NIAGARA PENINSULA CONSERVATION AUTHORITY

NPCA POLICY DOCUMENT:

POLICIES FOR THE ADMINISTRATION OF ONTARIO REGULATION 155/06 AND THE PLANNING ACT

September 2018

Document Notes

This document supersedes any previous version of the NPCA's policies.

TABLE OF CONTENTS

ABBREVIATIONS

DART	Drainage Act and Section 28 Regulations Team
EA	Environmental Assessment
GSC	Geodetic Survey of Canada (datum)
HEC-RAS	Hydrologic Engineering Centers River Analysis System
IWM	Integrated Watershed Management
MOU	Memorandum of Understanding
PPS	Provincial Policy Statement
PSW	Provincially Significant Wetland
NPCA	Niagara Peninsula Conservation Authority
NPSPA	Niagara Peninsula Source Protection Area
MNRF	Ministry of Natural Resources and Forestry
RAP	Remedial Action Plan
SARA	Species at Risk Act
SCR	Standard Compliance Report

1.0 INTRODUCTION

1.1 THE LIVING LANDSCAPE PROCESS

The Niagara Peninsula Conservation Authority (NPCA) fulfills a broad range of functions towards promoting the ultimate goal of conserving the environment and supporting sustainable development practices across the watershed. In September 2015, the NPCA initiated a process to review and update its main policy document, previously titled '*Policies, Procedures and Guidelines for the Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document*', through a project called the Living Landscape. This document represents the result of the process (see **Figure 1.1).**

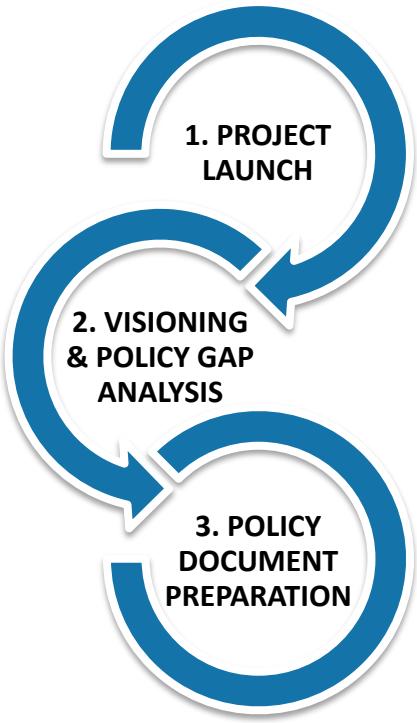


Figure 1.1: Living Landscape Process

1.2 OBJECTIVES

This document provides the principles, objectives, and policies for the administration of the NPCA's mandate under Ontario Regulation 155/06, as well as its delegated roles and responsibilities within the planning and approvals process. The document is intended as a guide for decision-making for NPCA staff, landowners, developers, municipal planners and residents. The overall objectives of this Policy Document are to:

1. Provide transparency and clarity in decision-making.
2. Implement the provincial planning framework and clearly communicate policy direction for areas under the NPCA's regulated areas under Ontario Regulation 155/06.
3. Promote collaboration amongst the various agencies and governments within the watershed.
4. Provide a set of implementation policies to manage change within the watershed.

1.3 HOW TO USE THIS DOCUMENT

1.3.1 Organization

Chapters 1 and 2 of this document provide an overview of the background, planning and legislative framework of the policies. Chapters 1 and 2 are provided for context purposes and are intended to summarize the general basis and background for the policies.

Chapter 3 describes the overall vision for the watershed. Chapter 3 provides a series of high-level statements which correlate to the legislative underpinnings of the policies. Given the complex and integrated nature of watershed planning, Chapter 3 helps to frame the policies found in the policies.

Chapters 4, 5, 6 and 7 provide the detailed policies for natural hazards, including flooding hazards, Great Lakes and Niagara River shoreline hazard, valleyland erosion hazards and hazardous sites (e.g. unstable soils).

Chapters 8 and 9 cover development and interference with wetlands and watercourses.

Chapters 10, and 11 cover a set of discrete policies for fill placement and municipal drains.

Chapter 12 addresses climate change and a number implementation and process related 2policies, including the NPCA's work permit process.

Chapter 13 provides the key definitions. Note the following:

- Development: The definition of development as used in this document pertains to the particular legislative act which is being applied – for example, when issuing a work permit under the *Conservation Authorities Act*, staff would use the definition from the CA Act and when providing comments to a municipality on a municipal planning matter, staff would refer to the definition of development provided in the *Provincial Policy Statement.*

This document also includes the following technical appendices:

- Appendix A: Section 28(3) Conservation Authorities Act Hearing Guidelines.
- Appendix B: MNR Delegation of Natural Hazards to Conservation Authorities.
- Appendix C: Conservation Authorities Act, Ontario Regulation 155/06.
- Appendix D: Welland River Floodplain Association Correspondence

1.3.2 A Note about Language

The following document uses very specific language and terminology. When reading this document, be advised of the following:

- The terms “shall” and “will” are used to describe instances where a policy is to be applied so as to fulfill a specific legislative obligation. The use of these two terms means that there is limited flexibility (unless otherwise stated) as to the policy’s application.
- The terms “may” and “should” are used to describe instances where a policy is to be applied to fulfill a specific legislative objective. The use of these two terms means that there is a greater degree of flexibility as to the application of the policy.

1.4 AUTHORITY

The policies within this document have been prepared under authority of several acts, including but not limited to, the Conservation Authorities Act, Ontario Regulation 155/06 and the Planning Act. Modifications to the policies require Board approval. Modifications to Chapters 1 and 2 do not require Board approval, as the content of these sections is provided for context purposes.

1.5 THE NPCA AND THE WATERSHED

The NPCA was formed in 1959 under the authority of the *Conservation Authorities Act*, and is responsible for undertaking a variety of responsibilities under the Act. As one of 36 conservation authorities across the Province, the NPCA’s mandate is to establish and undertake programs designed to further the conservation, restoration, development and management of natural resources across the watershed.

1.5.1 Role of the NPCA

As a corporate body created through provincial legislation as well as a registered charitable organization with several different functions, the NPCA’s roles can be broadly categorized as follows:

- **Regulatory Authority**: *Section 28* of the *Conservation Authorities Act* empowers conservation authorities to prohibit, restrict, regulate or give permission for certain activities in and adjacent to watercourses, including valleylands, wetlands, shorelines and other hazardous lands. In this capacity, the NPCA acts as an approval authority for development within its regulated areas.

- **Representative of the Province of Ontario**: Conservation Authorities have delegated provincial interest for Section 3.1 of the *Provincial Policy Statement* (Natural Hazards) and act on behalf of the Province. In this capacity, the NPCA is responsible for providing comments on municipal policies (Official Plans) and zoning by-laws, as well as development applications submitted under the *Planning Act*.
- **Resource Management Agency:** Sections 20 and 21 of the *Conservation Authorities Act* empower conservation authorities to develop programs that reflect local resource management needs within the watershed. These programs and/or policies are approved by the conservation authority board.
- **Public Commenting Body:** Under the *Planning Act*, conservation authorities are considered a public commenting body and, as such, are to be notified of municipal policy plan changes and development applications. The NPCA provides comments within the context of their board-approved policies (Policy Document).
- **Service Provider:** Conservation authorities may enter into agreements with other levels of government to undertake regulatory or approval responsibilities.
- **Landowner:** Conservation authorities are also landowners, and can be involved in the planning and development process as either a proponent or as a landowner impacted by adjacent development.

1.5.2 Our Watershed

A watershed is an area of land that catches rain and snow and drains or seeps into a marsh, stream, river, lake or groundwater. Watersheds include farms, cottages, forests, small towns, big cities, forests, rivers, lakes and a host of other physical elements. Some watersheds cross municipal, provincial and international borders. They come in all shapes and sizes and can vary from millions of acres, like the land that drains into the Great Lakes, to a few acres that drain into a pond (adapted from Conservation Ontario). **Figure 1.2** below provides a simple illustration showing the different elements within a watershed function.

The Niagara Peninsula watershed is bounded by Lake Ontario to the north, Lake Erie to the south, the Niagara River to east and Grand River and Hamilton watersheds to the west. The Niagara Peninsula watershed area covers an area of over 2,430 square kilometers and includes lands in the Region of Niagara, as well as portions within the City of Hamilton and the County of Haldimand. **Figure 1.3** shows the limits of the Niagara Peninsula watershed.

The watershed area is incredibly diverse, and is home to a complex interconnected system of agricultural, environmental, social and economic networks. There are over 460,000 people living in over 30 cities and small towns. The area includes a number of well-known unique features, including the Niagara Escarpment, the Wainfleet Bog, Balls Falls, Lake Niapenco and the Willoughby Marsh, as well as a variety of other significant landforms (such as the Fonthill Kame ice contact-delta complex) and plant communities (alvars, prairies, Great Lakes shorelines, bogs and fens, etc.). The Niagara Peninsula watershed features a number of micro-climates, which has improved its biodiversity and also provides a rich environment for farmers. The area boasts one of the Province's most productive agricultural systems, including vineyards, tender fruit orchards, livestock and a variety of specialty crops (greenhouses for flowers, vegetables, sod farms and mushroom farms). From a land use perspective, approximately 64% of the watershed is estimated to be used for agricultural activities; 21% is estimated to be wooded or in a natural state; the remaining 15% is comprised of urban uses (Niagara Source Protection Assessment Report, 2013).

Figure 1.2: Watershed Diagram

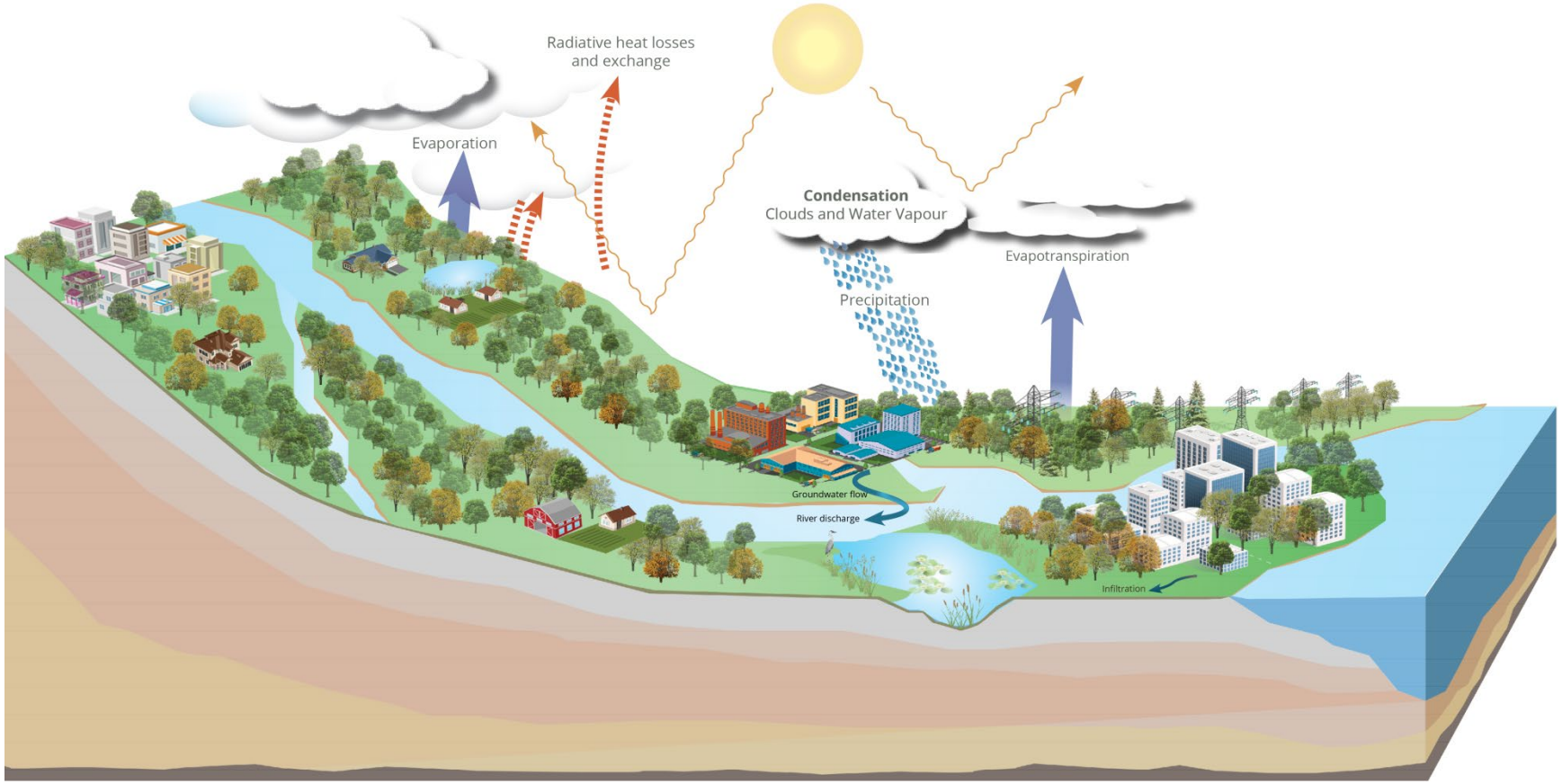


Figure 1.3: Watershed Planning Areas and Subwatersheds

2.0 PLANNING AND LEGISLATIVE CONTEXT

2.1 INTEGRATED WATERSHED MANAGEMENT

The NPCA has adopted an *Integrated Watershed Management* (IWM) approach to watershed planning. The IWM approach recognizes that water is a valuable resource which should be managed in a sustainable manner. Conservation Ontario defines IWM as "the process of managing human activities and natural resources on a watershed basis, taking into account social, economic, and environmental issues, as well as community interests in order to manage water resources sustainably" (*Conservation Ontario*, 2012). For the NPCA, this means adopting the IWM lens when it acts as a land owner, resource management agency, regulator, delegated provincial responsibility, commenting body and a service provider. **Figure 2.1** provides a snapshot of the IWM approach as adopted by the NPCA, and the various roles that the NPCA holds**.**

The NPCA derives its authority from several pieces of provincial legislation (see **Figure 2.2**), which are further described in the following sections.

Figure 2.1: Integrated Watershed Management and Roles of the NPCA

NIAGARA PENINSULA CONSERVATION AUTHORITY

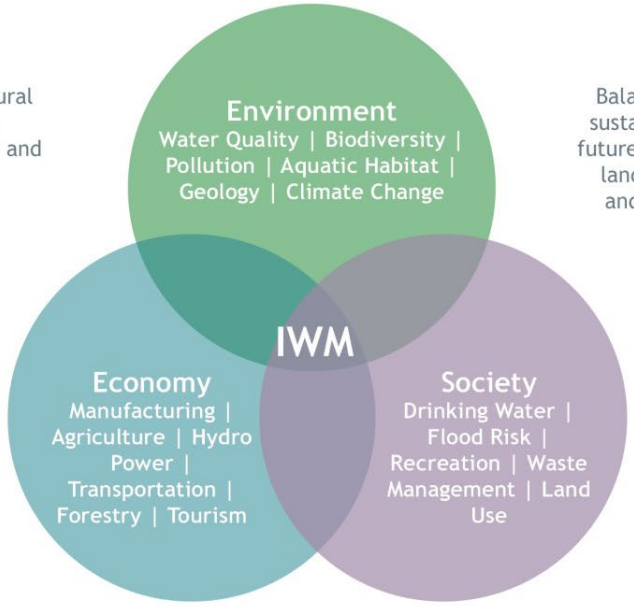
The objects of an Authority (under the CA Act, Section 20) are to establish and undertake, in the area over which it has jurisdiction, a program designed to further the conservation, restoration, development and management of natural resources other than gas, oil, coal, and minerals.

INTEGRATED WATERSHED MANAGEMENT

"The process of managing human activities and natural resources on a watershed basis, taking into account social, economic, and environmental issues, as well as community interests in order to manage water resources sustainably" (Conservation Ontario, 2012).

Our Mission

To manage watershed natural resources by balancing environmental, community and economic needs.



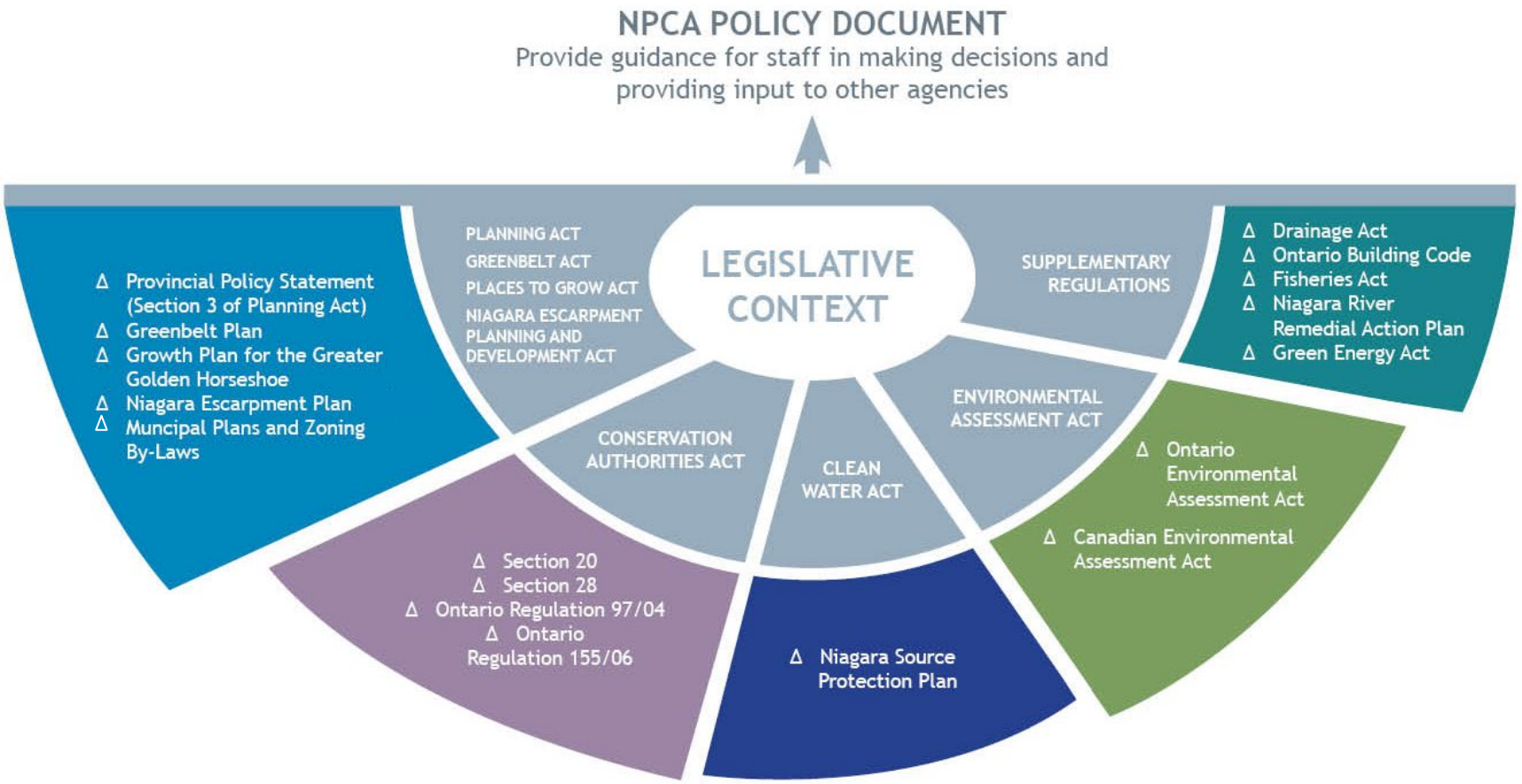
Our Vision

Balancing conservation and sustainable development for future generations by engaging landowners, stakeholders, and communities through collaboration.

NPCA Roles Through the IWM Lens

Land Owner	Resource Management Agency *CA Act, Section 20*	Regulator *CA Act, Section 28* *Regulation 97/04* *Regulation 155/06*	Provincial Delegated Responsibility *Planning Act* *PPS, Section 3.1*	Service Provider *MOUs*
Property Management	Conservation, Restoration, Natural Resource Management, Development, Application of Science & Tools	Regulation (NPCA work permit)	Environmental Planning	Environmental Planning
• Management of NPCA-owned properties	• Source Water Planning • Watershed Planning • Ground- and Surface Water Quality Program • Flood Protection • Conservation Lands • Stewardship • Environmental Information: GIS/NAI	• Flooding • Erosion • Pollution • Dynamic Beach • Conservation of Land	• Flooding • Erosion • Hazardous Lands • Great Lakes Shoreline • Climate Change	• Niagara MOU - Natural Hazards - Natural Heritage & Water • Hamilton MOU - Natural Hazards - Water • Haldimand MOU - Under Review

Figure 2.2: Legislative Context for the Policy Document



2.2 THE CONSERVATION AUTHORITIES ACT

The *Conservation Authorities* (CA) *Act* was passed in 1946 in order to provide direction on how to manage issues of erosion and flooding from a watershed perspective. Section 20 of the Act states:

> *The objects of an authority are to establish and undertake, in an area over which it has jurisdiction, a program designed to further conservation, restoration, development and management of natural resources other than gas, oil, coal and minerals.*

Conservation Authorities are empowered under the Act (Section 21) to undertake a variety of initiatives, including the power to "study and investigate the watershed and to determine a program whereby natural resources of the watershed may be conserved, restored, developed and managed" (21a). In addition, Section 28-1 of the Act provides the basis for the NPCA's permitting and development regulation function, stating that conservation authorities may (subject to approval from the Minister) create regulations within its jurisdiction:

a) *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.*
b) *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.*
c) *Prohibiting, regulating or requiring the permission of the authority for development if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.*
d) *Providing for the appointment of officers to enforce any regulation made under this section or section 29.*
e) *Providing for the appointment of persons to act as officers with all of the powers and duties of officers to enforce any regulation made under this section. 1998, c. 18, Sched. I, s. 12.*

Item 28-1(c), noted above is of particular importance, as it highlights the five tests for development proposed within an area regulated by a conservation authority. Through Section 28-1(c), conservation authorities have the power to prohibit, regulate or require permission for development, where the following elements may be affected by the development:

a) Flooding;
b) Erosion;
c) Dynamic beaches;
d) Pollution; and,
e) The conservation of land.

The definition of development under the *Conservation Authorities Act* is as follows:

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.*
d) *The temporary or permanent placing, dumping or removal of any material originating on the site or elsewhere.*

It should be noted that the above definition is applied when the NPCA is acting under the authority of the *Conservation Authorities Act* and the *Planning Act* definition is used when the NPCA is acting under the authority of the *Planning Act*. The PPS definition of development is different than the definition under the Conservation Authorities Act (see next section on the Planning for further discussion on the definition of development).

The *Conservation Authorities Act* also includes several explicit limitations on the power of conservation authorities. These limitations are provided under Section 28.10 and state that no regulation shall be made/applied which:

- Limits the use of water for domestic or livestock purposes.
- Interferes with any rights or powers conferred upon a municipality in respect of the use of water for municipal purposes.
- Interferes with any rights or powers of any board or commission that is performing its functions for or on behalf of the Government of Ontario.
- Interferes with any rights or powers under the Electricity Act or the Public Utilities Act.

Section 28.11 also limits the role of conservation authorities in regards to aggregate resource extraction, stating that “a requirement for permission of an authority in a regulation made under clause 28(1) (b) or (c) does not apply to an activity approved under the *Aggregate Resources Act*”.

2.3 THE PLANNING ACT

The purpose of the *Planning Act* is to promote sustainable economic development in a healthy natural environment through a policy-led system whose processes are fair, open, cooperative and efficient. The *Planning Act* provides the basis for land use planning in Ontario, identifying tools for managing how, where and when land use change occurs. The *Planning Act* is designed to recognize the decision-making authority and accountability of municipal councils in planning. Municipalities are responsible for preparing Official Plans and zoning by-laws and are also responsible for approving new development. Within this system, the Province's principle tool for ensuring that matters of provincial interests are implemented across the Province is the *Provincial Policy Statement*.

Specific responsibilities under the *Planning Act* have been delegated to conservation authorities. In 1995, the Province of Ontario delegated responsibility for flood plain management, hazardous slopes, Great Lakes shorelines, unstable soils and erosion (*Provincial Policy Statement,* Section 3.1). This means that the NPCA is responsible for representing the provincial interest on the above-noted matters:

- Conservation authorities review policy documents and development proposals which are processed under the Planning Act to ensure that the proposal is consistent with Section 3.1 of the PPS.
- Upon request from the Ministry of Municipal Affairs and Housing, conservation authorities provide comments to the Ministry on planning matters as part of the one-window review process.
- Where required, conservation authorities initiate appeals to the Ontario Municipal Board.

2.3.1 The Provincial Policy Statement

The Provincial Policy Statement (PPS, 2014) is of particular relevance for conservation authorities, as the *Planning Act* states that all decisions and advice shall be consistent with PPS and provincial plans. The NPCA also extends this consistency to comments provided under Service Agreements on development applications within its jurisdiction. Any comments provided by the NPCA need to be consistent with the PPS. The PPS includes a variety of policies related to Natural Heritage, Water, and Natural Hazards. The NPCA is responsible for providing comments on planning applications through the vehicle of a Memorandum of Understanding (MOU), and is bound by two different types of MOUs:

1. MOU between the Ministry of Natural Resources and Forestry, and Conservation Authorities in Ontario CAs (January 2001) regarding delegated Provincial Responsibility.
2. MOUs between the NPCA and the three main upper tier/single tier municipalities within our watershed, namely the City of Hamilton, Haldimand County, and Niagara Region. Each individual MOU is specific to the area and context it applies to. In general, these three MOUs identify the NPCA's role and function for implementing the above-noted sections of the PPS through the development review process.

As noted previously, there are some nuances between definitions used under the Conservation Authorities Act and those used in the PPS. The definition of development under the PPS is:

"*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:*

1. *activities that create or maintain infrastructure authorized under an environmental assessment process;*
2. *works subject to the Drainage Act; or,*
3. *for the purposes of policy 2.1.4(a), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a)*.[1]"

One of main differences between the Conservation Authorities Act definition of development and the PPS definition is that the PPS definition does not include site grading, and accordingly, the tools and processes under the *Planning Act* distinguish between development and site alteration (as two distinct things). The PPS also considers lot creation as a form of development, whereas the *Conservation Authorities Act* does not. These differences in definition are perhaps subtle, but are of importance for conservation authorities because they have functions under both *the Conservation Authorities Act* and the *Planning Act*, meaning that conservation authorities need to use the appropriate definition of development when making decisions and providing comments. When the NPCA is making decisions related to the Conservation Authorities Act (e.g. the issuance of a works permit) it uses the Conservation Authorities Act definition of development. When the NPCA is making comments on a Planning Act application, the PPS definition is used. Accordingly, Chapter 13 of this document includes both definitions of development.

A further nuance to be aware of is that the definition of development in the Niagara Escarpment Plan (NEP) is broader and without the limitations noted above. The NEP defines development as "a change in use of any land, building or structure". Additional details on the relationship between the Niagara Escarpment Commission and the NPCA planning functions are briefly described in section 2.3.2.3.

[1] Note that policy references within the definition pertain to PPS policies.

2.3.2 Provincial Plans

2.3.2.1 Greenbelt Plan

The Greenbelt Plan came into effect in 2005 and was recently updated in 2017. The Plan provides a policy framework for protecting the natural and agricultural systems in the Greater Golden Horseshoe by identifying where urbanization should not occur. The Greenbelt Plan was prepared under the authority of the Greenbelt Act, which designates the Greenbelt Area that the Plan applies to, and lays out the key components and objectives for the Greenbelt area as described in the Plan. The Greenbelt Plan lays out a strategy and policies for protecting natural and agricultural resources and framework builds on the framework established in the PPS (and other provincial plans such as the Oak Ridges Moraine Plan and the Niagara Escarpment Plan).

The Greenbelt Plan is of particular relevance as the northern portion of the NPCA's watershed falls within the limits of the Plan Area. The Plan is intended to be read and applied in conjunction with a range of other applicable plans, policies and legislation, including regulations under the Conservation Authorities Act. In instances where there is a conflict between a particular policy in the Greenbelt Plan and a policy in the NPCA's Policy Document, the Greenbelt Plan states that the more restrictive policy shall apply.

2.3.2.2 Places to Grow: The Growth Plan for the Greater Golden Horseshoe

Places to Grow: The Growth Plan for the Greater Golden Horseshoe (2017) works in parallel with the Greenbelt Plan (and other provincial plans). The Growth Plan was developed as a means to strategically direct and coordinate growth across the 118 municipalities which make up the mega-region known as the Greater Golden Horseshoe and was prepared under the authority of the Places to Grow Act. The Growth Plan provides policies to support compact, transit-supportive and pedestrian-friendly forms of intensification and greenfield development. Generally speaking, municipalities are primarily responsible for implementing the policies of the Growth Plan through Official Plans and zoning by laws. The NPCA needs to consider the policies of the Growth Plan when issuing work permits and/or commenting on development applications[2].

[2] In instances where there is a potential conflict between a policy within the Growth Plan and other provincial plans/policies, the Growth Plan shall prevail, except for policies related to the natural environment and public safety (in those matters, the policies of the PPS prevail).

2.3.2.3 Niagara Escarpment Plan

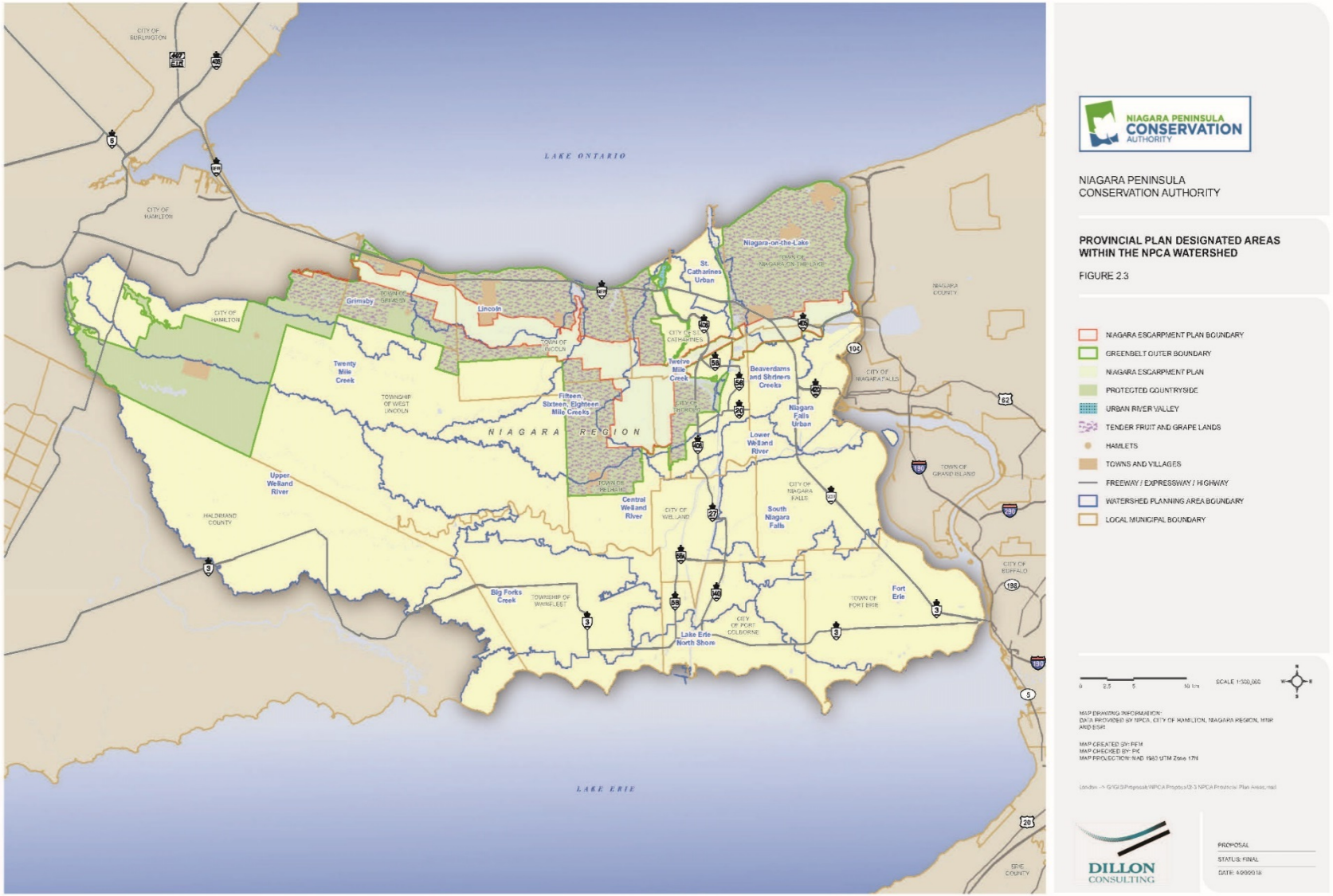
The Niagara Escarpment Plan (2017) was created to protect and preserve the Niagara Escarpment, one of eighteen (18) UNESCO World Biosphere Reserves in Canada. The Plan was prepared under the authority of the Niagara Escarpment Planning and Development Act (1973) and includes policies for seven designations within the Escarpment: Natural, Protection, Rural, Recreation, Urban, Minor Urban and Mineral Resource Extraction. The Niagara Escarpment Commission is responsible for regulating development in the Plan Area, which skirts the northern portion of the NPCA's watershed. The NPCA is responsible for reviewing and providing comments on Niagara Escarpment Plan Amendments and Development Permits which fall within the Plan Area and the NPCA's regulations also apply within the Niagara Escarpment Plan Area[3].

