

Saugen Valley Conservation Authority

Environmental Planning and Regulations Policies Manual



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EXECUTIVE SUMMARY

Saugeen Valley Conservation Authority (SVCA) has a legislative mandate to protect people and property from natural hazards. Under agreement with its watershed municipalities, SVCA, through its Planning and Regulations Department, provides environmental expertise to guide municipal and other land use decisions on a watershed basis. Prior to the approval of this document, the policy platform being used by SVCA consisted of a number of policy directives, statements and guidelines that while available, had not been consolidated into one central document, easily accessible by all who may have an interest.

Having an updated suite of Environmental Planning and Regulations policies is a vital foundation for effective decision making. Having an accessible, easily understood and well-articulated Manual that defines the dual role of SVCA to provide:

- advice to its watershed municipalities under *The Planning Act*; and
- permitting/regulatory role under *The Conservation Authorities Act*.

Not only are these policies utilized by SVCA staff in their review, but they are also relied upon by municipal staff and used as the basis for developing policies contained in upper tier County and lower tier Official Plans. In addition, the policy platform offers developers and environmental stakeholders an important lens by which to better understand SVCA mandate and responsibilities.

Planning and regulation policies must be robust, reflective and current if they are to provide guidance and direction. They must offer a consistent interpretation and clear direction not only for staff of Saugeen Valley Conservation Authority, but for its partners and clients. Having an affirmed planning and policy platform establishes credibility, promotes consistency and increases understanding and awareness. It is a vital evaluation, assessment and decision-making tool.

This Environmental Planning and Regulations Policy document represents a first in the history of the SVCA. While SVCA staff have been applying provincial policy under the *Planning Act* and regulatory responsibilities under the *Conservation Authorities Act*, the policies upon which SVCA offers municipal guidance and makes decisions regarding the issuance of permits has not been shared broadly with partners, clients or with watershed landowners. This Manual is an attempt to rectify that situation by ensuring that all interested parties – provincial and federal government staff, watershed municipal partners, elected community leaders, special interest groups and landowners – are aware of the planning and regulatory requirements and moreover, have a solid understanding of the basis for any decision made by the SVCA. For this reason, every effort has been made to create a document that is easy to understand, easy to use and easy to navigate.

This Manual summarizes SVCA's mandate and legislative responsibilities. In fact, this Manual has been written to offer a laser-focused view of the purpose, function and role of the conservation authority from both a planning and a regulatory lens. It has been written to:

- ✓ Reflect SVCA mandate and legislative responsibilities as assigned by the Province;
- ✓ Reflect current provincial land use planning objectives;
- ✓ Identify matters of provincial interest for which SVCA has responsibility to address from a policy and an operational perspective;
- ✓ Comply with Ontario Regulation 169/06, as amended;
- ✓ Articulate the requirements associated with conducting Environmental Impact Studies as well as Stable Slope Analyses.

Please note that consistent nomenclature has been used throughout this document. Saugeen Valley Conservation Authority is at times referenced as SVCA and as Saugeen Conservation. References to the Ministry of Environment now refer to the Ministry of Environment & Climate Change (MOECC), as it is currently known. Similar, all references to the Ministry of Natural Resources refer to the Ministry of Natural Resources & Forestry (MNRF) again in recognition of recent portfolio changes implemented by the province.

Any questions concerning this Planning & Regulations Policies Manual may be directed to:

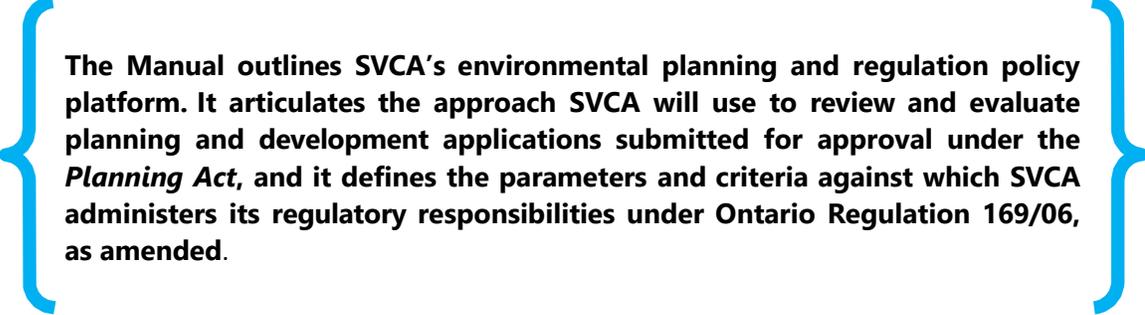
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PREFACE - PURPOSE & LAYOUT OF THE MANUAL

Purpose of the Manual

A new Environmental Planning and Regulations Policy Manual is needed for a number of critical reasons. SVCA did not have in place an Environmental Planning and Regulations Policy Manual and instead relied on a range of policy sources and regulatory guidelines when reviewing applications submitted to watershed municipalities for approval under The *Planning Act* as well as the review of applications submitted to SVCA under the *Conservation Authorities Act*.

To address the spectrum of SVCA program priorities and core mandate.



The Manual outlines SVCA’s environmental planning and regulation policy platform. It articulates the approach SVCA will use to review and evaluate planning and development applications submitted for approval under the *Planning Act*, and it defines the parameters and criteria against which SVCA administers its regulatory responsibilities under Ontario Regulation 169/06, as amended.

This updated Manual will serve many uses and many users:

- It will provide guidance and direction to SVCA staff responsible for reviewing *Planning Act* and *Conservation Authority Act* applications for approval against the policies contained herein.
- It will provide direction to municipalities (both local and upper tier) who will take these policies and incorporate them further in their planning review functions and in their planning (e.g. Official Plans) documents.
- It will provide guidance and direction to the development community (applicants and their agents) who will be able to rely on this Manual to provide guidance and direction as they prepare proposals for consultation, review and approval.
- It will provide guidance and direction to community stakeholders who have an interest in protecting, preserving and enhancing those natural features and functions of the watershed that are worthy of protection; and finally
- It will instill confidence among Provincial partners that matters of stated Provincial interest have been accurately interpreted and are being applied appropriately.

Layout & Structure of the Manual

This document consists of:

- Chapter 1:** **Introduction** provides an overview of the authorizing legislation and regulation that Saugeen Valley Conservation Authority is governed by. It also provides a summary of the role of conservation authorities generally and describes the other legislation and policies that SVCA relies on to make regulatory decisions and planning-related recommendations.
- Chapter 2:** **SVCA Approach to Watershed Planning** outlines the key principles upon which the Environmental Planning and Regulations policies are based. It structures SVCA's policy platform into four key areas: health and safety, environmental planning, stewardship and watershed science.
- Chapter 3:** **SVCA Land Use Planning Policies** outlines the provincial policies that provide direction to SVCA in carrying out its advisory responsibilities to watershed municipal partners under the Planning Act.
- Chapter 4:** **Policies and Procedures for the Administration of Ontario Regulation 169/06, as amended** outlines the policies, procedures and regulatory requirements associated with SVCA's administration of Ontario Regulation 169/06, as amended.

This Manual document has been developed so that it is easy-to-read and easy-to-understand. The following symbols provide important information for the reader:

	Denotes important information that the reader should be aware of.
	Denotes SVCA policy and procedures.
	Denotes the availability of additional information for those who may have an interest in learning more.

It is the intent of the SVCA to revisit this policy manual from time to time to adjust for case law, watershed needs and science progress, Regulation updates, Act updates, etc. This review may occur every five years and as necessary when issues arise.

CHAPTER 1: AN INTRODUCTION

Topics Covered

History of Conservation Authorities

Role & Mandate of Conservation Authorities

Legislative Authority

Role & Mandate of Saugeen Valley Conservation Authority

Relationship to Other Agencies

CHAPTER 1: AN INTRODUCTION

1.1 HISTORY OF CONSERVATION AUTHORITIES

Conservation Authorities have a long and important history in Ontario, not simply from a natural hazard lens but also from the perspective of natural heritage. For many, the impetus behind the creation of the conservation authority movement began with an early concern for the natural environment. While many may be of the view that conservation authorities were created to address devastating flooding and erosion concerns that were precipitated by Hurricane Hazel and the Timmins storm, the movement began in response to prevailing concerns with poor land, water and forestry practices that had taken place in the 1930s and 1940s. Organizations dedicated to conservation and wise resource use were becoming collectively concerned with drought, extensive soil loss, deforestation and flooding and called for a more enlightened and integrated approach to resource management using natural watershed boundaries. Moreover, many recognized that the environmental impacts necessitated a more collaborative approach and action was taken by a number of municipal councils that saw the enactment of the *Conservation Authorities Act* (CAA) in 1946. The CAA was premised on watershed management and provided the legislative framework for collaborative action by the province and watershed municipalities and those early beginnings paved the way for a number of legislative amendments over time.

In 1956, in response to severe economic and human losses associated with Hurricane Hazel (1954), changes were made to the *Conservation Authorities Act* to empower CAs to make Regulations to prohibit filling in floodplains. These Regulations were broadened in 1960 to prohibit or regulate the placing or dumping of fill in defined areas where in the opinion of the CA, the control of flooding, pollution or the conservation of land may be negatively affected. In 1968, amendments to the *Conservation Authorities Act* further extended the Regulations to prohibit or control construction and alteration to waterways, in addition to filling. Since that time, the *Conservation Authorities Act* has been amended – in 1998 as part of the Red Tape Reduction Act (Bill 25) to ensure that Regulations under the Act were consistent across the province and complimentary to provincial policies. Revisions were made to Section 28 of the CAA which led to the “Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” Regulation (97/04). While some CAs had been regulating wetlands, shorelines and inter-connecting channels for years, the amendments required all CAs to regulate Great Lakes shorelines, interconnecting channels, large inland lakes and wetlands in addition to the areas and features each CA had historically regulated.

In 2006, the Minister of Natural Resources and Forestry approved the individual “Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” Regulations for all CAs (Ontario Regulation 42/06 and 146/06 to 182/06) to be consistent with Ontario Regulation 97/04. Through these regulations, CAs are empowered to regulate development and site alterations in or adjacent to river or stream valleys, Great Lakes and their shorelines, watercourses, hazardous lands and wetlands. These Regulations ensure conformity of wording across all CAs and complement municipal implementation of provincial policies under the *Planning Act*. Development taking place on these lands may require permission from individual Conservation Authorities to confirm that the control of flooding, erosion, dynamic beaches, pollution or the conservation of land are not negatively affected. They also regulate the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse or for changing or interfering in any way with a wetland.

Efforts are presently underway by the province to consider legislative amendments to the *Conservation Authorities Act* to improve oversight and accountability, to enhance clarity and advance consistency across the CA sector, to promote greater collaboration and engagement, to address funding mechanisms and to provide greater flexibility for the province to develop additional programs and consider additional opportunities for delegation. While these legislative enhancements remain under review at the time of writing (Summer 2016), it is anticipated that the suite of statutory enhancements will be developed by the province once the Environmental Bill of Rights Registry (EBR) posting closes in September 2016.

1.2 ROLE AND MANDATE OF CONSERVATION AUTHORITIES

Ontario's 36 Conservation Authorities perform a number of important responsibilities:

- **Conservation Authorities are corporate bodies created by the Province** at the request of two or more municipalities in partnership with the province and in accordance with the requirements of the *Conservation Authorities Act* (CAA). As watershed-based resource management agencies, each Conservation Authority is governed by the CAA and by a Board of Directors (referred to as Authority Members) whose members are appointed by municipalities located within the CA's jurisdiction in accordance with the CAA.
- **Conservation Authorities have delegated responsibilities from the Minister of Natural Resources and Forestry** with respect to representing provincial interests regarding natural hazards identified in Section 3.1 of the *Provincial Policy Statement, 2014* (PPS, 2014). These delegated responsibilities require CAs to review and provide comments on:
 - policy documents (Official Plans and Comprehensive Zoning By-laws) and
 - applications submitted under the *Planning Act* as part of the Provincial One-Window Plan Review Service.
- **Conservation Authorities as 'public bodies' pursuant to the Planning Act**, are required to be notified of policy documents and planning and development applications as prescribed under the Act. CAs may comment as per their mandate to the municipality/planning approval authority on these documents and applications. In this role, the CA is responsible to represent its program and policy interests as a watershed based resource management agency. In this regard, CAs operating under the authority of the CAA, 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.
- **Conservation Authorities may perform a technical advisory role to municipalities**, as determined under the terms of a service agreement with participating municipalities which may include, but is not limited to, matters related to the assessment or analysis of environmental impacts, watershed science and technical expertise associated with activities near or in the vicinity of: sensitive features such as wetlands, river and stream valleys, fish habitat or significant woodlands; hydrogeology and storm water studies; and, in some cases, sewage disposal system reviews.
- **Individual Conservation Authorities may enter into agreements** with provincial and federal ministries and with municipalities to undertake specific regulatory/approval responsibilities.
- **Conservation Authorities are landowners**, as outlined in the Conservation Ontario (CO)/Ministry of Natural Resources & Forestry (MNRF)/Ministry of Municipal Affairs and Housing (MMAH) Delegated Responsibilities MOU and as such, may become involved in the planning and development process, either as adjacent landowner or as a proponent/applicant.

1.3 LEGISLATIVE AUTHORITY

The legislative authority that is assigned to conservation authorities derives from two primary statutes: the *Conservation Authorities Act* and the *Planning Act*. In addition, however, the role and responsibilities of Ontario's 36 conservation authorities has evolved over time, largely in response to the issuance of new provincial programs and the delegation of authority that has been assigned to CAs. For this reason, it is not only critical to understand how the CA derives its authority, but it is vital to understand that conservation authorities are just one player in a

planning landscape that involves many agencies and organizations including federal and provincial government ministries and agencies as well as municipal partners, all of whom derive their authority from legislation.

1.3.1 Conservation Authorities Act

The *Conservation Authorities Act* assigns a broad set of responsibilities to all Conservation Authorities across Ontario. The Act (Section 20) requires all CAs to design a program(s) to further the conservation, restoration and management of natural resources that fall within a specific CA jurisdiction. It defines the objects of a Conservation Authority as follows:

Section 20: The objects of an authority are to establish and undertake, in the areas 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.

The Act provides further direction as to how the objects of a CA are to be achieved:

Section 21: For the purposes of accomplishing its objects, an authority has power.

*a) To study and investigate the watershed and to determine a program whereby the natural resources of the watershed may be conserved, restored, developed and managed.*¹

In addition, the Act bestows regulatory responsibilities on CAs under Section 28 of the Act. Under Section 28, CAs are empowered to prepare Regulations, commonly referred to as the “Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses” (Generic or Content Regulation). These Regulations are subject to the approval of the Minister of Natural Resources and Forestry.

Section 28:

(1) Subject to the approval of the Minister, an authority may make regulations applicable in the area under 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 or 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 negatively affected by 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 the powers and duties of officers to enforce any regulation made under this section.*

¹ Under Section 21, CAs may also purchase, acquire or dispose of personal property; use lands that are owned or controlled by the authority for purposes that are in keeping with its objects and as it considers proper; use lands owned or controlled by the authority for park or other purposes and erect or permit to be erected, buildings, booths and facilities; charge fees for services approved by the Minister; collaborate and enter into agreements with ministries and agencies of government, municipal councils, local boards and other organizations.

Each CA has developed individual regulations that govern certain works in and adjacent to watercourses (including valley lands), wetlands, shorelines or inland lakes and the Great Lakes-St. Lawrence River System and other hazardous lands.



SVCA administers Ontario Regulation 169/06, as amended, which requires SVCA to regulate development and site alterations within its regulated area.

1.3.2 The Planning Act

Section 3(1) of the *Planning Act* provides for the issuance of policy statements on matters relating to municipal planning that are of provincial interest (e.g. PPS, 2014). Through the Minister of Natural Resources and Forestry's delegation letter and accompanying Memorandum of Understanding (MOU), specific responsibilities have been delegated to CAs to ensure that development application decisions made pursuant to the *Planning Act* are consistent with the natural hazard policies of the Provincial Policy Statement, 2014.

The 2001 Memorandum of Understanding (MOU) with the Ministry of Municipal Affairs and Housing (MMAH) and the Ministry of Natural Resources & Forestry (MNRF) clarifies and defines the roles and responsibilities of each agency with respect to delegated responsibilities for natural hazards including those assigned to conservation authorities under the One Window Planning System.

Conservation Authorities were delegated natural hazard responsibilities by the Minister of Natural Resources & Forestry. Natural hazards include:

- Floodplain management;
- Hazardous slopes;
- Great Lakes shorelines; and
- Unstable soils and erosion

In keeping with Section 3(5) of the *Planning Act*, decisions of Municipal Council, Local Boards, Planning Board, Ministers of the Crown, Agencies, Boards and Commissions shall be consistent with provincial policy statements in effect and further, that decisions conform to established provincial plans.

Further, Section 26 of the *Planning Act* requires municipalities to review Official Plans every five years to ensure that Municipal Official Plans conform to provincial plans and reflect established provincial policy and are consistent with provincial policy statements issued under Section 3(1).

1.3.3 Other Legislation

In addition to the *Conservation Authorities Act* and the *Planning Act*, CAs may have additional responsibilities under other pieces of legislation including the *Clean Water Act*. There may be additional authorizations, permits or approvals that may be required from other agencies. In this regard, applicants or their agents should be aware of the following:

Applicants are responsible for obtaining all necessary approvals and for taking steps necessary to secure such approvals.

Securing approval under Section 28 of the CAA does not imply that additional approvals will be forthcoming from other agencies.

The following is a list of some of the primary pieces of federal and provincial legislation that relate both directly and indirectly to the mandate of conservation authorities in Ontario.

1.3.3.1 Federal Legislation

Navigable Waters Protection Act

The Navigable Waters Act was first enacted in 1882, declaring the beds of all navigable waters as public domain. The ownership of the bed of a waterway in Ontario often depends on the question of navigability and the application of the *Navigable Waters Protection Act*. If the watercourse is navigable, the bed of the watercourse is Crown Land by virtue of the Act. The right of navigation is therefore protected under the *Navigable Waters Protection Act*, as administered by Transport Canada and is the responsibility of the Canadian Coast Guard.

Canadian Environmental Assessment Act

The *Canadian Environmental Assessment Act* (CEAA) requires federal departments to conduct environmental assessments for prescribed projects and works prior to providing federal approval or financial support. The environmental assessment process is a planning tool that is used to identify the potential effects of projects or works on the environment including its impact on air, water, land, living organisms and humans.

Fisheries Act

Prior to November 25, 2013, the SVCA served as the first point of contact and the local service provider for review of Section 35 of the previous version of the federal *Fisheries Act*.

As a result of changes within Fisheries and Oceans Canada (DFO), **Conservation Authorities no longer provide regulatory review for works under the federal *Fisheries Act* and therefore the previous partnership agreements between DFO and Conservation Authorities are no longer in effect.** The focus is now on proponent self-assessment, streamlining regulatory reviews and greater emphasis on large-scale projects.

Notwithstanding development of an MOU, Conservation Authorities may still continue to undertake advisory reviews involving fisheries and aquatic resources under the Planning Act and/or as a watershed management agency under the *Conservation Authorities Act*.

Conservation Authorities are still involved in administering regulations under the *Conservation Authorities Act* for works within regulated areas and will continue to provide quality service in this regard.

New Fisheries Act Self-Assessment Process



With regards to the Federal Fisheries Act, effective November 25, 2013, proponents must ensure that their projects meet the DFO requirements under the self-assessment process. The following links provide further information:



Does my project need a review? <http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>.



The new Memorandum of Agreement between Fisheries and Oceans Canada and Conservation Ontario for Cooperation for Fisheries and Aquatic Resource Protection in Ontario was signed September 29, 2014 and is included in Appendix B.

Species At Risk Act

The *Species At Risk Act* (SARA) is a federal statute, enacted in 2002 and designed to meet one of Canada's key commitments under the International Convention on Biological Diversity. The goal of the Act is to protect endangered or threatened species and their habitats as well as to manage species that are not yet threatened but whose existence or habitat is in jeopardy. Under SARA, steps are identified that must be taken to protect existing healthy

environments as well as the recovery of threatened habitats. The Act defines ways in which government, industry and community can work collectively to preserve species at risk.

1.3.3.2 Provincial Legislation

Aggregate Resources Act

Under the *Aggregate Resources Act*, Conservation Authorities review proposals when requested by MNRF for aggregate activities and also comment in an advisory capacity to municipalities who have the responsibility for making planning decisions on application approvals. The Ministry of Natural Resources & Forestry has the overall responsibility for administration of the Act.

Clean Water Act

Conservation Authorities, where designated by municipalities, have a responsibility under the *Clean Water Act (CWA)* to exercise and perform certain powers and duties of a source protection authority for a source protection area established by CWA regulation. Acting as source protection authorities under the CWA during the development of Source Protection Plan, CAs are responsible for:

- Collecting, analyzing and compiling technical and scientific information and data (watershed characterizations, water budgets)
- Local engagement, consultation, information management and communications
- Providing a support role to Source Protection Committees, including funding support
- Coordinating technical work with municipalities and others

Once a Source Protection Plan has been approved, the Minister of the Environment specifies a date by which a review of the plan must begin, and the Source Protection Authority ensures that the review and those that follow are conducted in accordance with the CWA and its regulations. Municipal Official Plans and Zoning By-laws will have to 'have regard to' the policies contained in the Source Protection Plans. In addition, municipalities have the ability to designate planning authorities or Conservation Authorities as Risk Management Officials under the Act.

Drainage Act

The *Drainage Act* defines a process whereby property owners can petition their local municipality to develop communal solutions to solve drainage problems. Using the procedures in the Act the construction of a "municipal drain" – a communal drainage system designed to accommodate water flowing from the properties located within the watershed can be accommodated. The Act defines "drainage works" 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

Once constructed under the authority of a by-law, a municipal drain becomes part of the municipality's infrastructure. The local municipality is responsible for repairing and maintaining the municipal drain in accordance with the associated engineers report. In certain circumstances, the municipality can be held liable for damages for not maintaining these drains. Municipal drains meet the definition of a watercourse as defined by the *Conservation Authorities Act*, and as such are regulated under an individual Conservation Authority's Regulation.

Environmental Assessment Act

Under the *Environmental Assessment Act (EAA)*, proponents are required to consult with Conservation Authorities on proposed works that require an Environmental Assessment. As a result, CAs review and comment on Class and Individual Environmental Assessment that occur within their jurisdiction.

Endangered Species Act

Under the *Endangered Species Act*, there are provisions to identify and protect species that are at risk as well as their habitats. There is also an opportunity under the legislation to promote stewardship activities to assist in the protection and recovery of species that are at risk.

Environmental Protection Act

Under the *Environmental Protection Act*, Ontario's Ministry of the Environment is provided with specific powers to protect and conserve the natural environment. In particular, the Act provides the Minister of the Environment with the ability to investigate problems relating to pollution, waste management, waste disposal, litter management and litter disposal and to conduct research, carry out studies of the natural environment and convene conferences pertaining to contaminants, pollution, waste and litter.

Green Energy & Green Economy Act (AND O.R. 359/09)

Under the *Green Energy & Green Economy Act*, there are provisions for completing a records review and for consultation on significant natural features including water resources. The Act places responsibilities on Conservation Authorities to issue permits under Section 28 of the *Conservation Authorities Act* for development related to renewable energy projects and further, prevents CAs from refusing to grant permission or to attach conditions on development unless they are necessary to control pollution, flooding, erosion or dynamic beach hazards.

Lakes and Rivers Improvement Act

The *Lakes and Rivers Improvement Act* provides for the management, protection, preservation and use of the waters of the lakes and rivers of Ontario and the land under them. It provides for the protection and equitable access of public rights in or over Ontario's lakes and rivers and addresses the rights of riparian owners. The Act also provides for the management, perpetuation and use of the fish, wildlife and other natural resources that are dependent upon Ontario's lakes and rivers and ensures the protection of the natural amenities of the lakes and their shores and banks. The act also provides for the protection of persons and property by ensuring that dams are suitably located, constructed, operated and maintained.

Nutrient Management Act

The Ministry of Agriculture, Food and Rural Affairs (OMAFRA) administers and enforces the *Nutrient Management Act* which provides for the management of materials containing nutrients in a way that will enhance the protection of the natural environment and support a sustainable future for agricultural operations and rural development.

Ontario Beds of Navigable Waters Act

The *Ontario Beds of Navigable Waters Act* is declaratory legislation that pertains to title in the beds of navigable waters. The Act was enacted in response to a 1911 case involving Keewatin Power and the Town of Kenora and was enacted to provide clarification with respect to the ownership of the beds of navigable waters. The Act provides clarity around the ownership of the bed of a navigable body of water and indicates that any land grant that may have been provided to a grantee bordering Crown land does not include the bed of that navigable body of water.

Ontario Building Code Act

The Ontario Building Code and the *Ontario Building Code Act* set standards for all types of construction and building projects in Ontario. Municipal Councils are responsible for enforcing the Act and for appointing a Chief Building Official and inspectors to enforce the Act. The act prohibits any person from constructing or demolishing a building unless the Chief Building Official has issued a permit. The Ontario Building Code also provides directives for the construction of sewage disposal systems, and outlines responsibilities to be carried out by the municipality or an appointed representative (e.g. health unit). A permit must be issued unless the proposed building, construction or demolition will contravene the Act, the Building Code or any other applicable law.

Ontario Water Resources Act

The *Ontario Water Resources Act* provides for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use.

Planning Act

The Planning Act is the primary piece of legislation that governs provincial and municipal regulation of land use. The *Planning Act* sets out the requirements that municipalities must meet in carrying out their planning responsibilities and defines through the issuance of a Provincial Policy Statement, matters of provincial interest.

Public Lands Act

The Public Lands Act provides specific powers to the Minister of Natural Resources & Forestry for the management, sale and disposition of public lands and forests in Ontario.

1.4 ROLE & MANDATE OF SAUGEEN CONSERVATION (SVCA)

Saugeen Conservation was established in 1950 largely in response to local concerns with flooding in and around the communities along the Saugeen River. From its start in the Saugeen River watershed, Saugeen Conservation's jurisdiction has expanded over the years to include the Pine River, Penetangore River and several smaller watersheds draining into Lake Huron. Significant flooding events on the Saugeen River occurred in 1947, 1948, 1970, 1977, 1981, 1986, 1997, and 2016. Efforts to control flooding include dyke systems at Walkerton, Paisley, Durham, and Pinkerton, as well as channelization at Durham and Neustadt. An extensive flood forecasting system has been developed. Large-scale erosion control projects have been completed in Southampton and Kincardine.

Saugeen Conservation is responsible for:

- Minimizing loss of life and minimize property damage from natural hazards;
- Controlling filling and drainage of natural storage areas such as wetlands;
- Regulating works that have the potential to increase flooding levels;
- Preventing the degradation of groundwater aquifers and recharge areas; and,
- Ensuring the conservation of land.

Governed by an Authority of seventeen members, SVCA is accountable to its member municipalities and has responsibility for the conservation, restoration, development and management of the natural resources in the watershed.²

1.4.1 Role & Mandate of the SVCA

SVCA derives its authority from legislation and in particular from the *Conservation Authorities Act* (and associated Regulations), and the *Planning Act*. As prescribed by legislation, Saugeen Conservation performs a number of important roles across the watershed:

1. SVCA has **delegated responsibilities** from the Minister of Natural Resources & Forestry to review policy documents and planning and development applications submitted for approval under the *Planning Act* to ensure that they are consistent with the natural hazards policies of the Provincial Policy Statement.



SVCA has delegated responsibility for reviewing and commenting on hazard planning issues and for interpreting hazard policies contained in the Provincial Policy Statement.

2. SVCA as a 'public body' pursuant to the Planning Act, acts as a **commenting agency** to member municipalities and/or planning approval authorities on policy documents, planning and development applications submitted for approval under the Planning Act.

² SVCA does not have authority to manage oil, gas, coal or mineral resources, as stipulated by the *Conservation Authorities Act*.



SVCA has responsibilities as a Watershed commenting agency under the Planning Act and provides comment on the potential implications of development proposals from a watershed perspective. These comments are provided to member municipalities and also to the Province as the planning approval authority.

3. SVCA provides **technical advisory services and planning advice** to municipalities in keeping with the service level agreements that are in place with Bruce County and Wellington County, and with the Municipality of Grey Highlands, the Municipality of West Grey, the Township of Chatsworth and the Township of Southgate.



Saugeen Conservation has six (6) Partnership Memoranda presently in place with the Counties of Bruce and Wellington, with the municipalities of Grey Highlands and West Grey and with the Townships of Chatsworth and Southgate.³

These Partnership Memoranda specify the role and the responsibilities of both SVCA and the municipality with respect to environmental planning. These Agreements prescribe the processing fees for various planning applications and stipulate that SVCA will provide planning advisory services on a cost-recovery basis, in seventeen (17) key areas:

- Natural hazard planning (flooding, erosion, unstable slopes and soils);
- Natural heritage planning (wetlands, significant woodlands, fish habitat impacts and mitigation, significant valleylands, habitat of threatened and endangered species, significant wildlife habitat, areas of natural and scientific interest, vulnerable surface and ground water, subwatershed planning/master drainage planning; lakes and rivers and shoreline impacts; and groundwater recharge/discharge areas where there is a fisheries or wetland impact; and,
- Adequacy of stormwater management plans from the perspective of SVCA.

1.4.1.2 Other Legislative Authority:

In addition to the *Conservation Authorities Act* and the *Planning Act*, development applications are subject to the legislative requirements of a range of provincial statutes that may be enacted from time to time. ***In the case of Saugeen Conservation, there are a number of critical pieces of legislation that will impact any development review process.***

1.4.2 Relationship to Other Agencies

As noted above, conservation authorities are responsible for performing a number of critical functions, as directed by the *Conservation Authorities Act*. CA's are responsible for:

- Studying and investigating the watershed and developing a program(s) to conserve, restore, develop and manage the natural resources of the watershed;
- Collaborating and entering into agreements with ministries and agencies of government, municipal councils and local boards and other organizations;
- Undertaking research; and
- Carrying out other tasks associated with managing specific CA-related projects.

Under Section 28 of the *Conservation Authorities Act*, CA's are empowered to prepare Regulations and in keeping with this regulatory authority, are responsible for:

³ Maitland Valley CA, Grey Sauble CA, Grand River CA, and Nottawasaga CA have similar agreements with each of the watershed municipalities that straddle SVCA, MVCA, GSCA, GRCA, and NVCA jurisdictions. The Memorandum of Agreements prescribe both the Plan Review and Technical Clearance responsibilities assigned to the conservation authority.

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

The planning process in Ontario is complex. There are many agencies at the Federal, Provincial and Municipal level who have an interest in, and a responsibility for, the review and approval of planning and development applications. At first glance, this relationship may appear duplicitous and overtly complex. However, the authority prescribed to each Ministry/Agency is founded in legislation. Some of these legislative requirements and responsibilities have been articulated in Chapter 1.

At the Federal level, responsibilities for administering the Canadian Environmental Assessment Act are prescribed to Environment Canada. Other responsibilities for navigable waterways and for federal Fisheries Act are also in place. At the Provincial level in Ontario, the Ministry of Municipal Affairs and Housing is responsible for administering the Planning Act. The Ministry of Natural Resources & Forestry is responsible for administering over fifty (50) pieces of legislation including the *Public Lands Act*, the *Lakes & Rivers Improvement Act* and the *Aggregate Resources Act* to name a few. The Ministry of the Environment & Climate Change has responsibility for administering the *Environmental Protection Act*, the *Clean Water Act* and the *Environmental Assessment Act*, for example. The inter- relationships between various Ministries and Agencies are frequently prescribed in formal Memorandums of Agreement (MOA) or Memorandums of Understanding (MOU). There are MOU's in place at the Federal level and also at the Provincial level that articulate the relative role and responsibilities of various agencies.

Federal MOU: Despite the fact that individual MOUs are no longer in place between individual conservation authorities and the Department of Fisheries & Oceans (DFO) to review applications in light of their impact on fish habitat, Conservation Ontario has an MOU in place with DFO (referenced in Chapter 1 and signed in 2014) to articulate this new business relationship.

Provincial MOU: The Memorandum of Understanding (MOU) with the Ministry of Municipal Affairs and Housing (MMAH) and the Ministry of Natural Resources & Forestry (MNRF) clarifies the role of Conservation Authorities under the One Window Planning System. Conservation Authorities were delegated natural hazard responsibilities by the Minister of Natural Resources in April 1995. Natural hazards include:

- Floodplain management;
- Hazardous slopes;
- Great Lakes shorelines;
- Unstable soils and erosion; and,
- All encompassed by Section 3.1 "Natural Hazards" of the Provincial Policy Statement.

First Nations:

Engagement with First Nations is contingent upon SVCA's interest to consult. Saugeen Conservation is aware of the special business relationship that the province of Ontario is promoting and recognizes its First Nation partners as a separate level of government. In recognition of the important connection First Nations have with the land, SVCA will continue to work with and honour this special relationship by engaging in particular with the Chippewas of Nawash Unceded First Nation, Saugeen Ojibwa Nation, Historic Saugeen Métis, and the Chippewas of Saugeen First Nation.

1.4.3 Relationship of the Regulation to the Planning Act & Provincial Policy Statement

It is important to understand the linkage between regulatory approvals issued by SVCA under Section 28 of the *Conservation Authorities Act* and approvals that are issued by planning authorities under the *Planning Act*. The *Planning Act* establishes the principle of development. The CA permitting process provides for technical implementation of matters pursuant to Section 28 of the CAA. Concerns regarding the principle of development are conveyed to the municipality during the *Planning Act* approval process and are not normally addressed through the CA permitting process.



Applicants who are contemplating development in the watershed are advised to check with Saugeen Valley Conservation Authority or the local and/or upper tier municipality to determine the requirements contained in Official Plans and Zoning By-laws and the latest requirements prescribed under the Provincial Policy Statement and related planning initiatives.



Applicants are also advised to contact the Municipal Building Official or By-law Enforcement Officer with any questions pertaining to enforcement or the application of applicable law.

1.4.4 Key Principles

In carrying out its mandated responsibilities, SVCA will be guided by the following principles:

Delegated Authority	SVCA will operate in accordance with the provisions of the CO-MNRF-MMAH Memorandum of Understanding when carrying out its plan review responsibilities.
Planning Act Priority	SVCA recognizes that the ‘principle of development’ is preferred to be established through the <i>Planning Act</i> . Any concerns regarding the establishment of the principle of development will be conveyed to the municipality/planning approval authority during the <i>Planning Act</i> approvals process and not addressed through the CA permitting process. (<i>Planning Act</i> approvals are to be secured first; permit approvals follow).
Partnership	SVCA will promote a collaborative and ‘whole team approach’ with member municipalities and will participate in pre-consultation arranged by member municipalities.
Process Fairness	SVCA will ensure that applicants are treated respectfully through decision making processes that are both fair and easy to understand. This reinforces that we will address requirements that are in effect at the time of submission. In the event that historical planning approval decisions were made in the absence of current technical information which could preclude development under the <i>Conservation Authorities Act</i> , SVCA will work diligently with the applicant and municipality.
Service Excellence	SVCA is committed to service excellence and to providing timely, transparent and professional services to all.

These principles are directly aligned with Saugeen Conservation’s corporate values:

2011 Strategic Plan

Our Values

- Build respect and trust with our partners, community organizations and the public through our commitment to openness and accountability;
- Act professionally to ensure that our decisions are balanced and fair and that our work is completed in an effective and timely manner; and,
- Be known as a leader in initiating best practices in stewardship activities and in supporting sound stewardship and conservation practices.

CHAPTER 2: SVCA's APPROACH TO INTEGRATED ENVIRONMENTAL PLANNING

Topics Covered

Watershed Features & Functions

SVCA Corporate Vision, Goals & Objectives

Planning & Regulation – Governing Principles

SVCA's Approach to Environmental Planning

Environmental Planning Areas of Interest

General Policies

CHAPTER 2: WATERSHED MANAGEMENT

2.1 INTRODUCTION & OVERVIEW

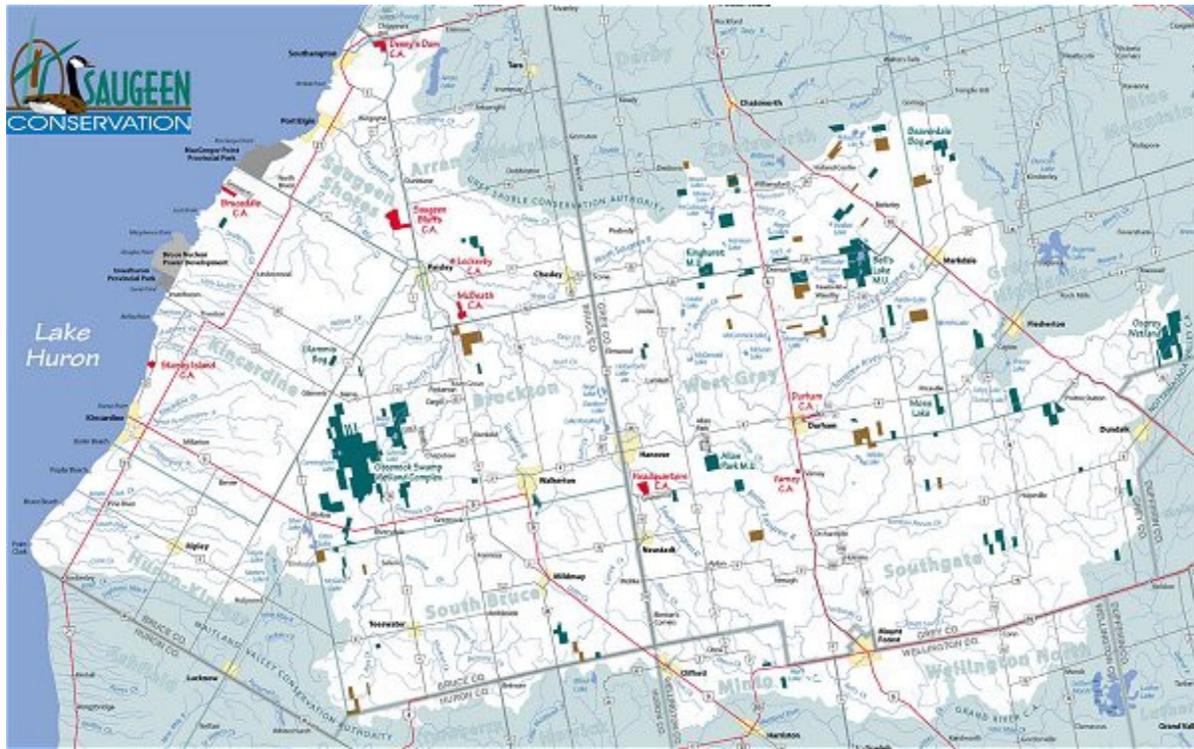
This Chapter provides an overview of the physiography of the SVCA watershed. It discusses the philosophy and approach to watershed management and how this document upholds the Authority approved Vision, Mission and Goals for the SVCA.

2.2 The SVCA Watershed: Features & Functions

As one of thirty-six conservation authorities in Ontario, Saugeen Conservation is bordered by Maitland Valley CA to the south, Grand River CA to the south and east, Nottawasaga Valley CA to the east, Grey Sauble CA to the north and Lake Huron to the west.



Saugeen Conservation consists of a land area comprised of portions of five Counties including Bruce, Grey, Huron, Wellington and Dufferin. Importantly, Saugeen Conservation is situated between Lake Huron and the headwater areas for most of the major watercourses in southwestern Ontario.



Saugeen Conservation has jurisdiction over a total land mass of 4,675 square kilometres (1,800 square miles) and owns more than 8,498 ha (21,000 acres) of natural areas consisting of significant natural areas, forests and Conservation areas. Sixteen municipalities and five Counties comprise the area of Saugeen Conservation’s jurisdiction:

- County of Bruce
 - Municipality of Arran-Elderslie
 - Municipality of Brockton
 - Township of Huron-Kinloss
 - Municipality of Kincardine
 - Town of Saugeen Shores
 - Municipality of South Bruce
 - Town of South Bruce Peninsula
- County of Dufferin
 - Township of Melancthon
- County of Grey
 - Township of Chatsworth
 - Municipality of Grey Highlands
 - Town of Hanover
 - Township of Southgate
 - Municipality of West Grey
- County of Huron
 - Township of Howick
 - Municipality of Morris Turnberry
- County of Wellington
 - Town of Minto
 - Township of Wellington North

In addition to local area and municipal government, the Chippewas of Nawash Unceded First Nation 27 reserve is located at Cape Croker (Neyaashiinigming) near Wiarton and its related Hunting Ground 60B abuts the Bruce Peninsula National Park. The Chippewas of Saugeen First Nation 28 and 29 reserves are on the Lake Huron shoreline near Southampton and Sauble Beach and its related Hunting Ground 60A also abuts Bruce Peninsula National Park. The presence of two First Nations speaks to the significant and long history of the area. Saugeen Ojibwa Nation and the Historic Saugeen Métis are also located in the area.

In addition to the reserve lands, most of the lands within Saugeen Conservation's jurisdiction are in private ownership although SVCA is responsible for managing a number of Conservation Areas that offer both overnight camping and day use park facilities. These include:

- Allan Park Management Unit;
- Beaverville Bog;
- Bells Lake;
- Brucedale Conservation Area;
- Denny's Dam Conservation Area;
- Durham Conservation Area;
- Glammis Bog;
- Greenock Swamp Complex;
- Kinghurst Management Unit;
- McBeath Conservation Area;
- Moss Lake;
- Osprey Wetland Complex;
- Saugeen Bluffs Conservation Area;
- Schmidt Lake;
- Stoney Island Conservation Area;
- Sulphur Spring Conservation Area; and,
- Varney Conservation Area

These conservation areas are examples of areas that are enjoyed for a variety of conservation purposes and are protected for their ecological value.

From a physiographic perspective, Saugeen Valley Conservation Authority consists of three major watersheds that include the land area drained by the Saugeen, Pine and Penetangore Rivers. Within these three major watersheds are a series of sub-watersheds. Although there are a variety of land use activities that occur across the SVCA landscape, agriculture predominates the landscape with forestry activities, aggregate extraction and recreational uses also factoring prominently.

This area is home to approximately 90,000 residents. For the most part, the landscape is comprised of small rural and agricultural communities that vary in size from several thousand to more than 11,000 residents. While there are four larger communities including Kincardine, West Grey, Saugeen Shores and Wellington North, the Municipality of West Grey is the largest community with a population of just over 12,000.⁴ Highest densities prevail along the Lake Huron shoreline with lowest population densities occurring on farmland situated away from Lake Huron and toward the eastern portions of the land base. Population and densities for Municipalities in the SVCA watershed are highlighted below:

⁴ 2006 Census.

Municipality ⁵	Total Population (2011 Census)	Total Area (km ²)	Population density (people per km ²)
Municipality of Arran-Elderslie	6,810	466.4	14.60
Municipality of Brockton	9,432	570.0	16.55
Municipality of Grey Highlands	9,520	891.9	10.67
Municipality of Kincardine	11,174	660.5	16.92
Municipality of Morris-Turnberry	3,413	379.1	9.00
Municipality of South Bruce	5,685	488.2	11.64
Municipality of West Grey	12,286	884.3	13.89
Town of Hanover	7,490	10.0	749.00
Town of Minto	8,334	301.5	27.64
Town of Saugeen Shores	12,661	266.5	47.51
Township of Chatsworth	6,437	600.1	10.73
Township of Howick	3,856	288.2	13.38
Township of Huron-Kinloss	6,790	477.0	14.23
Township of Southgate	7,190	645.6	11.14
Township of Wellington North	11,477	535.1	21.45

The resource base has played a significant role in the evolution of settlement. Just as agriculture plays a dominant role in the local economy, the importance of the rivers and waterway systems as well as the proximity to Lake Huron played an important role in early settlement and economic growth.

