data: Review & Assessment

A broad range of geospatial data were obtained through the data request process (Section 3.2) with the intention of informing both the screening and future scoped Subwatershed Study processes. For the purposes of the screening assessment, focus has been on those datasets which assisted in categorizing areas based on constraint (High, Moderate, Low) and provided geographic delineation of features and areas (e.g., wetlands, valleylands). Datasets that did not assist in this objective have not been carried forward for additional consideration in the screening assessment.

Datasets which met this basic requirement have generally been assessed with respect to cover, age and accuracy (including a high-level consideration of underlying methodology). Consideration has been given to the scale and the purpose of the parent assessment to inform suitability for use for each dataset. A summary of datasets used in the constraints assessment is provided in Table 4.1 and a summary of all datasets received through the data collection processes is provided in Appendix A.

For all data used in this assessment mapped features and areas are intended as a preliminary input to inform approximate areas that may constrain development. Therefore, the data included in the assessment and maps should not be used to interpret the exact site-level boundary and extent of features and the associated constraints that they represent. The limits of features and areas to be confirmed will be undertaken during subsequent studies and will be used to update the site-specific final development limits and inform site-specific or area-specific planning, as appropriate.

For example, accuracy of the floodplain varies across the study area based on the method of determination (i.e. 'estimated' vs. 'engineered') and will require confirmation or refinement through subsequent planning stages in consultation with the Conservation Authority. These refinements may include improved modelling accuracy, modifications through design, removing barriers, etc. It should be noted that regulation of these areas is unchanged based on the degree of accuracy in the delineation, although the extent of the regulation is subject to refinement as part of future studies.

Through the review of available datasets, the following protected features / areas do not have available data sets for use at this Phase 1 screening assessment:

- **Significant Wildlife Habitat** | this feature type is generally identified based on site-specific information and a comprehensive mapping layer is not available. This feature type is not typically mapped at the municipal scale and does not hinder the ability to undertake a constraints assessment to inform a revised study area. Other feature types can be used as a proxy and an assessment of habitat significance is addressed following detailed field verification through local planning approval stages (e.g., detailed subwatershed study and/or site-specific studies).
- **Habitat for Endangered and Threatened Species (Species at Risk)** | like Significant Wildlife Habitat, habitat for Endangered and Threatened Species is not comprehensively mapped. Additionally, sensitivity of some species (e.g., to poaching) makes wide-scale mapping inappropriate. Presence of Species at Risk will be documented through more detailed levels of study (e.g., detailed subwatershed study and/or site-specific studies) and compliance with the Endangered Species Act (ESA 2007) will be addressed through these processes002E

Table 4.1. Assessment of Geospatial Datasets for Use in Natural Environment Preliminary Constraints Assessment

Feature/ Function/ Area	Dataset(s)	Review / Assessment
Wetlands	*Dataset*: Item9_Wetlands; Source: LIO provided by Region of Peel	• Contains PSW, unevaluated and Evaluated-Other (i.e. non-PSW). Good dataset for use at screening stage. • Complete coverage of study area. • Dataset can be separated based on wetland significance classification type for categorization.
Watercourses	*Dataset*: Item9_Drainage *Source*: Region of Peel	• Complete coverage of study area. • Watercourses can be used as a proxy for fish habitat. • Watercourse alignments 'on the ground' and drainage type (i.e., permanent vs. intermittent) will require confirmation or refinement at future planning stages.
Natural Hazards / Floodplain	*Dataset*: Item16_Floodlines *Source*: Region of Peel	• Complete coverage of study area. • Contains regulated, engineered and estimated floodplains across the Region based on availability of data. This represents an initial suite of information which will need to be further vetted through direct consultation with the respective Conservation Authorities. • Refinement of floodplain limits will be required through subsequent stages of study through site-specific or area-specific modelling (i.e. local Subwatershed Study).
	Dataset: Floodplain *Source*: TRCA	• Coverage includes areas in TRCA[1] jurisdiction within Caledon and south of the greenbelt. • Refinement of floodplain limits will be required through subsequent stages of study through site-specific or area-specific modelling (i.e. local Subwatershed Study).

[1] Toronto and Region Conservation Authority

Feature/ Function/ Area	Dataset(s)	Review / Assessment
	Dataset: MeanderBelt_July2019 *Source*: TRCA	• Coverage includes areas in TRCA jurisdiction within Caledon and south of the greenbelt. • This layer primarily represents a buffer around the watercourse layer. Refinement of the meander belt width is required following TRCA (2005) protocols to accurately represent the potential erosion hazard associated with unconfined reaches. As a screening tool, the dataset provides an acceptable first approximation.
Provincial Natural Heritage System	*Dataset:* NHS_AREA *Source:* LIO	• Includes Protected Countryside NHS[2], ORM[3] NHS, Growth Plan NHS, and NEP[4] Escarpment Natural Area, Escarpment Protection Area. • Complete coverage of study area. • Mapping identifies areas of provincial interest for protection of natural heritage features, functions and areas.
Woodlands	*Dataset:* Item6_Woodlands *Source:* Region of Peel	• Region of Peel woodland dataset which differentiates woodlands as Core, NAC[5] and PNAC[6] in descending order of Regional significance. • Complete coverage of study area. • Dataset is appropriate for use.
Area of Natural and Scientific Interest (ANSI)	*Dataset:* Item6_ANSILifeScience *Source:* LIO provided by Region of Peel	• Complete coverage of study area. • LIO dataset represents the primary data source for *significant* ANSIs; Appropriate for use.
	Dataset: Item6_ANSIEarthScience *Source:* LIO provided by the Region of Peel	• Complete coverage of study area. • LIO dataset represents the primary data source for *significant* ANSIs; Appropriate for use.

[2] Natural Heritage System
[3] Oak Ridges Moraine
[4] Niagara Escarpment Commission
[5] Natural Areas and Corridors
[6] Potential Natural Areas and Corridors

Feature/ Function/ Area	Dataset(s)	Review / Assessment
Environmentally Sensitive Areas (ESA)	*Dataset:* Item6_ESA *Source:* Region of Peel	• Complete coverage of study area. • Designation generated by the Region; appropriate for use for current project.
Valleylands	*Dataset:* Item6_Valley *Source:* Region of Peel	• Region of Peel valleyland dataset which differentiates valleylands as Core, NAC[5] and PNAC[6] in descending order of Regional significance. • Complete coverage of study area. • Acceptable for use at screening stage; confirmation or refinement through later planning stages will be required.
	Dataset: CrestofSlope_July2019 *Source*: TRCA	• Coverage includes areas in TRCA jurisdiction within Caledon and south of the greenbelt. • Mapping represents the physical top of slope. The long-term-stable-top-of-slope is required when evaluating potential erosion hazards around slope stability, and applying appropriate setbacks to development. • Physical top of slope is an acceptable datatset for use at the screening stage; confirmation or refinement through later planning studies will be required (i.e. local Subwatershed Study and/or local geotechnical studies).
Seepage Areas & Springs	*Dataset:* Seeps_Areas_and_Springs *Source:* TRCA	• Coverage includes areas in TRCA jurisdiction within Caledon and south of the greenbelt. • Generated by TRCA, locations are identified based on potential groundwater discharge from the TRCA Expanded Groundwater Flow Model. • These should be used to inform screening and will require confirmation or refinement through future planning stages.
Other Natural Heritage Systems	*Dataset:* Item7_NaturalHeritageSystem *Source:* Region of Peel	• This dataset contains the NHS prepared by TRCA and CVC[7]. • Complete coverage of study area; Suitable for use in screening assessment.