Figure 2.3 highlights the areas within the NPCA jurisdiction that are designated under the Niagara Escarpment Plan and the Greenbelt Plan.

2.3.3 Regional and Local Plans

The NPCA takes on an advisory role in interacting with Upper and Lower Tier municipal policies and plans that apply within their watershed, providing input on the development of these tools and their application. The types of local municipal and Regional plans that apply within the NPCA jurisdiction include Regional and local Official Plans, Zoning By-Laws, Site Plan Control, strategic plans, secondary plans, watershed/subwatershed studies and municipal development and design guidelines.

[3] Note that the NEC does not maintain specific EIS guidelines and accordingly the NPCA relies on municipal EIS guidelines when reviewing NEC permits. It should also be noted that the NEC and NPCA do not maintain a specific Memorandum of Understanding.



NIAGARA PENINSULA CONSERVATION AUTHORITY

NIAGARA PENINSULA
CONSERVATION AUTHORITY

PROVINCIAL PLAN DESIGNATED AREAS WITHIN THE NPCA WATERSHED

FIGURE 2.3

- NIAGARA ESCARPMENT PLAN BOUNDARY
- GREENBELT OUTER BOUNDARY
- NIAGARA ESCARPMENT PLAN
- PROTECTED COUNTRYSIDE
- URBAN RIVER VALLEY
- TENDER FRUIT AND GRAPE LANDS
- HAMLETS
- TOWNS AND VILLAGES
- FREEWAY / EXPRESSWAY / HIGHWAY
- WATERSHED PLANNING AREA BOUNDARY
- LOCAL MUNICIPAL BOUNDARY

0 2.5 5 10 km

SCALE 1:300,000

MAP DRAWING INFORMATION:
DATA PROVIDED BY NPCA, CITY OF HAMILTON, NIAGARA REGION, MNR AND ESRI

MAP CREATED BY: PFM
MAP CHECKED BY: PK
MAP PROJECTION: NAD 1983 UTM Zone 17N

London -> G:\GIS\Proposal\NPCA Proposal\2-3 NPCA Provincial Plan Areas.mxd

DILLON CONSULTING

PROPOSAL
STATUS: FINAL
DATE: 4/20/2018

2.4 ENVIRONMENTAL ASSESSMENT ACTS

2.4.1 Ontario Environmental Assessment Act

The purpose of the Environmental Assessment Act is "the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment" (2). The Act applies to provincial ministries and agencies, municipalities such as towns, cities, and counties, as well as public bodies such as conservation authorities for infrastructure projects such as (but not limited to):

- Public roads and highways;
- Transit projects;
- Waste management projects;
- Water and wastewater works;
- Resource management; and,
- Flood protection projects.

The NPCA is responsible for commenting on infrastructure projects within the watershed led by public or private sector proponents. The NPCA is also responsible for adhering to the Act when it acts as the proponent under the act (e.g. undertaking flood protection projects). When acting as a proponent for certain types of projects, the NPCA is subject to Conservation Ontario's Class Environmental Assessment for Remedial Flood and Erosion Control Projects.

2.4.2 Canadian Environmental Assessment Act

The Canadian Environmental Assessment Act (CEAA 2012) is generally similar to the Ontario Environmental Assessment Act, focusing on potentially adverse environmental effects within federal jurisdiction, including:

- Fish and fish habitat;
- Other aquatic species;
- Migratory birds;
- Federal lands;
- Effects that cross provincial or international boundaries;
- Effects that impact on Aboriginal peoples, such as their use of lands and resources for traditional purposes; and,
- Changes to the environment that are directly linked to or necessarily incidental to any federal decisions about a project.

Where Federal EAs are undertaken within the Niagara Peninsula watershed, the NPCA provides comments through the CEAA process.

2.5 OTHER RELEVANT LEGISLATION

There are a number of additional legislative acts that guide decision-making at the NPCA with respect to development and site alteration. Where appropriate, NPCA staff will make reference to the relevant legislation. These include, but are not limited to:

- **The Building Code Act** governs the structural, safety, and liability characteristics of developments. For development applications within its regulated areas, the Building Code recognizes the conservation authority regulations that are applicable by law. The Building Code Act requires NPCA permission to be provided prior to issuance of development approvals in accordance with any applicable regulations under the Conservation Authorities Act. The NPCA provides location approval and/or recommends technical investigations and site control measures in line with conservation best practices.

- **The Drainage Act** provides direction to municipalities for the maintenance and repair of municipal drainage works and, under certain circumstances, municipalities can be held liable where prescribed duties are not performed. Under the Conservation Authorities Act, conservation authorities are responsible for regulating works within watercourses and wetlands. The Ontario Ministry of Agriculture, Food and Rural Affairs maintains a Drainage Act and Regulations Team (DART) protocol which provides guidance to municipalities and conservation authorities on how to ensure the objectives of both acts are met. The DART protocol identifies the circumstances where a works permit is required under the Conservation Authorities Act and where a standard compliance requirement (SCR) is recommended[4].

- **The Federal Fisheries Act** provides for the prevention of serious harm to fish as a result of human activity.

- **The Federal Migratory Birds Act** provides protection for over 450 species of migratory birds through a series of regulations.

- **The Ontario Water Resources Act** covers both groundwater and surface resources. The Act regulates sewage disposal and “sewage works” and includes regulations which prohibit the discharge of polluting materials that may adversely impact water quality. In addition to this, the Act also requires approvals from the Ministry of Environment and Climate Change to take more than 50,000 liters of water per day from ground or surface water sources. The NPCA is notified of any applications to take water within the watershed and provides comments on approval requests.

[4] Standard Compliance Requirements under the DART protocol are activities which can proceed without a work permit under the Conservation Authorities Act.

- **The Ontario Clean Water Act** is concerned with the protection of drinking water through a multi-pronged approach to source water protection. The issue of municipal drinking water protection within the NPCA watershed is addressed through the establishment of the Niagara Peninsula Source Protection Area (NPSPA), which was established in 2007 and covers the same geographic extent as the NPCA Watershed. The Niagara Peninsula Source Protection Plan was approved effective October 2014 to protect vulnerable municipal drinking water supplied by surface water resources.

- **The Federal Species at Risk Act (SARA)** prevents species from disappearing, promotes the recovery of species that have been extirpated, provides protection for species that are endangered or threatened as a result of human activity, and prevents species of special concern from becoming endangered or threatened. SARA is integrated into the NPCA's review of development applications particularly where the modification of wetland boundaries is concerned.

- **The Endangered Species Act (2007)** provides for the protection of over 200 species of plant and animal life in Ontario. Ontario Regulation 230/08 provides the official list of endangered, threatened, special concern and extirpated animals and plants in Ontario. The Ministry of Natural Resources and Forestry (MNRF) is responsible for administering the Act and the government protects species at risk by restricting activities that may affect these plants, animals or their habitats. Under the Endangered Species Act, the MNRF can issue different types of approvals for activities that would otherwise not be allowed, with conditions that are intended to protect species at risk. The MNRF's approval process is undertaken in a coordinated fashion with the various municipal development approvals processes under the Planning Act and also within the context of the Conservation Authorities Act and NPCA's works permit process.

In addition to the above-noted legislation, the Niagara River Remedial Action Plan represents an important plan within the NPCA's jurisdiction. The Great Lakes Water Quality Agreement (1972) was signed by Canada and the U.S. to restore and maintain the integrity of the Great Lakes Basin ecosystem, which had come under significant pressure from a variety of sources. In 1987, an amendment to the Agreement allowed for the implementation of Remedial Action Plans (RAPs) to restore ecosystem health in 43 identified Areas of Concern (AOCs) located within the Great Lakes Basin. The Niagara River was designated as one of the 43 AOCs. The purpose of the Niagara River RAP is to identify significant water quality concerns and take actions to resolve them. The designation of AOC can be removed once all actions are completed and environmental monitoring confirms that beneficial uses have been restored. The Niagara River AOC is currently in the final stage of the RAP process and is aiming to complete all remedial actions by December 2019. The NPCA acts as the Coordinator for the Niagara River Remedial Action Plan.

3.0 GUIDING PRINCIPLES AND GENERAL POLICIES

3.1 ABOUT THE PRINCIPLES

The following principles describe the NPCA's vision for integrated watershed management. These principles were developed as part of the Living Landscape process and help to underpin a number of the more detailed, complex policies found in the subsequent chapters.

3.2 GUIDING PRINCIPLES

a) Recognize that healthy communities require a sustainable balance between agricultural, environmental, social and economic priorities, interests and uses.
b) Acknowledge that protecting natural systems over the long term is best achieved through a science-based approach that manages human activities and natural resources across the watershed.
c) Consider the impacts of climate change on people, property and the environment.
d) Avoid the potential for adverse impacts to people, property and the environment by directing development and site alterations away from natural features.
e) Work with landowners, stakeholders and municipal, provincial and federal partners to develop appropriate policies that meet the requirements of all relevant legislation.
f) Continuously pursue practical approaches to the management of water and natural resources based on the application of sound science, creativity, and innovation.
g) Learn from and inform watershed residents, member municipalities, partners and clients about the value of the watershed, its features and functions.
h) Minimize the potential for risk of harm to people and property resulting from flooding, erosion and slope instability.

3.3 GENERAL POLICIES

3.3.1 Regulated Areas

Through section 28 of the Conservation Authorities Act and Ontario Regulation 155/06 the NPCA has the authority to regulate and approve development within its Regulated Areas. The NPCA's regulated areas are comprised of the following:

a) Lands adjacent to or close to the shoreline of the Great Lakes-St. Lawrence River System that may be affected by flooding, erosion or dynamic beaches;
b) River or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse;
c) hazardous lands;
d) wetlands; and,
e) other areas where development could interfere with the hydrologic function of a wetland, including areas up to 120 metres (394 feet) of all provincially significant wetlands and wetlands greater than 2 hectares in size, and areas within 30 metres (98 feet) of wetlands less than 2 hectares in size.[5]

3.3.2 Detailed Mapping of Regulated Areas

Detailed mapping of the limits of the NPCA's regulated areas is available on-line and can also be viewed at the offices of the NPCA. Where there is a discrepancy between the NPCA's mapping and the definitions provided in Ontario Regulation 155/06, the Regulation prevails. From time to time the NPCA will update its mapping to reflect changes in legislation and/or the best available information. When undertaking comprehensive updates to Regulated Area mapping the NPCA will engage municipalities, agencies and stakeholders in the process.

3.3.3 Activities Subject to an NPCA Work Permit

3.3.3.1 NPCA Work Permit Authority

Unless otherwise stated in this document, no work shall be undertaken within the NPCA's regulated areas without a work permit issued by the NPCA.

[5] Refer to Ontario Regulation 155/06, section 2 for additional details.

3.3.3.2 Typical Activities Subject to an NPCA Work Permit

Work permits are required for any proposed development (as defined under the Conservation Authorities Act), including but not limited to the construction, reconstruction, erection or placing of a building or structure, any change to a building or structure which would increase its size (or the number of units), site grading or the placement of fill material. The following lists some of the typical forms of development which are subject to a work permit from the NPCA:

a) Construction of all buildings, building additions and structures including modification or reconstruction of foundations which support existing buildings;
b) Breakwalls, revetments, rubble groynes and jetties;
c) Headland beach system and artificial nourishment(beach, berm or dune);
d) Docks;
e) Stairs, decks, gazebos;
f) Boat ramps, boat storage structures;
g) Dredging;
h) Swimming pools;
i) Temporary or permanent placement of fill, grading, removal of fill, or site alteration;
j) Retaining walls;
k) Trailers and mobile homes;
l) Municipal drains;
m) Certain forms of infrastructure, such as but not limited, bridges, crossings, roads and other types of infrastructure which have received an approval under the Environmental Assessment Act.

The above-noted list is not considered to be exhaustive and is provided for explanatory purposes only. Note that works associated with a demolition permit under the Building Code may require an NPCA work permit where the works constitute site alteration.

3.3.3.3 Development Permits within the Niagara Escarpment Plan Area

Applicants proposing works within the Niagara Escarpment Plan area should refer to the Niagara Escarpment Plan for applicable policies as development within the NEP area is subject to the jurisdiction of the Niagara Escarpment Commission. A permit for development from the NEC is required before any additional approvals may be granted from any other agency, including the NPCA.

3.3.4 Activities which do not require a Work Permit

3.3.4.1 Agricultural Lands outside of Regulated Areas

Agricultural activities outside of the NPCA's regulated areas are not subject to regulation under the Conservation Authorities Act and do not require a work permit.

3.3.4.2 Agricultural Lands within the NPCA's Regulated Areas

Agricultural uses within regulated areas generally do not require a work permit. The following activities are not considered development and do not require a work permit unless they would interfere with a watercourse or wetland:

a) Non-structural activities associated with an existing agricultural use, such as cropping, livestock management, tilling, fence row clearing;
b) Non-structural activities that would not result in alterations to the existing grade gardens/landscaping, shrub/tree planting nurseries, woodlot management;
c) Routine maintenance and/or upkeep of existing agricultural buildings or structures which do not change the existing footprint, square footage, height and/or use. This could include, but is not limited to, window or roof repair, siding, etc.

Certain forms of value-added, agri-tourism uses may require a work permit from the NPCA, depending on the nature of the application and any considerations related to the five tests under the Conservation Authorities Act. Note that agricultural activities which require a building permit from a local municipality may also require a work permit from the NPCA (where the proposed developed is within an area regulated by the NPCA).

3.3.4.3 Fill not Exceeding 50m^3 of Material

The placement of inert fill less than 50m^3 may be permitted where the placement of fill:

a) Is placed in a manner which will not impact the control of flooding;
b) Does not interfere with a watercourse, wetland, valleyland or shoreline; and,
c) Includes re-vegetation of any disturbed areas and is protected from erosion.

3.3.4.4 Landscaping

Generally, an NPCA work permit is not required for the addition of top soil to lawns or the augmentation of soil mixtures for landscaping purposes, to a maximum thickness of 50 mm. The raising of grades to allow for changing the landscape characteristics of a property is considered development in the flood plain. This policy is not applicable to the placement of fill within a wetland for landscaping (or any other) purposes. No fill placement is permitted within a wetland.

3.3.5 Use of Native Plant Species

The NPCA recognizes the importance of a natural approach to landscaping through the use of native, non-invasive and locally appropriate species. Some Planning Act applications and work permits may require re-vegetation for disturbed areas and in these instances, the NPCA will encourage re-vegetation plans and landscaping projects to include an appropriate mix of native, non-invasive and locally appropriate plantings.

4.0 FLOODING HAZARDS

4.1 WHAT ARE FLOODING HAZARDS?

4.1.1 River and Stream Flooding Hazards

4.1.1.1 Flood Plains and Flooding Hazards

To mitigate the potential risks to public health, safety and property, the Province of Ontario, through various regulations and policies (such as Ontario Regulation 155/06 and 97/04, as well as the Provincial Policy Statement) limits the amount of potential development in flood plains. Flood plains are usually low lands adjoining a watercourse which has been or may be subject to flooding. Lands which are subject to flooding or may be subject to flooding are referred to as flooding hazards.

4.1.1.2 River and Stream Flood Hazard vs. Great Lakes Flood Hazard

This Policy Document distinguishes between the flooding hazard associated with rivers and streams and the flooding hazard associated with the Great Lakes Shoreline. The policies of this section apply to flooding hazards associated with rivers and streams. Refer to section 5.0 for details related to the Great Lakes Shoreline flooding hazard.

4.1.1.3 River and Stream Flood Hazard Defined

In most cases, the Niagara Peninsula Conservation Authority defines the flood hazard as the 100 year flood event. The 100 year flood event is a frequency-based flood event that is determined through analysis of precipitation, snow melt, or a combination thereof, having a return period of once every 100 year on average (or having a 1% chance of occurring or being exceeded in any given year). The 100 year flood event is the minimum acceptable standard (in Ontario) for defining the regulatory flood plain.

4.1.1.4 Exceptions to using the 100 Year Flood

Notwithstanding the policy 4.1.1.2, the Regional Flood shall be used to determine the flood plain limits for the following watercourses:

a) Beaverdams Creek (Niagara Falls);
b) Shriner's Creek (Niagara Falls); and,
c) Ten Mile Creek (Niagara Falls).

4.1.2 Policy Concepts for Flood Hazards

Floodplains can be large areas, covering rivers, streams and natural areas, as well as agricultural areas, rural areas, communities, homes and businesses. The diversity of conditions within floodplains requires a flexible approach managing change within the floodplain. The NPCA recognizes the Province's approach for planning and regulating development within the river and stream flooding hazard, including the following concepts:

a) One zone concept;
b) Two zone concept; and,
c) Special Policy Area concept.

4.1.3 The One Zone Concept

4.1.3.1 Preference for One-Zone Concept

In most cases, the NPCA shall implement a one-zone concept to flood plain management. This means that generally, most forms of development or site alteration are prohibited within the regulated flood plain. Where a one zone concept is in place, the entire flood plain defines the floodway.

4.1.3.2 One-Zone Concept

Under the one-zone concept, the regulatory flood plain shall be defined as follows (**Figure 4.1**):

a) Where 100 Year Flood information is available, the 100 Year Flood shall be used for the purposes of delineating the flood plain; or,
b) Where no flood plain information is available and the Authority has a flooding concern, the proponent shall be required to provide the NPCA with 100 Year Flood Plain mapping for review and approval at the cost of the applicant, not all of the flood hazards within the watershed are mapped.

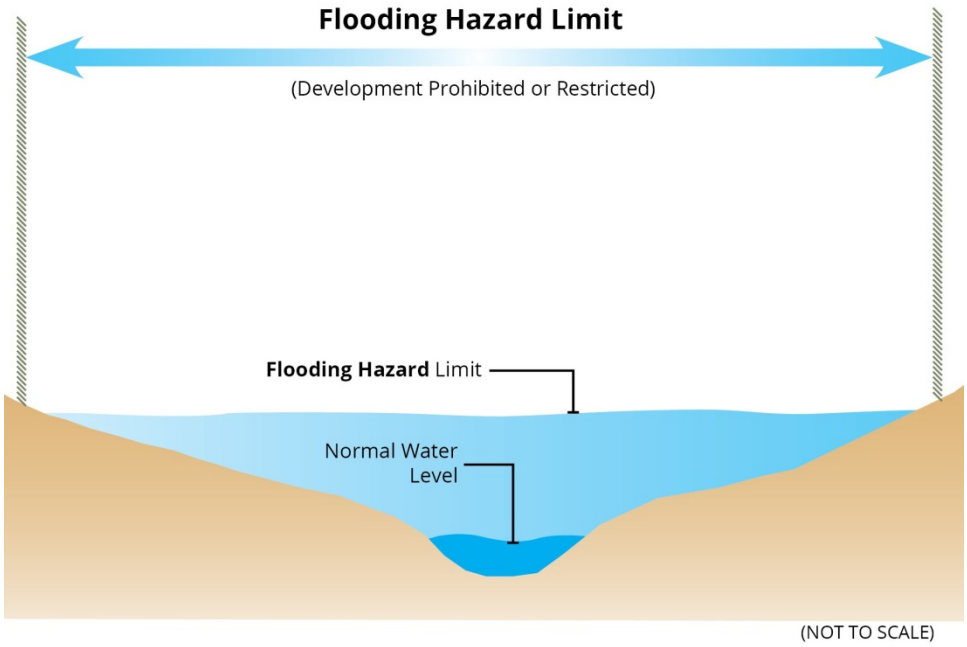
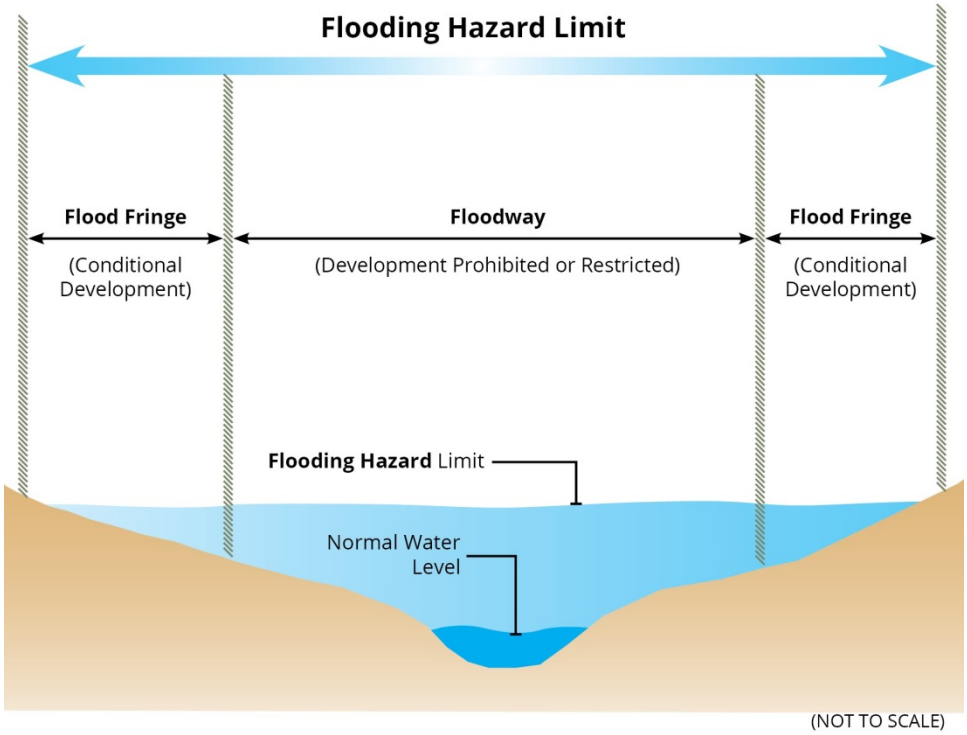


Figure 4.1: One Zone Concept

4.1.4 The Two Zone Concept

The two zone concept (**Figure 4.2**) identifies a floodway and a flood fringe within the flooding hazard. The floodway refers to the portion of the flood plain where development and site alteration is prohibited due to potential risks associated with public health and safety and property damage. The floodway is the inner portion of the flood plain, representing the area required for the safe passage of flood flow and/or that area where flood depth and/or velocities are considered to pose a potential threat to life and/or property damage. The flood fringe is the outer portion of the flood hazard that could potentially be safely developed, subject to certain conditions being met (see Policy 4.3).

Figure 4.2: Two Zone Concept



4.1.4.1 Considerations for Applying the Two Zone Concept

At present, there are no two zone areas in the watershed. The NPCA shall only consider a two zone concept where a request is put forward by a municipality within the flood plain. The onus is on the municipality to demonstrate that the one-zone policies are too stringent and would adversely impact the economic viability of the municipality. The Ministry of Natural Resources and Forestry should be consulted for technical advice in any area whether the two zone concept is being considered.

The two zone concept should only be applied within or immediately adjacent to a settlement area and where the risks associated with flooding can be adequately mitigated within the flood fringe. When making decisions related to the applicability of a two zone concept, the NPCA will consider the following elements as described in the Province's Technical Guide for River and Stream Flooding Hazard Limits and summarized below in **Table 4.1**. **Table 4.1** provides a summary of the MNR's recommended criteria for considering a two zone concept. Municipalities should also consider the criteria identified in Table 4.1 when applying for a two-zone concept.

Table 4.1: Factors to be considered in the Application of a Two Zone Concept

Criteria	Description
Frequency of flooding	• Caution should be exercised in applying the two zone concept for chronic problem areas. While development in such areas could adequately be floodproofed, maintenance and upkeep would continuously be required to ensure floodproofing measures and local services remain effective.
Physical characteristics of the valley	• Steepness of valley slopes, instability of banks and poor soil conditions in flood fringe areas can physically render the flood fringe unsuitable for development. Adopting the two zone concept would show more promise for areas with a flatter bank walls and shallow flow. Topography varies, so evaluation is necessary on a local basis in determining suitability.
Local need	• Suitability of flood fringe areas for development can be influenced by municipal planning considerations including availability of developable land elsewhere in the municipality. In urban areas where land values are high and pressure for development is usually the greatest, the concept shows promise. • Lot sizes are usually larger in rural areas, and it is generally possible to locate development outside the flood plain. Therefore, proposed application of the two zone concept in rural/agricultural areas will require detailed rationale/justification.
Impacts on proposed development	• Encroachment within the flood fringe area usually results in an increase in flood levels. The extent of potential increases will be dependent on a number of factors in watershed characteristics and the degree to which the two zone concept is to be applied. As a result, it may be necessary to recalculate for the flood standard the flood levels for floodproofing purposes and identify and assess the upstream and downstream impacts where the two zone concept is being considered. This is particularly true where the two zone concept is to be applied over extensive areas.
Feasibility of floodproofing	• One of the major factors in determining if a flood fringe area is suitable for development is the feasibility and cost of floodproofing.
Constraints to the provision of services	• Flood fringe areas are low-lying and it is often difficult and expensive to provide necessary services (watermains, sewers, drainage works, etc.) to serve the developments. Drainage systems should provide protection against the flood standard and it may be difficult to provide outlets above the level of flood standard. In these situations, it may be necessary to provide pumping facilities which would result in some additional expense in new developments. Private services located within the flooding hazard can also pose a risk to pollution during flood events.
Ingress/egress	• Major accessways to development potentially located in the flood fringe must be examined. It is not acceptable to have development isolated during the flood conditions because roads and escape routes are not passable. For example, flood depths greater than 0.3 metres and/or flood velocities greater than 1 metre per second may prevent evacuation during a flood. Standards may vary depending on local emergency requirements.
Changes in land use	• Land use is a key factor considered in flood plain studies and the calculation of flood lines. Proposed development, not anticipated in these calculations, could create increased flood risks and thus reduce the effectiveness of flood plain management programs. It is therefore imperative that municipalities discuss proposed changes in land use with the NPCA.
Administrative capability	• Staff availability and expertise to examine and implement the various factors and conditions for a two zone area should be considered.

For additional details refer to Appendix 4: Application of the Two Zone Concept, Factors to be Considered (Technical Guide, River and Stream Systems: Flood Hazard Limit, Government of Ontario, 2002)

4.1.4.2 Delineation of Floodway

The extent of the floodway shall be determined based on local watershed conditions, such as, but not limited to critical flow depth and velocity, existing and proposed development and the potential for upstream and downstream impacts.

4.1.4.3 Policy Requirements for Two Zone Concept

Where a two zone concept is undertaken, no development and site alteration shall be permitted within the floodway area. Limited development and site alteration may be permitted in the flood fringe area, subject to adherence to floodproofing requirements and safe access and egress (vehicular and pedestrian) and other considerations (as noted in Table 4.1). Municipal requests for final approval of a two zone policy area designation shall be supported by:

a) Official Plan policies specific to the review and approval of development and site alteration applications within the proposed two zone policy area, including development control criteria for the flood fringe and floodway areas and, if applicable, the implementation program for any flood control measures in relation to the timing and phasing of development;
b) A Zoning By-law that will implement the Official Plan policies; and
c) A Flood Emergency Management and Response Plan.

4.1.5 Special Policy Area Concept

4.1.5.1 Special Policy Area Concept

A Special Policy Area may only be proposed by lower tier or single tier municipalities (the proponent). The proponent is responsible for funding and preparing all mapping, studies, reports and official plan policies/amendments. Special Policy Areas require the approval of both the Minister of Natural Resources and the Minister of Municipal Affairs. The process for undertaking a Special Policy Area is outlined in the Ministry of Natural Resources Technical Guide for River and Stream Systems, Flooding Hazard Limit Appendix 5 Special Policy Areas (as amended in 2009) and includes:

a) Pre-consultation with the Ministry and the NPCA;
b) Phase 1: Request for Approval in Principle for Special Policy Area Status;
c) Phase 2: Application for Final Approval of Special Policy Area; and,
d) Phase 3: Post Approval Requirements.

4.1.5.2 Great Lakes Shoreline and the Niagara River

Special Policy Areas are not applicable to the flooding hazards associated with the Lake Erie and Lake Ontario shorelines as well as any connecting channels, such as the Niagara River.

4.1.5.3 Development Approvals

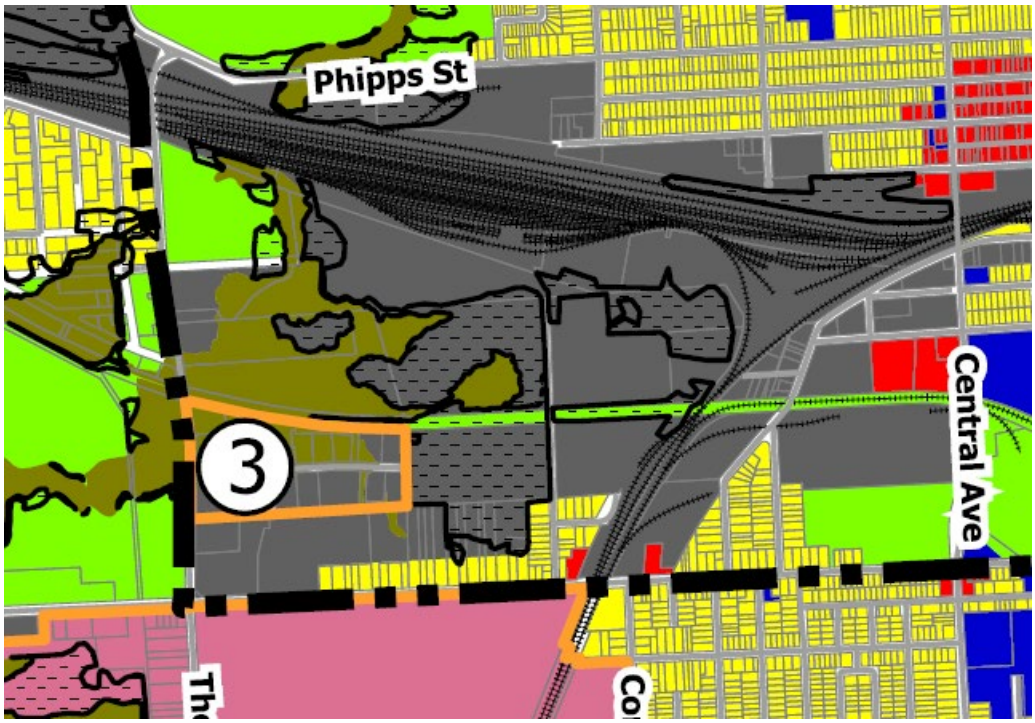
No development shall proceed within a Special Policy Area until the SPA has been approved by the Province and all necessary implementation tools are in place, such as Local Official Plan Amendments (and where applicable, Regional Official Plan Amendments) and implementing zoning by-law amendments are in place. Where a work permit is required from the NPCA, no approval shall be issued until the above-noted policy and regulatory changes have been implemented.