Looking to the future, the Ministry of Finance population projections for 2015-2041* are as follows:

Region & Census Division	Historical (Thousands)			Projected (Thousands)					
	2006	2011	2015	2016	2021	2026	2031	2036	2041
Bruce	67.4	67.8	68.1	68.4	69.7	70.8	71.5	72.0	72.3
Grey	95.4	94.8	95.1	95.4	97.4	99.5	101.5	103.1	104.5
Huron	61.3	60.5	58.6	58.3	57.1	56.3	55.4	54.5	53.7
Wellington	208.4	214.7	222.9	225.4	238.9	252.4	263.3	277.5	288.8
Dufferin	56.5	58.5	62.0	62.8	66.6	70.6	74.9	78.9	82.9

*Source: Ministry of Finance. Ontario Population Projections Update. Spring 2016. Based on the 2011 Census.

As evident from the above table, with the exception of Huron County, the balance of the SVCA watershed will experience moderate rates of growth during the 2016-2041 period. While Bruce and Grey County will see more moderate rates of growth over the projection period, much higher population growth rates are expected in Wellington and Dufferin County perhaps as a result of their closer proximity to the Greater Golden Horseshoe. That said, as the Greater Toronto Areas (GTA) intensifies and densifies, rural and agricultural places as well as water-dominated landscapes and greenspace may be expected to increase in value over time.

2.3 Vision, Goals & Principles

This Planning & Regulation Policies Manual is based on SVCA's Strategic Plan (2011-2016), and the vision that has been confirmed for the watershed:

Vision: "A watershed where human needs are met in balance with the needs of the natural environment."

⁵ Population figures, area and population density are for the entire municipality.

It has also been developed to reflect the Authority approved mission for the organization, as follows:

Mission: “To provide leadership through co-ordination of watershed planning, implementation of resource management programs and promotion of conservation awareness, in co-operation with others.” (SC, 2000)

This Manual is also directly reflective of the four goal areas that have been defined in the approved Strategic Plan for the Authority:



2.4 Planning & Regulation Principles

In the context of the vision, mission, goals and values, the following planning and regulation principles will guide the work that Saugeen Conservation carries out from a planning and regulatory perspective:

- *Focus specifically on core mandate and deliver on mandated and legislated responsibilities;*
- *Provide clear direction to watershed municipalities to distinguish between recommendations and requirements;*
- *Lead by example in carrying out Environmental management responsibilities;*

- *Maintain a watershed scale perspective and consider the implications of cumulative actions on the watershed as a whole as well as upstream and downstream impacts as this is the perspective that makes Saugeen Conservation unique;*
- *Make decisions and take action based on best available science and knowledge and promote the transparent and timely sharing of information;*
- *Consider future impacts of climate change on water and other natural resources in assessing the impacts of development;*
- *Recognize that effective environmental management requires a collaborative and whole team approach;*
- *Acknowledge that those most directly impacted by SVCA planning and regulatory responsibilities are the landowners across the watershed and to this end, that there is an ongoing need to pursue practical approaches to environmental management;*
- *Be committed to ecological literacy and to educating watershed residents, member municipalities, partners and clients about the value of the watershed, its features and functions; And,*
- *Work in collaboration with municipal partners to offer an integrated, consistent and streamlined approach to development review.*

2.5 SVCA's Approach to Environmental Planning

2.5.1 Environmental Planning

Environmental planning provides direction for land use and is based on the biophysical characteristics of a particular study area, on a watershed wide level. Environmental planning relies on the hydrologic cycle as the main pathway that integrates physical, chemical and biological processes. The natural heritage system approach is considered to be the most effective method of managing natural heritage systems and is consistent with the Provincial Policy Statement which states that:

“planning authorities shall protect, improve or restore the quality and quantity of water by using the watershed as the ecologically meaningful scale for planning.” (Provincial Policy Statement. MMAH, 2014)

Watershed plans include all of the lands drained by a major river and its tributaries and in some cases, can transcend administrative and political boundaries. Generally, a watershed plan is a document that describes a series of actions needed to achieve a desired degree of protection, restoration and enhancement of ecosystem functions within an entire watershed. This can include natural heritage and natural hazard protection as well as strategies for effective water management.

Subwatershed studies include all of the lands that fall within one tributary of a watershed. They tend to be more localized in focus and scope and generally make recommendations on three key areas: natural heritage protection and natural hazard management, servicing and stormwater management, implementation and ongoing monitoring.

2.5.2 A Natural Heritage Systems (NHS) Approach to Environmental Planning

Taking a natural heritage systems approach represents an understanding that individual natural features and areas have strong ecological linkages among themselves, which need to be maintained for a healthy and sustainable ecosystem. Traditionally, conservation approaches to environmental planning focused on protecting individual natural features and areas, often resulting in a failure to adequately protect the ecological integrity of the watershed as a whole. It is now commonly accepted that protecting natural features and areas such as woodlands or wetlands alone is insufficient to maintain the critical ecosystem functions they provide.

Within SVCA's jurisdiction, many species are dependent on multiple habitats for completion of their life cycles. Maintaining a diversity of natural features and areas, integrating land and water related functions, and maintaining

or restoring natural linkages are critical for ensuring long term ecosystem health. In addition to this, a natural heritage systems approach to environmental planning facilitates the co-ordination of ecosystem-based and watershed-based issues, including natural hazard management, realizing that important ecological linkages extend beyond property, planning area and political boundaries.

A natural heritage system includes all of the ecological 'systems' that make up the natural features and areas of the watershed. Natural heritage features and areas are defined in the Provincial Policy Statement as follows:

Natural heritage features and areas: means features and areas, including significant wetlands, significant coastal wetlands, other coastal wetlands in Ecoregions 5E, 6E and 7E, fish habitat, significant woodlands and significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Mary's River), habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area.⁶

In addition, the 2014 Provincial Policy Statement offers additional direction on the definition of a natural heritage system as follows:

Natural heritage system: means a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial parks and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue. The Province has a recommended approach for identifying natural heritage systems, but municipal approaches that achieve or exceed the same objective may also be used.⁷

Based on the PPS, natural features and areas that comprise the natural heritage system may also include those elements that are in need of restoration that act to improve connectivity between and among adjacent natural features and areas. The emphasis is on system integrity and the importance of a holistic or systems-based approach. Linkages are a key element of the natural heritage system as there is a natural movement pattern of plants and animals that is necessary for biodiversity conservation and long-term sustainability. A systems approach considers features and functions and is premised on a precautionary approach that considers the needs of more demanding species from a landscape perspective.

The philosophy behind a natural heritage systems approach is used by Saugeen Conservation and has been for many years. The importance of natural heritage is recognized by SVCA's municipal partners and in particular at the County Level. Work has been underway in both Huron and Grey County. Huron County has been leading the development of a Natural Heritage Strategy since 2011 with participation from SVCA. Grey County has also commissioned a consultant report to define a Natural Heritage Strategy methodology moving forward. At a municipal level, the Municipality of Kincardine and the Town of Saugeen Shores have also carried out natural heritage studies of portions of their municipalities.

Taking a natural heritage systems approach is based on the understanding that individual natural features and functions have strong ecological linkages one with another. Traditional conservation approaches focused on protecting individual natural features and areas and as a result, failed to adequately protect the ecological integrity of the watershed as a whole. Today, the intention is to apply the philosophy of a systems approach across the watershed. This is premised on the commonly held belief that protecting features alone is not sufficient to maintain critical ecosystem functions. In addition, a natural heritage systems approach to environmental planning upholds the PPS which states:

⁶ Provincial Policy Statement, 2014, p. 45.

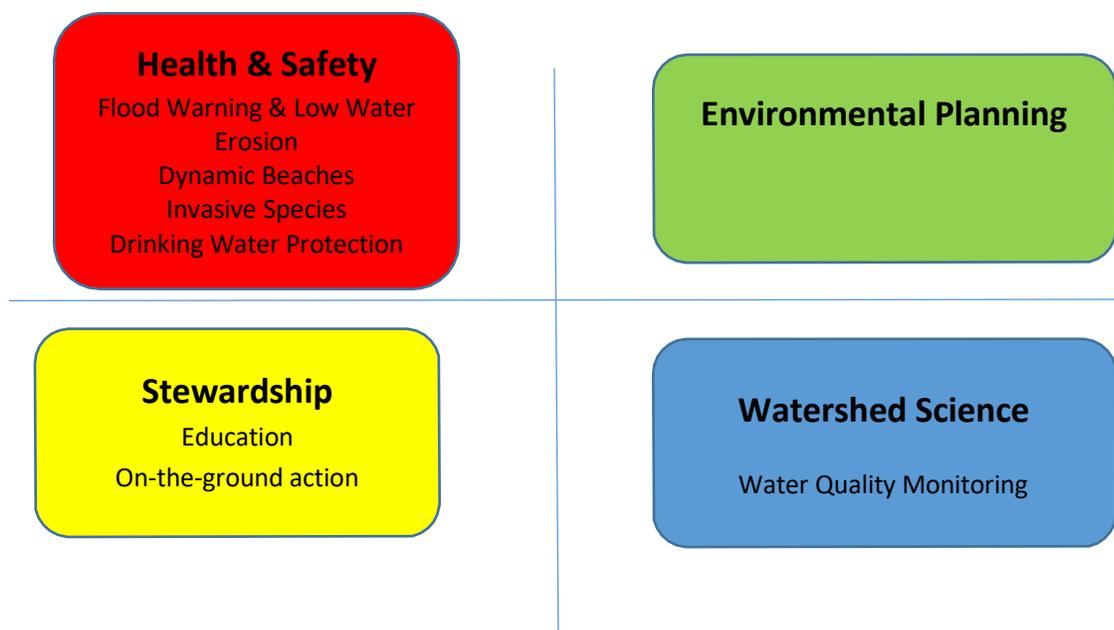
⁷ Ibid.

“the diversity and connectivity of the natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and groundwater features.”⁸

Across Saugeen Conservation’s area of jurisdiction, there are many species that are dependent on multiple habitats for completion of their life cycles. Maintaining features diversity, the integration of land and water related function and the restoration of natural linkages is critical to ensure long term ecosystem health. The natural heritage systems approach also realizes the important ecological linkages that extend beyond property, planning area and political boundaries.

2.6 Environmental Planning Areas of Interest

Saugeen Conservation has established a number of specific environmental planning areas of interest. These are reflective of SVCA’s mandate, role and responsibilities, as described previously, and can be broadly categorized into the following four areas:



The two chapters that follow provide the context for the environmental planning policies that guide SVCA in its review of development applications and site alteration proposals and in carrying out its regulatory responsibilities associated with the issuance of permits under the Conservation Authorities Act.

2.6.1 General Policies

This Manual contains a number of general and specific policies intended to provide guidance to the administration and the implementation of Ontario Regulation 169/06, as amended and SVCA’s plan review responsibilities. General policies provide the basis for the formulation of the specific policies contained in Chapters 3 and 4. General policies also provide a set of considerations, restrictions and/or requirements applicable to proposed development and interference/alteration that are within SVCA’s scope and mandate related to Regulation 169/06, as amended and Plan Review. The specific policies found in Chapters 3 and 4 do not address all potential forms of proposed development, site alteration or other alterations. It is intended that the general policies will provide guidance on

⁸ Ibid., p. 22

how to respond to those proposals that are not specifically referenced. Furthermore, when considering proposals not specifically referenced in the Manual, policies dealing with similar or like works/uses will also be considered.

2.6.1.1 Guiding Principles

The SVCA recognize the following important governing principles and general policies that govern their planning advisory and regulatory responsibilities:

1. A precautionary approach to natural hazard management shall be taken, such that risk associated with natural hazards are controlled by prohibiting development and site alteration in areas where there is an unacceptable risk to public health or safety or of property damage;
2. Proper natural hazard management requires that natural hazards (flooding, erosion, organic soils, karst bedrock, dynamic beaches) be simultaneously recognized and addressed in a manner that is integrated with land use planning and maintains environmental and ecosystem integrity;
3. Effective floodplain management can only occur on a watershed and littoral reach basis with due consideration given to development effects and associated environmental and ecosystem impacts;
4. Local conditions vary along floodplains and shorelines including depth, velocity, littoral drift, seiche, fetch, accretion, deposition, valleyland characteristics etc. and accordingly must be taken into account in the planning and management of natural hazards;
5. Where a regulated area pertains to more than one water-related hazard (e.g., lands susceptible to flooding that are part of a wetland), policies will be applied jointly, and where applicable, the more restrictive policies will apply.
6. Applications related to existing development that are susceptible to natural hazards must demonstrate that there is no increase in risk and no new hazards are created;
7. Development should only be considered within a natural hazard if there is no other feasible location outside of the natural hazard;
8. Development must not worsen or create natural hazards and must not increase risk to public safety or of property damage;
9. There are no adverse hydraulic or fluvial impacts on rivers, creeks, streams, or watercourses;
10. Wherever possible, access for emergency works and maintenance of flood or erosion control works must be made available;
11. Works are constructed, repaired and/or maintained according to accepted engineering principles and approved engineering standards or to the satisfaction of SVCA, whichever is applicable based on the scale and scope of the project;
12. All new buildings must have safe access in accordance with approved provincial policy;
13. Development must protect, maintain and wherever possible enhance the natural heritage system and the features and functions that comprise the system;
14. Wherever possible, groundwater recharge functions which support natural features or hydrologic or ecological functions on-site and adjacent to the site will be maintained or enhanced;
15. Erosion and sediment is minimized both during and after the construction phase for any new development. Best management practices may include, but are not limited to, the following:
 - a) stable, vegetated valley slopes shall not be disrupted, where possible;
 - b) the duration that areas are exposed to natural forces shall be minimized;
 - c) exposed or disturbed areas shall be stabilized as soon as possible (i.e. prolonged exposure of disturbed areas to wind and water erosion must be limited) and shall be rehabilitated, where possible, through the reestablishment of vegetative cover as construction or development proceeds;
 - d) adequate sediment controls shall be installed to retain sediment on-site;
 - e) stormwater management techniques shall be implemented, to minimize the rate and volume of stormwater runoff, where required;
 - f) natural features, such as vegetation, watercourses and natural grades shall be maintained, where possible; and,
 - g) snow or silt fences, or other suitable barriers, shall be installed to prevent the unauthorized movement of fill material or other disruptions to natural vegetation in floodplain, valleyland and other natural resource areas.

16. Development is prohibited in hazardous lands and hazardous sites where the use is:
 - a) an institutional use including, but not limited to, those associated with hospitals, nursing homes, preschool, school nurseries, day care and schools, as there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during an emergency as a result of flooding and/or failure of floodproofing measures or protection works; or
 - b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations as it would be impaired during an emergency as a result of erosion, the failure of floodproofing measures and/or protection works; or
 - c) uses associated with the disposal, manufacture, treatment or storage of hazardous substances.
17. As it relates to administration of Ont. Reg. 169/06, as amended, SVCA must be satisfied that the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be negatively affected by development, including during and post development
18. Natural hazard management and land use planning are distinct yet related activities that require overall co-ordination on the part of Municipalities, CAs, the Ministry of Natural Resources & Forestry and the Ministry of Municipal Affairs and Housing.

CHAPTER 3: PLANNING ADVISORY SERVICES

Topics Covered

The Planning Act & SVCA

Planning Act Application Types

Planning Advisory Services

Environmental Planning Areas of Interest

Natural Hazards & SVCA

Natural Heritage & SVCA

CHAPTER 3: PLANNING ADVISORY SERVICES

N.B.: Saugeen Valley Conservation Authority (SVCA) will provide plan input and review services primarily where Ontario Regulation 169/06, as amended applies and/or where SVCA's screening maps apply.

In some cases, there may be a need for coordination between planning applications and those under the Authority's Regulation and Permitting Program. This can also be complicated by the fact that the two applications may be received years apart. The Authority will ensure that its position on a *Planning Act* application is the same as its position on a permit application for the same property; except where planning policies supported by the PPS, municipal official plans or the Authority's Members, may be more restrictive. The principal of development is determined through the review process under the *Planning Act*.

3.1 Introduction

This chapter provides specific information about the planning advisory services performed by Saugeen Conservation under the *Planning Act* and in particular about the Plan Input and Plan Review services that the Authority provides.

Plan Input refers to the responsibilities that SVCA has as a planning agency and public body under the Planning Act and also to the planning advisory services that SVCA provides to watershed municipalities in submitting strategic level comments on Official Plans and Secondary Plans.

Plan Review refers to the technical advisory services SVCA provides to watershed municipalities on development applications including plans of subdivisions, plans of condominium, zoning by-law amendments, minor variances and consents to sever.

Saugeen Valley Conservation Authority provides plan review and technical clearance services to member municipalities for planning and development related applications. SVCA may also provide comments based on additional roles and responsibilities including as a watershed-based management agency, landowner, regulatory body or other delegated or assigned responsibilities. For additional information refer to Conservation Ontario's Memorandum of Understanding with the Province (see Appendix J).

SVCA reviews applications to ensure they meet SVCA and provincial guidelines related to natural heritage protection, natural hazard management and water management. When an applicant submits a planning application to a municipality, municipal staff may choose not to send the application to the SVCA based on service agreements and/or categorizing protocols developed in partnership.

When an application is to be circulated to SVCA, pre-consultation with municipal and SVCA staff is encouraged to scope technical studies that may be required, provide guidance related to other responsibilities delegated or assigned to SVCA and to ensure the application is complete.

In general, planning and development related applications containing or adjacent to the Lake Huron shoreline, watercourses, other natural features and areas or hazardous lands (including SVCA regulated areas) are circulated by municipalities to SVCA for comment. Planning related applications circulated to SVCA for review typically include:

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

Saugeen Conservation has been actively involved in municipal planning matters for many years. The objective of the Authority's plan review program is to further the SVCA's mandate of natural resource conservation and management by providing comments on natural resource/heritage and natural hazard issues, as they relate to planning and development applications.

The SVCA carries out its planning advisory services to support its watershed municipalities in meeting their obligations and planning responsibilities associated with natural heritage, water resources and hazard management. These responsibilities include the legislative requirements that have been prescribed under the *Planning Act*, as well as, but not limited to, the SVCA's role in administering Ontario Regulation 169/06, as amended. Comments that Saugeen Conservation provides to its watershed municipalities are articulated in formal Memorandum of Understanding (MOUs) or Service Level Agreements and reflect the Authority's goals and objectives of Environmental management.

In accordance with the individual MOUs that are in place with watershed Counties and Municipalities, SVCA plan review services strive to include the following:

- ✓ Participating in the pre-consultation process for the purpose of determining study requirements and compliance issues related to the environmental/hazard related policies of this document, provincial legislation, plans and guidelines where necessary;
- ✓ Reviewing and commenting on planning applications and documents within the context of the *Conservation Authorities Act*, *The Planning Act*, the Provincial Policy Statement (PPS), 2014, and the *Environmental Assessment Act*;
- ✓ Reviewing and commenting on planning applications and documents within the context of the identification, function and significance of natural heritage and hydrological features and systems and the review of studies which assess impacts on these features and areas;
- ✓ The need for and adequacy of stormwater management plans from a watershed management perspective; and
- ✓ Information and analysis of natural hazards and water management.

In some cases, provincial plan requirements may exceed SVCA's regulatory requirements. In administering O.Reg. 169/06, as amended and plan review services, the more stringent requirements shall take precedence. For example, the provincial plans may have greater requirements for vegetative buffers or more restrictions on the uses permitted than SVCA's regulation requirements. Similarly and in a reciprocal way, where Ontario Regulation 169/06, as amended is more restrictive than those contained in these provincial plans, the more restrictive shall prevail.

3.2 The Planning Act & SVCA

In carrying out planning related responsibilities, SVCA considers the following specifics in commenting and making recommendations to watershed planning authorities:

- Policy conformity (i.e., conformity with PPS, provincial plans and SVCA policy, etc.);
- Potential impacts on natural hazards;
- Potential impacts to water resources, including surface and ground water features;
- Infrastructure, site servicing and grading;
- Erosion and sediment control;
- Potential impacts on natural heritage systems, natural heritage features and functions and hydrologic features and functions;
- Stormwater management; and,
- Implications on sustainability and climate change.

In keeping with the provincial agreement (MNRF & CO MOU), SVCA has been delegated responsibilities to review policy documents and applications under the Planning Act to ensure that they are consistent with the natural hazards policies in section 3.1 of the PPS.

Section 3.0 of the PPS focuses specifically on protecting public health and safety and subsection 3.1 addresses natural hazards directly. In keeping with its Municipal Partner MOUs, the SVCA provides technical advisory services

on a range of issues including natural heritage, storm water management, and groundwater recharge/discharge. Although some of these partnership agreements were signed over ten years ago, there are other agreements that have been enacted in the recent past including one with the Township of Chatsworth in 2013. More information about existing MOUs may be found in Appendix E.



Once this Manual has been finalized by the SVCA, it is recommended that the existing Partnership Agreements be revisited and moreover that agreements be put in place with each watershed municipality to clearly articulate role, responsibilities and mandate of the SVCA and the municipality moving forward.

As a public body pursuant to Section 1 of the *Planning Act*, SVCA is required to be notified of planning applications submitted for approval to the municipality under *The Planning Act*. The Municipal Partnership MOUs articulate the types of planning documents that SVCA is expected to review. SVCA also reviews and comments on Environmental Assessments under the *EA Act* that occur within SVCA's area of jurisdiction.

Given that the SVCA is watershed-based, the approach to plan review that the SVCA takes is to consider watershed-wide impacts as well as impacts upstream and downstream. In carrying out plan review responsibilities, SVCA also considers its mandate under the CAA as a natural resource manager. In this regard, approved watershed plans provide additional guidance beyond this Manual to ensuring development maintains and enhances the health of the watershed. Where there is a conflict with the policies in this chapter to any provision contained in an SVCA approved Watershed Plan, the more protective policies relating to natural heritage and hazard shall prevail.

Both the CAA and the Provincial Policy Statement include definitions of "development". Although similar, the definitions differ in two primary ways:

1. The definition in the CAA allows for the regulation of works that are typically not regulated under the Planning Act (e.g. placement of material).
2. *The Planning Act* includes lot creation as development which is not included in the CAA definition.

With the exception of these two key differences, the definitions are generally consistent. As a result, the land use planning policies contained in this chapter focus on lot creation and protection of natural heritage features. In general, site plans, minor variances and similar applications deal with lots of record and are detail design oriented.

Typically, SVCA carries out its planning review and advisory function and processes these applications in coordination with Section 28 permit requirements. Considering this, the policies outlined in Chapter 4 dealing with the administration of OR 169/06, as amended are also to be used to guide the review for these types of applications, while being consistent with all other relevant policies throughout this document.

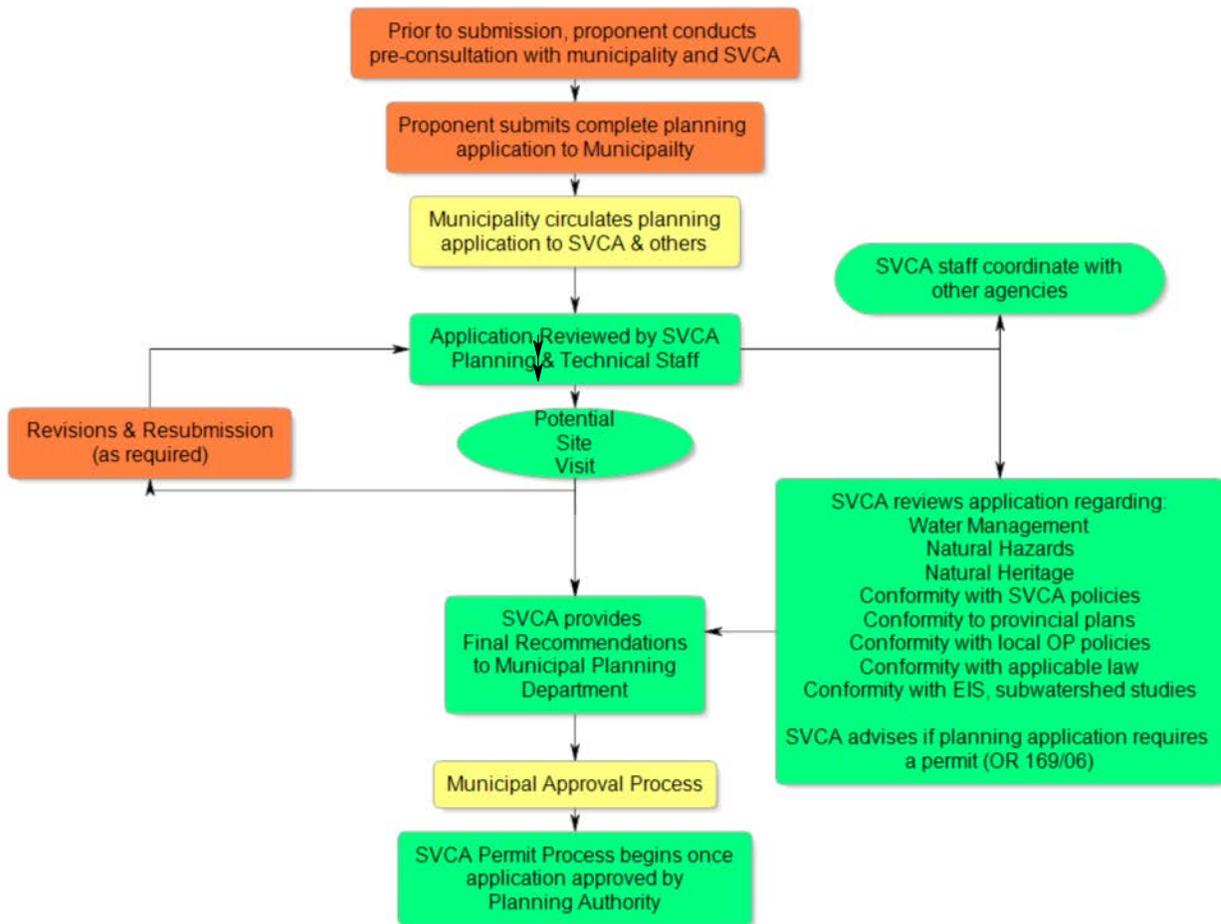
3.3 SVCA's General Approach

The following diagram illustrates in general, the plan review process carried out by SVCA:

Land use planning is dynamic and evolutionary. Areas of planning interest are subject to change over time. Evidence of this evolution is apparent in the release of a new PPS in 2014 but is also reflected in the release of new programs, new legislation and new guidelines. The focus of interest also changes in response to the emergence of new issues and the availability of new science and information.

There are few who would argue that the mandate of Ontario's 36 conservation authorities has evolved over time. What is important to recognize is that the mandate is established by the province and CAs as willing partners, have been relied upon to carry out an increasing array of provincial planning interests that reflects a multi-Ministry mandate. At one time, conservation authorities carried out responsibilities that were aligned specifically with the mandate of the Ministry of Natural Resources & Forestry; that is no longer the case and increasingly, responsibilities are being transferred to conservation authorities that reflect the mandate of many provincial ministries and agencies.

Figure 3.3.1: SVCA’s Plan Review Process



In keeping with the technical advisory and plan review functions assigned, SVCA’s approach to planning is premised on the following key principles:

- Conducting planning responsibilities on a watershed wide basis, recognizing the importance of integrated watershed management and the need for a holistic and ecological approach to planning;
- Making recommendations that are consistent with SVCA’s vision, goal and objectives and core mandate;
- Working with municipal partners to include natural hazard areas and natural heritage features into municipal planning documents to ensure that any new development is in keeping with established provincial policy;
- Recognizing that the responsibility for decisions made under the *Planning Act* rests with the municipality and in this regard, making recommendations to planning authorities that are in alignment with existing legislation and approved policy and guidelines; and,
- Providing sound technical advice and guidance on matters within SVCA mandate and as articulated in the Municipal Partner MOUs.

SVCA provides technical advisory services and planning advice to Counties and Municipalities within our watershed. MOU/Agreements that are in place with ***the Counties of Bruce and Wellington, with the municipalities of Grey Highlands⁹ and West Grey and with the Townships of Chatsworth and Southgate.¹⁰*** It is the goal of the SVCA to have up-to-date MOU Agreements with all of the Counties / Municipalities within the SVCA Watershed.

These partnership memoranda specify the role and the responsibilities of both SVCA and the County/municipality with respect to environmental planning. These Agreements prescribe the processing fees for various planning applications and stipulate that SVCA will provide planning advisory services on a cost-recovery basis, in seventeen (17) key areas:

- Natural hazard planning (flooding, erosion, unstable slopes, shorelines, and soils);
- Natural heritage planning (wetlands, significant woodlands, fish habitat impacts and mitigation, significant valleylands, habitat of threatened and endangered species, significant wildlife habitat, areas of natural and scientific interest, vulnerable surface and ground water, subwatershed planning/master drainage planning; lakes and rivers and shoreline impacts; and groundwater recharge/discharge areas where there is a fisheries or wetland impact; and,
- Adequacy of stormwater management plans from the perspective of SVCA.

The SVCA is working to constantly improve efficiency and effectiveness by offering streamlined planning services with municipal partners. For example, in the case of proposals where there are no natural hazard or natural heritage features, and the proposal is acceptable to SVCA staff, a stamp or signature indicating 'no comment' may suffice, rather than the preparation of full SVCA comments.

The SVCA will regularly review the MOU Agreements with the Counties and Municipalities within the SVCA Watershed.

While there is a degree of consistency between the MOUs, there is an important deviation that must be mentioned with respect to the Municipality of West Grey. The following clause requires SVCA to review all development/planning applications but not to provide comments or collect fees on specific file types:

⁹ Grey Highlands is an arrangement regarding fees and does not constitute a planning services agreement.

¹⁰ Maitland Valley, Nottawasaga Valley, Grey Sauble and Grand River Conservation Authorities have similar agreement with each of the watershed municipalities that straddle jurisdictions. The Memorandum of Agreements prescribe both the Plan Review and Technical Clearance responsibilities assigned to the conservation authority.

The Municipality shall continue to circulate all development/planning applications to the SVCA; however, for those development/planning applications listed below the SVCA agrees to not provide review comments and to waive the requirement for collection of fees. Where applicable the Municipality will indicate on the circulated notice or application form sent to the SVCA those proposals for which comments are not expected and no fee collected. The development/planning applications subject to clause 4 of Appendix A, Schedule 1 are as follows:

- i) minor variances, except as noted in clause 4(iv);*
- ii) rezoning having the effect of changing zone standards, such as building height, size, lot coverage frontage, setbacks, etc., but not including a change of use, except as noted in clause 4(iv);*
- iii) consent applications, for the purposes of lot line corrections, easements, and lot additions, where a new lot is not created, except as noted in clause 4(iv);*
- iv) but not including minor variances, rezoning, and consent applications:
 - a) that are located within areas subject to Ontario Regulation 169/06 "Development, Interference With Wetlands and Alterations to Shorelines and Watercourses" regulation, and/or;*
 - b) that are located within lands zoned and/or designated to recognize natural hazards (e.g. environmental protection, no development, natural environment), wetlands, or open space; and/or;*
 - c) where stormwater management is appropriate.**

3.3.1 Categorizing & Circulation

To coordinate planning responsibilities with watershed municipalities, the SVCA may develop circulation maps to be provided to the watershed Counties/Municipalities to determine when an application may require review by SVCA. In general, SVCA has an interest in the following:

- any lands that contain and/or are adjacent to all hazardous lands;
- any lands containing natural heritage features and/or their adjacent lands;
- watercourses and other natural features and areas that are within areas requiring special water management related measures; and/or
- properties that are located adjacent to any SVCA owned property.

Where a service level agreement or municipal MOU exists, the circulation categorizing processes are described in detail. Where no MOU exists between the municipality and the SVCA, informal or formal categorizing and circulation processes are developed based on municipal requirements, legal obligations and best practices.

3.3.2 Pre-consultation & Processing Timelines

In addition to consulting with municipal staff, it is important for applicants to discuss development related proposals with SVCA staff prior to submitting a formal application when in or near the SVCA's areas of interest outlined in the categorization process. For complex applications, this preliminary consultation is often done in coordination with the municipality to ensure all interests are met. Preliminary consultation should be done as early in the planning process as possible to determine how proposals may be affected by SVCA's programs and policies, including other partnering agencies such as the Ministry of Natural Resources & Forestry (MNR).

SVCA may attend a pre-consultation meeting in person or provide applicants with application-specific information in writing. Some of the detailed information that may be provided includes an overview of SVCA's general review process, an outline of specific components of the proposal that are of interest to SVCA, a discussion of any potential study requirements and subsequent anticipated processing timelines. Preliminary consultation also allows SVCA

staff to confirm what constitutes a complete application based on the preliminary discussions and assess the submission.

Processing timelines will vary based on the completeness of the submission, nature and complexity of the proposal, and quality of the technical submissions. SVCA staff are committed to providing a thorough and expeditious review of planning related proposals in an effort to meet the processing timelines as established by the approval authority, in consultation with SVCA and other relevant agencies. The submission of a complete application provides SVCA staff with an opportunity to review the application in a comprehensive, efficient and timely manner. In addition, it is very important that applicants ensure the quality of the submission meets good practice and industry standards to minimize the extent and number of resubmissions and to avoid unnecessary delay.



It is the responsibility of the applicant to undertake due diligence to determine all required planning and permitting approvals beyond those provided by SVCA staff.

3.3.3 Submission Requirements

To ensure SVCA's interests are met, and to properly address the technical aspects of the proposal, a number of documents may be required. The level of detail required will vary as will report requirements based on the location of the property and the nature of the proposal. Technical requirements may similarly vary from brief discussions between experts to a letter of opinion to, in other cases, a scoped or comprehensive environmental impact study. Pre-consultation will allow the proposal-specific requirements to be identified by SVCA staff.

3.3.4 Review Procedures

Through the plan input and review process, SVCA staff provide watershed municipal partners with technical advice on issues related to natural hazard management, natural heritage protection and water management. The policies in this Chapter provide the basis for SVCA staff review and comment. This technical and scientific expertise that is provided by SVCA supports the environmental planning functions of municipalities.

Planning and development applications are managed by the municipality or county involved and specific applications for approval under *The Planning Act* are managed by the Planning Department of that municipality or county. The municipal or county planner conducts an initial review, or in some cases, may send the application directly to SVCA for categorizing. A site visit may be arranged if required and the application, once it has been determined to be of interest to SVCA, is circulated to planning and technical staff within the Authority. The municipality or county, it should be noted, also circulates to its own internal departments as well as to other outside agencies for review, again depending on the proposal specifics. The nature of the proposal will determine which staff member at the SVCA needs to review the development. Upon completion of the review, a letter is forwarded from the SVCA to the affected municipality and in some cases to the applicant providing the SVCA comments, or if no SVCA comment is needed, a sign off will be provided.

The SVCA is committed to providing efficient and effective planning services. In general, review times for planning applications are established by municipalities. However, processing times are largely a reflection of the complexity and completeness of the submission.

3.3.5 Plan Review Fees

SVCA has individual fee schedules in place in each Agreement to assist in cost recovery for planning services. The plan review fees reflect the type and scale of the proposed development as well as the complexity of the application. Fee schedules are reviewed by SVCA staff annually and are updated in a manner than is consistent with the Statistics Canada "Consumer Price Index". The plan review fees are consistent with the MNRF Policies and Procedures for Charging of CA fees.

3.4 Environmental Planning Areas of Interest

SVCA has defined a number of areas of interest pertaining to planning and development applications submitted under The Planning Act. These reflect SVCA's mandate, role and responsibilities as described in Chapter 2, and fall under four key thematic areas, as follows:



These four areas are discussed in more detail below:

Health & Safety:

SVCA has a direct mandate to protect public safety and minimize property damage from natural hazards. SVCA will recommend that development be kept out of known hazard areas and that decisions be made by municipal partners that recognize the importance of protecting human life and guarding against property damage. SVCA will promote a position that is consistent with the PPS and in recognition of its regulatory responsibilities under OR 169/06, as amended, to ensure that new hazards are not created, that existing hazards are not aggravated and that adverse environmental impacts do not result.

Environmental Planning:

SVCA supports the sustainable management and wise use of the resources within the watershed. Valleylands, woodlands, wetlands, watercourses, life science ANSIs and Environmentally Sensitive Areas are among those natural features and areas that are considered important for conservation. These features and areas share a symbiotic relationship and the impact on one feature is likely to have an ensuing impact on others. There is, in addition, the potential that planning applications on adjacent lands could have an adverse impact on natural features and areas which may in turn, affect the ecological sustainability of the area. The concept of maintaining undisturbed buffers between areas proposed for development and natural features is a concept that is well understood and one that has broad acceptance. SVCA recognizes the importance of conservation buffers. Buffer zones help to stabilize stream banks and prevent erosion. They assist in trapping waterborne contaminants that can pollute watercourses and they provide important habitat areas for critical species of fish and wildlife. Generally, buffers are needed to address:

- Access and maintenance issues;
- Attenuation of pollutants;
- Maintenance of existing ecological functions and hydrologic functions;
- External and unpredicted factors; and,
- Areas of future potential enhancements.

SVCA recognizes the fact that as a watershed based organization, there is an important focus on integrated human and natural processes to achieve ecosystem sustainability. SVCA recognizes that the watershed offers the most effective and meaningful scale for managing natural features and ecological functions. SVCA advocates for a comprehensive and integrated approach to planning and managing natural hazards and natural resources, features, areas and systems that is consistent with the PPS. SVCA will promote the conservation and wise use of resources in the watershed.

Watershed Science:

SVCA recognizes the importance of science-based decision making and continuous improvement. To this end, SVCA will support updates to comprehensive environmental studies to reflect advancements in science and information.

Stewardship:

SVCA recognizes that sustainable management of the watershed requires the engagement of landowners and organized partners and stakeholders. SVCA will work with clients and partners to continue to promote on-the-ground action and will continue to recognize that the wise use and management of the watershed depends on shared ownership and collective action.

In recognition of these key areas, SVCA will take the following position on natural hazards and natural heritage:

SVCA Position: Natural Hazards

That development be generally directed away from areas of natural hazards where there is an unacceptable risk to public health and safety or of property damage. The PPS defines natural hazards as both hazardous lands and hazardous sites. SVCA will recommend that:

1. lands susceptible to natural hazards be placed in a protective designation in Official Plans and in a protective zone in Zoning By-laws to recognize the environmental hazard; and
2. that policies be developed that are in accordance with Section 3.1 of the PPS (See Appendix H)

SVCA Position: Natural Heritage

SVCA supports the protection of the Natural Heritage System (NHS)¹¹ consisting of a connected system of significant natural heritage features, riparian corridors, core habitat areas and corridors, and areas identified for natural cover regeneration/restoration that will improve connectivity and habitat. SVCA supports and encourages efficient and effective land use and development patterns as well as infrastructure and public services that support the protection, restoration and enhancement of the features and functions of the watershed. SVCA will encourage planning and development related decisions that are guided by comprehensive environmental studies based on natural boundaries and on a watershed scale.

3.5 Planning Act Application Types

The municipal plan input and review program of the SVCA involves the review of various development proposals (Subdivisions, Consents, etc.) and planning instruments (Official Plans, Zoning By-laws & Amendments) submitted for approval under the *Planning Act*. SVCA provides comments to municipalities from several perspectives: as a watershed-based resource management agency; in keeping with its planning and technical advisory services it offers to watershed municipalities; and, as a proponent and landowner and in keeping with its regulatory responsibilities. SVCA provides planning and technical advice to assist municipalities in meeting their responsibilities associated with natural heritage, water resource and natural hazard management.

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

- Official Plans and Official Plan Amendments;

¹¹ Work to develop a comprehensive NHS is being led at the County level.

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

Official Plans & Official Plan Amendments:

An Official Plan is a document adopted by a Municipal Council and approved either by the Minister of Municipal Affairs, a delegated authority such as a regional government, or the Local Planning Appeal Tribunal (formerly Ontario Municipal Board). Official Plans contain objectives and policies to guide development in a municipality while, at the same time, addressing social, environmental and economic conditions. The policies in an Official Plan are general in nature.

Under the provisions of the *Planning Act*, Council must provide to agencies it considers have an interest, adequate information on the Official Plan and, at the same time, must provide agencies with an opportunity to submit comments. The same provisions apply to Official Plan Amendments.

The *Planning Act* also stipulates notice provisions and requires the municipality to hold at least one public meeting to consider input from members of the public. Before an Official Plan or Amendment is approved, it is usually circulated to agencies like SVCA for review.



Policy 3.5-1 SVCA will recommend that Official Plans and Official Plan Amendments identify all natural hazards in accordance with the Provincial Policy Statement (PPS) and that appropriate provisions for safe access and egress be identified.

Zoning By-laws and Zoning By-law Amendments:

Zoning by-laws are precise documents that are used by Council to implement Official Plan policies through the regulation of land use. Zoning by-laws, as the legal implementing tool, must conform to the Official Plan. While the Official Plan divides a municipality into land use designations, zoning by-law provisions establish site specific requirements (setbacks, density) that are identified and implemented on a site-specific basis. Given their specific nature, zoning by-laws can directly compliment the Authority’s regulations by prohibiting certain buildings or structures on land with steep slopes, unstable soils, wetlands, or areas that are subject to flooding.

Under the provisions of the *Planning Act*, landowners within 120 meters of a proposed amendment must be provided with written notice. In the future, a goal of the SVCA is to establish planning services agreements with all of its member Counties/Municipalities, whereby Councils only provide notice to SVCA when, in accordance with the Agreement, SVCA has an interest in the proposed by-law.



Policy 3.5-2 SVCA will recommend that Zoning By-laws and Zoning By-law Amendments identify and address all natural hazards in accordance with the Provincial Policy Statement (PPS) and that appropriate provisions for safe access and egress be identified.

Draft Plans of Subdivision

When land is being subdivided into multiple lots, a plan of subdivision is generally required. This plan must be submitted to the Minister of Municipal Affairs & Housing or a delegated authority for approval. The plan of subdivision is first submitted and circulated as a draft under the *Planning Act*. SVCA considers a number of site-specific matters in its review:

- Natural features (e.g., watercourses, wetlands, woodlands, valleylands, etc.);

- Hydrological features (water quality, water quantity);
- Natural hazard features (floodplain lands, lands susceptible to erosion, steep slopes, unstable soil or bedrock); and,
- Built (man-made) features (buildings, structures, infrastructure).

As part of the approval process, municipalities may consult with commenting and approval agencies it feels have an interest in the proposed plan of subdivision. In the SVCA watershed, most draft plans of subdivision and plans of condominium are circulated by the watershed municipalities.

The Planning Act requires that, among other things, plans of subdivision be considered in light of the effect that development will have on matters of provincial interest (e.g. flood plain management, wetlands, etc.), the suitability of the land for which it is to be developed and the conservation of natural resources and flood control. Provisions under the *Planning Act* allow conditions of development to be imposed and it is through this mechanism that conservation authorities like SVCA are able to identify matters of concern relating to its mandate.

Draft Plans of Condominium

Condominiums are a form of subdivision in which title to a unit (e.g. individual apartment) is held by an individual. A share in the rest of the property, is held commonly by all owners. Condominiums are regulated under the Condominium Act and the process for approval of a plan of condominium is markedly similar to that of a plan of subdivision. Draft plans of condominium are circulated to SVCA for review by watershed municipalities. Condominiums can involve new development or the transition of an existing rental property to condominium ownership. Condominiums units can also apply in principle to any type of residential building as well as to commercial and/or industrial areas.

Consents:

A consent (sometimes referred to as a severance) is the authorized separation of a piece of land into two or more adjoining properties. If several severances are intended on the same property, the planning authority may determine that a plan of subdivision may be required. Severance approval is generally delegated to a Committee of Council. Notice requirements pertaining to severances/consents are identified under the *Planning Act*. Under the provisions of the *Planning Act*, the SVCA can request conditions of consent.

Minor Variances

A minor variance is generally considered a minor exception to the requirements of the zoning by-law. Usually, minor variances apply to specific properties and in most cases, municipalities appoint a Committee of Adjustment to deal with minor variance applications as they relate to:

- Minor variances to certain types of by-laws;
- Minor variances to non-conforming uses.; and,
- Minor variances to permit specific deviations in use where a by-law defines them in specific terms.