[7] Credit Valley Conservation

Feature/ Function/ Area	Dataset(s)	Review / Assessment
	Dataset: Item1_CaledonLandUse *Source:* Region of Peel	• Contains Environmental Policy Areas for Caledon. • Complete coverage of study area; suitable for use in screening assessment.
	Dataset: Item6_GreenlandsSystemCore *Source:* Region of Peel	• Regional Greenlands System: this is the natural heritage system for the Region of Peel. • Complete coverage of study area; suitable for use in screening assessment.
Highly Vulnerable Aquifers	*Dataset:* Item8_HighlyVulnerableAquifer *Source:* Region of Peel	• Contains areas represented by groundwater aquifers that are highly susceptible to contamination from human and natural sources. • Complete coverage of study area • Suitable for use in screening assessment; however, hydrogeologic sensitivity as defined by these areas may be refined through future planning stages
Wellhead Protection Areas (WHPA)	*Dataset:* Item8_WHIPA *Source:* Region of Peel	• Contains zones around wells where land uses are planned to protect long-term water quality. • Complete coverage of study area • Suitable for use in screening assessment; however, hydrogeologic sensitivity as defined by these areas may be refined through future planning stages
Significant Groundwater Recharge Areas	*Dataset:* Item8_SignificantGroundwaterRechargeAreas *Source:* Region of Peel	• Contains areas important for providing groundwater recharge to an aquifer • Complete coverage of study area • Suitable for use in screening assessment; however, hydrogeologic sensitivity as defined by these areas may be refined through future planning stages
Flood Vulnerable Areas	*Dataset:* FloodVulnerableArea *Source:* TRCA	• Coverage includes areas in TRCA jurisdiction within Caledon and south of the greenbelt. • Work to-date has stress tested the hydrology of the flow contributions to the receiving systems downstream of Caledon in the respective jurisdictions. Further modelling is required (hydraulic) to determine locations at risk (work is under way by Wood Team)

Feature/ Function/ Area	Dataset(s)	Review / Assessment
Ecologically Significant Groundwater Recharge Areas	*Dataset*: ESGRA *Source*: TRCA	• Coverage includes areas in TRCA jurisdiction within Caledon and south of the greenbelt. • The ESGRA dataset is a modelled output identifying areas of ecologically significant recharge to groundwater systems. This includes sources that support groundwater fed systems (e.g., coldwater streams). Although additional vetting of the dataset is required, it represents the best available data at this time and has been included in the screening process.

5.0 Preliminary Constraints Assessment

5.1 Feature Categorization

Features and areas have been assigned into constraint categories as defined in Section 3.3. Categorization has been based on the level of constraint posed by the feature type, function or area in accordance with policy-based protection or a physical constraint to development. As the project is Regional, Regional level policies are used as the driver for categorization (i.e. Provincial and Regional policies and legislation). Only those features, functions and areas for which geospatial data were available and suitable for use have been categorized to provide a clear summary on the features included in the preliminary constraints assessment. Features, function and areas included within each constraint category and the rationale for their inclusion is provided in Table 5.1.

Table 5.1. Preliminary Screening Categories

Feature / Function / Area	Rationale
High Constraint	
Provincially Significant Wetlands (PSW)	Development shall not be permitted in PSWs per s. 2.1.4 of the PPS (2014), and s. 2.3.2.2, 2.3.2.6, and 2.3.2.17 of the Region of Peel Official Plan. Wetlands are regulated under the Conservation Authorities Act and are subject to permitting and approvals of this legislation. *Exceptions: essential infrastructure* may be exempted, pre-approved or authorized under an environmental assessment process (Region of Peel Official Plan s. 2.3.2.6(c)).
Permanent and Intermittent Watercourses	Generally includes permanent and intermittent watercourses, which are used as a proxy for fish habitat. Development shall not be permitted in *fish habitat* (s. 2.1.6 of the 2014 PPS). Fish habitat is identified as a component of the Peel Greenlands Natural Areas and Corridors (s. 2.3.2.9). Permanent and intermittent watercourses are identified as key hydrologic features under the Growth Plan. Watercourses may be regulated under the Conservation Authorities Act and are subject to permitting and approvals of this legislation. Confirmation of mapping and applicable policies and legislation will be confirmed or refined through subsequent planning stages. Additional watercourses may be identified through subsequent levels of study, or existing, mapped watercourses may be re-classified as Headwater Drainage Features. Constraints and management are to be considered at those subsequent levels of study for such features. *Exceptions:* Development may be permitted where in accordance with *provincial and federal requirements* (PPS 2014 s. 2.1.6).
Natural Hazards	Development is restricted in areas of natural hazards (including floodplains) through s. 3.1 of the PPS (2014), and s. 2.4.1, 2.4.2, 2.4.4, 2.4.5 and 2.4.6 of the Region of Peel Official Plan. Natural Hazard lands (e.g., floodplain) are regulated under the Conservation Authorities Act and are subject to permitting and approvals of this legislation.

Feature / Function / Area	Rationale
	In this screening level assessment, natural hazards and floodplains includes: Regulated Floodplain, Engineered Floodplain and Estimated Floodplain. Variability exists in the accuracy of data and associated technical analyses available at this stage; refinements of floodplain areas will require refinement through additional modelling in subsequent levels of study (i.e. local Subwatershed Study).
Provincial Natural Heritage System	Development within the natural heritage system of the Protected Countryside is restricted under s. 3.2, 3.3 and 4.0 of the Greenbelt Plan. *Exceptions:* some exceptions for *infrastructure* are described in s. 4.2; however, *settlement areas* outside the Greenbelt are not permitted to expand into the Greenbelt (s. 3.4.2.1).
Significant Woodland (Core Woodlands in Peel)	Development shall not be permitted in *Significant Woodlands* per s. 2.1.5 of the PPS (2014). Core Woodlands as defined in Table 1 of s. 2.3 of the Region of Peel Official Plan are protected from development according to s. 2.3.2.2 and 2.3.2.6 of that plan. *Exceptions: essential infrastructure* may be exempted, pre-approved or authorized under an environmental assessment process (Region of Peel Official Plan s. 2.3.2.6 (c)).
Areas of Natural and Scientific Interest (ANSI)	Development shall not be permitted in Significant ANSI's per s. 2.1.5 of the PPS (2014). s. 2.3.2.2, 2.3.2.6 of the Region of Peel Official Plan provide protection for Provincially Significant Life Science ANSIs, and 2.3.2.9 (e) for Regionally Significant Life Science ANSIs. Provincially Significant Earth Science ANSI's are identified through Section 2.3.2.9(f) of the Region of Peel Official Plan. *Exceptions: essential infrastructure* may be exempted, pre-approved or authorized under an environmental assessment process (Region of Peel Official Plan s. 2.3.2.6(c)).
Environmentally Sensitive Areas (ESA)	ESAs are protected from development through s. 2.3.2.2(e) and 2.3.2.6 of the Region of Peel Official Plan. *Exceptions: essential infrastructure* may be exempted, pre-approved or authorized under an environmental assessment process (Region of Peel Official Plan s. 2.3.2.6(c)).
Significant Valleylands	Development shall not be permitted in s*ignificant valleylands* per s. 2.1.5 of the PPS (2014). Core valley and stream corridors are identified under s. 2.3.2.2 (g) of the Region of Peel Official Plan.
Other Valleylands (not captured by hazards or Significant Valleylands mapping; if available)	Valleylands are generally associated with watercourses and often provide existing and potential linkages across the landscape and

