

Credit Valley Conservation

April 2010



Watershed Planning and Regulation Policies





Resolution

Date: April 9, 2010
Resolution No. 48/10

Moved by: Sue McFadden
Seconded by: Bob Shirley

48/10

***WHEREAS** CVC initiated a review of its existing planning and regulation policies in 2006 and engaged stakeholders through the formation of an Advisory Panel to provide guidance in the preparation of updated policies;*

THEREFORE BE IT RESOLVED THAT the report entitled “CVC Planning and Regulation Policies” as Schedule ‘D’, March 12, 2010 be received and appended to the minutes of this meeting; and

THAT the CVC Board of Directors formally adopt the new “Credit Valley Conservation Watershed Planning and Regulation Policies” and the “Companion Document” to come into effect on April 9, 2010; and further

***THAT** a copy of the final documents be forwarded to members of the Advisory Panel.*

Original signed John Hutton
CARRIED

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1 INTRODUCTION

1.1 Purpose of this Document

The purpose of this document is to provide Credit Valley Conservation's (CVC's) updated *watershed* planning and regulation policies. These policies provide the parameters against which CVC administers Ontario Regulation 160/06 under Section 28 of the Conservation Authorities Act. These policies also guide CVC's review of official plans, zoning bylaws and planning applications under the Planning Act, including other legislation CVC may be requested or responsible to provide comment on such as the Canadian Environmental Assessment Act, Ontario Environmental Assessment Act, Lakes and Rivers Improvement Act, Fisheries Act, Clean Water Act, Endangered Species Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, Places to Grow Act, and the Greenbelt Act.

The preparation of this comprehensive policy document was initiated in 2006, in response to a number of factors including:

- To be more consistent with current and/or revised Federal, Provincial, and Municipal legislation, guidelines and initiatives;
- To better recognize recent advances in the physical and natural sciences as they relate to systems planning, natural heritage and natural hazard management;
- To further address the implementation of Ontario Regulation 160/06 (Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses); and
- To provide clearer and more consistent direction to CVC staff, partners and stakeholders recognizing the interdisciplinary nature of *watershed* planning, natural hazard management and the multitude of factors to be considered.

Of critical importance was the need to formally articulate an up-to-date policy framework that provides clear and consistent direction for planning and development related matters, and to better express the roles of CVC in protecting, restoring and enhancing the *watersheds* within CVC's jurisdiction. In addition to this, there was a need to develop policies which better recognize the integrated nature of a natural heritage systems approach to *watershed* planning and natural hazard management considering their dynamic relationship.

CVC's former planning and development policies were contained in two documents – the *Watercourse and Valleyland Protection Policies* (1996) and the *Authority Policies on Floodplain Management* (1994). It was apparent that the policies in these documents contained gaps and inconsistencies, particularly in light of new Provincial legislation and policy initiatives and the updated regulation. There were also policies or practices used to evaluate planning and development proposals not consolidated into these documents (e.g. CVC Board Resolutions), or which had been re-interpreted in an attempt to fill policy gaps. It is the purpose of this document to be comprehensive in nature and replace CVC's previously

adopted watershed planning and regulation related policies.

Since the mid 1990s, there have been fundamental changes experienced throughout the practice of planning as it relates to natural heritage protection. As a result, policy reform emerged at the Provincial level with the passing of the Oak Ridges Moraine Conservation Act (2001), Greenbelt Act (2005), Places to Grow Act (2005) and the provincial plans resulting from those acts, including a new Niagara Escarpment Plan (2005). In addition, major amendments to the Planning Act came into force in 2005 and 2007, resulting in a new Provincial Policy Statement (2005).

In response to this changing policy regime, CVC engaged in a number of new initiatives. These included, along with other Conservation Authorities, the introduction of the updated Section 28 regulation (Ontario Regulation 160/06), the development of the Credit Valley Conservation Strategic Plan 2006, the 2008 Strategic Plan Update, and the completion of the Credit River Water Management Strategy Update 2007 (CRWMSU). In particular, the CRWMSU was a plan of action designed to ensure that we have “abundant, clean and safe water” in the Credit River *watershed*, now and into the future. Some of the key findings of the CRWMSU included:

- Our long-term health depends on the health of the Credit River watershed;
- The health of the Credit River watershed is already at risk;
- Current planning and development practices are not sustainable in the long term;
- We can continue growing if we change our planning and water management practices; and
- There is a limit to growth.

The CRWMSU concluded that we need to change how we are doing things if we want to continue to grow and maintain or enhance environmental conditions in the Credit River *watershed*.

This document promotes a natural heritage systems approach to *watershed* planning for CVC’s partnering agencies to build from; it provides guidance and direction for CVC staff when considering planning and development related matters; it provides a clear and consistent framework for applicants when preparing development proposals; and it clearly outlines CVC’s policy framework for stakeholders and the general public who have an interest in protecting, restoring and enhancing the *watersheds* within CVC’s jurisdiction.

1.2 How to Read This Document

This document has been organized in to 11 chapters. In brief, they are as follows:

Chapter 1 - Introduction provides an overview of the history of CVC, and provides a brief review of the characteristics of CVC’s jurisdiction.

Chapter 2 - Regulatory Framework provides a review of CVC’s mandate, role and responsibilities as they relate to the Conservation Authorities Act and Planning Act.

Chapter 3 - Governing Principles presents CVC’s vision, goals and objectives which provide context for the principles highlighted in this chapter.

Chapter 4 – Credit Valley Conservation’s Approach to Watershed Planning highlights CVC’s commitment to a systems approach to managing CVC’s jurisdiction.

Chapter 5 – Environmental Planning Areas of Interest outlines the CVC’s policies as they relate to *Watershed* Planning, Sustainable Water Management and Infrastructure Planning, Natural Heritage and Natural Hazards.

Chapter 6 - Policy Implementation – Plan Input and Plan Review provides more detailed policies within the context of the policy objectives and general policies as it relates to implementation through *Planning Act* or similar development related applications.

Chapter 7 - Policy Implementation – Ontario Regulation 160/06 assists in the implementation of the policy objectives and general policies as it relates to Ontario Regulation 160/06, and *Planning Act* applications where applicable.

Chapters 8, 9, 10 and 11 – Definitions, References, List of Key Reference Documents and Appendices.

This document is more than a set of individual policies and is intended to be read in its entirety and its content interpreted accordingly. While specific sections and policies may reference others or only apply under certain circumstances, this should not take away from the need to read the document as a whole. CVC has also developed a companion document titled ‘Stakeholder Engagement and Co-Creative Planning for Credit Valley Conservation’. The purpose of the companion document is to provide the context and outline the collaborative process used in developing the framework for the policies. In addition to reading this policy document in its entirety, it is also important to read it in the context of the companion document for perspective.

Where the direction provided in this document is in conflict with that provided by federal, provincial or municipal documents, CVC will be consistent with the direction that provides more protection to the natural environment or public health and safety.

1.3 Credit Valley Conservation

1.3.1 A Brief History

Credit Valley Conservation was formed on May 13, 1954 and is one of thirty-six Conservation Authorities (CAs) in Ontario. Originally created by a provincial Act as a community-based organization, CVC is a partnership of municipalities dedicated to the conservation, restoration, and management of *watersheds* within CVC’s jurisdiction.

Since CVC was formed, its roles and responsibilities have evolved to respond to the dynamic

changes throughout the *watersheds* and along the Lake Ontario shoreline. These dynamic changes include the evolving characteristics of the natural system, climate change, increasing pressures from urbanization, changing needs of residents, recent advances in science, and new provincial initiatives. While the original planning and development related programs of CVC focused predominantly on water resources and hazard land management, a broad range of *watershed* management programs and services has resulted. These programs and services promote community engagement and partnerships allowing CVC to work with municipalities and stakeholders in a cooperative and holistic approach to *watershed* management.

Credit Valley Conservation’s jurisdiction includes the Credit River *watershed*, associated *watersheds* draining directly into Lake Ontario (from Applewood Creek in Mississauga to Clearview Creek in Oakville), approximately 15 kilometres of the Lake’s shoreline and an area extending 6 kilometres into the Lake.

1.3.2 Watershed Characteristics

Credit Valley Conservation’s jurisdiction contains a wealth of natural resources and is located in the western portion of the Greater Toronto Area (GTA), extending up to the southern portion of Dufferin County (see Figure 1).

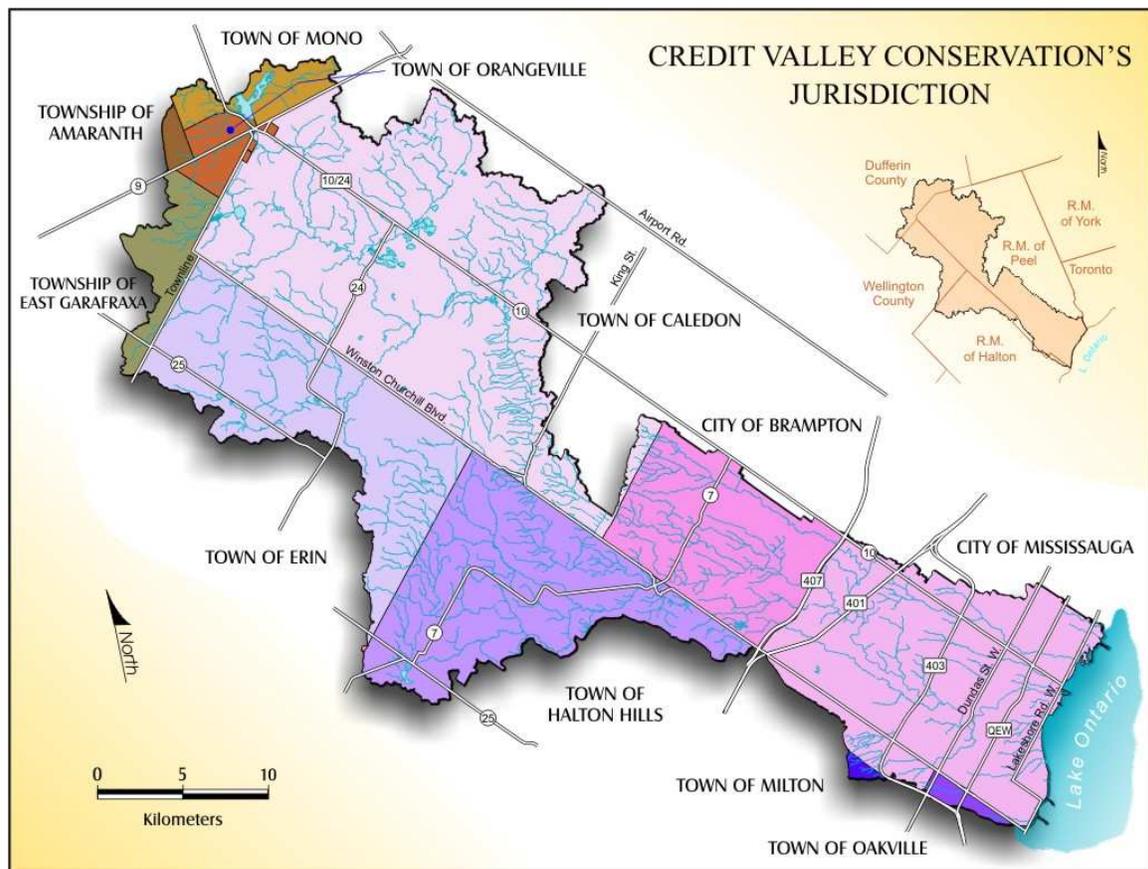


Figure 1. Credit Valley Conservation’s Jurisdiction.

Offering unique opportunities for recreational and educational activities, the Lake Ontario

shoreline and *watersheds* within CVC’s jurisdiction provide a diversity of ecosystem functions including climate stabilization and moderation of weather, critical habitat for flora and fauna, natural storage and regulation of surface water and groundwater, maintenance of biodiversity, and purification of water and air.

Most of the lands within CVC’s jurisdiction are privately owned, although CVC currently owns approximately 2,450 hectares of land. These lands are primarily used for conservation purposes, and are generally contained within the 50 conservation areas managed and operated by CVC. Credit Valley Conservation’s jurisdiction is naturally divided into three distinct physiographic zones – the upper, middle, and lower *watersheds* (see Figure 2).

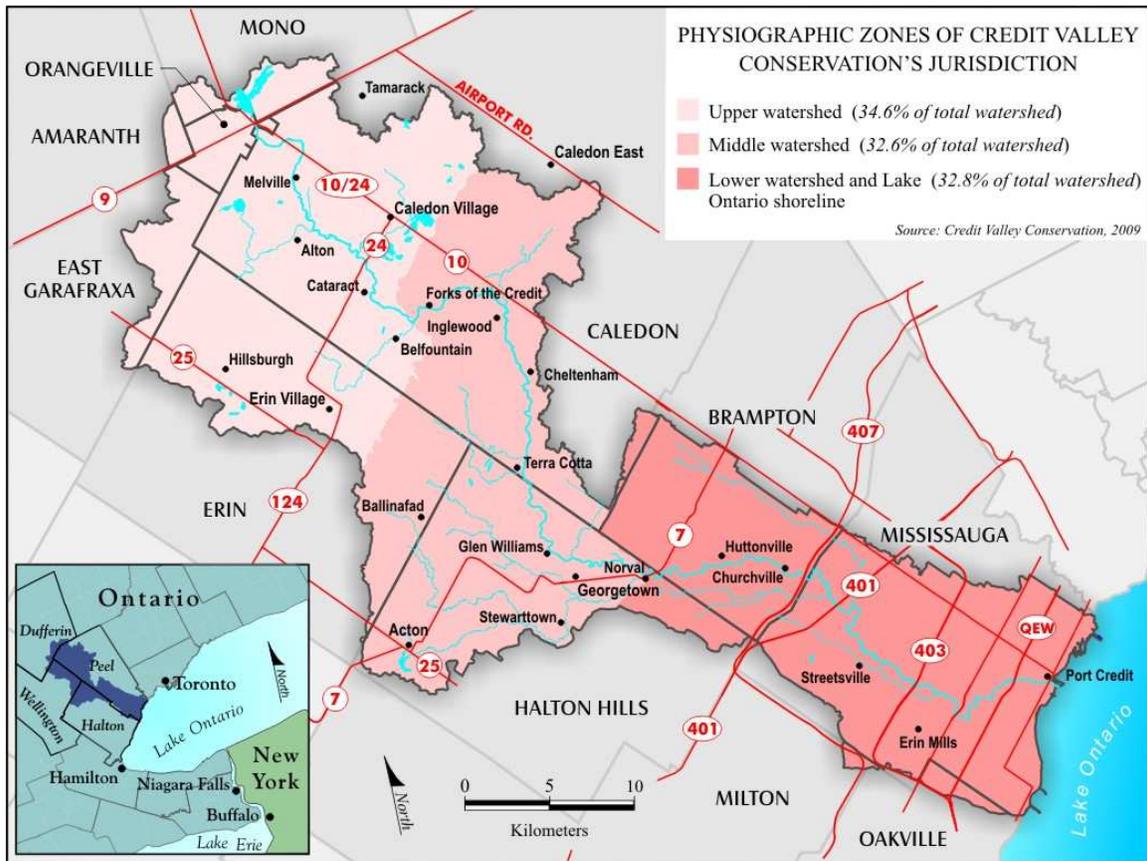


Figure 2. Physiographic zones of Credit Valley Conservation’s jurisdiction.

The upper *watershed* lies above the Niagara Escarpment and contains the Towns of Orangeville and Mono, Townships of Amaranth and East Garafraxa, and the northern portion of the Towns of Erin and Caledon. This zone is entirely within the Greenbelt Plan area (Niagara Escarpment and Protected Countryside) and contains the headwaters of the Credit River. Approximately 60% of this area is forested and the river valley varies from a complex and highly developed system at the base of the Escarpment, to flat marshy areas in the upper regions. Traditionally, land uses in this zone have been rural and agricultural in nature. However, the major urban centres are currently experiencing increased growth pressures due to their proximity to the GTA.

The middle *watershed* is almost entirely within the Greenbelt plan areas (mostly the Niagara

Escarpment and Protected Countryside with a small portion of the Oak Ridges Moraine). This zone contains much of the Town of Halton Hills, and the southern portion of the Towns of Erin and Caledon. Most of the tributaries flowing out of this area begin at large headwater wetland complexes, which cover approximately 40% of the Escarpment plateau. Below the Escarpment, the Credit River flows through a well defined valley system with *floodplains* of various widths. Similar to the upper reaches, the land uses in this area are generally rural and agricultural in nature, with increased growth pressures being experienced in the hamlets and urban centres.

The lower *watershed* contains a small portion of Greenbelt Protected Countryside and includes the Cities of Brampton and Mississauga, the southern portion of Halton Hills, and small portions of the Towns of Caledon, Milton and Oakville. This area is relatively flat, slopes gently towards Lake Ontario, and consists of the Peel Plain, South Slope, and Lake Iroquois Plain. In addition to the Credit River and its tributaries, this zone contains associated *watersheds* draining directly into Lake Ontario, approximately 15 kilometres of the Lake's shoreline and portions of the Lake. This zone is highly urbanized and contains approximately 87% of the inhabitants within CVC's jurisdiction. The unique natural system is generally confined to well defined valley and stream corridors which support several provincially and regionally significant natural features and areas. As a result of past agricultural practices and increased urbanization, the lower *watersheds* have experienced significant losses of natural cover that is currently estimated to be 6%.

Credit Valley Conservation's jurisdiction is also an important place for people. Currently, it is estimated that 28% of the jurisdiction is urbanized with approximately 650,000 people calling it home. Pressures from these rapidly expanding urban centres, including stresses resulting from agricultural, aggregate extraction, contamination and water taking activities are having a profound impact on the quality of natural systems. There is a general consensus that the state of human health is directly related to the health of our ecosystem. In this respect, undertaking activities to protect, restore and enhance CVC's jurisdiction will produce benefits for all.

2 REGULATORY FRAMEWORK

2.1 Mandate, Roles and Responsibilities

The policies outlined in this document provide guidance for planning and development activities within CVC's jurisdiction with a general focus on two main regulatory tools – the Conservation Authorities Act and the Planning Act.

Like all other CAs, CVC derives its authority from the Conservation Authorities Act and regulates *development (1)* and *interference with wetlands*, shorelines and *watercourses* pursuant to Section 28 of the Act. CVC also provides planning and technical advice to planning authorities to assist them in fulfilling their responsibilities regarding natural hazards, natural heritage and other relevant policy areas pursuant to the Planning Act. It is important to note that the principle of development is established through Planning Act approval processes, whereas the CA permitting process provides for technical implementation of matters pursuant to Section 28 of the Conservation Authorities Act. As highlighted in Section 2.1.2.1 below, in participating in the review of Planning Act applications CAs ensure the applicant and planning authority are aware of the Section 28 regulations and requirements and assist in coordinating those applications to avoid any conflicts.

In addition, this document provides guidance for planning and development activities governed under other regulatory tools CVC may be responsible or requested to provide comment on such as the Canadian Environmental Assessment Act, Ontario Environmental Assessment Act, Clean Water Act, Endangered Species Act, Lakes and Rivers Improvement Act, Fisheries Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, Places to Grow Act, and the Greenbelt Act.

2.1.1 The Conservation Authorities Act

The Conservation Authorities Act is the enabling legislation that provides the legal basis for the creation of CAs in Ontario. Generally, the Conservation Authorities Act directs CAs to perform a number of critical functions regarding *watershed* planning and management including the prevention, elimination, or reduction of loss of life and property from *flood hazards* and *erosion hazards*, as well as the conservation and restoration of natural resources.

2.1.1.1 Objects of a Conservation Authority

Section 20 of the Conservation Authorities Act outlines the object of the CAs as follows:

“establish and undertake, in the area over which it has jurisdiction, a program designed to further the conservation, restoration, development, and management of natural resources other than gas, oil, coal and minerals.”

2.1.1.2 Powers of a Conservation Authority

For the purposes of accomplishing this object, Section 21 of the Conservation Authorities Act establishes the powers of a CA. A few of the key powers applicable to planning and regulatory related matters include:

- To study and investigate the *watershed* and to determine a program whereby the natural resources of the *watershed* may be conserved, restored, developed and managed;
- To acquire, by purchase, lease or otherwise and to expropriate any land that it may require...;
- To collaborate and enter into agreements with ministries and agencies of government, municipal councils and local boards and other organizations;
- To cause research to be done; and
- Generally to do all such acts as are necessary for the due carrying out of any project.

In accordance with these powers, CVC strives to better understand the natural character of the *watershed* and undertake a program of conservation embedded in:

- i. Development regulations and permitting;
- ii. Oversight of water resources and natural heritage;
- iii. Securement of sensitive land for protection, appreciation and recreation; and
- iv. Stewardship initiatives with residents and landowners.

2.1.1.3 Regulations by a Conservation Authority

Whereas Sections 20 and 21 govern the object and powers of CAs, Section 28 of the Conservation Authorities Act empowers CAs to make regulations in the area under its jurisdiction;

- Restricting and regulating the use of water in or from rivers, streams, inland lakes, *ponds, wetlands* and natural or artificially constructed depressions in rivers or streams;
- Prohibiting, regulating or requiring the permission of the authority for straightening, changing, diverting or *interfering in any way* with the existing channel of a river, creek, stream or *watercourse*, or for changing or *interfering in any way* with a *wetland*; and
- Prohibiting, regulating or requiring the permission of the authority for *development (1)* if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* may be affected by the *development (1)*.

In this respect, CVC administers Ontario Regulation 160/06: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses. Through Ontario Regulation 160/06, CVC has the ability to:

- Prohibit, regulate or require the permission of the authority for straightening, changing, diverting or *interfering in any way* with the existing channel of a river, creek, stream or *watercourse*, or for changing or *interfering in any way* with a *wetland*; and
- Prohibit, regulate or require the permission of the authority for *development (1)*, if in the opinion of the authority, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* may be affected by the *development (1)*.

2.1.2 The Planning Act and Provincial Policy Statement

The Planning Act is the primary piece of legislation governing land use planning activities in Ontario, and outlines the means by which planning authorities make land use planning decisions. Under the Planning Act, CVC provides input and technical advice from several viewpoints including as a planning and technical advisor, a *watershed* based resource management agency, a regulatory body, and a proponent or landowner.

Section 3 of the Planning Act enables the Province to issue policy statements on matters related to municipal planning that are of provincial interest. Decisions affecting planning matters ‘shall be consistent with’ these policy statements which are contained in the Provincial Policy Statement (PPS). Of particular relevance to CVC are Sections 2.1 (Natural Heritage), 2.2 (Water) and 3.1 (Natural Hazards) of the PPS (2005). However, recognizing the linkages among policy areas the policies contained in the sections referred to above are not read in isolation of other relevant policies in the PPS. Planning decisions are also required to conform to provincial plans, including the Niagara Escarpment Plan (2005), Oak Ridges Moraine Conservation Plan (2002), Greenbelt Plan (2005) and the Growth Plan for the Greater Golden Horseshoe (2006).

2.1.2.1 CVC’s Role in Planning Matters

The Ministry of Natural Resources (MNR), Ministry of Municipal Affairs and Housing (MMAH) and Conservation Ontario (CO) have a memorandum of understanding (MOU) defining the roles and relationships for implementing delegated responsibilities under the Provincial One Window Planning System (see Appendix A). The MOU summarizes delegations from the MNR and MMAH including representing Provincial interests in planning matters as they relate to floodplain management, hazardous slopes, Great Lakes shorelines, unstable soils and erosion. This role does not extend to *special policy areas* (SPAs) or other portions of the PPS unless specifically delegated or assigned by the Province as described in the agreement.