The review of minor variance applications is an effective method by which SVCA can generally monitor and assess the impact of development activities on key policy and program interests.

Under the provisions of the *Planning Act*, the Committee of Adjustment circulates the notice of a hearing on an application to agencies that it considers have an interest. As a result, SVCA can request conditions be placed on the minor variance application and can identify the need for a permit under the Authority's regulations, where such requirements apply.

Site Plan Approval

In general, site plan, minor variance and similar types of applications deal with existing lots of record and tend to be more detail design oriented. SVCA typically considers these applications in accordance with Section 28 permit requirements (see Chapter 4). Under the provisions of the *Planning Act*, municipalities are empowered to require landowners to enter into a development agreement to ensure site specific requirements are met.

3.5.1 Right to Appeal by SVCA

In keeping with the provisions of the *Planning Act*, SVCA has the ability to appeal all or part of a decision of the approval authority to the Local Planning Appeal Tribunal (formerly Ontario Municipal Board). At the same time however, it is recognized that there may be historical planning approval decisions that were made in the absence of current technical information which could now preclude development under the *Conservation Authorities Act* requirements. Wherever possible, if an issue remains unresolved, SVCA will work with the proponent and the municipality to pursue a resolution.

3.5.2 SVCA General Planning Requirements

When reviewing applications submitted under the *Planning Act*, SVCA may require the following

- Geotechnical/Soils Report;
- Watershed or Sub-watershed Plan;
- Master Environmental Servicing Plan;
- Planting or Vegetation Plan;
- Vegetation Preservation Plan;
- Watercourse and/or Valley Wall Stabilization Plan;
- Slope Stability – Erosion Study;
- Environmental Impact Study (Hydrogeological – Appendix 2; Ecological – Appendix 3);
- Stormwater Management Plans;
- Erosion/Sediment Control Plan;
- Grading and Drainage Plan;
- Floodplain Study;
- Coastal Report;
- Fluvial Geomorphology Report;
- Water Budget, Hydrological and Hydro-Geological Studies;
- Compliance Monitoring Plan; and/or,
- Any additional report or study required by SVCA to provide additional information relating to a specific concern.

When development proposals involving site disturbance or alterations are submitted, SVCA will require a site-specific evaluation. Typically, this evaluation will consist of an on-site constraint assessment and is to be completed before any site disturbance or alteration takes place.

Policy 3.5.2-1 SVCA supports and encourages an ecosystem approach to land use planning. In general, development shall be directed away from the following natural hazard, natural heritage and hydrologic features:

- **Regulatory Floodplains;**
- **Areas of unstable bedrock, soils or slopes;**
- **Significant Valleylands;**
- **Wetlands;**
- **Areas of Natural and Scientific Interest;**
- **Significant Woodlands;**
- **Sensitive and/or Significant Wildlife Habitat(s);**
- **Habitats of Endangered or Threatened Species;**
- **Sensitive and/or vulnerable surface water features;**
- **Sensitive and/or vulnerable ground water features;**
- **Shorelines of small inland lakes; and,**
- **Shoreline of Lake Huron and related erosion and dynamic beach areas**

3.5.3 Lot Creation Policies



Policy 3.5.3-1 SVCA will recommend that any lots created through plan of subdivision or consent are set back a distance to be determined through the completion of a technical report or an Environmental Impact Study (EIS), to the satisfaction of SVCA and consistent with provincial and municipal policy from the limit of the following:

- major and minor valley systems;
- erosion hazards;
- flooding hazards;
- significant woodlands;
- significant wildlife habitat;
- significant habitat of threatened and endangered species;
- regionally and provincially significant life science ANSIs;
- Provincially Significant Wetlands;
- Lake Huron shoreline;
- watercourses; and
- other environmentally sensitive areas.



Policy 3.5.3-2 SVCA will not recommend the creation of new lots through plan of subdivision or consent that extend into significant natural areas, hazardous land and erosion access allowances, in consideration of the long-term management concerns related to risks to life and property and natural heritage protection and, as shown on the Authority's mapping.

Lot creation by individual severance may be permitted provided there is a sufficient lot area outside of the significant natural area, hazardous land and/or erosion access allowance to accommodate the proposed development. Creation of a lot in some circumstances will be permitted where the creation of a new lot is for the purpose of flood and/or erosion control works or for passive non-structural uses which do not affect flood flows.

Policy 3.5.3-3 SVCA will not recommend the creation of new lots unless it has been confirmed that a suitable building envelope exists that is consistent with relevant SVCA requirements. This includes sufficient space within the suitable building envelope to incorporate necessary infrastructure including private sewage disposal systems, wells, driveway and parking areas.



Policy 3.5.3-4 SVCA will not recommend the creation of new lots unless dry or¹² safe access can be achieved (SVCA determines safe access on the basis of flood depths and velocity) without negative impacts on the Hazard or heritage features.

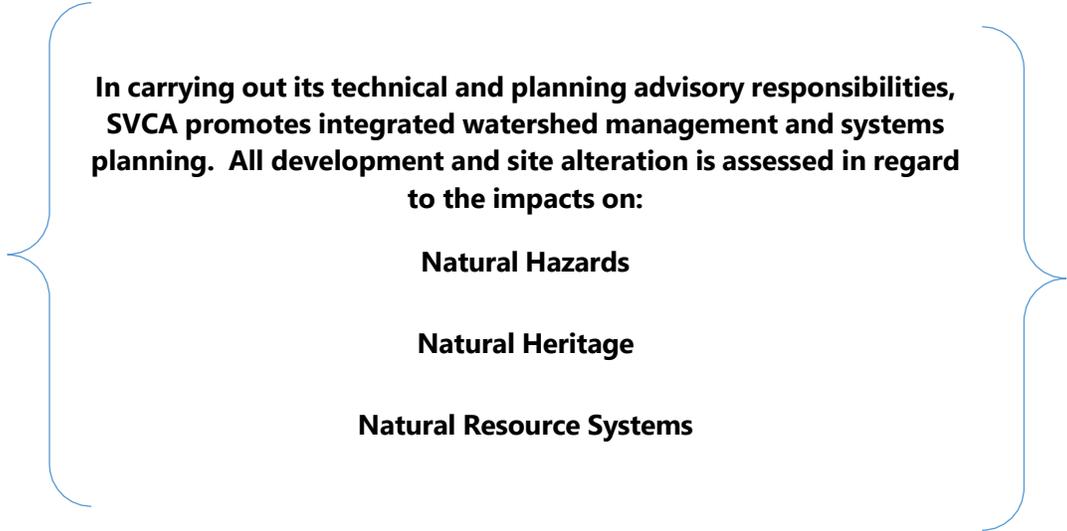
¹² Tolerable access is defined by MNR and is premised on flood depth and velocity. SVCA has adopted the following policy for residential buildings:

- That the depth of flooding to the site of the building does not exceed 0.8 metres under regulatory storm conditions;
- That the building site is subject to less than 1.0 metres/second of flood flow velocity under regulatory storm conditions;
- That safe access/egress is available to the site of the building as defined by the Authority.

Policy 3.5.3-5 SVCA will not recommend the creation of new lots where new access is required through sensitive habitat (e.g. wetlands) without confirmation that the impacts will be mitigated via the submission of natural heritage and/or natural hazard studies.

3.5.4 Infrastructure, Stormwater Management, Ponds & Parks, Trails & Recreational Open Spaces

SVCA's review of infrastructure, stormwater management, ponds and parks, trails and recreational open spaces will be based on the policies and procedures associated with SVCA's Section 28 permitting responsibilities. In addition, SVCA will recommend that planning applications associated with these types of structures are consistent with all other policies contained in this document. In particular, any component of any development proposal that requires services (storm, sanitary) that are situated within the floodplain require a permit under OR 169/06, as amended.



In carrying out its technical and planning advisory responsibilities, SVCA promotes integrated watershed management and systems planning. All development and site alteration is assessed in regard to the impacts on:

Natural Hazards

Natural Heritage

Natural Resource Systems

3.6 Natural Hazards

As defined under the *Conservation Authorities Act*, hazardous land means lands that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, steep slopes and unstable soil or bedrock. In addition to environmental impacts, risks from natural hazards can result in loss of life, property damage and social disruption.

SVCA takes the following approach to hazard land management:

- Preventing new development from locating in areas where there is a potential for loss of life and/or property damage from natural hazards;
- Protecting existing development from natural hazards by implementing structural and non-structural mitigation measures that may include the acquisition of lands that are subject to known natural hazards;
- Providing notification and supporting emergency response and recovery measures through flood forecasting and early warning systems; and
- Coordinating between natural hazards management and planning and development related activities to ensure that decision makers have the necessary information they need and are well informed of any natural hazards.

Eliminating natural hazards completely is not possible and as a consequence, the approach taken is to manage the risk. Minimum standards for acceptable levels of risk to the general public are established by the Province.

Guiding Principles:

- *To prevent, eliminate or minimize risks to life and property caused by flooding, erosion, unstable soils or steep slopes;*
- *To ensure development does not create new hazards or exacerbate existing hazardous conditions;*
- *To ensure that the potential adverse impact on natural features, areas and systems are considered for areas containing hazardous land; and/or*
- *To promote land use practices that prevent, minimize or eliminate the risks to life and property caused by hazardous land by focusing on proactive solutions.*

SVCA adheres to the following in carrying out its natural hazard management responsibilities:

- Proper natural hazard management requires that natural hazards (flooding, erosion, karst bedrock, organic soils) be simultaneously recognized and addressed in a manner that is integrated with land use planning and maintains environmental and ecosystem integrity;
- Effective floodplain management can only occur on a watershed and littoral reach basis with due consideration given to the effects of development and the associated environmental and ecosystem impacts;
- Local conditions must be taken into account in the planning and management of natural hazards;
- New development which is susceptible to natural hazards or which will cause or aggravate hazards to existing and approved land uses, or which will cause adverse environmental impacts will not be permitted unless the natural hazard and environmental impacts can be addressed; and,
- Natural hazard management and land use planning are distinct but related activities that require overall coordination on the part of Municipalities, SVCA, MNRF and MMAH.

In applying these guiding principles, SVCA will be consistently clear in taking the following position:



Policy 3.6-1 SVCA will recommend that a comprehensive approach to natural hazard management be adopted taking into consideration the risks to life and property, economic feasibility (i.e. cost benefit analysis), upstream and downstream impacts, social impacts and cumulative impacts as well as the impact to natural features and areas.



Policy 3.6-2 SVCA will recommend that development not occur in areas that would be rendered inaccessible to people and vehicles during events associated with hazardous land, unless it has been demonstrated that the site has safe access appropriate for the nature of the development being proposed.

SVCA will make recommendations consistent with established provincial policy and articulated Provincial standards when determining the limits and extent of lands containing hazardous land.

SVCA will promote mitigation and remediation works for existing development within hazardous land through the preparation and review of a comprehensive environmental study.

Sensitive Land Uses



Policy 3.6-3 SVCA will not recommend the following types of development on lands susceptible to natural hazards:

- **Institutional and associated uses** including hospitals, nursing homes, pre-schools, day cares and schools, which may pose a significant threat to the safety of inhabitants if involved in an emergency evacuation situation as a result of flooding, failure of flood proofing and/or protection works, and/or erosion;
- Uses associated with **essential services** such as those provided by fire, police and ambulance stations and electrical substations that may be impaired during a flood emergency as a result of flooding, failure of flood-proofing and/or protection works; or
- Uses associated with the **manufacture, collection, storage, disposal and/or consumption of hazardous substances** that may pose an unacceptable threat to public safety if they were to escape their normal containment/use as a result of flooding, failure of flood proofing and/or protection works and/or erosion.

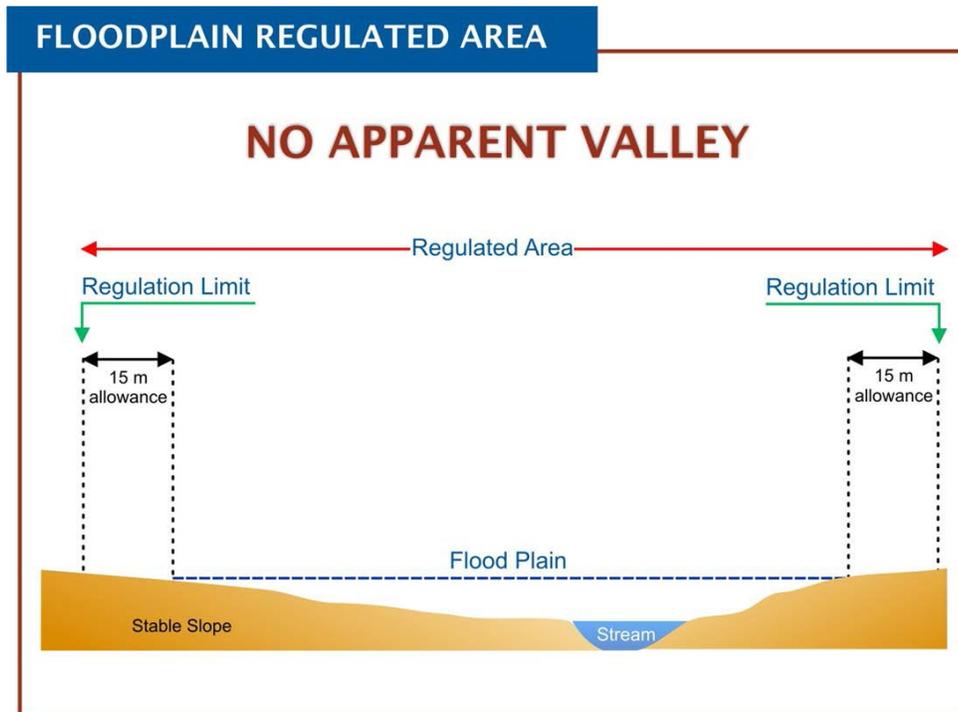
3.6.1 Flooding & Erosion Hazards

SVCA's flooding and erosion hazard policies are described in Chapter 4 of this document. These reflect the policies contained in the PPS and Ontario Regulation 169/06 related to hazardous lands adjacent to river and stream systems.

One Zone Concept:

Across the watershed, there are areas where SVCA applies a one-zone concept to floodplain management based on the regulatory flood standard, in accordance with Provincial standards. In a one-zone concept, the entire area within the flood hazard limit is considered to be one management unit. It is referred to as the floodway.

Figure 3-6.1. Riverine Flooding Hazard – Regulated Area for One-Zone Policy Areas



The one-zone concept is the most restrictive but also the most effective way to manage flood hazards from a risk management perspective.

The limits of the flood hazard will be determined through SVCAs floodplain mapping program in accordance with established Provincial standards. Where floodplain limits for a watercourse are required and not available, the applicant (or agent) is responsible for carrying out and completing appropriate technical reports to the satisfaction of SVCA and the affected planning authority, as appropriate.

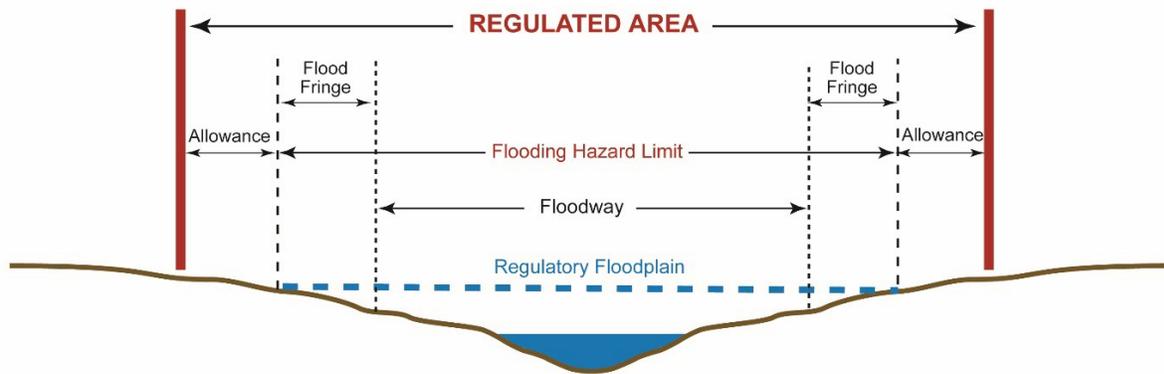
Two-Zone Concept & Special Policy Areas:

As noted in Chapter 4, there are several areas across the watershed where two-zone provisions apply.

A *Two-Zone Policy Area*¹³ permits new development or redevelopment in the *flood fringe* provided that it is protected to the level of the *Regulatory Flood and consistent with Two-Zone policies*. A *Two-Zone Policy Area* may be considered where the SVCA in cooperation with the municipality, after due consideration of local circumstances, agrees that application of the concept is suitable. The feasibility of a *Two-Zone Policy Area* requires the examination of a number of factors and implementation requires the assurance that various conditions will be complied with. Where the SVCA and the municipality agree to the use of a *Two-Zone Policy Area*, appropriate official plan designations and zoning must be put into place.

¹³ In a *Two-Zone Policy Area*, the *floodplain* is divided into two distinct sections – the *floodway* and the *flood fringe*. The *floodway* is that area of the *floodplain* that is required to pass the flows of greatest depth and velocity. The *flood fringe* lies between the *floodway* and the edge of the *floodplain*. Depths and velocities of flooding in the *flood fringe* are much less than those in the *floodway*. The technical considerations used to determine the *floodway-flood fringe* delineation and the suitability of applying a Two-Zone policy are described in the Ministry of Natural Resources Technical Guide River and Stream Systems Flooding Hazard Limit (2002).

Figure 3-6.2. Riverine Flooding Hazard – Regulated Area for Two-Zone Policy Areas



It is not the intention that a two-zone approach would apply across the watershed. A Two-Zone policy may be considered for new infill development in existing settlement areas. The two-zone concept is explained in more detail below.

The two zone concept separates the floodplain into two main components:

- the floodway - the portion of the floodplain where development and site alteration would cause a danger to public health and safety or property damage; and
- the flood fringe - the portion of the floodplain that could potentially be safely developed or altered utilizing proper flood-proofing techniques, with no adverse impacts.

The two zone concept is not intended to be considered on a lot-by-lot basis, but on a subwatershed or major reach basis. A number of community related and technical criteria as outlined by the Province including local need, changes in land use, administrative capability, constraints to the provision of services, frequency of flooding, physical characteristics of the valley, impacts of proposed development (flood levels at the site, upstream, and downstream), feasibility of floodproofing, and ingress and egress are taken into consideration when determining whether or not to implement a Two-Zone Policy. Within the SVCA watershed, Silver Creek in Walkerton is one area where a modified Two-Zone Policy applies.

Special Policy Areas (SPAs) are just that – special areas where specific provisions are made to accommodate pre-existing and historical development that may have taken place in flood susceptible areas (e.g. Central Downtown Core Areas that were settled years ago before the introduction of the PPS). SPAs are not intended to facilitate new or intensified development particularly where municipalities have the ability to develop outside of the floodplain. Where a Special Policy Area is warranted, approval is first required by the Ministers of Municipal Affairs and Housing and Natural Resources & Forestry.

Generally, Special Policy Areas (SPAs) may be considered where flood remediation strategies and two zone concept approaches have been deemed not practical, and adhering to the one zone concept will impose significant social and economic hardship to the historically existing flood-prone community. Where a special policy area is applied, the relevant agencies agree to reduce Provincial floodproofing standards and accept a higher level of risk. Similar to the two zone floodplain policy approach, a special policy area is not intended to be considered on a lot-by-lot basis, but on a subwatershed or major reach basis considering several community related and technical criteria such as municipal commitment, designated growth centre, infrastructure investment, limited alternatives, flow

characteristics, frequency of flooding, floodproofing measures, upstream and downstream effects, frequency of ice jams, berms and flood walls, and reduced flood standards. SPAs do not exist in the SVCA' watershed.



Policy 3.6.1-1 SVCA will recommend new development only where new hazards are not created, where existing hazards are not increased or aggravated and where adverse environmental impacts do not result.



Policy 3.6.1-2 SVCA will recommend that flood plain lands be placed in a separate designation with appropriate policies to reflect the Provincial Policy Statement. SVCA will recommend that flood plain lands be placed in a separate zone to recognize the environmental hazard.



Policy 3.6.1-3 Where a proposal involves a building, structure or ancillary use that abuts the limit of the regulatory flood plain or encroaches into the floodplain, the proposal will be considered by SVCA to be flood susceptible and the floodplain policies will apply. (Ancillary uses can include such things as driveways, parking lots and/or sewage disposal systems.) SVCA will make recommendations to the planning authority to this effect.



Policy 3.6.1-4 SVCA will not recommend new development and/or site alteration within the flooding and erosion hazard limits or along the shoreline of Lake Huron that would be contrary to the PPS or SVCA policies.



Policy 3.6.1-5 SVCA will recommend through conditions of draft plan approval, that applications for plans of subdivision adjacent to flooding and erosion hazards be required to include protection of the flooding and erosion hazards with associated allowances in perpetuity. It is SVCA's preference that this be done through dedication to the municipality however there may be other acceptable methods to ensure that these areas are protected.



Policy 3.6.1-6 SVCA will recommend that development and/or site alteration within the flood fringe be required to comply with floodproofing requirements, vehicular and pedestrian access requirements and any requirements associated with natural heritage protection.



Policy 3.6.1-7 SVCA will recommend approval of applications for minor variance provided the proposed development:

- **is floodproofed to the satisfaction of the SVCA;**
- **will not be subject to flows that could cause structural damage;**
- **will not affect flood flows; and**
- **conforms to the policies outlined in Chapter 4.**

3.6.2 Hazardous Land Associated with Unstable Soil or Unstable Bedrock (Karst Bedrock)

Hazardous land associated with unstable soil or unstable bedrock includes, but is not limited to, sensitive marine clays, organic soils and karst topography. Within the watershed organic soils and karst-like topography can be found. Organic soils are normally formed by the decomposition of vegetative and other organic materials. A soil is

organic when the percentage weight loss of the soil, when heated, is five to eighty percent. Peat soils are the most common, but not the only type of organic soil in Ontario. Karst topography may be present in limestone or dolomite bedrock and are extremely variable in nature. While there is karst topography within the SVCA watershed, precise locations are unknown.

Due to the specific nature of organic soils and karst topography it is difficult to accurately identify the location and extent of the hazard without undertaking site specific technical reports. In this regard, the potential for catastrophic failures in some areas of unstable soil and unstable bedrock require site specific studies to determine their characteristics and therefore the appropriate limits of the hazard.

Regulated Valley slopes, or Great Lakes shoreline slopes are regulated by the SVCA as indicated in the following section. Regulated slopes may have been altered or filled historically and because fill can suddenly and dramatically become unstable, the same SVCA policies apply to these areas as Karst or other hazardous lands.

Unstable Soil/Bedrock-1: Determination & Identification

The limits of hazardous land associated with unstable soil or unstable bedrock will be determined through site specific field investigations and technical reports where required, to the satisfaction of SVCA and the affected planning authority as appropriate.



Policy 3.6.2-1 SVCA will recommend that development occur outside of the boundaries of unstable soil or unstable bedrock.



Policy 3.6.2-2 SVCA will recommend reconstruction or relocation of a building within hazardous lands associated with unstable soils or bedrock, only where it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution, or the conservation of land will not be negatively affected.



Policy 3.6.2-3 SVCA will not recommend applications that are situated within hazardous lands associated with unstable soil or unstable bedrock except in accordance with the policies contained in Chapter 4.



Policy 3.6.2-4 Public infrastructure (roads, sewers, flood and erosion control works) and various utilities (pipelines) may be permitted within hazardous lands associated with unstable soil or bedrock, subject to the activity being permitted through an approved Environmental Assessment process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.

3.7 Natural Heritage

3.7.1 Valleyland Protection

River and stream valleys perform important hydrological and ecological functions. River and stream valleys are shaped and re-shaped by the natural processes of erosion, slope stability, and flooding. Erosion and slope stability are related processes that are sometimes linked together. Erosion is the continued loss of earth material (i.e. soil or

sediment) over time as a result of the influence of water or wind action. Slope stability, usually described in terms of the potential for slope failure, refers to a mass movement of earth material, or soil, sliding down a bank or slope face as a result of a single event in time.

The degree and frequency with which physical change will occur depends on the interaction of a number of interrelated factors including hydraulic flow, channel configuration, sediment load in the system, storage and recharge functions and the stability of banks, bed and adjacent slopes. The constant shaping and re-shaping of the river and stream systems by the physical processes can result in hazardous conditions that can pose a risk to life and result in property damage.

Erosion hazards pose a threat to life and property through the loss of land due to human or natural processes. The erosion hazard limit is determined using the 100 year erosion rate (the average annual rate of recession extended over a hundred year time span), and includes allowances for toe erosion, meander belt, and slope stability. The erosion hazard component of the actual river and stream systems is intended to address both erosion potential of the actual river and stream bank as well as erosion or potential slope stability issues related to valley walls.

Flooding of river or stream systems typically occurs following a spring freshet and may occur as a result of extreme rainfall events. Rivers naturally accommodate flooding in their valleys. Historically, development occurred in floodplain areas because of the availability of water for power, transportation, energy, waste assimilation and domestic as well as industrial use. However, development within the floodplain is susceptible to flooding which can result in property damage and/or loss of life.

The exact limits of valleylands will be determined through site specific field investigations and technical reports (where required). These limits will be established and confirmed to the satisfaction of SVCA and the affected planning authority, as appropriate.

SVCA will identify valleyland significance in accordance with appropriate planning authority policies and criteria. Where the affected planning authority does not have established criteria, SVCA will identify valleyland significance in accordance with Provincial standards.

Where development proposals or *Planning Act* applications are within or close to valleylands, SVCA may require the submission of a Vegetation Plan, a Tree Preservation Plan and/or a Tree Management Plan for review and approval.

Where there are concerns with *Planning Act* applications on potentially unstable slopes, a study using accepted geotechnical principles, signed and stamped by a Qualified Engineer, may be required to determine a safe setback from the top of bank (i.e. most slopes steeper than 3:1 are considered potentially unstable, slopes in sandy soil areas may be unstable if the slope is 5:1). Any such study would need to be reviewed and approved by SVCA.

Defining River or Stream Valleys

The limit of the river or stream valley is the furthest extent of the erosion hazard or flooding hazard plus an allowance. Chapter 4 identifies the approach taken to identify the erosion hazard and includes detailed information for the following scenarios:

SVCA identifies valleylands under two distinct situations:

- Where the valleylands are defined; and
- Where the valleylands are undefined.

Defined Valleylands:

Defined valleylands are ones in which the physical presence of a valley corridor containing a river or stream channel (which may or may not contain flowing water) is visibly evident – that is, the valley walls are clearly definable from the surrounding landscape, either by field investigations, aerial photography or map interpretation and the valley slopes are greater than or equal to 2 metres in height.

At a minimum, the limit of defined valleylands is determined by the methodology that is used to map Defined valleylands, as described in Chapter 4.

Undefined Valleylands

Undefined valleylands are ones in which the river or stream is present but there is no identifiable valley slope or bank that can be detected from the surrounding landscape. Generally, these undefined features are found in flatter or gently rolling landscapes and may be described as headwater areas. In addition, undefined valleylands include those features that exhibit the features or characteristics of defined valleylands, but the valley slopes are less than 2 metres in height.

The limit of an undefined valleyland is determined by the greater of the riverine flood hazard or the riverine erosion hazard, as described in more detail in Chapter 4.

Where topography does not define the valley form well, criteria based on floodlines or the meander belt width of a river system may be used. Valleys are dynamic and should be delineated on the basis of the historic, current and likely future zone of geomorphic influences.

The physical boundaries of valleys should first be identified. The physical boundaries are generally determined as follows:

- For well-defined valleys, the physical boundary is generally defined by the stable top-of-bank or the predicted top-of-bank (also known as “top of slope” or “top of valley”).
- For a less well-defined valley or stream corridor, the physical boundary may be defined in a number of ways, including the consideration of riparian vegetation, the flooding hazard limit, the meander belt or the highest general level of seasonal inundation.



Policy 3.7.1-1 SVCA will recommend that existing valleylands be maintained in their natural state.



Policy 3.7.1-2 SVCA will recommend that plans of subdivision located adjacent to valleylands include a condition of draft plan approval, to protect the valleylands either through the completion of an EIS or through appropriate setbacks. A preferred method may be to dedicate these lands to the municipality or other equally as effective methods for ensuring protection.



Policy 3.7.1-3 SVCA will not recommend the encroachment of individual sewage disposal systems, sanitary or storm sewer and transportation systems into or through valleylands unless it can be demonstrated that such works cannot be located outside of the valleylands, or have been approved through an Environmental Assessment process.

SVCA will indicate to planning authorities that where safe setbacks are determined using a geotechnical study, the setback must be based on the natural state of the slope and not through the use of structures or devices to stabilize the slope.



Policy 3.7.1-4 SVCA will recommend valleyland crossings provided:

- the crossings are proposed to be located in areas of low sensitivity;
- an erosion and sediment control plan be submitted for approval;

- a site restoration plan is completed and submitted for approval;
- the number of crossings be kept to the minimum required for the proposed development;
- crossings are located as close to perpendicular as possible to the valleyland or watercourse and are designed in a manner that is most sensitive to the characteristics of the valley;
- the design of valley crossings considers the sensitivity of flora and fauna and identifies mitigative measures; and,
- The crossing does not create a new hazard or increase an existing hazard.



Policy 3.7.1-5 SVCA will not recommend new development, site alteration and/or lot creation on lands adjacent to valleylands unless an EIS has been completed to the satisfaction of the SVCA which demonstrates that there will be no negative impact on the feature and its ecological function unless the completion of such a report would serve no useful purpose given site conditions.

As indicated previously in the hazardous lands section historic fill located on valley banks may warrant additional study or review due to the unpredictable nature of that material on a slope prior to development proceeding. The SVCA does not regulate building on fill areas unless located in the Regulated Area.

3.7.2 Areas of Special Protection

3.7.2.1 Areas of Natural and Scientific Interest– ANSI Life Science or Earth Science

The exact limit of life science ANSIs are determined by the Ministry of Natural Resources & Forestry.



Policy 3.7.2.1-1 SVCA will recommend that Areas of Natural and Scientific Interest (ANSIs) be identified and protected in Official Plans and Zoning By-laws.



Policy 3.7.2.1-2 SVCA will not recommend any new development and/or site alteration in or on lands adjacent (120m to a life science, 50 metres from an earth science) to Areas of Natural and Scientific interest (ANSIs) unless an EIS has been completed to the satisfaction of the SVCA. The EIS must be completed by a qualified professional and the EIS must demonstrate that there is no negative impact on the feature and its ecological function. The SVCA may consider the waiving of the EIS requirement if the development is subject to a duplicate or similar

environmental assessment process; if the development is minor in nature; or the site conditions for development are such that the preparation of an EIS would serve no useful purpose for the protection of significant environmental features.

3.7.2.2 Woodlands

Woodlands are an integral component of the natural heritage system and provide ecological and hydrologic benefits such as erosion prevention, attenuation of pollutants, hydrological and nutrient cycling, wildlife habitat and provisions for biodiversity. Woodlands include treed areas, woodlots or forested areas whether they are naturally occurring or managed plantations and vary in level of significance at the local, regional and provincial levels. Woodlands are defined using the Ecological Land Classification System based on the presence of woody vegetation and soil composition.

SVCA will identify woodland significance in accordance with the appropriate planning authority policies and criteria. Where the affected planning authority does not have established criteria, SVCA will identify woodland significance in accordance with the Natural Heritage Reference Manual or other accepted standard utilized in municipal or provincial planning context.

SVCA will consider the creation of new habitat, the development of linkages and/or the restoration of other ecosystem functions as mitigation measures.



Policy 3.7.2.2-1 SVCA will recommend that woodlands be included in parkland and other open space dedications and to use other measures to secure the long-term protection of other woodlands.



Policy 3.7.2.2-2 SVCA will recommend that existing tree cover and vegetation associated with the control of flooding, erosion, pollution or the conservation of land be maintained.



Policy 3.7.2.2-3 SVCA will not recommend development and/or site alteration in or adjacent to Significant Woodlands or in other woodlands unless an EIS has been completed to the satisfaction of the SVCA by a qualified professional and the EIS demonstrates that there will be no negative impact on the feature and its ecological function. The SVCA may consider the waiving of the EIS requirement if the development is subject to a duplicate or similar environmental assessment process; if the development is minor in nature; or the site conditions for development are such that the preparation of an EIS would serve no useful purpose for the protection of significant environmental features.

3.7.2.3 Wetlands

Wetlands are important natural features on the landscape, whether they are permanently or seasonally wet. Wetlands perform many important ecological functions. Wetlands moderate water flow by absorbing much of the surface water runoff from the land and then slowly releasing it. This helps to reduce flooding and to sustain stream flows during dry spells. Many wetland areas recharge groundwater by moving surface water into the groundwater system. As a result, they play an important role in protecting and improving water quality, provide for fish and wildlife habitat and offer a number of associated recreational opportunities. The lands that surround wetland areas are important in sustaining their vital hydrological and ecological functions.

Wetlands are defined in the Conservation Authorities Act as land that:

- a) Is seasonally or permanently covered by shallow water or has a water table close to or at the surface;
- b) Contributes directly to the hydrological function of a watershed through connection with a surface watercourse;
- c) Has hydric soils, the formation of which have been caused by the presence of abundant water; and
- d) Has vegetation dominated by hydrophytic (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).

Defining Areas of Interference

The areas surrounding wetlands where development could interfere with the hydrological function of the wetland are called "Areas of Interference." These areas include lands that are: 120 metres (394 feet) from the boundaries of Provincially Significant Wetlands; or 30 metres (98.43 feet) from other wetlands. These areas may be adjusted where detailed hydrologic studies define a more accurate and more precise 'area of interference.'

All wetlands and their associated areas of interference are regulated under the *Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation*. Any development or interference within wetlands or development in areas of interference requires permission from the SVCA.



Policy 3.7.2.3-1 SVCA will recommend that wetlands be identified and protected in Official Plans and Zoning By-laws.



Policy 3.7.2.3-2 SVCA will recommend the location of Public infrastructure (roads, sewers, flood and erosion control works) and various utilities (pipelines) within a wetland only where the activity is being established under an approved Environmental Assessment or it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected and the interference on the natural features and hydrologic and ecological functions of the wetland has been deemed to be acceptable by the SVCA.



Policy 3.7.2.3-3 SVCA will recommend conservation or restoration projects within a wetland only where it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected, and the interference on the natural features and hydrologic and ecological functions of the wetland has been deemed to be acceptable by SVCA.



Policy 3.7.2.3-4 SVCA will recommend development associated with public parks (passive or low intensity outdoor recreation and education, trail systems) within a wetland only where it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, interference with natural features and hydrologic and ecological functions of the wetland has been deemed acceptable by SVCA.



Policy 3.7.2.3-5 SVCA will not recommend development, site alteration or the location of stormwater management facilities within a wetland.

SVCA may require on-site wetland boundary delineation/staking and will recommend this to the appropriate planning authority.

Within 120 Metres of designated Provincially Significant Wetland or within 30 Metres of all other wetlands:



Policy 3.7.2.3-6 SVCA will not recommend development and/or site alteration within 120 metres of the boundary of a Provincially Significant Wetland or within 30 metres of the boundary of other wetlands unless the SVCA is satisfied that the development would not negatively impact the wetland.



Policy 3.7.2.3-7 SVCA will recommend development within 120 metres of a Provincially Significant Wetland or within 30 metres of any other wetland if the interference on the hydrologic function of the wetland is deemed to be negligible or acceptable to the SVCA and if no negative impacts on the wetland or on its ecological function are anticipated. An EIS to assess the hydrologic impact may be required if the submitted plans do not demonstrate the following:

- **Disturbance to natural vegetation communities contributing to the hydrologic function of the wetland are avoided;**
- **Overall existing drainage patterns for the lot will be maintained;**
- **Disturbed area and soil compaction is minimized;**
- **Development is located above the high water table;**

- All sewage disposal systems are located a minimum of 15 metres from the wetland and a minimum of 0.9 m above the water table;
- Impervious areas are minimized; and,
- Best Management Practices are used to:
 - Maintain water balance;
 - Control Sediment and erosion; and,
 - Maintain as much of the wetland buffer as possible.



Policy 3.7.2.3-8 SVCA may recommend larger scale development associated with large commercial uses, industrial uses, multiple residential uses and/or development into the water table in the area between 30-120 metres of a PSW or other wetlands if the level of interference on hydrologic functions is deemed acceptable to SVCA and the ecological functions of the wetland are not negatively impacted. An EIS may be required.



Policy 3.7.2.3-9 SVCA may consider the waiving of the requirement for the preparation of an EIS if the development is subject to a duplicate or similar environmental assessment process; the development is minor in nature; or the site conditions for development are such that the preparation of an EIS would serve no useful purpose for the protection of significant environmental features.

3.7.3 Wildlife Habitat



Policy 3.7.3-1 SVCA will recommend development and site alteration in wildlife habitat areas and/or on lands adjacent to wildlife habitat areas where an EIS has been completed to the satisfaction of the SVCA by a qualified professional, and the EIS demonstrates there will be no negative impact on the feature and its ecological function. The SVCA may consider the waiving of the EIS requirement if the development is subject to a duplicate or similar environmental assessment process; if the development is minor in nature; or the site conditions for development are such that the preparation of an EIS would serve no useful purpose for the protection of significant environmental features.

3.7.4 Habitat of Endangered Species, Threatened Species, Species of Concern & Locally Rare Species

In accordance with the 2014 PPS MNRF has the final determination on the appropriateness of a proposal within or near a habitat of endangered, threatened species. Please contact that agency for more information.

3.7.5 Aquatic Ecosystems & Fish Habitat



Policy 3.7.5-1 SVCA will find acceptable development and site alteration in fish habitat provided it is in compliance with provincial and federal requirements and where the habitat to provide for the life requirements of aquatic systems will not be reduced.



Policy 3.7.5-2 SVCA will find acceptable development and/or site alteration on lands adjacent to fish habitat if the impacts to fish habitat will be negligible, or where an EIS has been completed to the satisfaction of the SVCA by a qualified professional, and the EIS demonstrates there will be no negative impact on the feature and its ecological function.



Policy 3.7.5-3 SVCA may consider the waiving of the requirement for the preparation of an EIS if the development is subject to a duplicate or similar environmental assessment process; the development is minor in nature; or the site conditions for development are such that the preparation of an EIS would serve no useful purpose for the protection of significant environmental features.



Policy 3.7.5-4 SVCA will encourage planning authorities to support fish habitat rehabilitation and/or restoration.

3.7.6 Aggregate Resource Policies

The SVCA will provide planning authorities within its watershed and MNRF with natural heritage, natural hazard and natural resource information related to aggregate proposals. The SVCA will also provide technical review assistance to watershed municipalities to assist in their decision making responsibilities under The Planning Act.

3.7.7 Policies for Stormwater Management, Erosion & Sediment Control

The Authority provides stormwater management (SWM) and sediment and erosion control commenting and technical review services to municipalities for proposals located in or partially within the SVCA's Regulated Area, Area of Interest associated with Ontario Regulation 169/06, as amended, or within the SVCA's areas of interest associated with plan review. For proposals outside of the Regulated Area, Area of Interest or Circulation Area, the Authority may provide these services at the request of the applicable member municipality. In those cases where the municipality has the required expert staff available to undertake detailed reviews, the Authority may limit its review to catchment level plan preparation and defer the review of detailed projects to the municipality. Where the review is deferred to the municipality, the Authority may still comment on natural heritage and natural resource matters.



Policy 3.7.8-1 SVCA will recommend that on-line SWM ponds and facilities be located outside of natural hazard areas, significant natural heritage features or systems.



Policy 3.7.8-2 SVCA will recommend that SWM facilities (with the exception of outlets) be directed to areas located outside of the defined limits of the natural hazard. SVCA will only support the location of SWM facilities in the flood plain if it can be demonstrated that there is no feasible alternative location outside of the floodplain and that there is a net public benefit that will result.

Encroachment of SWM facilities into the flood plain must be justified with a catchment scale assessment as part of a Catchment Strategy, Area Plan, Subwatershed Plan, Master Drainage Plan or Environmental Assessment Act process. This type of assessment provides the opportunity to evaluate the location and function of SWM facilities based on technical, environmental, economic, and social factors. The following principles will be considered when assessing proposals to locate SWM facilities in the flood plain:

- a) The impact of the SWM facility on flood plain function (conveyance, flood storage etc.) and implications for other natural hazards;**
- b) The net ecological benefit of locating the SWM facility in the flood plain; and**
- c) Cultural benefits of locating the SWM facility in the flood plain. While cultural benefits are considered, the natural hazard and natural heritage implications are paramount.**



Policy 3.7.8-3 SVCA will recommend the implementation of erosion control at the source and supplementary treatment between the source and receiving watercourse.



Policy 3.7.8-4 SVCA will recommend sediment and erosion control measures be used on all construction sites to limit the effects of the proposed development on the surrounding natural environment and receiving drainage network.

3.7.8 Watercourse & Shoreline Protection

Watercourses are dynamic systems that include complex processes constantly undergoing change. A watercourse is defined to include rivers, streams, lakes, creeks and drains and are further defined in the Glossary of Terms. The health of watercourses is integral to the health of a watershed as they provide key ecological functions and hydrologic functions such as fish habitat and habitat for wildlife, sediment and nutrient transport and deposition, transfer media for energy and organisms, source of water supply and important contributions to the hydrologic cycle.

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

Watercourse limits will be determined through site specific field investigations and technical reports where required, to the satisfaction of SVCA and affected planning authorities, as appropriate.



Policy 3.7.9-1 SVCA will recommend that all watercourses and adjacent banks, valleys, and wetlands remain in their natural state and that base flow and velocity be maintained.



Policy 3.7.9-2 SVCA will not recommend applications for development that are within the existing channel of a watercourse, except in accordance with the policies in Chapter 4.



Policy 3.7.9-3 SVCA will not recommend any proposals to straighten, change, divert or interfere with the existing channel of a watercourse, except in accordance with the policies in Chapter 4.



Policy 3.7.9-3 SVCA will not recommend proposals to realign or re-channelize significant portions of a natural watercourse to accommodate development unless such alterations have been proven to the satisfaction of the SVCA to control flooding and/or erosion or provide fisheries and/or environmental enhancement. An erosion and sediment control plan must also accompany such a proposal and be found satisfactory to the Authority. The alteration must not adversely impact municipally owned properties (including road allowances) and privately-owned properties. Proposals to realign or re-channelize significant portions of a natural watercourse to accommodate development would not generally be found acceptable by the Authority.

With the exception of approved bridges and other watercourse crossings, the SVCA will not generally permit the spanning of buildings or structures across valleylands or watercourses.

3.7.9 Buffer Policies

The Authority shall encourage municipalities to place a 15 metre protective zoning on watercourse buffers on each side of the watercourse.

For minor alterations, additions (additions that do not encroach on the watercourse) and replacements to existing development or where the development will not increase the existing footprint, it is recognized that the above-noted buffers may not be achievable. SVCA will encourage the achievement of maximum buffer wherever possible.

Greater buffer widths may be required for areas of sensitive soil conditions (i.e. high permeability, shallow depths, or extensive organics, peat, etc.), areas subject to the recommendations of subwatershed plans and in the habitat of endangered or threatened species.



Policy 3.7.10-1 The SVCA shall take the position that the buffer may be interrupted to allow watercourse crossings where required.

The SVCA shall take the position that Recreational trails and paths may be allowed in buffer areas provided that:

- there is a compensating buffer allowance added to the width of the buffer strip;
- the trail/path does not come closer than 4 metres to the edge of the watercourse except for crossings;
- the trail/path does not impede the natural function of the valleylands; and
- trail design and construction is to be to the satisfaction of SVCA.

3.8 Natural Resource Systems

As has been referenced throughout this Manual, SVCA advocates for an integrated approach to planning and watershed management. The following policies support this approach:



Policy 3.8-1 All development and site alteration will be assessed with regard for the potential impacts on natural hazard, natural heritage and natural resource systems. The assessment of the resource, the identification of the development limit and mitigation measures will be undertaken through the completion of a comprehensive EIS where required.