4.1.5.4 Fort Erie Industrial Park Special Policy Area

In 1985, the Ministry of Municipal Affairs approved Fort Erie Official Plan Amendment 32 that included provisions for a Special Policy Area for the Fort Erie Industrial Park to recognize that parts of the approved Industrial Park were located within the 1 in 100 year flood plain of Frenchman's Creek and site specific policies apply. The Town's Official Plan includes site specific policies for this area (referred to Site Specific Policy Area #3 and illustrated in **Figure 4.3**) and includes the following policies:

a) No new buildings or structures other than those required for flood erosion control or flood management purposes shall be permitted in the Hazard area (1 in 100 year flood plain) as determined by the Niagara Peninsula Conservation Authority as generally shown on Schedule "C1";
b) Extensions, enlargements or reconstructions of existing buildings and structures may be permitted within the 1 in 100 year flood plain provided they are protected up to the 1 in 100 year flood level;
c) Prior to the issuance of any building permit within the 1 in 100 year flood plain, the Town shall consult with the Niagara Peninsula Conservation Authority regarding the administration of the Authority's fill and construction regulations to address any proposed flood damage reduction measures which may include such matters as building setbacks, basement elevations, the strength of foundation walls, the placement of fill and control of building opening elevations; and,
d) Any amendment to the Zoning By-law affecting the "Fort Erie Industrial Park" shall conform to the provisions of this subsection. In this regard the Town may, in consultation with the Niagara Peninsula Conservation Authority, incorporate flood reduction measures in the by-law relating to such matters as building setbacks, minimum heights of openings to buildings and maximum lot coverage.

Figure 4.3: Excerpt from the Town of Fort Erie's Official Plan



Note that this Special Policy Area is included for clarity and convenience purposes, as it reflects the policies within the Town's Official Plan. In the future, should the Town decide to modify, update or remove the Special Policy Area, then the NPCA will reflect the corresponding updates within this Policy Document to ensure alignment.

4.2 POLICIES FOR PLANNING AND REGULATING FLOOD HAZARDS (ONE ZONE POLICIES)

4.2.1 Objectives

The objectives of the flood hazard policies are to:

a) Prevent loss of life;
b) Minimize property damage and social disruption;
c) Reduce the potential for incurring public costs associated with the impacts of flooding hazards;
d) Manage existing risks and reduce the potential for future risks;
e) Promote the conservation of land and a co-ordinated approach to the management of water.

4.2.2 Permitted Uses within the Flood Hazard

Permitted uses within the flood hazard shall be consistent with the objectives of the Conservation Authorities Act and subject to the Regulation 155/06 (sections 2 and 3). The following are permitted uses within the flood plain:

a) Agriculture uses that do not require permanent, closed structures or any major alteration of the landscape;
b) Additions or extensions, including new structures which are minor in scale, to existing primary agricultural operations which are not likely to incur flood damages, impede flows, reduce flood storage, or cause pollution to a watercourse as a result of a flooding event;
c) Reconstruction or minor additions to the existing structures and accessory structures outlined in Policies 4.2.4-4.2.6;
d) Flood, erosion and sediment control measures;
e) Open space uses and recreational uses, such as boat docks, marina facilities, parks, trails, gardens, nurseries and other passive recreational and open space uses;
f) Swimming pools, subject to Policy 4.2.6;
g) Parking lots, driveways and private roads, subject to Policy 4.2.7;
h) Raw materials and equipment storage, subject to Policy 4.2.8;
i) Infrastructure which is subject to an approval under the Environmental Assessment Act, such as but not limited to, railroads, streets, bridges, public services and pipelines for transmission and distribution of water, gas, oil and electricity, provided that the approved engineering designs recognize and, where necessary, address the flooding potential at the site;
j) Works constructed under the Drainage Act accounting for the flooding potential at the site;
k) New water wells, provided the air vent on a drilled well extends above the maximum anticipated flooding level and not less than 40 cm above the ground surface; and,
l) Other uses not likely to incur or create damage from floodwaters.

4.2.3 Uses Prohibited within the Flood Hazard

The following uses are prohibited within the flood hazard:

a) Sensitive uses, such as hospitals, nursing homes, day-cares/pre-schools and schools;
b) Emergency services facilities;
c) Uses associated with the disposal, treatment, manufacturing/processing or storage of hazardous substances;
d) Any other use or development deemed to be inappropriate based on the objectives stated in 4.2.1.

4.2.4 Replacement and Relocation of Existing Buildings and Structures

Any building or structure which is located in the flood plain and has been destroyed for reasons other than flooding may be allowed to be rebuilt, provided the building cannot be relocated to an area outside of the flood plain, as determined by the Conservation Authority. All of the following criteria must be achieved through the reconstruction proposal:

a) The existing flood depths do not exceed 0.8 metres, the velocity does not exceed 1.7 metres/second and the product of depth and velocity is not greater than 0.4 square metres/second under a Regulatory Flood event (based on Ministry of Natural Resources and Forestry Policy and Water Survey of Canada "Hydrometric Field Manual (1981)");
b) All openings in the ground floor of the building are to be located above the regulatory flood elevation;
c) Vehicular and pedestrian ingress/egress is not to be flooded to a depth greater than 0.3 metres (1 foot) under the Regulatory Flood event;
d) Other landowners, upstream and downstream of the proposal, will not be adversely affected by the Reconstruction;
e) There is no increase in the number of dwelling units; and,
f) The replacement structure does not exceed the size of the original ground floor area or, where expansions are proposed, the proposal complies with Policy 4.2.5.

4.2.5 Additions to Existing Buildings

Additions to existing buildings may be permitted provided that:

a) They are of a peripheral nature (such as decks, patios, open porches) and they are properly anchored to prevent flotation, are not subject to major damage by flooding and flood flows and flood water storage are not impeded; or,

b) Any addition to the ground floor area of an existing building shall not exceed 46.5 square metres (500 square feet)[6];
c) The existing flood depths do not exceed 0.8 metres (2.6 feet), the velocity does not exceed 1.7 metres/second and the product of depth and velocity is not greater than 0.4 square metres/second under a Regulatory Flood event (based on Ministry of Natural Resources Policy and Water Survey of Canada "Hydrometric Field Manual (1981)");
d) All openings in the ground floor of the building are to be located above the regulatory flood elevation;
e) Vehicular and pedestrian Ingress/egress is not to be flooded to a depth greater than 0.3 metres (1 foot) under the Regulatory Flood event;
f) Other landowners, upstream and downstream of the proposal, will not be adversely affected by the addition; and,
g) There is no increase in the number of dwelling units.

4.2.6 Accessory Structures

Non-habitable accessory structures which are less than 10 metres square do not require a work permit from the NPCA. Non-habitable accessory structures which are greater than 10 metres square, such as garages, tool sheds, gazebos and decks are permitted within the flood hazard provided that the following are met:

a) There is no reasonable alternative location outside of the flood hazard on the site;
b) The works will not result in adverse upstream or downstream flood impacts; and,
c) For swimming pools, adequate hydrostatic pressure relief is incorporated in the design and excavated material is removed from the flood hazard.

4.2.7 Parking Lots, Driveways and Private Roads

Parking lots, driveways and private roads which are primarily used for vehicular traffic are permitted provided that:

a) The flood depths under the regulatory flood event do not exceed 0.3 metres (1 foot), based on the technical criteria development the PPS Natural Hazards Training Manual; and,
b) No adverse flood impacts result from the proposed work.

In some instances, it may be appropriate to allow for fill placement beyond 50m^3 (1,766 cubic feet) to improve safe access and egress for existing development located in the floodplain.

[6] On a case by case basis the NPCA may consider allowances beyond the 500 square foot limitation where it can be demonstrated that the five tests under the Conservation Authorities Act can be satisfied.

4.2.8 Raw Materials and Equipment Storage

Where the storage of raw materials is subject to a municipal approval, the storage of raw material and equipment storage is permitted, provided that:

a) They are properly anchored to prevent flotation;
b) They are not subject to major damage by flooding;
c) They are not of a polluting nature; and,
d) Flood flows or flood water storage are not impeded.

4.2.9 Replacement of Existing Watercourse Crossings

Where replacement of an existing watercourse crossing is proposed, NPCA staff will encourage the municipality to have the crossing upgraded (where appropriate) in order to provide full access and egress under regulatory storm conditions.

4.2.10 Fencing

Fencing generally does not require a work permit. However, there may be instances where a work permit may be required for example; if a fence is proposed to cross a watercourse or forms a solid barrier that would impede conveyance of flood flows. Fencing may be permitted in flooding hazards provided no fill placement/removal is required. Staff will work with the applicant to review other options in order to avoid fencing within the flood hazard. The placement of fill or changing of grades within a regulated area would be subject to formal approval under Ontario Regulation 155/06 as per other policies in this document.

4.2.11 Septic Systems (Riverine Flood Hazard)

Septic systems shall not be located within the flooding hazard. Where an existing septic system is already located in the flooding hazard and is being replaced, the proponent shall locate the replacement system outside of the flood hazard, where feasible. The feasibility of relocation shall be assessed on a case by case basis, recognizing that existing dwellings will require a new septic system from time to time and the intent of this policy is explore reasonable alternatives which do not cause undue hardship on homeowners. Where there is no reasonable or practical alternative for relocating a septic system outside of the flood hazard, then a replacement system may be permitted subject to any approvals required for other regulatory agencies.

4.2.12 Floodproofing (Riverine Flood Hazard)

As permitted in the policies of this document, floodproofing is required for proposed development which may be impacted by flood hazards, upon consideration of:

a) the depth and velocity of flood waters;
b) the duration of the flood;

c) the rate of rise/fall of the flood waters; and,
d) the type of flood warning system in place.

4.2.13 Balanced Cut and Fill

Cut and fill is a technique that is used to minimize flood storage losses resulting from the placement of fill within a flood plain that results in a quantifiable adverse hydraulic impact. This is achieved by removing a volume of earth at the appropriate elevation and location to offset any increase in flood level due to filling areas within the flood plain. The suitability of cut and fill operations is extremely site-specific. It should be recognized that, in conducting a cut and fill, additional flood-free lands are not obtained. A cut and fill will only serve to transfer floodwaters from one area to another as a result of the manipulation of the land's contours. In reviewing applications that will require cut and fill, the following policies will be applicable.

4.2.13.1 General Balanced Cut and Fill Policies

Any proposals that will require cut and fill operations within the jurisdiction of the Authority and within the flooding hazard limit must be in accordance with the following policies and guidelines and must be to the satisfaction of the Authority.

a) There are no negative impacts on the ecological or hydrological function of wetlands, valleylands, or significant features as a result of the cut and fill proposal.
b) The amount of earth removed (cut) must be equal to or greater than the volume of fill proposed for placement within the flood plain.

c) Cut and fill must be balanced in 0.3 m (1 foot) increments. An excess of cut volume may be permitted at any given increment; however, inadequate cut volume will not be permitted at any given increment.
d) No adverse impacts on the hydraulic conveyance capabilities of the watercourse will be permitted.
e) Depending on the location of the proposed works, a hydraulic/geotechnical evaluation may be required in order to ensure the long-term stability of the works.
f) A cut and fill plan must be submitted demonstrating consistency with the policies of this document.

4.2.13.2 Cut and Fill Plan Requirements

At a minimum, all plans and calculations for cut and fill operations shall be prepared by a qualified engineer or surveyor and are required to contain the following criteria:

a) Detailed calculations for incremental and total cut and fill volumes;
b) Cross-sectional plots to scale showing existing and proposed flood lines and ground elevations;
c) Detailed contour/topographic plan to scale showing existing conditions (including grades) and all proposed works and elevations;

d) Adequate erosion and sediment control measures will be implemented on-site, both during and after construction, and must be in accordance with the policies of this document;
e) A hydraulic analysis may be required as deemed necessary by the Authority (i.e. HEC-RAS modelling); and,
f) A geotechnical analysis may be required as deemed necessary by the Authority.

4.2.13.3 Exceptions for Balanced Cut and Fill

Notwithstanding the above policies, the NPCA recognizes that in some cases the need for balanced cut and fill may not be required due to the unique attributes of a given site. Where an applicant is able to demonstrate through a hydraulic study that there will be no impacts or negligible impacts on the loss of flood storage, the NPCA may grant a permit to place fill in the floodplain.

4.2.14 Flood Plain Spill Areas

4.2.14.1 Spill Areas

There are several areas within NPCA's watershed in which flood plain spills occur, generally in the areas north of the Niagara Escarpment. Spill areas are locations where hydraulic modeling and mapping of the flooding hazards indicates that flood waters may leave the flood plain and "spill" into surrounding lands that are outside of the regulated flooding hazard limits. Generally, the depth of flooding cannot be precisely/readily determined as the flood depths that may occur depend on a number of factors such as the local (and downgradient) topography and storage volume as well as the amount of spill flow that would occur. Typically spills would occur only during the higher flow rates of the storm and hence the volume and depth of flood water is dependent also on the duration of the storm and the foregoing factors.

4.2.14.2 Approach to Spill Areas

The NPCA does not regulate development in spill areas in the same manner as development within flood plain areas, as these areas are not readily defined and the storage/flow that occurs in these areas is not considered as part of the natural flood plain, hence preservation of flood storage is not required. Where spill locations can be identified; while not subject to Ontario Regulation 155/06, the NPCA would review any Environmental Assessment or land use application under the Planning Act, Niagara Escarpment Plan or Building Code so that the possible flood hazards can be assessed and appropriate mitigation can be established as part of the Municipal/Conservation Authority review process.

4.2.14.3 Potential Mitigation Measures for Development within Spill Areas

Where mitigation measures are required for lands within a spill zone, buildings and structures may be permitted provided that adequate floodproofing measures are undertaken. Mitigation for development proposed within a spill area could include (but is not limited to):

a) Raising the elevation of proposed buildings or structures above the anticipated flood level; and/or,
b) Raising the lands within the spill location to prevent its occurrence.

4.3 POLICIES FOR PLANNING AND REGULATING FLOOD HAZARDS (TWO-ZONE POLICIES)

4.3.1 Objectives

The objectives of the flood hazard policies are to:

a) Prevent loss of life;
b) Minimize property damage and social disruption;
c) Reduce the potential for incurring public costs associated with the impacts of flooding hazards;
d) Manage existing risks and reduce the potential for future risks;
e) Promote the conservation of land and a co-ordinated approach to the management of water.

4.3.2 Application of a Two-Zone Policy Framework

A two-zone policy framework may be applied where the NPCA is satisfied that the criteria outlined in Policy 4.1.4 have been met.

4.3.3 Floodway Development Policies

Development shall be restricted within the floodway and the policies of section 4.2 shall be applied when assessing development proposals within the floodway.

4.3.4 Flood Fringe Development Policies

4.3.4.1 Habitable Buildings

Habitable buildings may be permitted within the flood fringe of a two-zone policy area, provided:

a) Buildings or structures are floodproofed to the elevation of the regulatory flood;
b) New dwelling units are located above the flood elevation;
c) All habitable floor space, including any electrical, mechanical and heating services are located above the flood elevation;
d) Access and egress to the building or structure (as the case may be) is floodproofed to an elevation which is safe, practical and feasible; and,

e) No basement is proposed or where the building contains multiple units, the basement is floodproofed.

4.3.4.2 Non-Habitable Buildings, Structures and other forms of Development

Non-habitable buildings and structures and other forms of development may be permitted within the flood fringe area in accordance with municipal policies and standards.

5.0 GREAT LAKES AND NIAGARA RIVER SHORELINE HAZARD

5.1 WHAT ARE SHORELINE HAZARDS?

5.1.1 Shoreline Hazards

The shorelines along Lake Ontario, Lake Erie and the Niagara River are dynamic places, as they are in a state of constant flux. Shoreline areas are made up of an accumulation of detritus material such as sediment that is continually being transported and deposited by wave action, currents and wind. The composition of sediments varies from clay and silt to sand and gravel, to cobbles or even boulders. As a result, shorelines are constantly being shaped and re-shaped. These changes can range from a period of a few hours to days or even years and decades in response to the changes in waves, winds, water levels currents and the movement and accumulation of ice. The NPCA is responsible for regulating activities within the Lake Ontario, Lake Erie and Niagara River shoreline hazard areas to minimize risks to life, property damage, social disruption and adverse environmental impacts. The shoreline hazard area includes the following natural hazards:

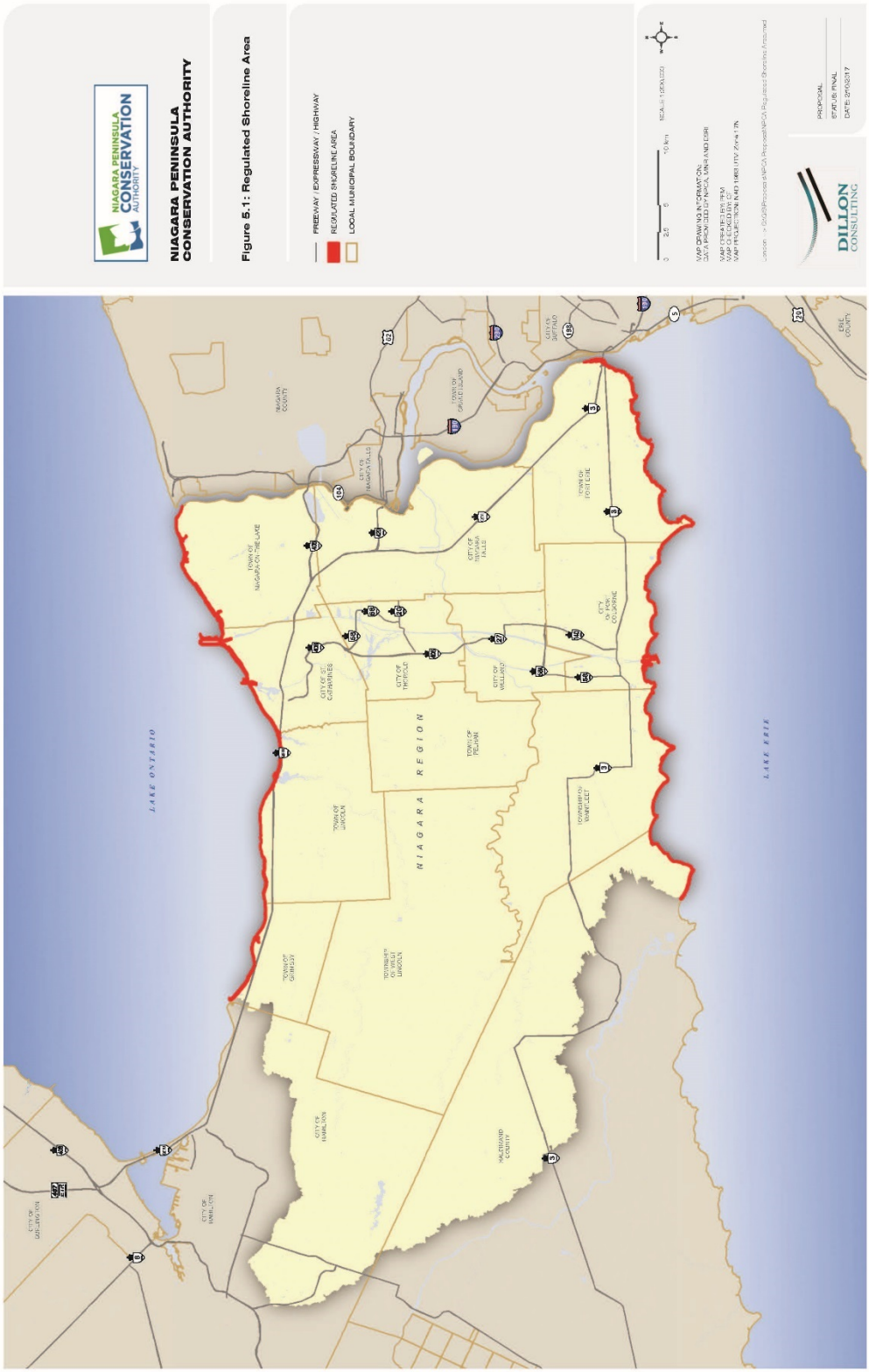
a) Shoreline flooding hazard;
b) Shoreline erosion and slope stability hazard; and,
c) Dynamic beach hazard.

5.1.2 Niagara River Policy Framework

The NPCA does not regulate the flooding hazard on the Niagara River, except for 350 metres from the mouth of the Niagara River at Lake Ontario (Melville Street) and an area at the head of the Niagara River within the 100 year flood elevation of 177.11 m GSC (Geodetic Survey of Canada Datum) of Lake Erie (an area which includes lands around the Peace Bridge and within the urban area of the Town of Fort Erie). **Figure 5.1** illustrates the regulation area for the Niagara River and Lake Ontario and the Niagara River and Lake Erie. These areas are regulated under the shoreline hazard policies of this section. "The Boundary Waters Treaty of 1909 requires that the United States and Canada, together, approve projects that affect the levels and flows of water along their common boundary, including the Niagara River. Water diversions in the Niagara River for hydroelectric power projects in both countries were approved by the 1950 Niagara Treaty. Water diverted from the river above Niagara Falls is returned to the river below the Falls." (IJC Fact Sheet, no date).

Planning Act applications and building permit applications along the Niagara River will be reviewed by the NPCA to address erosion hazards associated with steep slopes (slope height greater than or equal to 3m) and flooding hazards where the Niagara River meets Lake Erie and Lake Ontario. Consideration will be given to the International Joint Commission Study on the Great Lakes water levels and any international agreements which govern the watercourse. Ontario Power Generation (OPG) highwater levels have been provided to the NPCA for certain sections of the Niagara River.

Figure 5.1: Regulated Shoreline Area



5.1.3 Great Lakes and Niagara River Shoreline Flooding Hazard

5.1.3.1 Flooding Hazard Limits along the Great Lakes

Flooding has historically and repeatedly caused considerable damage along shorelines. Shorelines may experience various magnitudes and durations of shoreline flooding as the result of a combination of:

a. Higher, lake wide, static water levels due to abnormally high levels of precipitation and runoff and the annual lake level fluctuations;
b. Short-term, storm induced wind setups; and,
c. Wave action which rushes up the shore and other water related hazards, including wave overtopping, ice jamming and piling.

5.1.3.2 Approach to Flood Hazards along the Great Lakes

In general, development is restricted within the shoreline flood hazard and is subject to mitigation measures. Certain forms of development are prohibited. The flood hazard within NPCA's regulated areas shall be mitigated prior to development approval.

5.1.3.3 100-Year Flood Level

The 100-year flood level is the sum of the mean lake level and storm surge with a combined probability of a 100-year return period (i.e., on average, has a 1 percent probability of occurring in any given year or on average once in 100 years).

5.1.3.4 100-Year Flood Levels for Lake Erie

The 100 Year Flood levels for Lake Erie are illustrated in **Table 5.1** below (figures derived from Lake Erie Shoreline Management Plan, 2010):

Table 5.1: 100 Year Flood Levels for Lake Erie		
Location	**100 Year Flood Elevation (m GSC)**	**Floodproofing Elevation (m GSC)**
• Sector E-21 Mohawk Point (SMP reaches 1-1 and 1-2)	176.7	177.0
• Sector E-22 Port Colborne (SMP reaches 2-1 to 7-4)	176.8	177.3
• Sector E-23 Port Abino (SMP reaches 7-4 and 7-9)	176.9	177.3
• Sector E-24 Crystal Beach (SMP reaches 8-1 and 9-3)	177.0	177.4
• Sector E-25 Fort Erie (SMP reaches 10-1 and 10-10)	177.1	177.6

5.1.3.5 100-Year Flood Levels for Lake Ontario

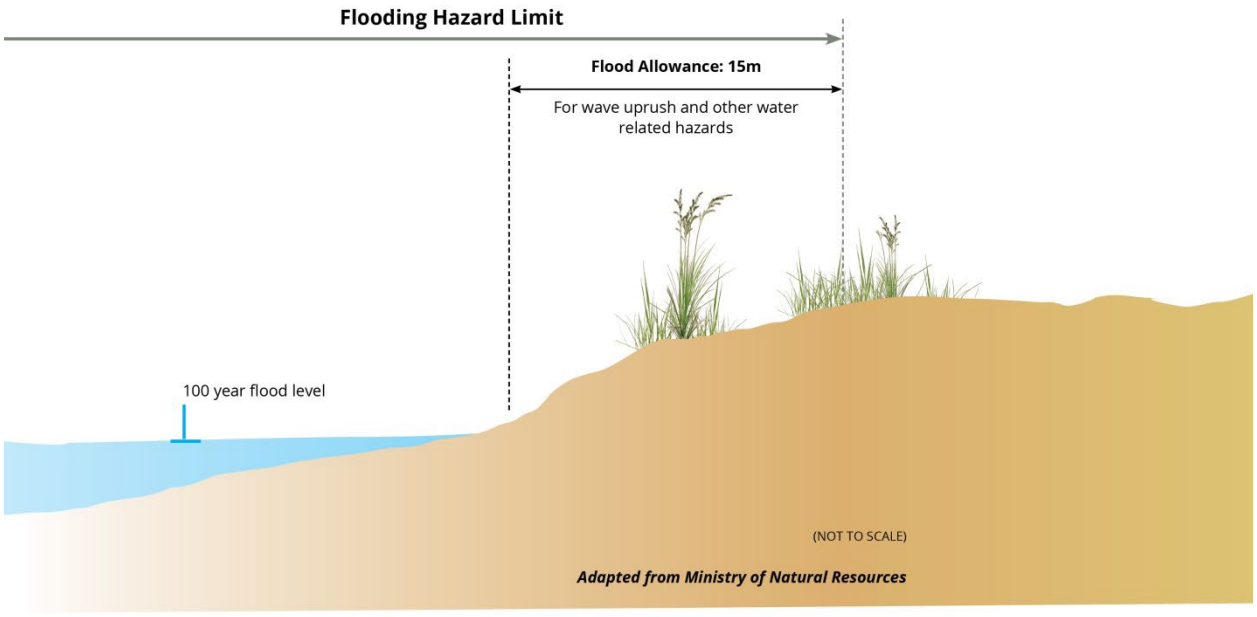
The 100 Year Flood levels for Lake Ontario are illustrated in **Table 5.2** below (figures derived from Lake Ontario Shoreline Management Plan, 2009):

Table 5.2: 100 Year Flood Levels for Lake Ontario		
Location	**100 Year Flood Level (metres GSC)**	**Floodproofing Elevation (m GSC**
• Fifty Point to Port Weller, reaches 0 to 36	76.01	76.50
• Port Weller to Mississauga Point , reaches 37 to 58	76.15	76.62

5.1.3.6 Flood Hazard Area along the Great Lakes Shoreline

The shoreline policies restrict (except as permitted in accordance with the policies of this document) development within the flooding hazard. The flooding hazard limit considers the cumulative impact of the 100-year flood level, wave uprush and other water related hazards. Specifically, the flooding hazard combines the 100-year flood level (i.e., static water level, storm surge, and wind setup), and a flood allowance for wave uprush and other water related hazards. In the absence of a site-specific wave uprush assessment, a 15 m horizontal setback shall be applied as a conservative estimate of wave uprush. A reduction to this setback shall only be considered if an engineering analysis (completed by the applicant and approved by the NPCA) justifies the reduction. **Figure 5.2** illustrates the shoreline flood hazard.

Figure 5.2: Great Lakes Shoreline Flooding Hazard



5.1.3.7 Wave Action and Wave Uprush

Winds can drive water farther inland. The extent of the wave uprush can be influenced by a range of site-specific factors, such as the presence of shore protection works or other structures. For planning purposes, the generic allowance for wave uprush is 15 metres (49 feet) to be measured horizontally from the 100 year flood level. However, given the potential variability along the shorelines, a site-specific analysis completed by a qualified engineer may be required to determine the appropriate wave uprush allowance on a specific site.

5.1.4 Great Lakes and Niagara River Erosion Hazard

5.1.4.1 Approach to Erosion Hazards along the Great Lakes

In general, development is restricted within the erosion hazard and is subject to mitigation measures prior to development approval. Certain forms of development are prohibited.

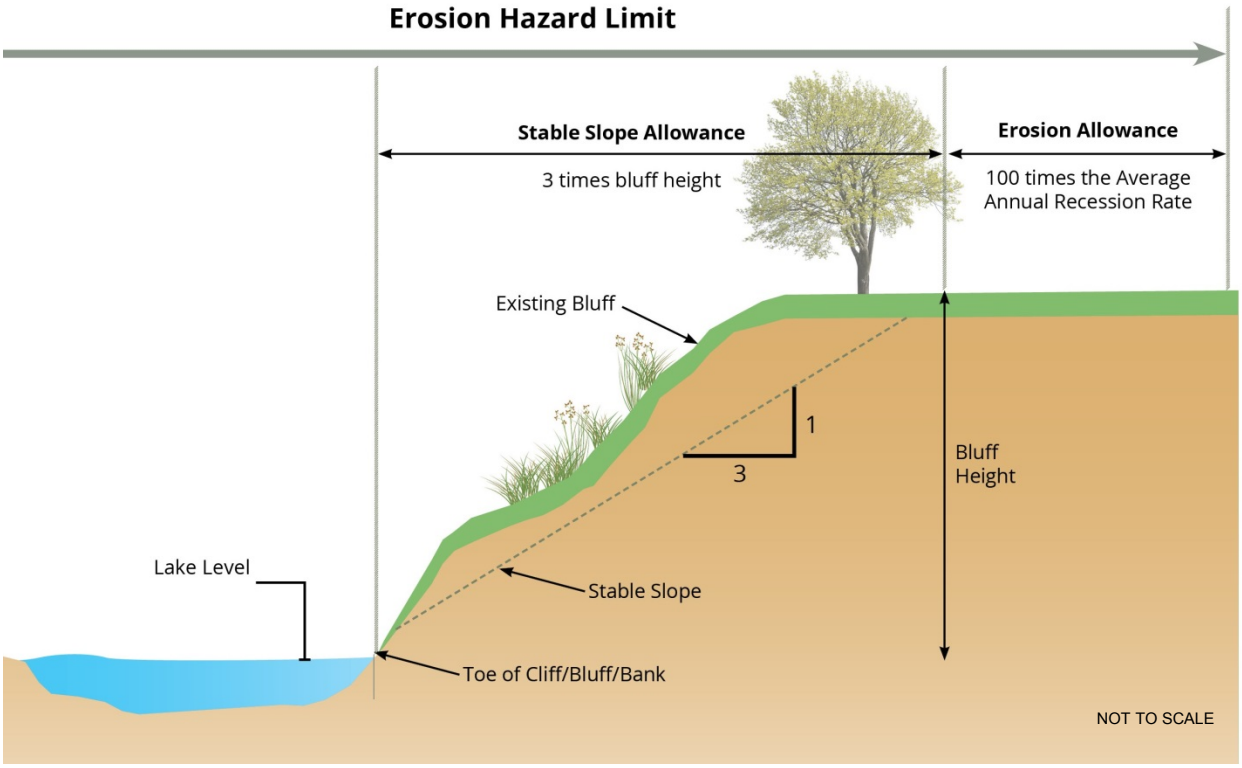
5.1.4.2 Erosion Allowance and Slope Stability Allowance

Shoreline lands along the Great Lakes shoreline and at the mouth of the Niagara River are the lands that are subject to erosion and in some cases, slope stability issues. Erosion is the loss of soil/rock at the ground surface, while slope failure consists of large masses of soil/rock sliding along a planer surface. The erosion hazard is determined by the sum of the following elements:

a. Erosion allowance; and,
b. Stable slope allowance.

Figure 5.3 illustrates the Great Lakes shoreline erosion hazard.

Figure 5.3: Great Lakes Shoreline Erosion Hazard



5.1.4.3 Erosion Allowance

The erosion allowance varies along the shoreline based on the annual recession rate and the presence of shore protection. The erosion allowance, measured from the limits of the stable slope allowance, shall be calculated based on the recession rate times 100 years. If shore protection exists, the erosion allowance can be reduced by the approximate remaining functional life of the shore protection.