In addition to clarifying each agency’s role pertaining to natural hazards, the MOU outlined further CA roles in plan input, plan review and appeals relating to planning matters. In keeping with this, CVC considers and prepares comments based on the following:

- ***Watershed Based Resource Management Agency*** – CA’s operate under the authority of the Conservation Authorities Act, and in conjunction with municipalities, develop business plans, watershed plans and natural resource management plans within their jurisdictions. These plans may recommend specific

approaches to land use and resource planning and management that should be incorporated into municipal planning documents and related development applications to be implemented. Conservation Authorities may become involved in the review of municipal planning documents and development applications under the Planning Act to ensure that program interests are addressed in land use decisions made by municipal planning authorities. In this role, the CA is responsible to represent its program and policy interests as a watershed based resource management agency.

- ***Planning Advisory Services to Municipalities***- The provision of planning advisory services to municipalities is implemented through a service agreement (or memorandum of understanding) with participating municipalities or as part of a CA's approved program activity. In this respect, the CA is essentially set up as a technical advisor to municipalities. The agreements cover the CA's areas of technical expertise such as natural hazards and natural heritage system planning and management. Planning advisory services for the review of Planning Act applications is a means of implementing a comprehensive resource management program on a watershed basis.
- ***Proponent or Landowner*** – Occasionally CAs become involved in the planning process as a proponent or landowner. Where there is a real or perceived conflict of interest between the role of the CA as a proponent or landowner and the role of the CA as a commenting agency, CAs may request the planning authority to implement alternate review mechanisms to address the CA's commenting responsibilities. Additionally, CAs ensure that any comments provided as a landowner are separate from comments provided under a technical, advisory, and/or regulatory role.
- ***Regulatory Responsibilities***
 - *Conservation Authority Act Regulations*: In participating in the review of applications under the Planning Act, CAs will ensure the applicant and municipal planning authority are aware of the Section 28 regulations and requirements under the Conservation Authorities Act, and assist in the coordination of these applications to eliminate unnecessary delay or duplication in the process.
 - *Other Delegated or Assigned Regulatory/Approval Responsibilities*: Federal and provincial ministries and municipalities often enter into agreements to transfer regulatory/approval responsibilities to individual CAs. In addition to ensuring awareness of the requirements pursuant to these other pieces of legislation, CAs will assist in the coordination of applications to eliminate unnecessary delays or duplication in the process. In this regard, CVC has entered into a Level II agreement with Fisheries and Oceans Canada (DFO) to review projects under Section 35(1) of the *Fisheries Act*.

3 GOVERNING PRINCIPLES

3.1 Vision

This document is premised on a number of governing principles. To provide context for these principles CVC has developed the following goals and objectives which are aligned with the CVC's Strategic Plan Update's vision which focuses on:

“An environmentally healthy Credit River Watershed for the present and future generations.” (CVC 2008)

3.2 Goals and Objectives

In keeping with the vision, the following goals and objectives found in CVC's Strategic Plan Update (2008) provide the context for the governing principles, and serve as the framework for this document.

3.2.1 Goals

CVC's goals are grouped into 5 main topic areas and are as follows:

1. ***Water Quantity*** – To manage the hydrological systems of the *watersheds* in a manner that emulates natural processes while recognizing human needs;
2. ***Water Quality*** – To protect and enhance the quality of surface and subsurface water for environmental and human uses;
3. ***Terrestrial and Aquatic Species, Communities and Ecosystems*** – To protect, restore and enhance the ecological integrity of the natural areas, features and systems within CVC's jurisdiction;
4. ***Natural Hazards*** – To protect public safety and minimize property damage from natural hazards such as *flood hazards, erosion hazards, dynamic beaches* and other *hazardous land*; and
5. ***Social and Economic*** – To promote the social and economic health of the community through effective *watershed* management.

3.2.2 Objectives

CVC's objectives as they relate to the goals identified above are:

- a) In addressing ***Water Quantity***, CVC shall:
 - a. Preserve and re-establish the natural hydrological cycle;
 - b. Maintain, enhance or restore natural stream processes to achieve a balance of flow and sediment transport;
 - c. Manage stream flow to reduce erosion impacts on habitats and property;
 - d. Minimize risk to human life and property due to *flood hazards*;

- e. Maintain groundwater levels and baseflows (ground water discharge to streams and *wetlands*) to sustain *watershed* functions, human uses and climatological changes.
- b) In addressing **Water Quality**, CVC shall:
- a. Maintain or enhance water and sediment quality to achieve ecological integrity;
 - b. Protect drinking water sources;
 - c. Protect groundwater quality to support *watershed* functions;
 - d. Reduce toxics through *pollution* prevention;
 - e. Improve water quality in rivers and Lake Ontario for body contact; and
 - f. Improve water aesthetics including odour, turbidity and clarity.
- c) In addressing **Terrestrial and Aquatic Species, Communities and Ecosystems**, CVC shall:
- a. Protect, restore or enhance integrity of the *watershed* ecosystem, through an integrated network of natural areas, habitats and connecting links;
 - b. Protect, restore or enhance native terrestrial and aquatic plant and animal species, community diversity and productivity;
 - c. Promote integrated ecosystem management of aquatic and terrestrial systems and areas within the *watershed* for plant, animal and human needs;
 - d. Protect, restore and enhance natural systems as a priority within the urban environment and throughout the *watershed*;
 - e. Ensure that the complete range of representative and significant natural features, functions and linkages distributed within the *watershed* are protected in perpetuity; and
 - f. Secure representative and sensitive environmental land to protect it in perpetuity.
- d) In addressing **Natural Hazards**, CVC shall:
- a. Identify and protect potentially hazardous river or stream valleys, *flood hazards* and Lake Ontario shoreline;
 - b. Identify and protect *watercourses* (including their meander belt) and *wetlands*;
 - c. Implement Ontario Regulation 160/06, as may be amended from time to time, in a manner that protects the public and minimizes property damage;
 - d. Update and refine hazard land mapping over time as new information becomes available;
 - e. Recommend to *watershed* municipalities proactive approaches within the planning and development process that reflect the dynamic nature of the hazards; and
 - f. Work with *watershed* municipalities and other partners to reduce the severity of natural hazards, where possible, recognizing the importance of natural processes.
- e) In addressing **Social and Economic** factors, CVC shall:
- a. Demonstrate through research and identify and promote the community benefits of the *watershed* system (recreational, educational, cultural, psychological, tourism, economic);

- b. Protect human physical, social and economic health as they relate to the natural environment; and
- c. Provide appreciation and compatible recreational opportunities on protected land.

3.3 Principles

In the context of the vision, goals, and objectives, the following are CVC's governing principles adopted from CVC's Strategic Plan Update (2008), and guide implementation of the policies contained in this document:

- Recognize the inextricable link between human health and the natural environment;
- Maintain a watershed-scale perspective and consider the implications of cumulative actions on the *watershed* as a whole;
- Recognize that healthy communities require a sustainable balance between economic, social and environmental priorities, interests and uses;
- Take a preventative, proactive and integrative approach to *watershed* management based on the principles of adaptive environmental management. Where there is uncertainty, risk or irreversibility we are cautious and will err on the side of protecting the environment;
- Make decisions and take actions based on our accumulated knowledge, skills and experience. We work to continually improve our understanding of the *watershed* and how it functions;
- Subscribe to the belief that protection and restoration of *watershed* health is a broadly shared responsibility. We implement *watershed* management by working with partners and engage clients around shared interests and objectives. We strive for excellence in those relationships;
- Pursue practical approaches to the management of water, other natural resources and natural heritage based on the application of sound science, creativity and innovation;
- Promote ecologically sustainable development designs, practices, lifestyles and behaviour within urban and rural communities;
- Ensure that CVC's conservation areas are primarily managed for natural heritage protection, secondarily for appreciation, and thirdly for recreation opportunities; and
- We have an important role in climate change mitigation and adaptation throughout CVC's jurisdiction.

4

CVC'S APPROACH TO WATERSHED PLANNING

Fundamental to maintaining a healthy *watershed* is ensuring the diversity and connectivity of natural features and areas, as well as the *ecological functions*, *hydrologic functions* and biodiversity of natural systems are maintained, restored, and where possible, improved. Credit Valley Conservation implements a natural heritage systems approach to *watershed* planning recognizing the dynamic interrelationships between ecosystem functions and human activities.

4.1 Watershed Planning

Watershed planning provides guidance for land use activities recognizing the study area's biophysical characteristics on a *watershed* wide level. *Watershed* planning is based on the fact that the hydrologic cycle is the main pathway that integrates physical, chemical and biological processes. Through CVC's experiences, this approach has proven to be the most effective method to manage *natural heritage systems*, and is consistent with the PPS which states "planning authorities shall protect, improve or restore the *quality and quantity of water* by using the *watershed* as the ecologically meaningful scale for planning." (MMAH 2005)

Watershed plans typically include all of the lands drained by a major river and its tributaries, and often cross political boundaries. Generally, a *watershed* plan is a document describing actions that should be taken to achieve a desired degree of protection, restoration and enhancement of ecosystem functions within an entire *watershed*. This includes natural heritage protection and natural hazard and water management related strategies. In this regard, *watershed* plans are typically developed cooperatively by government agencies and stakeholders as a guide for managing planning related activities that may affect *natural heritage systems* and their functions.

Subwatershed studies include all of the land within one tributary of a *watershed*, however, the study boundaries may be further localized to municipal or planning area boundaries. Generally, subwatershed studies examine and make recommendations on three main components: natural heritage protection and natural hazard management; functional servicing and stormwater management; and implementation and monitoring. Some of the key principles for subwatershed studies include developing an understanding of existing conditions and a long term vision for the ecosystem within the study area, to ensure long term cumulative impacts are avoided and to support an adaptive environmental management approach to development.

4.2 Natural Heritage Systems

A *natural heritage system* encompasses connected ecological systems made up of natural features and areas such as *valleylands* (confined and unconfined), *environmentally significant areas (ESAs)*, *areas of natural and scientific interest (ANSIs)*, *woodlands*, *wildlife habitat*, *wetlands* and *watercourses* among others. In addition to this, the PPS identifies that *natural heritage systems* "...can include lands that have been restored and areas with the potential to be restored to a natural state." (MMAH 2005)

As such, natural features and areas making up the *natural heritage system* may also include

components in need of restoration to improve connectivity between and among adjacent natural features and areas, and/or to maximize the ecological integrity of the system. Linkages are also a key component of a *natural heritage system* to accommodate the natural movement patterns of plants and animals necessary for biodiversity conservation and long term viability. Generally, the nature of linkages is dependant on the functions the connections are designed to perform. The identification and design of linkages is also based on a precautionary approach, whereby their identification and design considers the requirements of more demanding species as appropriate, accounting for the need of natural cover and the surrounding landscape matrix.

4.3 A Natural Heritage Systems Approach to Watershed Planning

Taking a natural heritage systems approach represents an understanding that individual natural features and areas have strong ecological linkages among themselves, which need to be maintained for a healthy and sustainable ecosystem. Traditionally, conservation approaches to *watershed* planning focused on protecting individual natural features and areas, often resulting in a failure to adequately protect the ecological integrity of the *watershed* as a whole.

It is now commonly accepted that protecting natural features and areas such as *woodlands* or *wetlands* alone is insufficient to maintain the critical ecosystem functions they provide. In addition, a natural heritage systems approach to *watershed* planning is consistent with the PPS which states “the diversity and connectivity of natural features in an area, and the long-term *ecological function* and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and groundwater features”. (MMAH 2005)

Within CVC’s jurisdiction, over half of all species are dependent on multiple habitats for completion of their life cycles. Maintaining a diversity of natural features and areas, integrating land and water related functions, and maintaining or restoring natural linkages are critical for ensuring long term ecosystem health. In addition to this, a natural heritage systems approach to *watershed* planning facilitates the co-ordination of ecosystem-based and watershed-based issues, including natural hazard management, realizing that important ecological linkages extend beyond property, planning area and political boundaries.

Credit Valley Conservation has divided the jurisdiction into 25 subwatersheds that are either major tributaries to the Credit River, or associated *watercourses* draining directly into Lake Ontario (see Figure 3). The purpose for identifying these subwatersheds was to provide an area of sufficient size for evaluating information, monitoring change and targeting preservation and restoration. Studies and monitoring activities developed at the subwatershed level are used to inform our understanding of the entire jurisdiction, helping to direct planning and development activities with consideration of impacts at the local and regional levels, including cumulative impacts.

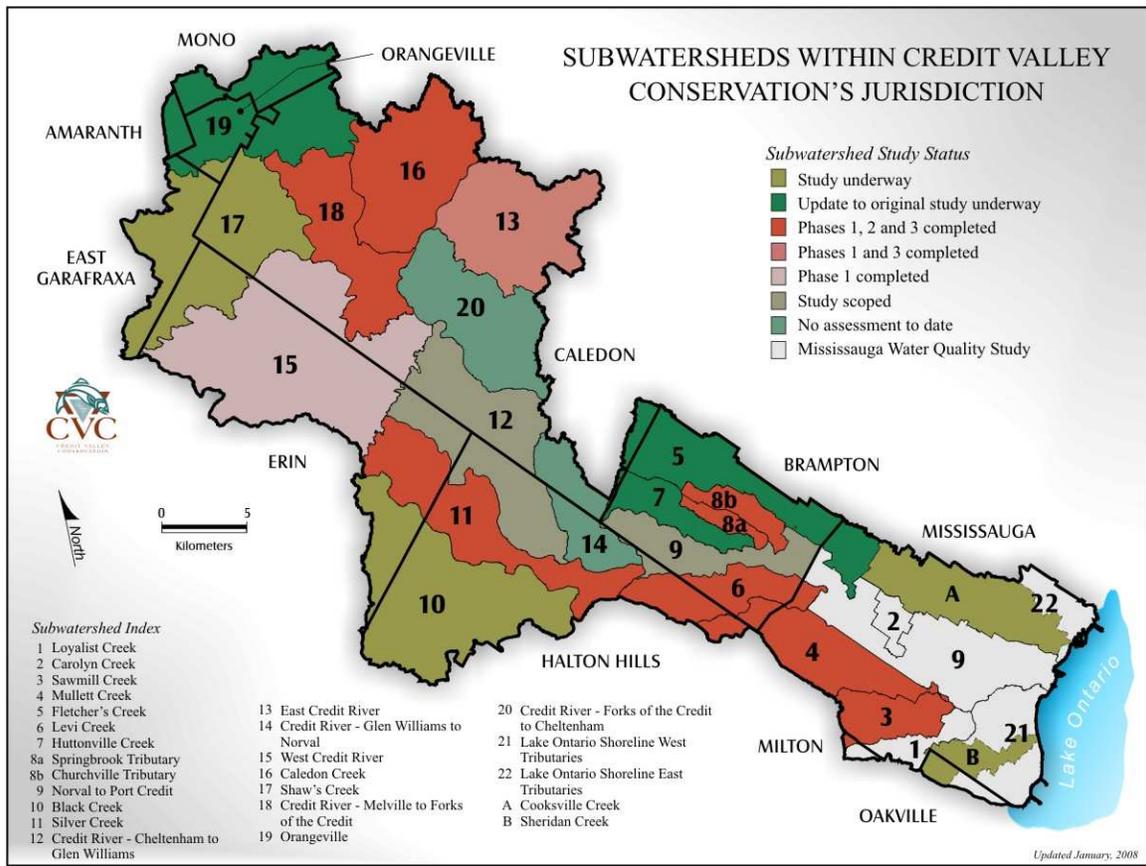


Figure 3. Credit River Watershed map illustrating subwatersheds.

Depending on the location and extent of planning proposals, CVC recommends municipalities or applicants to prepare *comprehensive environmental studies* or *technical reports* such as subwatershed studies, environmental implementation reports, environmental management plans, stormwater management reports, functional servicing reports and environmental impact studies to help guide land use decisions.

It is important to note *watershed* planning is not a static process. Where *comprehensive environmental studies* or *technical reports* have been completed, monitoring and evaluation exercises should be continually undertaken to review and update the studies, as appropriate.

5 ENVIRONMENTAL PLANNING AREAS OF INTEREST

Credit Valley Conservation has a number of areas of interest pertaining to planning and development activities. These areas of interest relate to CVC's mandate, role, and responsibilities as described in Chapter 2, and have been categorized into four policy themes:

- i. Watershed Planning (Section 5.1)*
- ii. Sustainable Water Management and Infrastructure Planning (Section 5.2)*
- iii. Natural Heritage (Section 5.3)*
- iv. Natural Hazards (Section 5.4)*

This chapter provides the objectives and guiding policies for the four policy themes listed above. These objectives and guiding policies relate to the overall vision, goals, objectives and principles identified in Chapter 3 and provide additional guidance for CVC's review of applications submitted under the *Planning Act*, Section 28 of the *Conservation Authorities Act* and other legislation CVC may be responsible for or requested to provide comment on. In addition, Sections 5.3 and 5.4 provide detailed descriptions and general policies for *hazardous land* and natural feature and area types that apply to the plan review, plan input and regulatory programs of CVC.

Chapters 6 (Policy Implementation – Plan Review and Plan Input) and 7 (Policy Implementation – Ontario Regulation 160/06) provide additional policies specific to CVC's plan review, plan input and regulatory functions.

5.1 Watershed Planning

A *watershed* is an integrated system of human and natural processes that must be managed in a holistic and balanced way to achieve a healthy sustainable ecosystem. As identified in the previous chapter, using the *watershed* as the ecologically meaningful scale for planning has proven to be the most effective method to manage the *natural heritage system* within CVC's jurisdiction. In this regard, CVC advocates for an integrated and comprehensive approach to planning and managing natural hazards and natural resources, features, areas and systems, including their functions, consistent with direction provided by the PPS.

5.1.1 Policy Objectives

- To protect, restore and enhance the *natural heritage system*, including its *ecological functions* and *hydrologic functions*, recognizing linkages between and among natural features and areas.
- To ensure an integrated and comprehensive approach to natural heritage, natural hazard and water management related strategies at appropriate management scales.
- To avoid potential and cumulative impacts of planning and development related

activities and decisions on all components of the *natural heritage system*.

5.1.2 Guiding Policies

- a) CVC will encourage efficient land use and development patterns, including *intensification* and *redevelopment* that allows for the efficient use of land, infrastructure and public services to aid in protecting, restoring and enhancing the features and functions of the *natural heritage system* within CVC's jurisdiction.
- b) CVC will recommend the preparation of *comprehensive environmental studies* that follow a natural heritage systems approach to *watershed* planning and are in support of adaptive environmental management.
- c) CVC will encourage planning and development related decisions to be guided by *comprehensive environmental studies* based on logical natural boundaries and management units capable of characterizing cumulative impacts *watershed* wide.
- d) CVC will recommend updates to *comprehensive environmental studies* to address relevant current legislation and policy, planning initiatives, advancements in science and information gained through monitoring and best practices, where appropriate.

5.2 Sustainable Water Management and Infrastructure Planning

Credit Valley Conservation supports developing communities in a sustainable manner. In particular, CVC promotes sustainable community design including growth management activities and sustainable water management and infrastructure planning. In this respect, CVC's review of planning and development proposals includes reviewing stormwater management and servicing strategies, as well as the design and implementation of infrastructure to ensure natural features, areas and systems, including their *ecological functions* and *hydrologic functions*, are not adversely affected.

In addition to regulatory requirements, CVC provides planning and technical advisory services to planning authorities in an effort to promote and coordinate sustainable water management and infrastructure planning practices from an ecological and watershed health perspective.

5.2.1 Policy Objectives

- To protect the *natural heritage system* from potential adverse impacts of *development (1, 2)* and *site alteration* as it relates to the design and installation of public and private water, waste water, stormwater and transportation infrastructure.
- To mitigate the potential adverse impacts of *development (1, 2)* and *site alteration* using *sustainable management practices* recognizing the unique nature of the physiographic regions within CVC's jurisdiction.
- To promote water management and infrastructure planning activities that protect,

restore and enhance the natural hydrologic cycle and reduce or eliminate risks to human life and property damage due to *flood hazards, erosion hazards and pollution*.

5.2.2 Guiding Policies

- a) CVC will encourage the preparation of *comprehensive environmental studies* which provide a natural heritage systems approach to assessing water management and infrastructure planning, and include provisions to protect, restore and enhance water quality and water quantity including water balance, stormwater management and the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land*.
- b) CVC will recommend that stormwater, transportation, servicing and all other infrastructure proposals appropriately consider existing natural features and areas, such that their *ecological functions* and *hydrologic functions* are maintained, restored or, where possible, improved.
- c) CVC will encourage the efficient and sustainable use of water resources, including practices for water conservation, managing the hydrologic cycle and enhancing the water quality of *surface water features* and *groundwater features*.
- d) CVC will recommend the use of *sustainable management practices* including the concepts of low impact development, sustainable (green) technologies and best practices for sediment and erosion control to address water quantity, water quality and *pollution* prevention for *surface water features* and *groundwater features*.
- e) CVC will provide recommendations for sustainable water management and infrastructure planning based on *Provincial standards* and *CVC standards*, consistent with the recommendations of the CVC supported *comprehensive environmental study* for the area.

5.3 Natural Heritage

CVC's natural heritage systems approach to *watershed* planning is based on maintaining a healthy, diverse and connected ecosystem. The key natural features and areas for which diversity and connectivity are to be protected, restored and enhanced are typically identified as core areas of the *natural heritage system*. Generally, considerations for the identification of core areas are based on the principles of conservation biology and landscape ecology and include characteristics such as size, shape, proximity, linkage functions, diversity, persistence and uncommon characteristics. Core areas often include natural features and areas such as *valleylands, woodlands, wetlands, habitat of endangered species and threatened species and fish and wildlife habitat*.

The provision of linkages among natural features and areas is fundamental to a natural heritage systems approach and is necessary to mitigate impacts of fragmentation. It must continue to be recognized that isolated and/or smaller natural features and areas not identified as core may provide critical functions to the overall health and sustainability of the *natural heritage system*, including the lands adjacent to it. Additionally, it is important to recognize that the *natural heritage system* may include lands that have been restored and areas

with the potential to be restored to a natural state.

In the absence of a CVC Board approved *natural heritage system* for CVC's jurisdiction, the *natural heritage system* policies in this document have been designed to be general in nature following a more traditional natural feature based systems approach to *watershed* planning. However, provisions are included for maintaining, restoring and enhancing biodiversity, connectivity, and sustaining *ecological functions* and *hydrologic functions* of natural features and areas. It is the intent of CVC to update this document once the *natural heritage system* for CVC's jurisdiction has been completed.

5.3.1 Policy Objectives

- To protect, restore and enhance the biodiversity, connectivity, *ecological functions* and *hydrologic functions* of natural features, areas and systems throughout CVC's jurisdiction.
- To ensure natural features, areas and systems, including their *ecological functions* and *hydrologic functions*, are appropriately protected from potential adverse impacts of *development (1, 2)* and *site alteration*.
- To promote a natural heritage systems approach to watershed planning that includes protecting the environment and public health and safety.

5.3.2 Guiding Policies

- a) CVC will encourage all planning and permit applications to achieve an *ecological gain*. Where it has been demonstrated an *ecological gain* is not feasible, CVC will promote the principle of *no-net-loss* of *ecological functions* and *hydrologic functions*.
- b) CVC will promote decision-making for *watershed* planning based on a natural heritage systems approach and in consideration of the potential cumulative effects, including precedent, from individual activities and decisions.
- c) CVC will recommend that appropriately sized *buffers* are maintained adjacent to natural features and areas to protect, restore or enhance their *ecological functions* and *hydrologic functions*.

5.3.3 Natural Features and Areas

The natural features and areas identified in this section are those affected by both CVC's regulatory, plan input and plan review programs. These natural features and areas may be protected under provincial and municipal planning policies as well as requirements under Section 28 of the *Conservation Authorities Act*. *Valleylands*, *woodlands*, *wetlands*, *watercourses*, life science *ANSIs* and *ESAs* are among those natural features and areas to be considered for conservation. It is important to note these features and areas are interrelated and as a result, impacts on one feature and area are likely to impact others.