SVCA will recommend that studies to support development consider the implications of the affected planning area and should be based on logical natural boundaries or planning area boundaries. Studies completed at this scale are capable of characterizing the cumulative effects of development.



Policy 3.8-2 SVCA will take the approach that a site specific EIS (an EIS for a specific property or group of properties) may be acceptable due to the scale of the development or the limited development area available. Although this type of EIS has a narrower scope than one that considers the entire affected planning area, it must still address the broader natural hazard, natural heritage or natural resource systems of the area. It should be noted that due to its narrower scope, the site specific EIS is less capable of assessing cumulative impacts on the system and as a result, the Authority will take a more precautionary approach when assessing the acceptability of impacts.

SVCA will work with watershed municipalities to identify the need for comprehensive studies on a priority issues. Comprehensive studies based on logical management boundaries are required to support large scale urban expansions.

The SVCA may consider the waiving of the requirement for the preparation of an EIS if the development is subject to a duplicate or similar environmental assessment process; the development is minor in nature; or the site conditions for development are such that the preparation of an EIS would serve no useful purpose for the protection of significant environmental features.

CHAPTER 4: ONTARIO REGULATION 169/06, AS AMENDED POLICIES & PROCEDURES

Topics Covered

Authority of the Regulation Areas Subject to the Regulation Regulated Works

CHAPTER 4: THE ADMINISTRATION OF ONTARIO REGULATION 169/06, AS AMENDED

N.B.: In some cases there may be a need for coordination between planning applications and those under the Authority's Regulation and Permitting Program. This can also be complicated by the fact that the two applications may be received years apart. The Authority will ensure that its position on a Planning Act application is the same as its position on a permit application for the same or similar proposal on the same property; except where planning policies supported by the PPS, municipal official plans or the SVCA may be more restrictive. The principal of development is determined through the review process under the Planning Act.

4.1 Introduction & Overview

This Chapter provides detailed information about the regulatory responsibilities assigned to Saugeen Valley Conservation Authority with respect to the administration of Ontario Regulation 169/06, as amended, and subject to further revisions and amendments.

As noted in Chapter 1, conservation authorities are created as corporate bodies with Authority Members acting in a governing capacity. The composition of the Authority Members/governing representatives is determined by the Act according to the population of participating municipalities. Authority Members are appointed by municipalities to represent the Authority's interest and for the most part, the vast majority of Authority Members are generally elected councillors.

The Ministry of Natural Resources & Forestry administers a shared program with municipalities that was approved by the Minister through the CAA in public safety, natural hazard prevention and management related to MNRF's Orders in Council under the Emergency Management & Civil Protection Act. These programs, as has been described earlier, focus on:

- Flood & Erosion Control Operations;
- Flood Forecasting & Warning;
- Ice Management; and
- Hazard information derived from studies for Municipal Plan Input

Each conservation authority has a Section 28 Development, Interference with Wetlands & Alterations to Shorelines and Watercourses Regulation (2006) that has been approved by the Minister and conforms to the Lieutenant Governor in Council 'content' or generic regulation, O.Reg 97/04

4.1.1 History of CA Regulatory Role

The Conservation Authorities Act first empowered Conservation Authorities to make regulations to prohibit filling in floodplains below the high water mark in 1956. These powers were broadened in 1960 to prohibit or regulate the placing or dumping of fill in defined areas where, in the opinion of the CA, the control of flooding, pollution or the conservation of land may be negatively affected. In 1968, an amendment to the CAA further extended the power of Conservation Authorities to prohibit or control construction and alteration to waterways, in addition to filling.

In 1998, the CAA was changed as part of the Red Tape Reduction Act (Bill 25) to ensure that regulations under the Act were consistent across the province and complementary with provincial policies. To better reflect provincial direction and to strengthen protection of public safety and the environment, the CAA was modified to enable CAs to enact the Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation (OR 97/04) to replace the Fill, Construction and Alteration to Waterways Regulation (OR 33/94).

The management of natural hazards¹⁴ involves a combination of four main program components:

¹⁴Details related to natural hazard management applications are contained in the Natural Hazards Technical Guides (MNR, 2002a; MNR, 2002b; MNR, 1996a; MNR, 1996b; and MNR 1996c).

1. Prevention – of new development locating within areas subject to loss of life and property damage and social disruption from natural hazards;
2. Protection – of existing development from natural hazards through the application of structural and non-structural measures/acquisition;
3. Emergency Response – to mitigate impacts through flood forecasting and warning; and
4. Co-ordination – between natural hazard management and planning and development.

4.2 Administration of the Regulation

As explained in Chapter 1, conservation authorities are empowered to make regulations (subject to the approval of the Minister of Natural Resources & Forestry and within their jurisdiction) under Section 28 of the Conservation Authorities Act for:

- 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 or 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 negatively affected by development;*
- d. Providing for the appointment of officers to enforce any regulation made under this section or Section 29; and/or*
- e. Providing for the appointment of persons to act as officers with all the powers and duties of officers to enforce any regulation made under this section.*

Conservation authorities regulate development and other works through a permitting process for the purposes of natural hazard management and prevention. Areas of focus include development in areas related to water-based natural hazards such as floodplains or shorelines. Under the Act, conservation authorities must consider development applications based on the potential impacts to the control of flooding, erosion, dynamic beaches, pollution or the conservation of land. In addition, conservation authorities are also concerned with interference with or alterations to a watercourse or wetland.

Permit decisions are based on the text of the Act & Regulation. Conservation Authorities find the direction in several documents including the Policies and Procedures for Conservation Authority Plan Review and Permitting Activities, MNRF's Natural Hazard Technical Guides, Guidelines for Developing Schedules of Regulated Areas, as well as applicable Conservation Authority approved policy or practice if these policies, practices and/or protocols are within the intent of the Act & Regulation.



As is the case with all provincial legislation, unless specific reference is made to the Crown, the statute is non-binding on Federal Departments, Provincial Ministries, Crown Agencies or Corporations, unless a third party is undertaking the project. While most provincial government agencies voluntarily agree to comply with the requirements of all applicable law, it is important to note that the CAA does not formally bind the Crown. The Regulation also does not:

- Limit the use of water for domestic or livestock purposes;
- Interfere with the rights or powers conferred upon a municipality in respect of the use of water for municipal purposes;
- Interfere with any rights or powers of any board or commission that is performing its functions for or on behalf of the Government of Ontario;
- Interfere with any rights or powers under the Electricity Act or the Public Utilities Act
- Apply to activities approved under the Aggregate Resources Act; and/or
- Some aspects of Green Energy Act projects.



Ontario Regulation 169/06, as amended outlines what and where the SVCA can regulate. The principal mandate of the Authority is to prevent the loss of life and property damage due to flooding and erosion, social disruption and to conserve and enhance natural resources. The regulation is a key tool in fulfilling this mandate because it prevents or restricts development in areas where the control of flooding, erosion, dynamic beaches, pollution or the conservation of land may be negatively affected by development.

Saugeen Conservation applies Ontario Regulation 169/06, as amended, in a manner that is in keeping with Section 3 of the Provincial Policy Statement issued under the Planning Act. SVCA has prepared OR 169/06, as amended, in keeping with the standards prescribed by the Ministry of Natural Resources & Forestry and Conservation Ontario in the Saugeen Valley Conservation Authority Terms of Reference for the Preparation of Regulation Schedules (November 2005.)

4.2.1 Important Definitions and Areas

One of the most critical things to understand regarding the scope of the Conservation Authority's jurisdiction is that the definition of 'development' under the Conservation Authorities Act is different than the definition that is provided for under The Planning Act. In the case of the Planning Act, the definition of development includes buildings and structures. Under the Planning Act (discussed in Chapter 3), activities that occur on the land base are not included in the definition of development. This is not the case under the Conservation Authorities Act where the definition of development is much broader and includes buildings and structures and works such as the temporary or permanent placement, dumping or removal of any material originating on the site or elsewhere as well as site grading. This broader definition of development under the CAA enables conservation authorities to regulate works that occur on the land base.

Conservation Authorities Act¹⁵ Important Definitions



Development means:

- "the construction, reconstruction, erection or placing of a building or structure of any kind;
- any change to a building or structure that would have the effect of altering the use or potential use of the building or structure;
- any change to a building or structure that would increase its size or structure or increase the number of dwelling units in the building or structure;
- site grading; or
- the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere."

The Act also defines watercourse as follows:

¹⁵ Source: CAA, Section 28

Watercourse means: “an identifiable depression in the ground in which a flow of water regularly or continuously occurs.”¹⁶

“Wetland” means land that:

- (a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface;
- (b) directly contributes to the 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).

Despite the authority provided by the Act, there are some terms that are not defined in the Act and are subject to local interpretation (e.g. “conservation of land”, “Interference in any way”)

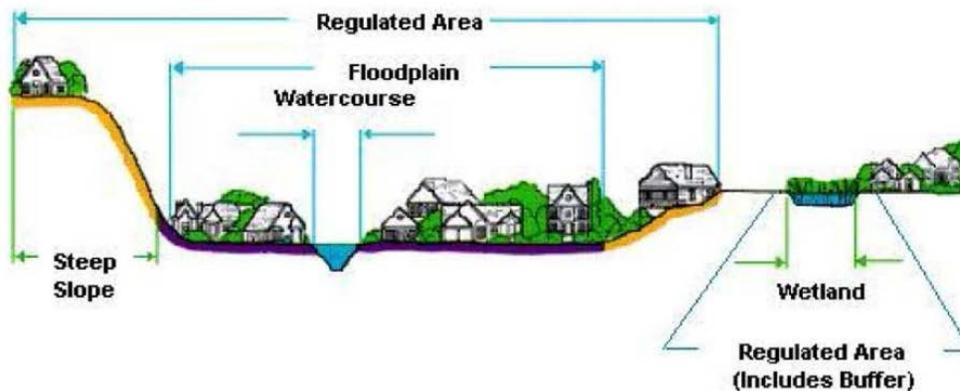


SVCA administers Ontario Regulation 169/06, as amended, which enables SVCA to regulate development and site alterations within its regulated area. The following types of lands are regulated:

- ravines, valleys, steep slopes;
- wetlands, including swamps, marshes, bogs, fens and ponds;
- any river, creek, flood plain or valley land; and/or
- lake shorelines.

The following is an example of regulated areas:

Figure 4-1: Cross section through a typical regulated area.



Please note that for wetlands, the regulated area includes “Other Areas” where development could interfere with the hydraulic function of a wetland and may include an area of interference.

¹⁶ Open Municipal drains, by their very nature, usually meet this definition and usually qualify.

4.2.2 Screening Maps

The SVCA uses screening maps to administer its Regulation for those lands not covered by Schedules. The Screening maps do not form part of the Regulation. Where there are Schedules under the Regulation, they supersede the screening maps. The screening maps will be used to assist Authority staff and the public in initially identifying areas where the Regulation is likely to apply. Subsequent closer review by Authority staff can formally establish the Regulation Limits for a site.

The origin of the Screening Maps consists of the original SVCA Hazard Land Mapping. The SVCA's Hazard Land Mapping consisted of 1:5000 scale semi-rectified photobase maps originating from aerial photography taken in 1990 and some in 1978. There is a total of 853 maps covering all of the SVCA Watershed. For all 27 former Townships in the Watershed and those communities that lacked engineered flood plain mapping, the SVCA has produced non-engineered hazard land mapping using the photobase format. This program was undertaken over a period of 14 years beginning in 1982. All work was done by trained SVCA staff. The methodology involved air photo interpretation, file research, and extensive ground-truthing. For some individual Townships there were up to 130 staff hours spent on completing field checks alone. As a rough estimate for the entire Watershed, the SVCA has mapped about 90,000 ha through this Hazard Land Mapping program.

The SVCA Hazard Land Mapping has been transferred into all of the Municipal Official Plans and Zoning By-laws throughout the Watershed. Consequently, as with any municipal planning application under the Planning Act, there have been public meetings prior to the adoption of the official plan or comprehensive zoning by-law. In total there have been approximately 132 public meetings/open houses, attended by thousands of watershed residents, where the Hazard Land Mapping was available for public review and scrutiny on an individual municipal basis.

During the time each Official Plan and Zoning By-law proceeded through the planning process and public meetings, landowners could request the SVCA to reassess the proposed hazard line. As a result, approximately 249 individual site reviews were completed by Authority staff, most of them involving field verification, resulting in revisions to the draft line as appropriate.

The final test that every Official Plan and Zoning By-law must complete is the required period of time during which anyone may file an appeal. An appeal can result in a hearing before the Ontario Municipal Board. Since 1982 to the present, there have been three (3) appeals of the Authority's Hazard Land Mapping, all of which were resolved satisfactorily.

Once implemented in an Official Plan or Zoning By-law, the hazard land mapping remains in constant use by municipal officials, landowners, property purchasers, and the Authority.

The Hazard Land Mapping produced over the years identifies essentially the same features as the Regulation, namely:

- River or stream valleys;
- the Lake Huron Shoreline;
- Hazardous Lands;
- Wetlands; and
- Watercourses.

The criteria used to apply the Hazard Land Mapping is somewhat different than that used to produce Regulation Schedules, but these differences relate essentially to terminology and details.

Due to these slight differences, the non-engineered mapping format, and the Hazard Land Mapping not using built in allowances (such as 15 metres from the toe of slope), the hazard boundaries are not necessarily coincident with the

Regulation Limit were they to be plotted. There is a 30 metre screening area buffer that applies. Only the Provincially Significant Wetlands, with the 'other areas' offset of 120 metres, exceeds this threshold; however, these wetlands are already identified in the municipal planning policies and the 120 metres adjacent lands policies are in effect through The Planning Act. It is evident the SVCA's Hazard Land Mapping has withstood rigorous scrutiny and it forms a valid basis as screening maps for the Regulation.

Current Online Mapping:

In the spring of 2015 the SVCA consolidated the screening and regulation mapping for the SVCA's jurisdiction. This consolidated approximate regulation and approximate screening mapping is intended to include the aggregate of the SVCA's Hazard land mapping, screening areas, PSWs and their 120 metre offset, and mapped regulated areas within the SVCA's jurisdiction. Therefore, this mapping acts as a single source guide for the public and other agencies to understand where the SVCA may have interest from a Regulatory perspective. Proposals within the approximate screening area or approximate regulated area should contact the SVCA for review prior to initiating works as permission may be required for that work. Proposals outside of the screening area likely do not require SVCA review. As the Regulation is a 'Text Based' Regulation, regardless of mapping, all proponents as well as the SVCA are required to consider the applicability of the Regulation given features present on or near the proposed works site. The SVCA's Regulation applies where hazardous features exist, even when these features are not included within the Screening Area. This mapping is located on the SVCA's website and has been provided to Counties within the SVCA's jurisdiction for inclusion in their online mapping programs.

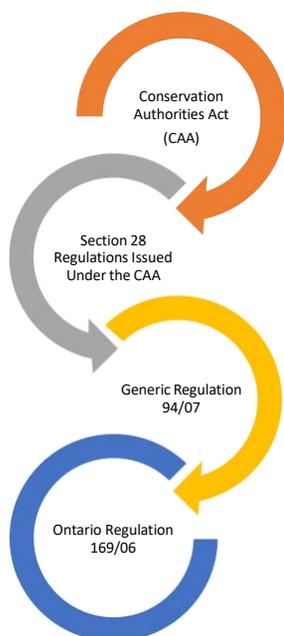
4.3 Purpose & Objectives of Ontario Regulation 169/06, As Amended

The purpose of the Regulation is not to necessarily restrict development, but rather to ensure that people are protected from risk and that properties are protected against natural hazards including flooding, erosion, unstable slopes and soils and dynamic beaches.

Authority for SVCA's regulation comes directly from the province and specifically section 28 of the Conservation Authorities Act.

In keeping with subsection 3.1 of the Regulation, 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 negatively affected by the development.

Figure 4.1: Relationship of the Regulation to the Act



The objectives of OR 169/06, as amended, are to:

- **Prevent loss of life** as a result of flood or erosion hazards;
- **Minimize property damage and social disruption** resulting from flooding or erosion;
- **Minimize public and private expenditure** for emergency operations, evacuations, disaster relief and restoration;
- **Prevent hazardous development** within floodplains, flood and erosion areas and unstable slopes which may in future require expensive protection measures;
- **Ensure that development does not increase risks** to upstream and downstream landowners;
- **Prevent filling and/or draining of natural storage areas**, and development that may limit floodplain storage capacity, increase flood elevations and/or decrease slope stability;
- **Prevent the interference with the hydrologic function of wetlands;**
- **Prevent pollution and other degradation** of rivers and other water bodies.

The Minister of Natural Resources and Forestry approved Ontario Regulation 169/06, as amended, consistent with Ontario Regulation 97/04 on May 4th, 2006. This regulation, entitled the *Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation* (hereafter referred to as the Regulation), was amended in 2013.

Regulating development in areas subject to natural hazards is frequently well understood however, regulating development and works in wetland areas may not be. The reasons why conservation authorities have this responsibility results from the important role wetlands play in flood attenuation. Wetlands provide natural water storage and flood attenuation characteristics. As a result, they can support efforts to minimize and reduce shoreline erosion. Filling and dredging wetland areas can result in a reduced capacity to retain water resulting in higher flows in connected watercourses with an increase in subsequent flooding and erosion. In addition, development in wetland areas could be at risk as a result of unstable conditions including the presence of organic soil and a high water table.

Within the SVCA Regulated Areas, the following are subject to Ontario Regulation 169/06, as amended:



- Construction, reconstruction, erection or placing of a building or structure of any kind;
- Changes that would alter the use or potential use of a building or structure;
- Increasing the size of a building or structure or increasing the number of dwelling units in the building or structure;
- Site grading;
- Temporary or permanent placement dumping or removal of any material originating on site or elsewhere;
- Straightening, changing, diverting or interfering with the existing channel of a river, creek, stream or watercourse; or
- Changing or interfering in any way with a wetland.

The SVCA will issue a permit where all five tests of the Regulation are met associated with a complete permit application. The tests of the regulation are that the control of flooding, erosion, pollution, the conservation of land, and dynamic beaches will not be negatively impacted by the proposal.

Stewardship:

SVCA recognizes that sustainable management of the watershed requires the engagement of landowners and organized partners and stakeholders. SVCA will work with clients and partners to continue to promote on-the-ground action and will continue to recognize that the wise use and management of the watershed depends on shared ownership and collective action.

4.4 Exemptions from OR 169/06, As Amended – No Permission Required

In an effort to streamline its permitting requirements, SVCA has identified a number of instances where permission from SVCA is not required. These instances are outlined in detail below.

4.4.1 Works Exempt from SVCA Permission – No Application & No SVCA Review Required



Policy-4.4.1-1: Exempt Works – NO SVCA Permit REQUIRED

The following works do not require permission from SVCA. Applicants are not required to submit an application for a permit if any of the following works are proposed:

Agricultural activities:

- **Non-structural agricultural use** such as cropping and pasturing within existing agricultural fields, and woodlot management (selective timber harvesting with no permanent watercourse crossings, permanent landing areas, etc.).

Accessory Building:

- **Non-habitable, free standing accessory building** associated with an existing use less than 10 m² (108 ft²), that is secured to the ground and requires less than 23 cubic metres of ground disturbance, and is not within a wetland and separated from other buildings, structures, including other structures less than 10 m² by at least a metre and is not more than 1m above the ground.

Construction of residential decks:

- will not require a permit to be obtained provided:
- they will never be enclosed or converted in use;
- are fixed to the ground unless they are a seasonal feature;
- the location selected is not within a hazard (may be acceptable within the flood fringe); and
- if located near or adjacent to a hazard, their construction will not create a hazard or increase the hazard that presently exists;

Docking and Related Facilities (e.g. swimming platforms):

- Seasonal or Temporary Facilities
 - Placement of temporary or seasonal facilities (including bridges) will not generally require an SVCA permit to be obtained provided they will not cause flooding or erosion and will not obstruct flow and the structure(s) will be removed in the fall and stored beyond the floodplain area or alternatively, if stored within the floodplain area, then well secured to prevent dislodging during flood events. Re-Installation of the facilities must not occur prior to flooding events that may be expected in the springtime of the year. Permission will be required from the owner of the bed of the watercourse or lake separate from SVCA review.

may be attached to permanent facilities that are located completely on the shoreline area beyond the water's edge. Permanent docking and related facilities to be placed wholly or partially within the water are discouraged. Any such facilities proposed will require full SVCA staff review, formal application and a permit to be obtained.

Fencing:

- Fencing is considered exempt from permission required under Section 28 regulation, including temporary snow or sand fencing, page wire fencing, split rail fencing, chain link fencing or board fencing. However, where fencing is required in a regulated area, where it could aggravate potential flood or erosion hazards, SVCA will recommend that fencing be constructed in such a manner that it will not impede the conveyance of flow¹⁷ and will limit the potential for collection of debris during high flow/flooding events. Stone or concrete walls are not included in this general exemption.

¹⁷ In the case of Board fencing located in a floodplain or dynamic beach, design considerations must ensure there is minimal impact on water or sand flow and/or deposition with appropriate board spacing.

Landscaping or grading: where fill quantities are less than 23 cu. m, the work is completed within one calendar year, is not an ongoing fill project, the fill is comprised of inert, granular material, will not cause erosion or sedimentation, and is not located on a steep slope, wetland, or along the shoreline.

Landscaping paths: in areas of dynamic beach or other natural hazards will not require an SVCA permit to be obtained provided that:

- the proposed works are to be located entirely on the subject property;
- the path is at grade;
- no significant amount of excavation, clearing, etc. is required;
- the path will not exceed a width of 1.2 metres;
- neighbouring paths along or at side yards of adjoining properties are encouraged;
- no other structures are proposed related to the landscaping; and
- there will only be one route per property.

Minor alterations & repairs:

- Maintenance and upkeep of existing buildings and structures;
- Repairs and renovations to an existing building within the existing roofline and exterior walls and above the existing foundation, and is not associated with a change in use, or potential use, or increase the number of dwelling units;
- Interior and exterior repairs or maintenance of a building, such as siding, painting, window and door replacements, roof shingling;
- Replacing or installing a furnace or electrical panel (unless some other aspect of the overall project is considered construction or reconstruction);
- Minor alterations and maintenance or operation of existing dams that would not affect the control of flooding, erosion, pollution or the conservation of land and that would not result in changes in the capacity of river flows or impacts on integrity of the structure or in-water works, and where there is no change to the original dimensions of the existing dam;
- Maintenance to stormwater management facilities that would not affect the control of flooding, erosion, pollution, dynamic beaches, or the conservation of land, and where there is no change to the original dimensions of the existing infrastructure.;
- Minor watercourse works, not including dams or ponds, in watercourses less than or equal to one metre in width at the project site (top of bank measured), will not disturb more than 8 metres of channel length, will not cause flooding or erosion and will not obstruct flow; and

Non-structural uses and activities:

- Replacement of existing service connections (e.g. telephone, cable, water, sewer within a Regulated Area, but not within the actual regulated feature unless a floodplain (not within a wetland, watercourse, shoreline, valley); and
- Other non-structural uses such as gardens, nurseries, open arboretums and forestry/wildlife management.

Previously approved uses:

- On-going operations associated with existing commercial/industrial uses that have been previously approved by SVCA; and
- Municipal water monitoring wells that would not affect the control of flooding, erosion, pollution, dynamic beaches, or the conservation of land.

Private sewage disposal systems (replacement or as part of development) will not require an SVCA permit to be obtained provided the disposal bed is no closer to a natural hazard than that which is being replaced; the bed is the same size or smaller than the existing being replaced; and/or there will be no negative impacts on the local drainage.

4.4.2 Violations, and Compliance with Permits

Violations of *Ontario Regulation 169/06, as amended*, may occur as a result of *development, interference or alteration* works occurring within a *Regulated Area* in one of two ways:

- without written permission from Saugeen Conservation; or *development, interference or alteration* undertaken contrary to the terms and/or conditions stipulated in a permit issued by SVCA.

The landowner and/or *individuals involved* may be unaware that permission is required from the SVCA. However, this does not absolve the landowner and/or *individuals involved* from obtaining permission.

A Permit may be cancelled if conditions are not adhered to.

SVCA has legal authority to investigate an activity to determine whether or not a contravention of OR 169/06, as amended, has taken place pursuant to section 28 (20) of the *Conservation Authorities Act*. Specific powers of entry are discussed more fully in Appendix H.



If convicted, the person(s) committing the offence (landowner, contractor, agent or other involved party) may be subject to a fine of not more than \$10,000 or to a term of imprisonment of not more than three months (*Conservation Authorities Act*, R.S.O. 1990, c. 27, s. 28, ss. 16). In addition, if convicted, the development/interference may be required to be removed at the expense of the landowner. The landowner may also be required to rehabilitate the impacted area in a manner prescribed by the courts (*Conservation Authorities Act*, R.S.O. 1990, c. 27, s. 28, ss. 17).

Further information about the procedures associated with violations is described in Appendix F. More information about processing Section 28 permits has been included in Section 6.0 of this Chapter.

4.5 General Policies

Ontario Regulation 169/06, as amended, gives the SVCA the authority and mandate to prohibit or regulate development on lands:

- Adjacent to or close to the shoreline of the Great Lakes – St. Lawrence River System or to inland lakes that may be negatively affected by flooding, erosion or dynamic beaches;
- River or stream valleys;
- Hazardous lands;
- Wetlands; and
- other areas where development could interfere with the hydrologic function of a wetland, including areas within 120 metres of all provincially significant wetlands and within 30 metres of all other wetlands.

The Regulation also gives the SVCA authority to prohibit or regulate alterations which would result in:

- the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse; or
- changing or interfering in any way with a wetland.

It is important to note that the level of mapping detail varies across the watershed. In some areas, regulation mapping exists but in other areas, there is screening mapping that is available and used. Work is underway to expand regulatory mapping but has not been completed to date.



The Regulation applies to all areas described, whether the features are mapped or not.

4.5.1 Implementation/Interpretation

SVCA will be guided by the following general administrative guidance with respect to the implementation of its regulatory responsibilities:



Policy 4.5.1-1: General Administrative Development Policies

- 1. All development taking place in a Regulated Area requires permission from SVCA.**
- 2. Where regulated lands contain more than one regulated feature (e.g. lands susceptible to flooding that are part of a Provincially Significant Wetland), policies will be applied jointly, and where applicable, the more restrictive policies will apply.**
- 3. Information regarding technical criteria, evaluation and guidelines are contained within the Appendices attached hereto. It is important to note that the Appendices must be read in conjunction with this manual.**

Development in areas defined in the *Regulation*, *interference* with wetlands or *alterations* to river, creek, stream or watercourse channels requires permission from the SVCA. Each application will be evaluated on its own merits, on a case-by-case basis, consistent with the policies outlined in this Chapter.



N.B.: Applicants who are contemplating site alterations as identified above, are encouraged to contact SVCA to determine if their property falls within a Regulated Area prior to the commencement of any on-site work. SVCA staff will advise of the permit process, if applicable, and are available to provide additional information and assistance.



In addition to obtaining a permission from SVCA, other permits may be required from other federal, provincial or municipal bodies in conjunction with a development proposal. Works that are subject to, but undertaken in an SVCA Regulated Area without permission, are in violation of the Conservation Authorities Act. More information about complying with the CAA and violations follows.

4.5.2 Prohibiting or Regulating Development

Within areas defined by the *Regulation* (*Regulated Area*) including river or stream valleys and an allowance; wetlands or other areas where development could interfere with a wetland or hydrologic function of a wetland (areas of interference); lands adjacent to the shoreline of Lake Huron and inland lakes as per SVCA screening maps, the following general policies will apply:



Policy 4.5.2-1: General – Prohibiting or Regulating Development

Development, interference or alteration will generally not be permitted within a Regulated Area, except in accordance with the policies in this Chapter.



Policy 4.5.2-2: General – Prohibiting or Regulating Development

Development, interference or alteration within a Regulated Area will be permitted only where it can be demonstrated to the Authority's satisfaction that:

- susceptibility to natural hazards is not increased or new hazards created;
- there are no adverse hydraulic or fluvial impacts on rivers, creeks, streams, or watercourses;
- grading (e.g. placing and removing fill) is minimized and maintains stage-storage discharge relationships and floodplain flow regimes for a range of rainfall events, including the Regulatory Storm;
- there are no negative or adverse hydrologic impacts on wetlands;
- pollution, sedimentation and erosion during construction and post construction is minimized using best management practices including site, landscape, infrastructure and/or facility design (whichever is applicable based on the scale and scope of the project), construction controls, and appropriate remedial measures;
- intrusions on hydrologic functions are avoided, and no adverse impacts to hydrologic functions will occur;
- groundwater discharge areas which support hydrologic functions on-site and adjacent to the site are avoided;
- groundwater recharge areas which support significant natural features or hydrologic or ecological functions on-site and adjacent to the site will be maintained or enhanced;
- access for emergency works and maintenance of flood or erosion control works is available;
- works are constructed, repaired and/or maintained according to accepted engineering principles and approved engineering standards or to the satisfactions of the SVCA, whichever is applicable based on the scale and scope of the project; and
- the control of flooding, erosion, pollution or the conservation of land is not adversely affected during and post development, interference or alteration.

If required, technical studies and/or assessments, site plans and/or other plans submitted as part of an application for permit to undertake **development, interference** or **alteration** in *Regulated Areas* must be completed by a qualified professional to the satisfaction of the SVCA in keeping with the most current technical guidelines approved by the SVCA.

4.6 Specific Policies to Prohibit or Regulate Development

4.6.1 Lake Huron Flooding Hazards: Definition and Context What is the Lake Huron Flooding Hazard?



In general, flooding is a phenomenon influenced by, and sensitive to, water level fluctuations. Inundation of low-lying Great Lakes - St. Lawrence River system shorelines in and of itself does not necessarily constitute a significant hazard. The hazard is dependent on the type, design, location and density of any development in or near the flood inundated shorelines. However, where flooded lands are coupled with storm events, the cumulative impact can and frequently does pose significant degrees of risk.

Understanding the interrelationship between pre-storm flooding, storm setup, wave height, wave uprush and other water related hazards (i.e. wave spray, ice) is important in managing a potentially flood susceptible shoreline. In terms of human use and occupation of the low-lying Great Lakes – St. Lawrence River system shorelines, development decisions based on or during periods of low water levels can present the most serious problem. During lower water levels, the potential flood hazard to homes, cottages and other development often goes unrecognized. Consequently, when water levels return to long-term averages or high water levels, flood damages are sustained. These damages are frequently quite significant (MNRF, 1996).

The variable nature of water elevations of the Great Lakes is apparent from historical records. There are two key factors influencing long-term and short-term changes in lake levels, natural phenomena (e.g. rainfall, evaporation, wind, storms, etc.) and human or anthropogenic intervention (i.e. diversions, water control structures, etc.). The most familiar changes in lake levels are seasonal fluctuations. Superimposed on these seasonal fluctuations are some extremely short periods of significantly larger magnitudes of lake level changes. The most temporary of these are caused by storm winds which blow over the lake surfaces pushing the water to the opposite side or end of the lake. When a wave breaks, it results in an increase in the mean water level in shore from the breaking point, referred to as wave set-up. Wave run-up refers to the uprush movement of a wave breaking on a shoreline. This is a function of the height and periodicity of the wave as well as the foreshore slope.

The 100-year flood level for Lake Huron within the SVCA area of jurisdiction is 177.6 m GSC, except for south of Point Clark, where the 100-year flood level is 177.7 m GSC.

4.6.2 Riverine Flooding Hazards: Definition and Context

What is the Riverine Flooding Hazard?

Within Ontario, there are three policy concepts for floodplain management: one zone, two zone, and special policy area (SPA).



For most of the Saugeen Valley watershed, the Riverine Flooding Hazard is based on the greater of the Hurricane Hazel storm event (the Regional Storm) or the 100-Year return period flood, or an observed flood event such as Frazil Ice flooding in specific areas. For the Saugeen, Penetangore, Pine River and Lake Fringe watersheds the Riverine Flooding Hazard is largely based on the Hurricane Hazel event. However, near the mouth of the Saugeen River in Southampton the 100-Year return period flood is used. The larger flood event is called the Regulatory Flood, the limits of which define the extent of the Riverine Flooding Hazard.

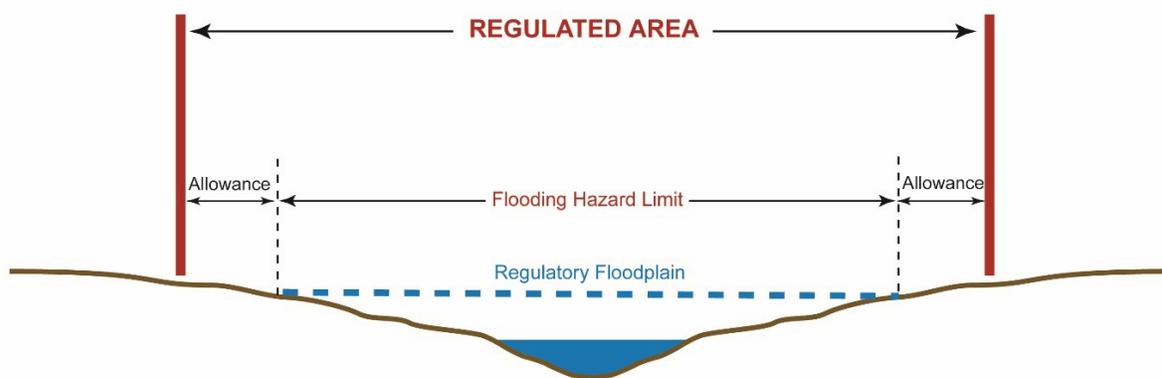
The *Regulated Area* includes the *Riverine Flooding Hazard* (also referred to as the *Regulatory Floodplain*) and the *allowance* (**Figure 4-6.1**). Where the *Riverine Flooding Hazard* is delineated, a 15 metre allowance has been added. The allowance is included to address limitations in base mapping scale and accuracy and to consider works directly adjacent to the *Riverine Flooding Hazard*, which could aggravate or increase the hazard risk.



The Regulated Areas within the Saugeen Valley watershed associated with the Riverine Flooding Hazard consist of One-Zone and Two-Zone Policy Areas. Regardless of the approach applied, development within the Riverine Flooding Hazard (Flooding Hazard Limit) as defined below and illustrated in the following figures 4.6.1 and 4.6.2, requires permission from the SVCA.

In a *One-Zone Policy Area*, the entire *Regulatory Floodplain* is considered the *floodway*. The Geographic Town of Chesley offers an example of a community that applies a One-Zone approach.

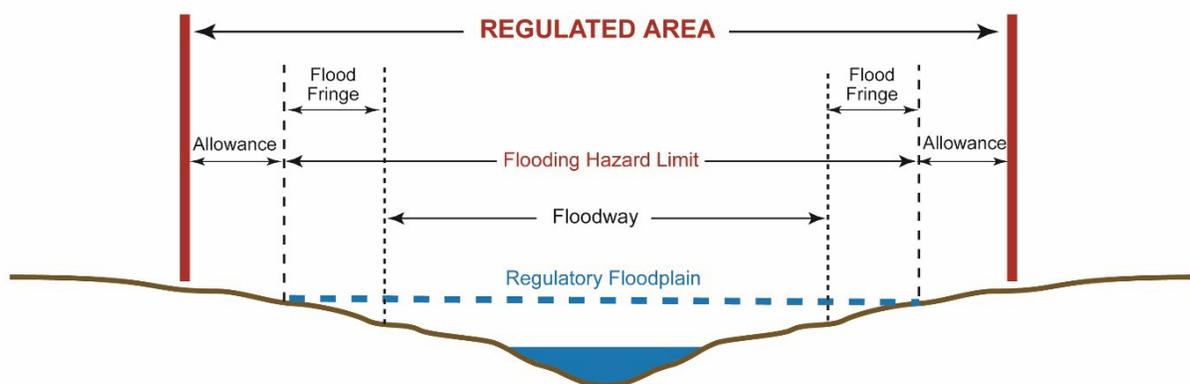
Figure 4-6.1. Riverine Flooding Hazard – Regulated Area for One-Zone Policy Areas



In other areas of the SVCA watershed (in an around the communities of Walkerton, Paisley, Durham, Teeswater, and Neustadt), a Two-Zone approach to floodplain management applies to certain areas. In these communities, the *Regulatory Floodplain* is divided into a flood way and a flood fringe. A *Two-Zone Policy Area*¹⁸ permits new development or redevelopment in the *flood fringe* provided that it is protected to the level of the *Regulatory Flood*

and consistent with two zone policies. A *Two-Zone Policy Area* may be considered where the SVCA in cooperation with the municipality, after due consideration of local circumstances, agrees that application of the concept is suitable. The feasibility of a *Two-Zone Policy Area* requires the examination of a number of factors and implementation requires the assurance that various conditions will be complied with. The application of a *Two-Zone Policy Area* is not intended to be on a lot-by-lot basis, but on a subwatershed or major reach basis. Where the SVCA and the municipality agree to the use of a *Two-Zone Policy Area*, appropriate official plan designations and zoning must be put into place by the municipality.

Figure 4-6.2 Riverine Flooding Hazard – Regulated Area for Two-Zone Policy Areas



¹⁸ In a *Two-Zone Policy Area*, the *floodplain* is divided into two distinct sections – the *floodway* and the *flood fringe*. The *floodway* is that area of the *floodplain* that is required to pass the flows of greatest depth and velocity. The *flood fringe* lies between the *floodway* and the edge of the *floodplain*. Depths and velocities of flooding in the *flood fringe* are generally less than those in the *floodway*. The technical considerations used to determine the *floodway-flood fringe* delineation and the suitability of applying a Two-Zone policy are described in the Ministry of Natural Resources Technical Guide River and Stream Systems Flooding Hazard Limit (2002).

The following policies apply to development proposed in a *One-Zone Policy Area* subject to a *Riverine Flooding Hazard*, excluding allowances. **Please note, the general provisions of the Regulation (4.5) apply.**

Technical Standards for the Flooding Hazard Safety risks are a function of the occupancy of structures as well as the flood susceptibility of the structures and the access routes to those structures. Generally, risk should be controlled by limiting the size and type (and thereby limiting the occupancy) of new construction and additions or reconstruction projects in dangerous or inaccessible portions of the regulatory floodplain. Floodproofing measures should be in keeping with the standards of the River and Stream Systems Flooding Hazard Limit, Technical Guide – Appendix 6 (MNRF, 2002a).

Floodplain Spill Areas

There are areas within SVCA’s watershed in which flood plain spills occur. A flood plain spill area exists where flood waters are not physically contained within the valley or stream corridor and exit into surrounding lands. As a consequence, the limit and depth of flooding are difficult to determine. Flood spill areas occur naturally or can occur as a result of downstream barriers to the passage of flood flows such as undersized bridges or culverts.

Geographic Town of Southampton and Adjacent Areas

SVCA 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, SVCA may permit development provided appropriate flood hazard mitigation can be established. Spill Regulated Areas are located within 50 metres of the indicated “Spill” area on floodplain mapping. Mitigation for development proposed within a spill area could include:

- a) Raising the elevation of proposed buildings or structures above the anticipated flood level; and/or
- b) Raising the lands within the spill location.

4.7 Regulatory Floodplain of River or Stream Valley

4.7.1 One Zone Policy Areas (Excluding Allowances)



Policy 4.7.1.1: Floodproofing

All development proposed within the flood hazard limit must be floodproofed.



Policy 4.7.1-2: One Zone – Permitted

Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.

Permitted Uses	Conditions
Recreational Infrastructure which by its nature must locate in river valleys such as fencing, stairways, and access points, and other recreational uses deemed appropriate by the SVCA	<p>In accordance with the general policies, section 4.5.2 or where it can be demonstrated through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that:</p> <ul style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new Riverine Erosion Hazards or aggravating existing Riverine Erosion Hazards is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage; d) the potential for surficial erosion is addressed by a drainage plan; and e) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.
Stream bank, slope and valley stabilization work to protect existing development	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
in ground pools, landscape retaining walls, grading, decks)	<p>Where it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be affected and submitted plans demonstrate that:</p> <ul style="list-style-type: none"> a) there is no viable alternative outside of the Regulatory floodplain or in the event that there is no feasible alternative site, that the proposed development is located in an area of least (and acceptable) risk b) the proposed works do not create new hazards or aggravate flooding on adjacent or other properties and there are no upstream or downstream hydraulic impacts; c) the development is protected from the flood hazard in accordance with established floodproofing techniques; d) the proposed development will not prevent access for emergency works, maintenance and evacuation e) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans; f) natural features and/or ecological functions associated with conservation of land are protected, pollution is prevented and erosion hazards have been adequately addressed.

Reconstruction or relocation of a building that has not been damaged or destroyed by flooding	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The submitted plans should demonstrate that the building: <ul style="list-style-type: none"> a) cannot be relocated to an area outside the flooding hazard and that there is no feasible alternative site, that it is located in an area of least (and acceptable) risk; b) will be protected from the flood hazard through the incorporation of appropriate building design parameters; and c) will not exceed original habitable floor area nor the original footprint of the previous structure.
Replacement of sewage disposal systems	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The replacement system should be located outside of the erosion hazard where possible and only permitted within the erosion hazard subject to being located in the area of lowest risk.
Minor removal or placement of fill and site grading	If it is has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.
Development associated with the construction of a driveway or access to provide access to lands outside of the apparent river or stream valley	If it has been demonstrated to the SVCA that the conservation of land will not be negatively affected. Submitted plans should demonstrate that: <ul style="list-style-type: none"> a) there is no viable alternative outside of the regulated area; and b) the provision of safe access has been met.
Above ground parking lots	Within the Regulatory floodplain if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected and that safe pedestrian and vehicular access is achieved.



Policy 4.7.1-3: One Zone – Not Permitted

In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted within the flood hazard limit of an apparent river or stream valley.



Policy 4.7.1-4: Development in the Flood Hazard Allowance of the Regulatory Floodplain – Permitted Development will be permitted within the allowance of a Regulatory floodplain if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.

4.7.2 Two-Zone Policy Areas (Excluding Allowances)

As noted previously, the two-zone concept separates the floodplain into two main components:

- the floodway - the portion of the floodplain where development and site alteration would cause a danger to public health and safety or property damage; and
- the flood fringe - the portion of the floodplain that could potentially be safely developed or altered with no adverse impacts.

SVCA may consider the implementation of the two-zone approach where appropriate and where such a request is supported by new engineered floodline map and/or subwatershed plan or other plans. It is not the intention of the provincial policy that a two-zone approach would apply across the watershed and, as has also been noted, there are municipalities where a more permissive two-zone approach has been implemented.

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

The Application of a Two-Zone Policy may be applied in urban settlement areas where the following conditions have been met:

- a) the application of a One-Zone Policy would cause undue hardship to the community in existing serviced areas and/or where channel enhancements or major dyke works have been carried out;
- b) the application of a *Two-Zone Policy Area* is supported by the SVCA and the municipality after due consideration of a number of community-related and technical factors;
- c) a higher level of risk is accepted by the municipality and the SVCA;
- d) a hydraulic study is undertaken which determines the extent of the *floodway* and *flood fringe* in a Two-zone scenario for the area; and
- e) the municipality incorporates appropriate policies and standards into its official plan and zoning by-laws.



Policy 4.7.2-1: New Development in the Floodway - Two Zone
New Development in the Floodway will be permitted only in accordance with the One-Zone Policy Area policies.



Policy 4.7.2-2: Two Zone – Permitted

Notwithstanding the policies	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.

Notwithstanding the policies	Conditions
Recreational Infrastructure which by its nature must locate in river valleys such as fencing, stairways, and access points, and other recreational uses deemed appropriate by the SVCA	In accordance with the general policies, section 4.5.2 or where it can be demonstrated through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that: <ul style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new Riverine Erosion Hazards or aggravating existing Riverine Erosion Hazards is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage; d) the potential for surficial erosion is addressed by a drainage plan; and e) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.
Stream bank, slope and valley stabilization work to protect existing development	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.