5.1.4.4 Stable Slope Allowance

The stable slope allowance along the Great Lakes shoreline is 3:1 (horizontal to vertical) in the absence of a site specific geotechnical study (see Policy 6.1.4.8).

5.1.4.5 Technical Studies

Technical studies undertaken by a qualified coastal engineer and/or geotechnical engineer may be required to determine the exact extents of the of the shoreline erosion hazard limits.

5.1.5 Great Lakes Dynamic Beach Hazard

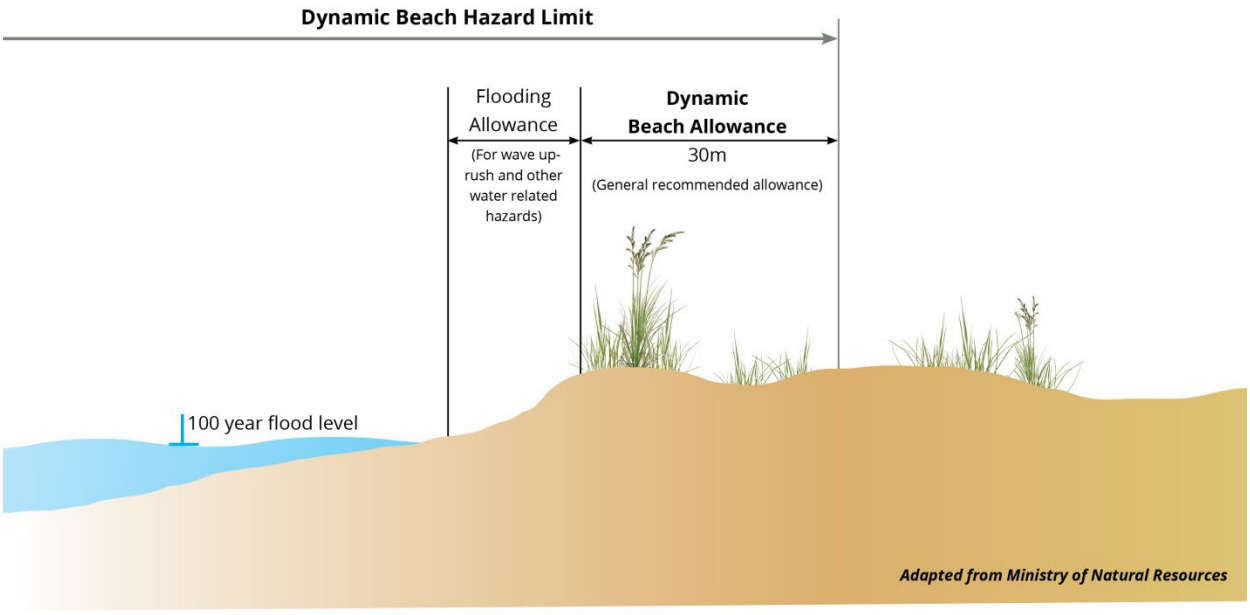
5.1.5.1 Approach to Dynamic Beach Hazard

The dynamic beach hazard is the area of unstable accumulation of shoreline sediments along the Great Lakes. The dynamic beach hazard within NPCA's regulated areas shall be mitigated prior to development approval. There are 23 dynamic beaches along the shores of Lake Erie and 10 located along the shores of Lake Ontario. In general, development is restricted within dynamic beach hazard and is subject to mitigation measures, including non-structural and structural protection measures (refer to the current Lake Erie and Lake Ontario Shoreline Management Plans, as amended from time to time). Certain forms of development are prohibited.

5.1.5.2 Defining the Hazard

A dynamic beach is defined where the beach deposit is at least 30 cm in thickness, 10 metres in width and 100 metres in length based on provincial standards. The generic setback for development along the Great Lakes shoreline should be 30 metres (98 feet) from the limits of the shoreline flood hazard (**Figure 5.4**). A site-specific analysis completed by a qualified engineer may be completed to determine the extent of the dynamic beach hazard.

Figure 5.4: Dynamic Beach Hazard



5.2 POLICIES FOR PLANNING AND REGULATING SHORELINE HAZARDS

5.2.1 Objectives

The objectives for the shoreline hazard policies are to:

a) Prevent loss of life and minimize potential for property damage and social disruption;
b) Reduce the potential for incurring public costs associated with the impacts of shoreline hazards;
c) Manage existing risks and reduce the potential for future risks;
d) Promote the conservation of land and a co-ordinated approach to the management of the shoreline; and,
e) Reduce the potential for adverse impacts, including pollution, on the ecological function of shorelines.

5.2.2 Development within the Shoreline Hazard Area

Development shall not be permitted within the limits of the Great Lakes shorelines hazard area, unless otherwise permitted in the policies of this section.

5.2.3 Prohibited Uses

Notwithstanding the policies of this section, the following uses are prohibited within the Great Lakes shoreline hazard area:

a) Sensitive uses, such as hospitals, nursing homes, day-cares/pre-schools and schools;
b) Emergency services facilities;
c) Uses associated with the disposal, treatment, manufacturing/processing or storage of hazardous substances;
d) Any other use or development deemed to be inappropriate based on the objectives stated in 5.2.1.

5.2.4 Repairs, Maintenance and Interior Alterations to Existing Buildings and Structures

Repairs and maintenance, including interior alteration to existing buildings and structures within the flood hazard, dynamic beach hazard, the stable slope allowance and the erosion allowance are permitted. The NPCA will advise the applicant of the potential risks associated with the site, including any potential risks related to flooding, slope failure and erosion. Replacement of a roof or exterior siding is also permitted. Increases to the total number of dwelling units is not permitted.

5.2.5 New Habitable Buildings and Additions

5.2.5.1 New Habitable Building and Ground Floor Additions

New habitable buildings/structures, including redevelopment and ground floor additions:

a) Are not permitted within the stable slope allowance or the dynamic beach hazard.

b) May be permitted within the flooding hazard provided:

   i. Means are provided to mitigate the wave uprush hazard (i.e. shutters installed on windows).
   ii. Means are provided to mitigate the 100 year flood hazard (i.e. no openings are constructed within the structure below the regulatory 100 year flood elevation and safe access/egress is provided).
   iii. The NPCA is satisfied that no practical alternative exists to locate the proposed structure outside of the flooding hazard.

c) May be permitted within the erosion allowance provided:

   i. It meets the requirements of the shore protection work standard to the maximum extent and level possible based on site-specific conditions;
   ii. It utilizes maximum lot depth and width;

iii. Uses a setback from the stable slope allowance of 7.5 metres (25 feet). At the discretion of the NPCA, any setback that is proposed to be less than 7.5 metres may be required to be supported by a geotechnical study.
iv. The NPCA is satisfied that no practical alternative exists to locate the proposed structure outside of the erosion hazard.

5.2.5.2 Additional Storeys

Proposals for additional storeys to existing development located within the shoreline flood hazard and/or the erosion allowance may be permitted provided:

a) Safe access and egress is provided;
b) No new dwelling units are created as a result of the addition;
c) Other proposed improvements required to accommodate additional storeys, such as a replacement to an existing septic system, comply with the policies of this document; and,
d) The proposed addition is not located in the stable slope allowance.

5.2.6 Replacement and Relocation of Existing Habitable Buildings and Structures

The following policies apply to the replacement or relocation of existing habitable buildings including those structures where the ground floor area is proposed to be expanded:

a) Buildings destroyed by flood and/or erosion forces will not be permitted to be reconstructed at the same location unless it can be conclusively demonstrated that the Great Lakes Hazards can be adequately mitigated to the satisfaction of the NPCA.
b) Buildings destroyed by forces other than flood and erosion may be reconstructed/ relocated within the erosion allowance provided:
    i. Adequate shore protection is in place;
    ii. Meets the minimum setback of 7.5 metres (25 feet)from the stable slope. At the discretion of the NPCA, any setback that is proposed to be less than 7.5m shall be supported by a geotechnical study.
    iii. The NPCA is satisfied that no practical alternative exists to locate the proposed structure outside of the erosion hazard; and,
    iv. The proposed development meets all other relevant policies of this Document.
c) Buildings destroyed by forces other than flood and erosion may be reconstructed/ relocated within the stable slope allowance provided:
    i. The building/structure is of the same use, the same size or smaller than the original building/structure and contains the same number of dwelling units;
    ii. The NPCA is satisfied that no practical alternative exists to locate the proposed structure outside of the stable slope allowance;
    iii. Adequate shore protection is in place;
    iv. A supporting geotechnical study is provided indicating that the proposed development will not be adversely impacted by the adjacent slope; and,
    v. The proposed development meets all other relevant policies of this Document.

d) Buildings destroyed by forces other than flood and erosion may be reconstructed/ relocated within the Dynamic Beach Hazard provided:
    i. the proposed building/structure is of the same use, the same size or smaller than the original building/structure that was destroyed and contains the same number of dwelling units;
    ii. the design minimizes impact on the dynamic beach (to the satisfaction of the NPCA);
    iii. the NPCA is satisfied that no practical alternative exists to locate the proposed structure outside of the dynamic beach hazard; and,
    iv. The proposed development meets all other relevant policies of this Document.

5.2.7 Non-Habitable Major Structures

The following policies apply to non-habitable structures greater than 10 m^2:

a) Major structures are not permitted within the stable slope allowance or the dynamic beach hazard.
b) Major structures may be permitted within the flooding hazard provided it incorporates flood-proofing.
c) Major structures may be permitted within the erosion allowance provided:
    i. Adequate shore protection exists;
    ii. It utilizes the maximum lot depth and width; and,
    iii. Uses a setback from the stable slope allowance of 7.5 metres (25 feet). At the discretion of the NPCA, any setback that is proposed to be less than 7.5 metres may be required to be supported by a geotechnical study.

5.2.8 Decks and Non-Habitable Minor Structures

The following policies apply to decks (which are not enclosed) and non-habitable structures less than 10 m^2:

a) Minor structures are not permitted within the stable slope allowance or the dynamic beach hazard.
b) Minor structures may be permitted within the flooding hazard provided safety concerns due to flood hazards are addressed.
c) Minor structures may be permitted within the erosion allowance provided:
    i. Adequate shore protection exists; and,
    ii. The location of the structure does not obstruct maintenance access to and along existing shoreline protection works.

5.2.9 Swimming Pools

Swimming pools are not permitted within the shoreline flooding hazard, stable slope allowance or dynamic beach hazard. Swimming pools may be permitted within the shoreline erosion allowance provided:

a) Adequate shore protection exists;
b) A setback of 7.5 metres from the stable top of slope will generally be required. Where a setback less than 7.5 metres is proposed, a geotechnical study may be required.
c) Drainage impacts are addressed; and,
d) The location of the pool does not obstruct maintenance access to and along existing shoreline protection works.

5.2.10 Boardwalks and Other Structures

The following policies apply to boardwalks and other structures:

a) Boardwalks are not permitted within the dynamic beach hazard, except as dune cross-overs at selected points.
b) Boardwalks are not permitted along the shore within the stable slope allowance. Only perpendicular access to the shoreline is permitted.
c) Boardwalks may be permitted within the flooding hazard provided safety concerns due to flood hazards are addressed.
d) Boardwalks may be permitted within the erosion allowance provided the structure is not at risk to erosion hazard for 10 years (3 metres).
e) Buildings or structures which, by the nature of their use, are located in proximity to water, such as docks and boathouses, may be permitted within the shoreline hazard area. Detailed site specific evaluations with respect to erosion, flooding and dynamic beach hazards will be required to permit development.

5.2.11 Septic Systems (Great Lakes Shoreline Hazard)

New septic systems are not permitted within the shoreline hazard area. The replacement of septic systems which are associated with an existing use may be permitted within the shoreline hazard area if it has been demonstrated to the satisfaction of the NPCA and other regulatory agencies that the control of flooding, erosion, pollution, dynamic beaches or the conservation of land will not be increased. Where feasible, the location of the replacement septic system shall be located outside of the shoreline hazard area.

5.2.12 Ecosystems Approach to Shoreline Protection Works

Shoreline protection works are generally defined as a combination of structural works with landform modifications designed, and constructed, to address the impacts of flooding and other water related hazards and to arrest the landward retreat of shorelines subject to erosion. The shoreline zone is characterized by a complex interaction of short-term and long-term water level variations, waves and currents, morphology, sediments and protection structures. A proponent may have to demonstrate how shoreline treatment considers ecological function and features to address the conservation of land. Shoreline protection works shall consider natural coastal processes and be effective against long-term erosion, preserve cobble/shingle beaches, protect/regenerate aquatic and terrestrial habitat, and not adversely impact neighbouring shoreline.

There may be circumstances when ecological considerations may require either specialized shore protection methods or consideration for zones of no shoreline protection to allow for natural processes to occur (ecological function). Many species (including some that are species at risk) depend on changing dynamic beach processes and shoreline protection alternatives which allow for these beach processes to continue shall be considered.

Wherever possible, proposed shoreline protection works shall conform to the recommendations of the Lake Erie and Lake Ontario Shoreline Management Plans, as amended from time to time.

5.2.13 Shoreline Protection Works

The design and installation of the protection works should be such that access to the shoreline protection works by heavy machinery for regular maintenance purposes and/or to repair the protection works, should failure occur, should not be prevented. The shoreline policy requires a minimum 5 metre wide access to, and along, the shoreline protection works. The following outlines the requirements for applicants proposing shoreline protection works:

a) The purpose or objective of the proposed works must be clearly defined;
b) The shoreline works must be designed according to accepted scientific coastal engineering principles, and shall conform to the recommendations of the appropriate Shoreline Management Plans;
c) The works may be required to be designed and the installation supervised by a professional engineer with experience and qualifications in coastal engineering;
d) Slope stability may be required to be assessed by a professional geotechnical engineer;
e) The ownership of land, where the protection works are proposed, must be clearly established by the applicant;
f) Where the applicant does not own the land, written permission shall be obtained from the landowner (be it a private citizen, corporation, municipality or the Crown) allowing for the construction of the proposed shore protection;

g) The design and installation of protection works must allow for a 5.0m wide access corridor to and along the protection works for equipment and machinery in order to undertake maintenance and repair of the protection works should failure occur (where shore protection works are shared across properties, a shared access route may be provided);
h) The proponent shall demonstrate how the conservation of land has been achieved;
i) The works should not aggravate existing hazards and/or create new hazards at updrift or downdrift properties;
j) In areas of existing development, protection works should be coordinated with adjacent properties; and,
k) All works should be located above the 80th percentile of the High Water Mark as defined by Fisheries and Oceans Canada: Lake Erie 174.62m and Lake Ontario 75.32m (IGLD 1985).

The NPCA will endeavour to provide copies of all shore work permits to the relevant municipality.

5.2.14 Changes in Use

When commenting on applications for a change in land use which is within the shoreline hazard area, the NPCA will consider the following:

a) Potential for increased risks associated with shoreline hazards, including flooding, erosion and dynamic beaches;
b) Potential opportunities for mitigation of shoreline hazards;
c) Potential for adverse impacts related to the conservation of land and ecological functions;
d) Potential for adverse impacts associated with pollution; and,
e) Other relevant aspects based on the site specifics.

6.0 VALLEYLAND EROSION HAZARD

6.1 WHAT ARE VALLEYLAND EROSION HAZARDS?

6.1.1 Valleys

Valleys are depressional features associated with a river or stream, which may or may not contain a watercourse. Where a watercourse is present, the watercourse may be either permanent or intermittent. The boundaries of a valley are defined by the primary top of bank on each side of the landform depression.

The valleyland resources within the NPCA jurisdiction can be categorized by - steep `V' shaped valleys and broad `U' shaped stream corridors. Generally, the steep valley systems are found north of the Niagara Escarpment in the western portions of Niagara-on-the-Lake and St. Catharines, as well as the eastern portion of the Town of Lincoln. The broader stream corridors are found south of the Escarpment, in Fort Erie, Port Colborne and Wainfleet and Haldimand County.

6.1.2 Valleyland Erosion Hazard

6.1.2.1 Erosion Hazard

Erosion hazard refers to 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 100 year erosion rate (the average annual rate of recession extended over a one hundred year time span), an allowance for slope stability, and an erosion/erosion access allowance. (PPS, 2014). The erosion hazard limit includes two different elements: erosion; and slope stability.

6.1.2.2 Erosion

Erosion means the process of gradual washing away of soil by water movement or seepage which may occur in one of the following ways:

a) Rainfall or snowmelt and surface runoff (sheet, rill or gully erosion);
b) Internal seepage and piping;
c) Water flow (banks or base of river, creek, channel); and
d) Wave Action (shorelines of ponds, lakes and bays)

Erosion impacts soil at the particle level by dislodging and removing the particles from the parent mass (with water being the transporting agent). Wind and frost may also weather and transport soil particles.

6.1.2.3 Slope Instability

Slope instability is the sudden movement or sliding of a large mass of soil over a failure plane. Slope instability can occur in many ways, such as:

a) Changes in slope configuration, such as steepness or inclination;
b) Increases in loading on or near the slope, such as structures or filling;
c) Changes in groundwater conditions or soil drainage (e.g. heavy rainfall, spring melt, drainage blocked by filling, broken watermains, etc.);
d) Loss of vegetation cover and root systems; and,
e) Slope erosion (MNR Technical Guide, River and Stream Systems: Erosion Hazard Limit, 2002).

Certain valleys in Niagara have, in recent years, exhibited slope failure problems. These problems have been aggravated by historical development situated in very close proximity to, or on, the top of valley slopes. This situation, in combination with varied soil characteristics, groundwater hydraulics/movement and historical fill placement (for example), has created damaging and dangerous situations. The Twenty Mile Creek Valley in Lincoln and the Twelve Mile Creek Valley in St. Catharines are two such areas. Historic development patterns have created situations where homes and businesses are now experiencing great risk of major damages due to slope instability problems. Solving these types of problems through 'structural' means can be cost prohibitive and may also adversely impact the ecological integrity of the valley system. As a result, a comprehensive 'non-structural' approach to deal effectively with development in these situations is of great importance.

6.1.3 The Ecological Importance of Valleylands

It is also important to recognize that valleylands have important ecological functions. Some valleylands connect natural areas over large distances, providing corridors for terrestrial, aquatic and avian species. Valleylands can also promote biodiversity, as they have the ability to support a diverse range of habitats resulting from microclimate variations. Accordingly, the policy framework for regulating development in and near valleylands considers aspects related to the erosion hazard and also potential for adverse impacts on ecological features and functions associated with the valleyland (in these instances, the policies refer to the conservation of land).

6.1.4 Defining the Valleyland Erosion Hazard

6.1.4.1 Regulated Valleylands

The policies of this Document apply to erosion hazards associated with apparent valleys where the bank height is equal to or greater than 3 metres in height (approximately 10 feet), the slope is steeper than 3 (horizontal) to 1 (vertical), and includes adjacent lands.

6.1.4.2 Physical Top of Slope

The physical top of slope is defined as the evident transition point between the plateau lands and the face of the slope. Where the physical top of slope is required to be established, site inspections with the applicant and Authority staff are to be undertaken. The NPCA approved physical top of slope shall be marked in the field. The applicant will then submit drawings indicating the surveyed location of the 'NPCA approved' physical top of slope for NPCA review and approval.

6.1.4.3 Stable Top of Slope

The physical top of slope and the stable top of slope may be coincident. However, in some cases, due to specific on-site conditions (such as slope inclination, proximity of the watercourse to the toe of slope, soil conditions, erosion, etc.) the stable top of slope may not be located at the physical top of slope, but rather may be located landward from the physical top of slope.

The stable top of slope is to be established by a professional geotechnical engineer utilizing the guidelines and manuals outlined in chapter 12, to the satisfaction of NPCA staff. Where no geotechnical assessment has been undertaken, the stable top of slope is based on a line projected upwards from the base of the slope at a 3:1 (horizontal to vertical) angle. In addition to the requirements outlined in Section 12, the geotechnical assessment must take into consideration, and make recommendations pertaining to: construction equipment/access; limit of work area; vegetation protection; sediment and erosion controls; drainage; etc.

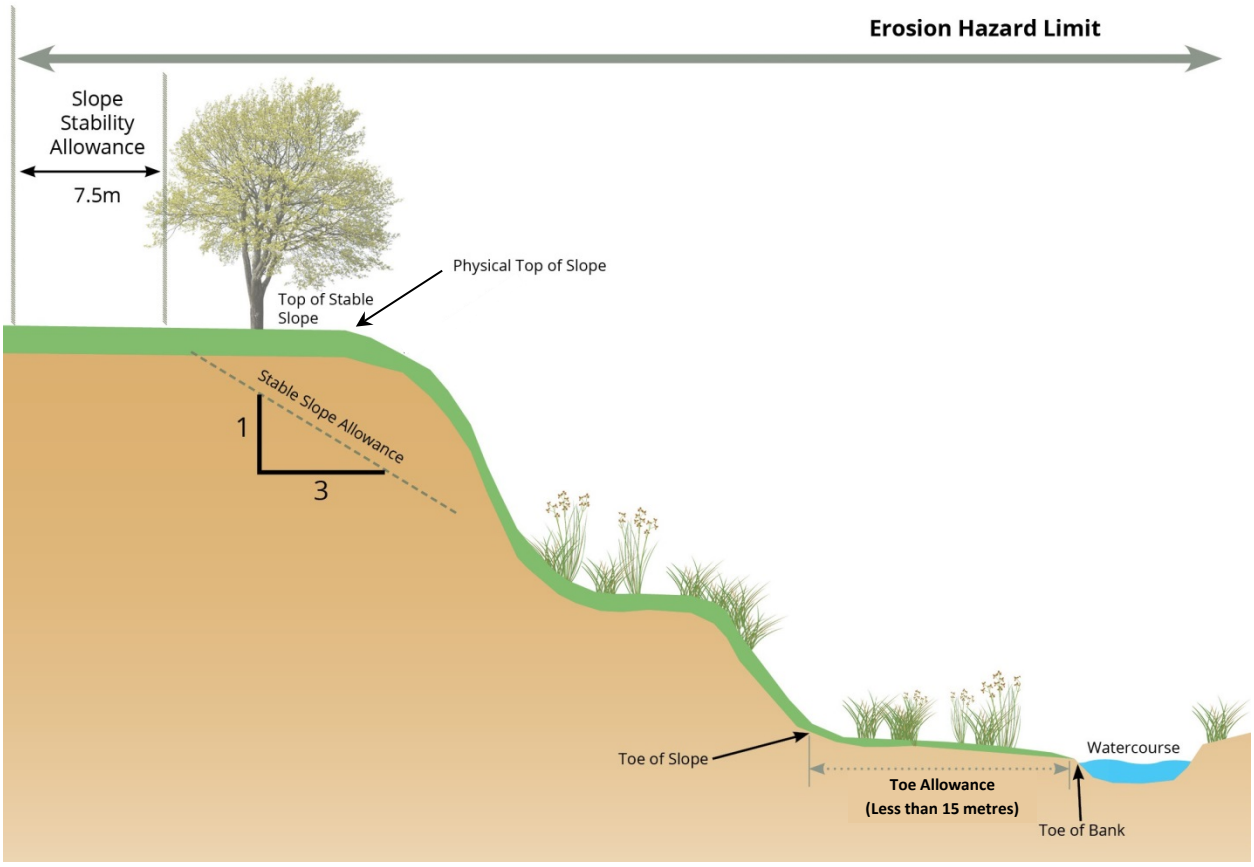
6.1.4.4 Defining the Erosion Hazard

The erosion hazard shall be the sum of the following elements (**Figure 6.1**):

a) The location of the stable top of slope or the physical top of slope, whichever is determined to be further landward on the plateau;
b) A slope stability allowance of 7.5 metres (25 feet) from the most landward location of either of the stable top of slope or the physical top of slope[7]; and,
c) The toe erosion allowance, where a watercourse is located less than 15 metres (49 feet) from the toe of slope.

[7] Ontario Regulation 155/06 allows the NPCA to regulate development within 15 metres of the stable top of slope. In practice and in policy, the NPCA has historically regulated development within 7.5 metres of the stable top of slope (refer to policy 3.25.3 of NPCA's previous policy document entitled "Policies, Procedures and Guidelines for Administration of Ontario Regulation 155/06 and Land Use Planning Policy Document (2011)".

Figure 6.1: Valleyland Erosion Hazard



6.1.4.5 Stable Slopes

Stable slopes are slopes which have been previously defined as such through geotechnical investigation or have been confirmed to be stable through a field investigation and do not reveal evidence of any of the following:

a) Bare slopes absent of any vegetation;
b) Outward tilting of trees;
c) Toe erosion at the base of the slope;
d) Slumping, gullying or other visible erosion processes;
e) The addition of fill material;

f) Containing an easily eroding soil type (i.e. Short Hills area of Pelham contains soil types which are highly erodible and easily susceptible to gully erosion); or,
g) Where the angle of the slope is gentler than 3(horizontal):1 (vertical).

In the absence of a previous geotechnical investigation and despite the presence of the above noted conditions, depending on the scope, nature, and location of the proposed development, the NPCA may still require that a geotechnical investigation be undertaken to confirm the location of the stable top of slope.

6.1.4.6 Unstable Slopes

Unstable slopes are slope which have evidence of any of the following:

a) Bare slopes absent of any vegetation;
b) Outward tilting of trees;
c) Toe erosion at the base of the slope;
d) Slumping, gullying or other visibly erosion processes;
e) The addition of fill material;
f) The presence of a watercourse within 15 metres (49 feet) of the toe of slope;
g) Containing an easily eroding soil type (i.e. Short Hills area of Pelham contains soil types which are highly erodible and easily susceptible to gully erosion); or,
h) Where the angle of the slope is steeper than 3(horizontal):1 (vertical).

Unstable slopes shall require a geotechnical investigation to determine the extent of the erosion hazard and determine appropriate development setbacks.

6.1.4.7 Toe Erosion Allowance

A toe erosion allowance may be required where a watercourse is located less than 15 metres (49 feet) from the toe of a slope to address the potential for erosion along the bank of the watercourse which may increase the risk of slumping and slope failure. The toe erosion allowance shall be defined as one of the following:

a) The average annual recession rate, based on 25 years of data to determine the toe erosion allowance over a 100 year period;
b) A 15 metre toe erosion allowance to be measured inland horizontally and perpendicular to the top of the watercourse slope;
c) Toe erosion allowance based on a geotechnical study completed by a qualified professional engineer; or,
d) Toe erosion allowance based on soil types and hydraulic processes as illustrated in **Table 6.1** (from MNR Technical Guide, River and Stream Systems: Erosion Hazard Limit).

Table 6.1: Minimum Toe Erosion Allowance, Where a Watercourse is Less than 15 metre from the Toe of Slope				
Type of Material (native soil structure)	**Evidence of Active Erosion or where the bankfull flow is greater than competent flow velocity**	**No Evidence of Active Erosion**		
		Bankfull Width		
		< 5m	**5-30m**	**>30 m**
Hard Rock (e.g. granite)	0-2m	0m	0m	1m
Soft Rock (e.g shale, limestone), cobbles, boulders	2-5m	0m	1m	2m
Clays, clay-silt, gravels	5-8m	1m	2m	4m
Sand, silt	8-15m	1-2m	5m	7m

6.1.4.8 Geotechnical Study

The NPCA may request that the applicant undertake a geotechnical study, completed by a qualified professional geotechnical engineer, to confirm the location of the top of stable slope and/or the potential for slope failure on lands which have evidence of unstable slopes. The results of the geotechnical study shall define the extent of the erosion hazard, taking into account the specific site characteristics and the nature of the proposed development. Geotechnical studies should be based on the MNR's Technical Guide for River and Stream Systems: Erosion Hazard Limit (2002) and must demonstrate that there is no increased risk to life or property. An appropriate factor of safety shall be incorporated into all designs/analysis based on the consequences or risks to land use or life in the event of slope failure. The recommended minimum factors of safety are provided in **Table 6.2** (from the MNR's Technical Guide).

The NPCA reserves the right to have any and all studies peer reviewed at the expense of the applicant. The NPCA also reserves the right to have studies updated where the time of the report is considered to be out-dated.

Table 6.2: Design Minimum Factors of Safety	
Land Use	**Design Minimum Factor of Safety**
PASSIVE; no buildings near slope; farm field, bush, forest, timberland, woods, wasteland, badlands, tundra	• 1.10
LIGHT; no habitable structures near slope; recreational parks, golf courses, buried small utilities, tile beds, barns, garages, swimming pools, sheds, satellite dishes, dog houses	• 1.20 to 1.30
ACTIVE; habitable or occupied structures near slope; residential, commercial, and industrial buildings, retaining walls, storage/warehousing of non-hazardous substances	• 1.30 to 1.50
INFRASTRUCTURE and PUBLIC USE; public use structures or buildings (i.e., hospitals, schools, stadiums), cemeteries, bridges, high voltage power transmission lines, towers, storage/warehousing of hazardous materials, waste management areas	• 1.40 to 1.50

Source: Technical Guide - River and Stream Systems: Erosion Hazard Limit 2002, Ontario Ministry of Natural Resources

6.2 POLICIES FOR PLANNING AND REGULATING VALLEYLAND EROSION HAZARDS

6.2.1 Objectives

The objectives of the erosion hazard policies are to:

a) Prevent the loss of life;
b) Minimize property damage;
c) Reduce the potential for incurring public costs associated with the impacts of erosion hazards;
d) Manage existing risks and reduce the potential for future risks;
e) Promote the conservation of land through the protection from adverse impacts on ecological features and functions of valleylands.

6.2.2 Permitted Uses

Generally, development within valleyland erosion hazard limits shall not be permitted, except in accordance with the policies of this Document. Notwithstanding the limitations on development, the following forms of development may be permitted at discretion of the NPCA:

a) Structures associated with erosion and sediment control, as well as any flood protection works;
b) Infrastructure approved through an environmental assessment process may be permitted where it has been demonstrated that the control of erosion, flooding, pollution and the conservation of land will not be affected or can be satisfactorily mitigated;
a) Minor removal (less than 25 m^3) and placement of fill and site grading within the erosion hazard (but not below the physical top of slope) may be permitted where it has been demonstrated to the satisfaction of the NPCA that the control of erosion, flooding, pollution and conservation of land will not be affected; and,
b) Development associated with existing uses located within the erosion hazard area in accordance with policy 6.2.4.
c) Passive public recreational uses, such as trails and pathways, as well as any associated structures, such as steps, staircases and lookouts in accordance with policy 6.2.6.

6.2.3 Prohibited Uses

Notwithstanding the policies of this section, the following uses are prohibited within the erosion hazard area:

a) Sensitive uses, such as hospitals, nursing homes, day-cares/pre-schools and schools;
b) Emergency services facilities;
c) Uses associated with the disposal, treatment, manufacturing/processing or storage of hazardous substances;
d) Any other use or development deemed to be inappropriate based on the objectives stated in 6.2.2.

6.2.4 Existing Development, Additions and Replacement Structures

6.2.4.1 Existing Development Located within 7.5 metres of the Stable Top of Slope

Replacements of existing buildings and structures, as well as additions to existing buildings and structures may be permitted where they exist within 7.5 metres (49 feet) of the stable top of slope. In this circumstance, the following policies will apply:

a) the replacement or addition shall not encroach any closer to the stable top of slope than the existing development at its closest point;
b) even if existing development is closer than 7.5 metres (25 feet) to the stable top of slope, no new development is permitted within 7.5 metres of the stable top of slope in order to provide for an erosion access allowance as per the Provincial Policy Statement;
c) a geotechnical assessment by a qualified engineer (at the expense of the applicant), may be required to determine the location of the stable top of slope and to determine if the proposed development would have an adverse impact on slope stability; and,
d) In cases where the building or structure can be reasonably relocated outside of the setback the applicant shall be required to do so.

6.2.4.2 Existing Lots of Record

For existing lots adjacent to valleys (bank height equal to or greater than 3 metres), a minimum setback of 7.5 metres (25 feet) from the NPCA approved physical top of slope as surveyed by the applicant shall be required for stability purposes and the conservation of land, for all development, buildings, and structures (including swimming pools).