In addition, there is potential for *development (1, 2)* and site alteration to adversely impact

adjacent lands to natural features and areas which may affect the ecological sustainability of the feature or area. The concept of maintaining undisturbed *buffers* between areas proposed for development activities and natural features and areas is well established. Generally, *buffers* are needed considering factors such as:

- Provisions for access and maintenance;
- Attenuation of pollutants;
- Maintaining existing *ecological functions* and *hydrologic functions*;
- Addressing external and unpredicted factors not considered in models or otherwise anticipated; and/or
- Providing areas for future potential enhancements.

Subsequently, it is also important to maintain *buffers* adjacent to natural features and areas such that potential adverse impacts of *development (1, 2)* and *site alteration* are avoided or mitigated to ensure a healthy and sustainable *natural heritage system*.

5.3.3.1 Valleylands

Valleylands provide important ecological, economic and social functions that contribute to the overall sustainability of the *natural heritage system* within CVC's jurisdiction and beyond. They provide essential *ecological functions* and linkages that facilitate the maintenance of biodiversity and movement and dispersal of flora and fauna over short and long distances. *Valleylands* are shaped and re-shaped by natural processes such as flooding and erosion. The degree and frequency with which the physical change occurs in these systems depends on the interaction of a number of interrelated factors including hydraulic flow, channel configuration, sediment load in the system, storage and recharge functions, extent and types of vegetation present and the stability of banks, bed and adjacent slopes.

The relationship between surface and groundwater and the linkages, interactions and interdependence of aquatic environments with terrestrial environments within, and adjacent to, *valleylands* supply *ecological functions* and *hydrologic functions* critical to sustaining *watershed* ecosystems. Given that ecological sustainability is based on the dynamic nature of these systems, it is essential they be allowed to function in a natural state.

Credit Valley Conservation identifies *valleylands* under two distinct situations:

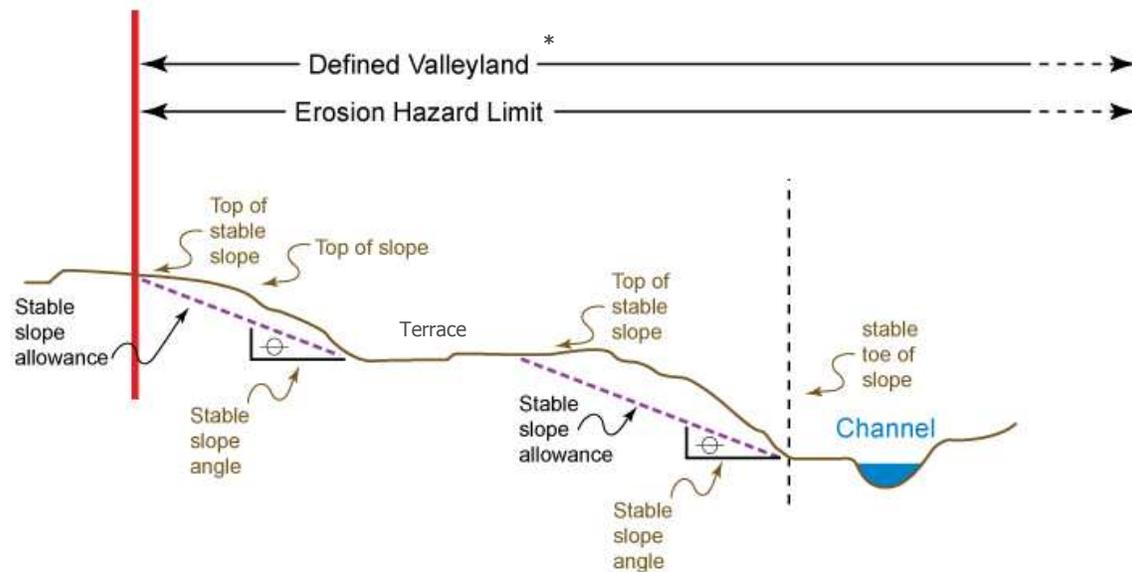
- Where the *valleylands* are defined; or
- Where the *valleylands* are undefined.

Defined Valleylands

Defined *valleylands* are ones in which the physical presence of a valley corridor containing a river or stream channel, which may or may not contain flowing water, is visibly discernable

(i.e. valley walls are clearly definable) from the surrounding landscape by either field investigations, aerial photography or map interpretation, and the valley slopes are greater than or equal to 2 metres in height. Figure 5 illustrates the typical cross-section of a defined *valleyland*.

At a minimum, the limit of a defined *valleyland* is determined by the methodology used to map defined *valleylands* as described in Section 5.4.4.



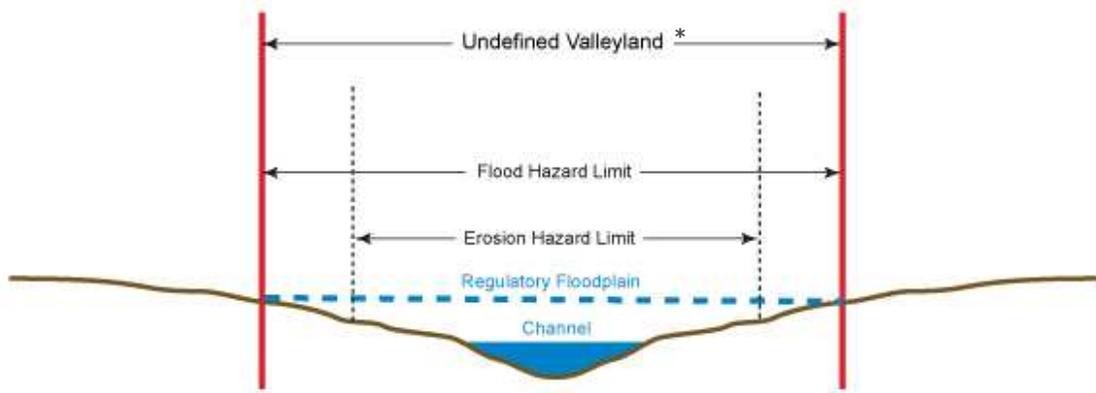
* Valleyland slopes are greater than or equal to 2 metres in height.

Figure 5. Typical cross-section of a defined valleyland

Undefined Valleylands

Undefined *valleylands* are ones in which a river or stream is present but there is no discernable valley slope or bank that can be detected from the surrounding landscape. Generally, these undefined features are found in flatter or gently rolling landscapes and may be characterized as headwater areas. In addition, undefined *valleylands* include those features exhibiting the characteristics of defined *valleylands* but the valley slopes are less than 2 metres in height. Figure 6 illustrates the typical cross-section of an undefined *valleyland*.

The limit of an *undefined valleyland* is determined by the greater of the *riverine flood hazard* or the *riverine erosion hazard* as described in Sections 5.4.3 and 5.4.4 respectively.



* Includes defined valleylands with slopes less than 2 metres in height.

Figure 6. Typical cross-section of an undefined valleyland.

GENERAL POLICIES

- a) The exact limits of *valleylands* will be determined through site specific field investigations and *technical reports* where required, in accordance with Sections 5.4.3 and 5.4.4. These limits will be established and confirmed to the satisfaction of CVC and the affected planning authority as appropriate.
- b) CVC will identify *valleyland* significance in accordance with the appropriate planning authority policies and criteria. Where the affected planning authority does not have established criteria CVC will identify *valleyland* significance in accordance with *Provincial standards*.
- c) CVC will not support planning approvals for *development (2)* and *site alteration* within *valleylands*, except in accordance with the policies in Chapters 6.
- d) CVC will not permit *development (1)* within *valleylands* in *regulated areas*, except in accordance with the policies in Chapter 7.

5.3.3.2 Environmentally Significant Areas

Environmentally Significant Areas (ESAs) are places within CVC's jurisdiction where ecosystem features or functions warrant special protection due to their physiographic, biological, ecological, geological, hydrologic and/or aesthetic characteristics at a watershed scale. These may include, but are not limited to, rare or unique plant or animal populations or habitats, plant or animal communities, concentrations of natural features and unique *ecological functions* and *hydrologic functions*. Within CVC's jurisdiction, *ESAs* are identified by CVC.

GENERAL POLICIES

- a) The exact limits of *ESAs* will be determined through site specific field investigations and *technical reports* where required. These limits will be established and confirmed to the satisfaction of CVC and affected planning authority as appropriate.

- b) CVC will not support planning approvals for *development (2)* and *site alteration* within *ESAs*, except in accordance with the policies in Chapters 6.
- c) CVC will not permit *development (1)* within *ESAs* in *regulated areas*, except in accordance with the policies in Chapter 7.

5.3.3.3 Areas of Natural and Scientific Interest (ANSIs) – Life Science

Life science *ANSIs* represent a range of unique provincially and regionally significant ecological characteristics that should be protected for science and educational purposes as identified by the Province. Life science *ANSIs* include a broad range of biological communities and environments that play an important role in the protection of natural heritage and biodiversity. Typically, life science *ANSIs* include forests, *valleylands*, *wetlands* and other natural features and areas that tend to correspond with features such as *significant woodlands*, *significant valleylands*, *significant wetlands* and *significant wildlife habitat*.

GENERAL POLICIES

- a) The exact limits of life science *ANSIs* are to be determined by the Ministry of Natural Resources.
- b) CVC will not support planning approvals for *development (2)* and *site alteration* within provincial and regional life science *ANSIs*, except in accordance with the policies in Chapters 6.
- c) CVC will not permit *development (1)* within provincial and regional life science *ANSIs* in *regulated areas*, except in accordance with the policies in Chapter 7.

5.3.3.4 Woodlands

Woodlands are an integral component of the *natural heritage system* and provide ecological and hydrologic benefits such as erosion prevention, attenuation of pollutants, hydrological and nutrient cycling, *wildlife habitat* and provisions for biodiversity. *Woodlands* include treed areas, woodlots or forested areas whether they are naturally occurring or managed plantations and vary in level of significance at the local, regional and provincial levels.

GENERAL POLICIES

- a) The exact limits of *woodlands* will be determined through site specific field investigations and *technical reports* where required. These limits will be established and confirmed to the satisfaction of CVC and the affected planning authority as appropriate.
- b) CVC will identify *woodland* significance in accordance with the appropriate planning authority policies and criteria. Where the affected planning authority does not have established criteria, CVC will identify woodland significance in accordance with *Provincial standards*.

- c) CVC will promote maintaining existing tree cover and vegetation associated with the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land*.
- d) CVC will not support planning approvals for *development (2)* and *site alteration* within *significant woodlands*, except in accordance with the policies in Chapters 6.
- e) CVC will not permit *development (1)* within *significant woodlands* in *regulated areas*, except in accordance with the policies in Chapter 7.

5.3.3.5 Wetlands

Wetlands are a critical component of the *natural heritage system* and provide important *ecological functions* and *hydrologic functions* including habitat for wildlife, water purification, surface water and groundwater source and recharge area, climate change mitigation, shoreline erosion protection, moderation of the hydrologic cycle and flood attenuation. *Wetlands* may be found in both the terrestrial and aquatic environments and includes swamps, marshes, bogs and fens.

GENERAL POLICIES

- a) The exact limits of *provincially significant wetlands* are to be confirmed by the Ministry of Natural Resources.
- b) The limits of *other wetlands* will be determined through site specific field investigations and *technical reports* where required. These limits will be established and confirmed to the satisfaction of CVC and the affected planning authority as appropriate.
- c) CVC will not support planning approvals for *development (2)* and *site alteration* within *provincially significant wetlands*.
- d) CVC will not permit *development (1)* within, or *interference* with, *provincially significant wetlands*.
- e) CVC will not support planning approvals for *development (2)* and *site alteration* within *other wetlands* except in accordance with the policies in Chapters 6.
- f) CVC will not permit *development (1)* within, or *interference* with, *other wetlands*, except in accordance with the policies in Chapter 7.

5.3.3.6 Watercourses and Fish Habitat

Watercourses are dynamic systems that include complex processes constantly undergoing change. The health of *watercourses* is integral to the health of a *watershed* as they provide key *ecological functions* and *hydrologic functions* such as *fish habitat* and habitat for wildlife, sediment and nutrient transport and deposition, transfer media for energy and organisms, source of water supply and important contributions to the hydrologic cycle.

The structure and functions of *watercourses* are influenced by channel morphology, sediment characteristics and the nature of the riparian vegetation. Each of these aspects is interrelated

and as a result, impacts on one are likely to impact others. Changes to channel morphology reduce the ability of the *watercourse* to process sediment causing erosion and changing the amount or size of bed load being moved. Loss of riparian vegetation results in more pollutants and run-off being transferred from the land to the water, impacting water quality and flooding downstream reaches. In addition, loss of riparian vegetation or change to source of water supply can have impacts to the thermal regime of the watercourse. These changes degrade near shore and aquatic habitat and impair the *watercourse* for use by *fish*, wildlife, humans and other organisms.

GENERAL POLICIES

- a) The determination and limits of a *watercourse* will be determined through site specific field investigations and *technical reports* where required, to the satisfaction of CVC and affected planning authority as appropriate.
- b) When reviewing *development (1, 2)* and *site alteration* applications that may cause a harmful alteration, destruction or disruption to *fish habitat* the project shall be referred to Fisheries and Oceans Canada (DFO) in accordance with the approved agreement between agencies.
- c) CVC will not support *development (2)* and *site alteration* within the existing channel of a *watercourse*, except in accordance with the policies in Chapter 6.
- d) CVC will not permit the straightening, changing, diverting or *interference* with the existing channel of a *watercourse*, except in accordance with the policies in Chapter 7.

5.4 Natural Hazards

Credit Valley Conservation implements natural hazard management through review of *Planning Act* applications, permit applications pursuant to Ontario Regulation 160/06 and other legislation CVC may be responsible or requested to provide comment on such as Niagara Escarpment Commission applications and Environmental Assessment proposals. Natural hazard management involves planning for the risks associated with naturally occurring processes such as *flood hazards*, *erosion hazards*, *dynamic beach hazards* and other *hazardous land*.

These risks include the potential for loss of life, property damage and social disruption as well as environmental impacts. Reducing the impacts of natural hazards to prevent or eliminate these risks is the key goal and is based on four main components:

- Prevention of new development located within areas subject to potential loss of life and property damage from natural hazards;
- Protection of existing development from natural hazards through implementation of structural and non-structural mitigation measures, including the acquisition of lands prone to natural hazards;

- Emergency Response and Recovery Measures to evacuate residents and prepare mitigation measures through flood forecasting and warning systems, including disaster relief; and
- Co-ordination between natural hazard management and planning and development related activities to ensure decision makers are well informed.

Since it is typically not possible to eliminate the threats of natural hazards, managing them is based on a risk management approach. This approach recognizes there is always a risk associated with natural hazard processes and establishes an appropriate level of risk for a community to be exposed to. The minimum standards for acceptable levels of risk to the general public are set by the Province.

5.4.1 Policy Objectives

- To prevent, eliminate or minimize the risks to life and property caused by *flood hazards, erosion hazards, dynamic beach hazards* and other *hazardous land*.
- To ensure *development (1, 2)* and *site alteration* does not create new hazards or aggravate existing *hazardous land*.
- To ensure potential adverse impacts to natural features, areas and systems are considered, as appropriate, when determining the implications of *development (1, 2)* and *site alteration* on areas containing *hazardous land*, including mitigation and remediation works.
- To promote land use and management practices that prevent, eliminate or minimize the risks to life and property caused by *hazardous land*, taking a proactive and solution oriented approach to natural hazard management.

5.4.2 Guiding Policies

- a) CVC will ensure that a comprehensive approach to natural hazard management is followed for all *development (1, 2)* and *site alteration* applications, considering factors such as risks to life and property, economic feasibility, upstream and downstream impacts, social impacts and cumulative impacts as well as impacts to natural features and areas, including their *ecological functions* and *hydrologic functions*.
- b) CVC will ensure that *development (1, 2)* and *site alteration* does not occur within areas that would be rendered inaccessible to people and vehicles during events associated with *hazardous land*, unless it has been demonstrated that the site has *safe access* appropriate for the nature of the *development (1, 2)* and *hazardous land*.
- c) CVC will ensure that *hazardous land* limits are based on the natural state of the area without the use of mitigation or remediation works, unless the proposed works are consistent with the recommendations of a *comprehensive environmental study* for the area, to the satisfaction of CVC. Any proposed works not consistent with a *comprehensive environmental study* for the area must be addressed through an amendment to the study.

- d) CVC will promote mitigation and remediation works for existing *development (1, 2)* within *hazardous land* through the preparation and review of a *comprehensive environmental study*.
- e) CVC will be consistent with *Provincial standards* when determining the limits and extent of lands containing *hazardous land*.

5.4.3 Riverine Flood Hazards

In Ontario, storm-centred events, flood frequency based events or an observed event are used to determine the extent of the *flood hazard limit*. Credit Valley Conservation manages lands containing *flood hazards* within CVC's jurisdiction based on the greater of the regional storm event as identified by the Province (Hurricane Hazel) or the *one hundred year flood*. The flood determined through this calculation is the Regulatory Flood and defines the extent of the *riverine flood hazard*.

Credit Valley Conservation applies and recommends various policy approaches for managing *flood hazards* within the CVC's jurisdiction as follows:

One Zone Concept – unless determined to be appropriate by the affected municipality and identified through a *comprehensive environmental study* approved by the relevant agencies, CVC will apply a *one zone concept* to *floodplain* management based on the regulatory flood standard, in accordance with *Provincial standards*. In a *one zone concept* the entire area within the *flood hazard limit* is considered to be one management unit, and is referred to as the *floodway* (see Figure 6). The *one zone concept* is the most restrictive and effective way to manage *flood hazards* from a risk management perspective.

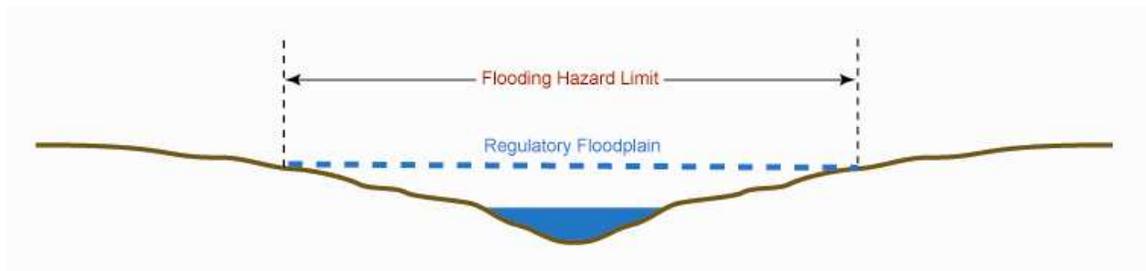


Figure 7. Flood Hazard Limit for One Zone Policy Approach.

Two Zone Concept – where the affected municipality has determined it appropriate to apply a two zone concept and a *comprehensive environmental study* has been approved by the relevant agencies, CVC will apply a *two zone concept* to *floodplain* management in accordance with *Provincial standards* and the approved municipal *two zone concept* policies. The *two zone concept* separates the *floodplain* into two main components (see Figure 7):

- i. the *floodway* - the portion of the *floodplain* where *development (1, 2)* and *site alteration* would cause a danger to public health and safety or property damage. Generally, *development (1, 2)* and *site alteration* will not be permitted within the *floodway*; and
- ii. the *flood fringe* - the portion of the *floodplain* that could potentially be safely developed or altered with no adverse impacts. *Development (1, 2)* and *site alteration*

may be permitted within the *flood fringe*, subject to satisfying specific conditions.

In addition to the above, the *two zone concept* is not intended to be considered on a lot-by-lot basis, but on a subwatershed or major reach basis considering several community related and technical criteria as outlined by the Province including local need, changes in land use, administrative capability, constraints to the provision of services, frequency of flooding, physical characteristics of the valley, impacts of proposed *development (1, 2)* (flood levels at the site, upstream, and downstream), feasibility of *floodproofing*, and ingress and egress.

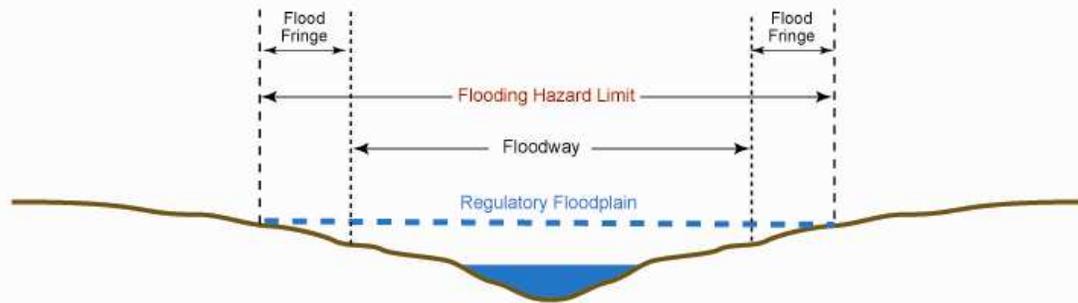


Figure 8. Flood Hazard Limits for Two Zone Policy Approach.

Currently, there are 2 areas within CVC's jurisdiction where the *two zone concept* has been approved for application. This includes specific portions of flood prone areas associated with Mill Creek and Lower Menora Creek in the Town of Orangeville, and specific portions of flood prone areas associated with Cooksville Creek in the City of Mississauga. The site specific policies and mapping for the approved two zone areas in Orangeville and Mississauga are outlined in Appendices B and C respectively.

Special Policy Areas – where the affected municipality has determined it appropriate to apply a *special policy area* and the Ministers of Municipal Affairs and Housing and Natural Resources have approved the designation, CVC will apply the *special policy area* concept, in accordance with *Provincial standards* and the approved municipal *special policy area* policies. Generally, *special policy areas* may be considered where flood remediation strategies and *two zone concept* approaches have been deemed not practical, and adhering to the *one zone concept* will impose significant social and economic hardship to the historically existing floodprone community. It is important to note that *special policy areas* are not intended to facilitate new or intensified *development (1, 2)* and *site alteration* if the community has feasible opportunities for *development (1, 2)* outside of the *floodplain*.

Where a *special policy area* is applied, the relevant agencies agree to reduce Provincial *floodproofing* standards and accept a higher level of risk. Similar to the two zone *floodplain* policy approach, a *special policy area* is not intended to be considered on a lot-by-lot basis, but on a subwatershed or major reach basis considering several community related and technical criteria such as municipal commitment, designated growth centre, *infrastructure* investment, limited alternatives, flow characteristics, frequency of flooding, *floodproofing* measures, upstream and downstream effects, frequency of ice jams, berms and flood walls, and reduced flood standards. Currently, there are no approved *special policy areas* within CVC's jurisdiction.

Floodplain Spill Areas – There are several areas within the CVC's jurisdiction where

floodplain spills occur. Spill areas are portions of the *floodplain* where hydraulic modeling and mapping of the *riverine flood hazard* indicates that flood waters are not physically contained within the *valleyland* and may or may not exit the *watershed* or subwatershed into surrounding lands. It is important to note that floodplain spill areas do not include the flood fringe, regardless of its characteristics such as flood flows and depths. Generally, the depth of flooding in spill areas cannot be readily determined as the flood depths that occur depend on a number of factors such as local and down-gradient topography, storage volume and the amount of spill flow that occurs. In addition, spills typically occur during higher flow rates of the storm event where the volume and depth of flood water is also dependant on the duration of the storm event.

5.4.3.1 General Policies

- a) The limits of the *flood hazard* will be determined through CVC's *floodplain* mapping program in accordance with *Provincial standards*. Where *floodplain* limits for a *watercourse* are required and not available, the applicant is responsible for carrying out the appropriate *technical reports* to the satisfaction of CVC and the affected planning authority, as appropriate.

One Zone Floodplain Policy Approach

- b) A *one zone concept* to *floodplain* management will be applied to all lands containing *riverine flood hazards* within CVC's jurisdiction except where a *two zone concept*, *special policy area* or *floodplain* spill area has been designated by the relevant agencies and affected planning authority, as appropriate.
- c) Where a *one zone concept* is applied, CVC will not permit *development (1, 2)* and *site alteration* within a *floodway*, regardless of whether the area of inundation contains high points of land not subject to flooding, except in accordance with this document and in particular the policies in Chapters 6 and 7.