Policy 4.7.2-3: New Development in the Flood Fringe – Two Zone

New Development¹⁹ will be permitted in the flood fringe of a Two-Zone Policy Area, or within 50 metres of a spill area designated (in the geographic Town of Southampton only) and approved on engineered floodplain mapping, provided the following conditions are met:

- a) the building or structure is floodproofed²⁰ to the elevation of the Regulatory Flood;**
- b) grading is kept to a minimum;**
- c) flood shields, if proposed, shall not be more than 3 feet high;**
- d) structural engineering will be required should the lowest floor elevation be below the flood elevation;**
- e) Safe access is achievable where feasible;**
- f) all habitable floor space and electrical, mechanical and heating services are above the elevation of the Regulatory Flood; and**
- g) no basement is proposed, or the basement is floodproofed to the elevation of the Regulatory Flood. This may include structural engineering to ensure hydrostatic uplift and side pressure, velocity, impact loading, and waterproof design are addressed.**

¹⁹ Does not include the list of prohibited uses identified in section 4.5.2.

²⁰ Active and passive flood proofing methods are permissible associated with non-residential uses, passive flood proofing is the only acceptable methodology associated with residential uses.



Policy 4.7.2-4: Existing Development – Two Zone

Additions to existing buildings²¹ and structures or proposed changes of use in the flood fringe of a Two-Zone Policy Area, or within 50 metres of a designated spill area (in the geographic Town of Southampton) as identified on engineered floodplain mapping, will be permitted provided the following conditions can be met:

- a) there is no feasible alternative site outside the Flood Fringe;
- b) ingress and egress is “dry” where this standard can be practically achieved, or floodproofed to an elevation which is practical and feasible, but no less than “safe”;
- c) the risk of structural failure due to potential hydrostatic/dynamic, impact loading, pressures is addressed;
- d) all habitable floor space is floodproofed;
- e) no basement is proposed, and any crawl space is non-habitable and designed to facilitate non-essential services only;
- f) for industrial, agricultural or commercial uses, when in a flood fringe area, any non-floodproofed addition is 50 percent or less of the original ground floor area of the building or structure to a maximum of 100 m² (1,076ft²) Where there have been multiple additions, all additions combined are equal to or less than 50 percent of the original ground floor area of the building or structure to a maximum footprint of 100 m² (1,076 ft²). There is no size restriction to industrial, agricultural or commercial additions in a spill area. Additions beyond the above noted size threshold will be required to be floodproofed. Wet or dry (active and passive) floodproofing methods can be used; and
- g) For residential uses, when in the flood fringe, any non-floodproofed addition is 50 percent or less of the original ground floor area of the building or structure to a maximum of or 46.5 m² (500ft²). Where there have been multiple additions, all additions combined are equal to or less than 50 per cent of the original ground floor area of the building or structure to a maximum footprint of 46.5 m² (500 ft²) . There is no size restriction to residential additions in a spill area. Residential additions beyond the above noted size threshold will be required to be dry floodproofed using passive floodproofing methods²².

Floodproofing

Floodproofing means structural changes and/or adjustments incorporated into the design and/or construction or alteration of individual buildings, structures or properties to help protect them from flood damage. In many situations, floodproofing involves nonconventional design of the structural, drainage and electrical/mechanical systems of the building. Accordingly, for certain applications, the services of a licensed professional engineer will be a requirement. Where buildings can be approved, but the services of a licensed professional engineer are required by this policy, the designer shall produce a summary or “owner’s manual” for the owner (and for subsequent owners) such that measures to be taken prior to, during and following a flood event are defined to ensure the building’s suitability for ongoing human habitation and to outline ongoing maintenance responsibilities and requirements.

Floodproofing Methods The following describes the basic options available for floodproofing typical structures and the policies of the Authority in circumstances where development may be permitted. It should be recognized that for some situations one or more of the following options may prove to be technically or economically impractical. Recognizing the required floodproofing measures are the minimum standard, where feasible, SVCA will require the most effective floodproofing measures in an effort to reach the requirements.

²¹ Does not include the list of prohibited uses identified in section 4.5.2.

²² All additions that were permitted or should have been permitted via the authority’s Regulation since the implementation of the Regulation on the subject property are considered in the total addition area allowance.

1. Wet Floodproofing

- Wet floodproofing involves designing a building or structure using materials, methods and design measures that maintain structural integrity by avoiding unbalanced forces from acting on buildings or structures during and after a flood, to reduce flood damage to contents, and to reduce the cost of post flood clean up;
- Wet floodproofed full height basements are not permitted;
- The proposal, must clearly indicate the means by which hydrostatic pressure is to be equalized on either side of the foundation walls and slab;
- The proposal, must clearly indicate the means by which impact loading is to be addressed;
- Top of window sills to be not less than 150 mm below finished exterior grade (to allow flood waters into the structure relieving hydrostatic pressure as soon as flooding of the surrounding land commences);
- Areas below the first floor are to remain unfinished and contain no habitable space or utilities and all mechanical and electrical equipment, heating/cooling units and ductwork are all to be located above regulatory flood level;
- Construction material must withstand anticipated flood conditions to the extent possible;
- Be securely anchored;
- Sump pump may be required (to facilitate clean-up).

2. Dry Floodproofing (Active & Passive)

Active dry floodproofing includes techniques such as installing water tight doors, seals or floodwalls to prevent water from entering openings below the level of the flood hazard. Passive dry floodproofing is the use of fill or design modifications to elevate structure or openings in the building at, or above, the level of the flood hazard;:

- All openings (windows, vents, doors) and electrical must be located at least at the regulatory flood level;
- Structural details of foundation elements and specifications for fill materials and compaction procedures must be prepared or approved by a qualified engineer at the applicant's expense;
- The responsible engineer shall certify in writing that the design has taken into account regulatory flood (velocity and depth of flow) and site (soil type, bearing capacity, etc.) conditions encountered at the specific location of the development;
- The engineer's certificate must confirm that the foundation and building are designed to withstand hydrostatic pressures and/or impact loading that would develop under water levels equivalent to the design storm; and
- The responsible engineer must also identify all operation and maintenance requirements to be met in order to ensure the effective performance of the floodproofing measures over the design life of the structure.

Safe Access/Egress

The ability for the public and emergency operations personnel (police, firefighters, ambulance, etc.) to safely access the floodplain during regulatory flood events is a paramount consideration in any application for development within the riverine floodplain.

Ingress and egress should be "safe" pursuant to provincial floodproofing guidelines (MNRF, 2002a). Depths and velocities should be such that pedestrian and vehicular emergency evacuations are possible on a municipal roadway or private right of way. For re-development on existing lots as a minimum, access should achieve the maximum level of flood protection determined to be feasible and practical based on existing infrastructure. Redevelopment should not be permitted if it results in greater risk to safe access. Access/egress shall remain dry at all times for institutional buildings servicing the sick, the elderly, the disabled or the young and in buildings utilized for public safety (i.e. police, fire, ambulance and other emergency measures) purposes.

Safe Access for New Development

Safe access to and from a site may only be achieved where the following depth and velocity criteria for pedestrians and automobiles are met. Tolerable access is defined by MNRF and is premised on flood depth and velocity. SVCA has adopted the following policy for residential buildings:

- a) That the depth of flooding to the site of the building does not exceed 0.8 metres under regulatory storm conditions;
- b) That the building site is subject to less than 1.0 metres/second of flood flow velocity under regulatory storm conditions;
- c) That safe access/egress is available to the site of the building as defined by the Authority.

Notwithstanding the above depth and velocity criteria, where the proposed development requires access onto an existing flooded roadway or access to a roadway is subject to flooding where the depth and velocity criteria for safe access cannot be met, the development may be permitted provided the following is addressed:

- a) Access to/from the site must have flood depths and velocities less than or equal to those experienced on the existing roadway;
- b) Safe alternate or secondary access for pedestrians and emergency vehicles that is appropriate for the nature of the development and the natural hazard is provided; or
- c) Where the affected municipal emergency services provides confirmation that acceptable provisions for emergency ingress/egress, appropriate for the nature of the development and the flood hazard, are available for a site and/or the nature of the development is such that a significant risk to property damage and human health is not created.

For existing development, safety risks are a function of the occupancy of the structure, the flood susceptibility of the structure and the access routes to the structure.

For reconstruction of an existing structure, the following factors will be considered:

- the degree of risk with the use of the existing access;
- the ability to modify the existing access or construct a new safe access;
- the ability to find and use the access during an emergency; and
- the ability and willingness of emergency vehicles to use the access

Cut and Fill balance analysis may be necessary associated with any proposed development or site alterations in the floodway to ensure flood stage and flood flow direction addresses the tests of the Regulation.

4.7.3 Special Policy Areas (SPAs)

Special Policy Areas are just that – special areas where specific provisions are made to accommodate pre-existing and historical development that may have taken place in flood susceptible areas (e.g. Central Downtown Core Areas that were settled long before the introduction of the PPS). SPAs are not intended to facilitate new or intensified development particularly where municipalities have the ability to develop outside of the floodplain. Where an SPA is warranted, approval is first required by the Ministers of Municipal Affairs and Housing and Natural Resources.

Generally, special policy areas may be considered where flood remediation strategies and two zone concept approaches have been deemed not practical and adhering to the one zone concept will impose significant social and economic hardship to the historically existing flood-prone community. Where a special policy area is applied, the relevant agencies agree to reduce Provincial floodproofing standards and accept a higher level of risk. Similar to the two zone floodplain policy approach, a special policy area is not intended to be considered on a lot-by-lot basis, but on a subwatershed or major reach basis considering several community related and technical criteria such as municipal commitment, designated growth centre, infrastructure investment, limited alternatives, flow characteristics, frequency of flooding, floodproofing measures, upstream and downstream effects, frequency of ice jams, berms and flood walls, and reduced flood standards. Currently, there is one modified Two Zone area within SVCA's jurisdiction and that area is Silver Creek in Walkerton. This is not an SPA area and no SPAs currently exist in the SVCA's watershed.



Development within a *Special Policy* may be permitted in accordance with the policies and standards approved by the municipality, Province of Ontario, and the SVCA. The Silver Creek Policy Area in Walkerton according to SVCA Motion E86-48 applies as Two-Zone policy with one important notation the floodway is considered to be 20 feet from the bank of Silver Creek and the rest of the floodplain area is considered flood fringe.

4.8 Lake Huron Shoreline

The SVCA Regulation contains the following sections dealing with Great Lakes shorelines:

Development prohibited

- 2 (1) Subject to section 3, no person shall undertake development or permit another person to undertake development in or on areas within the jurisdiction of the conservation authority that are:
- (a) adjacent 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 SVCA'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
 - ii. the predicted long-term stable slope projected from the existing stable toe of 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
 - iii. where a dynamic beach is associated with the waterfront lands, a 30 metre allowance inland to accommodate dynamic beach movement²³
 - iv. an allowance of 15 metres inland, except where there is a dynamic beach.

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 negatively affected by the development.
- (2) The permission of the Authority shall be given in writing, with or without conditions.

Regulation Allowances

The allowance adjacent to shoreline flood, erosion and dynamic beach hazards allows SVCA to regulate development in these areas in a manner that:

- Provide protection against unforeseen or predicted conditions that could have an adverse effect on natural conditions or shoreline processes;
- Protects access to and along the shoreline hazard areas;
- Ensures that existing erosion, flooding and dynamic beach hazards are not aggravated and that new hazards are not created;
- Ensures that the control of pollution and the conservation of land will not be negatively affected;
- Maintains and enhances natural features and ecological functions of shorelines; and
- Addresses issues related to accuracy of modeling and analysis used to establish the limits of flooding, erosion and dynamic beach hazards.

SVCA's Regulation states that the dynamic beach allowance is 30 metres.²⁴

²³ Unless covered by Assessment of Flood and Dynamic Beach Hazards – Pilot Study – Town of Southampton – February 28, 1996 whereby Regulated Area and dynamic beach offset depend on location within study area.

²⁴ Unless the Assessment of Flood and Dynamic Beach Hazards Pilot Study – Town of Southampton – February 28, 1996 applies to the subject lands in which case the finding and recommended offsets of that report are applied to the property.

What is the Lake Huron Shoreline Flooding, Erosion & Dynamic Beach Hazard?



This section provides a summary of the processes and functions that affect the shoreline of Lake Huron and indicates how the extent of the Lake Huron shoreline is determined for the purpose of administering the regulation.

Shorelines are generally comprised of three components:

- 1) flooding hazards;
- 2) erosion hazards; and
- 3) dynamic beach hazards.

4.8.1 The Shoreline Flooding Hazard

In general, flooding is a phenomenon influenced by and sensitive to water level fluctuations. Inundation of low-lying Great Lakes - St. Lawrence River system shorelines in and of itself does not necessarily constitute a significant hazard. The hazard is dependent on the type, design, location and density of any development in or near the flood inundated shorelines. However, where flooded lands are coupled with storm events, the cumulative impact can and frequently does pose significant degrees of risk. Understanding the interrelationship between pre-storm flooding, storm setup, wave height, wave uprush and other water related hazards (i.e. wave spray, ice) is important in managing a potentially flood susceptible shoreline. In terms of human use and occupation of the low-lying Great Lakes – St. Lawrence River system shorelines, development decisions based on or during periods of low water levels can present the most serious problem.

During lower water levels, the potential flood hazard to homes, cottages and other development often goes unrecognized. Consequently, when water levels return to long-term averages or high water levels, flood damages are sustained. These damages are frequently quite significant (MNRF, 1996b). The variable nature of water elevations of the Great Lakes is apparent from historical records. Of the two key factors influencing long-term and short-term changes in lake levels, natural phenomena (e.g. rainfall, evaporation, wind, storms, etc.) by far, cause the greater magnitudes of changes, than does human intervention (i.e. diversions, water control structures, etc.). The most familiar changes in lake levels are seasonal fluctuations as evidenced by average differences of about 0.6 to 1.1 metres in lake levels between the summer and winter months. Superimposed on these seasonal fluctuations are some extremely short periods of significantly larger magnitudes of lake level changes. The most temporary of these are caused by storm winds which blow over the lake surfaces pushing the water to the opposite side or end of the lake. When a wave breaks, it results in an increase in the mean water level in shore from the breaking point, referred to as wave set-up. Wave run-up refers to the uprush movement of a wave breaking on a shoreline. This is a function of the height and periodicity of the wave as well as the foreshore slope.

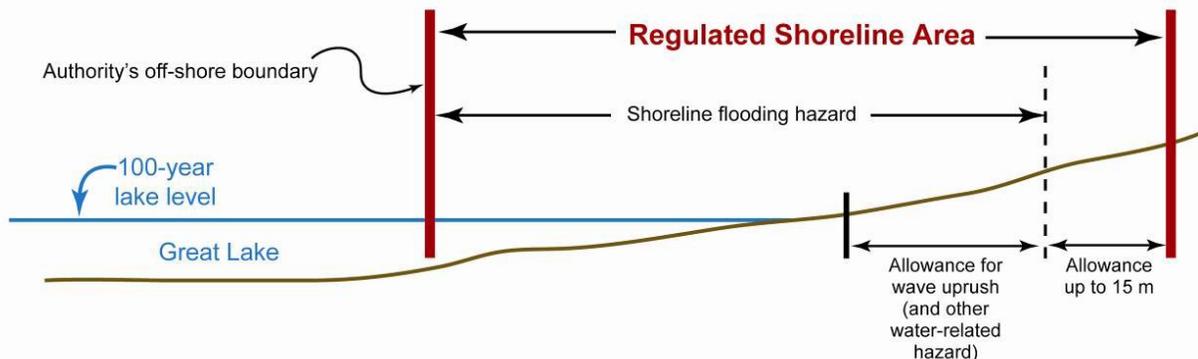
Flooding from Lake Huron affects the entire shoreline area, backshore areas, and also extends up the lower portions of several rivers.

The *Lake Huron Flooding Hazard* limit is defined as the combined influence of the following:

- 100-year flood level (static water level and storm surge);
- Flood allowance for wave uprush; and
- Other water-related hazards,

as shown in Figure 4.8.1 below:

Figure 4.8.1. Lake Huron Shoreline Flooding Hazard and Regulated Area



When determining the flooding hazard, other factors such as ice jamming or ship generated waves may result in an increased flood hazard. All shoreline areas and connecting channels form an ice cover. There are two types of ice which impact on shoreline features:

- drift ice (slush, frazil, pancake, floe and composite ice); and
- shorefast ice (anchor ice).

The impact to the shoreline by drift ice is dependent on the physical orientation and composition of the shoreline, wave action, wind setup and duration of ice action as the ice is transported alongshore and thrown onshore and then drawn offshore by wave action. Anchor or shorefast ice action on a shoreline has both a horizontal and vertical impact on shoreline features as the stationary ice grows or diminishes in response to the temperature fluctuations over the winter period. Ice piling results from wind blowing over the ice, pushing the ice landward. This can produce ridging and a large build-up of ice at the shore. This shore ice can then scour sections of the beach and nearshore as well as destroy structures close to the shore. The moving ice can also remove boulders from the shallow areas, thereby reducing the level of shore protection provided by the boulders. Ice jamming, the build-up of ice at the outlets of the lakes into the connecting channels, can cause extensive damage to shore structures and nearshore profiles. At the same time, ice jams frequently pose problems by impeding water flows outletting from the lakes and into the connecting channels causing varying magnitudes in lake level increases depending on the size and duration of the ice jam blockage. A reduction to the established hazard limit shall only be considered if an engineering analysis (submitted by the applicant and approved by SVCA) justifies the reduction.



Policy 4.8.1-1: Development within the Shoreline Flood Hazard – Permitted Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.

Permitted Uses	Conditions
Recreational Infrastructure which by its nature must locate in shoreline areas such as fencing, stairways, and access points, and other recreational uses deemed appropriate by the SVCA	In accordance with the general policies, section 4.5.2 or where it can be demonstrated through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that: <ol style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new Shoreline Erosion Hazards or aggravating existing Shoreline Erosion Hazards is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage; d) the potential for surficial erosion is addressed by a drainage plan; and e) where unavoidable, intrusions on significant natural features
	hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.
Stream bank, slope and valley stabilization work to protect existing development	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Minor removal or placement of fill and site	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively
Development associated with the construction of a driveway or access to provide access to lands outside of the shoreline hazard	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land conservation of land will not be negatively affected and that the provision of safe access has been met.
Development associated with existing uses (e.g., non-habitable accessory buildings (e.g. boat houses), pools, landscape retaining walls, grading, decks)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The plans should demonstrate that: <ol style="list-style-type: none"> a) there is no feasible alternative site outside of the shoreline flood hazard or in the event that there is no feasible alternative site, that the proposed development is located in an area that will not create new or aggravate existing flooding on the subject, adjacent or other properties; b) development is protected from the shoreline flood hazard in accordance with established floodproofing and protection techniques; c) development will not prevent access for emergency work, maintenance and evacuation; d) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans; and e) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and flooding hazards have been adequately addressed.

Reconstruction or relocation of a building that has not been damaged or destroyed by erosion	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The submitted plans should demonstrate that the building: <ul style="list-style-type: none"> a) cannot be relocated to an area outside the erosion hazard and that there is no feasible alternative site, that it is located in an area of least (and acceptable) risk; b) will be protected from the flood hazard; and c) will not exceed original habitable floor area nor the original
Replacement of sewage disposal systems	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The replacement system should be located outside of the shoreline flood hazard where possible and only permitted within the shoreline flood hazard subject to being located in the area of lowest risk



Policy 4.8.1-2 Development within the Shoreline Flood Hazard – Not Permitted

In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted within the shoreline flood hazard.



Policy 4.8.1-3 Development within the Allowance Adjacent to the Shoreline Flood Hazard – Permitted

Development will be permitted within the allowance adjacent to the shoreline flood hazard if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion,

pollution or the conservation of land will not be negatively affected. The submitted plans should demonstrate that:

- a) **development does not create a new or aggravate an existing flood hazard**
- b) **development does not impede access for emergency works, maintenance and evacuation**
- c) **the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans; and**
- d) **natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and erosion and dynamic beach hazards have been adequately addressed.**

4.8.2 The Shoreline Erosion Hazard

The shoreline erosion hazard is the limit of the landward extent of the stable slope measured from the existing protected or unprotected toe of slope, plus the limit of the 100-year erosion limit.

Many geological, topographical and meteorological factors determine the erodibility of a shoreline. These include soil type, surface and groundwater, bluff height, vegetation cover, shoreline orientation, shoreline processes, wind and wave climate and lake level fluctuations. The rate of erosion may be heightened during severe storm events, resulting in large losses of land over a very short period of time. These large losses, which are more evident immediately following major storm events, can periodically obscure the long-term processes. In the absence of human intervention and/or the installation of remediation measures, once material is removed, dislodged or extracted from the shore face and near shore profile, it cannot reconstitute with the original material and is essentially lost forever. Even with the installation of remedial measures (i.e. assumed to address the erosion hazard), the natural forces of erosion, storm action/attack and other naturally occurring water and erosion related

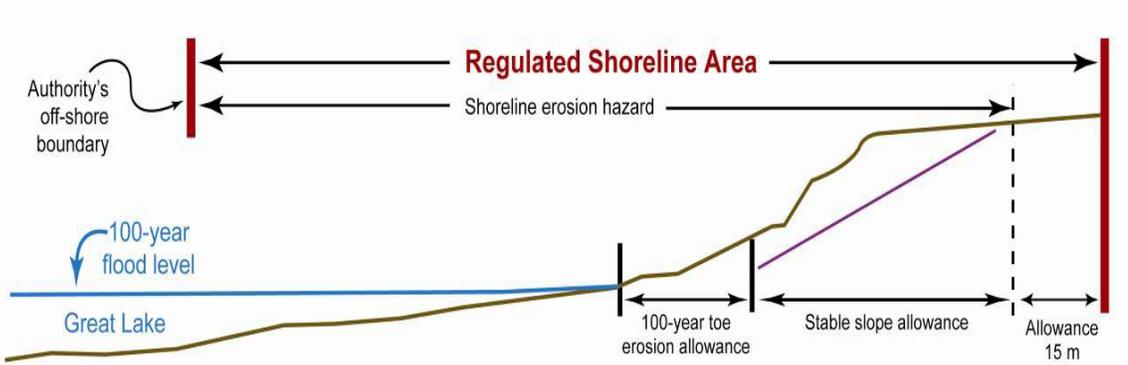
forces may prove to be such that the remedial measures may only offer a limited measure of protection and may only reduce or address the erosion hazard over a short period of time.

The risk of erosion is managed by planning for the 100-year erosion rate (the average annual rate of recession extended over a one-hundred-year time span). The extent of the shoreline erosion hazard limit depends on the shoreline type: bluff or beach.

The shoreline erosion hazard limit includes:

- the stable toe of slope (as may be shifted as a result of erosion over a 100-year period);
- predicted long-term stable slope projected from the stable toe of slope; and
- an allowance inland of 15 metres on large inland lakes or 30 metres on the Great Lakes

Figure 4.8.2. Lake Huron Shoreline Erosion Hazard and Regulated Area



A reduction to the established hazard limit shall only be considered if a geotechnical engineering analysis (submitted by the applicant and approved by SVCA) justifies the reduction.

To slow down the erosion of shorelines, structures such as breakwaters, seawalls and revetments have been used. MNRF Technical Guidelines provide additional guidance for considering how these structures may be considered. Even with the installation of these measures however, the natural forces of erosion, storm action and other naturally occurring water and erosion related forces may prove to be such that the remedial measures may only offer a limited measure of protection and may only reduce or address the erosion hazard temporarily. Even if the shoreline is successfully armoured, the near shore lake bottom continues to erode, and this process is typically more active on cohesive shorelines. Eventually, lakebed down cutting will undermine the shoreline armoring causing the structure to ultimately fail. These problems usually occur on updrift or downdrift properties, aggravating off-site hazards and posing detrimental impacts to a wide variety of environmental components of the shoreline ecosystem.



It is generally recommended that measures that harden the shoreline be avoided. It is further recommended that Shoreline Management Plans be undertaken to assist in developing shoreline specific policies and to evaluate whether the implementation of erosion protection measures are appropriate.



Policy 4.8.2-1: Shoreline Erosion Hazard - Permitted
Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.
Recreational Infrastructure	In accordance with the general policies, section 4.5.2 or where it can be
which by its nature must locate in shoreline area such as fencing, stairways, and access points, and other recreational uses deemed appropriate by the SVCA	demonstrated through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that: <ul style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new Shoreline Erosion Hazards or aggravating existing Shoreline Erosion Hazards is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage; d) the potential for surficial erosion is addressed by a drainage plan; and e) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.
Shoreline, bank and slope stabilization work to protect existing development	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Minor removal or placement of fill and site grading	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively
Development associated with the construction of a driveway or access to provide access to lands outside of the apparent shoreline hazard	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land conservation of land will not be negatively affected and that the provision of safe access has been met.

Development associated with non-habitable accessory buildings and pools, landscaping retaining walls, grading, decks, stairs, etc.	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution, dynamic beaches or conservation of land will not be negatively affected. The plans should demonstrate that: <ul style="list-style-type: none"> a) there is no feasible alternative site outside of the shoreline erosion hazard or in the event that there is no feasible alternative site, that the proposed development is located in an area of least (an acceptable) risk; b) no development is located within the stable slope allowance; c) there is no impact on existing and future slope stability and bank stabilization; d) development will have no negative impacts on natural shoreline processes; e) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans; and f) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented and flooding hazards have been adequately addressed.
Reconstruction or relocation of	If it has been demonstrated to the satisfaction of the SVCA that the
Permitted Uses	Conditions
a building that has not been damaged or destroyed by erosion	control of flooding, erosion, pollution, dynamic beaches or conservation of land will not be negatively affected. The submitted plans should demonstrate that the building: <ul style="list-style-type: none"> a) cannot be relocated to an area outside the erosion hazard and that there is no feasible alternative site, that it is located in an area of least (and acceptable) risk; b) will be protected from the erosion hazard through the incorporation of appropriate building design parameters; and c) will not exceed original habitable floor area nor the original footprint of the previous structure.
Replacement of sewage disposal systems	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The replacement system should be located outside of the shoreline flood hazard where possible and only permitted within the shoreline flood hazard subject to being located in the area of



Policy 4.8.2-2: Shoreline Erosion Hazard Not Permitted

In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted within the shoreline erosion hazard.



Policy 4.8.2-3 Development Within the Allowance Adjacent to the Shoreline Erosion Hazard - Permitted

Development will be permitted within the allowance adjacent to the shoreline erosion hazard if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution, dynamic beaches or the conservation of land will not be negatively affected. The submitted plans

should demonstrate that:

- a) development does not create a new or aggravate an existing erosion hazard;
- b) development does not impede access for emergency works, maintenance and evacuation
- c) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans; and

- d) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and erosion and dynamic beach hazards have been adequately addressed.**

4.8.3 The Dynamic Beach Hazard

The Dynamic Beach Hazard is the limit of the landward extent of the 100-year flood elevation limit, plus the allowance for wave uprush and other water-related factors, plus the dynamic beach allowance. The dynamic beach allowance is 30 metres on the Great Lakes and interconnecting channels.

A dynamic beach is considered an unstable accumulation of shoreline sediments along the Great Lakes – St. Lawrence River system and large inland lakes. In dynamic beach areas, topographic elevations can change due to the accumulation or loss of beach materials through the effects of wind and wave action. These changes can occur seasonally or yearly and, at times, quite rapidly and dramatically. As such, the depiction and evaluation of the hazard susceptibility of dynamic beaches should be dependent on the level of information, knowledge and understanding of the beach sediment budget and the cross-profile width over which most of the dynamic profile changes are taking place. The dynamic beach hazard is only applied where:

- Beach or dune deposits exist landward of the water line (e.g. land/water interface);
- Beach or dune deposits overlying bedrock or cohesive material are equal to or greater than 0.3 metres in thickness, 10 metres in width and 100 metres in length along the shoreline; and
- Where the maximum fetch distance measured over an arc extending 60 degrees on either side of a line perpendicular to the shoreline is greater than 5 km (this normally does not occur where beach or dune deposits are located in embayment's, along connecting channels and in other areas of restricted wave action where wave related processes are too slight to alter the beach profile landward of the waterline.

To define a dynamic beach, the flooding hazard limit must be known. The flooding hazard limit combines the 100-year flood elevation plus wave uprush. To determine the limit of a dynamic beach, the flooding hazard must be established. The flooding hazard is defined as the aggregate of the 100-year lake level plus a landward allowance to accommodate wave uprush and other water related hazards.

It is important that the 100-year lake level be established as a historic location rather than as an elevation. If considered as an elevation, the location of the 100-year lake level will move with the accretion or loss of beach materials. If established as an elevation, the 100-year lake level (and the subsequent flood hazard) would move lakeward. Under this approach, the Regulation could be considered as also moving lakeward. This area of accretion could rapidly be lost during a storm or when lake levels return to normal. Development permitted under this standard would therefore be at risk. In contrast, if the shoreline process, since mapping was completed, indicate the shoreline has been eroding, the SVCA's hazard and Regulated Area follows the shoreline inland to control the appropriate hazard areas.

The criteria used to define and classify a section of shoreline as a dynamic beach are intended to be applied over a stretch of shoreline in the order of 100 metres or more in length. Where shorter sections of sediments occur on a rocky or cohesive shoreline they are likely to be transitory. Beach width and thickness should be evaluated under calm conditions and at water levels between datum (IDGL) and the average annual low water level. When lake level conditions are higher, consideration should be given to the submerged portion of the beach.

If possible, mapping should not take place during high lake level conditions. It is expected that the person carrying out the mapping will exercise judgment, based on knowledge of the local area and historical evidence, in those areas where the beach width is close to the suggested criteria for defining a dynamic beach.

A number of shoreline reports have been prepared over the years for areas within the SVCA's jurisdiction. The Shoreline Erosion Hazard and Dynamic Beach Hazard are determined based on information from the Ministry of

Natural Resources & Forestry, updated shoreline mapping, and specific studies completed for sections of the shoreline with SVCA jurisdiction.

The dynamic beach hazard includes:

- 100-year flood level;
- An allowance for wave uprush and if necessary, an allowance for other water related hazards, including ship generated waves, ice piling and ice jamming; and
- An allowance inland of 30 metres to accommodate for dynamic beach movement on the Great Lakes.²⁵

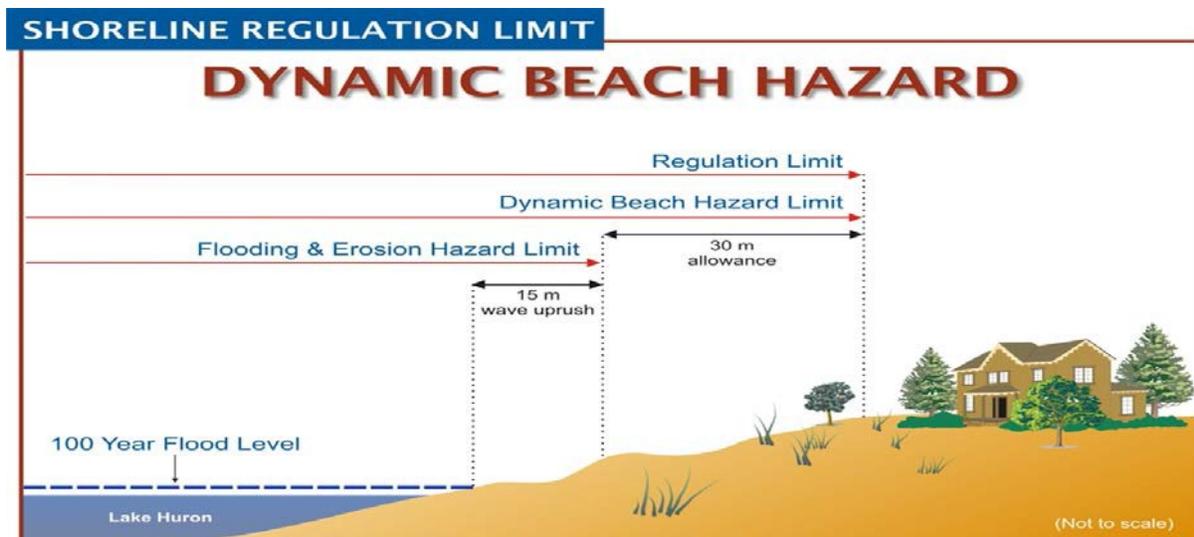
Regulation Allowances

The allowance adjacent to shoreline flood, erosion and dynamic beach hazards allows SVCA to regulate development in these areas in a manner that:

- Provides protection against unforeseen or predicted conditions that could have an adverse effect on natural conditions or shoreline processes;
- Protects access to and along the shoreline hazard areas;
- Ensures that existing erosion, flooding and dynamic beach hazards are not aggravated and that new hazards are not created;
- Ensures that the control of pollution and the conservation of land will not be negatively affected;
- Maintains and enhances natural features and ecological functions of shorelines; and
- Addresses issues related to accuracy of modeling and analysis used to establish the limits of flooding, erosion and dynamic beach hazards.

SVCA's Regulation states that the dynamic beach allowance is 30 metres.²⁶ See Figure 4.8.3 below.

Figure 4.8.3 Lake Huron Dynamic Beach Hazard and Regulated Area



²⁵ Unless the *Assessment of Flood and Dynamic Beach Hazards Pilot Study – Town of Southampton – February 28, 1996* applies to the subject lands in which case the finding and recommended offsets of that report are applied to the property.

²⁶ Unless the *Assessment of Flood and Dynamic Beach Hazards Pilot Study – Town of Southampton – February 28, 1996* applies to the subject lands in which case the finding and recommended offsets of that report are applied to the property.



Policy 4.8.3-1: Development within the Dynamic Beach Hazard - Permitted Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Underground Public Infrastructure (e.g. sewers, pipelines)	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution, dynamic beaches or the conservation of land will not be negatively affected.
Development to reconstruct a building or structure (not destroyed or damaged by natural hazard)	Provided building or structure is not enlarged (foundation footprint or internal habitable square footage) or located closer to the shoreline hazard.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution, dynamic beaches or the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution, dynamic beaches or the conservation of land will not be negatively affected.



Policy 4.8.3-2: Development within the Dynamic Beach Hazard - Not Permitted
In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted within the dynamic beach hazard.



Policy 4.8.3-3: Development within the Allowance Adjacent to the Dynamic Beach Hazard - Permitted

Development will be permitted within the allowance adjacent to the dynamic beach hazard if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution, dynamic beaches or the conservation of land will not be negatively affected. The

submitted plans should demonstrate that:

- a) development does not create a new or aggravate the existing dynamic beach hazard;**
- b) development does not impede access to and along the dynamic beach;**
- c) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans; and**
- d) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and erosion and flooding hazards have been adequately addressed.**



Policy 4.8.3-4: Inverhuron Specific Policies

Inverhuron – some existing dwellings located along the Lake Huron Shoreline in the community of Inverhuron on Lake St. and Victoria Street are partially or entirely within the Dynamic Beach setback or are within or adjacent to the wave uprush allowance associated with Lake Huron. The following policies apply:

- a) new development is not permitted in the wave uprush allowance or within the flood hazard of Lake Huron;
- b) reconstruction or redevelopment may be permitted in the wave uprush allowance provided the redevelopment does not intensify the use and the building or structure is improved with regards to ability to withstand applicable hazards;
- c) new development within the dynamic beach hazard may be permitted provided the addition will not result in more than a 25% increase in size compared to the original building size on a lot at the time of the application of the SVCA's Regulation to the area (2006) and will not result in additional dwelling units; and
- d) new development shall not extend to the west of any existing development. Policy 4.8.3-5: Baird Coastal Reports²⁷ Shoreline Management Area Policies:



Policy 4.8.3-5: Baird Coastal Reports²⁷ Shoreline Management Area Policies:

Existing dwellings located along the Lake Huron Shoreline in the Township of Huron Kinloss, geographic Township of Huron are often partially or entirely within the Dynamic Beach setback or are within or adjacent to the wave uprush allowance associated with Lake Huron. The following policies apply:

- a) new development is not permitted in the wave uprush allowance or within the flood hazard of Lake Huron;
- b) reconstruction or redevelopment may be permitted in the wave uprush allowance provided the redevelopment does not intensify the use and the building or structure is improved with regards to ability to withstand applicable hazards;
- c) new development within the dynamic beach hazard may be permitted provided the development is located at least 30 metres inland from the 100 year lake level and is:
 - o elevated to 181.5 m GSC for openings located less than or equal to 30 m from the 100- year flood level;
 - o elevated to 179.5 m GSC for openings located 45 m from the 100-year flood level; or
 - o elevated to the linearly interpolated elevation between 181.5 m GSC and 179.5 m GSC for openings located between 30 m and 45 m respectively from the 100-year flood level.
- d) Existing shoreline sand dunes should be avoided and improved to original condition, avoided by new development by at least 5 metres, and allowed to have approximately 1 vertical to 5 horizontal side slopes; and,
- e) Natural dune species and features will need to be avoided or addressed by the proposed development.

4.9 Inland Lakes

Lands that are adjacent or close to the shorelines of inland lakes that have a surface area of greater than 2 hectares (5 acres) and less than 100 km² (39 mile²) and/or that respond to a single runoff event could be affected by flooding or erosion. These lands are within the jurisdiction of the SVCA. Any development proposed adjacent to an inland lake will require permission from the SVCA.



Policy 4.9-1: Inland Lakes – Not Permitted

Development along inland lake shorelines that are impacted by flooding or erosion hazards will not be permitted except in accordance with the policies in Chapter 4.

Development along inland lake shorelines will generally not be permitted within a minimum 15 metres of the shoreline. In situations where no development currently exists, a minimum 30 metre setback will be encouraged.

²⁷Huron-Kinloss Dynamic Beach Study Phase II prepared by W.F. Baird & Associates Coastal Engineers Ltd.; dated April 2008; Huron-Kinloss Dynamic Beach Study Phase III-South of Concession 6 prepared by W.F. Baird & Associates Coastal Engineers Ltd.; dated August 2010

4.10 Dug Out/Isolated Pond



Policy 4.10-1: New Dug Out/Isolated Ponds – Permitted

New Dug Out/Isolated Ponds will be permitted in the Riverine Flooding Hazard in accordance with the General Provisions of Section 4.5 and provided it has been demonstrated to the satisfaction of SVCA that:

- a) the pond is not located within the erosion channel;
- b) the pond is not located in a wetland;
- c) the pond is not connected to the river channel;
- d) the finished side slopes are stable; and
- e) there are no negative impacts to the floodplain.



Policy 4.10-2: Existing Dug Out/Isolated Ponds - Permitted

The redesign of an existing Dug Out/Isolated Ponds will be permitted in the Riverine Flooding Hazard in accordance with the General Policies of Section 4.5 and where it can be demonstrated that:

- a) the pond is not connected to the river channel;
- b) the finished side slopes are stable;
- c) the redesign is not within the wetland limits (may be within the buffer adjacent to wetland); and
- d) there are no negative impacts to the floodplain.



Policy 4.10-3: Dredging of an Existing Dug Out/Isolated Pond – Permitted

Dredging of an existing Dug Out/Isolated Pond will be permitted where it can be demonstrated that:

- a) all dredged material is removed from the Riverine Flooding Hazard and the Riverine Erosion Hazard;
- b) dredging does not enlarge the pond in area or volume beyond that which was previously constructed;
- c) finished side slopes are stable;
- d) hydrologic and ecological functions are restored and enhanced to the extent possible; and
- e) the risk of pollution and sedimentation during dredging operations is minimized.

4.11 Specific Policies to Prohibit or Regulate Development – Erosion Hazards

4.11.1 Riverine Erosion Hazards – Definition and Context What Is the Riverine Erosion Hazard?



Erosion is a natural process of soil loss due to human or natural processes. The *Riverine Erosion Hazard* within river or stream valleys is that area of river bank and lands adjacent to watercourses where erosion is actively occurring and/or where development could create slope stability issues. According to the MNR Technical Guide for River and Stream Systems, Erosion Hazard Limit, the riverine erosion hazard applies to all watercourses and lake systems in the SVCA watershed. Large Inland Lake criteria for defining the erosion hazard does not apply.

The *Riverine Erosion Hazard* applies to those portions of the valleyland system that are both apparent (confined) and not apparent (unconfined). The extent of the hazard varies and is dependent on the characteristics of the bedrock and soils which comprise the valley slope, the degree to which the valley slope is stable or unstable, and whether or not the valley slope is subject to active erosion. Valley systems are considered to be apparent or confined where valley walls are greater than 2 metres, with or without a floodplain.

Apparent Valleys can exhibit three different conditions within which erosion hazards exist or may develop:

- valley slopes which are steep but stable;
- valley slopes which are over- steepened and potentially unstable; and
- valley slopes which are subject to active stream bank erosion.

Where a watercourse is not contained within a clearly visible valley section, valleys are *not considered to be apparent* (unconfined).

Defining the Regulated Area for Apparent Valleys (Confined Systems)

Where the valley slopes in *Apparent Valleys* have a slope inclination of 33 1/3 per cent (3H:1V) or greater, the limit of the *Regulated Area* includes two components: the *Stable Slope Allowance* plus an *allowance* of 15 metres (49.2 feet).

Where active toe erosion is present in a *Confined System*, an additional *Toe Erosion Allowance* is included.

The 15-metre *allowance* helps to buffer development from the hazards of slope instability and to prevent the influence of development on the rate of slope movement. Development adjacent to valley slopes can cause increased loading forces on the top of slope, compromise slope stability or worsen erosion of the slope face, and result in the loss of stabilizing vegetation. *Allowances* also provide access for emergencies, maintenance and construction works.

Defining the Riverine Erosion Hazard - Apparent Valley (Confined System) – Oversteepened (no toe erosion)

Slopes are considered over-steepened when the gradient is 3Horizontal:1Vertical (33 1/3 per cent slope) or greater. These slopes can be unstable.

On over-steepened slopes, where the toe of the slope is stable, the *Riverine Erosion Hazard* is defined using a *Stable Slope Angle*. The *Stable Slope Angle* is based on a stable slope gradient determined from a geotechnical study or engineering assessment.

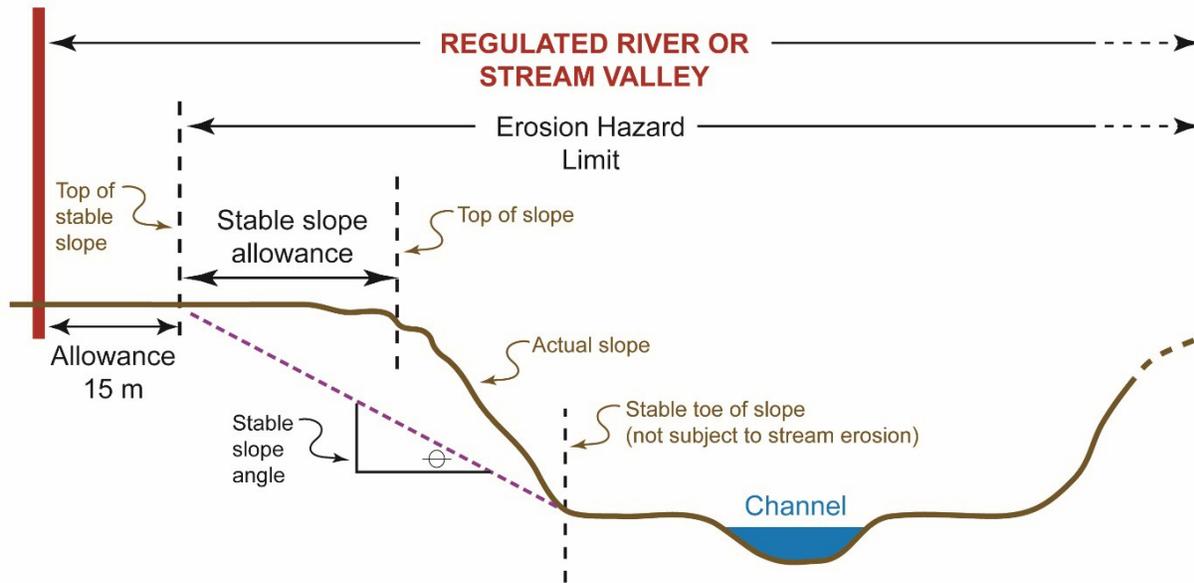
The *Stable Slope Allowance* is the distance between the actual valley top of slope and the point at which a stable slope gradient, rising from the same toe position, intersects the ground surface and includes an appropriate factor of safety. This is the distance required for the slope to reach a stable slope inclination.