Feature / Function / Area	Rationale
	between natural heritage features or areas. They also represent physical constraints to development. Other valleylands are identified as *Natural Areas and Corridors* per s. 2.3.2.9 (i) of the Region of Peel Official Plan.
Moderate Constraint	
'Evaluated-Other' wetlands and 'Unevaluated' wetlands	Wetlands are identified as Key Natural Heritage Features under the Growth Plan (Water Resource System). Evaluated non-provincially significant wetlands are identified as part of Peel's *Natural Areas and Corridors* and Unevaluated wetlands are identified as *Potential Natural Areas and Corridors* (s. 2.3.2.9 and s. 2.3.2.10). These features may be protected. These wetlands are also regulated under the Conservation Authorities Act and are subject to permitting and approvals of this legislation.
Other Woodlands	Non 'Core Woodlands' may be identified as *Natural Areas and Corridors* or *Potential Natural Areas and Corridors* (s. 2.3.2.9 and s. 2.3.2.10) in accordance with the policies of that plan and / or criteria set out in the Official Plan (Table 1), as appropriate.
Other drainage features	This will generally include ephemeral watercourses and/or headwater drainage features. Pending a review, some of these features may be limiting features to development. Evaluation in accordance with ***Evaluation, Classification and Management of Headwater Drainage Features Guidelines*** (HDF Guidelines, Jan 2014) at future planning stages will inform the level of constraint applied. When features are evaluated through the HDF Guidelines and management recommendations (constraint) of "protection" and "conservation" are determined, they are subject to TRCA's regulation. Features identified for "mitigation" may be subject to TRCA's regulation. Headwater Drainage Features do not require erosion setbacks such as a meander belt or long-term stable-top-of-slope, but may be subject to a regulatory buffer. Qualifying watercourses and drainage features can be regulated under the Conservation Authorities Act and thereby would be subject to permitting and approvals of this legislation.
Seepage Areas & Springs	These areas were based on potential groundwater discharge from the TRCA Expanded Groundwater Flow Model. These areas are not field verified and require field verification in future studies to assess / confirm presence and implications to development. Seepage areas are an indicator for Significant Wildlife Habitat (SWH). Where criteria are met and SWH is confirmed, it receives protection in accordance with Section 2.1.5. Consistent with the PPS and other provincial plans, the following ROP policies support protection for SWH: 2.2.9.3.9 (g), 2.2.10.4.21 (g), 2.3.2.9 (c).

Feature / Function / Area	Rationale
Municipal and Conservation Authority Natural Heritage Systems	Identified based on a consolidation of environmental policy areas identified in the Region's Official Plan, the Town's Official Plan, and Conservation Authority mapping. Areas include the Natural component of the Conservation Authority Natural Heritage System mapping, Greenland System Core areas identified within the Region's OP mapping, and Environmental Policy Areas within the Town of Caledon Land Use Plan mapping (Schedule A in the Town's OP). The Region's Greenlands System takes precedence amongst those identified above in the context of the current project. Policies of the ROP (Section 2.3) provide direction with respect to identification and protection of the system and its functions. Some component features are captured as High Constraint (e.g., Significant Woodlands); the system as a whole, which includes NAC and PNAC are captured as moderate constraint identifying a need for further review and consideration. The Town of Caledon's EPAs (Town OP Section 5.7) and Conservation Authority NHS' are captured here to recognize their influence and function through future study stages and to have regard for them in the Regional planning process.
Low Constraint	
Ecologically Significant Groundwater Recharge Areas (ESGRA)	These areas are identified as important for supporting groundwater discharge that assists in sustaining sensitive features that rely on groundwater contributions (e.g. coldwater streams, wetlands). Sensitive Groundwater Recharge Areas are identified through Sections 2.3.2.10(e) and 3.4.2.5 of the Region of Peel Official Plan.
Significant Groundwater Recharge Areas (SGRA)	These areas are identified through the Source Water Protection program as important for providing groundwater recharge to the aquifer system within the study area. Sensitive Groundwater Recharge Areas are identified through Sections 2.3.2.10(e) and 3.4.2.5 of the Region of Peel Official Plan.
Highly Vulnerable Aquifers	Highly vulnerable aquifers refer to groundwater aquifers which are highly susceptible to contamination from both human and natural sources. Restrictions are outlined in the Town of Caledon Official Plan Section 7.10 and the Region of Peel Official Plan Sections 2.2.9.3.30 and 2.2.9.3.31.
Wellhead Protection Areas (WHPA)	Wellhead protection areas are zones around wells where land uses must be carefully planned to protect the long-term quality of the water supply. In these areas, it may be necessary to restrict or even prohibit certain land uses due to their potential to impact groundwater as presented in Sections 2.2.9.3.26 through 2.2.9.3.29 in the Region of Peel Official Plan. These restrictions will also be detailed in the Town of Caledon Official Plan Section 7.10.5.4.

Feature / Function / Area	Rationale
Flood Vulnerable Areas	Flood vulnerable areas are located downstream of the FSA and constitute sub-areas within the Regulatory flood plain that contain multiple existing structures and/or roads for which a single, comprehensive flood remediation approach may be viable. These FVAs include Special Policy Areas (SPAs), as well as historical flood damage centres

5.2 Assessment Outcomes

The preliminary constraints assessment inherently does not capture all constraints and potential limitations on or opportunities for, urban development. Rather, it is intended to provide general direction for the identification of a Focused Study Area (FSA) within which more detailed technical studies will need to be undertaken (e.g., scoped Subwatershed Study) to inform the delineation of a proposed SABE.

The preliminary constraints assessment is shown on Figure 2 and summarized in Table 5.2. The screening Study Area encompasses ~69,600 ha of land area located within the Town of Caledon. The Study Area includes several areas that are not suitable for consideration in identification of the FSA:

- **Greenbelt Plan Area**. Expansion of settlement areas outside the Greenbelt are not permitted to expand into the Greenbelt. The Greenbelt Plan area is excluded for the purposes of considering options for expansion of the Rural Service Centres in Caledon that are outside the Greenbelt. Individual expansion requests regarding settlements inside the Greenbelt will be considered separately from the FSA in the SABE study and in the Environmental Screening and Scoped SWS should they be identified for consideration through the SABE Study.
- **Existing Developed or Planned Development Areas**. Areas within existing settlements and those lands approved for development within them are removed as they represent 'existing' conditions[8].

The Greenbelt represents ~55,800 ha of the Study Area, reducing the functional area for consideration to ~13,800 ha. Existing developed or planned development areas represent ~3,400 ha within the lands outside of the Greenbelt, further reducing the functional area for consideration to ~10,300 ha.

Of this reduced Study Area (~10,300 ha), ~1,452 ha (14 %) is occupied by features and areas within the 'High Constraint' category, an additional ~308 ha (3 %) is within the 'Moderate Constraint' category. As noted earlier, features within the Moderate Constraint category may become High Constraint through further study and assessment and represent potential constraints to development.

Notably, Low Constraint areas do not preclude development, based on current data and associated understanding. They identify those areas which may require additional management or inform the types or forms of development that are permissible. Further assessment is required at future planning stages to provide further direction with respect to the potential implications of Low Constraint areas on land use planning. Low Constraint areas encompass ~3,343 ha (32 %) of lands within the Study Area

8. In addition to the existing approved settlement areas, it is also acknowledged that a separate municipal comprehensive review has been undertaken by the Town of Caledon for the Mayfield West Phase 2 Stage 2 settlement expansion area. The study documentation prepared by the Town includes a Comprehensive Environmental Impact Study and Management Plan that has been received by the Region. This study is referenced as a relevant background document for the Mayfield West Phase 2 Stage 2 area.