Two Zone Floodplain Policy Approach

- d) A *two zone concept* to *floodplain* management will be applied where approved by the relevant agencies and affected planning authority, as appropriate, after evaluating the suitability of applying the *two zone concept* based on *Provincial standards*.
- e) Where a *two zone concept* is applied, CVC may permit *development (1, 2)* and *site alteration* in the *flood fringe*, subject to site specific conditions addressing *floodproofing*, vehicular and pedestrian access, natural heritage protection and land use permissions.

Special Policy Areas

- f) A *special policy area* approach will be applied where approved by the Ministries of Municipal Affairs and Housing and Natural Resources after evaluating the suitability of applying the *special policy area* concept based on *Provincial standards*.

- g) Where a *special policy area* approach is applied, CVC may permit *development (1, 2)* and *site alteration* within the *floodway*, subject to specific conditions addressing *floodproofing*, vehicular and pedestrian access, natural heritage protection and land use permissions.

Floodplain Spill Areas

- h) CVC will determine where *floodplain* spill area policies apply, considering the site specific characteristics of the spill in accordance with *Provincial standards*.
- i) Where CVC has confirmed *floodplain* spill area policies apply, CVC may permit *development (1, 2)* and *site alterations* provided there are no off-site impacts and the appropriate *flood hazard* mitigation measures are included such as:
- i. raising the elevation of proposed buildings or structures above the anticipated *floodplain* spill level;
 - ii. raising the lands within the spill location to prevent spilling; and/or
 - iii. provisions for *safe access* are available.

5.4.4 Riverine Erosion Hazards

Credit Valley Conservation determines the extent of *riverine erosion hazards* based on whether or not a *valleyland* is defined or undefined, and whether or not the valley slopes are stable, unstable and subject to toe erosion.

Defined Valleylands Where the Valley Slopes are Stable – the limits of the *erosion hazard* consist of the *valleyland* extending to the *top of stable slope*.

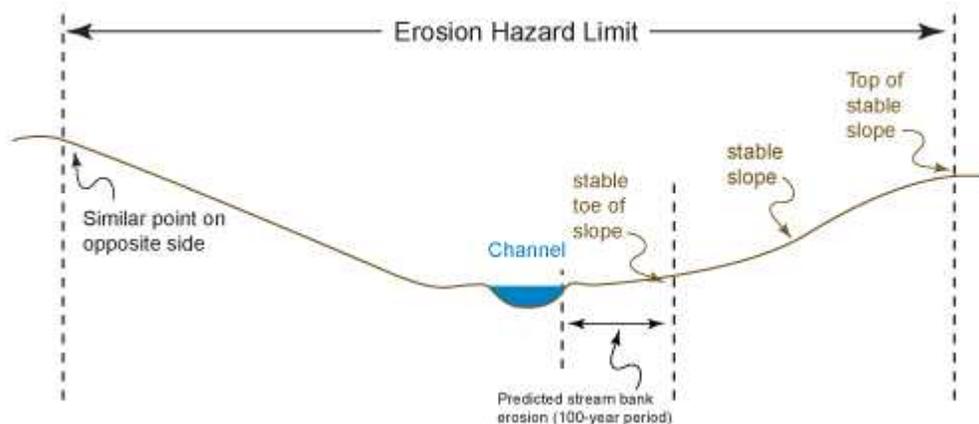


Figure 9. Extent of riverine erosion hazard where the valley slopes are stable.

Defined Valleylands Where the Valley Slopes are Unstable With a Stable Toe – the limits of the *erosion hazard* consist of the *valleyland* extending to the *top of stable slope* projected from the existing *stable toe of slope*.

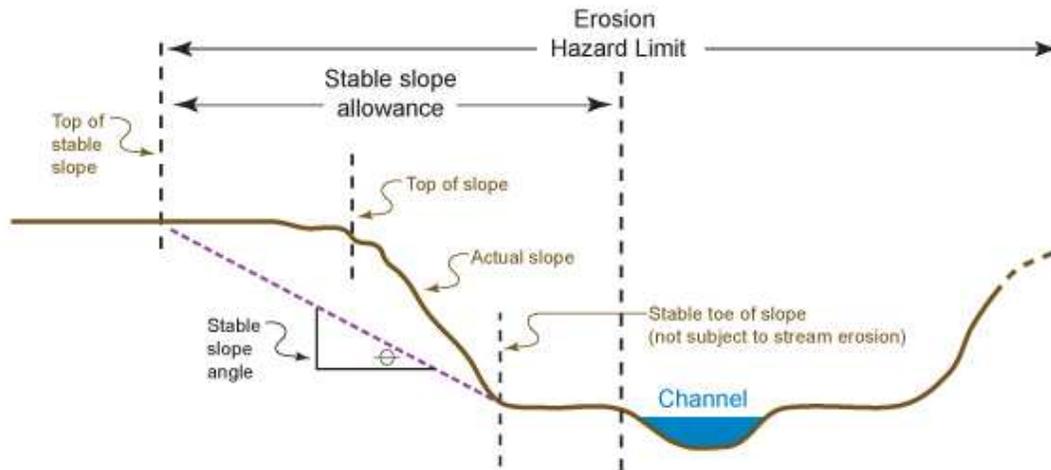


Figure 10. Extent of riverine erosion hazard where the valley slopes are unstable with a stable toe.

Defined Valleylands Where the Valley Slopes are Unstable With Active Toe Erosion – the limits of the *erosion hazard* consist of the *valleyland* extending to the *top of stable slope* projected from the *stable toe of slope*.

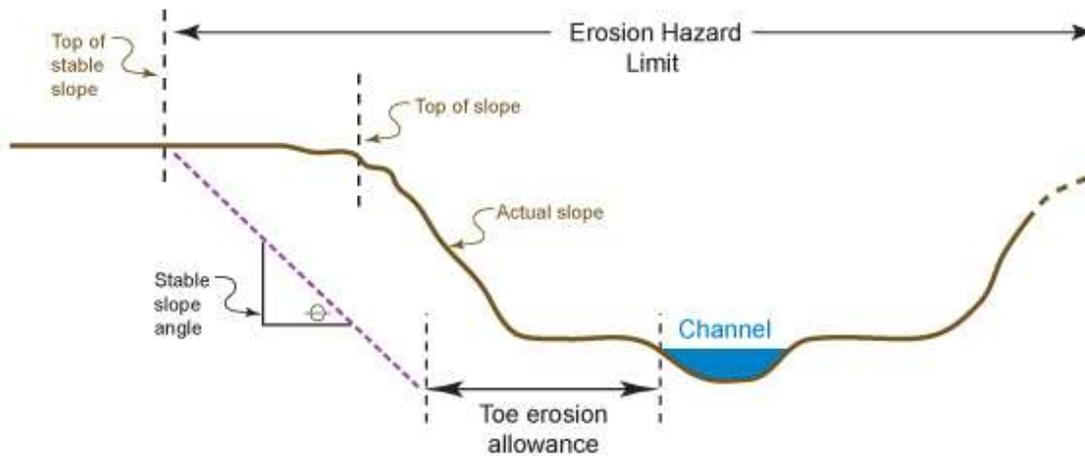


Figure 11. Extent of riverine erosion hazard where the valley slopes are unstable with active toe erosion.

Undefined Valleylands – the limits of the *erosion hazard* consist of the maximum extent of the *meander belt allowance* of the watercourse.

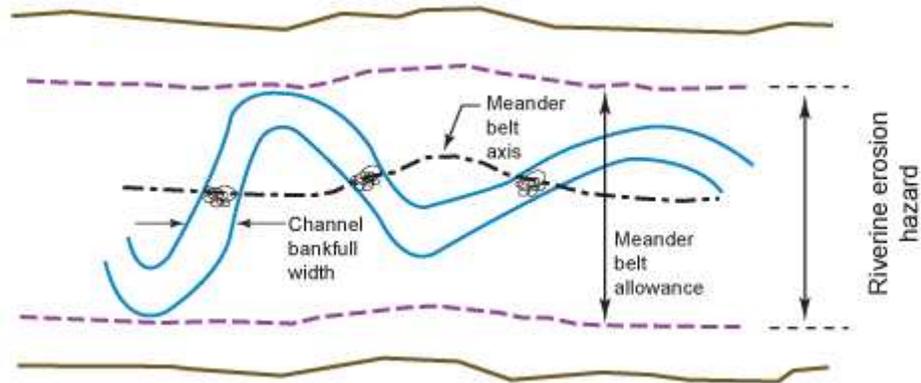


Figure 12. Extent of riverine erosion hazard for undefined valleylands.

5.4.4.1 General Policies

- a) *Erosion hazard* limits will be determined through site specific field investigations and *technical reports* where required. These limits will be established and confirmed to the satisfaction of CVC and affected planning authority as appropriate, where:
 - i. a slope is steeper than 3:1;
 - ii. a slope is greater than or equal to 2 metres in height;
 - iii. there is visible evidence of slope instability or erosion on the site or adjacent slopes as determined by an appropriate professional;
 - iv. *bankfull* flow location of a *watercourse* is within 15 metres of the *valley toe of slope*; and/or
 - v. there is a history of slope instability on the site or adjacent sites or slopes.
- b) CVC will not permit *development (1, 2)* and *site alteration* within the *riverine erosion hazard* limit or *erosion access allowance*, except in accordance with this document and in particular the policies in Chapters 6 and 7.

5.4.5 Lake Ontario Shoreline Hazards

The Lake Ontario *flood hazard*, *erosion hazard*, and *dynamic beach hazard* limits are determined based on information from the most recently approved shoreline hazard plan on a reach basis, based on the following parameters:

Lake Ontario Flood Hazards – flooding from Lake Ontario affects the entire shoreline area. The Lake Ontario *flood hazard* limits consists of:

- i. the *one hundred year flood* level;
- ii. the appropriate allowance for *wave uprush*; and

- iii. the appropriate allowance for other water related hazards.

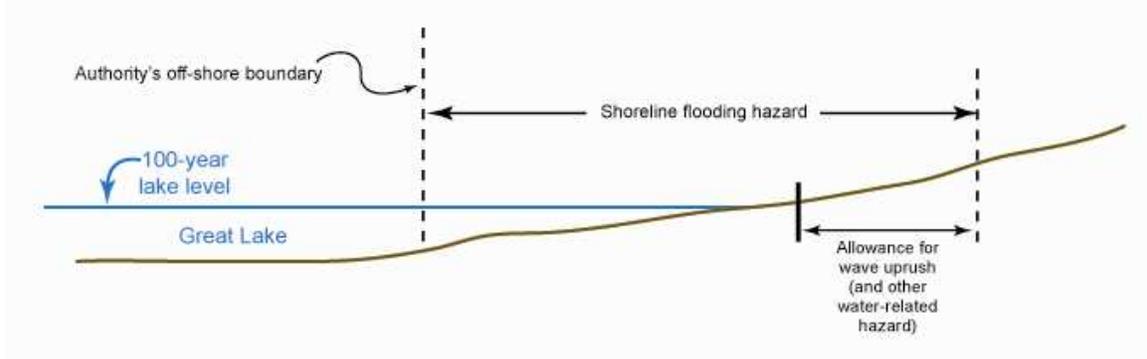


Figure 13. Lake Ontario shoreline flood hazard limits

Lake Ontario Erosion Hazards – the Lake Ontario *erosion hazard* limits are determined by using the *one hundred year erosion rate* in accordance with *Provincial standards*, and consists of the combined effects of:

- i. *toe erosion allowance*; and
- ii. *stable slope allowance* projected from the *stable toe of slope*.

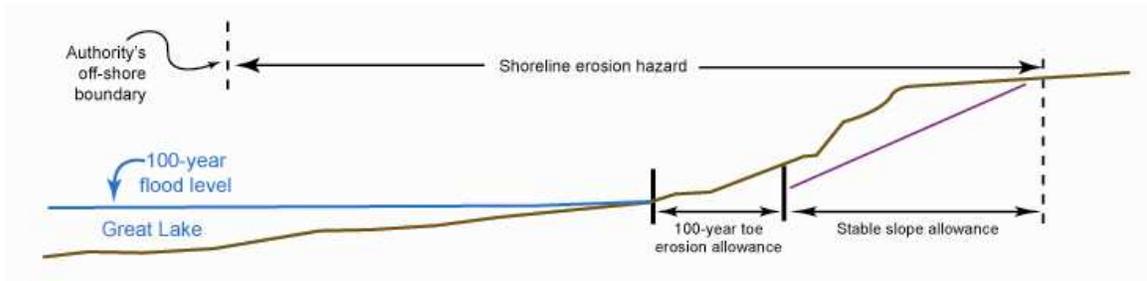


Figure 14. Lake Ontario shoreline erosion hazard limits

Lake Ontario Dynamic Beach Hazards – the Lake Ontario *dynamic beach hazards* are portions of the shoreline where accumulated unconsolidated sediment continuously moves as a result of naturally occurring processes associated with wind, water and changes in the rate of sediment supply. The Lake Ontario *dynamic beach hazard* limits consists of the combined effects of:

- i. *one hundred year flood level*;
- ii. an allowance for *wave uprush*; and
- iii. an allowance for dynamic beach processes.

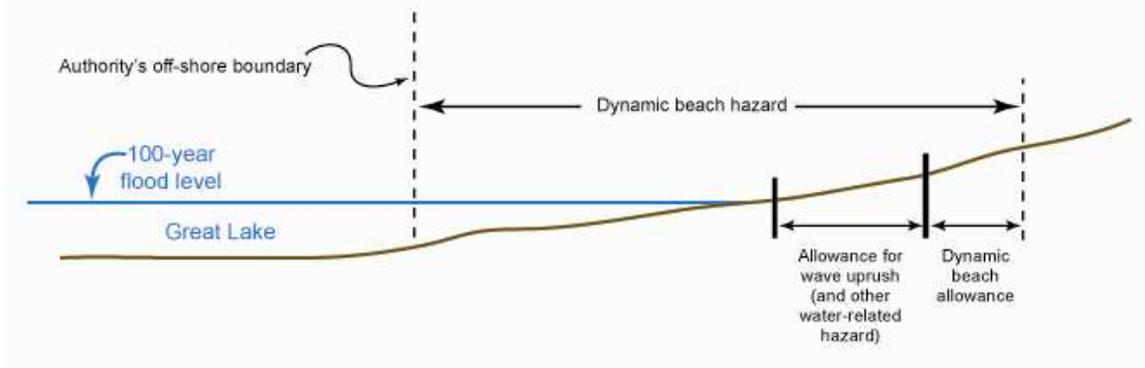


Figure 15. Lake Ontario *dynamic beach hazard* limits

5.4.5.1 General Policies

- a) The *hazardous land* limits along the Lake Ontario shoreline will be determined in accordance with the approved shoreline hazard plan, in consultation with the affected planning authority as appropriate. Where an applicant wishes to make revisions to the plan requirements based on site specific circumstances or updated information, a detailed *technical report* may be undertaken to re-evaluate the *hazardous land* limits, in accordance with *Provincial standards*.
- b) CVC will not permit *development (1, 2)* and *site alteration* within *hazardous land* along the Lake Ontario shoreline, except in accordance with this document and in particular the policies in Chapters 6 and 7.

5.4.6 Hazardous Land Associated with Unstable Soil or Unstable Bedrock

As identified in Chapter 8, *hazardous land* means land that could be unsafe for *development (1, 2)* and *site alteration* because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or unstable bedrock. Where an activity is within unstable soil or unstable bedrock then this section applies, otherwise refer to the appropriate section(s) for other *hazardous land* such as flooding, erosion and dynamic beaches.

Hazardous land associated with unstable soil or unstable bedrock includes, but is not limited to, sensitive marine clays, organic soils and karst topography. Sensitive marine clays (or Leda Clay) are clays that were deposited as sediment during the last glacial period in the Champlain Sea – there are no sensitive marine clays within CVC’s jurisdiction. Organic soils are normally formed by the decomposition of vegetative and other organic materials. A soil is organic when the percentage weight loss of the soil, when heated, is five to eighty percent - peat soils are the most common type of organic soil in Ontario. Karst topography may be present in limestone or dolomite bedrock, and are extremely variable in nature – within CVC’s jurisdiction, karst topography is generally found along the Niagara Escarpment.

Due to the specific nature of sensitive marine clays, organic soils and karst topography it is difficult to accurately identify the location and extent of the hazard without undertaking site specific *technical reports*. In this regard, the potential for catastrophic failures in some areas of

unstable soil and unstable bedrock require site specific studies to determine their characteristics and therefore the appropriate limits of the hazard.

5.4.6.1 *General Policies*

- a) The determination and limits of *hazardous land* associated with unstable soil or unstable bedrock will be determined through site specific field investigations and *technical reports* where required, to the satisfaction of CVC and the affected planning authority as appropriate.
- b) CVC will not permit *development (1, 2)* and *site alteration* within *hazardous land* associated with unstable soil or unstable bedrock, except in accordance with this document and in particular the policies in Chapters 6 and 7.

6 POLICY IMPLEMENTATION – Plan Input and Plan Review

The policies in this chapter provide further guidance for CVC’s review of proposals submitted pursuant to the Planning Act. As outlined in Chapter 1, CVC provides comments to municipalities for proposals submitted under the Planning Act or similar pieces of development related legislation from several perspectives - *watershed* based resource management agency, planning and technical advisory services, proponent and landowner and regulatory responsibilities. In this regard, CVC provides planning and technical advice to assist municipalities in fulfilling their responsibilities associated with natural heritage, water resources and natural hazard management pursuant to the relevant legislation, and to assist in the coordination of regulatory requirements including, but not limited to, Ontario Regulation 160/06, Environmental Assessment Act, Clean Water Act, Niagara Escarpment Planning and Development Act and the Fisheries Act.

Planning related applications circulated to CVC for review and comment typically include:

- Official Plans and Official Plan Amendments;
- Zoning By-laws and Zoning By-law Amendments;
- Plans of Subdivision;
- Plans of Condominium;
- Consents (severances and lot-line adjustments)
- Minor Variances; and
- Site Plans.

This document outlines policies guiding CVC’s plan input, plan review and regulatory programs, providing a consistent and harmonized approach. As there are similarities in issues relevant to each program such as natural hazard management and *conservation of land*, there may be circumstances where policy requirements outlined in Chapters 5, 6 and 7 are alike. Similarly, differences in issues relevant to each program must be recognized resulting in the need for discrete program specific policies consistent with the legislated framework. To reduce duplication and recognize the integrated nature of CVC’s planning and regulatory programs, the policy themes for Chapter 6 were scoped to focus on planning specific activities such as official plan, zoning and lot creation whereas Chapter 7 deals with more site specific circumstances such as *development* proposals on lots of record which may or may not require planning authority approvals.

In general, site plan, variance and similar related applications deal with lots of record and are detail design oriented. As such, CVC staff typically process these applications in coordination with Section 28 permit requirements. Considering this, the policies outlined in Chapter 7 are to be used to guide the review for these types of applications, while being consistent with all other relevant policies throughout this document.

6.1 General Plan Input and Plan Review Policies

- a) CVC will provide recommendations to planning authorities or agencies on Planning Act or similar development related applications in accordance with this document and in particular Chapters 5, 6 and 7 as appropriate.
- b) CVC will be consistent with the Provincial Policy Statement and other relevant legislation when providing recommendations to planning authorities or agencies on Planning Act or similar development related applications.

Long Range Municipal Planning (Plan Input)

- c) CVC will recommend that official plan and zoning by-law documents support a natural heritage systems approach to *watershed* planning, recognizing that comprehensive, integrated, precautionary and proactive land use planning policies and zoning by-law provisions will be required.
- d) In commenting on official plans, zoning by-laws and official plan and zoning by-law amendments, CVC will recommend that the components of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowances* and associated *buffers*, are:
 - i. recognized and protected through appropriate official plan and zoning designations, policies and regulations; and
 - ii. dedicated to an *appropriate public agency* for conservation and risk management purposes as appropriate.
- e) CVC will recommend that planning authorities adopt plans and policies for the management, appropriate use and potential acquisition of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowances* and associated *buffers*.

Development Review (Plan Review)

- f) CVC will provide recommendations consistent with the recommendations of the CVC supported *comprehensive environmental study* for an area when providing comments on applications. Where a *comprehensive environmental study* for an area does not exist, or the existing ones are outdated, site specific *technical reports* may be required for applications determined to be small scale, have limited area available for *development (2)* or limited potential impacts on *hazardous land* and the *natural heritage system*.
- g) CVC will recommend that all planning related applications include the appropriate *technical reports* to assesses potential impacts on the *natural heritage system* within and adjacent to the subject lands on matters such as, but not limited to:
 - i. policy conformity;

- ii. potential impacts on existing *natural heritage features and areas* and *significant natural areas*, including their *ecological functions* and *hydrologic functions*;
 - iii. potential impacts on *hazardous land* and *erosion access allowances*;
 - iv. potential impacts to *surface water features* and *ground water features*;
 - v. site servicing, *infrastructure* and grading;
 - vi. stormwater management;
 - vii. erosion and sediment control; and
 - viii. vegetation preservation and proposed landscaping.
- h) CVC will recommend that planning related applications adjacent to the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowances* and associated *buffers*, maintain existing topography to the maximum extent possible, discouraging the use of structural measures such as retaining walls to meet or maintain existing grades.
- i) CVC will encourage that planning related applications follow a natural approach to landscaping, restoration or enhancement efforts by using native, non-invasive and locally appropriate species. In addition, genetic diversity, vegetated linkages and the incorporation of a variety of native, locally appropriate plant species to support biodiversity and connectivity will be promoted.
- j) CVC will not support modifications to components of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowances* and associated *buffers*, to create additional useable area or to accommodate or facilitate *development (2)* and *site alteration* unless the modifications have been appropriately addressed through an environmental assessment, *comprehensive environmental study* or *technical report*, to the satisfaction of CVC.
- k) Where any component of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land* or *erosion access allowances*, has been altered, damaged or destroyed by unauthorized activities, CVC will not support a boundary adjustment to recognize such activities and will recommend replacement or rehabilitation of the feature(s) and its functions.
- l) CVC recognizes that certain types of *development (2)* and *site alteration* by their nature must locate within the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowances* and associated *buffers*. Considering this, CVC may support such works where they have been addressed through an environmental assessment, *comprehensive environmental study* or *technical report*, completed to the satisfaction of CVC. This may include, but is not limited to, the following:

- i. *infrastructure*, including stormwater management facilities;
 - ii. *development (2)* and *site alteration* associated with passive or low intensity outdoor recreation and education;
 - iii. *development (2)* which by its nature must locate within *hazardous land*;
 - iv. *development (2)* and *site alteration* associated with conservation or restoration projects or management activities following *sustainable management practices*;
 - v. *hazardous land* remediation or mitigation works required to protect existing *development (2)*; and
 - vi. modifications to components of the *natural heritage system* to implement the recommendations of an environmental assessment, *comprehensive environmental study* or *technical report* that has been completed to the satisfaction of CVC.
- m) CVC recognizes there are established communities throughout CVC's jurisdiction that exist within *valleylands*. Under these circumstances, CVC may support infill *development (2)*, *redevelopment* and/or lot creation where the proposal is in conformity with municipal plans and consistent with the appropriate policies in this document considering the site specific circumstances.