Notwithstanding the minimum 7.5 metre setback noted in this policy, a smaller setback may be considered where an existing lot of record contains insufficient depth to accommodate required setbacks and a geotechnical investigation reveals that some infringement within the setback area, together with mitigative measures can be accommodated on-site while maintaining bank stability and will result in no adverse long term environmental impacts. In no case shall the setback reduction be such that development is allowed beyond the physical top of slope. In no case shall the setback be reduced to less than 6 metres.

6.2.4.3 Existing Development Located on the Valley Wall

In specific cases where buildings, structures or private access roads already exist on a valley wall or valley floor, reconstruction or alteration may be permitted subject to the following:

a) Best efforts must be undertaken to relocate the existing structure outside of the valley and associated tableland regulation limit;
b) No increase in the size of building will be permitted for the reconstruction of a structure on the valley wall or valley floor;
c) Notwithstanding 6.2.4.3.b, a maximum addition of 28 square metres may be permitted, subject to meeting 6.2.4.3.d-i;
d) A qualified professional must complete a geotechnical study to determine the risk of the proposed work. The study will include an assessment of the stability of the valley wall, rate of erosion or recession of the valley wall, access issues and an assessment of the construction technique on the valley wall. The design of any works must ensure that the long-term stability of the valley wall is maintained and that no risk to life or property damage is anticipated (refer to Policy 6.1.4.8 for additional details);
e) There is no change in land use and no increase in the number of dwelling units;
f) Adequate existing safe ingress and egress exists;
g) The proposed development does not result in a need to increase the size or location of a private subsurface sewage disposal system;
h) No adverse environmental impacts to existing ecological features and functions and the conservation of land is maintained; and,
i) There is no increase in risk associated with the five tests under the Conservation Authorities Act.

6.2.5 New Development

6.2.5.1 Erosion Access Allowance

A minimum setback of 7.5 metres (25 feet) from the NPCA approved physical top of slope (surveyed by the applicant in accordance with the policies of this document) or the location of the Stable Top of Slope (whichever is furthest landward) shall be required, to ensure perpetual stability of the slope and for the purposes of conservation of land, for all development including new lots, swimming pools, subsurface sewage disposal system and the placement of fill. The valley shall be maintained in a natural state and there shall be no disturbance of grades or vegetation below the physical top of slope or within the 7.5m setback.

6.2.5.2 Urban Area Infilling Situations

Notwithstanding the required 7.5 metre setback, a reduced setback may be permitted for infilling situations upon consultation with the local municipality regarding site specific constraints which may necessitate a reduced setback. When considering potential for a reduced setback, the NPCA will require a geotechnical study.

6.2.6 Passive Recreational Uses within Valleyland Erosion Hazard

It is recognized that certain forms of passive recreational uses can be appropriate for public within a valleyland setting. Passive recreational development applications within or adjacent to erosion hazard limits and valleylands will be considered subject to the following criteria:

a) There are no adverse impacts on ecological features or functions;
b) No new buildings or structures are located within the erosion hazard limits, apart from those exceptions noted in item c below;
c) All new development is set back from stable top of slope or toe of slope in accordance with the policies of this section, apart from access routes and lookouts; and,
d) Proposed access routes and lookouts may require a supporting geotechnical investigation to be undertaken; and,
e) A re-vegetation plan is submitted for review and approval by the NPCA, demonstrating that there is no net loss of natural vegetation.

6.2.7 Use of Native Species

The NPCA requires the use of native species on disturbed valley slopes to minimize erosion. Where through the review of proposed development it is determined that there has been historic disturbances to the valley slope, the NPCA encourages re-vegetation of the slope using native species. The NPCA may require that applicants submit a landscaping and vegetation plan in support of any application that has been made for development within or adjacent to valleylands.

6.2.8 Overland Drainage

Overland drainage shall be directed away from valley slopes. Notwithstanding this requirement, overland drainage may be permitted where there is no alternative means to convey overland flow. In such cases, the NPCA will require:

a) Overflow flow be dispersed before discharge over the physical top of slop (concentrated flow will not be permitted);
b) Demonstration that overland flow will not compromise the long term stability of the slope (this may require a geotechnical study); and,
c) Demonstration that the overland flow will not adversely impact the ecological features or functions of the valley.

6.2.9 Public Ownership of Valleylands

Where the planning process allows, all valley and stream corridors should be brought into public ownership to ensure public safety; protection of ecological integrity of these systems and the quality of life for present and future residents of the watershed. The expectation is that this would be achieved at the time of a Planning Act application.

6.2.10 Valleyland Policy Direction for Official Plans and Zoning By-Laws

Local municipalities are encouraged to zone all valleylands and stream corridors in their zoning by-laws in a manner which recognizes their inherent environmental characteristics and limitations to development and which incorporates a minimum setback from the stable top of slope of 7.5 metres (25 feet). The zoning shall be in conformity with the official plans.
All lands located within the setback area defined above shall be surveyed and zoned in the appropriate "Open Space", "Hazard" or "Greenspace" category. Wherever possible, existing vegetation should be maintained in the setback areas. Any works within a setback area will be reviewed and approved by the Conservation Authority. In some situations, enhancement by natural landscaping and additional native planting to create a vegetative buffer area may be required. The native vegetation in the setback area develops an extensive root network which binds and stabilizes the bank and protects it from erosive forces of rainfall and runoff. bioengineering may be used to stabilize erosion prone areas.

7.0 HAZARDOUS SITES

7.1 WHAT ARE HAZARDOUS SITES?

7.1.1 Hazardous Sites and Hazardous Lands

The Provincial Policy Statement defines hazardous sites as lands that could be unsafe for development due to naturally occurring hazards. These may include unstable soils (sensitive marine clays [leda], organic soils) or unstable bedrock (karst topography). The Conservation Authorities Act uses a similar term, referring to hazardous lands, which are lands that are unsafe to development due to naturally occurring processes. Naturally occurring processes includes flooding, erosion, dynamic beaches and unstable soils. In the context of the Conservation Authorities Act, the term hazardous lands is used as a general term, referring to a full range of natural hazards (i.e. flooding, erosion, unstable soils) . Earlier chapters in this document address hazardous lands associated with flooding (Chapter 4), dynamic beaches (Chapter 5), erosion and unstable slopes (Chapter 6). The following chapter provides guidance for hazardous lands associated with unstable soils, such as sensitive marine clays (leda clays), organic soils and unstable bedrock, such as karst formations (such as sinkholes and caves). The term hazardous site is used in this chapter to refer to naturally occurring hazards associated with unstable soils

and unstable bedrock (similar in definition to the term hazardous sites which is used in the PPS to describe a similar feature). This chapter also provides guidance for unstable soils associated with back-dunes areas.

7.1.2 Defining and Assessing Hazardous Site

Hazardous sites are considered to be part of the NPCA's regulated areas. Due to the site specific nature of areas of unstable soil or unstable bedrock, it is difficult to identify these hazards without detailed mapping and studies. The potential for catastrophic failures in some areas of unstable soil and unstable bedrock warrant site specific studies to determine the extent of these hazardous sites, and therefore the appropriate limits of the hazard and regulation limits. The regulated area will be based on the conclusions and recommendations of such studies, to the satisfaction of NPCA. Accordingly, the limits for hazardous lands, such as leda clays, organic soils and karst formations, shall be determined on a site-specific basis according to the Ministry of Natural Resources Technical Guide for Hazardous Sites (1996) and Understanding Natural Hazards (2001). The policies of this provide additional context and guidance for two specific types of hazardous sites which are known to existing within the watershed:

a) Karst formations; and,
b) Back-dune areas.

7.1.3 Karst Formations

Karst is a landform that develops on or in limestone, dolomite, or gypsum by dissolution and is characterized by the presence of features such as sinkholes, underground (or internal) drainage through solution-enlarged fractures (joints) and caves. Karst formations can be significant geologic hazards. Sudden collapse of an underground opening of a sinkhole can cause surface subsidence that can severely damage overlying structures such as buildings, bridges or highways. Improperly backfilled sinkholes are prone to both gradual and sudden subsidence and similarly threaten overlying structures. Sewage, animal wastes and agricultural, industrial and ice control chemicals entering sinkholes as surface drainage are conducted directly and quickly into the groundwater/surface water systems.

There are at least five known locations within the watershed with Karst formations:

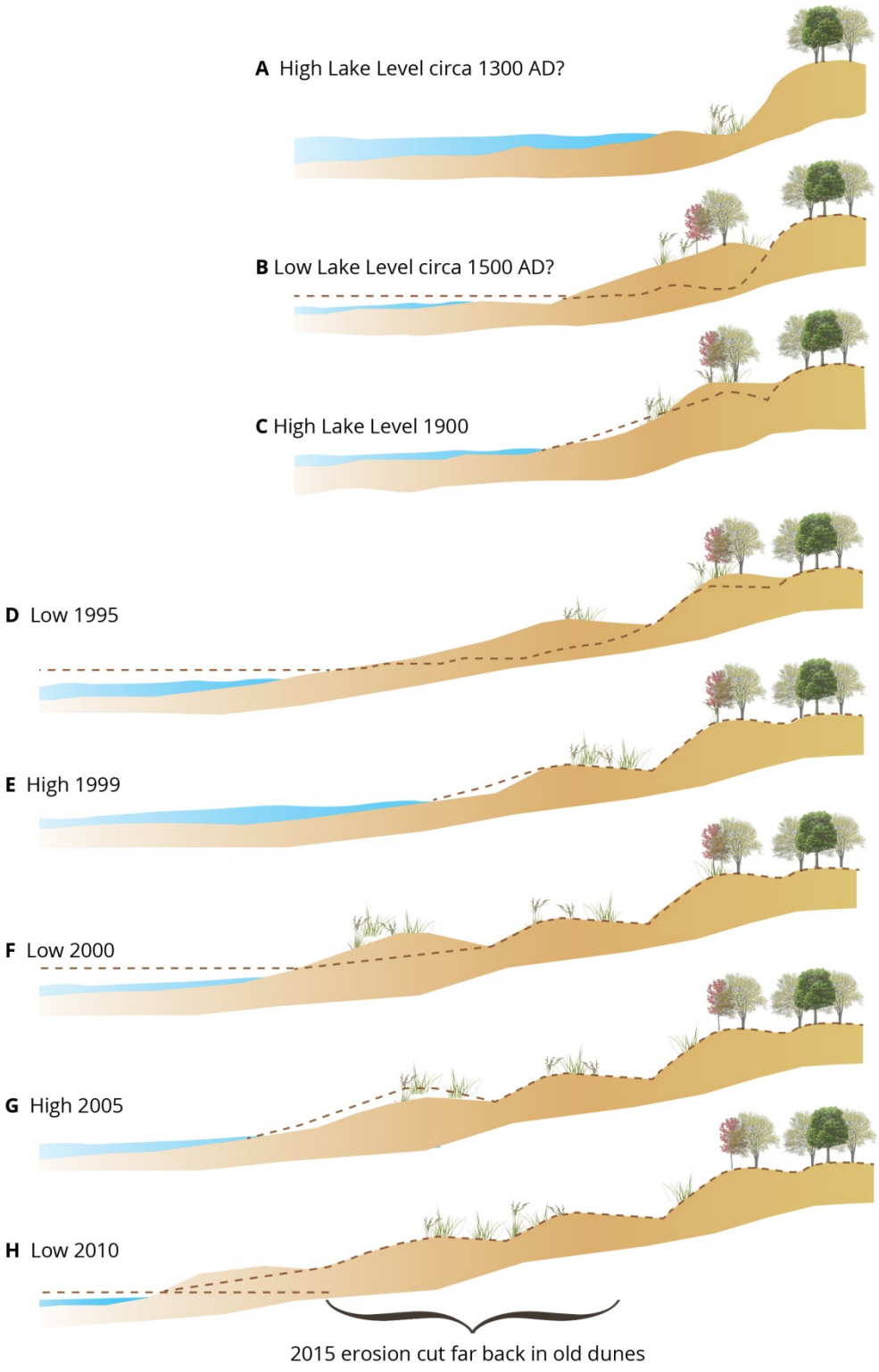
a) The Stoney Creek "Mountain" Area;
b) The Smithville Area;
c) The Gavora Drain and Balls Falls Area in Vineland,
d) The Brow of the Niagara Escarpment Area; and
e) The Onondaga Escarpment Area.

(Geologic Hazard Mapping Study, Karst Topography, Phase I, NPCA Watershed Area, Terra Dynamics, 2006)

7.1.4 Back-Dune Areas

There are a number of back-dune areas located in-land from shorelines of Lake Erie and Lake Ontario. Back dune areas are considered to be a natural hazard, as these are locations which may be susceptible to slope failure and erosion, but may not be part of an apparent valleyland or part of the shoreline hazard area (as overtime they receded beyond the extent of the shoreline area). Back dunes form as a result of long term changes of lake levels and a gradual recession of dune areas from the shoreline area. **Figure 7.1** illustrates back-dune formation. The NPCA will evaluate the potential risks associated with development on back-dunes on a case by case basis.

Figure 7.1: Back-Dune Formation



Adapted from Olson, J.S., 1958d. Dune development 3: lake-level, beach, and dune oscillations. J. Geol. 66, 473 – 483

7.2 POLICIES FOR PLANNING AND REGULATING HAZARDOUS SITES

7.2.1 Objectives

The objectives of the hazardous sites policies are to:

a) Prevent the loss of life;
b) Minimize property damage;
c) Reduce the potential for incurring public cost associated with the impacts of hazardous sites; and,
d) Manage existing risks and reduce the potential for future risks.

7.2.2 Development Regulation on Hazardous Sites

Generally, development and/or site alteration shall not be permitted on or near hazardous sites, including but not limited to karst formations, back-dune areas and other areas where unstable soils/bedrock is known to exist. However, development may be permitted subject to the completion of a geotechnical study completed by a qualified engineer which demonstrates that all hazards and risks associated with the site have been addressed. An EIS may also be required to ensure that there are no negative impacts on the ecological function of natural features. In addition, development and/or site alternation may be permitted on or near hazardous sites where the effects and risk to public safety are minor and can be mitigated by addressing the following items:

a) Applicable provincial standards related to floodproofing, protection works and access can be met and are implemented;
b) Vehicles and people have a way of safely entering and exiting the area during times of flooding, erosion and other emergencies;
c) Existing hazards are not aggravated;
d) New hazards are not created;
e) There are no negative impacts on ecological features or functions; and,
f) All other relevant site development concerns are addressed to the satisfaction of the NPCA.

7.2.3 Development within 50 metres of a Hazardous Site

7.2.3.1 Development within 50 metre of a Hazardous Site

Development and/or site alteration shall not be permitted within 50 metres of a hazardous site unless it can be demonstrated that there are no adverse impacts to the hazard with respect to the control of flooding, erosion, dynamic beaches, pollution and conservation of land. The NPCA may require a geotechnical study. An EIS may also be required to demonstrate that there are no negative impacts on the natural features or their ecological function.

7.2.4 Prohibited Uses

Notwithstanding the policies of this section, the following uses are prohibited within hazardous lands:

a) Sensitive uses, such as hospitals, nursing homes, day-cares/pre-schools and schools;
b) Emergency services facilities;
c) Uses associated with the disposal, treatment, manufacturing/processing or storage of hazardous substances;
d) Any other use or development deemed to be inappropriate based on the objectives stated in policy 7.2.1.

7.2.5 Infrastructure

Notwithstanding the policies of this section, infrastructure approved through an environmental assessment may be permitted within hazardous lands associated with unstable soil or bedrock, where it has been demonstrated to the satisfaction of the NPCA that the five tests under the Conservation Authorities Act have been addressed. Infrastructure approved through an environmental assessment process shall require a work permit to develop from the NPCA.

7.2.6 Water Wells

No water wells shall be installed within 50 metres of a karst feature. The NPCA may require an assessment of the draw down impact of the well on the water table and may decline approval where the draw down has the potential to destabilize karst topography.

7.2.7 Policy Considerations for Developing on or Near Karst Areas

The following issues must be addressed when developing on karst:

a) Storm water drainage: When the amount of paved surface is increased in developments, the rush of extra water gathered over the area can cause flooding.
b) Utilities: Buried utility lines can serve as a focus for sinkhole development, as they provide a break in the bedrock for storm water to enter and slowly dissolve it.
c) Groundwater contamination: Because water moves rapidly through karst, and undergoes little filtration, groundwater in karst areas is easily polluted. If contaminants are introduced into a karst system, they will spread quickly.
d) Flooding: Sinkholes and conduits may become blocked with debris and litter, resulting in back-up and flooding. Sinkholes are often used as a convenient place to place trash.

8.0 WETLANDS

8.1 WHAT ARE WETLANDS?

8.1.1 Defining Wetlands

Wetlands are “lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens. Periodically soaked or wet land being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the proposes of this definition” (PPS, 2014). The Conservation Authorities Act provides a similar definition of wetlands:

means land that:

a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface;

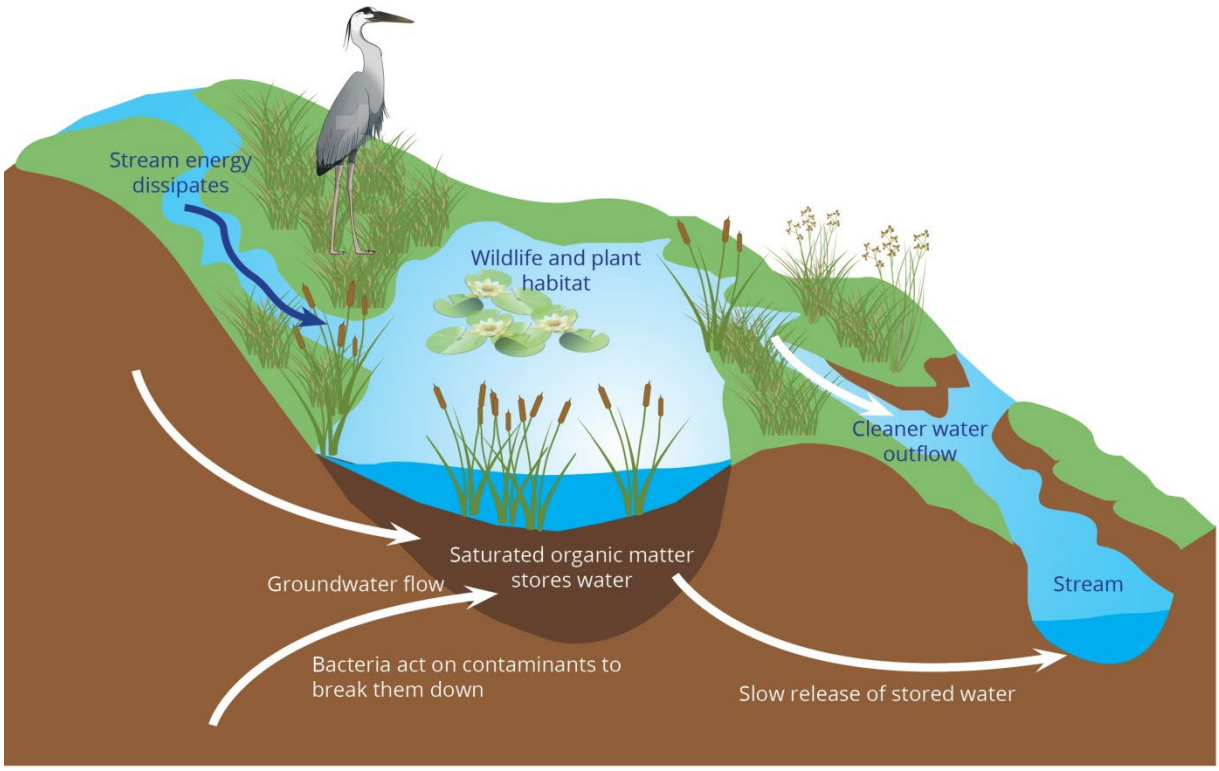
b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse;

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).

Regardless of the language used to precisely define the term, wetlands are widely recognized as an important part of the ecosystem. Wetlands are among the most productive and biologically diverse habitats in the world. They play a multi-dimensional role in the hydrologic cycle acting as a source for flood attenuation, groundwater recharge and the improvement of water quality. Wetlands are an incredible source of biodiversity, offering a multitude of habitats for plants, birds, reptiles, amphibians, fish and other species. They also provide opportunities for recreation and have potential to play a significant role in climate change adaptation and mitigation strategies (see **Figure 8.1**).

Figure 8.1: Wetland Function



8.1.2 Classification of Wetlands

The policy framework within this Document recognizes several classes of wetlands:

a) Provincially significant wetlands;
b) Non-Provincially significant wetlands; and,
c) Unevaluated wetlands.

8.1.2.1 Provincially Significant Wetlands

The majority of identified wetlands within the NPCA's watershed are classified as Provincially Significant Wetlands (PSWs). PSWs are wetlands which have been identified by the Province of Ontario using evaluation methodology established by the Province. PSWs are determined by a science-based ranking system known as the Ontario Wetland Evaluation System (OWES). This methodology features a standardized method of assessing wetland functions and societal values, which enables the Province to rank wetlands relative to one another. This information is provided to Conservation Authorities and municipalities to support decision-making. A wetland that has

been evaluated using the criteria outlined in the OWES is known as an evaluated wetland. Refer to the OWES manual for additional details on the criteria for classifying wetlands.

8.1.2.2 Non-Provincially Significant Wetlands

The term non-provincially significant wetland is used to describe any evaluated wetland which does not meet the score to be considered Provincially Significant.

8.1.2.3 Unevaluated Wetlands

Some wetlands within the watershed have not been evaluated and delineated under the OWES. In those instances, the following policies apply:

a) Prior to development or site alteration on a property with an unevaluated wetland, a wetland evaluation shall be required prior to completion of an EIS if required, or the approval process, and approved by the MNRF.
b) Exceptions to (a) may be considered in cases where an appropriate natural buffer (as determined by the NPCA) is proposed between the NPCA staked wetland boundary and all site alteration and development (including grading), or small scale non-permanent development (such as small backyard sheds not requiring planning approval) which in the opinion of NPCA will have no negative impact on the ecological and hydrologic function of the wetland. These cases will only be considered for small-scale development through the work permit process, or through some minor variances where an appropriate buffer is maintained.
c) Areas identified through natural areas inventories, EIS's or similar as Ecological Land Classification MAM, MAS, MAX, SWD, SWT, SWX, SAS, SAF, OAO, OAW, or other potential wetland indicator classifications shall identify the area as a potential unevaluated wetland subject to these policies.

8.1.3 Defining the Limits of Wetlands and Area of Interference

8.1.3.1 Wetland Boundary Delineation

Wetland boundaries are often found in areas of gradual ecological change, where changes in soil moisture results in transitions from upland to wetland plant species. The wetland boundary is established where 50% of the plant community consists of upland plant species (i.e. the percentage of area covered by upland plant species, not to the number of different upland plant species). Topography and soil data also provides guidance for where the wetland boundary should be drawn. Wetland boundary mapping is typically generalized from aerial imagery and other secondary source materials. Field visits by qualified biologists are required to accurately define the wetland boundary for development purposes. In cases where vegetation cannot be used for interpretation, such as instances where vegetation has recently been removed, soil sampling will be used to help determine boundaries.

8.1.3.2 Area of Interference

The areas adjacent to wetlands where development could impact the hydrologic function of the wetland are referred to as areas of interference. The areas of interference are considered to be a regulated area under the Ontario Regulation 155/06. The area of interference differs, depending on the classification of the wetland:

a) For Provincially Significant Wetlands or wetlands greater than 2 hectares, the area of interference can be up to 120 metres (394 feet) from the boundary of the wetland.
b) For wetlands less than 2 hectares the area of interference is 30 metres (98 feet).

8.1.4 Environmental Impact Study (EIS)

Depending on the nature of the proposed development, the NPCA may request that the applicant undertake an EIS to evaluate the potential impacts on a wetland. Chapter 12 provides additional direction for undertaking an EIS.

8.1.5 Hydrological Study

Depending on the nature of the proposed development, the NPCA may request that the applicant undertake a hydrological study to confirm potential impacts on the hydrologic function the wetland. Refer to Chapter 12 for additional details.

8.2 POLICIES FOR PLANNING AND REGULATING DEVELOPMENT AND INTERFERENCE WITH WETLANDS

8.2.1 Objectives

The objectives of the wetland policies are to:

a) Promote the conservation of land through the protection of wetlands;
b) Maintain and where appropriate, enhance wetland ecological and hydrological functions and features;
c) Promote the maintenance, restoration and enhancement of wetlands; and,
d) Provide a policy framework which aligns with Provincial standards for wetland protection, including guidance for decision-making related to the interference of wetlands.

8.2.2 Development and Interference within a Wetland

8.2.2.1 Development and Interference

Unless otherwise stated in this Document, no development and/or site alteration shall be permitted within a wetland.

8.2.2.2 Replacement Structures

Replacement structures may be permitted within a wetland subject to the following:

a) No alternative location outside of the wetland exists;
b) The structure is restored to its original form (i.e. same dimensions or smaller, square footage, and building footprint location); and,
c) Where applicable, floodproofing measures will be required.

8.2.2.3 Accessory Structures and Building Additions

Accessory structures and building additions are not permitted within wetlands.

8.2.2.4 Ponds

Ponds will generally not be permitted within any wetland. Ponds will only be permitted if it can be demonstrated through the appropriate studies (as determined by the NPCA), that the proposed pond will not have any impact to the existing hydrological function or hydrological regime of the wetland and improve the overall ecological function of the wetland and adjacent lands. As identified in the OWES, ponds constructed for agricultural purposes are not considered to be wetlands.

8.2.2.5 Conservation and Restoration Projects

Conservation and restoration projects may be permitted where it has been demonstrated to the satisfaction of the NPCA that the proposed works will enhance the overall ecological and hydrological function of the wetland. Depending on the nature of the proposed works, the NPCA may require an EIS to demonstrate how the hydrological and ecological features/functions will be protected, created, restored and/or enhanced.

8.2.2.6 Passive Recreational Uses within a Wetland

Ideally, passive recreational uses should be located on adjacent lands. However, it is acknowledged that in some circumstances it may be appropriate for passive recreational uses to be located within a wetland. Passive recreational development intended to promote the conservation of land, such as wilderness trails, boardwalks and lookouts may be permitted within wetlands, subject to the following:

a) The risk to public safety from natural hazards, including flooding, erosion and shoreline hazards is not increased;
b) The area of construction disturbance is minimized;
c) The existing topography is maintained;
d) Trails are established using organic, pervious surfaces, or using boardwalks which will not impact natural vegetation;
e) The removal of trees is avoided and/or minimized;
f) A re-vegetation plan is approved and there is no net loss of natural vegetation; and,
g) The overall ecological and hydrological functions of the wetland are maintained.

An EIS may be required to establish any passive recreational use within a wetland.

8.2.2.7 Wetland Reconfiguration and Compensation Context

At the time of drafting the policies of this Document, the Province of Ontario was undertaking a review of its wetland policy framework. The NPCA will continue to monitor the provincial policy framework for wetlands and update the policies of this section based on guidance provided by the Province. Note that NPCA's existing policy framework for wetlands includes policy guidance for the reconfiguration of non-provincially significant wetlands (see Policy 8.2.2.8 for details).

8.2.2.8 Wetland Reconfiguration and Compensation for Non-Provincially Significant Wetlands

Where no reasonable alternative exists to locate a proposed development, site alteration or other activity outside of a non-provincially significant wetland (or adjacent land), the NPCA may require that an area of wetland be created to offset the disturbance that is greater than (in area and function) the area of wetland and adjacent land being disturbed. Any required wetland creation should be located in proximity to the area disturbed (at a minimum within the same watershed) or in an area to be determined by the Authority. All wetlands created under this policy will be added

to the NPCA regulated area and identified on appropriate screening maps. The Authority may permit the reconfiguration of wetland boundaries provided:

a) The wetland has been evaluated in accordance with OWES Protocol and approved by the MNRF;
b) The wetland (as evaluated in (a) above) is not a Provincially Significant Wetland under the OWES Protocol to the satisfaction of the MNRF;
c) The reconfigured wetland and proposed development will not have a negative impact on any species of concern, significant habitat types or species at risk;
d) The reconfigured wetland and proposed development will not have a negative impact on the hydrological or ecological function of the wetland;
e) A restoration plan for the reconfigured wetland is provided for review and approval;
f) A multi-year monitoring program is required (minimum five years) to ensure the long-term establishment of the reconfigured wetland;
g) A security deposit in an amount approved by the NPCA to establish the reconfigured wetland and ensure its establishment;
h) An EIS is provided for review and approval to demonstrate conformity with Section 8.2.2.8;
i) The applicant is required to enter into a restoration agreement with the NPCA that will be registered on the title of the property containing the reconfigured wetland that will provide the necessary details to implement Section 8.2.2.8; and
j) Additional information, such as an EIS, hydrologic study, restoration plan and or other studies as required depending on site-specific characteristics.

8.2.3 Development in Areas of Interference

8.2.3.1 Development within 30 metres of a Wetland

Unless otherwise stated in this Document, no development and site alteration shall be permitted within 30 metres (98 feet) of a wetland.

8.2.3.2 Permitted Uses within 30 metres of a Wetland

Notwithstanding Policy 8.2.3.1, the following uses may be permitted within 30 metres (98 feet) of a wetland:

a) Infrastructure in accordance with policy 8.2.4;
b) Conservation and restoration projects in accordance with policy 8.2.2.5
c) Passive recreational uses in accordance with policy 8.2.2.6;
d) Replacement structures, accessory structures and minor additions in accordance with policy 8.2.3.3;
e) Other forms of development and site alteration which do not adversely impact the ecological and hydrological function of the wetland, and where the proposed development meets the five tests under the Conservation Authorities Act and is evaluated in accordance with policy 8.2.3.3.

8.2.3.3 Replacement Structures, Accessory Structures and Minor Additions within 30 metres of a Wetland

Where development and site alteration under Policy 8.2.3.2 is proposed, reductions in the 30 metre requirement will be considered based on the following:

a) The nature of the proposed development/site alteration;
b) The proximity to the wetland of existing structures;
c) Adjacent land use;
d) The condition of the 30 metre Regulated area;
e) The extent of existing natural buffer;
f) Restoration of buffer functions;
g) Other ecological or hydrological function considerations specific to the site;
h) That no development or site alteration be permitted within 5 metres of a wetland;
i) A determination of whether an Environmental Impact Study or Hydrological Study will be required. Such studies will be reviewed by NPCA staff to ensure that there will be no negative impact on the hydrologic and ecological functions of the wetland as a result of the proposed development and/or site alteration;
j) For septic systems, please refer to Policy 8.2.3.5; and,
k) The availability of alternative locations outside of the 30 metre buffer.

8.2.3.4 Lot Creation within 30 metres

Lot creation (unless for legal or technical reasons) should not be permitted within 30 metres (98 feet) of a wetland. However, lot creation may be permitted between 30 metres and 15 metres (49 feet) of a wetland where items the policies of 8.2.3.3 are addressed. Lot creation within 15 metres of a wetland shall not be permitted.

8.2.3.5 Proposed New Development within 30 metres of a Wetland

Where no new development exists within 30m (98 feet) of any wetland:

a) For new residential development, no new septic systems are permitted within 30m of any wetland.
b) For replacement septic systems where residential development is already established, septic systems shall not be permitted within 30 metres of any wetland, except where no alternative location outside of 30 metres exists in proximity to the residence. In this case the replacement septic system shall be placed as far from the wetland as possible.
c) For major development (as determined by the NPCA) including, but not limited to; plans of subdivision; extensions of draft approval for existing plans; and, major commercial, industrial, or institutional uses, no new development is permitted within 30m of a PSW. Reductions will only be considered based on a site specific evaluation by NPCA staff to determine whether a reduction is warranted, depending on scale, nature and proximity of the proposed development, the following may be taken into consideration:
    I. The nature of the proposed development/site alteration;
    II. The proximity to the wetland;

III. Adjacent land use;
IV. The condition of the 30 metre Regulated area;
V. The extent of existing natural buffer;
VI. Restoration of buffer functions;
VII. Presence of existing roads;
VIII. Removal of invasive species;
IX. Presence of sensitive ecological features; and,
X. Other ecological or hydrological function considerations specific to the site; and,
XI. Other items as required.