Table 5.2. Summary of Preliminary Constraints Assessment Outcomes and General Implications for Land Use Planning

Constraint Category	Land Area[9] (ha [% S.S.A[10]])	Cumulative Land Area (ha [% S.S.A.[9]])	Implications for Land Use Planning (for summary of features, see Table 2)
High	~1,452 ha (14%)	~1452 ha (14 %)	Features and areas in this category represent 'take-outs' in terms of development potential. While some minor modifications may occur (e.g., through field-confirmation of feature boundaries).
Moderate	~308 ha (3%)	~1,760 ha (17%)	Features and areas in this category are not currently known to represent a high constraint to development. Through additional study, some of these areas may be identified as High Constraint and would represent a 'take-out' to future development area. Updates to some of these areas may be identified through the scoped Subwatershed Study.
Low	~3,343 ha (32%)	~5,103 ha (49%)	Features and areas in this category are not currently known to represent a high or moderate constraint to development, and thus are not expected to result in development 'take-outs'. It may, however, be determined that special design considerations are required for these areas through additional study, which in turn, may affect land-use type and density targets.

[9] Constraint categories overlap in many areas. As such, the area calculations (ha) and percent (%) S.S.A will not equal the total area of the Study Area Where categories overlap, it is the most constraining category that takes precedence in the assessment.
[10] S.S.A. area is based on the reduced Study Area which removes lands within the Greenbelt and existing development and planned developments.

6.0 Applying Preliminary Constraints Outcomes

6.1 Selection of the Focused Study Area

The SABE team (Hemson led) is leading the identification and selection of the Focused Study Area (FSA) and the subsequent identification of the recommended SABE. As noted earlier, numerous technical disciplines are engaged through Hemson to provide input to the project process (e.g., Agriculture, Transportation). As a separate, but inter-related project, the Environmental Team (Wood led) is working in parallel and close consultation to ensure that technical inputs to the SABE study are provided accordingly. The interactions between the Environmental and SABE study teams are outlined in the sections which follow. Complete details on the FSA selection process can be reviewed in the SABE Phase A: Focus Study Area Report (Hemson 2020).

6.1.1 Wood Team Input to Hemson

The results from the environmental constraint assessment have been used to identify the geographic extent of high, moderate, and low constraint areas within the SSA. As part of the data geoprocessing, unique constraint layers have been created to simplify the representation of each constraint class based on the areas and features identified in Table 5.1; where overlap existed among constraint classes, the highest constraint class has taken precedence in the screening assessment.

These consolidated natural environment data layers have been provided to the Region as a key input to the S.A.B.E. study for identification of the FSA. For the purposes of defining the FSA, only high constraint features have been employed as these represent known constraints to development; these data were combined with other policy and technical considerations by the SABE team to delineate the FSA; the policy drivers, planning justification and technical inputs to the FSA delineation process are documented in the Hemson Report (Hemson 2020).

Moderate constraint features have been used for an additional validation exercise undertaken by the Wood team as a form of sensitivity testing for potential natural environment constraints (Section 6.2). All constraint levels (high, moderate, low) will be investigated in more detail as part of the on-going technical studies undertaken to support future planning requirements.

6.1.2 Natural Environment Excerpts from Hemson Report

Criteria used to inform the delineation of the FSA included the following areas of study:

- Climate Change,
- Environmental Protection and Natural Resources,
- Agriculture,
- Growth Management,
- Economic Development, Infrastructure and Cost of Growth
- Public Consultation

The FSA process defines the natural environment area of study as follows:

> ***Environmental Protection and Natural Resources*** *– environmental features and resource areas such as natural heritage system features and areas, water resource system features, mineral aggregate and related criteria have been considered in defining the FSA. The FSA will need to be large enough to accommodate future growth outside areas that cannot be developed because of environmental and natural resource constraints.*

Evaluation criteria have been prepared for each area of study and have been used to delineate the FSA. The following summarizes the criteria associated with the *Environmental Protection and Natural Resources* area of study:

Growth Plan Policy Reference	Policy Requirement	Relevance to the FSA	Criteria to Define the FSA
Section 2.2.8.3(e)	SABE, including associated servicing (water, wastewater, stormwater) should avoid, or if avoidance is not possible, minimize and mitigate any potential negative impacts on watershed conditions and the *water resource system*, including *quality and quantity of water*.	Main policy objective is to avoid negative impacts. Minimizing and mitigating negative impacts are secondary objectives, when avoidance cannot be achieved. FSA must consider this prioritization of objectives. Integration of watershed planning principles by aligning FSA with the Scoped Subwatershed Study will assist in meeting these objectives at a regional scale.	FSA should enable SABE options to avoid areas with high potential to negatively impact *quality* and *quantity of water*. FSA should enable SABE locations to be evaluated to avoid areas where high concentrations of *key hydrologic features and areas* occur to maximize opportunities to avoid negative impacts. FSA should enable SABE locations to be evaluated to minimize negative impacts on key *hydrologic features and areas*.
Section 2.2.8.3(i)	SABE must apply PPS policies that address Wise Use and Management of Resources (s.2) and Protection of Public Health and Safety (s.3).	Scoped Subwatershed Study and some SABE technical studies, including Mineral Aggregate and Health Assessment, will address these policies at a regional scale. Region of Peel Official Plan and Town of Caledon Official Plan both mirror and expand upon PPS restrictions on specific natural features, functions, and areas.	FSA should enable for SABE options that avoid areas with high concentration of significant *natural heritage systems,* hydrological features that support the *water resource system,* and *natural hazards* (as identified by the PPS). FSA should enable SABE options to be evaluated that generally direct development outside significant *natural heritage systems,* hydrological

Growth Plan Policy Reference	Policy Requirement	Relevance to the FSA	Criteria to Define the FSA
		Watercourses also regulated under *Conservation Authorities Act*.	features that support the *water resource system* and *natural hazards* (as identified by the PPS), or if not possible, minimize and mitigate impacts in accordance with Provincial guidelines. FSA should enable SABE options that could avoid areas that would directly impact *mineral aggregate resources* (as defined by the PPS) which includes the High Potential Mineral Aggregate Resource Areas (HPMARA) (as defined in the Regional Official Plan) or areas that would preclude or hinder aggregate extraction within HPMARA.
2.2.8.3(j)(k)	Requires that SABE meet applicable requirements of other Provincial Plans, including those that apply to the *Greenbelt Area*.	Caledon includes substantial areas that fall within the *Greenbelt Area*. Evaluation criteria workshop identified strong support for environmental protection and conservation, including protection of the natural resource and natural heritage systems.	FSA should not include any areas with the *Greenbelt Area*.

6.1.3 The Draft Focused Study Area

Based on inputs from the range of areas of study and associated multi-disciplinary criteria, the Hemson team prepared a draft FSA (Appendix B). The FSA encompasses ~8,000 ha of land located within the Town of Caledon and includes small linear extensions of the Greenbelt for functional definition of the FSA. These extensions of the Greenbelt represent ~9% of the FSA and removed, the FSA encompasses ~7,343 ha. The revised values for both the FSA and Study Area were used in the analysis presented in the following.

6.2 Focused Study Area Validation

The Wood Team has conducted a simple validation exercise to confirm that the FSA as developed by the Hemson Team provides enough flexibility within its defined area to meet the natural environment criteria used to inform its delineation. The validation exercise has been completed based on two scenarios:

- **High Constraint** | This scenario is consistent with the approach taken by the Hemson Team in their delineation of the FSA. It treats the High Constraint features as 'take-outs' and assumes that all other areas have development potential.
- **High Constraint and Moderate Constraint** | This scenario explores the potential impact of conservatively assuming all Moderate Constraint features being re-classified as High Constraint features through further study. It treats both High and Moderate Constraint features as 'take-outs' and assumes that all other areas have development potential.