Therefore setbacks from both the top of slope, and bottom of slope are required to address the slumping hazard on over-steepened slopes with new development.

A geotechnical assessment was completed for the geographic Town of Kincardine and that study concluded an alternative appropriate *Stable Slope Allowance*. Where this slope stability study applies, the *Stable Slope Allowance* is calculated using a 2.25:1 slope gradient, plus ½ the height of the bank offset, measured from the toe of slope horizontally inland of the valley slope.

Figure 4-11-1 shows the two components used to establish the *Regulated Area* where slopes are over-steepened and no erosion is occurring at the toe of the valley slope.

Figure 4-11-1 Riverine Erosion Hazard – Regulated Area for Apparent Oversteepened Valleys with Stable Toe



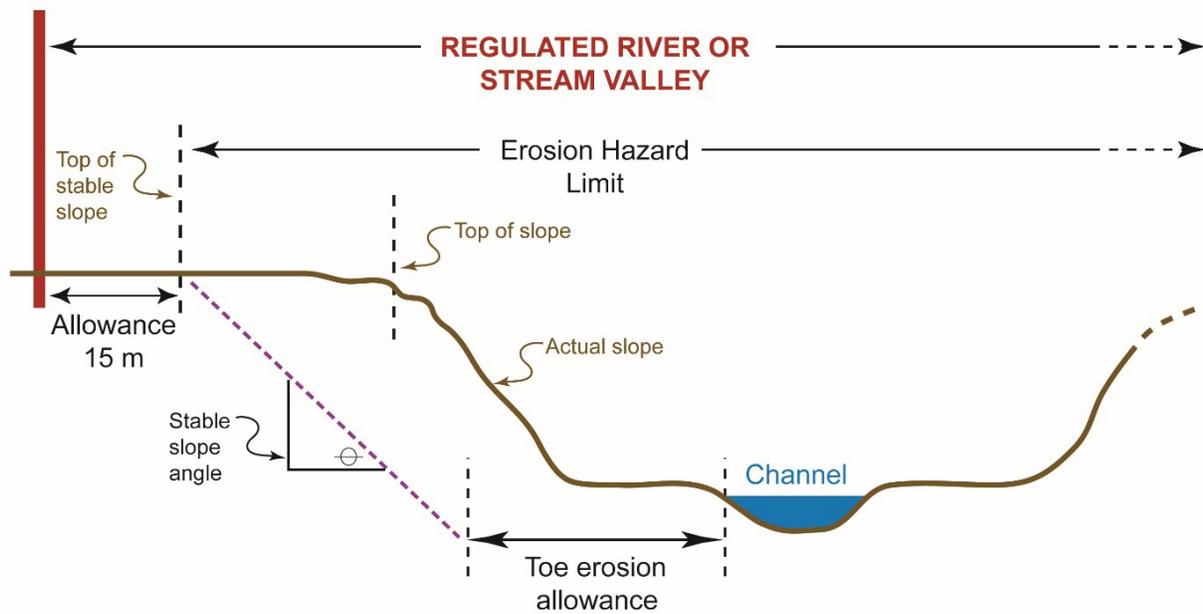
Defining the Riverine Erosion Hazard - Apparent Valley (Confined System) – Active Toe Erosion

Where valley slopes in *Apparent Valleys* are subject to active toe erosion, a *Toe Erosion Allowance* is added into the *Riverine Erosion Hazard*. The *Toe Erosion Allowance* is the distance calculated from the toe of the slope by multiplying the average annual recession rate (as determined by an engineered study based on observation of twenty-five years or longer) over a 100 year planning horizon. This method estimates the amount of erosion that would occur over the next 100 years. In the absence of an engineering study or where the toe of the slope is less than 15 metres (49.2 feet) from the watercourse, a *Toe Erosion Allowance* of 15 metres (49.2 feet) from the bank of the stream is used.

A geotechnical assessment was completed for the geographic Town of Kincardine and that study concluded an alternative appropriate Stable Slope Allowance. Where this slope stability study applies, a 10 metre toe erosion allowance is applied where applicable as recommended by this report.

Figure 4-11-2 illustrates the three components used to establish the *Regulated Area* where slopes are oversteepened and active toe erosion is occurring.

Figure 4-11-2 Riverine Erosion Hazard – Regulated Area for Apparent Oversteepened Valleys with Active Toe Erosion



Defining the Regulated Area for No Apparent Valley (Unconfined Systems)

Where there is *No Apparent Valley*, the flow of water is free to shift across the shallower land. Although toe erosion and slope stability are not deemed potential hazards, consideration for the meandering tendencies of the system must be provided. In these valley sections, the *Regulated Area* is the greater of the extent of the *Riverine Flooding Hazard* plus the prescribed allowance or the *Meander Belt Allowance* plus an allowance of 15 metres (49.2 feet).

Access Allowances

River or stream valley allowances allow SVCA to regulate development adjacent to erosion and flooding hazards in a manner that provides protection against unforeseen or predicted external conditions that could have an adverse effect on the natural conditions or processes of the river or stream valley.

Development within the allowance must be regulated to ensure that existing erosion and flooding hazards are not aggravated, that new hazards are not created, and to ensure that pollution and the conservation of land will not be negatively affected. The allowance provides SVCA and its watershed municipalities with the opportunity to maintain and enhance the natural features and ecological functions of the river or stream valley.

Regulation of development in the allowance is also required to deal with issues related to accuracy of the modeling and analysis tools utilized to establish the limits of the erosion and flooding hazards. To provide access and protection against unforeseen conditions, provincial guidelines recommend that a minimum of 6 metres access allowance as part of defining erosion and flooding hazards (sections 3.0 and 3.4, Erosion Access Allowance, Technical Guide – River and Stream Systems: Erosion Hazard Limit (MNRF, 2002b)). As a result, a provision for a 6m access allowance shall be considered for development within the Regulated Area. MNRF recommends that this access allowance not only be applied to the erosion hazards discussed in the sections above, but also adjacent to the flooding hazard because of the potential for erosion throughout the flooding hazard as a result of the flow of water during significant runoff events. The SVCA may also determine that a reduced access allowance is appropriate where the existing development already encroaches within the recommended 6 metre setback, and where further development will not aggravate the erosion or flooding hazard.

Technical Analysis for Erosion Hazards

Frequently technical analysis is required to determine the appropriate toe erosion, slope stability, and meander belt allowances. Technical studies should be carried out by a qualified professional, with recognized expertise in the appropriate discipline, and should be prepared using established procedures and recognized methodologies to the satisfaction of SVCA.

With respect to riverine erosion hazards, technical studies should be in keeping with the Technical Guide – River and Stream Systems: Erosion Hazard Limit, (MNR, 2002b) and must demonstrate that there is no increased risk to life or property. The Technical Guide provides four methods of determining the toe erosion allowance. The Technical Guide also states that toe erosion rates are best determined through long-term measurements and that a minimum of 25 years of data is recommended for erosion assessment rates. (See sections 3.0, 3.1, 4.1, and 4.3 of the Technical Guide for more information).

It is essential that qualified professionals properly characterize the watercourse in question to identify what processes are occurring. For channels where processes indicative of instability, such as downcutting, are identified, very detailed fluvial geomorphic analyses would likely be required to predict erosion rates. As well, watercourses in catchments experiencing rapid land use change where the sediment and hydrologic regimes are changing could be experiencing erosion rates that are shifting in response, and that rate of change may not be quantifiable without significant detailed analysis.

The Technical Guide provides important information respecting slope stability analysis. Slope stability analysis should be undertaken in accordance with the Geotechnical Principles for Stable Slopes, Terraprobe Limited for Ontario Ministry of Natural Resources, 1994. Recognized analytical methods should be used. An appropriate Factor of Safety should be incorporated into all designs/analysis based on the consequences of risks to land use or life in the event of a slope failure. Recommended minimum Factors of Safety are provided in the Technical Guide based on land use above or below the slope (Table 4.3, Page 60 – Technical Guide – River and Stream Systems: Erosion Hazard Limit, MNR, 2002b). These Factors of Safety should also be increased when necessary to account for the reliability of the information available for the technical analysis due to aspects such as natural soil variability in the subject area, limited site work due to constraints, etc.

The determination of the appropriate meander belt allowance usually involves a wide range of study areas such as geomorphology, engineering, ecology and biology. The existing and the ultimate configuration of the channel in the future must be considered. Due to the challenges in assessing meander belt widths, more than one method of determining the meander belt width may be required for any given application. Sections 3.0, 3.3 and 4.4 of the Technical Guide and the supporting documentation entitled “belt width delineation procedures” (Prent and Parish, 2001) provide further details.

When assessing an application for development within any type of valley system, consideration must be given to the ability for the public and emergency operations personnel to safely access through the valley system for emergency purposes, regular maintenance to existing structures or to repair failed structures. The MNR Technical Guide – River and Stream Systems: Erosion Hazard Limit, provides that the top of the stable slope is 3:1 3Horizontal:1Vertical minimum or as determined by using accepted geotechnical principles. Accordingly SVCA will consider a top of stable slope greater than 3:1 provided a geotechnical report demonstrates a stable slope.²⁸

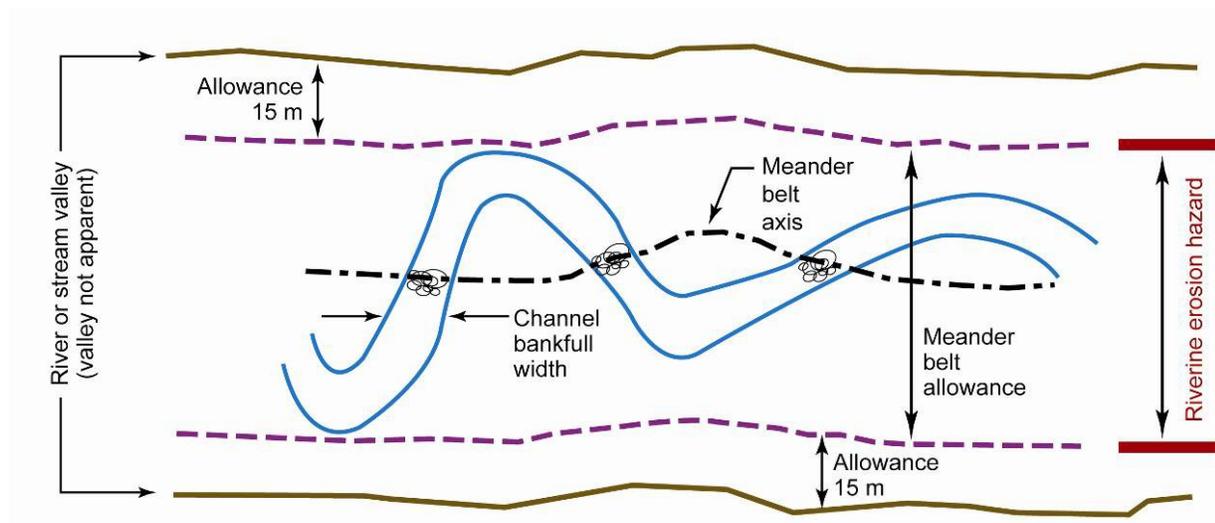
As part of the review of an application, SVCA may request an Environmental Impact Study (EIS) to address development within erosion hazards in order to assess pollution and/or conservation of land. An EIS is a mechanism for assessing impacts to determine the suitability of a proposal. The submission of an EIS does not guarantee approval of the works. An EIS must be carried out by a qualified professional, with recognized expertise in the appropriate area of concern and shall be prepared using established procedures and recognized methodologies to the satisfaction of SVCA. More information about EIS may be found in the Appendix.

The *Meander Belt Allowance* provides a limit to development within the areas where the river system is likely to shift. This allowance is based on twenty (20) times the bankfull channel width, where the bankfull channel width is measured at the widest riffle section of the reach. A riffle is a section of shallow rapids where the water surface is

²⁸ A geotechnical assessment was completed for the geographic Town of Kincardine and that study concluded an alternative appropriate Stable Slope Allowance. Where this slope stability study applies, a 2.25Horizontal:1Vertical, plus half the height of the bank, and a 10 metre toe erosion allowance where applicable, shall be applied.

broken by small waves. The meander belt is centered over the channel – the schematic below (Figure 4-11-3) provides additional detail:

Figure 4-11-3 Riverine Erosion Hazard – Regulated Area – No Apparent Valley



Development within the Regulated Area of any valleyland in the Saugeen Valley watershed requires permission from SVCA.

An exception to the above stable slope profile may occur in a specific area(s) of the SVCA watershed where a geotechnical assessment (reviewed and approved by SVCA) determines that a different stable slope profile is appropriate. This geotechnical assessment may be conducted on either a site specific basis, or on a larger slope or valley system basis.

A geotechnical assessment was completed for the geographic Town of Kincardine and that study concluded an alternative appropriate Stable Slope Allowance. Where this slope stability study applies, the Stable Slope Allowance is calculated using a 2.25:1 slope gradient, plus ½ the height of the bank offset, measured from the toe of slope horizontally inland of the valley slope.

4.11.2 Development in the Erosion Hazard – Apparent River or Stream Valley



Policy 4.11.2-1: Erosion Hazard Limit of an Apparent River or Stream Valley - Permitted
Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.

Permitted Uses	Conditions
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.
Recreational Infrastructure which by its nature must locate in river valleys such as fencing, stairways, and access points, and other recreational uses deemed appropriate by the SVCA	<p>In accordance with the general policies, section 4.5.2 or where it can be demonstrated through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that:</p> <ul style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new Riverine Erosion Hazards or aggravating existing Riverine Erosion Hazards is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage; d) the potential for surficial erosion is addressed by a drainage plan; and e) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.
Stream bank, slope and valley stabilization work to protect existing development	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Removal or placement of fill and site grading	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively
Development associated with the construction of a driveway or access to provide access to lands outside of the apparent river or stream valley	<p>If it has been demonstrated to the SVCA that the conservation of land will not be negatively affected. Submitted plans should demonstrate that:</p> <ul style="list-style-type: none"> a) there is no viable alternative outside of the regulated area; and b) the provision of safe access has been met.
Development associated with existing uses (e.g., non-habitable accessory buildings, pools, landscape retaining walls, grading, decks)	<p>If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The plans should demonstrate that:</p> <ul style="list-style-type: none"> a) there is no feasible alternative site outside of the apparent river or stream valley or in the event that there is no feasible alternative site, that the proposed development is located in an area that will not affect flood control, erosion, pollution or conservation of land; b) no development is located on an unstable slope; c) there is no impact on existing and future slope stability; d) bank stabilization or erosion protection works are not required; e) development will have no negative impacts on natural stream

Permitted Uses	Conditions
	meandering/fluvial processes; f) structural development would not be susceptible to stream erosion; g) development will not prevent access into and through the valley in order to undertake preventative actions /maintenance or repairs; h) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans; and i) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and flooding hazards have been adequately addressed.
Reconstruction or relocation of a building that has not been damaged or destroyed by erosion	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The submitted plans should demonstrate that the building: <ul style="list-style-type: none"> a) cannot be relocated to an area outside the erosion hazard and that there is no feasible alternative site, that it is located in an area of least (and acceptable) risk; b) will be protected from erosion through the incorporation of appropriate building design parameters; and c) will not exceed original habitable floor area nor the original
Replacement of sewage disposal systems	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The replacement system should be located outside of the erosion hazard where possible and only permitted within the erosion hazard subject to being located in the area of lowest risk.



Policy 4.11.2-2: Erosion Hazard Limit of an Apparent River or Stream Valley - Not Permitted

In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted within the erosion hazard limit of an apparent river or stream valley.



Policy 4.11.2-3: Development in the Erosion Hazard Allowance – Apparent River of Stream Valley

Development will be permitted within the allowance adjacent to the erosion hazard of an apparent river or stream valley if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The submitted plans should demonstrate that:

- a) development does not create or aggravate an erosion hazard;
- b) development is set back a sufficient distance from the stable top of bank to avoid increases in loading forces on the top of the slope;
- c) development does not change drainage or vegetation patterns that would compromise slope stability or exacerbate erosion of the slope face;
- d) development does not prevent access to, preserve, maintain or repair the top of the valley slope;

- e) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans; and
- f) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and flood control and erosion hazards have been adequately addressed.



Policy 4.11.2-4: Where Technical Assessment Demonstrates No Erosion or Flooding Hazard
 Notwithstanding the above, where technical assessment or studies demonstrate that lands within the erosion hazard of an apparent river or stream valley are not subject to an erosion or flooding hazard, development will be permitted if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The submitted plans should demonstrate that:

- a) no access through the erosion susceptible area is required;
- b) development will not prevent access into and through the valley in order to undertake preventative actions/maintenance or during an emergency;
- c) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
- d) there is no impact on existing or future slope stability;
- e) bank stabilization or erosion protection works are not required; and
- f) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented, and flooding hazards have been adequately addressed.

4.11.3 Development in the Erosion Hazard – No Apparent River or Stream Valleys (Meander Belt)



Policy 4.11.3-1: Development in the Erosion Hazard – No Apparent River or Stream Valleys (Meander Belt) –Permitted

Notwithstanding the policies referenced above, the following will be permitted within the meander belt of a not apparent river or stream valley:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected.
Recreational Infrastructure which by its nature must locate in river valleys such as fencing, stairways, and access points, and other recreational uses deemed appropriate by the SVCA	In accordance with the general policies, section 4.5.2 or where it can be demonstrated through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that: <ul style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new Riverine Erosion Hazards or aggravating existing Riverine Erosion Hazards is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage;

Permitted Uses	Conditions
	<ul style="list-style-type: none"> d) the potential for surficial erosion is addressed by a drainage plan; and e) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.
Stream bank, slope and valley stabilization work to protect existing development	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Conservation or restoration projects	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution and the conservation of land will not be negatively affected.
Minor removal or placement of fill and site	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively
Development associated with the construction of a driveway or access to provide access to lands outside of the apparent river or stream valley	<p>If it has been demonstrated to the SVCA that the conservation of land will not be negatively affected. Submitted plans should demonstrate that:</p> <ul style="list-style-type: none"> a) there is no viable alternative outside of the regulated area; and b) the provision of safe access has been met.
Development associated with existing uses (e.g., non-habitable accessory buildings, pools, landscape retaining walls, grading, decks)	<p>If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The plans should demonstrate that:</p> <ul style="list-style-type: none"> a) there is no feasible alternative site outside of the meander belt or a not apparent river or stream valley or in the event that there is no feasible alternative site, that the proposed development is located in an area of least (and acceptable) risk; b) development will not prevent access into and through the valley in order to undertake preventative actions /maintenance or repairs; c) development will have no negative impacts on natural stream meandering/fluvial processes; d) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans; e) natural features and/or ecological functions contributing to the conservation of land are protected, pollution is prevented and flooding hazards have been adequately addressed. non-habitable structural development would not be susceptible to stream erosion; f) non-habitable structural development would not be susceptible to erosion; and g) additions that would not be susceptible to stream erosion within the 100 year planning horizon.
Reconstruction or relocation of a building that has not been damaged or destroyed by erosion	<p>If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The submitted plans should demonstrate that the building:</p> <ul style="list-style-type: none"> a) cannot be relocated to an area outside the erosion hazard and

Permitted Uses	Conditions
	<p>area of least (and acceptable) risk;</p> <p>b) will be protected from erosion through the incorporation of appropriate building design parameters; and</p> <p>c) will not exceed original habitable floor area nor the original footprint of the previous structure.</p>
Replacement of sewage disposal systems	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The replacement system should be located outside of the erosion hazard where possible and only permitted within the erosion hazard subject to being located in the area of lowest risk.



Policy 4.11.3-2: Development in the Erosion Hazard – No Apparent River or Stream Valleys (Meander Belt) – Not Permitted

In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted within the erosion hazard limit – no apparent river or stream valley



Policy 4.11.3-3: Development within the Allowance Adjacent to the Erosion Hazard of a Not Apparent (Confined) River or Stream Valley (Meander Belt)

Development will be permitted within the allowance adjacent to the meander belt if it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected. The submitted plans should demonstrate that:

- a) development does not create or aggravate the erosion hazard;
- b) development does not prevent access to and along the meander belt for maintenance and/or repair;
- c) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans; and
- d) natural features and/or ecological functions contributing to the conservation of land, pollution prevention flood control and erosion prevention have been adequately addressed.

4.12 Other Slope Hazards – Stable Slope Allowance

Where post glacial re-entrant valley and shoreline slopes are not associated with the current watercourse or shoreline location, and the slopes are considered to be over-steepened, these slopes can be unstable. Generally, these slopes are considered over-steepened when the gradient is 3Horizontal:1Vertical (33 ½ per cent slope) or greater. In areas of sandy soil, the slopes are considered over-steepened when the gradient is 5Horizontal:1Vertical (20 per cent slope) or greater.

On over-steepened slopes where the toe is stable, the Stable Slope Allowance is defined using a Stable Slope Angle. The Stable Slope Angle is based on a stable slope gradient determined from a geotechnical study or engineering assessment. Where a geotechnical study or engineering assessment does not exist, the Stable Slope Angle will be considered to be at a gradient of 3Horizontal:1Vertical measured from the toe of the slope.²⁹

²⁹ A geotechnical assessment was completed for the geographic Town of Kincardine and that study concluded an alternative appropriate Stable Slope Allowance. Please consult that report for more details.

The Stable Slope Allowance is the distance between the existing valley top of slope and the point at which the stable slope Angle/gradient, rising from the existing toe of slope position, intersects the ground surface and includes an appropriate factor of safety. There is an offset required from the toe of slope to accommodate any slumping material moving down the slope. The Stable Slope Allowance is applied to the toe of the slope as the appropriate setback or offset.



Policy 4.12-1: Other Slope Hazards – Permitted

The following uses will be permitted in accordance with the general policies, section 4.5.2 and provided the specific conditions can be met.

Permitted Use	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses and pipelines	<p>Will be permitted provided that</p> <ol style="list-style-type: none"> 1. There is no feasible alternative site outside of the Regulated Area as determined by an Environmental Assessment or other comprehensive plan supported by the SVCA, 2. A site-specific geotechnical or engineering assessment based on established provincial guidelines and an appropriate factor of safety establishes a more precise Stable Slope Allowance, and 3. Where it can be demonstrated that: <ol style="list-style-type: none"> a) there are not impacts on existing and future slope stability; b) the risk of creating new <i>Slope Hazards</i> or aggravating existing <i>Slope Hazards</i> is minimized through site and infrastructure design and appropriate remedial measures; c) the potential of increased loading forces on the top of the slope is addressed through appropriate structural design; and d) the potential for surficial erosion is addressed by a drainage plan.
Recreational Infrastructure which by its very nature must be located on or near slope features such as fencing, stairways, lookouts, and other recreational uses deemed appropriate by SVCA.	<p>Will be permitted, in accordance with the general policies, section 4.5.2 and where it can be determined through a site-specific geotechnical or engineering assessment based on established provincial guidelines and appropriate factor of safety that:</p> <ol style="list-style-type: none"> a) there is no impact on existing and future slope stability; b) the risk of creating new <i>Slope Hazards</i> or aggravating existing <i>Slope Hazards</i> is minimized through site and infrastructure design and appropriate remedial measures; c) facilities are designed and constructed to minimize the risk of structural failure and/or property damage; d) the potential for surficial erosion is addressed by a drainage plan; <i>and</i> e) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions.



Policy 4.12-2: Development within Other Slope Hazards and the Stable Slope Allowance

Development within Other Slope Hazards and the Stable Slope Allowance will generally not be permitted unless a site-specific geotechnical or engineering assessment (based on established provincial guidelines and an appropriate factor of safety against slope failure or slipping) establishes a more precise Stable Slope Angle, and where it can be demonstrated that:

- a) there is no feasible alternative site outside the Regulated Area;
- b) the proposed development is not subject to Other Slope Hazards;
- c) there is no impact on existing and future slope stability;
- d) the risk of creating new Slope Hazards or aggravating existing Slope Hazards as a result of the development is negligible;
- e) the potential of increased loading forces on the top of the slope is addressed through appropriate structural design;
- f) the potential for surficial erosion is addressed by a drainage plan; and

An appropriate setback from the Stable Slope Allowance, as established in the table below:

Use	Setback Required
Ground Floor Additions to existing residential dwellings including ground floor additions to residential buildings or structures that have been replaced or relocated previously through permission received from SVCA.	Will be permitted provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from both the top and bottom of the slope, where practical.
Ground Floor Additions to existing industrial, commercial and/or institutional uses	Will be permitted, provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from both the top and bottom of the slope, where practical.
Additional Storey to an existing building or structure	Will be permitted, provided the existing development setback is maintained.
Buildings or Structures associated with new multi-lot uses (residential, industrial, commercial, institutional), large scale uses such as golf courses or commercial/institutional complexes	Will be permitted provided that all building lots or greens and fairways (in the case of golf courses) are set back, in their entirety, a minimum of 6 metres (20 feet) from the Stable Slope Allowance from both the top and bottom of the slope.
Buildings or Structures not associated with new multi-lot or multi-unit uses (residential, industrial, commercial, institutional), large scale uses or commercial/institutional complexes	Will be permitted, provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from both the top and bottom of the slope.
Replacement ³⁰ of an existing building or structure damaged or destroyed by causes other than flooding	Will be permitted, provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from both the top and bottom of the slope
Relocation of an existing residential building or structure	Will be permitted, provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from both the top and bottom of the slope.
Non-Habitable Accessory Buildings or Structures associated with an existing residential use (e.g. detached garage, tool sheds, gazebos)	Will be permitted, provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from

³⁰ Replacement does not include construction or reconstruction of a building or structure on a remnant foundation (e.g. a foundation that has been sitting without a building or structure for more than 10 years), nor does it include reconstruction of an abandoned or derelict building or structure (one that has not been used or maintained for the last 10 years and may be subject to structural safety issues/concerns.)

Use	Setback Required
	both the top and bottom of the slope.
Accessory Buildings or Structures associated with an existing industrial, commercial and/or institutional use	Will be permitted, provided that a development setback of not less than 6 metres (20 feet) is maintained from the Stable Slope Allowance, from both the top and bottom of the slope.

As noted previously, a geotechnical assessment was completed for the geographic Town of Kincardine and that study concluded an alternative appropriate Stable Slope Allowance. Where this slope stability study applies, the Stable Slope Allowance is calculated using a 2.25:1 slope gradient, plus ½ the height of the bank offset, measured from the toe of slope horizontally inland of the valley slope.

4.13 Wetlands and Areas of Interference

What are wetlands?

Wetlands are defined in the Conservation Authorities Act as land that:



- Is seasonally or permanently covered by shallow water or has a water table close to or at the surface;
- Contributes directly to the hydrological function of a watershed through connection with a surface watercourse;
- Has hydric soils, the formation of which have been caused by the presence of abundant water; and
- Has vegetation dominated by hydrophytic (water tolerant) plants, the dominance of which has been favoured by the presence of abundant water.

Why Are Wetlands Important?



Wetlands are important natural features on the landscape, whether they are permanently or seasonally wet. Wetlands perform many important ecological functions. Wetlands moderate water flow by absorbing much of the surface water runoff from the land and then slowly releasing it. This helps to reduce flooding and to sustain stream flows during dry spells. Many wetland areas recharge groundwater by moving surface water into the groundwater system. As a result, they play an important role in protecting and improving water quality, provide for fish and wildlife habitat and offer a number of associated recreational opportunities. The lands that surround wetland areas are important in sustaining their vital hydrological and ecological functions.

Hydrologic function means the functions of the hydrological cycle that include the occurrence, circulation, distribution and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water’s interaction with the environment including its relation to living things. This is a comprehensive definition for the hydrologic cycle, which allows many factors to be considered when reviewing interference to wetlands. The Southern Ontario Wetland Evaluation System (OWES) states “it must be recognized that many non-hydrological functions of a wetland depend, in part on the wetland’s hydrological setting and that changes in the basin beyond the boundaries of the wetland could have an effect on the ecological value of the wetland”.

What Are ‘Areas of Interference?’



The areas surrounding wetlands where development could interfere with the hydrological function of the wetland are called “Areas of Interference.” These areas include lands that are 120 metres from

the boundaries of *Provincially Significant Wetlands* and 30 metres from the boundaries of all other wetlands.

These areas may be adjusted where detailed hydrologic studies define a more accurate 'area of interference.'

Development and Interference

There are three ways in which the Regulation addresses wetlands and other areas:

a) Development within the wetland boundary

To be regulated, the activity must meet the definition of development. Applications for development must be assessed with respect to the five "tests" outlined in the Conservation Authorities Act (control of flooding, erosion, pollution, dynamic beaches and the conservation of land). Generally, an Environmental Impact Study (EIS) is required to ensure there will be no adverse impact on the hydrologic and ecological features and functions of the wetland.

b) Development within the "other areas"

To be regulated, the activity must meet the definition of development and be assessed with regard to interference with the hydrologic function of the adjacent wetland, including areas within 120 m of a Provincially Significant Wetland (PSW) and 30 m from other wetlands. Hydrologic functions include both water regime and biogeochemical. If a measurable hydrologic impact to the wetland is predicted then the development must be assessed with respect to the five "tests" outlined in the Conservation Authorities Act (control of flooding, erosion, pollution, dynamic beaches and the conservation of land).

Regulated areas can extend beyond the 120m and 30m distances if the activity is deemed to have a measurable impact on the hydrologic function of the wetland.

The SVCA Regulation identifies "other areas" as follows:

"Other areas where development could interfere with the hydrologic function of a wetland, including areas within 120 metres of all provincially-significant wetlands and within 30 metres of all other wetlands."

c) Interference with wetlands

To be regulated, the activity must occur within the wetland or its Area of Interference. An example of an activity that does not strictly meet the definition of "development" and could represent interference if there is vegetation removal. Interference is interpreted as any anthropogenic act or instance which hinders, disrupts, degrades or impedes in any way the natural features or hydrological and ecological functions of a wetland.

Portions of wetlands may also be regulated due to presence of hazardous lands such as regulated floodplains or unstable soils. The applicable policies should be referenced with respect to these hazards. Removal, filling, dredging, or changing the hydrologic regime of wetlands (e.g. ponds or drains) can result in reducing the capacity of wetlands to retain water. This can result in higher flows in watercourses with resulting increases in flooding and erosion. As well, with no ability to retain water, the ability to recharge the aquifer is reduced, and the hydrologic cycle is modified.

Development in wetlands has the potential to interfere with many of the natural features or ecological functions of wetlands. Development may remove or impact wildlife species and their habitat, degrade or remove natural vegetation communities and impair water quality and quantity in both surface and groundwater. As a result, development within wetlands can impact conservation of land. Many wetlands develop on organic soils and, as a result, when reviewing development within a wetland, the soil composition should be reviewed.

Pollution from development (e.g. improperly installed or maintained sewage disposal systems or urban runoff) has the potential to interfere with the wetland. Proposals to drain stormwater management facilities into existing wetlands do not benefit the wetland through constant flows for dilution and moving particulate matter. Nutrients, chemicals, and sediments could enter the wetland impeding the function of the wetland. The application must be reviewed with respect to the control of flooding, erosion, pollution, dynamic beaches or the conservation of land. Many individual and cumulative hydrologic impacts to a wetland commonly occur within the catchment area of the wetland.

It is important to consider the linkages between small wetlands and headwater areas, impacts of stormwater, and upstream constrictions to flow. Impacts to the hydrologic function of a wetland due to development within the “other areas” may also result from changes in imperviousness/infiltration due to a removal or change in vegetation, soil compaction during construction, disruption or alteration of groundwater flow paths due to underground construction, etc.

As part of the review of an application, SVCA may request an Environmental Impact Study (EIS) to address potential impacts to a wetland. An EIS is a mechanism for assessing impacts to determine the suitability of a proposal and the minimum buffer from development to ensure no negative impact on the wetland. The submission of an EIS does not guarantee approval of the works. An EIS must be carried out by a qualified professional, with recognized expertise in the appropriate area of concern and shall be prepared using established procedures and recognized methodologies to the satisfaction of the SVCA.

All wetlands and their associated areas of interference are regulated under the *Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation*.

Environmental Impact Studies are requested associated with an SVCA permit application and are not and should not be considered an ‘Environmental Appraisal’ as referenced in the Drainage Act process.



Policy 4.13-1: Development and Interference with Wetlands –Permitted Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected and the interference on the natural features and hydrologic and ecological functions of the wetland has been deemed acceptable to the SVCA.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected and the interference on the natural features and hydrologic and ecological functions of the wetland has been deemed acceptable to the SVCA.
Conservation or restoration projects	If it has been demonstrated to the SVCA that the control of flooding, erosion, pollution or the conservation of land will not be negatively affected and the interference on the natural features and hydrologic and ecological functions of the wetland has been deemed satisfactory



Policy 4.13-2: Development and Interference with Wetlands – Not Permitted

In general, the following are not permitted within wetlands:

- Development and interference;
- Ponds and drains; and
- Stormwater management facilities



Policy 4.13-3: Area Within 30 Metres of the Boundary of a Wetland – Permitted

Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	If the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Conservation or restoration projects	If the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Systematic Agricultural Tile Drainage	Provided the Hydraulic impacts to the wetland are avoided. Nonperforated tile will be permitted within the hydraulic influence area of the tile. Perforated tiles will not be located within groundwater.
Any buildings or structures	If the interference on the hydrologic function of the wetland has been deemed to be acceptable by the SVCA. An EIS to assess the hydrologic impact shall be required if the plans do not demonstrate the following: <ul style="list-style-type: none"> a) All development (including grading) is located outside the regulated wetland and maintains as much setback as possible; b) Disturbances to natural vegetation communities contributing to the hydrologic function of the wetland are avoided; c) Overall drainage patterns for the lot will be maintained d) Disturbed area and soil compaction is minimized; e) Development is above the high water table; f) All sewage disposal systems are located a minimum of 15 metres from the wetland and a minimum of 1metre above the water table; g) Impervious areas are minimized; and h) Best Management Practices are used to: <ul style="list-style-type: none"> • Maintain water balance • Control erosion and sedimentation • Buffer wetlands



Policy 4.13-4: Area Within 30 Metres of a Wetland Boundary – Not Permitted

In general, development is not permitted within 30 metres of the boundary of a wetland.



Policy 4.13-5: Area Between 30 Metres to 120 Metres of a Wetland – Permitted

Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Development	If the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or if the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Development associated with public parks (e.g. passive or low intensity outdoor recreation and education, trail systems)	If the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Conservation or restoration projects	If the interference on the hydrologic functions of the wetland has been deemed acceptable by the SVCA.
Any buildings or structures	If the interference on the hydrologic function of the wetland has been deemed to be acceptable by the SVCA. An EIS to assess the hydrologic impact shall be required if the plans do not demonstrate the following: <ol style="list-style-type: none"> a) Disturbances to natural vegetation communities contributing to the hydrologic function of the wetland are avoided; b) Overall drainage patterns for the lot will be maintained; c) Disturbed area and soil compaction is minimized; d) Development is above the high water table; e) All sewage disposal systems are located a minimum of 15 metres from the wetland and a minimum of 1 metre above the water table; f) Impervious areas are minimized; and g) Best Management Practices are used to: <ul style="list-style-type: none"> • Maintain water balance • Control erosion and sedimentation • Buffer wetlands
Larger scale development associated with large commercial uses, industrial uses, multiple residential uses (e.g. condominiums, townhouses, apartments, etc.) and/or development into the water table	If the interference on hydrologic functions of the wetland has been deemed acceptable to the SVCA. An EIS to assess the hydrologic impact will be required.

4.14 Hazard Lands – Unstable Soil or Bedrock

What is Hazard Land?



Hazardous land is defined by the Conservation Authorities Act as “land that could be unsafe for development because of naturally-occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock”. Where an activity is within unstable soil or unstable bedrock

then this section applies, otherwise refer to the appropriate section(s) for other hazardous land such as flooding or erosion hazards.

Due to the specific nature of areas of unstable soil or unstable bedrock, it is difficult to identify these hazards. 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 lands, 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 SVCA.

Development within areas deemed as hazardous land is considered through the “development” provision of the Regulation. Works proposed within unstable soil and unstable bedrock hazardous lands must therefore meet the definition of “development” in the Conservation Authorities Act to be regulated.

Unstable Soil

Unstable soil includes but is not necessarily limited to areas identified as containing sensitive marine clays (e.g. leda clays) or organic soils (MNRF et al, 2005).

Organic Soils

Organic soils are normally formed by the decomposition of vegetative and organic materials into humus, a process known as humification. A soil is organic when the percentage weight loss of the soil, when heated, is five to eighty per cent (MNRF, 2001). As a result, organic soils can cover a wide variety of soil types. Peat soils, however, are the most common type of organic soil in Ontario. Therefore, a CA’s wetland inventory may provide guidance in the location of organic soils. In addition, maps by the Geological Survey of Canada, MNRF, Ministry of Northern Development & Mines, and the Ministry of Agriculture, Food and Rural Affairs may provide additional information on the location of organic soils.

Due to the high variability of organic soils, the potential risks and hazards associated with development in this type of hazardous land are also highly variable. As such, assessment of development potential in areas of organic soils is site specific. Section 4.0 of the Hazardous Sites Technical Guide (MNRF, 1996a) provides important guidance in this regard.

Unstable Bedrock

Unstable bedrock includes, but is not necessarily limited to, areas identified as karst formations. Karst formations may be present in limestone or dolomite bedrock, and are extremely variable in nature. Local, site-specific studies are required for identifying karst formations. Air photo interpretation of surface features such as sink holes may provide an indication of karst formations (MNRF et al, 2005).



Any development within hazardous lands requires permission from the SVCA.



Policy 4.14-1: Unstable Soils or Unstable Bedrock –Permitted

Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads,	subject to the activity being approved through a satisfactory EA process and/or if it has been demonstrated to the satisfaction of SVCA that the

Permitted Uses	Conditions
sanitary sewers, utilities, water supply wells, well houses, and pipelines	control of flooding, erosion, pollution or the conservation of land will not be negatively affected.
Reconstruction or relocation of a building that has not been damaged or destroyed by erosion	If it has been demonstrated to the satisfaction of the SVCA that the control of flooding, erosion, pollution or conservation of land will not be negatively affected. The submitted plans should demonstrate that: <ul style="list-style-type: none"> a) there is no feasible alternative site, that it is located in an area of least (and acceptable) risk; b) the control of flooding, erosion, pollution or the conservation of land will not be negatively affected; and c) all hazards/risks associated with unstable soils or unstable bedrock have been adequately addressed.



Policy 4.14-2: Unstable Soils or Unstable Bedrock – Not Permitted

In general, development, interference with wetlands, alterations to shorelines and watercourses will not be permitted on unstable soils or unstable bedrock.

4.15 Straightening, Changing, Diverting or Interfering with the Existing Channel of a River, Creek, Stream or Watercourse

The area along both sides of any river, creek, stream or watercourse, called the riparian zone, not only provides habitat for a wide range of flora and fauna, it also filters surface runoff before it reaches open waterways. As runoff passes through, the riparian zone retains excess nutrients, some pollutants and reduces the sediment flow. A healthy zone can also keep stream flow going even during the dry seasons, by holding and releasing groundwater back into the watercourse. This interface between terrestrial and aquatic environments acts as a sponge for storing water, which in turn helps to reduce flooding and shelters the banks against shoreline erosion. Alterations to the channel of a watercourse can negatively impact the hydrologic and ecological features and functions provided by riparian zones.

Any alteration to the channel of a river, creek, stream or watercourse requires permission from the SVCA. This includes works such as, but not limited to, culvert placement or replacement, bridge construction, bed level crossings, piping of watercourses, installation or maintenance of pipeline crossings, cable crossings, construction or maintenance of by-pass, connected or online ponds, straightening and diversions as well as any work on the bed or the banks of the watercourse such as bank protection projects. These works will be subject to timing windows associated with erosion control. SVCA timing windows, within which works may occur with a permit, are June 15 to September 15 and during low flow conditions in the watercourse.



Straightening, changing, diverting or interfering with an existing river, creek, stream or watercourse is not permitted except in accordance with the following policies.

4.15.1 Interference with Watercourses



Policy 4.15.1-1: Interference with Watercourses – General – Permitted Notwithstanding the policies referenced above, the following will be permitted:

Permitted Uses	Conditions
Public Infrastructure including but not limited to roads, sanitary sewers, utilities, water supply wells, well houses, and pipelines	Subject to the activity being approved through a satisfactory EA process and/or other studies deemed necessary by the SVCA and/or if the interference on the natural features and hydrologic and ecological functions of the watercourse has been deemed acceptable by the SVCA.
Stream bank and channel stabilization work to protect existing development	If the interference on the natural features and hydrologic and ecological functions of the watercourse has been deemed to be acceptable to the SVCA. The stabilization work will not reduce the anticipated hazard on the property in order to facilitate development.
Conservation or restoration projects	If the interference on the natural features and hydrologic and ecological functions of the watercourse has been deemed to be acceptable to the SVCA.
Any works located below the bed of a river within a watercourse	Provided they are all located below the long-term scour depth to the satisfaction of the SVCA.
Minor interference and/or alteration	If it has been demonstrated to the satisfaction of the SVCA that the interference is acceptable on the natural features and hydrologic and ecological functions of the watercourse.
Major interference (e.g. realignment, dam, enclosure, pond)	Where supported by the recommendations of a sub-watershed study, EA and/or if it has been demonstrated to the satisfaction of the SVCA that the interference is acceptable for the natural features and hydrologic and ecological functions of the watercourse.
Watercourse crossings	If it has been demonstrated to the satisfaction of the SVCA that the interference is acceptable on the natural features and hydrologic and ecological functions of the watercourse. At a minimum, plans should demonstrate the following based on the morphological characteristics of the watercourse: <ul style="list-style-type: none"> a) culverts have an open bottom where feasible and where it is not feasible, culverts are appropriately embedded into the watercourse; b) crossing location, width and alignment should be compatible with stream morphology which typically requires location of the crossing on a straight and shallow/riffle reach of the watercourse with the crossing situated at right angles to the watercourse; c) the crossing is sized and located such that there is no increase in upstream or downstream erosion or flooding; d) the design should consider fish and wildlife passage; and e) have regard for upstream and downstream effects when installing/replacing a culvert.



Policy 4.15.1-2: Interference with Watercourses – General – Not Permitted. In general, interference with a watercourse shall not be permitted.

4.15.2 Bridges, Culverts and Other Crossings



Policy 4.15.2-1: Temporary or Seasonal Bridges – No Permit Required

Placement of a temporary or seasonal bridge will not generally require an SVCA permit to be obtained provided impact on the watercourse is minimal and the structure will be removed in the fall and stored beyond the floodplain area or alternatively, if stored within the floodplain area, then well secured to prevent dislodging during flood events. Re-installation of the structures must not occur prior to flooding events that may be expected in the springtime of the year.

SVCA staff reserves the right to require a Letter of Opinion or a detailed report on the structural adequacy of the proposed crossing, especially if the crossing will be used by the general public or other groups (e.g. hikers, skiers, snowmobilers, etc.).

4.15.3 Water Control Structures



Policy 4.15.3-1: Water Control Structures - Permitted

Water Control Structures to protect existing development or other uses deemed appropriate by the SVCA from the Riverine Flooding Hazard including dykes and berms, but excluding stormwater management facilities and dams, will be permitted to be constructed maintained or repaired in accordance with the General Policies outlined in section 4.15.1-1 and where it can be demonstrated that:

- a) all feasible alignments have been considered through an *Environmental Assessment* supported by the SVCA or other site specific technical studies, whichever is applicable based on the scale and scope of the project;
- b) intrusions on hydrologic functions are minimized and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions;
- c) the SVCA's timing window are accommodated; and
- d) the proposed works will not negatively impact surrounding landowners.