8.2.3.6 Development Between 30 metres and 120 metres of a Provincially Significant Wetland

In general, development may be permitted between 30 metres (98 feet) and 120 metres (394 feet) of Provincially Significant Wetlands where there are no negative impacts on the ecological or hydrological function of the wetland. The NPCA reserves the right to regulate development within 30 metres and 120 metres of a Provincially Significant Wetland on a site by site basis, where the nature of the proposed development merits consideration of the five tests under the Conservation Authorities Act and/or there exists potential interference with the ecological or hydrological function of the wetland. An EIS may be required where development is proposed between 30 and 120 metres of a Provincially Significant Wetland.

8.2.3.7 Work Permit Requirements

Any development or site alteration deemed by the NPCA to require a work permit may require an EIS or similar study and/or a hydrological assessment, prepared by qualified professionals, that identifies whether the proposed development and/or site alteration will cause a negative hydrologic or ecological impact to the wetland features/ functions.

8.2.4 Public Infrastructure

The Authority may allow the construction or development of public infrastructure (roads, pipelines, sewers and associated appurtenances, other than stormwater management facilities) within a wetland, provided:

a) The proposed infrastructure is supported by the completion of an appropriate Environmental Assessment or a Comprehensive EIS to the satisfaction of the Authority;
b) No reasonable alternate location for the infrastructure exists outside of the wetland;
c) Any impacts to flood flows, flood storage or groundwater movement are mitigated; and,
d) The proposed infrastructure is designed to fully address impacts to the existing hydrological function, hydrological regime and ecological function of the wetland and adjacent lands.
e) Infrastructure approved through an environmental assessment process shall require a work permit to develop from the NPCA.

8.2.5 Wetland Conservation

The Authority will recommend that municipalities seek the dedication of wetlands to a public agency to protect the wetland and its features when applications for a plan of subdivision are reviewed.

8.2.6 Stormwater

The NPCA may require enhanced stormwater controls where development is proposed to outlet into a wetland.

9.0 WATERCOURSES

9.1 WHAT ARE WATERCOURSES?

9.1.1 Watercourses

A watercourse is an identifiable depression in the ground in which a flow of water regularly or continuously occurs (Conservation Authorities Act). Watercourses are complex, multi-functional, living systems. They transport water, sediment and energy. They are ecosystems, providing habitat for fish, amphibians, invertebrates, birds, plants and other species. Watercourses provide drinking water for communities, wildlife and livestock. Watercourses are also highly valued socio-economic resources, offering recreational opportunities, food, hydro generation, land drainage and educational experiences.

The health of a watercourse, including the quality of the water and the adjacent lands can be influenced by a range of factors, including channel morphology, sediment characteristics and the nature of the riparian vegetation both on the overbank and the bed of the watercourse. Changes to any of these elements can have significant impacts on other parts of the watercourse. For example, a loss in riparian vegetation along the bank can facilitate increased pollutant loads

resulting from higher volumes of run-off, which in turn can impact water quality and also result in higher flood levels downstream. Impacts on water quality could have consequences on fish and other species living in the watercourse, as well as those who rely on the watercourse for resource purposes.

9.1.2 Need for an EIS/Hydrological

An EIS and/or hydrological study may be required to confirm the location and limits of a watercourse, as well as any potential impacts of the proposed development on the hydrological and ecological features and functions. An EIS may also be required to confirm the extent of any natural buffers (refer to policy 9.2.5 for additional details) or for morphological assessments or any impacts on established natural buffers.

9.2 POLICIES FOR WATERCOURSE INTERFERENCE

9.2.1 Objectives

The objectives of the watercourse policies are to:

a) Protect and improve the health of watercourses within the watershed;
b) Protect and enhance hydrologic features and ecological functions within the watershed;
c) Provide policy direction for development which may impact watercourses within the NPCA watershed; and,
d) Promote the conservation and restoration of watercourses.

9.2.2 Interference with a Watercourse

In general, interference with a watercourse shall not be permitted, except in accordance with the policies of this Document. All proposed development shall meet the five tests under the Conservation Authorities Act.

9.2.3 Watercourse Alterations

9.2.3.1 Watercourse Alterations

The NPCA may allow the alteration of a watercourse for the following works:

a) Channel realignments and vegetation alteration/spot removal of sediment accumulation;
b) Full or partial diversions;
c) Retaining wall;
d) Revetments;
e) Bridges;
f) Culverts;
g) Docks;
h) Pipeline crossings;
i) Erosion control measures; and,
j) Storm sewer outlets.

9.2.3.2 Criteria for Assessing Watercourse Alterations

The following matters shall be addressed when proposing a watercourse alteration:

a) The need for the watercourse alteration has been demonstrated to the satisfaction of the NPCA;
b) The proposed works are in accordance with NPCA standards;
c) The proposed watercourse alternation does not increase flood plain elevations, flood frequency, erosion rates or erosion frequency along either side of the watercourse, upstream and/or downstream of the proposed works;
d) The works are designed to ensure that the storage capacity of the flood plain is maintained;
e) The works will not adversely affect the ecological and hydrological function of the watercourse and riparian zone;
f) Adequate erosion protection measures are utilized when required;
g) Sediment control measures are incorporated during the construction phase to the satisfaction of the NPCA; or,
h) They are considered minor works as defined in this Document.

9.2.3.3 Alterations to Existing Water Control Structures

Alterations to existing water control structures may be permitted where it can be demonstrated to the satisfaction of the NPCA that the items noted in 9.2.3.2 have been addressed.

9.2.4 Watercourse Crossings

Watercourse crossings, including infrastructure which goes over a watercourse or underneath it, such as bridges, culverts, pipelines, channel enclosures of less than 20 metres and causeways may be permitted, subject to the following:

a) There are no reasonable alternatives to the crossing;
b) Where physical alterations to the watercourse are required, they are in accordance with policy 9.2.3.2;
c) Where feasible, crossings avoid any bends in the watercourse;
d) The preferred location for crossings is in areas which are already disturbed, making use of existing impacted or open areas on the channel bank or valley slope;
e) The risk for increased flooding as a result of the crossing, either upstream or downstream, is mitigated;
f) Risks associated with erosion are addressed;
g) The design minimizes impacts on the ecological and hydrological functions and features, with a preference for open bottom structures (which allow for fish passage and accommodation of bankfull flows, etc.) and where appropriate, restoration measures are included to the satisfaction of the NPCA; and,

h) Maintenance requirements are minimized.

9.2.5 Watercourse Buffer Composition

9.2.5.1 Buffer Requirements

Where development and site alteration is proposed adjacent to a watercourse, the NPCA shall require the establishment of a natural buffer of between 15 metres (49 feet) and10 metres (33 feet) based on the following:

i) A 15 metre natural buffer for watercourses containing permanent flow, cool water or coldwater systems or specialized aquatic or riparian habitat (such as but not limited to fish spawning areas, habitat of species at risk or species of concern, forested riparian areas or Type 1 Critical Fish Habitat);
j) A 10 metre natural buffer for watercourses containing intermittent flow, warmwater systems or general/impacts aquatic or riparian habitat, or Type 2 Important Fish Habitat or Type 3 Marginal Fish Habitat;
k) Other considerations which may impact pollution or the conservation of land.

Development setbacks associated with flooding (4), erosion (6) and dynamic beaches (5) are addressed in their respective chapters and may also apply depending on site specific characteristics.

9.2.5.2 Reductions in Buffer Requirements

Notwithstanding policy 9.2.5.1, reductions of these buffer requirements will only be considered in special circumstances based on a site specific evaluation by NPCA staff to determine whether a reduction is warranted, which will include consideration of:

a) The nature of the proposed development/site alteration;
b) Adjacent land use;
c) The condition of the lands within the riparian area;
d) The extent of existing natural buffer;
e) Restoration of watercourse/riparian function;
f) Proximity to the watercourse of any existing structures;
g) Other ecological function considerations specific to the site; and,
h) A determination of whether an Environmental Impact Study will be required to support a reduction in the buffer.

Notwithstanding the above, no development or site alteration be permitted within 5 metres of a watercourse.

9.2.6 Infrastructure

Notwithstanding the policies of this section, infrastructure approved through an environmental assessment may be permitted within a watercourse, where it has been demonstrated to the satisfaction of the NPCA that the five tests under the Conservation Authorities Act have been addressed. Infrastructure approved through an environmental assessment process shall require a work permit to develop from the NPCA.

9.2.7 Conservation and Restoration Projects

9.2.7.1 Conservation and Restoration of Watercourses

Notwithstanding the policies of this section, conservation projects, such as stream rehabilitation works intended to improve and enhance ecological and hydrological function of the watercourse may be permitted, subject to the following:

a) The proposed ecological and hydrological improvements are demonstrated to the satisfaction of the NPCA;
b) The proposed rehabilitation works uses best management practices;
c) The need for future maintenance is minimized;
d) Stream bank stability is addressed, and where appropriate, enhanced;
e) Channel design techniques are in accordance with NPCA standard; and,
f) Considerations for the control of flooding, erosion, dynamic beaches, pollution and the conservation of land are addressed.

9.2.7.2 Re-Naturalization of Channels

The NPCA encourages municipalities to consider opportunities for the re-naturalization of watercourses which have been urbanized.

10.0 FILL PLACEMENT

10.1 WHAT IS FILL?

10.1.1 Fill Placement and Authority to Regulate Fill Placement

Fill is any material that can be placed, dumped or removed originating from the site or elsewhere, such as earth, sand, gravel or rubble, which is used to raise, lower or alter the existing grade. Fill is considered to be a form of development defined in Conservation Authorities Act, as site grading and the placement/removal of any material from a site are both examples of development (Conservation Authorities Act, Section 28(25c,d). Accordingly, the placement of fill within the areas regulated by the Niagara Peninsula Conservation Authority are subject to five tests listed under Section 28(1c) of the Act. The placement of fill outside of the NPCA's regulated areas are subject to local site alteration by-laws, meaning that in some cases, the placement of fill requires a shared regulatory framework, whereby the NPCA regulates the placement of fill within regulated areas and the local municipalities regulate the placement of fill elsewhere on the site (where the lands are outside of the NPCA's regulated areas).

10.1.2 Exceptions

The policies of this chapter generally do not apply to the following items:

a) Approved development applications under the Planning Act as of May 4, 2006;
b) Fill activities proposed in accordance with a site licence under the Aggregate Resources Act; or
c) Projects under the Ontario Environmental Assessment Act.

Other policies of this document may apply to the above-noted items.

10.2 POLICIES FOR THE PLACEMENT OF FILL

10.2.1 Objectives

The objectives of the fill placement policies are to:

a) Provide policy guidance for the placement of fill within the NPCA's regulated areas;
b) Promote the conservation of land through the avoidance of adverse impacts on ecological and hydrological features and functions;
c) Avoid and mitigate any adverse impacts on the control of flooding, erosion and dynamic beaches; and,

d) Avoid pollution resulting from the placement of fill.

10.2.2 Placement of Fill

10.2.2.1 The Placement of Fill

The placement of fill is prohibited within wetlands, valleylands, watercourses, dynamic beaches, flood plains or other hazardous lands or their allowances.

10.2.2.2 The Placement of Fill Less than 50m^3

The placement of inert fill less than 50m^3 may be permitted where the placement of fill:

a) Is placed in a manner which will not impact the control of flooding;
b) Does not interfere with a watercourse, wetland, valleyland or shoreline; and,
c) Includes re-vegetation of any disturbed areas and is protected from erosion.

10.2.2.3 The Placement of Fill Less than 250m^3

The placement of fill less than 250m^3 (8829 cubic feet) may be permitted and shall require a work permit from the NPCA and is subject to the following policies:

a) The fill is inert and meets appropriate provincial standards, including any regulations under the Environmental Protection Act;
b) The placement of fill shall not interfere with a watercourse or wetland;
c) The placement of fill shall not adversely affect the control of flooding, erosion and dynamic beaches within the NPCA's regulated areas;
d) The placement of fill has no adverse impact the conservation of land, including no adverse impacts on significant features and ecological and hydrological functions;
e) There are no impacts on the control of pollution;
f) The placement of fill satisfies the requirements and standards of municipal by-laws (where the placement of fill is proposed to cover lands which are subject to both the Conservation Authorities Act and a local site alteration by-law); and,
g) The placement of fill may be seasonally restricted.

10.2.2.4 Supporting Studies

The NPCA may require the submission of a Geotechnical Study (see Policy 6.1.4.8 for additional details) to support any work permit request for filling less than 250m^3 (8829 cubic feet). As a condition of approval, the NPCA may request the applicant to prepare a survey prepared by a qualified engineer after the works have been completed to demonstrate that the placement of fill conforms to the work permit conditions.

10.2.3 Large Scale Fill Placement

10.2.3.1 The Placement of Fill Greater than 250m^3

The intent of the following policies is to address issues arising from the placement and storage of fill. The placement of fill greater than 250m^3 (8829 cubic feet) shall require a work permit and shall only be permitted in accordance with the following policies:

a) The fill is inert and meets appropriate provincial standards, including any regulations under the Environmental Protection Act;
b) The placement of fill shall not interfere with a watercourse or wetland;
c) The placement of fill shall not adversely affect the control of flooding, erosion and dynamic beaches;
d) The placement of fill has no adverse impact the conservation of land, including no adverse impacts on significant features and ecological and hydrological functions;
e) There are no impacts on the control of pollution and sedimentation and erosion during and post-development are avoided;
f) The placement of fill satisfies the requirements and standards of municipal by-laws (where the placement of fill is proposed to cover lands which are subject to both the Conservation Authorities Act and a local site alteration by-law);
g) The placement of fill may be seasonally restricted;
h) The risk to public safety is not increased;
i) There are no adverse impacts on groundwater quality, quantity, flow or functions (recharge or discharge);
j) A minimum setback of 30 metres (98 feet) from Provincially Significant Wetlands and wetlands larger than 2 hectares and a minimum setback of 15 metres (49 feet) from all other wetlands is maintained; and,
k) The site is graded during the fill operation and stabilized as soon as possible subsequent to fill placement and final grading.

10.2.3.2 Supporting Studies

The placement of large fill may require the following studies, subject to scoping during the pre-consultation process:

a) Environmental Impact Study;
b) Hydrogeological Study;
c) Geotechnical Study;
d) Hydraulic Analysis;
e) Stormwater Management Plan; and,
f) Other supporting studies as required.

10.2.3.3 Conformity with Municipal By-Laws

Prior to the issuance of a work permit, the NPCA may require written consent from the municipality where the proposed site is to be located, demonstrating that municipal interests have been satisfied, including site access, haul routes, dust control, landscaping requirements and other items as appropriate.

10.2.3.4 Large Fill Placement Procedures

Notwithstanding the policies of this Document, the NPCA reserves the right to prepare detailed procedures and guidelines for the placement of large fill.

10.2.4 Fill Placement within the Niagara Escarpment Plan Area

The Niagara Escarpment Plan (NEP) provides policies for the placement of fill within the Niagara Escarpment Plan Area. Refer to Part 2.13.9 and 2.13.10 for additional details on fill placement within the NEP area.

10.2.5 Fill Placement within the Regulated Flood Hazard

Refer to the policies of section 4.2 for additional guidance where fill placement is proposed within the NPCA's regulated flood hazard.

11.0 MUNICIPAL DRAINS

11.1 WHAT ARE MUNICIPAL DRAINS?

Municipal drains are an important piece of infrastructure for rural and agricultural land management, providing drainage systems which manage the impacts of flooding. Municipal Drains are created under the Drainage Act and municipalities are required to maintain and repair existing municipal drains and also make decisions for applications for new drains. Generally, municipal drains are considered watercourses as defined under the Conservation Authorities Act.

11.2 POLICIES FOR MUNICIPAL DRAINS

11.2.1 Objectives

The objectives of the following municipal drain policies are to:

a) Ensure that maintenance of existing municipal drains is undertaken in conformity with the Conservation Authorities Act and provincial standards, and that, where applicable, the five tests under the Act are met;
b) Provide guidance for evaluating the impacts of new municipal drains;
c) Promote coordination and collaboration with municipal partners and provincial agencies.

11.2.2 Maintenance Policies Approved by MNRF/OMAFRA/CA

The Province provides direction for municipalities and conservation authorities to guide decision-making and approvals process for municipal drains. When making decisions related to municipal drains which fall within the NPCA's regulated areas, the NPCA will use the Province's most up to date standards for the maintenance of municipal drains. In the absence of any approved protocols, the normal Conservation Authorities Act permitting process shall apply.

11.2.3 Municipal Drainage Activities not subject to a Work Permit from the NPCA

Standard compliance elements are required for the following activities, as outlined in the Province's most up to date standards for municipal drain maintenance. Provided these works do not occur within a wetland or wetland boundary, a work permit will not be required by the NPCA:

a) Brushing bank slope;
b) Brushing top of bank;
c) Debris removal and beaver dam removal;
d) Spot clean-out;
e) Culvert replacement;
f) Bank repair or stabilization and pipe outlet repair;
g) Dyke maintenance and repair;
h) Water control structure maintenance and repair;
i) Pump station maintenance and repair;
j) Bottom only cleanout (outside of regulated wetland limits);
k) Bottom cleanout plus one bank slope (outside of regulated wetland limits); and,
l) Full cleanout (outside of regulated wetland limits).

11.2.4 Municipal Drainage Activities subject to a Work Permit from the NPCA

Any proposed maintenance within a wetland or wetland boundary shall be submitted to the NPCA for review and may require a work permit.

11.2.5 New Municipal Drains, Extensions and Alterations

As per the Drainage Act, any works (physical or adjustment of the assessment schedule) proposed on a municipal drain shall be submitted to the conservation authority for review. New drains or extensions/alterations to the original engineers report may require a work permit from the NPCA depending on location and any potential impacts under the five tests of the Conservation Authorities Act. Any proposed construction not deemed maintenance within a wetland or wetland boundary, shall not be permitted. Important morphological features or ecological functions of the watercourse may need to be incorporated into the design of the drain.

12.0 OTHER POLICIES AND TOOLS

12.1 CLIMATE CHANGE

12.1.1 What is Climate Change?

Climate change refers to “changes in long-term weather patterns caused by natural phenomena and human activities that alter the chemical composition of the atmosphere through the build-up of greenhouse gases which trap heat and reflect it back to the earth’s surface” (Government of Canada, 2013). Climate change impacts have the potential to be wide-reaching, affecting ecosystems, agriculture, infrastructure, water supply, energy, transportation systems, tourism and recreation, human health and well-being, and ultimately the economy. The Government of Ontario, through the PPS directs planning authorities to consider the impacts of climate change and the NPCA has a role to play in implementing provincial policy on this matter.

12.1.2 Climate Change Impacts within the Watershed

Within the watershed, the impacts of climate change have been experienced at various levels, most visibly through changes in annual seasonality and temperature shifts. Niagara Region has experienced changes in the climate including (Penney, 2012):

a) 1.3°C increase in annual average temperature in the last 40 years;
b) Trend towards more days with temperatures over 30°C and more heat waves of 3 or more consecutive hot days;
c) Longer growing season, with May and September significantly warmer;
d) Increase in average number of frost-free days with 10 more per year compared to 1970;
e) Small increase in annual precipitation, with most of the increase coming in winter;
f) More rain and less snow in winter;
g) More summer droughts and dry spells;
h) Increased numbers of freeze-thaw cycles; and,
i) And increase in heavy rain events.

It is projected that by 2050, average annual temperatures in Niagara Region will increase 3-4°C, freeze-free days will increase by 30 days, summer rainfall will decrease by 20%, an increase in freeze-thaw cycles and likely an increase in heavy rains, lighting strikes, high winds, hailstorms and tornados.

12.1.3 Considerations for Climate Change

12.1.3.1 Climate Change Adaptation

Adaptation efforts minimize the level of damage, hazard and risks associated with climate change, while also recognizing new opportunities presented with our changing climate (Conservation Ontario, 2015), including: flood management programs, ecosystem enhancements, water quality and quantity, municipal plan review/input, local climate change monitoring and modelling, information management, green infrastructure/stormwater management, low water, carbon and water trading and offsets.

12.1.3.2 Climate Change Mitigation

Mitigation efforts are focused on reducing greenhouse gas emissions and other causes that adversely and rapidly influence weather patterns and climatic conditions (Conservation Ontario, 2015). They include: green building technologies and retrofits (e.g., LEED), energy conservation, renewable energy, reforestation, carbon sequestration (e.g., wetlands), low impact development and sustainable transportation.

12.1.3.3 Directions to Support a Resilient Watershed

A number of the NPCA's current policies and programs help to mitigate the impacts of climate change and also assist with adaptation. The NPCA will continue to undertake programs and initiatives which assist with adaptation and mitigation. Through a future study or update to the Strategic Plan, the NPCA will seek to develop a comprehensive approach for climate change, including any new policies or programs which assist with adaption and mitigation. In addition, the NPCA will participate, coordinate and collaborate with municipal partners and other agencies in addressing the impacts of climate change.

12.2 LAND USE AND ENVIRONMENTAL PLANNING REVIEW

12.2.1 The NPCA's Role in Planning

12.2.1.1 Mandate

The NPCA is responsible for commenting and reviewing Planning Act applications. In fulfilling this function, the NPCA provides comments based on:

a) The NPCA's regulatory role, identifying the need for any permits under the Conservation Authorities Act;
b) Delegated responsibilities from the Province to the NPCA for reviewing and commenting on any natural hazard planning issues associated with a given application;

c) Municipal planning advisory services where the NPCA has an arrangement with its watershed municipalities to provide advice and technical expertise related to natural hazards and natural heritage matters;
d) The NPCA's role as a watershed agency, providing comments to municipalities on the implications of development proposals from a watershed perspective, typically pertaining to matters of natural heritage planning, natural hazard planning and water resources management; and,
e) From time to time, the NPCA will also provide comments from a landowner's perspective, either as a proponent or adjacent landowner.

12.2.1.2 Planning Act Review

When reviewing Planning Act applications, the NPCA will:

a) Provide comments on particular aspects of the application based on the particular role/function noted in policy 12.2.1.1;
b) Identify the need for and review (as required) any associated technical reports; and,
c) Provide recommendations for conditions of approval, as required.

12.2.1.3 Memorandums of Understanding

The NPCA maintains the following memorandums of understanding with municipalities in the watershed:

a) Niagara Region, including all lower tier municipalities within Niagara Region;
b) City of Hamilton; and,
c) The County of Haldimand.

Each MOU is different, with the NPCA providing varying degrees of technical support. The NPCA will continue to use the MOU as a tool for clarifying and coordinating responsibilities between the NPCA, municipal governments and government agencies (as the case may be).

12.2.1.4 Objectives for Planning Act Reviews

The objectives of the NPCA's municipal plan review process are as follows:

a) To minimize the potential for loss of life, property damage and social disruption and to create a safer and healthier environment for everyone who lives in the watershed;
b) To reduce the need for public and private expenditures for emergency operations, evacuation, and restoration of properties which may be impacted by flooding and erosion;
c) To increase public awareness about the potential risks to development as a result of the physical conditions associated with hazardous areas;
d) To use an ecosystem planning approach for identifying the environmental implications of Development applications in order to maintain, protect, preserve and enhance natural heritage resources and natural resources;

e) To screen development applications and proposals to identify where a watershed interest may be impacted;
f) To specify conditions of approval which satisfy the afore-noted objectives;
g) To serve as an information centre for inquiries from landowners, potential landowners, lawyers, municipalities, and community groups interested in environmental legislation, approvals and stewardship;
h) To advise and inform potential applicants (and/or their consultants) to consult with NPCA Staff prior to submitting their Development proposals in order to identify potential concerns that could result in delays to the planning process, as well as for the need to prepare and submit technical reports and supporting information required to undertake the review and approval of applications;
i) To provide responses to site-specific inquiries in a timely manner through the continued expansion of data bases (e.g. natural heritage data bases and inventories) and other information management systems; and
j) To continue to liaise with other agencies, county/regional and municipal governments and departments, consultants, developers and watershed residents to ensure continued co-operation in achieving effective management of natural resources.

12.2.2 Coordination with Area Municipalities and Agencies

12.2.2.1 General Coordination on Planning Act Applications

When reviewing complete applications under the Planning Act, the NPCA will communicate and coordinate with municipal planning on an application-by-application basis in accordance with the applicable MOU.

12.2.2.2 Official Plan Reviews and New Official Plans

Where a municipality within the watershed is updating its Official Plan or drafting a new Official Plan, the NPCA will work closely with the municipality to ensure that the most accurate and up-to-date natural heritage and natural hazard policies are in place.

12.2.2.3 Zoning By-Laws

Where a municipality within the watershed is updating its Zoning by-law or drafting a new Zoning by-law, the NPCA will work closely with the municipality to ensure that the most accurate and up-to-date natural heritage and natural hazard regulations are in place.

12.2.2.4 Secondary Plans and Community Improvement Plans

Where a municipality within the watershed is updating a secondary plan/community improvement plan or drafting a new secondary plan/community improvement plan, the NPCA will work closely with the municipality to ensure that any relevant aspects of completed watershed plans, sub-watershed plans or shoreline management plans are addressed and implemented.

12.2.2.5 Participation in Pre-Consultation Meeting under the Planning Act

The NPCA will participate in municipal pre-consultation meetings where development proposals under the Planning Act require input from the Niagara Peninsula Conservation Authority, as either a public body (commenting agency), representative of the Province (delegated authority), service provider (under MOUs) or other relevant roles as the case may be.

12.3 NPCA WORK PERMIT PROCESS

12.3.1 The NPCA Work Permit Process

Before work (Filling, grading/Site Alteration, or construction) can proceed in an area regulated by Niagara Peninsula Conservation Authority, a work permit is typically required. Application forms are available at Niagara Peninsula Conservation Authority's Administration Office and on the website (www.npca.ca). Permits must be made by a person having an interest in the land (i.e. owner, purchaser with owner's knowledge and permission, or an authorized agent). Upon submission of an application it will be stamped received and assigned a file number which can be referred to for processing.

12.3.1.1 Pre-Consultation

Before submitting plans, all potential applicants are encouraged to consult with Niagara Peninsula Conservation Authority staff to determine if an application is required and, if so, what information should be submitted with the application (e.g., studies, drawings, etc.). Staff will provide pre-application comments or guidelines on works proposed; however, a final decision on whether or not a proposal would be supported by Niagara Peninsula Conservation Authority staff can only be provided once an application and detailed plans are submitted.

12.3.1.2 Work Permit Application Requirements

At the time of the work permit application, details of the works proposed must be provided along with site access, construction phasing, sediment and erosion control and re-vegetation plans. All works should adhere to the policies within this document and follow the various municipal, provincial, federal and Niagara Peninsula Conservation Authority guidelines as may be applicable. Works that involve substantial site development should be prepared using the services of professionals from a variety of disciplines.

12.3.1.3 Supporting Studies

Supporting studies may be required to support the proposed application. Refer to Section 12.4 for additional details regarding supporting studies.

12.3.1.4 Processing of Application

All applications, as a first step, are reviewed to determine if they conform to the policies set out in this document. Niagara Peninsula Conservation Authority staff may request revisions to plans or reports submitted as part of an application. This is a normal part of the review process and applicants are encouraged to consult with Niagara Peninsula Conservation Authority staff as reports and plans are prepared in order to make the most efficient use of time involved in the design and review process. If, in the opinion of Niagara Peninsula Conservation Authority staff, an application does not conform, the applicant will be advised of options that may be pursued to either bring the application into conformity or of steps that can be taken to seek a formal hearing before the Niagara Peninsula Conservation Authority Board of Directors.

Niagara Peninsula Conservation Authority staff may also contact other review agencies to discuss the proposed project; however, it is the proponent's responsibility to obtain all other necessary approvals from federal, provincial and municipal authorities.

12.3.1.5 Approval of Work Permit

Section 28(2) of the Conservation Authorities Act allows the authority to delegate decision-making on permits to other bodies. On this basis, the NPCA has established types/classes of applications where approval has been delegated to staff. Applications that conform to the policies set out in this document will be recommended for approval, along with any conditions, and submitted to the CAO or designate of the Niagara Peninsula Conservation Authority or designate for authorization and work permit issuance under Ontario Regulation 155/06.

The NPCA CAO or designate may refer applications to the Niagara Peninsula Conservation Authority Board of Directors for review and ruling if deemed warranted by Niagara Peninsula Conservation Authority staff.

In all cases, any approval is only valid upon issuance of a work permit on the prescribed form, signed by the NPCA CAO or designate accompanied by drawings stamped and signed by either the Director of Watershed Management or designate.

Any proposed amendments to the approval will require review and approval and may be subject to additional fees.

12.3.1.6 Validity of Work Permits

The typical period, including an extension for a work permit, is two years from the date of issuance. Projects that, in the opinion of the NPCA cannot reasonably be completed within the two-year timeline may be granted a one-year extension. Issuance of a work permit does not relieve the applicant from the responsibility of acquiring approval from other agencies, or relieve the applicant from compliance with any conditions that other agencies may impose on the work.

12.3.1.7 Hearings and Appeals

If an application does not conform to policy or it does not satisfy technical requirements, or if the applicant does not agree with any recommended condition of work permit approval, the application may be recommended for refusal. In such a case, the applicant may request a hearing before the Niagara Peninsula Conservation Authority Board of Directors.

Niagara Peninsula Conservation Authority shall, by personal service or by registered mail, give written notice of the time and place of the hearing of the application, together with a brief explanation of the nature of the application, not less than ten (10) days prior to the day of the hearing to:

a) the applicant or their designated agent,
b) all members of the NPCA Board of Directors,
c) Niagara Peninsula Conservation Authority may at its discretion request representation to the hearing as follows:

    i. the municipality in which the property is located,
    ii. any Federal or Provincial Government Representative,
    iii. any surveyor, consulting engineer or other expert retained by Niagara Peninsula Conservation Authority.
    iv. Where the Notice of Hearing is given to the applicant or their designated agent by registered mail, it shall be sent to the address given in the application.

Upon hearing evidence submitted by the applicant or their designated agent, and reviewing any other information submitted in support or rejection of the application, the NPCA Board of Directors shall approve (with or without conditions) or refuse the application. Upon refusal of the application or if permission is granted subject to conditions, the Board of Directors shall give written response to the applicant, including reasons, for its decision.

A hearing for refusal of permission cannot proceed unless the applicant or their designated agent is present. If the applicant or agent does not appear at a hearing, the application will be held in abeyance.

The NPCA has adopted hearing guidelines (2005) and may be amended from time to time. A general summary of the hearing guidelines are provided below (refer to Appendix A for details).

12.3.1.8 Appeals

An applicant who has been refused permission or is not in agreement with conditions of an approval may, within thirty (30) days of the receipt of the reasons for the decision, appeal to the Minister of Natural Resources, care of the Mining and Lands Commission, who may dismiss the appeal or grant permission. In all cases, hearings/appeals will be conducted in accordance with the “Procedural Guidelines for Appeals, Under the Conservation Authorities Act”, October 2005 (refer to Appendix 1).

12.3.2 Terms and Conditions

12.3.2.1 Transfer of Permissions

Permission granted by Niagara Peninsula Conservation Authority cannot be changed or transferred without prior written approval by Niagara Peninsula Conservation Authority. Transfers will require the written authorization from the original applicant and confirmation that the details of the project have not changed.

12.3.2.2 Additional Conditions of Approval

Approvals, permits, etc., may be required from other agencies prior to undertaking the work proposed. Niagara Peninsula Conservation Authority's permission does not exempt the applicant from complying with any or all other approvals, laws, statutes, ordinance, directives, regulations, by-laws, etc., that may affect the property or the use of same.

12.3.2.3 Withdrawal of Permissions

Niagara Peninsula Conservation Authority may, at any time, withdraw any permission given if, in its opinion, the representations contained in the application for permission are not carried out or the conditions of the work permit are not complied with.

12.3.3 Fees

Fees for the processing of applications are set by the Board of Directors of the Niagara Peninsula Conservation Authority and must be paid at the time of submitting an application. Fees are non-refundable. For major projects, an additional charge based on actual staff review and inspection time at a rate set by the Board of Directors, may be applied. All fees must be paid prior to the review and issuance of the work permit. The fee schedule is attached to the application form and is available on the NPCA's website.