6.2 Lot Creation Policies

6.2.1 Development Limits

- a) CVC will not support the creation of new lots through plan of subdivision or consent that extend into, or fragment ownership of, the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land* and *erosion access allowances*, in consideration of the long term management concerns related to risks to life and property and natural heritage protection.
- b) In addition to policy 6.2.1 a), CVC will recommend that lots created through plan of subdivision or consent are set back a minimum of whichever is the greatest of the following *buffers*:
 - i. 10 metres from the limit of *flood hazards*;
 - ii. 10 metres from the limit of *erosion hazards*;
 - iii. 10 metres from the limit of *dynamic beach hazard*;
 - iv. 10 metres from the drip line of *significant woodlands*;
 - v. 10 metres from the limit of *other wetlands*;
 - vi. 30 metres from the limit of *provincially significant wetlands*;

- vii. 30 metres from the *bankfull* flow location of *watercourses*; and/or
- viii. A distance to be determined through the completion of a *comprehensive environmental study* or *technical report*, to the satisfaction of CVC, from the limit of the following:
 - a. *significant wildlife habitat*;
 - b. *significant* habitat of *threatened species* and *endangered species*;
 - c. regionally and provincially significant life science *ANSIs*;
 - d. *ESAs*; and/or
 - e. significant habitat of *species of conservation concern*.
- c) Notwithstanding policy 6.2.1 b), CVC may recommend lots be set back a distance other than those identified in 6.2.1 b) based on the results of a *comprehensive environmental study* or site specific *technical report* completed to the satisfaction of CVC, and consistent with provincial and municipal policy.

6.2.2 Building Envelope

- a) CVC will recommend that *building envelopes* are set back from *fish habitat* a distance to be determined through the completion of a *comprehensive environmental study* or *technical report*, to the satisfaction of CVC.
- b) CVC will not support the creation of new lots unless it is confirmed that a *suitable building envelope* exists within the parcel to be created, consistent with relevant CVC and municipal requirements. This includes sufficient space within the *suitable building envelope* to incorporate necessary *infrastructure* including, but not limited to, private septic systems, wells, driveways and parking areas.

6.2.3 Site Access

- a) CVC will not support the creation of new lots that would necessitate a new crossing of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous lands*, *erosion access allowances* and associated *buffers*, to access a *suitable building envelope* unless it has been demonstrated, to the satisfaction of CVC, that there will be no adverse impacts on the features to be protected or their *ecological functions* and *hydrologic functions*.
- b) CVC will not support the creation of new lots unless dry or flood free access (including parking facilities) can be achieved. Where *technical reports* demonstrate this is not possible, CVC will not support lot creation unless *safe access* in accordance with Section 7.5 can be achieved.

6.2.4 Lot-line Adjustments

- a) Notwithstanding the policies in 6.2.1, in cases where a lot-line adjustment is proposed

and both existing lots contain portions of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowances* and associated *buffers*, CVC may support a lot-line adjustment provided:

- i. there will be a *suitable building envelope* on both lots, in accordance with Section 6.2.2;
- ii. the proposal will not necessitate or encourage any new or upgraded crossings of the features to be protected for the purposes of site access or egress; and
- iii. existing crossings are sufficient for the intended land use.

6.3 Site Plan and Variance Application Policies

- a) CVC's review of site plan, variance or similar applications related to *development (2)* and *site alteration* on lots of record will generally be based on the policies in Chapter 7 to determine compliance with CVC's Section 28 permitting responsibilities. CVC will recommend that *development (2)* and *site alteration* be set back in accordance with policies 6.2.1 b) and 6.2.1 c), to the extent feasible.
- b) For site plan, variance or similar applications with lands containing components of the *natural heritage system*, including *natural heritage features and areas*, *significant natural areas*, *hazardous land*, *erosion access allowance* and associated *buffers*, where appropriate, CVC will recommend a warning clause be registered on title identifying such features which must be maintained in a natural condition, or enhanced, in consideration of natural heritage protection and concerns related to risks to life and property.

6.4 Infrastructure, Stormwater Management, Ponds and Parks, Trails and Recreational Open Spaces

- c) CVC's review of *infrastructure*, stormwater management, ponds and parks, trails and recreational open spaces will generally be based on the relevant policies in Chapter 7 to determine compliance with CVC's Section 28 permitting responsibilities. In addition, CVC will recommend that planning applications associated with infrastructure, stormwater management, ponds and parks, trails and recreational open spaces are consistent with all other relevant policies in this document as appropriate.

7 POLICY IMPLEMENTATION – Ontario Regulation 160/06

The following policies provide additional guidance for CVC's review of proposals submitted pursuant to Ontario Regulation 160/06. As outlined in Chapter 6, there is considerable overlap on issues relevant to CVC's plan input, plan review and regulatory programs. As such, there will be circumstances where policy requirements outlined in Chapters 6 and 7 cross over. To recognize the integrated nature of CVC's planning and regulatory programs, policy themes for Chapters 6 and 7 were scoped to eliminate duplication. Chapter 6 was designed to focus on planning approvals (e.g. lot creation, official plan and zoning by-law amendments etc.), and Chapter 7 deals with site specific circumstances such as *additions* to existing buildings and structures or the *development (1)* of existing lots which require regulatory approval and may or may not require planning approvals.

The policies in this chapter provide guidance for *development (1)* proposals including:

- Residential, commercial, industrial and institutional buildings and structures;
- *Additions* to existing buildings and structures;
- *Accessory buildings and structures*;
- *Reconstruction*;
- *Infrastructure*;
- Parks, Trails and Recreational Open Spaces,
- Stormwater Management Ponds; and
- *Ponds*.

In addition, guidance for the following are also included:

- *Interference* with a *wetland* and *watercourse*;
- General and setback criteria for *development (1)*;
- *Floodproofing* Requirements;
- Lake Ontario shoreline protection works; and
- Minor works.

Generally, if *development (1)* or *interference* is permitted under one set of policies and prohibited under another, the more prohibitive of the policies applies. For example, where a site is located within both a *flood hazard* and *erosion hazard* and the policies permit the proposed

development (1) within the former but not the latter, the *development (1)* would not be permitted.

Although the policies outlined in Chapters 5 direct how CVC determines the limits of natural features and areas and *hazardous land*, the boundaries of CVC's *regulated area* are determined in accordance with Ontario Regulation 160/06. Accordingly, the boundary of CVC's *regulated area* is the greater inland of the following:

- a) for *watercourses*, the limit of the *hazardous land* as determined in accordance with Section 5.4.3 and 5.4.4, plus a 15 metre allowance;
- b) for Lake Ontario shoreline, the limit of the *hazardous land* as determined in accordance with Section 5.4.5, plus a 15 metre allowance; and
- c) for *wetlands*, the limit of the *wetland*, plus a 120 metre allowance for *provincially significant wetlands* or a 30 metre allowance for *other wetlands*.

The *regulated area* defines the boundaries within which *development (1)* requires a permit in accordance with the Conservation Authorities Act, Ontario Regulation 160/06 and the policies in this document.

7.1 General Policies

- a) CVC will not permit *interference* with a *wetland* or *watercourse*, or *development (1)* within a *regulated area*, except in accordance with this document and in particular the policies in Chapters 5 and 7.
- b) CVC may permit *interference* with a *wetland* or *watercourse*, or permit *development (1)* within a *regulated area* if, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* will not be affected.
- c) Notwithstanding policies 7.1 a) and 7.1 b), *interference* with a *wetland* or *watercourse*, or *development (1)* within a *regulated area* may be permitted subject to the policies in Sections 7.2 and 7.8.
- d) Notwithstanding policy 7.1 c), CVC recognizes that certain types of *development (1)* or *interference* by their nature must locate within *hazardous land*, *watercourses*, *wetlands*, natural features contributing to the *conservation of land* and associated setbacks. Considering this, CVC may permit such works where they have been addressed through an environmental assessment, *comprehensive environmental study* or *technical report* and it has been demonstrated that the *interference* is acceptable and, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* will not be affected. This may include, but is not limited to, the following:
 - i. *infrastructure*, including stormwater management facilities;
 - ii. *development (1)* associated with passive or low intensity outdoor recreation and education;

- iii. *development (1)* which by its nature must locate within hazardous land such as marinas, boat houses, docks, boat launching facilities or similar *development (1)*;
 - iv. *development (1)* associated with conservation or restoration projects or management activities following *sustainable management practices*;
 - v. *hazardous land* remediation or mitigation works to protect existing *development (2)*; and
 - vii. *interference* or *development (1)* to implement the recommendations of an environmental assessment, *comprehensive environmental study* or *technical report* that has been completed to the satisfaction of CVC.
- e) Notwithstanding policies 7.1 b) to 7.1 d), CVC will not permit *interference* or *development (1)* within a *regulated area* that proposes to modify *watercourses*, *wetlands*, *hazardous land* and natural features and areas contributing to the *conservation of land* to create additional useable area or to accommodate or facilitate *development (1)* unless the modifications have been addressed through an environmental assessment or *comprehensive environmental study* demonstrating that the *interference* is acceptable and, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* will not be affected.
- f) Notwithstanding policies 7.1 b) to 7.1 d), *development (1)* will not be permitted within *hazardous land* where the use is:
- i. an institutional use associated with hospitals, nursing homes, preschool, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during an emergency as a result of flooding, erosion, dynamic beach processes and/or failure of protection works/measures; or
 - ii. an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations which would be impaired during an emergency as a result of flooding, erosion, dynamic beach processes and/or failure of protection works/measures; or
 - iii. Uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

7.2 Development and Interference

- a) CVC will not permit *interference* with a *wetland* or *watercourse*, or *development (1)* within a *regulated area*, except in accordance with this document and in particular the general policies in Section 7.1 and policies in Sections 7.2 and 7.8.

7.2.1 Residential, Commercial and Industrial Buildings and Structures

Riverine Flood Hazards

- a) Residential, commercial and industrial buildings and structures may be permitted within

the *riverine flood hazard* limit, subject to the applicable criteria in Sections 7.3 and 7.4, and where it has been demonstrated, to the satisfaction of CVC, that:

- i. *Safe access* to and from a public roadway is achieved, in accordance with Section 7.5;
- ii. *Habitable* buildings and structures are dry passively *floodproofed*, in accordance with Section 7.5; and
- iii. Non-habitable commercial and industrial buildings and structures are dry passively *floodproofed*, in accordance with Section 7.5. Where *technical reports* have demonstrated it is not possible to meet this criterion, at a minimum, the buildings and structures must be wet *floodproofed*, in accordance with Section 7.5.

Riverine Erosion Hazards

- b) Residential, commercial and industrial buildings and structures will not be permitted within the *riverine erosion hazard* limit of an undefined *valleyland*.
- c) Residential, commercial and industrial buildings and structures may be permitted within the *riverine erosion hazard* limit of a defined *valleyland* where *technical reports* have demonstrated the lands are not subject to an *erosion hazard*, and *development (1)* is in accordance with the applicable criteria in Sections 7.3 and 7.4.

Lake Ontario Shoreline Hazards

- d) Residential, commercial and industrial buildings and structures will not be permitted within the *erosion hazard* or *dynamic beach hazard* limit.
- e) Residential, commercial and industrial buildings and structures may be permitted within the Lake Ontario *flood hazard* limit, subject to the applicable criteria in Sections 7.3 and 7.4, and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. *habitable* buildings and structures meet dry passive *floodproofing* requirements, in accordance with Section 7.5; and
 - ii. non-habitable commercial and industrial buildings and structures meet dry passive *floodproofing* requirements, in accordance with Section 7.5. Where *technical reports* have demonstrated it is not possible to meet this criteria, at a minimum, the buildings and structures must be wet floodproofed, in accordance with Section 7.5.

Wetlands and Other Areas

- f) Residential, commercial and industrial buildings and structures will not be permitted in *provincially significant wetlands*, or *other wetlands* 2 hectares or greater in size.
- g) Residential, commercial and industrial buildings and structures may be permitted within *other wetlands* less than 2 hectares in size and/or *other areas*, subject to the applicable criteria in Sections 7.3 and 7.4.

Hazardous Land Associated with Unstable Soil and Unstable Bedrock

- h) Residential, commercial and industrial buildings and structures will not be permitted within *hazardous land* associated with unstable soil and unstable bedrock.

7.2.2 Additions to Existing Buildings and Structures

Riverine Flood Hazard

- a) *Additions* to existing buildings and structures may be permitted within the *riverine flood hazard* limit, subject to the applicable criteria in Sections 7.3, 7.4, and where it has been demonstrated, to the satisfaction of CVC, that:
- i. the *addition* does not increase the number of dwelling units of the existing building or structure;
 - ii. the *addition* does not include a *basement*, regardless if the existing building or structure has a *basement*;
 - iii. *safe access* to and from the area is achieved, in accordance with Section 7.5;
 - iv. For existing residential uses:
 - a. Ground floor *additions*:
 - i. the ground floor *addition* is 50 percent or less of the *original habitable ground floor area* to a maximum footprint of 100 square metres, or in the case of multiple *additions*, all *additions* combined are equal to or less than 50 percent of the *original habitable ground floor area* to a maximum footprint of 100 square metres; and
 - ii. the *addition* meets dry passive *floodproofing* requirements, in accordance with Section 7.5;
 - b. An additional storey:
 - i. the additional storey does not exceed the *original habitable ground floor area* plus 100 square metres; and
 - ii. the existing building or structure meets wet *floodproofing* requirements, in accordance with Section 7.5;
 - v. For existing commercial, industrial or institutional uses:
 - a. the *addition* is 50 percent or less of the *original ground floor area*, or in the case of multiple *additions*, all *additions* combined are equal to or less than 50 percent of the *original ground floor area*;

- b. ground floor *additions* are dry passively floodproofed, in accordance with Section 7.5. Where *technical reports* have demonstrated it is not possible to meet this criterion, at a minimum, the *addition* must be wet floodproofed, in accordance with Section 7.5; and
- c. Second storey *additions* must ensure the existing building or structure meets wet *floodproofing* requirements, in accordance with Section 7.5;
- vi. Subsequent requests for *additions* that will result in the cumulative exceedance of the maximum permitted allowance will not be permitted.

Riverine Erosion Hazards

- b) *Additions* to existing buildings and structures will not be permitted within the *riverine erosion hazard* limit of an undefined *valleyland*.
- c) *Additions* to existing buildings and structures may be permitted within the *riverine erosion hazard* limit of a defined *valleyland* where *technical reports* have demonstrated the lands are not subject to an *erosion hazard*, and *development (1)* is in accordance with the applicable criteria in Sections 7.3 and 7.4.

Lake Ontario Shoreline Hazards

- d) *Additions* to existing buildings and structures will not be permitted within the *erosion* or the *dynamic beach hazard* limit.
- e) *Additions* to existing buildings and structures may be permitted within the Lake Ontario *flood hazard* limit, subject to the applicable criteria in Sections 7.3 and 7.4, and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. For existing buildings and structures within the Lake Ontario *flood hazard* limit;
 - a. the *addition* is 50 percent or less of the *original habitable ground floor area* to a maximum footprint of 100 square metres, or in the case of multiple *additions*, all *additions* combined are equal to or less than 50 percent of the *original habitable ground floor area* to a maximum footprint of 100 square metres.
 - ii. For works within the Lake Ontario *flood hazard* limit, policies 7.2.2 a) i. to 7.2.2 a) iii and 7.2.2 a) vi. also apply, as appropriate.

Wetlands and Other Areas

- f) *Additions* to existing buildings and structures will not be permitted in *provincially significant wetlands* or, *other wetlands* 2 hectares or greater in size.
- g) *Additions* to existing buildings and structures may be permitted within *other wetlands* less than 2 hectares in size and/or *other areas*, subject to the applicable criteria in Sections 7.3 and 7.4.

Hazardous Land Associated with Unstable Soil and Unstable Bedrock

- h) *Additions* to existing buildings and structures will not be permitted within *hazardous land* associated with unstable soil and unstable bedrock.

7.2.3 Accessory Buildings and Structures

Riverine Flood Hazard

- a) *Accessory buildings and structures* less than 50 square metres may be permitted within the *riverine flood hazard* limit, subject to the applicable criteria in Sections 7.3, 7.4, and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. the proposed *accessory buildings and structures* meet wet *floodproofing* requirements, in accordance with Section 7.5.
- b) *Accessory buildings and structures* 50 square metres or greater may be permitted within the *riverine flood hazard* limit, subject to the applicable criteria in Sections 7.3, 7.4, and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. the proposed *accessory buildings and structures* meet dry passive *floodproofing* requirements, in accordance with Section 7.5.

Riverine Erosion Hazards

- c) *Accessory buildings and structures* will not be permitted within the *riverine erosion hazard* limit of an undefined *valleyland*.
- d) *Accessory buildings and structures* may be permitted within the *riverine erosion hazard* limit of a defined *valleyland* where *technical reports* have demonstrated the lands are not subject to an *erosion hazard*, and *development (1)* is in accordance with the applicable criteria in Sections 7.3 and 7.4.

Lake Ontario Shoreline Hazards

- e) *Accessory buildings and structures* will not be permitted within the *stable slope allowance* or the *dynamic beach hazard* limit.
- f) *Accessory buildings and structures* may be permitted within the Lake Ontario *flood hazard* limit and *toe erosion allowance*, subject to the applicable criteria in Sections 7.3 and 7.4. For works within the *Lake Ontario flood hazard* limit it must also be demonstrated, to the satisfaction of CVC, that:
 - i. For *accessory buildings and structures* less than 50 square metres;
 - a. The proposed buildings and structures must meet wet *floodproofing* requirements, in accordance with Section 7.5.

- ii. For *accessory buildings and structures* 50 square metres or more;
 - a. The proposed buildings and structures must meet dry passive *floodproofing* requirements, in accordance with Section 7.5.

Wetlands and Other Areas

- g) *Accessory buildings and structures* will not be permitted within *provincially significant wetlands*, or *other wetlands* 2 hectares or greater in size.
- h) *Accessory buildings and structures* may be permitted in *other wetlands* less than 2 hectares in size and *other areas*, subject to the applicable criteria in Sections 7.3 and 7.4.

Hazardous Land Associated with Unstable Soil and Unstable Bedrock

- i) *Accessory buildings and structures* will not be permitted within *hazardous land* associated with unstable soil and unstable bedrock.

7.2.4 Reconstruction

Riverine Flood Hazard

- a) *Reconstruction* may be permitted within the *riverine flood hazard* limit subject to the applicable criteria in Section 7.3, and it has been demonstrated, to the satisfaction of CVC, that:
 - i. the previous buildings and structures were not damaged or destroyed by a *riverine flood hazard* event;
 - ii. the building and structures to be *reconstructed* existed within two years of CVC receiving the appropriate application(s) for the *development (1)*;
 - iii. the proposed buildings and structures do not exceed the *original habitable* floor area and the *original habitable ground floor area* of the previously existing buildings and structures;
 - iv. *safe access* to and from the area is achieved, in accordance with Section 7.5. Where *technical reports* have demonstrated it is not possible to meet this criterion, measures to maximize *safe access* to and from the area will be required; and
 - v. the proposed buildings and structures meet dry passive *floodproofing* requirements, in accordance with Section 7.5. Where *technical reports* have demonstrated it is not possible to meet this criterion, at a minimum, the proposed buildings and structures must meet wet *floodproofing* requirements, in accordance with Section 7.5.
- b) *Basements* will not be permitted within the *flood hazard* limit unless the previously existing buildings and structures had a *basement*. Crawl spaces will not be considered *basement* area.

Riverine Erosion Hazards

- c) *Reconstruction* may be permitted within the *riverine erosion hazard* limit subject to the applicable criteria in Section 7.3, policies 7.2.4 a) ii. and 7.2.4 a) iii., and it has been demonstrated, to the satisfaction of CVC, that:
 - i. the previous buildings and structures were not damaged or destroyed by a *riverine erosion hazard* event; and
 - ii. the proposed buildings and structures will be protected from the *erosion hazard* through incorporation of appropriate building design parameters in accordance with *Provincial standards*.

Lake Ontario Shoreline Hazards

- d) *Reconstruction* will not be permitted within the *dynamic beach hazard* limit.
- e) *Reconstruction* may be permitted within the Lake Ontario *flood hazard* and *erosion hazard* limits subject to the applicable criteria in 7.3, policies 7.2.4 a) ii. to 7.2.4 a) v. and 7.2.4 b), and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. the previous buildings and structures were not damaged or destroyed by a *Lake Ontario shoreline hazard* event.

Wetlands

- f) *Reconstruction* will not be permitted within *provincially significant wetlands* or *other wetlands* 2 hectares or greater in size.
- g) *Reconstruction* may be permitted within *other wetlands* less than 2 hectares in size and *other areas*, subject to the applicable criteria in Sections 7.3, policies 7.2.4 a) ii. and 7.2.4 a)iii., and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. no new septic systems will be required. Notwithstanding this, existing septic systems may be replaced provided there are no feasible alternative locations outside of the *wetland* or other area, and the replacement does not encroach any closer to the *wetland*.

Hazardous Land Associated with Unstable Soil or Unstable Bedrock

- h) *Reconstruction* may be permitted within *hazardous land* associated with unstable soil or unstable bedrock in accordance with the applicable criteria in Section 7.3, and where it has been demonstrated, to the satisfaction of CVC, that:
 - i. all hazards and risks associated with unstable soils or unstable bedrock have been addressed to the satisfaction of CVC.

7.2.5 Interference with a Watercourse

- a) Major *interference* with a *watercourse* (including, but not limited to, realignment, lowering, enclosure and dam and pond construction) is generally not permitted. Such *interference* may be permitted where it has been demonstrated, to the satisfaction of CVC, that:
 - i. acceptable justification has been provided through an environmental assessment or *comprehensive environmental study*;
 - ii. the works are subject to conformity with municipal planning documents; and
 - iii. the *interference* is acceptable for the natural features and *ecological functions* and *hydrologic functions* of the watercourse.
- b) Minor *interference* with a *watercourse* (including, but not limited to, culverts and restoration projects) may be permitted where it has been demonstrated, to the satisfaction of CVC, that:
 - i. the natural topography of the *watercourse* system, flood storage and flood conveyance are maintained to the extent feasible;
 - ii. there are no unacceptable adverse impacts to fluvial processes (including meander belt);
 - iii. there are no unacceptable adverse impacts on groundwater recharge/discharge;
 - iv. geotechnical issues are adequately addressed;
 - v. the recommendations within the *comprehensive environmental studies* for the area have been implemented; and
 - vi. the *interference* is acceptable for the natural features and *ecological functions* and *hydrologic functions* of the *watercourse*.

7.2.6 Infrastructure Policies

- a) CVC recognizes that certain types of *interference* or *development (1)* related to *infrastructure* by their nature must locate within *hazardous land*, *watercourses*, *wetlands* and natural features and areas contributing to the *conservation of land* and associated setbacks. Considering this, CVC may permit such works where all reasonable alternatives have been explored and determined not to be feasible through an environmental assessment, *comprehensive environmental study* or *technical report* supported by CVC, and subject to the following:
 - i. The *interference* is acceptable and/or it has been demonstrated that, in the opinion of CVC, that the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* will not be affected. This includes, but is not limited to:
 - a. all works must be constructed in such a manner as to prevent unacceptable

increases in *flood hazards*, *erosion hazards* and associated effects on upstream and downstream properties. All reasonable efforts to eliminate or minimize impacts on *flood hazards* and *erosion hazards* must be implemented;

- b. the location and design of bridges and culverts must be consistent with CVC standards. Where feasible, bridge and culvert abutments or piers should be located outside of the *meander belt allowance* or the one hundred year erosion limit of any *watercourse*;
- c. the safe passage of flood flows should not be impeded. Where feasible, structural abutments or piers should be located outside of the *flood hazard* to minimize obstruction to water flows;
- d. the construction of pipe or service pipelines must maintain the predevelopment configuration of the *floodplain* and *valleyland* slopes, be below the scour depth of the *watercourse* and minimize disturbance to existing vegetation to the extent feasible;
- e. outfalls must be designed to provide adequate protection to *watercourse* embankments and maintain or enhance existing vegetation to the extent feasible;
- f. provincial, regional and municipal roads should be designed to be flood free based on the *flood hazard* limit, to the extent feasible;
- g. ecological linkages and corridors should be incorporated into the design of all works. The design of infrastructure should maintain, and where possible, improve or restore ecological linkages where appropriate;
- h. the area of construction disturbance is minimized to the extent feasible;
- i. natural features, ecological functions and hydrologic functions contributing to the *conservation of land* are not affected. Where unavoidable, adverse impacts must be minimized to the extent feasible and mitigation measures implemented to the satisfaction of CVC;
- j. the *interference* is acceptable for the natural features and *ecological functions* and *hydrologic functions* of the *wetland* or *watercourse*; and
- k. infrastructure should be designed so it does not:
 - i. decrease base flow characteristics;
 - ii. adversely impact *wetlands* by changing the existing hydro-period and/or hydrological connections;
 - iii. impair surface water and groundwater quality through the introduction of

pollutants such as sediments or contaminants; and

- iv. prevent access for maintenance, evacuation or during an emergency.