Under both scenario's the constraint categories included have been considered as 'take-outs' and the total available area has been considered against the stated needs of the SABE. No scenario has been examined with Low Constraint category as take-outs as these represent management and land use related constraints only (i.e., do not prohibit development).

6.2.1 High Constraint Scenario Results

Within the FSA, high constraint areas encompass ~1,098 ha (15% of the FSA land area). Based on the current land needs assessment, the SABE will require ~1,300 ha. Excluding the high constraint areas, the final SABE requirements represent 21% of the land area within the FSA; this indicates that there would be sufficient flexibility in the FSA to allow for multiple options in delineating the SABE to accommodate these growth requirements and provide for protection of natural features and areas.

6.2.2 High and Moderate Constraint Scenario Results

The addition of moderate constraint features to this second scenario would have a very small impact on total land availability. Moderate constraint features represent ~223 ha (3%) of the land area within the FSA. When considered cumulatively with the high constraint areas, this constraint scenario encompasses ~1321 ha (18% of the FSA land area). Based on the current land needs assessment, the SABE will require ~1,300 ha. Excluding the high and moderate constraint areas, the final SABE requirements represent 22% of the land area within the FSA; this indicates that there would be sufficient flexibility in the FSA to allow for multiple options in delineating the SABE to accommodate these growth requirements and provide for protection of natural features and areas.

6.3 Scoped Subwatershed Study Scope and Objectives

A Scoped Subwatershed Study will be undertaken as part of the next phase of the study to further refine the FSA and establish the SABE. The Scoped Subwatershed Study will be largely based on desktop data and "scoped" windshield/roadside assessments, with no detailed field investigations. The Scoped Subwatershed Study will provide direction for future detailed Subwatershed Studies, to be completed as part of subsequent Secondary Plans.

Work completed for the Phase 2 Scoped Subwatershed Study for Settlement Boundary expansion, as it relates to water resources and ecological systems will:

(a) characterize the broader subwatershed areas associated with the urban expansion areas identified in Phase 1,
(b) conduct an impact assessment based on land-use change and infrastructure scenarios,

(c) prepare an implementation plan focused on the protection, enhancement, and implementation of the Water Resource System and Natural Heritage System (NHS) and associated environmental management strategies.

The key outcomes of the Phase 2 work, as related to water resources and ecological systems, will be to support the identification of a preferred urban boundary expansion, ensure the approach and outcomes conform to Regional policy requirements to support the proposed boundary expansion, identification and recommended scope to complete a detailed SWS within the Town of Caledon, identify other detailed studies and scope that may be required to complement the planning approvals process, a preliminary environmental management strategy for the preferred urban expansion area, and a long-term monitoring strategy.

PROJECT: DA19-052-01

CLIENT: Region of Peel

DATE: 06, May 2020

DRAWN BY: J.Sauder

Figure 1: Screening Study Area

Peel Region Settlement Boundary Expansion and Scoped Subwatershed Study

- Town of Caledon (Screening Study Area)
- Conservation Authority Boundary

Greenbelt Designations

- Niagara Escarpment Commission
- Oak Ridges Moraine Conservation Plan Area
- Protected Countryside

Base Map Data Sources (i-v), Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

0 1,500 3,000 6,000

Metres

SCALE: 1:125,000

NAD 1983 UTM Zone 17N

Disclaimer:
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DRAWN BY: J.Sauder

Figure 2: Preliminary Natural Environment Constraints: Input to Focused Study Area Delineation

Peel Region Settlement Boundary Expansion and Scoped Subwatershed Study

- Caledon (Screening Study Area)
- Conservation Authority Boundary
- Settlement Areas
- Planned Development and Expansion Areas

Preliminary Natural Environment Constraints

- High Constraint Features
- Moderate Constraint Features
- Low Constraint Features

Greenbelt Designations

- Niagara Escarpment Commission
- Oak Ridges Moraine Conservation Plan Area
- Protected Countryside

ORANGEVILLE
MELVILLE
ALTON
MONO MILLS
CALEDON VILLAGE
CATARACT
BELFOUNTAIN
CALEDON EAST
INGLEWOOD
MONO ROAD
CLAUDE
CHELTENHAM
CAMPBELLS CROSS
VICTORIA
TERRA COTTA
SANDHILL
PALGRAVE
PALGRAVE ESTATE
ALBION
BOLTON
TULLAMORE
WILDFIELD
MAYFIELD WEST
None

Townline
Porterfield Road
Highpoint Road
Main Street
Beech Grove Sideroad
Willoughby Road
Charleston Sideroad
Finnerty Sideroad
Escarpment Sideroad
Patterson Sideroad
Winston Churchill Boulevard
McLaren Road
Huron Ontario Street
Heart Lake Road
Horseshoe Hill Road
Airport Road
Bush Street
Forks Of The Credit Road
The Grange Sideroad
Old Church Road
Highway 50
Mount Hope Road
Mount Wolfe Road
Olde Baseline Road
The Gore Road
Humber Station Road
Columbia Way
Caledon King Townline South
King Street
Dixie Road
Bramalea Road
Healey Road
Coleraine Drive
Albion Vaughan Road
Mississauga Road
Creditview Road
Heritage Road
Winguacousy Road
McLaughlin Road
Old School Road
Mayfield Road
Countryside Drive
Torbram Road
Goreway Drive
McVean Drive
Clarkway Drive
Nashville Road
King Road
Highway 27
Highway 7
Trafalgar Road
Wellington 24 Road
9th Line
Sideroad 32
Sideroad 22
Maple Avenue
Wanless Drive
Wellington 124 Road
Wellington 22 Road
Wellington 23 Road
4th Line
10th Line
Sideroad 17
County Road 24
County Road 18
County Road 1
County Road 50
County Road 14
Adjala Tecumseth Townline
5th Line
4th Line
Tottenham Road

0 1,250 2,500 5,000
Metres
SCALE: 1:120,000

NAD 1983 UTM Zone 17N

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Appendix A

Region of Peel, Settlement Boundary Expansion and Scoped Subwatershed Study: Information Transfer Tracking