12.3.4 Enforcement

12.3.4.1 Request for As-Built Drawings

The NPCA may request the submission of as-built drawings to ensure development has been constructed as per the conditions of an NPCA work permit, such as but not limited to, the construction of shorewalls, cut and fill projects or instances where a violation has occurred. The drawings shall be prepared by a qualified professional engineer and may include the need for elevation surveys.

12.3.4.2 Unauthorized Works

Any initiators of unauthorized works that contravene the regulation will be requested to halt the works immediately. Authority staff will advise the offender(s) of the Regulation and its purpose.

Works that proceed without the proponent or their agent obtaining any permission required under Ontario Regulation 155/06 may result in charges being laid pursuant to Ontario Regulation 155/06 and the Conservation Authorities Act.

12.3.4.3 Notice of Violation

Normally a “Notice of Violation” will be sent to the landowner, their agent and/or the contractor as well as the Clerk of the respective municipality. This notice will advise that the subject area is regulated, identify the section of the regulation contravened, advise that activities observed require permission and will request that work cease and the respective parties contact Niagara Peninsula Conservation Authority to discuss options for resolution of the matter within fourteen (14) days of issue of the Notice. Should the violator not contact the Authority within the specified time period, legal action may be pursued under Section 28 of the Conservation Authorities Act.

12.3.4.4 Contravention of Other Acts

In cases where other legislation, such as the Fisheries Act, Lakes and Rivers Improvement Act, Ontario Water Resources Act, etc. may also have been contravened, Niagara Peninsula Conservation Authority will notify the appropriate authorities and may carry out a coordinated investigation and prosecution. Once contacted, the Conservation Authority will subsequently review the violation in more detail and notify the offender(s) by registered mail with an option(s)/recommendation(s) for resolution of the matter. It may be necessary to obtain additional information/details of the violation before options for resolution of the matter can be provided. In this case, specific information will be requested from the offender, by registered mail.

12.3.4.5 Resolution of Violations

If the violation is contrary to the Authority's Regulation Policies, the offender(s) will be requested to remove the works and restore the site to its original condition (i.e. prior to the works being undertaken). If the offender(s) chooses not to remove the violation, the Conservation Authority may elect to pursue legal action under Section 28 of the Conservation Authorities Act.

The offender may apply for a work permit. If they are in conformity with the policies of this document, a work permit may be granted. The application will be processed in a normal manner by the Conservation Authority, in accordance to the policies outlined above. The Authority will work with the applicant to ensure that the works meet all of the criteria for approval outlined in the appropriate sections of this procedure document. If a work permit is subsequently approved, the works may proceed.

If the work permit is refused and the violation continues, the Conservation Authority may elect to pursue legal action under Section 28 of the Conservation Authorities Act. In all cases, The Authority will work to resolve violations within a timely manner. If the matter is not resolved within a timely manner, the NPCA may pursue legal action. Legal proceedings must commence within two year from the date of which the NPCA becomes aware of the offense. The provisions of the

Conservation Authorities Act and the Provincial Offences Act direct the Niagara Peninsula Conservation Authority staff when investigating a violation.

It is normal that, in addition to any penalty levied by the court upon conviction, Niagara Peninsula Conservation Authority will seek an order for rehabilitation of the site and/or removal of any buildings, fill and/or structures ruled in contravention of Ontario Regulation 155/06. Rehabilitation measures shall be undertaken within a time frame agreed upon by the NPCA and the offender.

12.3.5 Development Officers

In accordance with Section 28 (1) of the Conservation Authorities Act, officers may be appointed to enforce enacted regulations. These officers have the responsibility of liaising with applicants, inspecting properties upon request, and processing the work permit applications. Responsibilities also include investigating and monitoring violation situations as well as undertaking all other enforcement work under the regulation, as directed by senior management of the Authority. Regulation officers carry identification for inspection purposes.

12.4 SUPPORTING STUDIES

12.4.1 Study Types

In support of an application for development within a regulated area or upon reviewing an application under the Planning Act (or other relevant piece of legislation), the NPCA may request that any of the following supporting studies or plans be completed to clarify the impacts of proposed development:

a) Environmental Impact Study;
b) Geotechnical Study;
c) Flood Plain and Hydraulic Analysis;
d) Coastal Study;
e) Stormwater Management Plans and Hydrological Study;
f) Erosion and Sediment Control Plans;
g) Landscaping and Vegetation Plans;
h) Other supporting studies, as required.

12.4.2 Need for Studies

In general, the above-noted studies apply to forms of development which have unknown risks or impacts, or where mitigation measures may be required to reduce the potential for risks and impacts related to flooding, erosion, dynamic beaches, pollution, and conservation of land. The NPCA recognizes that the cost of studies can place a burden on applicants and will work closely with applicants to minimize the need for studies and endeavour to scope each study to the site specific issues.

12.4.3 General Study Requirements

The following requirements apply to all studies requested by the NPCA:

a) Studies shall be submitted by a suitably qualified professional;
b) The NPCA reserves the right to have a completed study peer reviewed by an independent qualified professional;
c) Applicants are required to complete a pre-consultation meeting with the NPCA staff to confirm the scope and methods for the study; and,
d) Studies are to be completed to the satisfaction of the NPCA and any applicable provincial or municipal standards (as the case may be).

12.4.4 Environmental Impact Study (EIS)

12.4.4.1 Need for an EIS

An EIS is a tool for objectively assessing the environmental impacts of a proposed development or site alteration, and is both a planning and decision-making tool. An EIS is required where development and site alteration is proposed wholly or partially within, or adjacent to, a natural heritage feature as defined in Provincial, Regional, local policies and regulations. It is also required where development and site alteration is proposed in the Greenbelt Natural Heritage System and on lands adjacent to key hydrologic features in the Greenbelt.

In the context of an application under the Planning Act, an EIS is required to confirm the impact of the proposed development on a Regulated feature(s) and/or functions. An EIS can also be required to support a work permit application under the Conservation Authorities Act where proposed development has potential to impact natural and/or hydrological features and functions (i.e. conservation of land, interference with a watercourse or wetland, control of pollution, etc.). Note that not all work permit applications under the Conservation Authorities may have been subject to a Planning Act application (hence the need for an EIS under the CA Act).

12.4.4.2 EIS Requirements

There are different standards and requirements for completing an EIS within the watershed. Niagara Region, the City of Hamilton and County of Haldimand each maintain different technical guidelines for conducting an EIS. When preparing an EIS, the applicant and NPCA should refer to the appropriate EIS guideline based on the location of the proposed development, until such time as the NPCA-approved EIS Guidelines for Regulated areas is available. Where a municipality does not have formal EIS guidelines, the NPCA will refer to the Ministry of Natural Resources and Forestry's Natural Heritage Reference Manual. In all cases the applicant must obtain site-specific scoping of the EIS from the NPCA prior to the commencement of the field studies. Furthermore, the NPCA may require a water balance to demonstrate no negative impact to the Hydrological function of a wetland.

12.4.4.3 Exceptions

An EIS may not be required where it is determined by the NPCA, in consultation with the appropriate planning authority, that the natural heritage feature or hydrologic feature does not meet the criteria established for designation as significant. This determination may be based on a preliminary review and site visit. The need for an EIS may also be waived where a similar level of analysis has already been completed through an environmental assessment.

12.4.5 Geotechnical Study

A geotechnical study may be required to assess the effect of increases in loading on slope stability/failure, the effect of infiltration of surface water on slope stability/failure, the evaluation of the susceptibility of slopes above or adjacent to a development to collapse and the use of appropriate and environmentally-sound protection works. The scope of geotechnical studies will be determined on a site-specific basis through the pre-consultation process with NPCA staff. Refer to policy 6.1.4.8 for additional details.

12.4.6 Flood Plain Study and Hydraulic Analysis

A flood plain study may be required for proposed development where there exists no flood plain mapping for the subject site, or where updated flood plain mapping is required. The study may include hydraulic analysis to assess the potential impact on upstream or downstream flooding and erosion potential. The scope of any hydraulic analysis shall be determined and confirmed through pre-consultation with the application. When generating a flood line, the following information is required:

a) Explanation of how the starting water level was determined;
b) A description of how/where flow values utilized in the model were determined;
c) A topographic map showing cross-sections and flood lines;
d) Hard copy and electronic files of the input and output for existing and proposed conditions; and,
e) Electronic files as required.

12.4.7 Coastal Study

A coastal study may be required to assess the risks associated with development in or near the shoreline hazard area. The scope of coastal studies will be determined on a site-specific basis through the pre-consultation process with NPCA staff.

12.4.8 Stormwater Management Plans and Hydrological Study

12.4.8.1 Stormwater Management Plans

The Stormwater Management Plans should describe the effect of the planned development on the existing drainage area and environment, and include proposed mitigation measures. If a watershed/sub-watershed plan is available for the proposed area of development, then the Plan should refer to those conclusions and recommendations. Stormwater Management Plans should be prepared in alignment with the NPCA's latest set of Stormwater Management Guidelines and relevant Provincial standards.

12.4.8.2 Hydrological Study

A hydrological study may be required to confirm potential impacts on water quality or water quantity. Hydrological studies shall, at a minimum, address the following:

a) demonstrate that the development or site alteration will have no adverse effects on the hydrologically sensitive feature or on the related hydrological functions;
b) identify planning, design and construction practices that will maintain and, where possible, improve or restore the health, diversity and size of the hydrologically sensitive feature; and,
c) determine whether the minimum vegetation protection zone is sufficient and, if it is not sufficient, specify the dimensions of the required minimum vegetation protection zone and provide for the maintenance and, where possible, improvement or restoration of natural self-sustaining vegetation within it.

12.4.9 Erosion and Sediment Control Plans

An Erosion and Sediment Control Plan may be required to illustrate how a proposed development will address concerns of erosion and sediment control during and after construction. The detailed requirements for erosion and sediment control plans will be determined through pre-consultation with the NPCA. In general, the Plan should be guided by the following principles:

a) Retain existing vegetation and stabilize exposed soils with new vegetation, where appropriate;
b) Minimize the duration of soil exposure;
c) Minimize slope length and gradient of disturbed areas;
d) Maintain overland sheet flow and avoid concentrated flows;
e) Store/stockpile soil away (e.g. greater than 15 metres, 49 feet) from watercourses, drainage features and top of steep slopes;
f) Monitor and adjust the Erosion and Sediment Control Plan to adapt to site features.

12.4.10 Landscaping and Vegetation Plans

Landscaping and vegetation plans may be required to illustrate how disturbed areas will be rehabilitated. The detailed requirement for landscaping and vegetation plans will depend on the nature of the application and site conditions. In general, the Plan should be guided by the following principles:

a) To the extent possible, all existing vegetation and drainage patterns should be maintained;
b) Site restoration should include native, non-invasive and locally appropriate species;
c) Where possible, the vegetation and landscaping plans should provide opportunities for connections to adjacent features, with a particular emphasis on improving connections to the natural heritage system;
d) The plans should support biodiversity;
e) The plans should conform to any applicable municipal tree preservation by-laws.

12.5 WATERSHED AND SUBWATERSHED PLANS

12.5.1 Purpose and Intent of Watershed and Sub-watershed Plans

A watershed is an area of land from which surface runoff (water, sediments, nutrients and contaminants) drain into a common water body, such as the Mill Creek, Elsie Creek which are tributaries to the Welland River. Watersheds include all water and water-dependent features such as wetlands, forests, urban areas, and agriculture. A watershed plan is a proactive document created cooperatively by government agencies and the community to manage the water, land/water interactions, aquatic life and aquatic resources within a particular watershed to protect the health of the ecosystem as land uses change. Watershed and sub-watershed plans provide specific direction for the overall water and resource management of specific creek systems. The NPCA will continue to work collaboratively with municipalities in the development of watershed plans and any municipally-led watershed or sub-watershed studies.

12.5.2 Approved Plans

The following watershed and sub-watershed plans have been approved and should be considered when reviewing planning act applications and, where appropriate, work permit approvals:

a) 12 Mile Creek Watershed Plan
b) 15-16-18 Mile Creek Watershed Plan
c) 20 Mile Creek Watershed Plan
d) Central Welland River Watershed Plan
e) Fort Erie Creeks Watershed Plan
f) Lake Erie North Shore Watershed Plan
g) NOTL Watershed Plan
h) One Mile Creek Watershed Plan

i) South Niagara Falls Watershed Plan
j) Upper Welland River Watershed Plan
k) Port Robinson West Sub-watershed Plan

12.6 TECHNICAL GUIDELINES TO SUPPORT DECISION-MAKING

The policies contained within this Document are intended to implement and complement a number of provincial, regional and local standards, regulations and guidelines. Where required, NPCA staff will make use of provincial standards and guidelines including, but not limited to, the following:

a) Understanding Natural Hazards: Great Lakes – St. Lawrence River System and Large Inland Lakes, River and Stream System Hazardous Sites (Province of Ontario);
b) Technical Guide: River and Stream System: Flooding Hazard Limit (Province of Ontario);
c) Procedural Guidelines for Appeals, Under the Conservation Authorities Act;
d) Natural Heritage Reference Manual (Province of Ontario);
e) Drainage Act and Conservation Authorities Act Protocol (Province of Ontario);
f) Stormwater Technical Guide (Province of Ontario); and,
g) Other relevant standards and guidelines.

12.7 NPCA POLICY DOCUMENT AMENDMENTS AND UPDATES

12.7.1 Periodic Reviews of the Policy Document

The NPCA will undertake a periodic and comprehensive review of this document at a minimum every ten years to ensure that the policies remain effective and are consistent with the NPCA's mandate under provincial policy and applicable legislation.

12.7.2 Amendments to the Policy Document

12.7.2.1 Amendment Process

Where required, the NPCA may prepare amendments to various sections of this document to address emerging issues, changes in provincial legislation and/or modifications to the MOUs between the NPCA and its municipal partners. When preparing amendments to the Policy Document, the NPCA will:

a) Pre-consult with the Board and its municipal partners to confirm issues, timing and process for the amendment;
b) Complete an community engagement program to ensure that stakeholders, agencies and landowners within the watershed have the opportunity to participate in the amendment process;

c) Prepare a discussion paper for public review explaining the key issues to be addressed in the amendment; and,
d) Prepare a draft and final amendment to be approved by the NPCA Board.

12.7.2.2 Amendment Index

Amendments to the Policy Document shall be numbered and listed on the inside cover page of the Policy Document, including a brief explanation of the amendment, noting the date and purpose of the amendment.

12.7.3 Housekeeping Amendments

Minor changes to formatting, numbering, graphics and definitions do not require a formal amendment to this document and may be implemented by Staff as required.

12.7.4 Variances

The NPCA may issue a work permit where in the opinion of the Authority the proposed impacts on the control of flooding, erosion and dynamic beaches, conservation of land and pollution are considered to be minor in nature and the proposed development will not result in increase in risks to human health and safety. Variances shall be approved by the NPCA Board. Note that the variance process is intended to be different than the Hearing process described in 12.3.7.1 (and further explained in Appendix A), which are intended to resolves instances where dispute resolution is required. At a later date, the NPCA will prepare a separate guideline document to describe the process and steps for undertaking a variance.

12.8 INTERPRETATION

The policies of this Document are based on provincial legislation, policies, plans and guidelines. In cases where there is a conflict between a policy within this Document and a provincial plan, the more restrictive policy/standard should apply (unless there is an explicitly stated exception noted in the Document).

13.0 DEFINITIONS

Agriculture Uses: means the growing of crops, including nursery, biomass, and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including, but not limited to livestock facilities, manure storages, value-retaining facilities, and accommodation for full-time farm labour when the size and nature of the operation requires additional employment.

Accessory: A use, separate building, or structure normally incidental, subordinate, exclusively devoted to and located on the same lot as the principal use, building or structure but does not include a building or structure used for human habitation.

Balanced Cut and Fill: means an engineering technique used to balance flood storage losses resulting from Filling or Development activities within flood plains. An equivalent volume of earth is removed from the flood plain at appropriate elevations and locations to offset areas within flood plains that are Filled or developed.

Building: means any structure used for the shelter or accommodation of persons, animals, goods or chattels or equipment, having a roof which is supported by columns or wall and including any tents or awnings which are situated on private property.

Climate Change: changes in long-term weather patterns caused by natural phenomena and human activities that alter the chemical composition of the atmosphere through the build-up of greenhouse gases which trap heat and reflect it back to the earth's surface.

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 hydrologic and ecological functions within the watershed.

Development: in the PPS means the creation of a new lot, a change in land use or the construction of Buildings and Structures which require 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; or
c) for the purposes of PPS policy 2.1.4 (a), underground or surface mining of minerals or advanced exploration on mining lands in Significant areas of mineral potential in EcoRegion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead those matters shall be subject to policy 2.1.5(a)

Development: under the Conservation Authorities Act means;

a) the construction, Reconstruction, erection or placing of a Building or Structure of any kind; or
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; or
c) site grading; or
d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.

Dynamic Beach: means an area of inherently unstable accumulations of shoreline sediment along the Great Lakes-St. Lawrence River system and large inland lakes, as identified by provincial standards, as amended from time to time. The dynamic beach hazard limit consists of the flooding hazard limit plus a 30 m dynamic beach allowance.

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.

Ecosystem Approach: means the linkages and relationships involving air, land, water and living organisms. The approach is adaptive and recognizes the dynamic nature of watersheds and Watercourses and their respective landforms. It is intended to restore and maintain the integrity, quality, productivity and well-being of the watershed and subwatersheds.

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 100 year erosion rate (the average annual rate of recession extended over a one hundred year time span), an allowance for slope stability, and an erosion/erosion access allowance.

Evaluated Wetland: A wetland that has been evaluated using the Ontario Wetland Evaluation System (OWES).

Existing Lot of Record: means a lot created under The Planning Act prior to the adoption of these policies by the Board of Directors of the Niagara Peninsula Conservation Authority on September 15, 1993 for the purposes of the top of bank setback. For the purposes of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation 155/06 regulation, the effective date for an Existing Lot of Record is May 4, 2006 (the date Ontario Regulation 155/06 came into effect).

Fill: Is a form of development under the Conservation Authorities Act and includes earth, sand, gravel, rubble, rubbish, garbage, or any other matter whether similar to or different from any of the aforementioned materials, whether originating on the site or elsewhere, used or capable of being used to raise, lower, or in any way effect the existing grade (does not include herbaceous or woody plant material).

Five Tests: The five tests of a work permit application under Ontario Regulation 155/06 including the control of flooding, erosion, dynamic beaches, pollution, and conservation of land.

Flooding Hazard: means the inundation, under the conditions specific below, of areas adjacent to a shoreline or a river or stream systems and not ordinarily covered by water:

a) Along the shorelines of the Great Lakes-St. Lawrence River System and large inland lake, the flooding hazard limit is based on the one hundred year flood level plus an allowance for wave uprush and other water related hazards;
b) Along river, stream and small inland lake systems, the flooding hazard limit is defined as he one hundred year flood.

Flood Fringe: for river, stream and small inland lake systems, means the outer portion of the flood plain between the floodway and the flooding hazard limit. Depths and velocities of flooding are generally less severe in the flood fringe than those experienced in the floodway.

Flood Line: means an engineered line delineating the potential extent of flooding, by elevation, as a result of a specific flood event.

Flood plain: for a river, stream and small inland lake systems, means the area, usually low lands adjoining a watercourse, which has been or may be subject to flooding hazards. (PPS, 2014)

Flood plain Mapping: means the process whereby floodlines are produced and plotted on suitable base maps using procedures approved by the Province of Ontario. The use of computers allows for the detailed identification and consideration of local watershed features, such as drainage areas, soils, land use, flow constrictions, and topography when determining flows and flood levels.

Floodproofing: means the combination of measures incorporated into the basic design and/or construction of buildings, structures, or properties to reduce or eliminate flooding hazards, wave uprush and other water-related hazards along the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes, and flooding hazards along river, stream and small inland lake systems.

Floodway: for river, stream and small inland lake systems, means the portion of the flood plain where development 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 contiguous flood plain. Where the two zone concept is applied, the floodway is the contiguous inner portion of the flood plain, 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 flood plain is called the flood fringe.

Habitable Structure: means any building or structure used, or intended to be used, for living, sleeping or the preparation of food.

Hazardous Lands: When applying the Conservation Authorities Act, hazardous land means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock.

Hazardous Lands: When applying the Planning Act, means property or lands that could be unsafe for development due to naturally occurring processes. Along the shorelines of the great lakes - St. Lawrence River system, this means the land, including that covered by water, between the international boundary, where applicable, and the furthest landward limit of the flooding hazard, erosion hazard or dynamic beach hazard limits. Along the shorelines of large inland lakes, this means the land, including that covered by water, between a defined offshore distance or depth and the furthest landward limit of the flooding hazard, erosion hazard or dynamic beach hazard limits. Along river, stream and small inland lake systems, this means the land, including that covered by water, to the furthest landward limit of the flooding hazard or erosion hazard limits.

Hazardous Site: means property or lands that could be unsafe for development and site alteration due to naturally occurring hazards. These may include unstable soils (sensitive marine clays [leda], organic soils) or unstable bedrock (karst topography).

Hydraulic Floodway: the inner portion of the flood plain where flood depths and velocities are generally higher and faster flowing than those experienced in the outer or fringe portion of the overall flood plain. The floodway represents 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 significant threat to life and/or property damages.

Hydrologic Function means: 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.

Inert: In the context of fill means earth or rock fill or waste of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances.

Infrastructure: Infrastructure means physical structures (facilities and corridors) that form the foundation for development and includes:

a) Sewage and water systems;
b) Septage treatment systems;
c) Stormwater management systems;
d) Waste management systems;
e) Electricity generation facilities;
f) Electricity transmission and distribution systems;
g) Transportation corridors and facilities; and,
h) Oil and gas pipelines and associated facilities.

Intermittent Watercourse: Intermittent systems flow continuously for only a portion of the year, or are consistently dry, during the summer months. If a watercourse flows during brief periods (usually during the spring and/or fall), or for brief periods following storm events during the summer months, or has a defined channel but is dry for at least three months of the year, it should be considered intermittent. If the watercourse is categorized as an intermittent system, but

habitats are present within the drain where there are known sensitive species, the drain cannot be considered intermittent.

Large Fill: Includes the placement of fill which is greater than 250m^3 (8829 cubic feet).

Legal or Technical Reasons: means severances for purposes such as easements, corrections of deeds, quit claims, and minor boundary adjustments, which do not result in the creation of a new lot.

Minor Works: means a category of Development within the flood plain which has relatively small economic value and will not lead to significant economic hardship if lost in times of severe flooding. The construction of Minor Works does not require detailed Floodproofing measures and therefore there is an assumption of risk associated with the Development.

Municipal Drain: A “drainage works” as defined under the Drainage Act. Under the Act, a drainage works is defined as a drain constructed by any means, including the improving of a natural watercourse, and includes works necessary to regulate the water table or water level within or on any lands or to regulate the level of the waters of a drain, reservoir, lake or pond, and includes a dam, embankment, wall, protective works or any combination thereof. To be a municipal drain, there must be a municipal by-law that adopts an engineer’s report that defines the drainage system and states how the cost of the system is to be shared among property owners.

100 Year Flood: means a flood which has a one percent probability of occurring or being exceeded in any given year. This flood is likely to occur or be exceeded on an average of once every one hundred years. It is the flood used for regulatory purposes in the Niagara Peninsula with the exception of three watersheds located within the City of Niagara Falls.

100 Year Flood limit (for the shorelines of the Great Lakes): means the peak instantaneous stillwater level , resulting from combinations of mean monthly lake levels and wind setups that have a 1% chance of being equaled or exceeded in any given year.

Original Ground Floor Area: means the ground floor area of a Building at current grade, measured by the total dimensions of the exterior face of the Structure. For purposes of the Authority's cumulative exceedance requirements, original floor area of Building would be the floor area of a Building that existed on or after May 4th, 2006 for the purposes of Buildings in the flood plain (date on which Ontario Regulation 155/06 came into effect).

Passive Recreational Uses: means recreational activities that occur in a natural setting which require minimal development or facilities, and the importance of the environment or setting for the activities is greater than in developed or active recreation settings.

Permanent Watercourse: Permanent systems flow year round, or are consistently wet. If a watercourse continues to flow (in an average year), or is consistently wet, during the dry summer months, it should be considered permanent.

Provincially Significant Wetland: an area identified as provincially significant by the Ontario Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time.

Pollution: means any deleterious physical substance or other contaminant that has the potential to be generated by development in an area to which a regulation made under Section 28 of the Conservation Authorities Act.

Regional Storm: The Regional Storm used for this part of Ontario is the Hurricane Hazel storm. This storm occurred over the Humber River watershed in October, 1954. This storm is used for regulatory purposes for three watersheds located within the City of Niagara Falls. A more technical definition of the Regional Storm is outlined in Ontario Regulation 99/91.

Reconstruction: The restoration of a building or structure to its original form (i.e. same dimensions, square footage and building footprint).

Regulatory Flood: means the Regulatory Flood is the 100 Year Flood for the entire Niagara Peninsula Conservation Authority with the exception of three watersheds located within the City of Niagara Falls. The Regional Storm is the Regulatory Flood for the watersheds associated with Shriner's Creek, Ten Mile Creek and Beaverdam's Creek (including Tributary W-6-5).

Riparian Vegetation: means the plant communities in the riparian zone, typically characterized by hydrophilic plants.

Riparian Zone: means the interface between land and a flowing surface water body. Riparian is derived from Latin ripa meaning river bank.

Runoff: That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water. It can carry pollutants from the air and land into the receiving waters.

Significant Habitat: Means any habitat which is or would be defined as Significant Wildlife Habitat through available provincial Significant Wildlife Habitat technical guidance documents, or which is ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area, natural heritage system or Regulated feature.

Special Policy Area: means an area within a community that has historically existed in the flood plain 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. 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 and site alteration, if a community has feasible opportunities for development outside the flood plain.

Species of concern: means any species that is listed or categorized as a special concern species by the Ontario Ministry of Natural Resources and Forestry or that has been given a ranking of S3 imperiled or higher by the Ontario Natural Heritage Information Centre, as updated from time to time.

Species at Risk: Means any species that is listed or categorized as Endangered or Threatened on the Ontario Ministry of Natural Resources and Forestry official Species at Risk list, as updated and amended from time to time.

Stormwater: Includes stormwater runoff, snow melt runoff, surface runoff and drainage. It excludes infiltration.

Stormwater Management (SWM): Practices implemented to protect natural waterways and receiving waters from urban impacts. Controls used include peak flow control for flood control, peak flow and volume control to mitigate erosion impacts and water quality controls for water quality impacts.

Structure: means that which is built and can include, but is not limited to, dwellings or other Buildings or partial Building, all of which require footings or foundation support, as well as retaining walls, septic systems, private roads, parking lots, berms, swimming pools and decks.

Valleylands: means a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

Watercourse: means an identifiable depression in the ground in which a flow of water regularly or continuously occurs.

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.

Watershed: means an area that is drained by a river and its tributaries.

Wetland, under the Conservation Authorities Act: 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 hydrological 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).

Wetland, under the Planning Act (Provincial Policy Statement): means lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens.

APPENDIX A

SECTION 28(3) CONSERVATION AUTHORITIES ACT HEARING GUIDELINES

SECTION 28 (3)

CONSERVATION AUTHORITIES ACT

HEARING GUIDELINES

October 2005

Amended for use by NPCA, October, 2011

Conservation ONTARIO
Natural Champions

ONTARIO
Ministry of Natural Resources
Ministère des Richesses naturelles

SECTION 28 (3)

CONSERVATION AUTHORITIES ACT

HEARING GUIDELINES

October 2005

Peter Krause, Chairman
Conservation Ontario

Gail L. Beggs, Deputy Minister
Ministry of Natural Resources

Section 28 (12), Conservation Authorities Act - Hearing Guidelines

Table of Contents

1.0 PURPOSE OF HEARING GUIDELINES:

The purpose of the Hearing Guidelines is to reflect the changes to the 1998 Conservation Authorities Act. The Act requires that the applicant be party to a hearing by the local Conservation Authority Board, or Executive Committee (sitting as a Hearing Board) as the case may be, for an application to be refused or approved with contentious conditions. Further, a permit may be refused if in the opinion of the Authority the proposal adversely affects the control of flooding, pollution or conservation of land, and additional erosion and dynamic beaches. The Hearing Board is empowered by law to make a decision, governed by the Statutory Powers Procedures Act. It is the purpose of the Hearing Board to evaluate the information presented at the hearing by both the Conservation Authority staff and the applicant and to decide whether the application will be approved with or without conditions or refused.

These guidelines have been prepared as an update to the October 1992 hearing guidelines and are intended to provide a step-by-step process to conducting hearings required under Section 28 (12), (13), (14) of the Conservation Authorities Act. Similar to the 1992 guidelines, it is hoped that the guidelines will promote the necessary consistency across the Province and ensure that hearings meet the legal requirements of the Statutory Powers Procedures Act without being unduly legalistic or intimidating to the participants.

2.0 PREHEARING PROCEDURES

2.1 Apprehension of Bias

In considering the application, the Hearing Board is acting as a decision-making tribunal. The tribunal is to act fairly. Under general principles of administrative law relating to the duty of fairness, the tribunal is obliged not only to avoid any bias but also to avoid the appearance or apprehension of bias. The following are three examples of steps to be taken to avoid apprehension of bias where it is likely to arise.

(a) No member of the Authority taking part in the hearing should be involved, either through participation in committee or intervention on behalf of the applicant or other interested parties with the matter, prior to the hearing. Otherwise, there is a danger of an apprehension of bias which could jeopardize the hearing.

(b) If material relating to the merits of an application that is the subject of a hearing is distributed to Board members before the hearing, the material shall be distributed to the applicant at the same time. The applicant may be afforded an opportunity to distribute similar pre-hearing material.

(c) In instances where the Authority (or Executive Committee) requires a hearing to help it reach a determination as to whether to give permission with or without conditions or refuse a permit application, a final decision shall not be made until such time as a hearing is held. The applicant will be given an opportunity to attend the hearing before a decision is made; however, the applicant does not have to be present for a decision to be made.

Individual Conservation Authorities shall develop a document outlining their own practices and procedures relating to the review and reporting of Section 28 applications, including the role of staff, the applicant and the Authority or Executive Committee as well as, the procedures for the hearing itself. Such policy and procedures manual shall be available to the members of the public upon request. These procedures shall have regard for the above information and should be approved by the Conservation Authority Board of Directors.

2.2 Application

The right to a hearing is required where staff is recommending refusal of an application or where there is some indication that the Authority or Executive Committee may not follow staff's recommendation to approve a permit or the applicant objects to the conditions of approval. The applicant is entitled to reasonable notice of the hearing pursuant to the Statutory Powers Procedures Act.

2.3 Notice of Hearing

The Notice of Hearing shall be sent to the applicant within sufficient time to allow the applicant to prepare for the hearing. To ensure that reasonable notice is given, it is recommended that prior to sending the Notice of Hearing, the applicant be consulted to determine an agreeable date and time based on the local Conservation Authority's regular meeting schedule.

The Notice of Hearing must contain the following:

(a) Reference to the applicable legislation under which the hearing is to be held (i.e., the Conservation Authorities Act).

(b) The time, place and the purpose of the hearing.

(c) Particulars to identify the applicant, property and the nature of the application which are the subject of the hearing.

Note: If the applicant is not the landowner but the prospective owner, the applicant must have written authorization from the registered landowner.

(d) The reasons for the proposed refusal or conditions of approval shall be specifically stated. This should contain sufficient detail to enable the applicant to understand the issues so he or she can be adequately prepared for the hearing.

It is sufficient to reference in the Notice of Hearing that the recommendation for refusal or conditions of approval is based on the reasons outlined in previous correspondence or a hearing report that will follow.

(e) A statement notifying the applicant that the hearing may proceed in the applicant's absence and that the applicant will not be entitled to any further notice of the proceedings.

Except in extreme circumstances, it is recommended that the hearing not proceed in the absence of the applicant.

(f) Reminder that the applicant is entitled to be represented at the hearing by counsel, if desired.

It is recommended that the Notice of Hearing be directed to the applicant and/or landowner by registered mail. Please refer to **Appendix A** for an example Notice of Hearing.