7.2.7 Stormwater Management Policies

- a) CVC will not permit drainage boundary diversions on a site by site basis to facilitate *development (1)* unless the adjustment is considered to be minor in nature, it is required to accommodate minor local grading conditions and/or it has been demonstrated through an environmental assessment, *comprehensive environmental study* or *technical report* that, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* are not affected.
- b) CVC will not permit existing *wetlands* identified for protection to be used for treatment of wastewater or stormwater management purposes.
- c) CVC will not permit the establishment of on-line or in-stream stormwater management ponds unless it has been demonstrated through an environmental assessment, *comprehensive environmental study* or *technical report* that the *interference* is acceptable and, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* are not affected.
- d) CVC will not permit stormwater management facilities to be located within natural features and areas contributing to the *conservation of land*, including areas providing *ecological functions* and *hydrologic functions* contributing to the *conservation of land* unless it has been demonstrated that, in the opinion of CVC, the control of flooding, erosion dynamic beaches, *pollution* or the *conservation of land* are not affected.
- e) CVC will not permit stormwater management facilities to be located within *hazardous land*. Notwithstanding this, CVC may permit stormwater management facilities within the *flood hazard* limit if it can be demonstrated, to the satisfaction of CVC, that:
 - i. there is no feasible alternative site outside of the *flood hazard*;
 - ii. the proposal will result in a public benefit and *ecological gain*;
 - iii. there will be no loss of floodplain storage or conveyance;
 - iv. the proposal will not prevent access for emergency works, maintenance and evacuation;
 - v. the facility is not located within the *one hundred year flood* or areas subject to an *erosion hazard*;
 - vi. the facility is located outside of defined *valleylands* to the extent feasible; and
 - vii. all other concerns related to the control of flooding, erosion, dynamic beaches, *pollution*

or the *conservation of land* have been addressed.

7.2.8 Ponds

- a) CVC will not permit the establishment of on-line or in-stream *ponds*.
- b) CVC will not permit dugout or offline by-pass *ponds* within the *riverine erosion hazard* limit.
- c) CVC may permit dugout and off-line by-pass *ponds* within a *flood hazard* if it can be demonstrated, to the satisfaction of CVC, that:
 - i. all fill, including dredged material, is removed from the *floodplain*;
 - ii. ground water sources for nearby *watercourses* and *wetlands* are not negatively impacted;
 - iii. the proposed *development (1)* does not create new hazards or aggravate existing hazards on the subject or other properties;
 - iv. the control of *pollution*, including thermal *pollution*, are not affected;
 - v. fluvial processes are not adversely impacted;
 - vi. the *pond* is designed with appropriate side slopes for stability and safety purposes;
 - vii. the proposed facility maintains setbacks as required under policy 7.4;
 - viii. for off-line by-pass *ponds*, the water intake structure must be designed to:
 - a. ensure applicable in-stream minimum flow thresholds are maintained and the rate of diversion is controlled to within approved limits (consideration to higher flow conditions should also be given);
 - b. consider and respect to the riparian rights of downstream water users;
 - c. be operated in accordance with a plan that meets the requirements of the Ontario Ministry of Environment under the Ontario Water Resources Act; and
 - d. be monitored in accordance with a program that confirms the structure performs as designed;
- viii. All other concerns related to the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* have been addressed.

7.2.9 Parks, Trails and Recreational Open Spaces

- a) CVC will not permit *interference* or *development (1)* associated with new active or major

recreational uses within *watercourses*, *wetlands*, *hazardous land* and natural features and areas contributing to the *conservation of land* unless it has been demonstrated, to the satisfaction of CVC, that;

- i. there is no feasible alternative site outside of the *hazardous land* or natural features and areas contributing to the *conservation of land*;
 - ii. the proposed *development (1)* is not within a *watercourse* or *wetland*;
 - iii. buildings and structures, parking facilities and service infrastructure are located outside of *hazardous land* and development setbacks, as appropriate;
 - iv. unacceptable risks to life and property as a result of impacts to *flood hazards*, *erosion hazards* and *dynamic beach hazards* do not result;
 - v. natural features, *ecological functions* and *hydrologic functions* contributing to the *conservation of land* are not affected. Where unavoidable, adverse impacts must be minimized to the extent feasible and remedial and mitigation measures implemented;
 - vi. the area of construction disturbance is minimized to the extent feasible;
 - vii. the existing topography is maintained to the extent feasible;
 - viii. The control of *pollution* is not affected and construction *sustainable management practices* are used; and
 - ix. all other concerns related to the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* have been addressed.
- b) Notwithstanding policy 7.2.9 a), CVC may permit *development (1)* associated with modifications or expansions to existing active or major *recreational uses* within *hazardous land* where the proposal is consistent with *CVC standards* and it has been demonstrated that, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* will not be affected.
- c) CVC may permit *interference* or *development (1)* associated with new passive or low intensity *recreational uses* within *watercourses*, *wetlands*, *hazardous land* and natural features and areas contributing to the *conservation of land* where the proposal is consistent with *CVC standards*, and it has been demonstrated that the *interference* is acceptable and, in the opinion of CVC, the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* will not be affected.
- d) CVC will ensure that pedestrian bridges and/or footbridges are designed in accordance with *CVC standards*.
- e) Notwithstanding policy 7.5 f), parking facilities for existing or approved public open space uses may be permitted within the *flood hazard* limits, if it can be demonstrated, to

the satisfaction of CVC, that;

- i. there is no feasible alternative site outside of the flood hazard or in the event there is no feasible alternative site, that the proposed parking facility is located in an area of least (and acceptable) risk or impact; and
- ii. all other concerns related to the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land* have been addressed.

7.3 General Criteria for Development

The following apply to *development (1)* outlined in Sections 7.2.1 to 7.2.4.

Riverine Flood Hazard, Riverine Erosion Hazard, Lake Ontario Shoreline Hazards, Wetlands and Hazardous Land Associated with Unstable Soil and Unstable Bedrock

- a) It has been demonstrated, to the satisfaction of CVC, that there is no feasible alternative site outside of the *hazardous land* or *wetland* and in the event there is no feasible alternative site, that the proposed *development (1)* is located in an area of least (and acceptable) risk or impact.
- b) It has been demonstrated, to the satisfaction of CVC, that the *development (1)* will not:
 - i. subject life and property to significant (and unacceptable) risk;
 - ii. create new hazards or aggravate existing hazards on the subject or other properties;
 - iii. result in a measurable and unacceptable cumulative effect on the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land*; and
 - iv. prevent access for maintenance, evacuation or during an emergency.

Lake Ontario Shoreline Hazards

In addition to policies 7.3 a) and 7.3 b):

- c) It has been demonstrated, to the satisfaction of CVC, that:
 - i. Lake Ontario *erosion hazards* are safely addressed in accordance with Section 7.6;
 - ii. the proposal uses the total lot depth and width to maximize the landward siting of the *development (1)*; and
 - iii. the proposed *development (1)* will have no unacceptable impacts on natural shoreline processes.

Wetlands

In addition to policies 7.3 a) and 7.3b):

- d) It has been demonstrated, to the satisfaction of CVC, that:
 - i. the *interference* on the natural features, *ecological functions* and *hydrologic functions* of the *wetland* are acceptable and the *ecological functions* and *hydrologic functions* of the *wetland* can be maintained or enhanced within the subwatershed or planning area; and
 - ii. natural features, *hydrologic functions* and *ecological functions* contributing to the *conservation of land* will not be affected.

Other Areas

- e) It has been demonstrated, to the satisfaction of CVC, that the *interference* with the *hydrologic function* of the *wetland* are acceptable. A *technical report* to assess impacts may be required if the submitted plans do not demonstrate the following:
 - i. disturbances to natural vegetation communities contributing to the *hydrologic function* of the *wetland* are avoided;
 - ii. the overall existing drainage patterns for the lot will be maintained;
 - iii. disturbed area and soil compaction is minimized;
 - iv. development is located above the high water table;
 - v. adverse impacts from wastewater servicing on surface water and groundwater quality will be minimized;
 - vi. all septic systems are located a minimum of 15 metres from the *wetland* and a minimum of 0.9 metres above the water table;
 - vii. *sustainable management practices* are used to;
 - a. maintain water balance;
 - b. control erosion and sediment; and
 - c. protect the *wetland* from adverse impacts.

7.4 Setback Criteria for Development

The following applies to any *development (1)* within a *regulated area* and in particular *development (1)* outlined in Sections 7.2.1 to 7.2.4.

Valleylands and Wetlands

- a) As a minimum, all *development (1)* must be set back 10 metres from the following features:
- i. *top of stable slope*;
 - ii. *stable toe of slope*;
 - iii. meander belt;
 - iv. *bankfull* flow location of a *watercourse*;
 - v. *provincially significant wetlands*; and
 - vi. *other wetlands* required to be protected.
- b) Notwithstanding policy 7.4 a), *accessory buildings and structures*, pools, decks, patios, site grading, minor landscaping or similar *development (1)* as determined by CVC, may be set back a minimum of 6 metres from the those features listed in policy 7.4 a).

Lake Ontario Shoreline Hazards

- c) The following types of *development (1)* must be set back as follows:
- i. For new residential, commercial and industrial buildings and structures or additions to existing buildings and structures;
 - a. A minimum of 6 metres from the *erosion hazard* limit.
 - ii. For *accessory buildings and structures* 14 square metres or greater in size, the greater of;
 - a. A minimum *toe erosion allowance* based on a planning horizon of not less than 70 years; or
 - b. A minimum 6 metres from the *stable slope allowance*.
 - iii. For decks, patios, in-ground and above ground pools or similar *development (1)* as determined by CVC, the greater of;
 - a. The structure(s) will not be at risk to *erosion hazards* based on a planning horizon of not less than:
 - i. 30 years for in-ground pools; or
 - ii. 10 years for above ground pools, decks and patios.
 - b. A minimum 6 metres from the *stable slope allowance*.

- iv. For boardwalks, fixed walkways or similar *development (1)* as determined by CVC;
 - a. Not at risk to *erosion hazards* for 10 years.
- d) Notwithstanding policies 7.4 a), 7.4 b) and 7.4 c), where CVC determines it is appropriate based on the results of a *comprehensive environmental study* or site specific *technical report development (1)* may be set back a distance other than those identified in policies 7.4 a), 7.4 b) and 7.4 c).

7.5 Floodproofing Requirements

- a) All new *development (1)* proposed within the *flood hazard* limit must meet *floodproofing* requirements as outlined in Section 7.2, plus a 0.3 metre freeboard. Recognizing the required *floodproofing* measures are the minimum standard, where feasible, CVC will continue to encourage the most effective flood damage reduction measures in an effort to reach the maximum protection possible based on the following alternatives, listed in order of priority;
 - i. flood control remedial works;
 - ii. dry passive *floodproofing* measures;
 - iii. wet *floodproofing* measures; and
 - iv. dry active *floodproofing* measures, which may also be implemented to further minimize flood risk in combination with any of the above.
- b) All new *development (1)* must provide *safe access*, consistent with *CVC standards*. Recognizing this is the minimum standard, CVC will continue to encourage dry or flood free vehicular and pedestrian access, to the greatest extent possible.

Safe Access and Parking Facilities

- c) *Safe access* to and from a site must be consistent with *CVC standards*, and may only be achieved where the following depth and velocity criteria for pedestrians and automobiles are met:
 - i. for depths up to and including 0.2 metres, the velocity must be less than or equal to 1.7 metre/second (based on the *flood hazard*); and
 - ii. for depths greater than 0.2 metres and less than or equal to 0.3 metres, the velocity must be less than or equal to 1.3 metres/second (based on the *flood hazard*).
- d) Notwithstanding policy 7.5 c), where the proposed *development (1)* requires access onto an existing flooded municipal or provincial roadway where the depth and velocity criteria for *safe access* cannot be met;
 - i. access to/from the site must have flood depths and velocities less than or equal to

those experienced on the existing roadway; and

- ii. *safe alternate or secondary access* for pedestrians and emergency vehicles that is appropriate for the nature of the *development (1, 2)* and the *natural hazard* is provided.
- e) Notwithstanding policy 7.5 c) and 7.5 d), CVC will consider the subject site as having *safe access* where the affected municipal emergency services provides confirmation that acceptable provisions for emergency ingress/egress, appropriate for the nature of the *development (1, 2)* and the *flood hazard*, are available for a site.
- f) Parking facilities that are existing or proposed must meet the depth and velocity criteria outlined in policy 7.5 c).

Dry floodproofing

- g) Dry passive *floodproofing* measures must be consistent with *CVC standards*, and may only be achieved where the following depth and velocity criteria are met:
 - i. for *riverine flood hazards*, flood depths do not exceed 0.8 metres and associated flood velocities do not exceed 1.7 metres/second (based on the *flood hazard*). Under no circumstance is the placement of fill to meet these criteria permitted; and
 - ii. for Lake Ontario *flood hazards*, flood depths do not exceed 0.8 metres and associated flood velocities do not exceed 1.7 metres/second (based on the *flood hazard*). The placement of fill to meet these criteria may be permitted where it is determined to be the only feasible alternative, in accordance with Section 7.6.

Wet floodproofing

- h) *Wet floodproofing* measures must be consistent with *CVC standards*.

7.6 Lake Ontario Shoreline Protection Works

- a) Where permitted, shoreline protection works may be used to address Lake Ontario shoreline *flood hazards* and *erosion hazards* where it can be demonstrated, to the satisfaction of CVC, that:
 - i. it has been demonstrated that there is no feasible alternative;
 - ii. the need and purpose of the proposed works have been clearly defined;
 - iii. the shoreline works have been designed to the Lake Ontario *flood hazard* limit and according to accepted scientific and coastal engineering principles;
 - iv. the works have been designed and approved by a professional engineer with experience and qualifications in coastal engineering;

- v. slope stability has been assessed by a professional engineer with experience and qualifications in geotechnical engineering;
 - vi. the ownership of land, where the protection works are proposed, has been clearly established by the applicant;
 - vii. the design and installation of protection works allows for access to and along the protection works for appropriate equipment and machinery for regular maintenance purposes and repair should failure occur;
 - viii. the protection works should follow accepted sustainable management practices;
 - ix. the protection works will not create new hazards or aggravate existing hazards on the subject or other properties;
 - x. the works do not result in a measurable and unacceptable impact or cumulative affect on the control of flooding, erosion, dynamic beaches, *pollution* or the *conservation of land*;
 - xi. natural features, *ecological functions* and *hydrologic functions* contributing to the *conservation of land* are not affected; and
 - xii. in areas of existing *development (1)*, protection works should be coordinated with adjacent properties.
- b) Shoreline protection works will only be permitted where the works:
- i. appropriately consider natural coastal processes;
 - ii. are effective against long term erosion;
 - iii. preserve cobble beaches and shingle beaches;
 - iv. protect or regenerate natural features, *ecological functions* and *hydrologic functions* contributing to the *conservation of land*; and
 - v. do not result in unacceptable adverse impacts to adjacent shorelines;
- c) Where shoreline protection works exist, the integrity of the protection works may be required to be assessed by a professional engineer with experience and qualifications in coastal engineering, at the expense of the proponent, and any recommendations for improvements incorporated into the *development (1)* proposal to improve the effectiveness and integrity of the existing shoreline protection works.

7.7 Sediment and Erosion Control Policies

- a) CVC will require that all applications for *development (1)* within a *regulated area* include erosion and sediment control plans prepared in accordance with *CVC standards*.

7.8 Minor Works

Minor Works refers to *development (1)*, which if it meets the criteria outlined below, does not require any further *technical reports* or assessment. However, development considered to be minor works continues to require the issuance of a permit pursuant to Section 28 of the Conservation Authorities Act but the administration and issuance of the permit may be expedited by CVC.

The minor works program was created in recognition of the minor nature of certain types of *development (1)*, which if undertaken in accordance with the applicable criteria, meets the requirements under Section 28 of the Conservation Authorities Act. Where feasible, CVC encourages applicants to modify *development (1)* proposals to be consistent with the minor works provisions in an effort to reduce or eliminate impacts and to expedite the issuance of a permit.

7.8.1 Single Family Residential Buildings and Structures and Accessory Buildings and Structures

- a) Notwithstanding Sections 7.2.1 and 7.2.3, single family residential buildings and structures and *accessory buildings and structures* 50 square metres or greater may be permitted within a *regulated area*, subject to the criteria in Section 7.8.5, and where it can be demonstrated that:
 - i. A minimum of 30 metres is maintained from any *wetland*, or 15 metres from the limit of *hazardous land*, whichever is greater; and
 - ii. All *accessory buildings and structures* are located within the existing building cluster, as defined by CVC.
- b) Notwithstanding Section 7.2.3, *accessory buildings and structures* less than 50 square metres may be permitted within a *regulated area*, subject to the criteria in Section 7.8.5, and where it can be demonstrated that:
 - i. A minimum of 15 metres is maintained from the *bankfull* flow location of any *watercourse*;
 - ii. A minimum of 6 metres is maintained from the known *top of stable slope* of any *valleyland*;
 - iii. A minimum of 6 metres is maintained from the *toe of slope* of any *valleyland*;
 - iv. A minimum of 30 metres is maintained from any *provincially significant wetland*, 15 metres from any *other wetland* or no closer than existing *development (1)*, whichever is less.

7.8.2 Pools

- a) Notwithstanding Section 7.2.3, above-ground or in-ground pools may be permitted within a *regulated area*, subject to the criteria in Section 7.8.5, and where it can be demonstrated that:

- i. A minimum of 15 metres is maintained from the *bankfull* flow location of any *watercourse*;
- ii. A minimum of 6 metres is maintained from the known *top of stable slope* of any *valleyland*;
- iii. A minimum of 6 metres is maintained from the *toe of slope* of any *valleyland*;
- iv. A minimum of 30 metres is maintained from any *provincially significant wetland* or 15 metres from any *other wetland*;

7.8.3 Additions to Existing Residential Buildings and Structures

- a) Notwithstanding Section 7.2.2, *additions* to existing residential buildings and structures may be permitted within a *regulated area*, subject to the applicable criteria in Sections 7.2.2 iv. and 7.8.5, and where it can be demonstrated that:
 - i. the addition is not closer to *hazardous land* than the existing buildings and structures;
 - ii. A minimum of 15 metres is maintained from the *bankfull* flow location of any *watercourse*;
 - iii. A minimum of 6 metres is maintained from the known *top of stable slope* of any *valleyland*;
 - iv. A minimum of 6 metres is maintained from the *toe of slope* of any *valleyland*;
 - v. A minimum of 30 metres is maintained from any *provincially significant wetland* or 15 metres from any *other wetland*.

7.8.4 Minor Landscaping

- a) Minor landscaping less than 30 cubic metres may be permitted within a *regulated area*, subject to the applicable criteria in 7.8.5, and where it can be demonstrated that:
 - i. A minimum of 15 metres is maintained from the *bankfull* flow location of any *watercourse*;
 - ii. A minimum of 30 metres is maintained from any *provincially significant wetland* or 15 metres from any *other wetland*.

7.8.5 General Criteria for Minor Works

The following apply to *development (1)* outlined in Sections 7.8.1 to 7.8.4.

- a) It has been demonstrated, to the satisfaction of CVC, that:
 - i. *Development (1)* is located outside of the following:

- a. the *flood hazard* limit;
 - b. the *stable slope allowance* (slope hazard);
 - c. Lake Ontario *shoreline hazards*; and
 - d. *hazardous land* associated with unstable soils or unstable bedrock.
- ii. All disturbed areas are immediately stabilized upon completion of the development;
 - iii. The appropriate erosion and sediment controls are implemented during all phases of construction;
 - iv. Existing vegetation adjacent to the shoreline, *watercourse* and *wetland* be maintained or replaced to the extent possible;
 - v. All topsoil and excess fill stock piles are located outside of the setback areas; and
 - vi. The development does not prevent access for maintenance, evacuation or during an emergency; and
 - vii. The *development (1)* will not subject life and property to significant (and unacceptable) risk.

8 DEFINITIONS

ACCESSORY BUILDINGS AND STRUCTURES: means a non-*habitable* building or structure that is subordinate and exclusively devoted to a main use, building or structure and is located on the same lot as the main use, building or structure to which it is subordinate.

ADDITION: means any works occurring on an existing building or structure that serves to increase the total area of that building or structure.

ADJACENT LANDS: means those lands contiguous to a specific *natural heritage feature or area* where it is likely that *development (2)* or *site alteration* would have a negative impact on the feature or area. The extent of the adjacent lands may be recommended by the Province or based on municipal approaches which achieve the same objectives (MMAH, 2005).

APPROPRIATE PUBLIC AGENCY: means a public agency such as, but not limited to, a municipality, CVC, a government ministry, Ontario Heritage Foundation or other similar bodies.

AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSIs): means areas of land and water containing natural landscapes or features that have been identified by the Ministry of Natural Resources as having life science or earth science values related to protection, scientific study or education (MMAH, 2005).

BANKFULL: means the maximum flow within a channel before spilling onto its floodplain. (MNR a, 2002)

BASEMENT: means one or more storeys of a building located below the first storey. Crawl space or cellar will be considered as a basement if:

- a) The finished ceiling is more than 1.8 metres high above the floor or ground at any point; or
- b) It is habitable.

BUFFER: means a vegetated area surrounding natural features and areas in which only those land uses permitted within the feature or area itself are permitted. Buffers should be of sufficient size to protect the features and areas, including their functions, from potential impacts of *development (1, 2)* and *site alteration* that may occur before, during, and after, construction, and where possible, restore or enhance the feature or area, including their *ecological functions* and *hydrologic functions*.

BUILDING ENVELOPE: means an area that contains buildings and structures, including *accessory buildings and structures*, septic systems, parking lots, driveway access or similar *development (1, 2)*.

COMPREHENSIVE ENVIRONMENTAL STUDIES: means studies or plans undertaken at a landscape scale including *watershed* plans, subwatershed studies, environmental implementation reports, environmental management plans, or similar documents, that have been prepared to address and document various alternatives and are part of a joint and harmonized planning process, or community plans that include comprehensive environmental impact studies.

CONSERVATION OF LAND: means the protection, management or restoration of lands within

the *watershed* ecosystem for the purpose of maintaining or enhancing the natural features and *ecological functions* and *hydrologic functions*, within the *watershed*. (CO, 2008)

In addition to conservation of lands, it is important to note that natural features also provide *ecological functions* and *hydrologic functions* related to the control of flooding, erosion, dynamic beaches and *pollution*.

CVC STANDARDS: as it pertains to natural hazard and water resource management, means the most recently approved policies, manuals, and technical guidelines administered or prepared by the CVC including, but not limited to, documents related to *floodproofing*, stormwater management, *development (1, 2)*, design criteria and procedures, as amended from time to time (see Chapter 10 List of Key Reference Documents).