4.15.4 Dams

The Ministry of Natural Resources and Forestry has a regulatory role to play with respect to dams and water control structures. Please contact MNRF for more information on the Ministry's mandate and responsibilities as it pertains to dams.



Policy 4.15.4-1: Dams Directly Adjacent to River, Stream, Creek or Watercourse Including Stormwater Management Facilities - Permitted

Dams which by their nature must be located within or directly adjacent to a river, stream, creek or watercourse, including stormwater management facilities, will be permitted where it can be demonstrated that:

- a) all feasible alternative sites and alignments have been considered through an *Environmental Assessment* supported by the SVCA or through site-specific studies, whichever is applicable based on the scale and scope of the project;
- b) the water management benefits of the dam or stormwater management facility are demonstrated to the satisfaction of the SVCA;
- c) pollution, sedimentation and erosion during construction and post construction are minimized using best management practices including site, landscape, infrastructure design, construction controls, and appropriate remedial measures;

- d) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions;
- e) works are constructed according to accepted engineering principles and approved engineering standards or to the satisfaction of the SVCA, whichever is applicable based on the scale and scope of the project;
- f) the SVCA's timing window are accommodated; and
- g) the proposed works will not negatively impact surrounding landowners.



Policy 4.15.4-2: Alterations to Existing Dams – Permitted

Alterations³¹ to existing Dams will be permitted where it can be demonstrated that:

- a) pollution, sedimentation and erosion during construction and post construction are minimized using best management practices including site, landscape, infrastructure design, construction controls, and appropriate remedial measures;
- b) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site and infrastructure design and infrastructure design and appropriate remedial measures will be adequately restore and enhance features and functions;
- c) there are no adverse impacts on the capacity of the structure to pass flows;
- d) the integrity of the original structure is maintained or improved;
- e) works are altered according to accepted engineering principles and approve engineering standards or to the satisfaction of the SVCA, whichever is applicable based on the scale and scope of the project;
- f) the SVCA's timing window are accommodated; and
- g) the proposed works will not negatively impact surrounding landowners.



Policy 4.15.4-3: Maintenance and Repair of Existing Dams - Permitted

The maintenance and repair of existing *Dams* will be permitted where it can be demonstrated that:

- a) pollution and sedimentation during maintenance and repair works is minimized using best management practices including site and infrastructure design, construction controls and appropriate remedial measures;
- b) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions;
- c) susceptibility to natural hazards is not increased or new hazards created;
- d) works are maintained or repaired according to accepted engineering principles and approved engineering standards or to the satisfaction of the SVCA based on the scale and scope of the project; and
- e) SVCA's timing window are accommodated.

³¹Alterations to existing dams in watercourses that, in the opinion of the SVCA, would not affect the control of flooding, erosion, pollution, dynamic beach, or the conservation of land and that would not result in changes in the capacity to pass river flows or impacts on integrity of the structure or in-water works do not require a permit under *Regulation 169/06, as amended*.



Policy 4.15.4-4: Dam Decommissioning or Retirement - Permitted

The Retirement of Dams³² or the Removal of Dams, located within a river, stream creek or watercourse will be permitted where an *Environmental Assessment* or a detailed decommissioning plan supported by the SVCA demonstrates that:

- a) all potential hydrologic and ecological impacts have been identified and considered;
- b) significant natural features and hydrologic and ecological functions within or adjacent to the river, creek, stream or watercourse are restored and enhanced through the retirement or removal of the structure and a site restoration plan is provided and supported by the SVCA;
- c) the risk of pollution and sedimentation during and after retirement or removal is addressed through a draw down plan supported by the SVCA;
- d) susceptibility to natural hazards is not increased or new hazards created; and
- e) SVCA's timing windows are accommodated.

4.15.5 Conservation Projects within or Adjacent to a River, Creek Stream or Watercourse



Policy 4.15.5-1: Conservation Projects Within or Adjacent to a River, Creek, Stream or Watercourse

Conservation Projects such as stream rehabilitation works, small impoundments and realignments which restore or enhance watercourse morphology or aquatic health and habitat will be permitted in accordance with the General Policies provided that:

- a) the hydrologic and ecological benefits of the project are demonstrated to the satisfaction of the SVCA;
- b) stream bank stability is enhanced;
- c) significant natural features and hydrologic and ecological functions are restored and enhanced using best management practices including site and/or infrastructure design and appropriate remedial measures;
- d) natural channel design principles are followed to the extent possible;
- e) maintenance requirements are minimized; and
- f) the SVCA's timing window are accommodated.

4.15.6 Erosion and Sediment Control Structures



Policy 4.15.6-1: Erosion and Sediment Control Structures

Erosion and Sediment Control Structures to protect existing development and other uses deemed appropriate by the SVCA will be permitted in accordance with the General Policies, and where it can be demonstrated that:

- a) erosion risk on adjacent, upstream and/or downstream properties is reduced or erosion and sedimentation processes are controlled to reduce existing or potential impacts from adjacent land uses, whichever is appropriate;
- b) natural channel design principles are followed to the extent possible;
- c) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions; and
- d) the SVCA's timing window are accommodated.

³² Retirement of a dam refers to a situation in which its original purpose or use is no longer necessary, and its operation is cancelled. Some retirement activities may involve the demolition of a structure or a change in the purpose, use, capacity, or location of a structure.



Policy 4.15.6-2: Maintenance and Repair of Existing Erosion & Sediment Control Structures

The maintenance and repair of *Erosion and Sediment Control Structures* will be permitted where it can be demonstrated that:

- a) pollution and sedimentation during maintenance and repair works is minimized using best management practices including site and infrastructure design, construction controls and appropriate remedial measures;
- b) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site and infrastructure design and appropriate remedial measures will adequately restore and enhance features and functions;
- c) susceptibility to natural hazards is not increased or new hazards created;
- d) works are maintained or repaired according to accepted engineering principles and approved engineering standards or to the satisfaction of the SVCA based on the scale and scope of the project; and
- e) SVCA's timing window are accommodated.

4.15.7 Connected & Bypass Ponds & Dredging



Policy 4.15.7-1: Connected Ponds with No Water Intakes

Connected Ponds with no water intakes from the watercourse but which outflow into the watercourse will be permitted provided that the *General Policies* are met and a site plan and/or other site-specific study demonstrates that:

- a) there is no negative measurable impact on the downstream water quality or thermal regime; and
- b) maximum berm heights above existing grades do not exceed the existing ground level within the Riverine Flooding or Erosion Hazard and all remaining fill is removed from the hazard area.



Policy 4.15.7-2: Bypass Ponds Associated with Site Restoration Plan and/or Conservation Projects

Bypass Ponds connected to watercourses created as part of site restoration plan or a conservation project will be permitted where it can be demonstrated that the water intake is

set above the elevation that permits continuous flow (i.e., refreshing of the pond will depend on increased stream flows from snow melt and rainfall events).



Policy 4.15.7-3: On-Line Ponds –Permitted

On-Line Ponds at the very upstream end of watercourses will be permitted for wetland restoration and fish and wildlife habitat enhancement in accordance with the *General Policies* and where a site plan and/or other site-specific study demonstrates that:

- a) there is no negative impact on the downstream thermal regime;
- b) there are no negative impacts on areas of groundwater recharge/discharge; and
- c) SVCA's timing window are accommodated.



Policy 4.15.7-4: On-Line Ponds – Not Permitted

On-Line Ponds in a river, creek, stream or watercourse are generally not permitted.



Policy 4.15.7-5: Dredging – Permitted

Dredging of a river, creek, stream or watercourse will be permitted to improve hydraulic characteristics and fluvial processes or to improve aquatic habitat or water quality in accordance with the General Policies, and where a dredging plan and/or other site-specific study demonstrates that:

- a) stream bank stability is enhanced;
- b) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized, and it can be demonstrated that best management practices including site design and appropriate remedial measures will adequately restore and enhance features and functions;
- c) all dredged material is removed from the Riverine Flooding and Erosion Hazard and safely disposed of in accordance with the policies in provincial guidelines; and
- d) SVCA's timing window are accommodated.

4.15.8 Realignment, Channelization or Straightening



Policy 4.15.8-1: Realignment, Channelization or Straightening - Permitted

Realignment, channelization or straightening of a river, creek, stream or watercourse will be permitted to improve hydraulic characteristics and fluvial processes or to improve aquatic habitat or water quality in accordance with the General Policies and where a site plan and/or other site-specific study demonstrates that:

- a) all feasible alternative alignments have been considered through an Environmental Assessment supported by the SVCA or through site-specific studies, whichever is applicable based on the scale and scope of the project;
- b) stream bank stability is enhanced;
- c) where unavoidable, intrusions on significant natural features or hydrologic or ecological functions are minimized and it can be demonstrated that best management practices including site design and appropriate remedial measures will adequately restore and enhance features and functions;
- d) natural channel design principles are followed to the extent possible; and
- e) SVCA's timing window are accommodated.

4.15.9 Enclosures



Policy 4.15.9-1: Enclosures – Permitted

Enclosures of creeks, streams or watercourses will be permitted where a proposal demonstrates that:

- a) all feasible alternative options and methods have been explored;
- b) the risk to public safety is not increased;
- c) susceptibility to natural hazards is not increased and no new hazards are created;
- d) there are no negative or adverse impacts on hydrologic and ecological functions;
- e) pollution, sedimentation and erosion during construction and post construction is minimized using best management practices including site and infrastructure design, construction controls, and appropriate remedial measures;

- f) intrusions within or adjacent to the river, creek, stream or watercourse are minimized and it can be demonstrated that best management practices including site design and appropriate remedial measures will adequately restore and enhance features and functions to the extent possible;
- g) there is no negative impact on the downstream thermal regime;
- h) works are constructed, repaired and/or maintained according to accepted engineering principles and approved engineering standards or to the satisfaction of the SVCA, whichever is applicable based on the scale and scope of the project; and
- i) SVCA's timing window are accommodated.



Policy 4.15.9-2: Enclosures – Not Permitted

Enclosures of creeks, streams or watercourses are generally not permitted.

4.16 Municipal Drains

Municipalities are responsible for managing, maintaining, repairing and improving drainage systems that have been constructed under the authority of the Drainage Act. Generally, Municipal Drains are designed by a Drainage Engineer and constructed by the municipality.

The Conservation Authorities Act does not exempt Municipal Drains from requiring Conservation Authority Permission and drainage works may require permits subject to the conditions outlined below. The SVCA will ensure that comments to municipalities regarding proposed drainage works as per the Drainage Act will be consistent with the requirements under Regulation 169/06 to prevent conflicting issues and the Drainage Act Review Team Protocol³³.



Policy 4.16-1: Maintenance and Repairs to Existing Municipal Drains

No permit will be required from the SVCA for the modification of an existing Engineer's Report in accordance with Section 78 of the Drainage Act or normal drain maintenance activities such as brushing of side slopes, bottom cleanouts, debris cleanouts and the installation of erosion control works on existing municipal drains that have been classified as Class A, B, C or F drains

(as defined in the Class Authorization System for Agricultural Municipal Drains in the Southern Ontario Region), provided that the following mitigation measures are incorporated into the works:

- a) The width to depth ratio of the drain is not increased;
- b) Adequate sediment and erosion control measures are implemented prior to construction to prevent sediment from entering the watercourse or migrating out of the work area;
- c) Works are conducted during dry conditions whenever possible or conducted during low flow periods and where timing restrictions are not in force;
- d) Any disturbed bank vegetation is replaced when necessary in order to stabilize the channel;
- e) All dredged material is either leveled and stabilized adjacent to the watercourse to minimize any impacts to regulatory flood limits or removed from the area; and
- f) Any drain maintenance activity within or adjacent to a wetland, that may have a negative impact on the wetland, should include measures to minimize impacting the hydrologic function or hydrologic regime of the wetland. The SVCA should be contacted directly to recommend project specific mitigation measures.

³³ DART Protocol as of May 2, 2017. via the Drainage Act Review Team (Conservation Ontario, DFO, OMAFRA agreement on this protocol).

Work in any municipal drain that has been identified as a Class D or E Drain (as defined in the Class Authorization System for Agricultural Drains in the Southern Ontario Region), will require a permit from SVCA, supported by appropriate study, if the proposed works:

- a) Alter the ecological function of a watercourse
- b) Impact a regulatory floodplain; or
- c) Alter or interfere with a wetland.

SVCA should be contacted prior to the commencement of any works on a Class D or E drain that may impact the above referenced features. This process is consistent with the Drainage Act Review Team Protocol.



Policy 4.16-2: New Municipal Drains and the Extension of Existing Drains

New Municipal Drain works, including new sections of existing drains, will require a permit if the proposed works:

- a) alter the ecological function of an existing watercourse;
- b) impact a regulatory wetland;
- c) alter or interfere with a wetland;
- d) are entirely or partially located on the shoreline of Lake Huron; or
- e) are contained within a valley.

SVCA Timing Windows associated with municipal drain maintenance and repair and new drains will be June 15 to September 15.

CHAPTER 5: ADDITIONAL GUIDELINES

Topics Covered

Additional Guidelines

Natural Hazards

Hydrological Evaluations

Natural Heritage

Sediment and Erosion Control

Stormwater Management Practices

Natural Channel Design

Watershed and Subwatershed Plans

Municipal Storm Drainage Policy and Criteria Manuals

Other Related Legislation

5.0 Additional Guidelines

Watershed management is constantly evolving and from time to time guidelines are adopted for use by the SVCA. In addition, reference is made to other legislation that must be considered in the review of any works proposed for permission under Ontario Regulation 169/06. The following are the current guidelines commonly used by the SVCA and additional information requirements frequently requested by staff when reviewing applications.

5.1 Natural Hazards

The assessment of flooding, floodproofing, erosion and slope stability impacts, hydrology and hydraulic analysis and various technical review criteria are set out in the following provincial documents:

- Understanding Natural Hazards, Ministry of Natural Resources, 2001
- Technical Guide – River & Stream Systems: Flooding Hazard Limit, Ministry of Natural Resources & Watershed Science Centre, 2002
- Technical Guide – River & Stream Systems: Erosion Hazard Limit, Ministry of Natural Resources & Watershed Science Centre, 2002
- Belt Width Delineation Procedures, Prent & Parish, 2001
- Geotechnical Principles for Stable Slopes, Terraprobe Limited & Aqua Solutions, 1998
- Ministry Directive B-100, Ministry of Transportation, 1980
- Great Lakes – St. Lawrence System and Large Inland Lakes, Technical Guides for Flooding, Erosion and Dynamic Beaches in Support of Natural Hazards Policies 3.1 of the Provincial Policy Statement, Ministry of Natural Resources, 2001

5.2 Hydrological Evaluations

Where the policies identify a need for a hydrologic evaluation, the evaluation shall, at a minimum:

- (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.

5.3 Natural Heritage

The Natural Heritage Reference Manual, Ministry of Natural Resources, March 2010, is a guide for those who require additional information, including interpretation and various technical review criteria, relative to the application of Section 2.1 of the Provincial Policy Statement. In addition, the following documents are also referenced when reviewing applications:

- Significant Wildlife Habitat Technical Guide, Ontario Ministry of Natural Resources, 2000.
- Significant Wildlife Habitat Decision Support System, Ontario Ministry of Natural Resources Southern Science and Information Section, 2002.
- How Much Habitat is Enough: A Framework for Guiding Habitat Rehabilitation in Great Lakes Areas of Concern, Second Edition, Environment Canada, 2004.
- Ontario Centre for Soil Resource Evaluation. 1993. Field Manual for Describing Soils in Ontario. 4th Edition. Ontario Centre for Soil Resource Evaluation. Publication No. 93-1 62pp.

The science related to natural heritage protection is constantly evolving and, as a result, applicants are encouraged to reference recent literature.

5.4 Sediment and Erosion Control

All applications must include a plan to ensure fish habitat and water quality is not negatively affected by sediment leaving a property during or after site development. Erosion and Sediment Control Guideline for Urban Construction, March 2006 is a general guideline that can be used to prepare sediment and erosion control plans. However, as this is an evolving science, applicants are encouraged to consult other sources of information to supplement their plans.

5.5 Stormwater Management Practices

Storm water management (SWM) plans are required to meet the standards and criteria set out in the Stormwater Management Planning and Design Manual, Ministry of Environment, March 2003, as may be revised, in addition to requirements/recommendations of any relevant watershed or subwatershed study. Stormwater management facilities normally require a permit under Ontario Regulation 169/06 as part of approval of their outlet to a watercourse.

5.6 Natural Channel Design

Where a watercourse is to be altered, the use of state of the art natural channel design will be encouraged. Adaptive Management of Stream Corridors in Ontario, Ministry of Natural Resources & Watershed Science Centre, 2002, is the primary document presently utilized by SVCA in conjunction with the documents outlined in Section 5.1. Ontario's Stream Rehabilitation Manual, M. Heaton, R. Grillmayer, and J. Imhof, 2002, is also utilized.

5.7 Watershed and Subwatershed Plans

Watershed and subwatershed plans provide specific direction for the overall water and resource management of specific creek systems. All applications will be reviewed to ensure their conformity with the applicable watershed and subwatershed plans.

5.8 Municipal Storm Drainage Policy and Criteria Manuals

Most municipalities utilize specific manuals for the design of various municipal infrastructures. It is the responsibility of any applicant to ensure that designs submitted for approval to SVCA are in conformity with local municipal drainage requirements and engineering standards manuals.

5.9 Other Related Legislation

Lakes and Rivers Improvement Act & Public Lands Act: The applicant should contact the Ontario Ministry of Natural Resources & Forestry if any instream works are proposed to determine approval requirements under the Lakes and Rivers Improvement Act and the Public Lands Act.

Ontario Water Resources Act: The applicant should contact the Ontario Ministry of Environment & Climate Change for applicable policies and guidelines.

Navigation Protection Act: The applicant should contact Transport Canada and/or refer to the website at <http://laws-lois.justice.gc.ca/eng/acts/N-22/> for any works associated with a navigable waterway.

Building Code & Municipal Site Alteration and Tree Cutting By-laws: The applicant should contact their local municipality to determine additional approvals that may be required.

The above was not intended as a comprehensive listing of all legislation that could potentially affect the design or construction of an application.

Additional Information

Through the review of development and alteration applications, staff often require supplementary information. Stormwater management plans, sediment and erosion control plans, Environmental Impact Assessments/Environmental Impact Studies, tree preservation plans, revegetation/rehabilitation plans and geotechnical assessments are frequently requested prior to providing approval, or as conditions of approval. Please note that the Counties and local municipalities may have their own additional information requirements to facilitate their review of the documents. It is recommended that the applicant meet with all review agencies prior to initiating any studies to develop an agreed upon Terms of Reference.

Environmental Impact Assessments (EIA)/Environmental Impact Studies (EIS)

Environmental Impact Assessments/Studies must be prepared by a qualified professional in the field related to the natural heritage assessment that is being undertaken. The Counties and some area municipalities (i.e. Grey Highlands) also have guidelines for the preparation of Environmental Impact Studies for those applications within or adjacent to an Environmentally Significant/Sensitive Area (as designated in their Official Plans). These guidelines, in conjunction with the Natural Heritage Reference Manual (MNR, 2010) and other associated guidelines, will be used when establishing terms of reference for an EIA/EIS and when reviewing the report.

CHAPTER 6: PROCESSING SECTION 28 PERMIT APPLICATIONS

Topics Covered

Processing Fees Processing of Applications Approval of the Permit

Hearing (Refusal of a Permission) Appeal Process

Terms and Conditions Enforcement

Review Timeline

6.0 Processing Section 28 Permit Applications

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 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.

Completing an application form is required before work (filling, grading/site alteration, or construction) can proceed in an area regulated by Saugeen Valley Conservation Authority, and a permit must be issued. Application forms are available at SVCA's Administration Office. Permits are non-transferable and 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.

Before submitting plans, all potential applicants are encouraged to consult with Saugeen Valley 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 Saugeen Valley Conservation Authority staff can only be provided once an application and detailed plans are submitted.

At the time of the formal permit application, details of the works proposed may be required 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 SVCA guidelines as may be applicable. Works that involve substantial site Development should be prepared using the services of professionals from a variety of disciplines. Any proposals for construction of Buildings within the flood plain or shoreline flooding hazard will normally, by their very nature, involve flood proofing and have to be submitted by a professional civil engineer. Any proposals that involve issues of Slope stability must include an assessment by a professional geotechnical engineer. The shoreline protection Structures must be designed by a professional engineer with experience and qualifications in coastal engineering. Simpler proposals for farm ponds or a minor alteration of an intermittent Watercourse may only require a sketch plan with cross sections, etc. In all cases, it is necessary that the information provided with the application is clear as to the work proposed and is sufficient to allow Saugeen Valley Conservation Authority staff to complete a technical review.

6.1 Processing Fees

Fees for the processing of applications are set by the Authority Members and must be paid at the time of submitting an application. Fees are nonrefundable. All fees must be paid prior to issuance of the permit. The fee schedule is available on the website (www.svca.on.ca).

6.2 Processing of Applications

All applications, as a first step, are reviewed to determine if they conform to the policies set out in Chapter 4 of this document. Saugeen Valley 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 SVCA 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 Saugeen Valley 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 SVCA Authority Members.

Saugeen Valley 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.

6.3 Approval of the Permit

Saugeen Valley Conservation Authority has established types/classes of applications where approval has been delegated to staff.

Applications that conform to the policies set out in Chapter 4 will be recommended for approval, along with any conditions, and submitted to the General Manager/Secretary Treasurer of the Saugeen Valley Conservation Authority or designate for authorization and permit issuance under Ontario Regulation 169/06.

The General Manager/Secretary Treasurer or designate may refer applications to the Saugeen Valley Conservation Authority Members for review and ruling if deemed warranted by SVCA staff or the applicant.

In all cases, any approval is only valid upon issuance of a permit on the prescribed form, signed by the General Manager/Secretary Treasurer or designate.

Any proposed amendments to the approval will require review and approval and may be subject to additional fees. Permits are normally issued for one year from the date of issuance. Requests for an extension of one year, provided that the scope of work remains unchanged from the original application, must be made in writing prior to the one-year expiration date of the original permit.

Issuance of a 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.

6.4 Hearing (Refusal of a Permission)

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 permit approval, the application may be recommended for refusal. In such a case, the applicant may request a hearing before the Saugeen Valley Conservation Authority Members.

Saugeen Valley 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 SVCA Authority Members; and
- (c) Saugeen Valley Conservation Authority may at its discretion request representation to the hearing as follows:
 1. the Municipality in which the property is located,
 2. any Federal or Provincial Government Representative,
 3. any surveyor, consulting engineer or other expert retained by SVCA.

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.

Additional information about Hearing Guidelines may be obtained by request from the Saugeen Valley Conservation Authority.

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 SVCA Authority Members shall approve (with or without conditions) or refuse the application. Upon refusal of the application or if permission is granted subject to conditions, the Authority Members 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.

6.5 Appeal Process

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 & Forestry, care of the Mining and Lands Commissioner, who may dismiss the appeal or grant permission.

In all cases, hearings/appeals will be conducted in accordance to the “Procedural Guidelines for Appeals, Under the Conservation Authorities Act”, October 2005.

6.6 Terms and Conditions

Permission granted by SVCA cannot be changed or transferred.

Approvals, permits, etc., may be required from other agencies prior to undertaking the work proposed. Saugeen Valley 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.

Saugeen Valley 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 permit are not complied with.

6.7 Enforcement

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 169/06 may result in charges being laid pursuant to Ontario Regulation 169/06 and the Conservation Authorities Act.

Normally a “Notice of Violation” will be sent to the landowner, their agent and/or the contractor. 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 Saugeen Valley Conservation Authority to discuss options for resolution of the matter.

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, R.S.O. 1990.

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.

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, R.S.O. 1990.

The offender may apply for a permit for approval of the works. If they are in conformity with the policies outlined in Chapter 4 of this document a 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 permit is subsequently approved the works may proceed.

If the permit is refused and the violation continues the Conservation Authority may elect to pursue legal action under Section 28 of the Conservation Authorities Act, R.S.O. 1990.

In all cases, the Authority will work to resolve violations within two (2) years. If the matter is not resolved the SVCA may pursue legal action. This will allow for ample time for court preparation, if required. This deadline will be made clear to the violator(s) at the onset of negotiations. If negotiations fail to resolve the violation the Authority may pursue legal action under Section 28 of The Conservation Authorities Act, R.S.O. 1990.

The provisions of the Conservation Authorities Act and the Provincial Offences Act direct the Saugeen Valley Conservation Authority staff, when investigating a violation. It is normal that in addition to any penalty levied by the court upon conviction, Saugeen Valley Conservation Authority will seek an order for rehabilitation of the site and/or removal of any Buildings and/or Structures ruled in contravention of Ontario Regulation 169/06.

6.8 Review Timeline

Information about review timelines have been included in the Policies and Procedures for Conservation Plan Review and Permitting Works, May 2010 – see Appendix J. In keeping with the requirements prescribed, SVCA will adhere to the timelines identified for permitting activities (30 days for a minor application and 90 days for a major application.)

Appendix A: A Glossary of Terms

Accepted Engineering Principles means those current coastal, hydraulic and geotechnical engineering principles, methods and procedures that would be judged by a peer group of qualified engineers (by virtue of their qualifications, training and experience), as being reasonable for the scale and type of project being considered, the sensitivity of the locations, and the potential threats to life and property.

Access (Ingress/Egress) means standards and procedures applied in engineering practice associated with providing safe passage for vehicles and people to and from a shoreline or river-side property during an emergency situation as a result of flooding, other water related hazards, the failure of floodproofing, and/or protection works, and/or erosion that have been reviewed and approved by the Saugeen Valley Conservation Authority and/or the Ontario Ministry of Natural Resources & Forestry.

Accessory Building or Structure means a use or a building or structure that is subordinate and exclusively devoted to a main use, building or structure and located on the same lot.

Adverse Hydraulic and Fluvial Impacts means flood elevations are not increased, flood and ice flows are not impeded and the risk of flooding to and erosion on adjacent upstream and/or downstream properties is not increased.

Apparent Valley or Confined Valley means that part of the *valleyland* system where the valley walls are greater than 3 metres (10 feet), with or without a floodplain.

Anthropogenic means created by a human (e.g. activities carried out by humans; human impact).

Aquifer means an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, silt or clay).

Areas of Interference means those other areas where development could interfere with the *hydrologic function* of a wetland. Within 120 metres of Provincially Significant Wetlands or within 30 metres of wetlands greater than or equal to 2 ha in size.

Bankfull Width means the formative flow of water that characterizes the morphology of a fluvial channel. In a single channel stream, “bankfull” is the discharge, which just fills the channel without flowing onto the floodplain.

Best Management Practices (BMPs) means methods, facilities and structures which are designed to protect or improve the environment and natural features and functions from the effects of development or interference.

Buffers - an area or band of permanent vegetation, preferably consisting of native species, located adjacent to a natural heritage feature and usually bordering lands that are subject to development or site alteration. The purpose of the buffer is to protect the feature and its function(s) by mitigating the impacts of the proposed land use and allowing an area for edge phenomena to continue. A buffer may also provide an area for recreational trails and a physical separation for new development that will discourage encroachment (adapted from Ontario Ministry of Natural Resources’ Natural Heritage Reference Manual, 2nd Edition, 2010). The vegetation within a buffer can be managed (e.g. trimmed, cut, thinned, but not cultivated) providing that the integrity of the buffer remains intact.

Confined River or Stream System - a watercourse located within a valley corridor, either with or without a floodplain, and is confined by valley walls. The watercourse may be located at the toe of the valley slope, in close proximity to the toe of the valley slope (less than 15 m) or removed from the toe of the valley slope (more than 15 m). The watercourse can contain perennial, intermittent or ephemeral flows and may range in channel configuration, from seepage and natural springs to detectable channels.

Comprehensive Plan means a study or plan undertaken at a landscape scale such as a watershed/subwatershed plan, an *Environmental Assessment*, a detailed *Environmental Implementation Report (EIR)* that has been prepared to address and document various alternatives and is part of a joint and harmonized planning or *Environmental Assessment* process, or a community plan that includes a comprehensive *Environmental Impact Study*.

Conservation of Land means the protection, preservation, management, or restoration of lands within the watershed ecosystem for the purposes of maintaining or enhancing the natural features and hydrologic and ecological functions with the watershed or as defined in related case law.

Control of Flooding means the protection of people and property from flood related impacts from the regulatory flood or as defined in related case law.

Creek means a natural stream of water normally smaller than and often tributary to a river.

Cumulative Effects means the combined effects of all works in an area over time and the incremental effects associated with individual project in an area over time.

Cut and Fill Balance means all fill placed at or below the flood elevation is balanced with an equal amount of soil material removal within a defined reach of a watercourse.

Dam means a structure or work holding back or diverting water and includes a dam, tailings dam, dyke, diversion, channel, artificial channel, culvert or causeway (Lakes and Rivers Improvement Act, R.S.O. 1990 c. L3, s. 1)

Development as defined by the Conservation Authorities Act means:

- the construction, reconstruction, erection or placing of a building or structure of any kind;
- 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;
- site grading; or
- the temporary or permanent placing, dumping or removal of material, originating on the site or elsewhere.

Development as defined by the Planning Act, means the creation of a new lot, a change in land use, or the construction of buildings or structures, requiring approval under the Planning Act, but does not include:

- works that create or maintain infrastructure authorized under an environmental assessment process;
- works subject to the Drainage Act; or
- underground or surface mining or 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.

Drainage Area means, for a point, the area that contributes runoff to that point.

Dug-out or Isolated Ponds mean anthropogenic waterbodies that are created by excavating basins with no inlet or outlet channels and in which surface and ground water collect.

Dwelling unit means a *suite* operated as a housekeeping unit, used or intended to be used as a domicile by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.

Dynamic Beach means *areas of inherently unstable accumulations of shoreline sediments along the Great Lakes – St. Lawrence 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 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 means systems of plants, animals and micro-organisms together with non-living components of their environment, related ecological processes and humans.

Enclosure means a pipe, tile, or other conduit for carrying a creek, stream or watercourse underground.

Endangered Species (federal) means any indigenous species of fauna or flora which on the basis of the available scientific evidence is facing imminent extinction or extirpation, listed in schedule 1 of the Species At Risk Act as updated and amended from time to time, by Order-In-Council (adapted from the Species At Risk Act, 2002).

Endangered Species (provincial) means any indigenous species of fauna or flora which on the basis of the available scientific evidence is categorized as an “endangered species” (i.e. a native species facing imminent extinction or extirpation) on the Ontario Ministry of Natural Resources & Forestry official species at risk in Ontario list, as updated and amended from time to time (adapted from the Provincial Policy Statement, 2014).

Engineering Principles current coastal, hydraulic and geotechnical engineering principles, methods and procedures that would be judged by a peer group of qualified engineers (by virtue of their qualifications, training and experience), as being reasonable for the scale and type of project being considered, the sensitivity of the locations, and the potential threats to life and property.

Enhance in the context of wetlands means the altering of an existing functional wetland to increase or improve selected functions and benefits.

Environmental Assessment means a process that is used to predict the environmental, social and economic effects of proposed initiatives before they are carried out. It is used to identify measure to mitigate adverse effects on the environment and can predict whether there will be significant adverse environmental effects, even after the mitigation is implemented.

Environmental Impact Study (EIS) means a report prepared to address the potential impacts of *development* or *interference* on natural features and ecological functions. There are three types:

- a *Comprehensive EIS* is a landscape scale, watershed or subwatershed study which sets the width of setbacks and offers guidance for the investigation, establishment and maintenance of buffers.
- a *Scoped EIS* is an area or site-specific study that addresses the potential negative impacts to features described previously in a comprehensive study.
- a *Full EIS* is an area or site-specific study prepared, in the absence of a comprehensive study to address possible impacts from a development. Due to the lack of guidance from a comprehensive study, the full EIS is typically much more detailed than a scoped study, and will also include statements to address possible negative impacts at a regional scale.

Erosion means incremental or sudden dramatic riverine, shoreline, or slope processes that result in movements of large quantities of material which could include anthropocentric features, natural features, etc. and pose a hazard.

Erosion Access Allowance a 6 metre development setback applied to the stable slope allowance/top of stable slope/meander belt allowance and forming part of the erosion hazard for confined (apparent) and unconfined (not apparent) river or stream systems. The erosion access allowance is applied to provide for emergency access to erosion prone areas, provide for construction access for regular maintenance and access to the site in the event of an erosion event or failure of a structure, and, provide for protection against unforeseen or predicted external conditions which could have an adverse effect on the natural conditions or processes acting on or within an erosion prone area.

Existing Use means the type of activity associated with an existing building or structure or site on the date of a permit application.

Factor of Safety means the ratio of average available strength of the soil along the critical slip surface to that required to maintain equilibrium. The design minimum factors of safety are provided by the Ministry of Natural Resources Technical Guide for River and Stream Systems (2002). The higher factor of safety is used in complex geotechnical conditions or where there are *geologically metastable materials*.

Land-Uses	Design Range in Factor of Safety
Passive: no buildings near slope: farm field; bush; forest; timberland; and woods.	1.10
Light: no habitable structures near slope: recreational parks; golf courses; buried small utilities; tile beds; barns; garages; swimming pool; sheds; satellite dishes; and dog houses.	1.20 to 1.30
Active: habitable or occupied structures near slope: residential, commercial and industrial buildings; retaining walls; decks; stormwater management facilities; and, 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; and, waste management areas.	1.40 to 1.50
Quantifying recharge is not easy, because it depends on a number of variables including: <ul style="list-style-type: none"> • soil type • geology and hydrogeology • precipitation (including amount, type, and melt rate for snow) • prior soil moisture conditions • runoff • topography • evapotranspiration For a given climatic condition, recharge is much higher in areas of coarse sands and gravels than in areas of low-permeability clays.	

Feasible means with regards to floodproofing of a proposed addition to an existing building or structure that such measures are achievable without significantly altering the usability and practicality of executing and utilizing that proposed work.

Fish Habitat- as defined in the *Fisheries Act*.

Habitable that portion of a building or structure containing rooms or spaces required and intended for overnight occupancy and associated living space and includes those portions which contain facilities for storage, heating, air-conditioning, electrical, hot water supplies, etc., which are necessary to maintain the habitable condition and any area that has the potential to be used as or converted to residential living space, including basements.

Habitable Floor Space means any area that has the potential to be used as or converted to residential living space, including basements.

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. These may include unstable soils (sensitive marine clays (leda), organic soils) or unstable bedrock (karst topography).

Hazardous Substances means substances which individually or in combination with other substances, are normally considered to pose a danger to or threat to public health, safety and the environment. These substances generally include a wide range of materials that are toxic, ignitable, corrosive, reactive, radioactive or pathological.

Headwater means the source and extreme upper reaches of a river, creek, stream or watercourse.

Hydrologic Function means the functions of the hydrologic 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.

Hydrologic Study means a report prepared to address the potential impacts of development and interference on the hydrologic functions of a wetland or other natural feature.

Karst means an area of irregular limestone in which erosion has produced fissures, sinkholes, underground streams, and caverns.

Littoral – associated with Lake Huron shoreline area is the dry land at shoreline to the depth at which sunlight no longer penetrates to the bottom of the water.

Lot of Record means a lot that has been severed from a larger parcel which has not yet been developed. It is a parcel or tract of land described in deed or other legal document that is capable of being legally conveyed and contains no pre-existing buildings or structures.

Meander Belt Allowance means a limit for development within the areas where the river system is likely to shift. It is based on twenty (20) times the bankfull channel width where the bankfull channel width is measured at the widest riffle section of the reach. A riffle is a section of shallow rapids where the water surface is broken by small waves. The meander belt is centred over a meander belt axis that connects the riffle section of the stream.

Meander Belt Axis means the line or "axis" that the meander belt is centred over which connects all the riffle sections of a stream.

Meander Belt means the area of land in which a watercourse channel moves or is likely to move over a period of time. It is generally considered 20 times of bankfull channel width at riffles in the reach.

Multi-lot means four lots or more.

Multi-unit means any building or structure or portion thereof that contains more than one unit for any use (e.g. a residential dwelling unit, an industrial/commercial/institutional space designed or intended to be occupied or used for business, commercial, industrial or institutional purposes).

Natural Heritage System: means a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial parks and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue. The Province has a recommended approach for identifying natural heritage systems, but municipal approaches that achieve or exceed the same objective may also be used. **Natural Heritage Features** – features and areas including all wetlands, significant woodlands, significant valleylands, fish habitat, significant habitat of endangered and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area; part of an ecologically functional corridor or linkage between natural areas; or, any other features or areas

that are considered ecologically important in terms of contributing to the quality and diversity of an identifiable geographic area or natural heritage system.

Negligible means not measurable or too small or unimportant to be worth considering.

Normal High Water Mark – - the usual or average level to which a body of water rises at its highest point and remains for a sufficient time so as to change the characteristics of the land. In flowing waters (rivers, streams) this refers to the “active channel/bankfull level” which is often the one to two year flood flow return level. For inland lakes, it refers to those parts of the waterbody bed and banks that are frequently flooded by water so as to leave a mark on the land and where the natural vegetation changes from predominantly aquatic vegetation to terrestrial vegetation (excepting water tolerant species).

Non-Apparent Valley or Unconfined Valley means that part of the valleyland system where a river, creek, stream or watercourse is not contained within a clearly visible valley section.

One Hundred Year Flood Event (100 Year Flood) - 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.

One Hundred Year Erosion Rate means the predicted lateral movement of a river, creek, stream or watercourse or inland lake over a period of one hundred years.

Other Water-Related Hazards means water-associated phenomena other than *flooding hazards* and *wave uprush* which act on shorelines. This includes, but is not limited to ship-generated waves, ice piling and ice jamming.

Oversteepened Slope means a slope which has a slope inclination equal to or greater than 33 1/3 per cent (3H:1V) or as determined by an area or property specific geotechnical report.

Pollution means any deleterious physical substance or other contaminant that has the potential to be generated by development.

Protect in the context of wetlands, means the preservation of wetlands in perpetuity through implementation of appropriate physical and/or legal mechanisms (e.g. ecological buffers, development setbacks, zoning, fencing, conservation easements, etc.).

Protection Works means structural or non-structural works which are intended to appropriately address damages caused by flooding, erosion and/or other water-related hazards.

Qualified Professional means a person with specific qualifications, training, and experience authorized to undertake work in accordance with the policies in accepted engineering or scientific principles, provincial standards, criteria and guidelines, and/or to the satisfaction of the SVCA.

Regulated Area means the area encompassed by all hazards and wetlands, plus any allowances, as defined by SVCA’s Regulation.

Regulatory Flood means the inundation under a flood resulting from the rainfall experienced during the greater of the Hurricane Hazel Storm , the 100 year flood, or a known larger event (Frazil Ice Flooding in the Geographic Town of Durham, April 1, 2016 Flood MucCullough Lake), the limits of which define the *riverine flooding hazard*.

Replacement/ Reconstruction means the removal of an existing building or structure and the construction of a new building or structure. Replacement does not include reconstruction on remnant foundations or derelict or abandoned buildings or structures.

Restore in the context of wetlands means the re-establishment or rehabilitation of a former or degraded wetland with goal of returning natural or historic functions and characteristics that have been partially or completely lost by such actions as filling or draining.

Riffle means a section of shallow rapids where the water surface is broken by small waves.

Riparian Vegetation – 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.

River means a large natural stream of water emptying into an ocean, lake, or other body of water and usually fed along its course by converging tributaries.

Riverine Erosion Hazard means the loss of land, due to human or natural processes, that poses a threat to life and property. The *riverine 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, plus a 15 metre allowance or, in unconfined systems, the meander belt allowance plus a 15 metre allowance.

Riverine Flooding Hazard means the inundation under a flood resulting from the rainfall experienced during the greater of the Hurricane Hazel Storm or in limited situations in headwater streams, the 100 year flood, or a known larger event (Frazil Ice Flooding in the Geographic Town of Durham, April 1, 2016 Flood McCullough Lake), wherever it is greater, the limits of which define the riverine flooding hazard...

Riverine Hazard Limit means the limit which encompasses the *flooding* and *erosion hazards* and the river, creek, stream or watercourse.

Settlement Area means urban areas and rural settlement areas within municipalities that are:

- built up areas where development is concentrated and which have a mix of land uses; and,
- lands which have been designated in an official plan for development over the long term planning horizon.

Safe Access means locations where during the *Regulatory Flood*, the flow velocity does not exceed 1.0 m/s, the product of depth and velocity does not exceed 0.4 m²/s, the depth of flooding along access routes to residential units does not exceed 0.8 metres or 2.0 metres along access routes to commercial or industrial buildings or structures, and the depth of flooding adjacent to residential units does not exceed 1.2 metres or 2.0 metre adjacent to commercial or industrial buildings or structures.

Significant Natural Features means features and areas including all wetlands, fish habitat, valleylands, habitat of endangered species, significant wildlife habitat, confirmed habitat for provincially or regionally significant species, part of an ecologically functional corridor or linkage between natural areas, or any other features or areas that are considered ecologically important in terms of contributing to the quality and diversity of an identifiable geographic area or natural heritage system.

Significant Wildlife Habitat means locations which include:

- seasonal concentrations of animals,
- rare vegetation communities or specialized habitats for wildlife,
- habitats of species of conservation concern (excluding habitats of endangered and threatened species), and
- wildlife movement corridors.

Stage-Storage Discharge Relationship means the relationship of flood storage and flood elevation values at various flood flow rates within a particular watercourse/floodplain reach. This relationship is used as a factor to determine whether the hydraulic function of the floodplain is preserved.

Stream means a flow of water in a channel or bed, as a brook, rivulet, or small river.

Thermal Impact means the impairment of water quality through temperature increase or decrease. Changes in temperature can also effect species composition of plants, insects and fish in a water body.

Toe of Slope means the lowest point on a slope, where the surface gradient changes from relatively shallow to relatively steep.

Top of Slope means the point of the slope where the downward inclination of the land begins, or the upward inclination of the land levels off. This point is situated at a higher topographic elevation of land than the remainder of the slope.

Valleyland means land that has depressional features associated with a river or stream, whether or not it contains a watercourse. Valley lands 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. A watercourse also includes a lake and a municipal drain.

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

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.

Wetland – as defined by the Conservation Authorities Act means land that:

- is seasonally or permanently covered by shallow water or has a water table close or at the surface and
- directly contributes to the hydrological function of a watershed through connection with a surface watercourse and
- has hydric soils, the formation of which have been caused by the presence of abundant water and
- 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 wetland characteristics

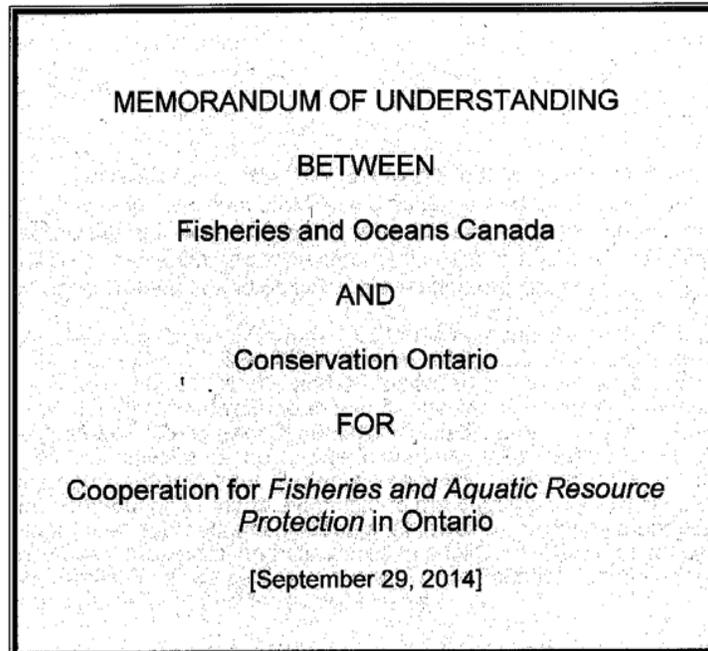
Wetland – as defined by the Provincial Policy Statement, means lands that are

- a) seasonally or permanently covered by shallow water, as well as
- b) 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.