2.4 Presubmission of Reports

If it is the practice of the local Conservation Authority to submit reports to the Board members in advance of the hearing (i.e., inclusion on an Authority/Executive Committee agenda), the applicant shall be provided with the same opportunity. The applicant shall be given two weeks to prepare a report once the reasons for the staff recommendations have been received. Subsequently, this may affect the timing and scheduling of the staff hearing reports.

2.5 Hearing Information

Prior to the hearing, the applicant shall be advised of the local Conservation Authority's hearing procedures upon request.

3.0 HEARING

3.1 Public Hearing

Pursuant to the Statutory Powers Procedure Act, hearings are required to be held in public. The exception is in very rare cases where public interest in public hearings is outweighed by the fact that intimate financial, personal or other matters would be disclosed at hearings.

3.2 Hearing Participants

The Conservation Authorities Act does not provide for third party status at the local hearing. While others may be advised of the local hearing, any information that they provide should be incorporated within the presentation of information by, or on behalf of, the applicant or Authority staff.

3.3 Attendance of Hearing Board Members

In accordance with case law relating to the conduct of hearings, those members of the Authority who will decide whether to grant or refuse the application must be present during the full course of the hearing. If it is necessary for a member to leave, the hearing must be adjourned and resumed when either the member returns or if the hearing proceeds, even in the event of an adjournment, only those members who were present after the member left can sit to the conclusion of the hearing.

3.4 Adjournments

The Board may adjourn a hearing on its own motion or that of the applicant or Authority staff where it is satisfied that an adjournment is necessary for an adequate hearing to be held.

Any adjournments form part of the hearing record.

3.5 Orders and Directions

The Authority is entitled to make orders or directions to maintain order and prevent the abuse of its hearing processes. A hearing procedures example has been included as **Appendix B**.

3.6 Information Presented at Hearings

(a) The Statutory Powers Procedure Act, requires that a witness be informed of his right to object pursuant to the Canada Evidence Act. The Canada Evidence Act indicates that a witness shall be excused from answering questions on the basis that the answer may be incriminating. Further, answers provided during the hearing are not admissible against the witness in any criminal trial or proceeding. This information should be provided to the applicant as part of the Notice of Hearing.

(b) It is the decision of the hearing members as to whether information is presented under oath or affirmation. It is not a legal requirement. The applicant must be informed of the above, prior to or at the start of the hearing.

(c) The Board may authorize receiving a copy rather than the original document. However, the Board can request certified copies of the document if required.

(d) Privileged information, such as solicitor/client correspondence, cannot be heard. Information that is not directly within the knowledge of the speaker (hearsay), if relevant to the issues of the hearing, can be heard.

(e) The Board may take into account matters of common knowledge such as geographic or historic facts, times measures, weights, etc or generally recognized scientific or technical facts, information or opinions within its specialized knowledge without hearing specific information to establish their truth.

3.7 Conduct of Hearing

3.7.1 Record of Attending Hearing Board Members

A record shall be made of the members of the Hearing Board.

3.7.2 Opening Remarks

The Chairman shall convene the hearing with opening remarks which generally; identify the applicant, the nature of the application, and the property location; outline the hearing procedures; and advise on requirements of the Canada Evidence Act. Please reference **Appendix C** for the Opening Remarks model.

3.7.3 Presentation of Authority Staff Information

Staff of the Authority presents the reasons supporting the recommendation for the refusal or conditions of approval of the application. Any reports, documents or plans that form part of the presentation shall be properly indexed and received.

Staff of the Authority should not submit new information at the hearing as the applicant will not have had time to review and provide a professional opinion to the Hearing Board.

Consideration should be given to the designation of one staff member or legal counsel who coordinates the presentation of information on behalf of Authority staff and who asks questions on behalf of Authority staff.

3.7.4 Presentation of Applicant Information

The applicant has the opportunity to present information at the conclusion of the Authority staff presentation. Any reports, documents or plans which form part of the submission should be properly indexed and received.

The applicant shall present information as it applies to the permit application in question. For instance, does the requested activity affect the control of flooding, erosion, dynamic beach or conservation of land or pollution? The hearing does not address the merits of the activity or appropriateness of such a use in terms of planning.

- The applicant may be represented by legal counsel or agent, if desired
- The applicant may present information to the Board and/or have invited advisors to present information to the Board
- The applicant(s) presentation may include technical witnesses, such as an engineer, ecologist, hydrogeologist etc.

The applicant should not submit new information at the hearing as the Staff of the Authority will not have had time to review and provide a professional opinion to the Hearing Board.

3.7.5 Questions

Members of the Hearing Board may direct questions to each speaker as the information is being heard. The applicant and /or agent can make any comments or questions on the staff report.

Pursuant to the Statutory Powers Procedure Act, the Board can limit questioning where it is satisfied that there has been full and fair disclosure of the facts presented. Please note that the

courts have been particularly sensitive to the issue of limiting questions and there is a tendency to allow limiting of questions only where it has clearly gone beyond reasonable or proper bounds.

3.7.6 Deliberation

After all the information is presented, the Board may adjourn the hearing and retire in private to confer. The Board may reconvene on the same date or at some later date to advise of the Board's decision. If the hearing is adjourned to another date, only members present during the previous hearing(s) may participate in discussion and/or decision. The Board members shall not discuss the hearing with others prior to the decision of the Board being finalized.

4.0. DECISION

The applicant must receive written notice of the decision. The applicant shall be informed of the right to appeal the decision within 30 days upon receipt of the written decision to the Minister of Natural Resources.

It is important that the hearing participants have a clear understanding of why the application was refused or approved. The Board shall itemize and record information of particular significance which led to their decision.

4.1 Notice of Decision

The decision notice should include the following information:

(a) The identification of the applicant, property and the nature of the application that was the subject of the hearing.

(b) The decision to refuse or approve the application. A copy of the Hearing Board resolution should be attached.

It is recommended that the written Notice of Decision be forwarded to the applicant by registered mail. A sample Notice of Decision and cover letter has been included as **Appendix D**.

4.2 Adoption

A resolution advising of the Board's decision and particulars of the decision should be adopted.

5.0 RECORD

The Authority shall compile a record of the hearing. In the event of an appeal, a copy of the record should be forwarded to the Minister of Natural Resources/Mining and Lands Commissioner. The record must include the following:

(a) The application for the permit.

(b) The Notice of Hearing.

(c) Any orders made by the Board (e.g., for adjournments).

(d) All information received by the Board.

(e) The minutes of the meeting made at the hearing.

(f) The decision and reasons for decision of the Board.

(g) The Notice of Decision sent to the applicant

Appendix A

NOTICE OF HEARING

IN THE MATTER OF
The Conservation Authorities Act,
R.S.O. 1990, Chapter 27

AND IN THE MATTER OF an application by

FOR THE PERMISSION OF THE CONSERVATION AUTHORITY
Pursuant to Regulations made under
Section 28, Subsection 12 of the said Act

TAKE NOTICE THAT a Hearing before the Executive Committee of the Conservation Authority will be held under Section 28, Subsection 12 of the Conservation Authorities Act at the offices of the said Authority (ADDRESS), at the hour of **, on the day of , 2001**, with respect to the application by (***NAME***) to permit development within an area regulated by the Authority in order to ensure no adverse affect on (***the control of flooding, erosion, dynamic beaches or pollution or conservation of land./alter or interfere with a watercourse, shoreline or wetland***) on Lot , Plan/Lot , Concession , (***Street***) in the City of , Regional Municipality of , River Watershed.

TAKE NOTICE THAT you are invited to make a delegation and submit supporting written material to the Executive Committee for the meeting of (***meeting number***). If you intend to appear, please contact (***name***) . Written material will be required by (***date***), to enable the Committee members to review the material prior to the meeting.

TAKE NOTICE THAT this hearing is governed by the provisions of the Statutory Powers Procedure Act. Under the Act, a witness is automatically afforded a protection that is similar to the protection of the Ontario Evidence Act. This means that the evidence that a witness gives may not be used in subsequent civil proceedings or in prosecutions against the witness under a Provincial Statute. It does not relieve the witness of the obligation of this oath since matters of perjury are not affected by the automatic affording of the protection. The significance is that the legislation is Provincial and cannot affect Federal matters. If a witness requires the protection of the Canada Evidence Act that protection must be obtained in the usual manner. The Ontario Statute requires the tribunal to draw this matter to the attention of the witness, as this tribunal has no knowledge of the affect of any evidence that a witness may give.

AND FURTHER TAKE NOTICE that if you do not attend at this Hearing, the Executive Committee of the Conservation Authority may proceed in your absence, and you will not be entitled to any further notice in the proceedings.

DATED the ___ day of , _____200X

The Executive Committee of the
Conservation Authority

Per:
Chief Administrative Officer/Secretary-Treasurer

Appendix B

HEARING PROCEDURES

1. Motion to sit as Hearing Board.

2. Roll Call followed by the Chair's opening remarks.

3. Staff will introduce to the Hearing Board the applicant/owner, his/her agent and others wishing to speak.

4. Staff will indicate the nature and location of the subject application and the conclusions.

5. Staff will present the staff report included in the Authority/Executive Committee agenda.

6. The applicant and/or his/her agent will speak and also make any comments on the staff report, if he/she so desires.

7. The Hearing Board is open to the public and therefore, the Hearing Board will allow others to speak, and, if necessary, the applicant in rebuttal.

8. The Hearing Board will question, if necessary, both the staff and the applicant/agent.

9. The Hearing Board may move into camera.

10. Members of the Hearing Board will move and second a motion.

11. A motion will be carried which will culminate in the decision.

12. The Hearing Board will move out of camera.

13. The Chairman or Acting Chairman will advise the owner/applicant of the Hearing Board decision.

14. If decision is "to refuse", the Chairman or Acting Chairman shall notify the owner/applicant of his/her right to appeal the decision to the Minister of Natural Resources within 30 days of receipt of the reasons for the decision.

15. Motion to move out of Hearing Board and sit as Executive Committee.

Appendix C

CHAIR'S REMARKS WHEN DEALING WITH HEARINGS WITH RESPECT TO ONTARIO REGULATION 158

We are now going to conduct a hearing under section 28 of the Conservation Authorities Act in respect of an application by _____: , for permission to:_____

The Authority has adopted regulations under section 28 of the Conservation Authorities Act which requires the permission of the Authority for development within an area regulated by the Authority in order to ensure no adverse affect on (the control of flooding, erosion, dynamic beaches or pollution or conservation of land) or to permit alteration to a shoreline or watercourse or interference with a wetland.

The Staff has reviewed this proposed work and a copy of the staff report has been given to the applicant.

The Conservation Authorities Act (Section 28 [12]) provides that:

"Permission required under a regulation made under clause (1) (b) or 8) shall not be refused or granted subject to conditions unless the person requesting permission has been given the opportunity to require a hearing before the authority or, if the authority so directs, before the authority's executive committee."

In holding this hearing, the Authority Board/Executive Committee is to determine whether or not a permit is to be issued. In doing so, we can only consider the application in the form that is before us, the staff report, such evidence as may be given and the submissions to be made on behalf of the applicant.

The proceedings will be conducted according to the Statutory Powers Procedure Act. Under Section 5 of the Canada Evidence Act, a witness may refuse to answer any question on the ground that the answer may tend to criminate the person, or may tend to establish his/her liability to a civil proceeding at the instance of the Crown or of any person.

The procedure in general shall be informal without the evidence before it being given under oath or affirmation unless decided by the hearing members.

If the applicant has any questions to ask of the Hearing Board or of the Authority representative, they must be directed to the Chair of the board.

Appendix D

(Date)
BY REGISTERED MAIL
(name)
(address)

Dear:

RE: Hearing Pursuant to Section 28(12) of the Conservation Authorities Act
Proposed Residential
Development Lot , Plan ;
?? Drive City of
(Application #)

In accordance with the requirements of the Conservation Authorities Act, the (***name***) Conservation Authority provides the following Notice of Decision:

On (***meeting date and number***), the Hearing Board/Authority/Executive Committee refused/approved your application/approved your application with conditions. A copy the Boards/Committee's resolution # has been attached for your records. Please note that this decision is based on the following reasons: (***the proposed development/alteration to a watercourse or shoreline adversely affects the control of flooding, erosion, dynamic beaches or pollution or interference with a wetland or conservation of land***).

In accordance with Section 28 (15) of the Conservation Authorities Act, An applicant who has been refused permission or who objects to conditions imposed on a permission may, within 30 days of receiving the reasons under subsection (14), appeal to the Minister who may refuse the permission; or grant permission, with or without conditions. For your information, should you wish to exercise your right to appeal the decision, a letter by you or your agent/counsel setting out your appeal must be sent within 30 days of receiving this decision addressed to:

The Honourable David Ramsay
Minister of Natural Resources
Queen's Park, Whitney Block
99 Wellesley Street West, 6th Floor, Room 6630
Toronto, Ontario M7A 1W3
TEL: (416) 314-2301 FAX: (416) 314-2216

Should you require any further information, please do not hesitate to contact (***staff contact***) or the undersigned.

Yours truly,

Chief Administrative Officer/Secretary Treasurer

Enclosure

APPENDIX B

MNR DELEGATION OF NATURAL HAZARDS TO CONSERVATION AUTHORITIES

Mr. Charles Ort
Niagara Peninsula Conservation Authority
2358 Centre Street
Allanburg, Ontario
LOS lAO

Dear Mr. Ort:

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 C onservation 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.

.....2

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

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

MEMORANDUM OF UNDERSTANDING ON PROCEDURES TO ADDRESS CONSERVATION AUTHORITY DELEGATED RESPONSIBILITY

1. 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.

2. 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 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.

4. 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 resource 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 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 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 Responslbllltles

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.

5. 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”.

6. 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.

_____ _____

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

_____ _____

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

_____ _____

R.D. Hunter Date
General Manager
Conservation Ontario

APPENDIX C

CONSERVATION AUTHORIES ACT, ONTARIO REGULATION 155/06,

Conservation Authorities Act
Loi sur les offices de protection de la nature

ONTARIO REGULATION 155/06

NIAGARA PENINSULA CONSERVATION AUTHORITY: REGULATION OF DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND WATERCOURSES

Consolidation Period: From February 8, 2013 to the e-Laws currency date.

Last amendment: 71/13.

Legislative History: 71/13.

This Regulation is made in English only.

Definition

1. In this Regulation,

"Authority" means the Niagara Peninsula Conservation Authority. O. Reg. 155/06, s. 1.

Development prohibited

2. (1) Subject to section 3, no person shall undertake development or permit another person to undertake development in or on the areas within the jurisdiction of the Authority that are,

(a) adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beaches, including the area from the furthest offshore extent of the Authority's boundary to the furthest landward extent of the aggregate of the following distances:

(i) the 100 year flood level, plus the appropriate allowance for wave uprush shown in the most recent document entitled "Lake Ontario Shoreline Management Plan" available at the head office of the Authority,

(ii) the 100 year flood level, plus the appropriate allowance for wave uprush shown in the most recent document entitled "Lake Erie Shoreline Management Plan" available at the head office of the Authority,

(iii) the predicted long term stable slope projected from the existing stable toe of the slope or from the predicted location of the toe of the slope as that location may have shifted as a result of shoreline erosion over a 100-year period,

(iv) where a dynamic beach is associated with the waterfront lands, the appropriate allowance inland to accommodate dynamic beach movement shown in the most recent document entitled "Lake Ontario Shoreline Management Plan" available at the head office of the Authority, and

(v) where a dynamic beach is associated with the waterfront lands, the appropriate allowance inland to accommodate dynamic beach movement shown in the most recent document entitled "Lake Erie Shoreline Management Plan" available at the head office of the Authority;

(b) river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined in accordance with the following rules:

(i) where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of bank, plus 15 metres, to a similar point on the opposite side,

(ii) where the river or stream valley is apparent and has unstable slopes, the valley extends from the predicted long term stable slope projected from the existing stable slope or, if the toe of the slope is unstable, from

the predicted location of the toe of the slope as a result of stream erosion over a projected 100-year period, plus 15 metres, to a similar point on the opposite side,

(iii) where the river or stream valley is not apparent, the valley extends the greater of,

(A) the distance from a point outside the edge of the maximum extent of the flood plain under the applicable flood event standard, to a similar point on the opposite side, and

(B) the distance of a predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood standard, to a similar point on the opposite side;

(c) hazardous lands;

(d) wetlands; or

(e) other areas where development could interfere with the hydrologic function of a wetland, including areas up to 120 metres of all provincially significant wetlands and wetlands greater than 2 hectares in size, and areas within 30 metres of wetlands less than 2 hectares in size. O. Reg. 155/06, s. 2 (1); O. Reg. 71/13, s. 1 (1-3).

(2) All areas within the jurisdiction of the Authority that are described in subsection (1) are delineated as the "Regulation Limit" shown on a series of maps filed at the head office of the Authority under the map title "Ontario Regulation 97/04: Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses". O. Reg. 71/13, s. 1 (4).

(3) If there is a conflict between the description of areas in subsection (1) and the areas as shown on the series of maps referred to in subsection (2), the description of areas in subsection (1) prevails. O. Reg. 71/13, s. 1 (4).

Permission to develop

3. (1) The Authority may grant permission for development in or on the areas described in subsection 2 (1) if, in its opinion, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development. O. Reg. 155/06, s. 3 (1).

(2) The permission of the Authority shall be given in writing, with or without conditions. O. Reg. 155/06, s. 3 (2).

(3) Subject to subsection (4), the Authority's executive committee, or one or more employees of the Authority that have been designated by the Authority for the purposes of this section, may exercise the powers and duties of the Authority under subsections (1) and (2) with respect to the granting of permissions for development in or on the areas described in subsection 2 (1). O. Reg. 71/13, s. 2.

(4) A designate under subsection (3) shall not grant a permission for development with a maximum period of validity of more than 24 months. O. Reg. 71/13, s. 2.

Application for permission

4. A signed application for permission to undertake development shall be filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing the type and location of the proposed development.
2. The proposed use of the buildings and structures following completion of the development.
3. The start and completion dates of the development.
4. The elevations of existing buildings, if any, and grades and the proposed elevations of buildings and grades after the development.
5. Drainage details before and after the development.
6. A complete description of the type of fill proposed to be placed or dumped.
7. Such other technical studies or plans as the Authority may request. O. Reg. 155/06, s. 4; O. Reg. 71/13, s. 3.

Alterations prohibited

5. Subject to section 6, no person shall straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or change or interfere in any way with a wetland. O. Reg. 155/06, s. 5.

Permission to alter

6. (1) The Authority may grant permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or to change or interfere with a wetland. O. Reg. 155/06, s. 6 (1); O. Reg. 71/13, s. 4 (1).

(2) The permission of the Authority shall be given in writing, with or without conditions. O. Reg. 155/06, s. 6 (2).

(3) Subject to subsection (4), the Authority's executive committee, or one or more employees of the Authority that have been designated by the Authority for the purposes of this section, may exercise the powers and duties of the Authority under subsections (1) and (2) with respect to the granting of permissions for alteration. O. Reg. 71/13, s. 4 (2).

(4) A designate under subsection (3) shall not grant a permission for alteration with a maximum period of validity of more than 24 months. O. Reg. 71/13, s. 4 (2).

Application for permission

7. A signed application for permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or change or interfere with a wetland shall be filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing plan view and cross-section details of the proposed alteration.
2. A description of the methods to be used in carrying out the alteration.
3. The start and completion dates of the alteration.
4. A statement of the purpose of the alteration.
5. Such other technical studies or plans as the Authority may request. O. Reg. 155/06, s. 7; O. Reg. 71/13, s. 5.

Cancellation of permission

8. (1) The Authority may cancel a permission granted under section 3 or 6 if it is of the opinion that the conditions of the permission have not been met. O. Reg. 155/06, s. 8 (1); O. Reg. 71/13, s. 6 (1).

(2) Before cancelling a permission, the Authority shall give a notice of intent to cancel to the holder of the permission indicating that the permission will be cancelled unless the holder shows cause at a hearing why the permission should not be cancelled. O. Reg. 155/06, s. 8 (2).

(3) Following the giving of the notice under subsection (2), the Authority shall give the holder at least five days notice of the date of the hearing. O. Reg. 155/06, s. 8 (3); O. Reg. 71/13, s. 6 (2).

Period of validity of permissions and extensions

9. (1) The maximum period, including an extension, for which a permission granted under section 3 or 6 may be valid is,

(a) 24 months, in the case of a permission granted for projects other than projects described in clause (b); and

(b) 60 months, in the case of a permission granted for,

(i) projects that, in the opinion of the Authority or its executive committee, cannot reasonably be completed within 24 months from the day the permission is granted, or

(ii) projects that require permits or approvals from other regulatory bodies that, in the opinion of the Authority or its executive committee, cannot reasonably be obtained within 24 months from the day permission is granted. O. Reg. 71/13, s. 7.

(2) The Authority or its executive committee may grant a permission for an initial period that is less than the applicable maximum period specified in subsection (1) if, in the opinion of the Authority or its executive committee, the project can be completed in a period that is less than the maximum period. O. Reg. 71/13, s. 7.

(3) If the Authority or its executive committee grants a permission under subsection (2) for an initial period that is less than the applicable maximum period of validity specified in subsection (1), the Authority or its executive committee may grant an extension of the permission if,

(a) the holder of the permission submits a written application for an extension to the Authority at least 60 days before the expiry of the permission;

(b) no extension of the permission has previously been granted; and

(c) the application sets out the reasons for which an extension is required and, in the opinion of the Authority or its executive committee, demonstrates that circumstances beyond the control of the holder of the permission will prevent completion of the project before the expiry of the permission. O. Reg. 71/13, s. 7.

(4) When granting an extension of a permission under subsection (3), the Authority or its executive committee may grant the extension for the period of time requested by the holder in the application or for such period of time as the Authority or its executive committee deems appropriate, as long as the total period of validity of the permission does not exceed the applicable maximum period specified in subsection (1). O. Reg. 71/13, s. 7.

(5) For the purposes of this section, the granting of an extension for a different period of time than the period of time requested does not constitute a refusal of an extension. O. Reg. 71/13, s. 7.

(6) The Authority or its executive committee may refuse an extension of a permission if it is of the opinion that the requirements of subsection (3) have not been met. O. Reg. 71/13, s. 7.

(7) Before refusing an extension of a permission, the Authority or its executive committee shall give notice of intent to refuse to the holder of the permission, indicating that the extension will be refused unless,

(a) the holder requires a hearing, which may be before the Authority or its executive committee, as the Authority directs; and

(b) at the hearing, the holder satisfies the Authority, or the Authority's executive committee, as the case may be,

(i) that the requirements of clauses (3) (a) and (b) have been met, and

(ii) that circumstances beyond the control of the holder will prevent completion of the project before the expiry of the permission. O. Reg. 71/13, s. 7.

(8) If the holder of the permission requires a hearing under subsection (7), the Authority or its executive committee shall give the holder at least five days notice of the date of the hearing. O. Reg. 71/13, s. 7.

(9) After holding a hearing under subsection (7), the Authority or its executive committee shall,

(a) refuse the extension; or

(b) grant an extension for such period of time as it deems appropriate, as long as the total period of validity of the permission does not exceed the applicable maximum period specified in subsection (1). O. Reg. 71/13, s. 7.

(10) Subject to subsection (11), one or more employees of the Authority that have been designated by the Authority for the purposes of this section may exercise the powers and duties of the Authority under subsections (2), (3) and (4), but not those under subsections (6), (7), (8) and (9). O. Reg. 71/13, s. 7.

(11) A designate under subsection (10) shall not grant an extension of a permission for any period that would result in the permission having a period of validity greater than 24 months. O. Reg. 71/13, s. 7.

Appointment of officers

10. The Authority may appoint officers to enforce this Regulation. O. Reg. 155/06, s. 10.

Flood event standards

11. (1) The applicable flood event standards used to determine the maximum susceptibility to flooding of lands or areas within the watersheds in the area of jurisdiction of the Authority are the Hurricane Hazel Flood Event Standard, the 100 Year Flood Event Standard and the 100 year flood level plus wave uprush, described in Schedule 1. O. Reg. 155/06, s. 11 (1).

(2) The 100 Year Flood Event Standard applies to all watersheds within the area of jurisdiction of the Authority except for,

(a) the watersheds associated with Shriner's Creek, Ten Mile Creek and Beaverdams Creek (including Tributary W-6-5) in the City of Niagara Falls where the Hurricane Hazel Flood Event Standard applies; and

(b) Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System, as described in the Schedule, where the 100 Year Flood Event Standard, plus wave uprush, applies. O. Reg. 155/06, s. 11 (2).

12. REVOKED: O. Reg. 71/13, s. 8.

13. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 155/06, s. 13.

SCHEDULE 1

1. The Hurricane Hazel Storm Event Standard means a storm that produces over a 48-hour period,

(a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 1; or

(b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 1 shall be modified by the percentage amount shown in Column 2 of Table 2 opposite the size of the drainage area set out opposite thereto in Column 1 of Table 2.

TABLE 1

73 millimetres of rain in the first 36 hours
6 millimetres of rain in the 37th hour
4 millimetres of rain in the 38th hour
6 millimetres of rain in the 39th hour
13 millimetres of rain in the 40th hour
17 millimetres of rain in the 41st hour
13 millimetres of rain in the 42nd hour
23 millimetres of rain in the 43rd hour
13 millimetres of rain in the 44th hour
13 millimetres of rain in the 45th hour
53 millimetres of rain in the 46th hour
38 millimetres of rain in the 47th hour
13 millimetres of rain in the 48th hour

TABLE 2

Column 1	Column 2
Drainage Area (square kilometres)	Percentage
26 to 45 both inclusive	99.2
46 to 65 both inclusive	98.2
66 to 90 both inclusive	97.1
91 to 115 both inclusive	96.3
116 to 140 both inclusive	95.4
141 to 165 both inclusive	94.8
166 to 195 both inclusive	94.2
196 to 220 both inclusive	93.5
221 to 245 both inclusive	92.7
246 to 270 both inclusive	92.0
271 to 450 both inclusive	89.4
451 to 575 both inclusive	86.7
576 to 700 both inclusive	84.0
701 to 850 both inclusive	82.4
851 to 1000 both inclusive	80.8
1001 to 1200 both inclusive	79.3
1201 to 1500 both inclusive	76.6
1501 to 1700 both inclusive	74.4
1701 to 2000 both inclusive	73.3
2001 to 2200 both inclusive	71.7
2201 to 2500 both inclusive	70.2
2501 to 2700 both inclusive	69.0
2701 to 4500 both inclusive	64.4
4501 to 6000 both inclusive	61.4
6001 to 7000 both inclusive	58.9
7001 to 8000 both inclusive	57.4

2. The 100 Year Flood Event Standard means rainfall or snowmelt, or a combination of rainfall and snowmelt, producing at any location in a river, creek, stream or watercourse a peak flow that has a probability of occurrence of one per cent during any given year.

3. The 100 year flood level means the peak instantaneous still water level plus an allowance for wave uprush and other water-related hazards for Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System that has a probability of occurrence of one per cent during any given year.

O. Reg. 155/06, Sched. 1.

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APPENDIX D

WELLAND RIVER FLOODPLAIN ASSOCIATION CORRESPONDENCE

WELLAND RIVER FLOODPLAIN ASSOCIATION

Representing Property Owners in the Welland River Watershed

Mr. Chair, Mr. Vice Chair, Members of the Board, good morning and thank you for the opportunity to speak to you today. I am here today representing the Welland River Floodplain Association. Our group was formed in January 2012 to address community concerns regarding the expansion of the regulatory floodplain along the Welland River by this Agency. Since that time, we have worked with our communities, this Board, NPCA staff, politicians at all levels of Government and technical and engineering professionals in our attempts to successfully resolve this issue.

In addition to our ongoing concerns regarding the completion of the Welland River floodplain mapping project, we were also very concerned about regulatory policies. We felt that the previous policy document was arbitrarily and unnecessarily restrictive. Two years ago, when the NPCA initiated the project to update and revise the main policy document, we wanted to participate in that process.

We feel that the process, although lengthy, has been mostly positive. We have engaged members of our communities, attended all public information meetings, participated in the Watershed Floodplain Committee and Paddy Kennedy from Dillon has been very open to our many suggestions and recommendations.

For those property owners who find themselves in a regulated area, our initial concerns, although many and varied, can largely be distilled into three main areas. We felt that there were unreasonable restrictions to building, to the placement of fill material, and for the requirement to provide a lengthy list of expensive and complex technical studies.

With regards to building, we feel that those property owners who find themselves in the floodplain, should be allowed to live and enjoy their properties like all others. The risk, which exists in only the rarest, most extreme conditions - if at all, is simply in being there in the first instance, not in the size of your house or in the number or type of accessory structures on your property. We feel that the easing of some of the restrictions as reflected in section 4.0 should meet the needs of most property owners most of the time. We are largely satisfied with the improvements in this area.

With regards to the placement of fill material, we believe that restrictions are largely driven by the ideological desire to maintain flood water “storage” capacity. We strongly believe that any placement of fill material in all but the largest projects is so small as to make a negligible and immeasurable impact on design storm flooding levels. Additionally, we feel that “Cut and Fill” permit requirements do nothing to reduce flooding. In fact, we believe that the CA would be

more productive by promoting the placement of fill for best practices flood proofing and mitigation measures and we would like to see more efforts in this area. None the less, the small increase in allowable fill placement is a step in the right direction. We urge staff to set your radar high enough to avoid engagement in small construction or landscaping projects by individual landowners.

With regards to studies and engineering reports, we don't feel that there has been much progress in this area. If you look at clause 12.4, the CA reserves the right to demand at least nine different types of studies plus "other supporting studies as required". Many of these studies are complex and expensive, requiring engineers or other professionals. When faced with these requirements, many applicants do not have the knowledge or the resources to proceed and simply throw up their hands in defeat. For example, in clause 10.2.3, in order to permit the placement of over 250 m3 of fill, (about ten truck loads) five or more studies could be required. Most troubling of all, clause 12.4.6 requires an individual property owner to complete a floodplain mapping study where one does not currently exist. Not only is this a complex, expensive undertaking as many of us have come to understand over the past seven years, but flooding or water flows do not respect an individual's property lines or other arbitrary boundaries. There is no standardized methodology for floodplain mapping. Multiple studies, on behalf of individual property owners, by different engineers, perhaps using different modeling techniques and data sets will result in a patchwork map that serves no purpose. If this agency takes flood monitoring seriously, it must take an integrated and co-ordinated approach to floodplain mapping in order to maintain accuracy and consistency. Do not burden or depend on property owners to complete this work.

We are concerned that CA staff can request any study at any time with no downside or financial commitment. We would like to see much more burden of proof on the CA that a study is required and more partnership with property owners to avoid complex, time consuming and expensive studies unless absolutely necessary. We urge staff to do as much preliminary work as is practical to ensure that technical studies are necessary before burdening property owners with these requirements.

We recognize and appreciate the time and effort that has gone into the revision of this document by staff, Board members, Watershed Floodplain Committee members and especially Paddy Kennedy from Dillon. Even though, as indicated, we are not enthusiastic about certain clauses, in the interests of moving forward, we support the adoption of this draft.

We do have a few suggestions and recommendations that we would like to share.

1) Clause 12.7.4 describes a proposal for a Minor Variance process to be developed in the future, whereby an owner seeks relief from the letter of some policy in similar fashion as is common with municipalities. We think this proposal has merit and we hope that this can be implemented ASAP. We would like to see a reasonable fee structure and hope that the arbitrators can include members of the public.
2) If this policy review and revision process is in fact nearing completion, we would like to see attention returned to the Welland River floodplain mapping project. Our Association has devoted almost seven years to date to this project. We already have one member who did not live to see the final outcome.

3) We hope and expect that the CA will fulfil their promise and obligation to host another set of public information meetings to show the final floodplain lines and to explain the latest regulatory policies.
4) As this agency moves forward with other public facing projects including any future floodplain mapping projects, please don't make the same mistakes that initially plagued the Welland River project. Engage the public throughout, not because you may be criticized for not engaging, but because you value the input from those impacted in the community. Do it not because you have to, but because you want to.

Thank you for the opportunity to speak to you today.