DATA CATEGORY				DATA TRANSFER TRACKING		STATUS			COMMENTS
Item	Description	Type	Format	Data Owner	Data Provider	Details of Data Request	Status	Date Received	
1. General									
TRCA REQUESTS									
	Spot Flow Measurements	Data	Excel	TRCA		Requested October 7, 2019	Received	10/21/2019	
	Continuous Flow Data	Data	Excel	TRCA		Requested October 7, 2019	Partial	10/16/2019	Gauge locations provdided; data required
	Water Quality Data (Chemistry and Temperature)	Data	Excel	TRCA	TRCA	Requested October 7, 2019	Received	10/16/2019 and 10/25/2019	Monitoring locations for Mayfield data received 10/16/2019. 4 spreadsheets of data provided 10/25/2019
	Precipitation Data	Data	Excel	TRCA		Requested October 7, 2019	Partial	10/16/2019	Gauge locations provdided; data required
	Region of Peel Orthophography - entire Region	Orthophotos	tif jpg sid	Region/TRCA		Requested October 7, 2019	Partial	9/23/2019 and 11/19/2019	Ortho of Brampton and Caledon provided by Region; historic air photos from 1946 provided by TRCA; historic air photos from multiple years required.
	Snowfall Data and Gauge Locations	Data	Excel	TRCA		Requested October 7, 2019	Partial	10/16/2019	Gauge locations provdided; data required
	Snowpack Data and Measurement Locations	Data	Excel	TRCA		Requested October 7, 2019	Partial	10/16/2019	Gauge locations provdided; data required
	Erosion Site Monitoring Data	Data	Excel	TRCA		Requested October 7, 2019	Partial	10/16/2019	Gauge locations provdided; data required There is some data in the attribute tables, however, some background or further info (reports, even) is required to understand the data/methodology. Phase 2.
	HDF Classifications	Data	Excel	TRCA		Requested October 7, 2019	Data not available		
	Geologic and hydrogeologic cross-sections	Data	PDF	TRCA		Requested October 7, 2019	Received		Groundwater team will utilize ORMGP portal
	Vertical gradient mapping	Data	Excel	TRCA		Requested October 7, 2019	Resolved		Groundwater team will utilize ORMGP portal
	Fish community monitoring data	Data	Excel	TRCA	TRCA	Requested October 7, 2019	Received	10/16/2019	
	Long term monitoring plots (fisheries)	Data	Excel/PDF	TRCA		Requested October 7, 2019	Requested		
CVC REQUESTS									
	Spot Flow Measurements	Data	Excel	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	
	Continuous Flow Data	Data	Excel	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	
	Water Quality Data (Chemistry and Temperature)	Data	Excel	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	Additional link provided to access real-time data - see KiWisInstructionsV2 for full details. https://waterinfo.cvc.ca/KiWIS//
	Precipitation Data	Data	Excel	CVC		Requested October 17, 2019	Data not available		CVC response - not available
	Region of Peel Orthophography - entire Region	Orthophotos	tif jpg sid	Region/TRCA		Requested October 17, 2019	Requested		
	Snowfall Data and Gauge Locations	Data	Excel	CVC		Requested October 17, 2019	Data not available		CVC response - not available
	Snowpack Data and Measurement Locations	Data	Excel	CVC		Requested October 17, 2019	Data not available		CVC response - not available
	Erosion Site Monitoring Data	Data	Excel	CVC		Requested October 17, 2019	Data not available		CVC response - not available
	HDF Classifications	Data	Excel	CVC		Requested October 17, 2019	Data not available		
	Geologic and hydrogeologic cross-sections	Data	PDF	CVC		Requested October 17, 2019	Received		Groundwater team will utilize ORMGP portal
	Vertical gradient mapping	Data	Excel	CVC		Requested October 17, 2019	Received		Groundwater team will utilize ORMGP portal
	Fish community monitoring data	Data	Excel	CVC		Requested October 17, 2019	Received	11/13/2019	
	Long term monitoring plots (fisheries)	Data	Excel/PDF	CVC		Requested October 17, 2019	Received	11/13/2019	
2. Mapping	Caledon OP	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
2	Parcel Fabric	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
3	2018 Parcel Based Land Use (MPAC)	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Regional Structure (Schedule D Appealed) - All data layers (Urban System, Rural System, Regional Urban Boundary, Rural Service Centres, Study Areas, etc.)	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database - Layers included: •Bolton Residential Expansion Area •NW Brampton Urban Development Area •Regiona lStructure •Urban Area Outside Peel •Urban Growth Centre
	Region of Peel Greenlands System Core, NAC and PNAC features and areas (includes woodlands, wetlands and valley and stream corridors)	Mapping	shp	Region/TRCA	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database - Layers included: •ANSI Earth Science •ANSI Life Science •ESA •Greenlands System Core •Valley •Woodlands
	Region of Peel Natural Heritage System - Existing Natural Cover and Potential Enhancement Areas	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database

Region of Peel, Settlement Boundary Expansion and Scoped Subwatershed Study: Information Transfer Tracking

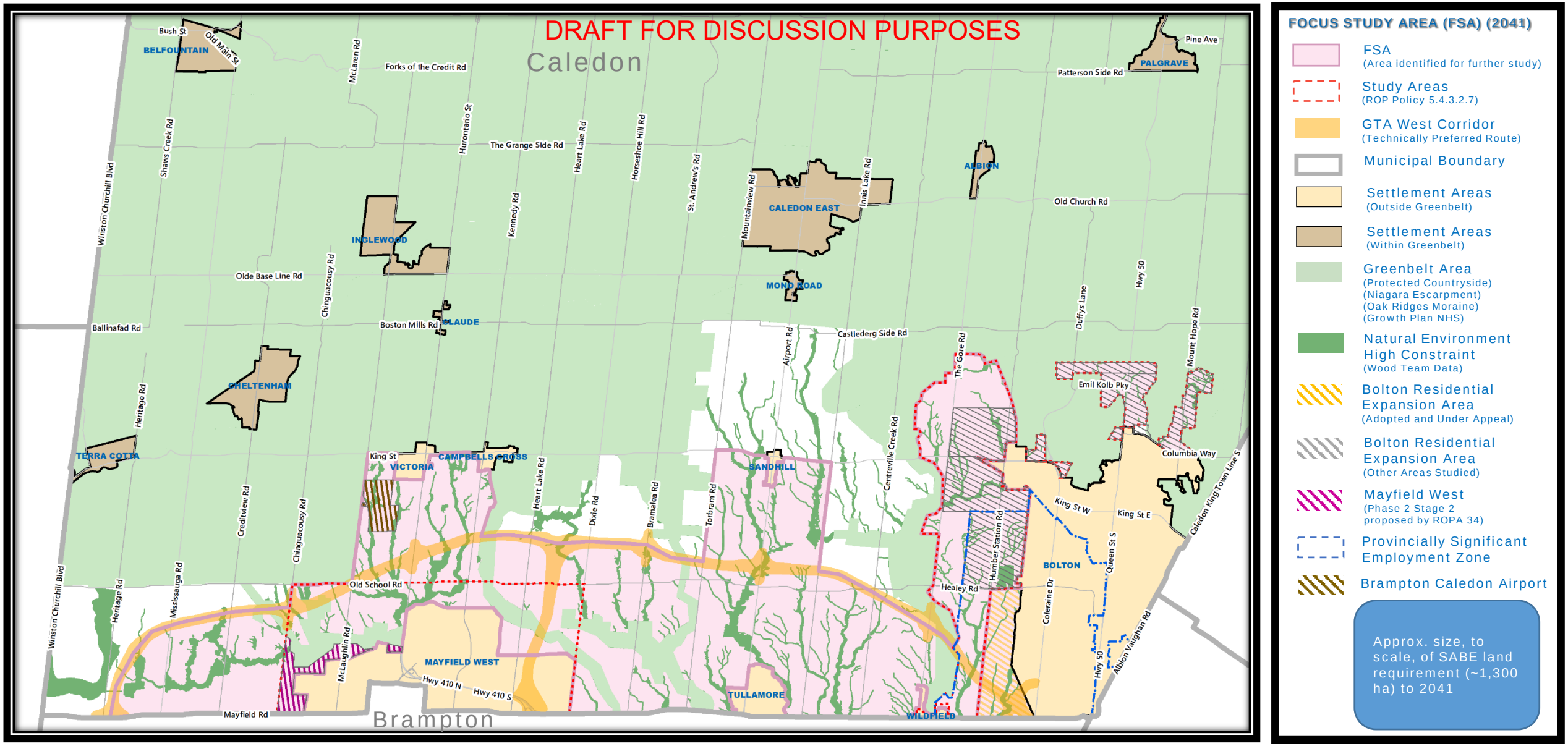
DATA CATEGORY				DATA TRANSFER TRACKING		STATUS			COMMENTS
Item	Description	Type	Format	Data Owner	Data Provider	Details of Data Request	Status	Date Received	
	Region of Peel Water Resource System Features and Areas (all features and areas compiled for Water Resources ROPA). Includes: CTC Region, LSGB and Halton Region drinking water source protection areas: •WHIPAs •ICAs •Highly Vulnerable Aquifers •Significant Groundwater Recharge Areas	Mapping	shp	RegionTRCA	Region	Requested September 19, 2019	Received	9/23/2019	Layers included: •WHIPAs •ICAs •Highly Vulnerable Aquifers •Significant Groundwater Recharge Areas
	Watercourses, waterbodies, drainage, wetlands	Mapping	shp	RegionTRCA	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Regional roads	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Caledon roads	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Greenbelt Plan Area Land Use Designations (Schedule D3 – all data layers)	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Layers included: •Greenbelt Designations •Greenbelt NHS •Caledon Settlement Boundary •Valley Connection
	Oak Ridges Moraine Conservation Plan Area Land Use Designations (Schedule D1 and D2 – all data layers)	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Layers included: •Aquifer Vulnerability •ORMCPA Boundary •Oak Ridges Moraine Land Use Designation •Palgrave Estate Residential Community •Rural Service Centre Outside ORMCPA •Rural System Outside ORMCPA
	Niagara Escarpment Plan Area Land Use Designations (all data layers)	Mapping	shp	Region	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Digital Elevation Model and Data	Mapping	shp	Region/TRCA	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Soils	Mapping	shp	Region/TRCA	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database https://www.sse.gov.on.ca/sites/MNR-PublicDocs/EN/CMID/Soil%20Survey%20Complex%20-%20Data%20Description.pdf
TRCA REQUESTS									
	Conservation Authority Regulated Areas	Mapping	shp	TRCA	Region	Requested September 19, 2019	Received	10/16/2019	Data provided in Peel GIS Database
	Conservation Authority Floodlines (includes Regional Floodplain, engineered floodplains, other natural hazards)	Mapping	shp	TRCA	Region/TRCA	Requested September 19, 2019	Received	10/16/2019	Data provided in Peel GIS Database and supplemental floodline drawings
	Ecological Land Classification	Mapping	shp	TRCA	Region	Requested September 19, 2019	Received	9/23/2019 & 10/16/2019	Data provided in Peel GIS Database and from TRCA
	Watershed and Subwatershed Boundaries	Mapping	shp	TRCA	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database
	Endangered Species Habitat Mapping (Redside Dace, Jefferson Salamander)	Mapping	shp	TRCA	Region	Requested September 19, 2019	Received	9/23/2019	Data provided in Peel GIS Database, Species at Risk Flag Zones areas provided
	Hydrologic Model Subcatchment Boundary Plan	Mapping	shp	TRCA		Requested September 19, 2019			
	LiDAR mapping	Mapping	shp	TRCA		Requested September 19, 2019	Received	10/16/2019	1 m contour data and 1 m DEM provided in Peel GIS database Phase 2 - Topographical info should extend downstream of the study area by a greater extent.
	HDF Mapping and Classifications	Mapping/Data	shp	TRCA		Requested September 19, 2019	Data not available		
	Groundwtaer flow mapping	Mapping/Data	shp	TRCA		Requested October 7, 2019	Received		Groundwater team will utilize ORMGP portal
	Vertical gradient mapping	Mapping/Data	shp	TRCA		Requested October 7, 2019	Received		Groundwater team will utilize ORMGP portal
	PGMN water level data and well locations	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	10/16/2019 & 11/1/2019	Shapefile and data provided separately
	Recharge discharge mapping and quantities	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	10/28/2019	Seepage Areas and Springs Mapping Provided
	ESGRA mapping	Mapping/Data	shp	TRCA		Requested October 7, 2019	Received		
	Groundwater quality data and mapping	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	11/1/2019	Matrix to confirm is mapping sufficient
	Aquifer vulnerability mapping	Mapping/Data	shp	TRCA		Requested October 7, 2019	Received		
	WHPA mapping	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	10/16/2019	Received from both TRCA and in Peel GIS database
	Fisheries data and monitoring locations	Mapping/Data	shp	TRCA		Requested October 7, 2019	Requested		
	Benthics and monitoring locations	Mapping/Data	shp	TRCA		Requested October 7, 2019	Received	10/16/2019 and 11/19/2019	Benthic monitoring stations shapefile
	Flora	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	10/16/2019	