DEVELOPMENT (1): as it pertains to the *Conservation Authorities Act*, means:

- a) the construction, *reconstruction*, erection or placing of a building or structure of any kind;
- b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of *dwelling units* in the building or structure;
- c) site grading; or the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere. (CAA, 1990)

DEVELOPMENT (2): as it pertains to the *Planning Act*, means the creation of a new lot; a change in land use; or the construction of buildings and structures, requiring approval under the Planning Act, but does not include: (a) activities that create or maintain *infrastructure* authorized under an environmental assessment process; (b) works subject to the Drainage Act. (MMAH, 2005)

DWELLING UNIT: means a suite of one or more *habitable* rooms, occupied or capable of being occupied as an independent and separate housekeeping unit, in which separate kitchen and sanitary facilities are provided for the exclusive use of the occupants. (CO, 2008)

DYNAMIC BEACH HAZARD: means areas of inherently unstable accumulations of shoreline sediments along Lake Ontario, as identified by *provincial standards*. The dynamic beach hazard limit consists of the *flood hazard* limit plus a dynamic beach allowance. (MMAH, 2005)

ECOLOGICAL FUNCTION: means the natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socio-economic interactions. (MMAH, 2005)

ECOLOGICAL GAIN: means a working principle by which CVC strives to build upon natural features and areas requiring protection under CVC, municipal or provincial policy, and enhances or restores the *ecological functions* and *hydrologic functions* of the *natural heritage system* in both the short term and long term as a result of the approval of an application. Enhancements or restoration may include, but are not limited to, on-site and off-site works that will result in one or more of the following:

- a) increases in the spatial extent of the *natural heritage system*;
- b) increases in biological and habitat diversity;
- c) enhancement or restoration of *ecological functions* and *hydrological functions*;
- d) enhancement or restoration of *wildlife habitat*;
- e) enhancement of natural succession;
- f) creation of *wetlands*, water systems or *woodlands*;
- g) enhancement or restoration of riparian corridors;
- h) enhancement or restoration of *ground water features*; and
- i) establishment, enhancement or restoration of linkages between natural features and areas.

ENDANGERED SPECIES: means a species that is listed or categorized as an ‘Endangered Species’ on the Ontario Ministry of Natural Resources’ official species at risk list, as updated and amended from time to time. (MMAH, 2005)

ENVIRONMENTALLY SIGNIFICANT AREA (ESA): An area of special environmental significance, aesthetic qualities and educational value identified and adopted by CVC.

EROSION ACCESS ALLOWANCE: means the setback needed to ensure there is a big enough safety zone for people and vehicles to enter and exit an area during an emergency, such as slope failure or flooding. The suggested minimum erosion access allowance for river and stream systems should be six metres. (OMNR, 2001)

EROSION HAZARD: means the loss of land, due to human or natural processes, that poses a threat to life and property. The erosion hazard limit is determined using considerations that include the *one hundred year erosion rate*, and an allowance for slope stability. (CO, 2008)

FISH: means fish, which as defined in Section 2 of the *Fisheries Act*, Chapter F-14, as amended, includes fish, shellfish, crustaceans, and marine animals, at all stages of their life cycles. (MMAH, 2005)

FISH HABITAT: as defined in the *Fisheries Act*, c. F-14, means spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes. (MMAH, 2005)

FLOOD FRINGE: means the outer portion of the *floodplain* between the *floodway* and the *flood hazard* limit. Depths and velocities of flooding are generally less severe in the flood fringe than those experienced in the *floodway*. (MMAH, 2005)

FLOOD HAZARD: means the inundation, under the conditions specified below, of areas adjacent to a shoreline or a *watercourse* and not ordinarily covered by water (note: high points of land not

subject to flooding but surrounded by *floodplain* or flooded land are considered to be within the *flood hazard*):

Lake Ontario Flood Hazard Limit - the *one hundred year flood*, plus an allowance for *wave uprush* and other water-related hazards.

Riverine Flood Hazard Limit – the flood produced by the Hurricane Hazel storm event or the *one hundred year flood*, whichever is greater.

FLOODPLAIN: means the area, usually low lands adjoining a *watercourse*, which has been or may be subject to *flood hazards*. (MMAH, 2005)

FLOODPROOFING: means the combination of measures incorporated into the basic design and/or construction of buildings and structures or properties to reduce or eliminate *flood hazards*, *wave uprush* and other water related hazards along the shoreline of Lake Ontario, and *flood hazards* along *watercourses*. (MMAH, 2005)

Dry Passive floodproofing – includes the use of fill, columns or design modifications to elevate openings in the building or structure at or above the level of the *flood hazard*. These measures do not require flood warning or any other action to put the flood protection in effect.

Dry Active floodproofing – includes techniques such as installing water tight doors, seals or floodwalls to prevent water from entering openings below the level of the *flood hazard*. Advance warning is almost always required to make the flood protection operational (i.e. closing of water tight doors, installation of waterproof protective coverings or windows etc.).

Wet floodproofing – involves designing a building or structure using materials, methods and design measures that maintain structural integrity by avoiding external unbalanced forces from acting on buildings or structures during and after a flood, to reduce flood damage to contents, and to reduce the cost of post flood clean up. Buildings and structures are designed so as to intentionally allow flood waters to enter and exit, ensuring the interior space below the level of the *flood hazard* remains unfinished, non-habitable, and free of service units and panels.

FLOODWAY: means the portion of the *floodplain* where *development (1, 2)* and *site alteration* would cause a danger to public health and safety or property damage.

Where the *one zone concept* is applied, the floodway is the entire *floodplain*.

Where the *two zone concept* is applied, the floodway is the inner portion of the *floodplain*, representing that area required for the safe passage of flood flow and/or that area where flood depths and/or velocities are considered to be such that they pose a potential threat to life and/or property damage. Where the *two zone concept* applies, the outer portion of the *floodplain* is called the *flood fringe*. (MMAH, 2005)

FREEBOARD: , means a distance above the level of the *flood hazard*, used to compensate for unknown factors such as ice jams and waves generated by vehicles and boats which could contribute

to flood heights greater than anticipated.

GROUND FLOOR AREA: means the ground area of a lot covered by any part of a building, excluding decks, patios and similar structures.

GROUND WATER FEATURES: means water related features in the earth's subsurface, including recharge/discharge areas, water tables, aquifers and unsaturated zones that can be defined by surface and subsurface hydrogeological investigations. (MMAH, 2005)

HABITABLE: means that portion of a building or structure containing rooms or spaces required and intended for overnight occupancy and associated living space, and includes those portions which contain facilities for storage, heating, air-conditioning, electrical, hot water supplies, etc., which are necessary to maintain the habitable condition.

HAZARDOUS LAND: means land that could be unsafe for *development (1)* because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock. (CAA, 1990)

HYDROLOGIC FUNCTION: means the functions of the hydrological cycle that include the occurrence, circulation, distribution and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water's interaction with the environment including its relation to living things. (MMAH, 2005)

INFRASTRUCTURE: means physical structures (facilities and corridors) that form the foundation for *development (1, 2)*. Infrastructure includes: sewage and water systems, septage treatment systems, waste management systems, electric power generation and transmission, communications/telecommunications, transit and transportation corridors and facilities, oil and gas pipelines and associated facilities. (MMAH, 2005)

INTENSIFICATION: means the development of a property, site or area at a higher density than currently exists through:

- a) *redevelopment*, including the reuse of brownfield sites;
- b) the development of vacant and/or underutilized lots within previously developed areas;
- c) *infill development (1, 2)*; and
- d) the expansion or conversion of existing buildings. (MMAH, 2005)

INTERFERING IN ANY WAY (also interference): means any anthropogenic act or instance which hinders, disrupts, degrades or impedes in any way the natural features or hydrologic and ecologic functions of a *wetland* or *watercourse*. (CO, 2008)

LAKE ONTARIO SHORELINE HAZARD: means *flood hazards, erosion hazards* and *dynamic beach hazards* associated with Lake Ontario.

MEANDER BELT ALLOWANCE: means the area of land in which a *watercourse* channel moves

or is likely to move over a period of time. The extent of the meander belt allowance is determined by a *technical report* using accepted scientific and engineering principles and includes considerations for meander amplitudes, erosion setbacks and factors of safety.

NATURAL HERITAGE FEATURES AND AREAS: means features and areas, including *significant wetlands, fish habitat, significant woodlands, significant valleylands, significant habitat of endangered species and threatened species, significant wildlife habitat, and significant ANSIs*, which are important for their environmental and social values as a legacy of the natural landscapes of an area. (MMAH, 2005)

NATURAL HERITAGE SYSTEM: means a system made up of *natural heritage features and areas*, linked by natural corridors which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species and ecosystems. These systems can include lands that have been restored and areas with the potential to be restored to a natural state (MMAH, 2005).

NO-NET-LOSS: means a working principle by which CVC strives to balance unavoidable *negative impacts* to the *natural heritage system* with replacement of those *ecological functions* and *hydrologic functions* on a project-by-project basis so that further reductions to the *natural heritage system* may be avoided.

ONE HUNDRED YEAR EROSION RATE: means the average annual rate of recession extended over a hundred year time span.

ONE HUNDRED YEAR FLOOD: means that flood, based on an analysis of precipitation, snow melt, or a combination thereof, having a return period of 100 years on average, or having a 1% chance of occurring or being exceeded in any given year. (MMAH, 2005)

ORIGINAL: as it pertains to the location, dimensions, use, *habitable* and *ground floor area* of an existing building or structure, as those attributes existed on June 20, 1990.

OTHER AREAS: means areas where development could interfere with the *hydrologic function* of a *wetland* including areas within 120 metres of all *provincially significant wetlands* and areas within 30 metres of all *other wetlands* but not including those where development has been approved pursuant to an application made under the Planning Act or other public planning or regulatory process. (CAA, 1990)

OTHER WETLANDS: means any *wetland* that that is not a *provincially significant wetland*.

POND: means a human made body of water, typically constructed by digging, dredging, excavating and/or damming, in which surface water and groundwater collects.

On-line or in-stream ponds - include ponds located within an existing *watercourse*.

Dugout ponds - include ponds with no inlet or outlet channels to an existing *watercourse*.

Off-line by-pass ponds - include ponds with an inlet and outlet channel to an existing *watercourse*.

POLLUTION: means any deleterious physical substance or other contaminant that has the

potential to be generated by *development (1)* in an area to which a regulation made under clause (1) (c) of the Conservation Authorities Act applies. (CAA, 1990)

PROVINCIAL STANDARDS: means the most recently approved policies, manuals and technical guidelines administered or prepared by the Province, as amended from time to time (see Chapter 10 List of Key Reference Documents).

PROVINCIALY SIGNIFICANT WETLAND: means a *wetland* identified as significant by the Ontario Ministry of Natural Resources (see *Significant a*).

QUALITY AND QUANTITY OF WATER: is measured by indicators such as minimum base flow, depth to water table, aquifer pressure, oxygen levels, suspended solids, temperature, bacteria, nutrients and hazardous contaminants, and hydrologic regime. (MMAH, 2005)

RECONSTRUCTION: means the restoration, repair or replacement of a building or structure within its *original* footprint, not to exceed its *original ground floor area*, gross floor area or height, and without any change to its *original* use. 'Reconstructed' has a corresponding meaning.

RECREATIONAL USES: means:

Passive or Low Intensity Uses - those uses and facilities that have minimal impact on the *natural heritage system*, including its *ecological functions* and *hydrologic functions*, and require very little terrain or vegetation modification and few, if any, buildings or structures, including but not limited to non-motorized trails, boardwalks, picnic facilities, unserviced playing fields, natural heritage appreciation, unserviced camping on public and institutional land and accessory uses; and

Active or Major Recreational Uses - those uses that require large scale modification of terrain, vegetation or both and usually also require large scale buildings or structures, including but not limited to golf courses, serviced playing fields, serviced campgrounds and ski hills.

REDEVELOPMENT: means the creation of new units, uses or lots on previously developed land in existing communities, including brownfield sites. (MMAH, 2005)

REGULATED AREA: means the lands described in, and subject to, Ontario Regulation 160/06 under Section 28 of the Conservation Authorities Act.

RIVERINE: means related to a *watercourse* and/or a *valleyland*.

SAFE ALTERNATE OR SECONDARY ACCESS: means a secondary route of ingress and egress which meets or exceeds the flood criteria required for the primary route, may or may not be designed or constructed to the same road standard(s), and would not be a source of risk, harm, injury or damage.

SAFE ACCESS: means locations where during the regulatory storm event, vehicular and pedestrian access to and from a site is consistent with *CVC standards*.

SENSITIVE: as it pertains to *surface water features* and *ground water features*, means areas that are particularly susceptible to impacts from activities or events including, but not limited to, water withdrawals, and additions of pollutants. (MMAH, 2005)

SIGNIFICANT: means:

- a) in regard to *wetlands*, coastal *wetlands* and *areas of natural and scientific interest*, an area identified as provincially significant by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time;
- b) in regard to the habitat of *endangered species* and *threatened species* the habitat, as approved by the Ontario Ministry of Natural Resources, that is necessary for the maintenance, survival, and/or the recovery of naturally occurring or reintroduced populations of *endangered species* or *threatened species*, and where those areas of occurrence are occupied or habitually occupied by the species during all or any part(s) of its life cycle;
- c) in regard to *woodlands*; an area which is ecologically important in terms of features such as species composition to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history; and
- d) in regard to *wildlife habitat and valleylands*, ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or *natural heritage system*. (MMAH, 2005)

SIGNIFICANT NATURAL AREAS: means areas that are not identified as *significant natural heritage features and areas* but have been identified by CVC as *valleylands*, *ESAs*, regionally significant life science *ANISs*, significant habitat of *species of conservation concern*, *watercourses* and *other wetlands* required to be protected.

Areas that exhibit characteristics meeting the criteria for any of the above feature types or have been identified as integral to the ecological or hydrological sustainability of the *natural heritage system* but have not been previously identified may also be considered. However, these areas must be determined through *comprehensive environmental studies* or *technical reports* and their suitability for classification as a significant natural area confirmed by CVC and/or the appropriate agency.

SITE ALTERATION: means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site. (MMAH, 2005)

SPECIAL POLICY AREA: means an area within a community that has historically existed in the *floodplain* and where site-specific policies, approved by both the Ministers of Natural Resources and Municipal Affairs and Housing, are intended to provide for the continued viability of existing uses (which are generally on a small scale) and address the significant social and economic hardships to the community that would result from strict adherence to provincial policies concerning *development (1, 2)*. The criteria and procedures for approval are established by the Province.

A special policy area is not intended to allow for new or intensified *development (1, 2)* and *site alteration*, if a community has feasible opportunities for *development (1, 2)* outside the *floodplain*. (MMAH, 2005)

SPECIES OF CONSERVATION CONCERN: means a species meeting one or more of the following criteria:

- a) identified as nationally endangered species, threatened species or of special concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC);
- b) identified as provincially *endangered species, threatened species* or of special concern by the Committee on the Status of Species at Risk in Ontario (COSSARO); or
- c) listed as rare or historical in Ontario (i.e. S1-S3) based on records kept by the Ministry of Natural Resources' Natural Heritage Information Centre (S1=critically imperiled, S2=imperiled, S3 = vulnerable).

STABLE SLOPE ALLOWANCE: means:

Defined Valleylands - the setback that ensures safety if the slumping or slope failure occur. It refers to a horizontal allowance measured landward from the toe erosion allowance equivalent to three times the height of the slope or through valid study; and

Lake Ontario Shoreline - a horizontal allowance measured landward from the toe of the shoreline cliff, bluff or bank that is three times the height of the cliff, bluff or bank or as determined through a valid study. The height is the difference in elevation between the toe of the shoreline cliff, bluff or bank, which may be above the surface of the water, or below it, and the top or first lakeward break in slope. (OMNR 2001)

STABLE TOE OF SLOPE: means:

- a) the physical *toe of slope* where the existing toe is stable and not impacted by erosion; or
- b) the landward limit of the *toe erosion allowance* where the existing slope is unstable and/or impacted by erosion.

SURFACE WATER FEATURES: means water-related features on the earth's surface, including headwaters, rivers, stream channels, inland lakes, seepage areas, recharge/discharge areas, springs, *wetlands*, and associated riparian lands that can be defined by their soil moisture, soil type, vegetation or topographic characteristics. (MMAH, 2005)

SUITABLE BUILDING ENVELOPE: means any portion of a lot suitable for *development (1, 2)* which will allow for *development (1, 2)*, including buildings, structures, *accessory buildings or structures*, septic systems, parking lots, driveway access and other similar *development (1, 2)* to be outside of *natural heritage features and areas, significant natural areas, fish habitat, hazardous land* and *erosion access allowances* as required, including the applicable setbacks. It must also be able to incorporate other appropriate municipal and provincial requirements.

SUSTAINABLE MANAGEMENT PRACTICES: means methods, facilities, buildings and structures which are designed to protect or improve the natural heritage system, including its *ecological*

functions and *hydrologic functions*, from the effects of *development* (1, 2) and *site alteration*. Sustainable management practices include, and are often referred to as, best management practices.

TECHNICAL REPORTS: means reports, studies or plans, typically prepared to support and implement the recommendations of a *comprehensive environmental study*, that provide detailed information regarding one or more aspects of the natural or physical sciences. For the purposes of this document, technical reports may include, but are not limited to, hydraulic analyses, stormwater management reports, functional servicing reports, hydrogeology reports, geomorphology studies, geotechnical reports and environmental impact studies, or similar documents. Technical reports must be prepared by a qualified professional in the relevant field.

In consultation with CVC and the affected planning authority, requirements for a technical report may be scoped or reduced based on the scale of *development* (1, 2), *site alteration* and associated potential or anticipated impacts.

THREATENED SPECIES: means a species that is listed or categorized as a ‘threatened species’ on the Ontario Ministry of Natural Resources’ official species at risk list, as updated from time to time. (PPS, 2005)

TOE EROSION ALLOWANCE: means:

Defined Valleylands - the setback that ensures safety if the toe of the slope adjacent to the *watercourse* erodes and weakens the bank, increasing the risk of slumping (OMNR 2001); and

Lake Ontario Shoreline – the setback that ensures safety considering the average annual rate of recession extended over a hundred year time span for a site where there is at least 35 years of reliable information and/or an appropriate erosion allowance. (OMNR 2001)

TOE OF SLOPE: means the lowest point on a slope, where the surface gradient changes from relatively shallow to relatively steep.

TOP OF SLOPE: means the point of the slope where the downward inclination of the land begins, or the upward inclination of the land levels off. This point is situated at a higher topographic elevation of land than the remainder of the slope. There may be situations where there are interruptions in the valley slope by plateau (terrace) areas.

TOP OF STABLE SLOPE: means:

- a) the physical *top of slope* where the existing slope is stable and not impacted by toe erosion; or
- b) the landward limit of the *toe erosion allowance* plus the *stable slope allowance* where the existing slope is unstable and/or impacted by erosion.

VALLEYLAND: means land that has depressional features associated with a river or stream, whether or not it contains a *watercourse*. (CAA, 1990)

WATERCOURSE: means an identifiable depression in the ground in which a flow of water regularly or continuously occurs. (CAA, 1990)

WATERSHED: means an area that is drained by a river and its tributaries. (PPS, 2005)

WAVE UPRUSH: means the rush of water up onto a shoreline or structure following the breaking of a wave; the limit of wave uprush is the point of furthest landward rush of water onto the shoreline. (MMAH, 2005)

WETLAND: means land that:

- a) is seasonally or permanently covered by shallow water, or has a water table close to or at its surface,
- b) directly contributes to the *hydrologic function* of a *watershed* through connection with a surface *watercourse*,
- c) has hydric soils, the formation of which has been caused by the presence of abundant water, and
- d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water,

but does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a wetland characteristic referred to in clause (c) or (d). (CAA, 1990)

WILDLIFE HABITAT: means areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species. (MMAH, 2005)

WOODLAND: means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of *wildlife habitat*, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas can vary in their level of significance at the local, regional and provincial levels. (MMAH, 2005)

9

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- Ontario Ministry of Natural Resources (MNR), 2001. *Understanding Natural Hazards: Great Lakes – St. Lawrence River System and large inland lakes, river and stream systems and hazardous sites*. Queen’s Printer for Ontario.
- Ontario Ministry of Natural Resources a (MNR a), 2002. *Technical Guide – River and Stream Systems: Erosion Hazard Limit*. Queen’s Printer for Ontario.
- Ontario Ministry of Natural Resources b (MNR b), 2002. *Technical Guide – River and Stream Systems: Flooding Hazard Limit*. Queen’s Printer for Ontario.

10 LIST OF KEY REFERENCE DOCUMENTS

CREDIT VALLEY CONSERVATION

Environmental Impact Study Terms of Reference, 2008

Erosion and Sediment Control Guideline for Urban Construction, 2006

Guidelines for the Review of Golf Course Developments, 2005

Stormwater Management Guidelines, May 1996

Technical Guidelines for Floodproofing, June 1994

Technical Guidelines for Pedestrian Bridge Crossings, 1993

PROVINCIAL

Growth Plan for the Greater Golden Horseshoe, MMAH, 2006

Provincial Policy Statement, MMAH, 2005

Greenbelt Plan, MMAH, 2005

The Niagara Escarpment Plan, MNR, 2005

Stormwater Management Planning and Design Manual, MOE, 2003

Oak Ridges Moraine Conservation Plan, MMAH, 2002

Technical Guide - River and Stream Systems: Flooding Hazard Limit, OMNR, 2002

Technical Guide - River and Stream Systems: Erosion Hazard Limit, OMNR, 2002

Understanding Natural Hazards: Great Lakes – St. Lawrence River System and large inland lakes, river and stream systems and hazardous sites, OMNR, 2001

Natural Heritage Reference Manual – for policy 2.3 of the provincial policy statement, OMNR, 1999

APPENDIX A - Memorandum of Understanding on Procedures to Address Conservation Authority Delegated Responsibilities

CONSERVATION ONTARIO, MINISTRY OF NATURAL RESOURCES & MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING

MEMORANDUM OF UNDERSTANDING ON PROCEDURES TO ADDRESS CONSERVATION AUTHORITY DELEGATED RESPONSIBILITY

PURPOSE OF THE MOU

The MOU defines the roles and relationships between Conservation Authorities (CAs), the Ministry of Natural Resources (MNR), and the Ministry of Municipal Affairs and Housing (MMAH) in planning for implementation of CA delegated responsibilities under the Provincial One Window Planning System.

BENEFITS TO SIGNATORY PARTIES

It is beneficial for all parties to enter into this agreement because it clarifies the roles of CAs and the unique status of CAs in relationship to the Provincial One Window Planning System.

DELEGATED RESPONSIBILITY FOR NATURAL HAZARDS

CAs were delegated natural hazard responsibilities by the Minister of Natural Resources. A copy of the delegation letter is attached. This letter (dated April 1995) went to all CAs and summarizes delegations from the MNR including flood plain management, hazardous slopes, Great Lakes shorelines, unstable soils and erosion which are now encompassed by Section 3.1 “Natural Hazards” of the Provincial Policy Statement (1997). In this delegated role, the CA is responsible for representing the “Provincial Interest” on these matters in planning exercises where the Province is not involved.

This role does not extend to other portions of the PPS unless specifically delegated or assigned in writing by the Province.

ROLES AND RESPONSIBILITIES

Ministry of Natural Resources

- a) MNR retains the provincial responsibility for the development of flood, erosion and hazard land management policies, programs and standards on behalf of the province pursuant to the *Ministry of Natural Resources Act*.
- b) Where no conservation authorities exist, MNR provides technical support to the Ministry of Municipal Affairs and Housing on matters related to Section 3.1 of the Provincial Policy Statement in accordance with the “Protocol Framework – One

Window Plan Input, Review and Appeals”.

- c) MNR, in conjunction with MMAH, co-ordinates the provincial review of applications for Special Policy Area approval under Section 3.1 of the PPS.