Region of Peel, Settlement Boundary Expansion and Scoped Subwatershed Study: Information Transfer Tracking

DATA CATEGORY				DATA TRANSFER TRACKING		STATUS			COMMENTS
Item	Description	Type	Format	Data Owner	Data Provider	Details of Data Request	Status	Date Received	
	Fauna	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	10/16/2019	
	Significant Wildlife Habitat mapping	Mapping/Data	shp	TRCA		Requested October 7, 2019	Requested		
	SAR species locations and/or mapped habitat	Mapping/Data	shp	TRCA		Requested October 7, 2019	Requested		
	Crest of Slope	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Partial	10/17/2019	Phase 1 - not LTSTOS.
	Meanderbelt	Mapping/Data	shp	TRCA	TRCA	Requested October 7, 2019	Received	10/17/2019	Phase 1 - need method.ology used to create this shapefile. Looks more like a buffer than meander belt. Methodology data received February 7, 2020
	Thermal Classification for Watercourses	Mapping/Data	shp	TRCA		Requested November 12, 2019	Requested		
	Floodline Mapping	Mapping/Data	shp	TRCA			Received	11/15/2019	
	Floodplain Mapping	Mapping/Data	shp	TRCA			Received	11/15/2019	
	Flood Vulnerable Areas	Mapping/Data	shp	TRCA			Received	11/15/2019	
	Watercourses with permanent/intermittent (or regulated/unregulated) classification	Mapping/Data	shp	TRCA		5-Feb-20	Data not available		
	Regional Habitat Connectivity								
CVC REQUESTS									
	Hydrologic Model Subcatchment Boundary Plan	Mapping	shp	CVC		Requested October 17, 2019	Resolved		Wood's model boundaries for Fletchers and Huttonville available in-house; CVC to confirm concurrence with their use YES
	Groundwater flow mapping	Mapping/Data	shp	CVC		Requested October 17, 2019	Requested		To be confirmed using ORMGP portal
	ESGRA mapping	Mapping/Data	shp	CVC		Requested October 17, 2019	Requested		Current FSA constraint mapping includes ESGRA. Need layer if it exists.
	Aquifer vulnerability mapping	Mapping/Data	shp	CVC		Requested October 17, 2019	Requested		To be confirmed using ORMGP portal
	Significant Wildlife Habitat mapping	Mapping/Data	shp	CVC		Requested October 17, 2019	Data not available		CVC response - not available
	SAR species locations and/or mapped habitat	Mapping/Data	shp	CVC		Requested October 17, 2019	Requested		CVC response - not available - suggest contacting MECP
	Benthics and monitoring locations	Mapping/Data	shp	CVC		Requested October 17, 2019	Partial	11/13/2019	Provided in excel format. May correspond to the IWMP Sites Shapefile.
	Fisheries data and monitoring locations	Mapping/Data	shp	CVC		Requested October 17, 2019	Partial	11/13/2019	Provided in excel format. May correspond to the IWMP Sites Shapefile.
	Flora	Mapping/Data	shp	CVC		Requested October 17, 2019	Partial	11/13/2019	Provided in excel format. May correspond to the IWMP Sites Shapefile.
	Fauna	Mapping/Data	shp	CVC		Requested October 17, 2019	Partial	11/13/2019	Provided in excel format. May correspond to the IWMP Sites Shapefile.
	HDF Mapping and Classifications	Mapping/Data	shp	CVC		Requested October 17, 2019	Data not available		
	Region of Peel Greenlands System Core, NAC and PNAC features and areas (includes woodlands, wetlands and valley and stream corridors)	Mapping/Data	shp	CVC		Requested October 17, 2019	Requested		Region of Peel Data
	Watercourses, waterbodies, drainage, wetlands	Mapping/Data	shp	CVC		Requested October 17, 2019	Requested		Forthcoming
	Endangered Species Habitat Mapping (Redside Dace, Jefferson Salamander)	Mapping/Data	shp	CVC		Requested October 17, 2019	Data not available		CVC response - not available
	LiDAR mapping	Mapping	shp	CVC		Requested October 17, 2019	Requested		Region of Peel Data
	IWMP Mapping Areas	Mapping	shp	CVC		n/a	Received	11/13/2019	
	Watercourses with permanent/intermittent (or regulated/unregulated) classification								Forthcoming
3. Reports	Etobicoke Creek Hydrology Update - MMM 2013	Report	PDF	TRCA	TRCA	Requested September 19, 2019	Received	10/28/2019	
	Final Report Humber River Hydrology Update - CIVICA 2018	Report	PDF	TRCA	TRCA	Requested September 19, 2019	Received	10/28/2019	
	Etobicoke Creek Floodplain Mapping Update - Aquafor Beech 2016	Report	PDF	TRCA	TRCA	Requested September 19, 2019	Received	10/28/2019	
	Humber River Floodplain Mapping Update in Peel Region - Cole 2018	Report	PDF	TRCA	TRCA	Requested September 19, 2019	Received	10/28/2019	
	Mayfield West Phase 2 Comprehensive EIS&MP	Report	PDF	Wood					
	Fletcher's Creek and Huttonville Creek Subwatershed Study	Report	PDF	Wood					
	Draft Peel Synthesis Report: Compilation of Conservation Authority Existing Watershed Plans and Related Studies (Part A)	Report	PDF	Region	Region	n/a	Partial	10/21/2019	Summary of all related background studies. Part B (Appendices) are outstanding
	Processed data for fisheries and water quality, and corresponding reports	Report	PDF	TRCA		Requested November 12, 2019	Received	4/14/2020	Link provided by Region
	"Natural Hazard and Water Quality Studies" - RFP Page 56	Report	PDF	TRCA? Region?		Requested November 12, 2019	Received	4/14/2020	Link provided by Region
	Mount Pleasant 51-1 2015 Monitoring Report	Report	PDF	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	
	Mount Pleasant 51-1 2016 Monitoring Report	Report	PDF	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	
	Mount Pleasant 51-1 2017 2018 Monitoring Report	Report	PDF	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	
	51-1 2016 Water Quality Lab Results	Report	PDF	CVC	CVC	Requested October 17, 2019	Received	11/13/2019	
	Whitebelt Expansion Hydrologic Assessment (Flood Vulnerable)	Memo	Word	TRCA	TRCA		Received	11/15/2019	
	Humber River Watershed Plan: Pathways to a Healthy Humber (2008)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Etobicoke and Mimico Creeks Watersheds Technical Update Report (2010)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Credit River Water Management Strategy (2006)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Toronto and Region Conservation Authority Terrestrial Natural Heritage System (2007)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Humber River Fisheries Management Plan (2005)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Etobicoke Creek: The Aquatic Ecosystem Fisheries Management Plan (2006)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region

Region of Peel, Settlement Boundary Expansion and Scoped Subwatershed Study: Information Transfer Tracking									
DATA CATEGORY				DATA TRANSFER TRACKING		STATUS			COMMENTS
Item	Description	Type	Format	Data Owner	Data Provider	Details of Data Request	Status	Date Received	
	Credit Valley Conservation Natural Heritage Strategy (2002)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online; to be obtained directly from CVC
	Credit River Watershed Natural Heritage System (2015)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Credit River Fisheries Management Plan (2002 and 2015 update)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	CVC Wetland Restoration Strategy (2009)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Dougan/Wood to research archives for information
	Peel Natural Systems Vulnerability Assessment	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Water Infrastructure Systems Vulnerability Assessment	Report	PDF			Outlined in the RFP - pg. 56	Requested		Inquire directly with TRCA/CVC for copy
	Peel Climate Change Strategy	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Peel Climate Change Partnership Action Plan	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online; inquire directly with OCCEM
	Peel Climate Change Adaptation Plan	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online; inquire directly with OCCEM
	Credit Climate Change Strategy (2008)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online; inquire directly with OCCEM
	Climate Change & Source Water Protection Water Quality Assessment (in progress)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not yet available; inquire directly with Sourcewater Protection
	Source Water Protection Assessment Reports and Plans	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	CTC Source Protection Plan	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Credit River Peak Flow Study (in draft)	Report	PDF			Outlined in the RFP - pg. 56	Data not avaialble		not finalized - unavailable
	Credit River Flow Management Study (2007)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Wood to search archives for information
	CVC Subwatershed Studies (various)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Credit Water Quality Strategy (2003)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online; request directly from CVC
	Humber Hydrology Study (in progress)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online; request directly from TRCA
	Ontario Great Lakes Strategy	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Lake Ontario Biodiversity Conservation Strategy	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	Lake Ontario Atlantic Salmon Restoration Program – Five Year Implementation Strategy (2016) and Watershed Habitat Plans (2017)	Report	PDF			Outlined in the RFP - pg. 56	Requested		Not available online
	Toronto and Region Remedial Action Plan (RAP)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	CVC Lake Ontario Integrated Shoreline Strategy (LOISS)	Report	PDF			Outlined in the RFP - pg. 56	Received	4/14/2020	Link provided by Region
	CVC Ecological Restoration Strategy and Guidelines (in progress)	Report	PDF			Outlined in the RFP - pg. 56	Data not avaialble		Not available online; inquire directly with CVC
	TRCA/CVC/Caledon/Brampton Erosoin Inventory/Monitoring reports	Report	PDF			5-Feb-20	Requested		More details required regarding information request
	Road EA/Design reports for Regional Road 50, Mayfield, Hurontario, Airport	Reports	PDF			5-Feb-20	Received	4/14/2020	Link provided by Region

Appendix B



FOCUS STUDY AREA (FSA) (2041)

- FSA (Area identified for further study)
- Study Areas (ROP Policy 5.4.3.2.7)
- GTA West Corridor (Technically Preferred Route)
- Municipal Boundary
- Settlement Areas (Outside Greenbelt)
- Settlement Areas (Within Greenbelt)
- Greenbelt Area (Protected Countryside) (Niagara Escarpment) (Oak Ridges Moraine) (Growth Plan NHS)
- Natural Environment High Constraint (Wood Team Data)
- Bolton Residential Expansion Area (Adopted and Under Appeal)
- Bolton Residential Expansion Area (Other Areas Studied)
- Mayfield West (Phase 2 Stage 2 proposed by ROPA 34)
- Provincially Significant Employment Zone
- Brampton Caledon Airport

Approx. size, to scale, of SABE land requirement (~1,300 ha) to 2041

Disclaimer: This map has been developed for the Settlement Area Boundary Expansion (SABE) Study and represents an area to be studied for the purpose of identifying a SABE. For additional information, please refer to the *Settlement Area Boundary Expansion Study Phase A: Focus Study Area* report.

Note:

(1) There may be opportunities to expand rural settlements outside the FSA as part of the SABE Study.
(2) Other natural environmental constraints not identified on this map, including features not captured through existing mapping and potential buffers, will be identified through further analysis and may further limit development.
(3) ROP Policy 5.4.3.2.7 as it relates to the area surrounding Bolton is under appeal.
(4) The ~1,300 ha SABE is based on a draft land needs assessment which is under review.

N

1 cm = 1 km