Ministry of Municipal Affairs and Housing

- a) MMAH coordinates provincial input, review and approval of policy documents, and development proposals and appeals to the Ontario Municipal Board in accordance with the “Protocol Framework One Window Plan Input Review and Appeals”.
- b) Where appropriate, MMAH will consult conservation authorities as part of its review of policy documents and development proposals to seek input on whether there was “regard to” Section 3.1 of the PPS.
- c) Where there may be a potential conflict regarding a Conservation Authority’s comments on a planning application with respect to Section 3.1 of the PPS and comments from provincial ministries regarding other Sections of the PPS, the Ministry of Municipal Affairs and Housing will facilitate discussions amongst the affected ministries and the Conservation Authority so that a single integrated position can be reached.
- d) Where appropriate, MMAH will initiate or support appeals to the OMB on planning matters where there is an issue as to whether there was “regard to” Section 3.1 of the PPS.
- e) MMAH, in conjunction with MNR, coordinates the provincial review of application for Special Policy Area approval under Section 3.1 of the PPS.

Conservation Authorities (CAs)

- a) The CAs will review policy documents and development proposals processed under the *Planning Act* to ensure that the application has appropriate regard to Section 3.1 of the PPS.
- b) Upon request from MMAH, CAs will provide comments directly to MMAH on planning matters related to Section 3.1 of the PPS as part of the provincial one window review process.
- c) Where there may be a potential conflict regarding a Conservation Authority’s comments on a planning application with respect to Section 3.1 of the PPS and comments from provincial ministries regarding other Sections of the PPS, the Ministry of Municipal Affairs and Housing will facilitate discussions amongst the affected ministries and the Conservation Authority so that a single integrated position can be reached.
- d) CAs will apprise MMAH of planning matters where there is an issue as to whether there has been “regard to” Section 3.1 of the PPS to determine whether or not direct involvement by the province is required.
- e) Where appropriate, CAs will initiate an appeal to the OMB to address planning matters where there is an issue as to whether there has been “regard to” Section 3.1 of the PPS is at issue. CAs may request MMAH to support the appeal.

- f) CAs will participate in provincial review of applications for Special Policy Area approval.
- g) CAs will work with MMAH, to develop screening and streamlining procedures that eliminate unnecessary delays and duplication of effort.

FURTHER CA ROLES IN PLAN INPUT, PLAN REVIEW AND APPEALS

CAs also undertake further roles in planning under which they may provide plan input or plan review comments or make appeals.

1. Watershed Based Resource Management Agency

CAs are corporate bodies created by the province at the request of two or more municipalities in accordance with the requirements of the *Conservation Authorities Act (CA Act)*. Section 20 of the *CA Act* provides the mandate for an Authority to offer a broad resources management program. Section 21 of the *CA Act* provides the mandate to have watershed-based resource management programs and/or policies that are approved by the Board of Directors.

CAs operating under the authority of the *CA Act*, and in conjunction with municipalities, develop business plans, watershed plans and natural resource management plans within their jurisdictions (watersheds). These plans may recommend specific approaches to land use and resource planning and management that should be incorporated into municipal planning documents and related development applications in order to be implemented. CAs may become involved in the review of municipal planning documents (e.g., Official Plans (OPs), zoning by-laws) and development applications under the *Planning Act* to ensure that program interests developed and defined under Section 20 and 21 of the *CA Act* are addressed in land use decisions made by municipal planning authorities. In this role, the CA is responsible to represent its program and policy interests as a watershed based resource management agency.

2. Planning Advisory Service to Municipalities

The provision of planning advisory services to municipalities is implemented through a service agreement with participating municipalities or as part of a CAs approved program activity (i.e., service provided through existing levy). Under a service agreement, a Board approved fee schedule is used and these fee schedules are coordinated between CAs that “share” a participating municipality. The “Policies and Procedures for the Charging of CA Fees” (MNR, June 13, 1997) identifies “plan review” activities as being eligible for charging CA administrative fees.

The CA is essentially set up as a technical advisor to municipalities. The agreements cover the Authority’s areas of technical expertise, e.g., natural hazards and other resource management programs. The provision of planning advisory services for the review of *Planning Act* applications is a means of implementing a comprehensive resource management program on a watershed basis.

In this role, the CA is responsible to provide advice on the interpretation of the Provincial Policy Statement (PPS) under the terms of its planning advisory service agreement with the municipality. Beyond those for Section 3.1 “Natural Hazards” where CAs have delegated responsibility, these comments should not be construed by any party as representing the provincial position.

3. CAs as Landowner

CAs are landowners and as such, may become involved in the planning process as a proponent or adjacent landowner. Planning Service Agreements with municipalities have anticipated that this may lead to a conflict with our advisory role and this is addressed by establishing a mechanism for either party to identify a conflict and implement an alternative review mechanism.

4. Regulatory Responsibilities

a) *CA Act* Regulations

In participating in the review of development applications under the *Planning Act*, CAs will (i) ensure that the applicant and municipal planning authority are aware of the Section 28 regulations and requirements under the *CA Act*, and, (ii) assist in the coordination of applications under the *Planning Act* and the *CA Act* to eliminate unnecessary delay or duplication in the process.

b) Other Delegated or Assigned Regulatory/Approval Responsibility

Federal and provincial ministries and municipalities often enter agreements to transfer regulatory/approval responsibilities to individual CAs (e.g., Section 35 Fisheries Act/DFO; Ontario Building Code/septic tank approvals). In carrying out these responsibilities and in participating in the review of development applications under the *Planning Act*, CAs will (i) ensure that the applicant and municipality are aware of the requirements under these other pieces of legislation and how they may affect the application; and, (ii) assist in the coordination of applications under the *Planning Act* and those other Acts to eliminate unnecessary delays or duplication in the process.

CANCELLATION OR REVIEW OF THE MOU

The terms and conditions of this MOU can be cancelled within 90 days upon written notice from any of the signing parties. In any event, this document should be reviewed at least once every two years to assess its effectiveness, its relevance and its appropriateness in the context the needs of the affected parties. “Ed. Note: 90 days is to provide time for the parties to reach a resolution other than cancellation”.

**MEMORANDUM OF UNDERSTANDING ON PROCEDURES TO ADDRESS
CONSERVATION AUTHORITY DELEGATED RESPONSIBILITY**

I hereby agree to support the provisions contained in this Memorandum of Understanding as an appropriate statement of the roles and responsibilities of relevant Ministries and Conservation Authorities in the implementation of the Provincial Policy Statement.

Jan 19, 2001: Original signed by

David de Launay
Director
Lands and Waters Branch
Ministry of Natural Resources

Date

Feb 12, 2001: Original signed by

Audrey Bennett
A/Director
Provincial Planning and Environmental Services Branch
Ministry of Municipal Affairs and Housing

Date

Jan 01, 2001: Original signed by

R.D. Hunter
General Manager
Conservation Ontario

Date



Ministry of
Natural
Resources

Minister

Ministère des
Richesses
naturelles

Ministre

Queen's Park
Toronto, Ontario
M7A 1W7
416 / 314-2301

APR 19 1995

95-01252-MIN

Mr. Donald Hocking
Chair
Upper Thames River Conservation Authority
R.R. #6
London, Ontario
N6A 4C1

Dear Mr. Hocking:

This letter is with regard to the responsibilities of Conservation Authorities in commenting on development proposals.

The Government of Ontario is continuing to move forward on reforms promoting greater local involvement in decision-making, streamlining of municipal planning and other approval processes, and improved environmental protection. Ontario's Conservation Authorities continue to be important partners in this process.

In 1983, Conservation Authorities were delegated commenting responsibility on flood plain management matters. This was followed in 1988 by a similar delegation of commenting responsibility for matters related to flooding, erosion, and dynamic beaches along the shorelines of the Great Lakes-St. Lawrence River system.

At present, the Ministry and Conservation Authorities continue to independently review and provide input to municipalities and the Ministry of Municipal Affairs on development matters related to riverine erosion, slope, and soil instability. Although Authorities and the Ministry share similar objectives, this overlap and duplication of efforts have occasionally led to differences in comments which, in turn, have sometimes resulted in confusion, delays and expense for development proponents. As part of the current Planning Reform initiative, there is an opportunity to clarify the roles and responsibilities related to these important hazard management issues.

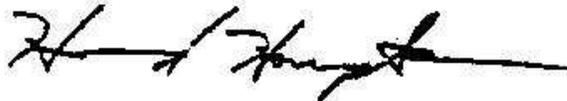
Through their flood plain, watershed and Great Lakes-St. Lawrence River shoreline management planning initiatives, Conservation Authorities have made good progress in streamlining approval processes and strengthening provincial-municipal partnerships. By extension, I believe that it would be appropriate to recognize the well-developed expertise and capabilities of Conservation Authorities in the evaluation of riverine erosion, slope and soil instability matters and to formally confirm Conservation Authorities as the lead commenting agency. This would result in further streamlining of approval processes, the promotion of environmentally sound development, and the provision of an economic stimulus for the province.

As of March 29, 1995, Conservation Authorities, where they exist, will have sole commenting responsibilities on development proposed in areas subject to riverine erosion, slope instability and soil instability, such as in areas of high water tables, organic or peat soils, and leda, or sensitive marine clay, soils. Implementation of this policy by authorities would continue to be eligible for provincial grant. Where Conservation Authorities exist, I have asked Ministry staff to focus their comments on all other matters of direct interest and concern to the Ministry. Where Conservation Authorities do not exist, the Ministry will continue its commenting role on these matters.

The Ministry of Natural Resources will continue as lead administrative Ministry having overall Government responsibility for hazard management policies and programs. In this regard, the Ministry will continue to provide leadership, policy direction and advisory assistance to the Conservation Authorities.

Your continued participation in the delivery of this important component of the overall provincial hazard management program will serve to strengthen the partnership between the Ministry and the Conservation Authorities.

Yours sincerely,



Howard Hampton
Minister

APPENDIX B - Policies and Mapping for Approved Two Zone Area in Orangeville

The Town of Orangeville and CVC have adopted the two zone concept for floodplain management within specific portions of Orangeville. The following policies will apply to those areas in the Town of Orangeville defined in the report titled 'CVCA Two Zone Plain Study in the Town of Orangeville' (Phillips Planning and Engineering Limited, October 1989), as amended from time to time.

Two Zone Policies

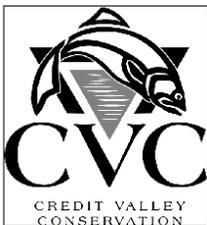
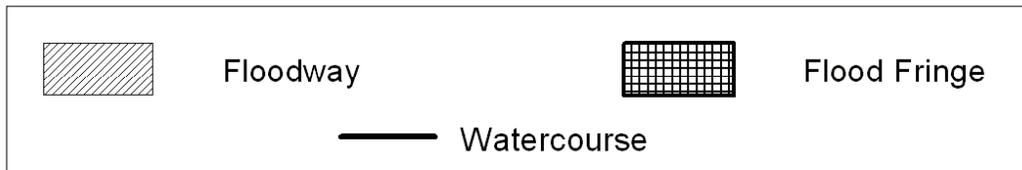
Floodway

- i. CVC will not permit any buildings or structures other than those for flood and erosion control and utilities which by nature of their function must be located in the *floodway*, in a defined *floodway* area.
- ii. CVC will not permit the expansion of any existing uses in a defined *floodway* area, other than those identified in i. above.
- iii. CVC will require that all *floodway* areas be zoned in an appropriate zoning category at the time specific lands containing *floodway* are considered for *development (1, 2)/redevelopment*.

Flood Fringe

- iv. All new *development (1)* in an area defined as *flood fringe* must be protected to the level of the *flood hazard* limit.
- v. All new buildings and structures proposed within the *flood fringe* must be dry passively *floodproofed*. At a minimum, proposed new buildings and structures must be constructed on a pad of fill which has a minimum elevation of the *flood hazard* limit, plus a 0.3 metre *freeboard*.
- vi. The importation of fill, without a compensating, balanced cut will be permitted on lands defined as *flood fringe* in conjunction with the *development (1, 2)/redevelopment* of such lands.
- vii. CVC will require that *flood fringe* areas be zoned in an appropriate zoning category at the time specific lands are considered for *development (1, 2)/redevelopment*.
- viii. Notwithstanding policies i. to vii. above, all other relevant CVC policies will apply in the review of *development (1, 2)/redevelopment* proposals in the defined Two Zone Area.

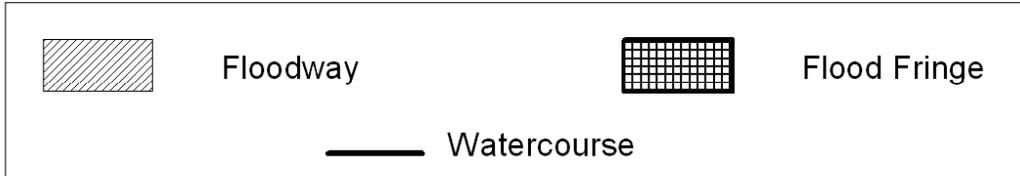
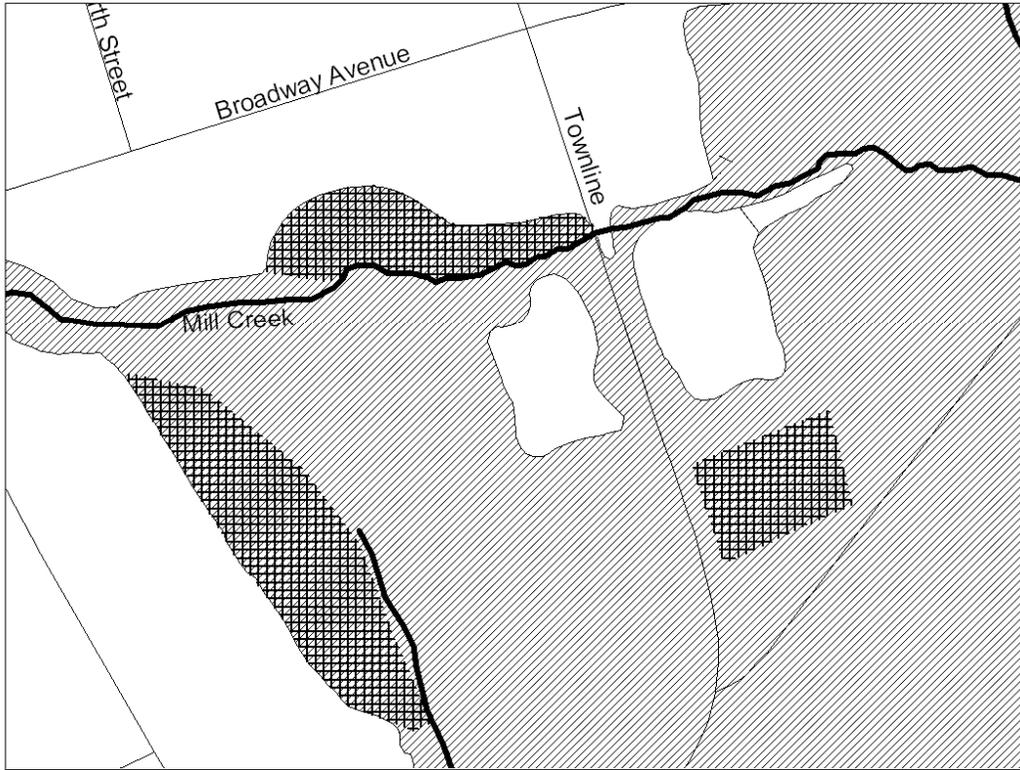
Orangeville 2 Zone Area First Street to Orangeville Mall



Please note that the above figure is for illustrative purposes only. For specific information please contact the Planning Department at CVC.



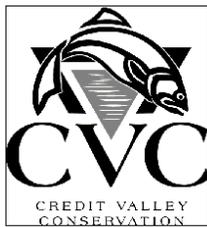
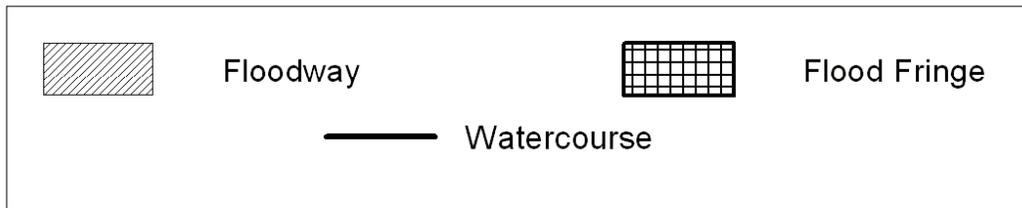
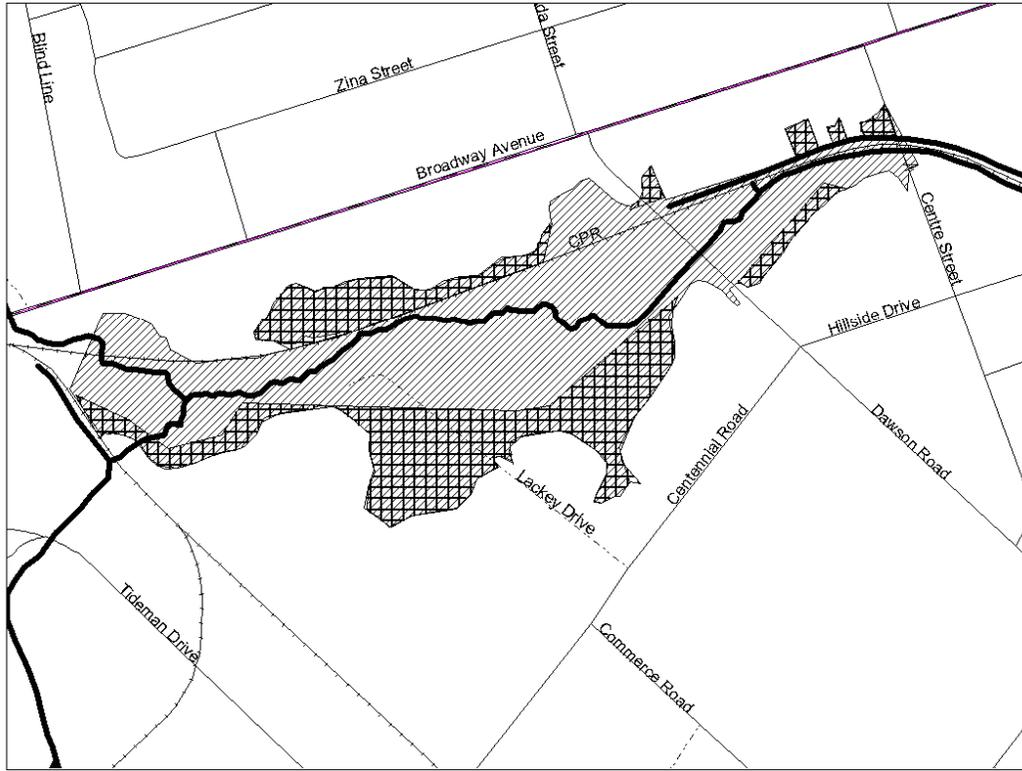
2 Zone Area of Mill Creek Broadway Ave and Townline



Please note that the above figure is for illustrative purposes only. For specific information please contact the Planning Department at CVC.



2 Zone Area of Mill Creek South of Broadway Ave



Please note that the above figure is for illustrative purposes only. For specific information please contact the Planning Department at CVC.



APPENDIX C - Policies and Mapping for Approved Two Zone Area in Mississauga

The lands identified in the map above are located generally between the North Service Road where the Cooksville Creek crosses Camilla Road, and are subject to the two zone concept for floodplain management. The limits of the floodplain, floodway and flood fringe are conceptual and the exact limits will be determined through further study. The following policies will apply to those areas within this Cooksville two zone area as determined by further study.

Two Zone Policies

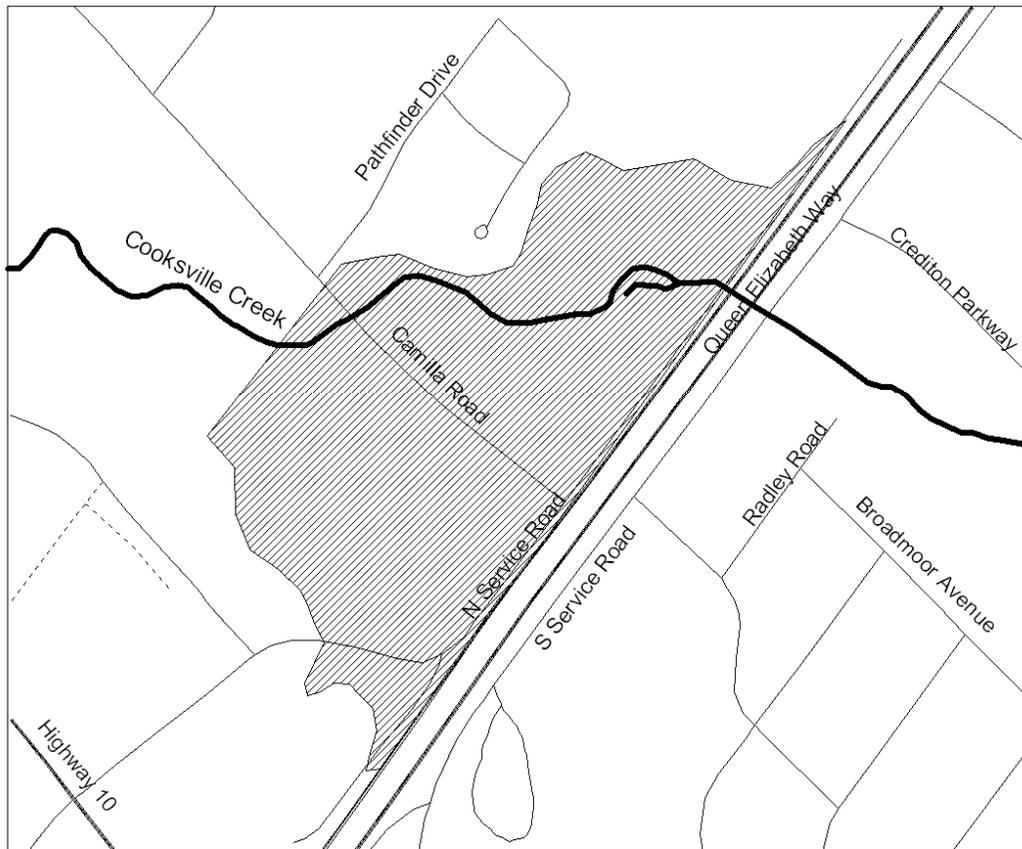
Floodway

- i. CVC will not permit any buildings or structures within the *floodway* other than those for flood and erosion works, passive recreational activities, or facilities which by their nature must locate near water or traverse watercourses (e.g. bridges, storm sewer outlets and stormwater management facilities).
- ii. CVC will require that all *floodway* areas be zoned in an appropriate zoning category at the time specific lands containing *floodway* are considered for *development (1, 2)/ redevelopment*.

Flood Fringe

- iii. *Development (1, 2)* may be permitted within the *flood fringe* provided the use, building or structure is floodproofed to the level of the *flood hazard* limit.
- iv. Ingress/egress for all *development (1, 2)* located in the *flood fringe* will be such that emergency vehicular and pedestrian movement is not prevented during times of flooding in order that *safe access* and evacuation is ensured.
- v. Enclosed underground parking will be subject to the installation of stringent *floodproofing* measures to the level of the *flood hazard* limit.
- vi. CVC may support the zoning of lands within the *flood fringe* using a holding provision to provide direction as to future permitted uses while ensuring *floodproofing* and *safe access* are addressed prior to the *development (1, 2)*. CVC will not support the removal of the holding symbol until such time that the requirements for *floodproofing*, the provision for *safe access* to the proposed *development (1, 2)* and a detailed spill assessment and a financing agreement for the reconstruction of the culvert at the QEW has been completed.
- vii. Notwithstanding policies i. to vii. above, all other relevant CVC policies will apply in the review of *development (1, 2)/ redevelopment* proposals in the defined Two Zone Area.

Cooksville Creek 2 Zone Area



Please note that the above figure is for illustrative purposes only. For specific information please contact the Planning Department at CVC. The limits of the flood fringe and floodway will be determined through further study.