Woodland - means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels (2014 PPS).

Appendix B: 2014 CO & DFO MOU



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Memorandum of Understanding

BETWEEN:

Fisheries and Oceans Canada ("DFO")

AND

Conservation Ontario ("CO")

1. Introduction

Whereas:

- (a) The *Constitution Act, 1867* assigns to the federal government exclusive jurisdiction for sea coast and inland fisheries and the *Fisheries Act* sets out the powers and duties of the Minister of Fisheries and Oceans with respect to the conservation and protection of fish and fish habitat, specifically the fisheries protection and pollution prevention provisions;
- (b) Fisheries and Oceans Canada ("DFO") is responsible for the administration of the *Fisheries Act*, specifically the fisheries protection provisions including Sections 6, 20, 21, 35, 37, and 38 related to the conservation and protection of Canada's marine and freshwater fisheries resources and their habitats from the impact of human activities; before DFO exercises ministerial powers as they relate to commercial, recreational and Aboriginal fisheries in the Fisheries Protection sections of the Act, DFO must consider the contribution of the relevant fish to the ongoing productivity of commercial, recreational or Aboriginal fisheries, fisheries management objectives, measures and standards to avoid, mitigate or offset serious harm to fish that are part of or support a commercial, recreational or aboriginal fishery; and the public interest.
- (c) The Species at Risk Act (SARA) identifies the Minister of Fisheries and Oceans as the competent minister with respect to aquatic species other than those individuals in or on federal lands administered by the Parks Canada Agency and, in that capacity, the Minister of Fisheries and Oceans has powers and duties with respect to protecting aquatic species listed under that Act.
- (d) The *Conservation Authorities Act* states the objectives of a Conservation Authority (CA) 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. As well, all CAs are responsible for administering "Development, Interference and Alteration Regulations" (Ontario Regulations 42/06 and 146/06 to 182/06) consistent with the "Content Regulation" Ontario Regulation 97/04 of the *Conservation Authorities Act*. CAs have responsibilities to regulate development and activities in or

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adjacent to river or stream valleys, Great Lakes and large inland lakes, shorelines, watercourses, hazardous lands and wetlands or the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse or wetland. CAs review projects proposed in their watershed jurisdictions during the planning and/or early design stages and may provide technical advice and information related to fisheries and aquatic resources as watershed management agencies under the *Conservation Authorities Act*. CAs may also provide advice and information related to fisheries and aquatic resources to municipalities on policy documents and planning and development applications, as part of their public commenting body role under the *Planning Act* and may provide additional technical advice related to their mandates as determined under the terms of service agreements with municipalities. Finally, CAs may provide advice and information related to fisheries and aquatic resources as part of their role as commenting bodies under other provincial legislation and provincial plans such as the *Environmental Assessment Act*.

- (e) Under Section 312 of the *Corporations Act* (1990), the Association of Conservation Authorities of Ontario (hereafter Conservation Ontario or "CO") was issued letters patent of continuation on March 4, 2005. These letters patent authorize its continuation to the same extent as if it has been incorporated under this Act and specify that the objects of the corporation are to: Promote and represent the interests of Conservation Authorities in Ontario, to support and enhance an effective conservation network in the Province of Ontario, to promote watershed-based conservation and resource management in Ontario, to provide a forum for discussion of the issues affecting watershed-based conservation and resource management and for other purposes not inconsistent with these objects.
- (f) CO's by-laws further specify that CO shall be governed by its Council, consisting of representatives appointed and designated by its members (Conservation Authorities) as voting delegates; and by its Directors.
- (g) To carry out their mandate under the *Conservation Authorities Act*, Conservation Authorities have prepared watershed, subwatershed and shoreline management plans (many of which contain specialized fish and aquatic resource management objectives, technical information, strategies, policies and programs).

Therefore, DFO and CO (the "Parties") agree to the following Memorandum of Understanding ("MOU"):

2. Guiding Principles

- (a) The parties are committed to client service and will work together to improve the efficiency and effectiveness the delivery of their respective programs in Ontario.
- (b) Conservation and protection of fish and fish habitat and listed aquatic species at risk and their critical habitat will be managed in accordance with the DFO's regulatory and policy frameworks for the application of the



fisheries protection provisions of the *Fisheries Act* and *Species at Risk Act* respectively.

- (c) Conservation Authorities, where resources allow, will continue to provide technical advice and information related to fisheries and aquatic resources during the planning and / or early design of projects in their jurisdictions as part of their responsibilities under their legislated mandates (description in section 1d of this MOU)

3. PURPOSE

- (a) DFO and the Conservation Authorities have respective responsibilities for regulatory reviews and approvals and aquatic resource protection related to works, undertakings and activities in Ontario and will work together to develop a collaborative approach to fisheries and aquatic resource protection that is consistent in Ontario;
- (b) The Parties will work together in the development of protocols to improve the efficiency and effectiveness of regulatory reviews of applications and decision-making related to the roles and responsibilities of each Party for:
 - (i) Ensuring that opportunities are utilized to make proponents aware of the new fisheries protection program requirements of the *Fisheries Act* and any relevant regulatory requirements under the *Species at Risk Act*;
 - (ii) Ensuring that opportunities are utilized to make proponents aware of the requirements of the *Conservation Authorities Act*;
 - (iii) Communicating fisheries and aquatic resource data, policies and management objectives; and
 - (iv) Reporting on the discussions and actions taken under this MOU.

4. WORK TO BE COORDINATED

- (a) The Parties will establish, wherever possible, clear, comprehensive and harmonized standards, guidelines and procedures to guide and measure regulatory performance related to:
 - (i) Advice to be provided to planning and development proponents regarding fisheries and aquatic resource protection and potential related *Fisheries Act*, *Species at Risk Act* and *Conservation Authorities Act* requirements;
 - (ii) Developing and improving technical capacity through training and other knowledge transfer mechanisms regarding fisheries and aquatic resource protection;
 - (iii) Sharing the results of new methods, measures and/or best practices for fisheries and aquatic resource protection.
- (b) The Parties will establish a working group consisting of principal contacts to oversee the development and implementation of an annual workplan to

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accomplish work to be coordinated (paragraph 4 of the MOU) .This working group will also conduct an annual review as outlined under paragraph 6 of the MOU.

(c) DFO agrees to:

- i) Refer Proponents where appropriate to the local CA to obtain information that may be available on the aquatic environment and fisheries management objectives, priorities and strategic offsetting options, if DFO determines that a project requires an Authorization and offsetting under the *Fisheries Act* and/or where necessary for a permit under the *Species at Risk Act*;
- ii) Inform CO, where appropriate, of any review or investigation by DFO of a non-compliance incident under DFO's jurisdiction that may have occurred in a Conservation Authority's jurisdiction;
- iii) Assist in developing the professional and technical capacity of CO and CAs by providing training opportunities and communication materials related to implementation of the *Fisheries Act*, *Species at Risk Act* and associated regulatory and policy frameworks; and
- iv) Consult with CO regarding the development of new standards and guidelines for application of the fisheries protection provisions of the *Fisheries Act*, and the *Species at Risk Act* where appropriate.

(d) CO agrees to:

- (i) Assist CAs in ensuring that the watershed stakeholders they interact with as part of their responsibilities as a watershed management agency under the *Conservation Authorities Act* (as described in 1d) are aware of the *Fisheries Act*, *Species at Risk Act* and associated regulatory and policy frameworks;
- (ii) Coordinate training for DFO staff in Central and Arctic Region regarding Conservation Authorities and their relationship to DFO's mandate;
- (iii) Coordinate, compile *and communicate* information, questions and concerns from individual CAs for presentation to DFO where appropriate;
- (iv) Facilitate communication between CAs and DFO to provide information that may be available on aquatic resource and/or fisheries management objectives, priorities and strategic offsetting options, to DFO and project proponents where DFO determines an offsetting plan is required as part of a proponent's application for authorization under the *Fisheries Act*; and/or where necessary for the issuance of a permit under the *Species at Risk Act*
- (v) Liaise with DFO and CAs to assist CAs in further developing knowledge related to aquatic resources in their watersheds and, as resources allow, use the available information to provide advice to the Proponent for appropriate measures to offset impacts, where DFO requires an offsetting plan;
- (vi) Inform DFO where appropriate of projects that could result in serious

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harm to a commercial, recreational, or aboriginal fishery or have the potential to contravene the *Species at Risk Act*.

5. FINANCIAL ARRANGEMENTS

This MOU will not impose any financial responsibilities or limitations on the Parties. Each party will be responsible for their respective costs incurred related to the implementation of the MOU.

6. ANNUAL REVIEW OF MOU

- (a) The Parties will meet together at least once each fiscal year that this MOU is in force to review its content and assess the effectiveness of activities under this MOU.
- (b) Proposals for changes to this MOU can be made at any time, and appropriate amendments made as may be agreed upon.

7. LEGAL LIABILITY

- (a) This MOU is an expression of the mutual intentions of the Parties and is not legally binding on them or enforceable against them.
- (b) It is agreed and acknowledged that any enforcement action under the *Fisheries Act* and the *Species at Risk Act* is at the sole discretion of DFO and may be referred to the Attorney General of Canada for consideration for prosecution.
- (c) It is agreed and acknowledged that any enforcement action under the *Conservation Authorities Act* is at the sole discretion of the Conservation Authorities.
- (d) If there is any conflict or inconsistency between this MOU and any obligations under any Act of Parliament, including but not limited to the *Fisheries Act* and the *Species at Risk Act* the obligations under the Act of Parliament shall prevail.

8. PRINCIPAL CONTACTS

Correspondence relating to this MOU is to be sent to the respective points of contact designated below. Either Party may unilaterally revise its point of contact by written notice to the other Party at any time.

- (a) **For DFO:**
Tom Hoggarth
Team Leader-Client Liaison, Partnerships, Standards & Guidelines
Central and Arctic Region
Fisheries and Oceans Canada
867 Lakeshore Road, PO Box 5050
Burlington, Ontario L7R 4A6
Fax: 905-336-6285
- (b) **For CO:**
Bonnie Fox
Manager, Policy and Planning
Conservation Ontario
Box 11, 120 Bayview Parkway
Newmarket, ON L3W 4W3

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Fax: 905-895-0751

9. TERM OF THE MOU

- (a) This MOU will be in force from the date of final signature of both Parties and will remain in effect until cancelled by either Party acting under paragraph 10.
- (b) This MOU may be amended from time to time by mutual written agreement of the Parties under paragraph 6 – Annual Review of MOU.

10. PROVISION FOR CANCELLATION

This MOU may be cancelled unilaterally by either Party by providing six (6) months written notice of the intention to cancel to the other Party or by mutual agreement with any agreed period of notice.

11. SIGNATORIES

The Parties hereto have signed the Agreement, in counterpart, on the dates indicated below.

Approved by:

Dave Burden
Regional Director General,
Central and Arctic Region
Fisheries and Oceans Canada

Date NOV 25 2014

Kim Gavine
General Manager
Conservation Ontario

Date Oct 27/14

Appendix C: Other References & Resources

Provincial Legislation and Regulations – www.e-laws.gov.on.ca

Federal Legislation and Regulations - <http://laws.justice.gc.ca/en/>

Conservation Authorities Act –

<https://www.ontario.ca/laws/statute/90c27>

Ontario Regulation 162/06 –

<https://www.ontario.ca/laws/regulation/060169>

Provincial Policy Statement - <http://www.mah.gov.on.ca/Page215.aspx>

Municipal Websites:

Municipality of Arran-Elderslie - <http://www.arran-elderslie.com>

Municipality of Brockton - <http://www.brockton.ca>

Township of Chatsworth - <http://www.chatsworth.ca>

Municipality of Grey Highlands - <http://www.greyhighlands.ca>

Town of Hanover - <http://www.hanover.ca>

Township of Howick - <http://howick.ca>

Township of Huron-Kinloss - <http://www.huronkinloss.com>

Municipality of Kincardine - <http://www.kincardine.net>

Town of Minto - <http://town.minto.on.ca>

Municipality of Morris-Turnberry - <http://www.morristurnberry.ca>

Town of Saugeen Shores - <http://www.saugeenshores.ca>

Municipality of South Bruce - <http://www.town.southbruce.on.ca>

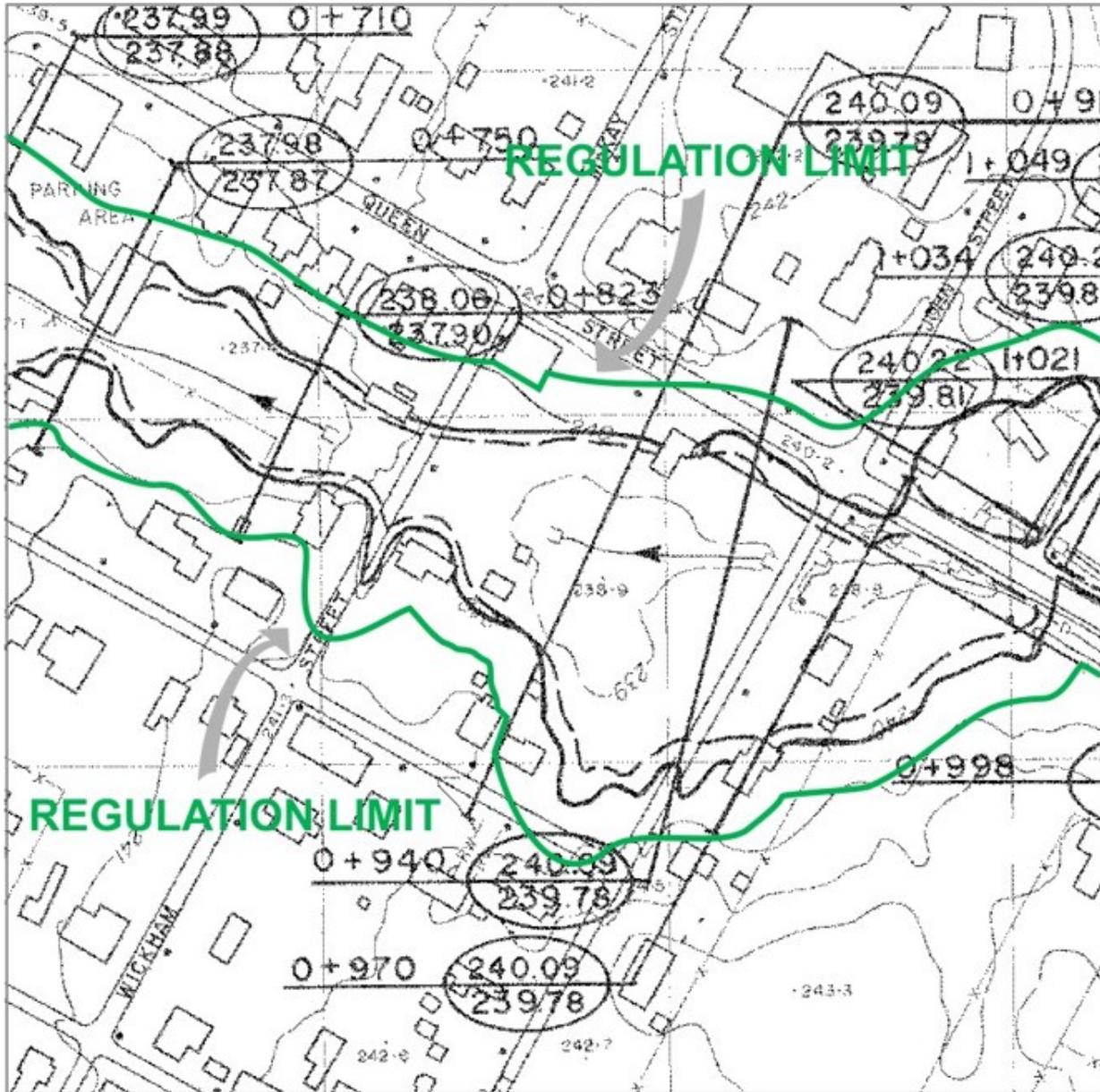
Township of Southgate - <http://www.southgate.ca>

Township of Wellington North - <http://wellington-north.com>

Municipality of West Grey - <http://www.westgrey.com>

Appendix D: Engineering Flood Plain Mapping

Sample Flood Plain Mapping:



Appendix E: Municipal Partnership Agreements- Sample

MEMORANDUM OF AGREEMENT dated x-t day of s

J 2013.

BETWEEN

THE CORPORATION OF THE TOWNSHIP OF CHATSWORTH

(Hereinafter referred to as the "Township ")

AND

THE SAUGEEN VALLEY CONSERVATION AUTHORITY

(Hereinafter referred to as the "SVCA")

1. PURPOSE

The purpose of this Memorandum of Agreement is to describe the framework within which the SVCA will provide specified Planning Act application review and technical clearance services to the Township.

2. ROLES AND RESPONSIBILITIES

(a) The Township and the SVCA mutually agree that:

- i) this Memorandum of Agreement applies to the SVCA and the area under its jurisdiction which is located in the Township of Chatsworth;*
- ii) the SVCA desires and has the expertise to provide the plan review and technical clearance services to the Township identified in this Memorandum of Agreement and that the Township is relying on said expertise. The parties acknowledge that the Township remains the approval authority for those planning applications for which the Township is so designated by statute;*
- iii) nothing in this Memorandum of Agreement precludes the SVCA from commenting to the Township from a Conservation Authority perspective, as it normally would on an application circulated by the Township under the Planning Act, including appeals to the Ontario Municipal Board for such matters as the Authority deems to be within its mandate.*
- v) this Memorandum of Agreement may be amended by mutual agreement, in writing, from time to time to reflect changes in the programs of parties to this Memorandum of Agreement, or as a result of changes in provincial or County policies, or as a result of subsequent discussions between the parties hereto; and*
- vi) any party to this Memorandum of Agreement may terminate the agreement at any time, in writing to the other party to the agreement, with a minimum of six months notice.*

vii) *nothing in this Memorandum of Agreement precludes the SVCA from administering and enforcing its Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (Ontario Regulation 169106), under Section 28 of the Conservation Authorities Act, R.S.O. 1990, Chap. C.27.*

(b) The Township commits to:

- i) *circulate to the SVCA under this Memorandum of Agreement all those development/planning applications listed in Appendix A, Schedule 1;*
- ii) *transfer appropriate policy statements, guidelines, manuals, maps, information, data and criteria from the Township to the SVCA, and transfer said material to the SVCA as it is received from the Province of Ontario or County of Grey, or make arrangements to have said material transferred directly from the Province or County to the SVCA to reflect the terms of this Memorandum of Agreement;*
- iii) *make other arrangements to provide the plan review and technical clearance services identified in this Memorandum of Agreement, when in the opinion of the Township and the SVCA utilizing the services of the SVCA as specified in this agreement could result in a conflict of interest for the SVCA; and,*
- iv) *collect fees as prescribed in Appendix A, Schedule 3(a) on behalf of the SVCA.*

(c) The SVCA commits to:

- i) *provide the Township with those services listed in Appendix A, Schedule 2 at no extra cost to the Township;*
- ii) *provide its comments to the Township prior to the public hearing, or public meeting, or due date for submitting comments as indicated on the circulated application or notice, or request an extension with reasons;*
- iii) *comment on whether the application complies with applicable Provincial Policies as set out in the Provincial Policy Statement and in the County of Grey and Local Official Plans, and other planning documents as mutually agreed upon by the Parties, in the plan review services it provides the Township;*
- iv) *apply all relevant Provincial and Municipal operational procedures and guidelines in the plan review and technical clearance services it provides the Township;*
- v) *not disseminate any data, maps, information or other documents either received directly from the Province or identified as "Provincial data" by the Township, unless permission has been obtained;*
- vi) *disseminate Municipal data, maps, information or other documents when requested, only in accordance with Township policies and procedures; and,*
- vii) *make provision for staff to attend Ontario Municipal Board Hearings, upon the request of the Township, with respect to the plan review and technical clearance*

services provided pursuant to this Memorandum of Agreement , at no extra cost to the Township.

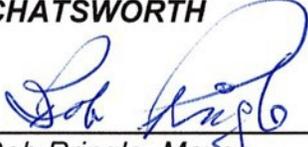
3. TIME FRAME FOR IMPLEMENTATION

This Memorandum of Agreement will take effect on N -- , 2013.

The parties have duly executed this Memorandum of Agreement under the hands of their authorized Officers.

Signed, Sealed and Delivered

) **THE CORPORATION OF THE TOWNSHIP OF**
) **CHATSWORTH**

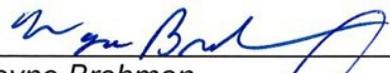
) 

) Bob Pringle, Mayor

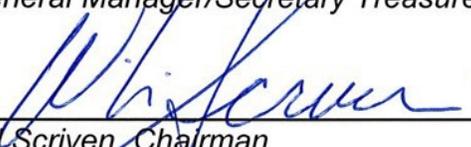
) 

) Will Moore, Chief Administrative Officer/Clerk

) **SAUGEEN VALLEY CONSERVATION AUTHORITY**

) 

) Wayne Brohman,
) General Manager/Secretary Treasurer

) 

) Bill Scriven, Chairman
) We have authority to bind the Corporation

APPENDIX A - SCHEDULE 1

CIRCULATION STATUS BY APPLICATION TYPE AND DEFINITIONS

1. *The Township of Chatsworth advises the SVCA that under this Agreement it will circulate the following types of development/planning applications to the SVCA for comment as per the items in Appendix A, Schedule 2:*

*Subdivisions (unless circulated by the County of Grey);
Condominiums (unless circulated by the County of Grey); Consents;
County and Township Official Plans (unless circulated by the County of Grey);
County and Township Official Plan Amendments (unless cir. by Co. of Grey);
Part Lot Control By-laws (unless circulated by the County of Grey); Comprehensive Zoning By-laws;
Zoning By-law Amendments;
Minor Variances; and,
Site Plans, where deemed necessary by the Township or as requested by the SVCA.*

2. *"Development/planning application review" as defined in Appendix A, Schedule 2 includes:*
 - i) reviewing development applications to determine if and where a Provincial interest or Official Plan policy may be affected;*
 - ii) identifying the need for and adequacy of technical reports and proposing mitigation measures for applications;*
 - iii) assisting in the preparation of terms of reference for studies and reports; iv) specifying conditions of approval; and,*
 - v) providing advice and recommendations on the boundaries of Areas of Natural and Scientific Interest and Provincially Significant Wetlands.*
3. *"Technical Clearance" as defined in Appendix A, Schedule 2 includes:*
 - i) assessing technical reports submitted by the proponent's consultants to determine if the reports have been prepared in accordance with Provincial, County, Municipal, and Authority guidelines and standards.*

**APPENDIX A – SCHEDULE 2
SERVICES TO BE PROVIDED BY SVCA TO CHATSWORTH AT NO EXTRA COST**

	LIST OF FUNCTIONS FOR DEVELOPMENT/PLANNING APPL/CATION REVIEW AND TECHNICAL CLEARANCE	
DESCRIPTION	DEVELOPMENT/PLANNING APPL/CATION REVIEW	TECHNICAL CLEARANCE
<i>Identify need for and conduct technical review of reports on wetland areas impacts and mitigation measures</i>	x	x
<i>Comment on and conduct technical review of reports on fish habitat impacts and mitigation</i>	x	x
<i>Review for site specific (off site) stormwater planning issues</i>	x	x
<i>Identify need for and conduct technical review of stormwater management facilities design reports</i>	x	x
<i>Review for sub-watershed planning/master drainage planning</i>	x	
<i>Comment on natural hazards</i>	x	x
<i>Comment and issue permit for development in Regulated Areas</i>	x	x
<i>Review impact on significant Wildlife habitat</i>	x	x
<i>Review impact on habitat of threatened and endangered species</i>	x	x
<i>Review impact on significant areas of natural and scientific interest</i>	x	x
<i>Review impact on significant Woodlands</i>	x	x
<i>Review impact on significant Valleylands</i>	x	x

<i>Comment on lakes and rivers impacts</i>	x	x
<i>Comment on shorelines impact</i>	x	x
<i>Review and comment on erosion limits</i>	x	x
<i>Identify if Crown Land involved and notify MNR if applicable</i>	x	
<i>Review and comment on natural resource - related impacts on groundwater recharge/discharge areas where there is a fisheries or wetland impact</i>	x	x

APPENDIX A

SCHEDULE 3(a)

FEE SCHEDULE - Township of Chatsworth

APPLICATION REVIEW FEE

- *The Application Review Fee shall be charged to all applicants.*
- *The Application Review Fee shall be collected by the Township on behalf of the Authority and remitted to the Authority quarterly, or in accordance with any other mutually agreeable timeframe.*
- *No Application Review Fee shall be charged for municipally sponsored applications.*
- *For any application that is circulated by the County and not the Township (e.g. Plan of Subdivision) then the Application Review Fee shall be collected by the Authority from the applicant.*

<i>Official Plan Amendment</i>	<i>\$210.00</i>	<i>per application</i>
<i>Zoning By-law Amendment</i>	<i>\$210.00</i>	<i>per application</i>
<i>Consent (Severance) Minor Variance</i>	<i>\$210.00</i>	<i>per each new lot created</i>
<i>Draft Plan of Subdivision</i>	<i>\$160.00</i>	<i>per application</i>
	<i>\$50.00</i>	<i>per each lot or block, with a minimum flat fee of \$540.00 (Note: 0.3 metre reserve blocks shall not be included in the calculation of the number of blocks.)</i>
<i>Draft Plan of Condominium</i>		<i>the lesser of \$50.00 per unit or \$1300.00/ha with a minimum flat fee of \$540.00</i>
<i>Site Plan Application</i>		<i>the lesser of \$50.00 per unit or \$1300.00/ha with a minimum flat fee of \$540.00</i>
<i>Private "Multi-Lot" Residential Developments (as an OPA and/or ZBA</i>		<i>\$50.00 per unit (parcel) or block with a minimum flat fee of \$540.00</i>
<i>Other Types of Applications not noted above</i>		<i>\$160.00 per application</i>

Notes and Definitions

1. *The SVCA reserves the right to waive the application fee or reduce the fee on a case by case basis.*
2. *Fees for multiple joint applications made at the same time for the same parcel and for the same development proposal for Official Plan Amendments, Zoning By-law Amendments, Minor Variances and Consents will be discounted as follows:*

First application Additional applications

*Full fee per Application Review Fee above
50% of full Application Review Fee per lot/application*

Note: The first Application Review Fee shall always be the higher of the applicable fees.

3. *That on January 1st of each year, commencing January 1st, 2014, the fees as listed in Schedule 3 (a) "Fee Schedule" shall automatically increase on a percentage basis, rounded up to the nearest dollar increment, in a manner consistent with the Statistics Canada "Consumer Price Index" for the previous calendar year, if the index shows an increase. Such fee increases shall be implemented when the change is at least \$10.00 for a category (if less than \$10.00 then the increase is deferred and added to the subsequent year increase).*

APPENDIX A
Schedule 3(b)
FEE SCHEDULE - Township of Chatsworth
(fees collected directly from the applicant by the Authority)

TECHNICAL CLEARANCE FEES

<i>Technical Clearance</i>	<i>Flat Fee (Also See No.11)</i>
1. <i>Site Plans</i>	<i>\$500.00</i>
2. Scoped Site <i>Environmental Impact Studies for proposed mitigation measures related to any natural heritage features (refer to Appendix A, Schedule 2)</i>	<i>\$500.00</i>
3. Full Site <i>Environmental Impact Studies for proposed mitigation measures related to any natural heritage features (refer to Appendix A, Schedule 2)</i>	<i>\$1,250.00</i>
4. <i>Subwatershed Study/Master Drainage Plan or Tributary Study</i>	<i>\$500.00</i>
5. <i>Stormwater management studies and proposed facilities. This fee includes review of all Phases of SWM plans from preliminary or conceptual to final engineering design (Quality, Quantity and Sediment and Erosion Control)</i>	<i>\$95.00/lot or large block plus surcharge where applicable</i>
6. Scoped Site <i>Impact studies and proposed mitigation measures for any proposal that is potentially impacted by natural hazards (flooding, slope stability, shorelines)</i>	<i>\$500.00</i>
7. Full Site <i>Impact studies and proposed mitigation measures for any proposal that is potentially impacted by natural hazards (flooding, slope stability, shorelines)</i>	<i>\$1,250.00</i>
8. <i>Any combination of two of the above</i>	<i>Sum of the two less \$175.00</i>
9. <i>Any combination of three of the above</i>	<i>Sum of the three less \$350.00</i>
10. <i>Any combination of four or more of the above</i>	<i>Sum of the four or more less \$500.00</i>
11. <i>All technical clearance fees are subject to the Supplementary Fee, where applicable, in addition to the flat fee</i>	<i>See note 5 below</i>

Notes and Definitions:

1. *For the purpose of the fee schedule in Appendix A - Schedule 3(b), **Scoped Site** studies are generally recommended in situations where the nature of the natural feature or hazard is well documented, similar development has been previously proposed, modelled and analyzed, impacts are not expected due to the location or nature of a proposed development, and mitigation options have been developed.*
2. *For the purpose of the fee schedule in Appendix A - Schedule 3(b), **Full Site** studies are generally recommended in situations which are more complex, where information is Jacking, or where the risk or significance of the impact is high.*
3. *It is anticipated that the determination of the type of studies required will be made by the Township, following consultation with the SVCA. The fee for the technical clearance is to be paid by the proponent directly to the SVCA.*
4. *Where a Development, Interference with Wetlands and Alterations to Shorelines and Waterways Regulation permit approval is required in addition to the planning approval, the fee for the SVCA permit may be discounted at the Authority's discretion.*
5. *For the purpose of the fee schedule in Appendix A - Schedule 3(b), the **Supplementary Fee** applies when the SVCA chooses to use specific technical assistance from another source to supplement their review of a technical document, and thereby direct costs are incurred by the Authority. This fee is in addition to the flat rate fee and is to be paid by the proponent directly to the Authority. The Supplementary Fee charged to the proponent is equal to the costs invoiced to the Authority by the other source for that specific review.*

Appendix F: Environmental Impact Study (EIS) Guidelines

Biophysical Description of Site

This section of the EIS will provide a description of the existing natural environment that will be affected or might reasonably be affected, either directly or indirectly, by the proposed development or change in land use. This section will summarize relevant background studies and reports (e.g. sub-watershed, hydrological, geo-technical, etc.), and report the results of any field work conducted during the current study. Study area, survey dates, and field methodology are to be discussed in detail. Proper citations are to be provided for all existing information. All wetland features, functions, issues, and concerns that were identified on the EIS checklist (Appendix A) will be addressed in this section. This section of the report should provide clear descriptions of wetland and upland communities using the Ecological Land Classification System (Lee et al. 1998). These vegetation units are to be superimposed onto an air photo or a base map of a scale not greater than 1:5000. Ideally, a scale of 1:750 would provide the level of detail needed to evaluate a typical grading plan. Water courses and surveyed flood lines should be mapped as well. **Wetland boundaries shall be total-station surveyed in the field by a qualified wetland biologist, field verified by SVCA staff, and mapped on all site plans.**

Description of Proposed Development

This section will provide details about **existing** conditions and **proposed** development on the subject property, and is divided into two subsections for clarity.

Inventory of Existing Conditions

It may be helpful to begin this section by discussing current land uses and land use regulations on and adjacent to the subject property. A general location map and a site map will be mandatory. A detailed plan will be required to illustrate any **existing** structures such as:

- main roads;
- lot lines;
- all building(s) and structures located within the study area;
- laneways;
- sewage disposal system(s);
- well(s) or waterline location;
- surrounding natural heritage features or areas

Proposed Development Conditions

This section will provide details about the proposed development and/or site alteration, and should provide sufficient detail to be able to assess potential impacts associated with various development alternatives and methods. A detailed site plan illustrating wetland boundaries and associated natural features will facilitate review of the application. The **proposed** site plan should provide sufficient detail, which may include but is not necessarily limited to the following:

- new lot lines and fences;
- all building envelope, including the location of any new building(s) or structures;
- sewage disposal system areas, service areas, lighting, and signage;
- driveways and parking lots;
- utility corridors, maintenance routes, public trails, etc.;
- erosion and sedimentation control measures;

- grading limits and post-grading contours;
- extent of proposed vegetation removal/retention;
- surrounding natural heritage features or areas;
- other features as requested through the EIS pre-consultation;
- timing of construction, including any phasing of development;
- development or land use alternatives; and
- all activities associated with the proposal that may have environmental impacts, (e.g. removal of vegetation, grading, filling, draining, and other construction activities)

Assessment of Potential Impacts

This section will address impacts that might reasonably be expected to occur as a result of development, and that are to be avoided whenever possible. Impacts may be **direct** and immediately evident (e.g. wetland filling/drainage, woodlot clearing, vegetation removal) or **indirect** and not immediately apparent at the time of initial development (e.g. downstream sedimentation, reduced base flow, noise disturbance, invasion of exotic or invasive species, loss of biodiversity). The impact assessment will describe negative and/or positive impacts associated with the development proposal, including any impacts identified by concurrent hydrogeological and/or geotechnical studies by addressing:

- the potential for impacts on specific wetland features and/or functions;
- the spatial extent, magnitude, frequency, and duration of wetland impacts (direct and indirect);
- the extent and degree to which lands adjacent to wetlands will be affected; and
- the possibility of cumulative impacts.

Recommendations for Wetland Protection and/or Enhancement

Section 4.13 of the SVCA's Environmental Planning and Regulations Policy Manual clearly states that where the SVCA has jurisdiction under the Conservation Authorities Act, it will protect wetlands from construction and placement of fill using the Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses Regulation.

This section of the EIS will demonstrate how the development proposal complies with this policy. Wetland protection measures should be clearly identified and evaluated with respect to all development alternatives being considered as part of the development proposal. When avoidance is not possible, the proponent must demonstrate compliance with the Regulation. Protection efforts and proposed mitigation measures should not result in significant negative impacts on the wetland in question. This section of the EIS report should thus address the following:

- SVCA's Policy, including
- opportunities for wetland protection and/or enhancement;
- impacts that can and cannot be avoided or mitigated under various development scenarios;
- detailed description of the proposed avoidance, protection, and/or mitigation measures; and
- development setbacks, wetland buffer zones, and other development constraints and environmental protection opportunities (see Appendix D)

Monitoring

This section will identify any monitoring requirements. There are two types of monitoring (OMNR 1999):

1. **Compliance Monitoring** – ensures that the proponent has implemented all mitigation measures identified in the EIS, and that the measures are performing as intended. This monitoring will be undertaken before, during, and after construction.
2. **Effectiveness Monitoring** – determines the adequacy of the protection or mitigation measures identified in the EIS. Such monitoring may be particularly appropriate where there is uncertainty as to the efficacy of established mitigation measures or if new and untested mitigation measures are used.

Monitoring programs may be established as a condition of approval for consents, subdivisions, Environmental Assessments, and aggregate licenses, and will provide SVCA and other planning authorities with an opportunity to review monitoring results before proceeding with subsequent phases of development, in accordance with appropriate conditions of approval. Examples of such conditions could include:

- Adoption of planning and regulatory instruments such as zoning, site plans, and development agreements; and
- Submission of certain infrastructure (e.g. stormwater management facilities) designs in accordance with accepted standards
- Designation of conservation easements on the subject property

Some municipal policies specify 2 years of pre-development monitoring. In some cases, long-term post-development monitoring programs may be required, particularly to address potential impacts on surface or groundwater quality or quantity, which in turn may influence the form and function of wetlands. Remedial steps may be necessary where the results of monitoring indicate that actual impacts are greater than those predicted initially. This section will clearly specify the need for, type, and frequency of environmental monitoring and reporting, and indicate the parties responsible for such an undertaking.

Recommendations and Conclusions

This section of the EIS report will:

- Identify and provide the rationale for the preferred development alternative;
- Summarize any potential impacts to the wetland and/or associated natural heritage features on and off the site;
- Summarize wetland protection and/or enhancement measures to be implemented;
- Indicate the need for a new, amended, or consolidated EIS if significant modifications to the original application are being proposed, or if additional studies are expected to be completed after the original EIS is submitted

Attach all site plans and designs supporting all of the following, if applicable:

- wetland boundary and appropriate buffers and development setbacks;
- storm water management plans;
- erosion and sediment control plans; and
- vegetation planting and management plans for proposed restoration or buffer areas

If an amended EIS is being submitted, indicate any modifications to the original proposal. Such modifications may include:

- a modification to the concept plan or site plan;
- a new development requirement, environmental constraint, or potential impact;
- other wetland protection measures recommended by SVCA and municipal authorities

APPENDIX A
EIS Scoping Checklist

Type of Application: _____
 Proponent or Applicant: _____
 Location: _____
 Comprehensive Plan (if available): _____

Check **first** box if sufficient information is available; Check **second** box if to be addressed by current EIS)

<input type="checkbox"/> <input type="checkbox"/> Natural Heritage Designations and Zoning:					
<input type="checkbox"/> <input type="checkbox"/> Provincially Significant Wetland <input type="checkbox"/> <input type="checkbox"/> Non-provincially Significant Wetland <input type="checkbox"/> <input type="checkbox"/> Unevaluated Wetland <input type="checkbox"/> <input type="checkbox"/> Threatened or Endangered Species Habitat <input type="checkbox"/> <input type="checkbox"/> Significant Woodland <input type="checkbox"/> <input type="checkbox"/> Significant Valleyland	<input type="checkbox"/> <input type="checkbox"/> Significant Wildlife Habitat <input type="checkbox"/> <input type="checkbox"/> Significant Areas of Natural and Scientific Interest (ANSI) <input type="checkbox"/> <input type="checkbox"/> Fish Habitat <input type="checkbox"/> <input type="checkbox"/> Other Designations (e.g. ESA, ESPA, Core Greenlands, etc.)				
<input type="checkbox"/> <input type="checkbox"/> Geology, Hydrology, and Hydrogeology:					
<input type="checkbox"/> <input type="checkbox"/> Subwatershed or Wetland Catchment Boundary <input type="checkbox"/> <input type="checkbox"/> Geomorphology & Topographic Features <input type="checkbox"/> <input type="checkbox"/> Soils (surface and subsurface) Specify timing of any field studies to be done:	<input type="checkbox"/> <input type="checkbox"/> Surface Drainage Pattern, including all permanent and intermittent watercourses <input type="checkbox"/> <input type="checkbox"/> Groundwater Recharge/Discharge Areas <input type="checkbox"/> <input type="checkbox"/> Hydrogeologic Conditions <input type="checkbox"/> Winter, <input type="checkbox"/> Spring, <input type="checkbox"/> Summer, <input type="checkbox"/> Fall				
<input type="checkbox"/> <input type="checkbox"/> Natural Hazard Lands:					
<input type="checkbox"/> <input type="checkbox"/> Surveyed Flood Plain <input type="checkbox"/> <input type="checkbox"/> Valley Lands	<input type="checkbox"/> <input type="checkbox"/> Erosion Hazards <input type="checkbox"/> <input type="checkbox"/> Poorly Drained Soils				
<input type="checkbox"/> <input type="checkbox"/> Biological Inventory:					
<input type="checkbox"/> <input type="checkbox"/> Wetland Evaluation (see OMNR 1993) <input type="checkbox"/> <input type="checkbox"/> Wetland Boundary Delineation (see OMNR 1993) <input type="checkbox"/> <input type="checkbox"/> Ecological Land Classification (see Lee et al. 1998) <input type="checkbox"/> <input type="checkbox"/> Wildlife Inventory (see OMNR 1999)					
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Completed by: _____ (please print) Date Submitted: _____
 Signature: _____

APPENDIX B
EIS Reporting Standards

Please ensure that the following standards are met:

- 3 copies of report, signed by the principal author (s) to be submitted to SVCA; consult with municipality regarding number of copies to be submitted.
- 8½ by 11 paper, double-sided.
- Maps 11 by 17 shall be bound into the report. Larger maps shall be inserted in a pocket inside the back cover of the report.
- A title page listing the name of the proponent, address of the subject property, list the principal author of the report, and his or her firm, and the date the report was completed.
- An executive summary (no longer than one page) following the title page.
- A complete list of dates of site investigation including the names of every person involved in investigations, and their credentials
- Minimum map size to be 8 X 11 inch, maximum 36 X 60 inch (folded to 11 X 17 inch)
- All maps to include a metric scale, north arrow, full legend corresponding to all mapped features
- Surveyed site plan and maps showing ELC community boundaries, surveyed wetland boundary, flood lines, existing and proposed land use, and property boundaries
- use of orthoimage is encouraged
- appendix to include:
 - annotated species checklists
 - a brief CV of author(s)
 - copy of the approved terms of reference and EIS checklist

Submitted documents shall remain the property of the SVCA

APPENDIX C

Data Collection Standards

Guidelines for Data Collection

Where relatively current (3 years old or less) data is available for the site and it meets the SVCA's standards required for collection and analysis, these data may be applied to the current EIS. Such studies may include watershed studies, life science inventories, wetland evaluations, site-specific biological studies completed for a municipality or in support of other development applications. In most cases, a minimum of two site visits at the appropriate time of year will be required to verify and document current/existing conditions. The timing of the site visits is crucial as any data collection must be able to fill information gaps, confirm significant and sensitive features, demarcate ecological boundaries and environmentally sensitive zones, and identify site specific impacts, protection, and management requirements. Where older inventory data or information are available (4 to 10 years or older), it must be updated through the current study. In this case, existing data may be used to supplement current field data, and may provide historical context or benchmark for the current study. The need to supplement existing data through a single or multi-season inventory will be evaluated on a case by case basis depending on the nature of the development and the wetland.

Where site-specific development requiring an approval under the Planning Act, Environmental Assessment Act, Aggregate Resources Act, or Conservation Authorities Act is proposed, and the evaluation of significance of the natural heritage feature or function is not an issue or the feature and functions are to be retained, the requirement for multi-season biological inventory may be waived or reduced in scale. This is often applied for a site plan application where no permanent (e.g. Official Plan or Zoning By-Law amendments) changes are proposed. This guideline may also apply at an area plan level where general boundaries and buffer requirements are identified at large scales (1:10,000 -1:30,000). This may also apply to development proposals where the proposed land use changes are expected to be minimal and will not require significant mitigation or monitoring.

Biological Inventory Protocol

Appendix D of the Significant Wildlife Technical Guide (OMNR, 2000) is the standard reference for conducting field investigations. The field protocols identified in this guide should be used, especially when determining or confirming the presence of species that are considered locally, regionally, provincially, or nationally significant. Target species and inventory times should be identified on the scoping checklist during the pre-consultation phase. The following inventory times are suggested in order to fully account for all wildlife that are most readily observed at specific times of the year.

a) Early Spring (late March/early April)

Target Species – Raptors, owls, salamanders, early frogs (wood frog, spring peeper, chorus frog)

Special time requirements -conduct amphibian surveys at night during snow melt/spring thaw period and immediately after first spring rains; use call-back tape at night to survey owls; look for stick nests during daylight hours

b) Spring (May)

Target Species – Frogs, migratory birds, ephemeral flora

Special time requirements – conduct road-side amphibian surveys on warm evenings

c) Early Summer (June)

Target Species – Breeding birds, flora, forest vegetation communities, fish habitat

Special time requirements - 5:00 to 10:00 a.m. using Breeding Bird Atlas breeding codes; use seine, minnow traps, and electrofishing techniques to sample fish populations

d) Summer (mid-July / early August)

Target Species – Ecological Land Classification field data collection, wildlife habitat, summer flora, wetland species, prairie species, butterflies

Special time requirements – none

e) Fall (September)

Target Species – late season plant species (e.g. asters, goldenrods, gentians), prairie species, migratory birds, butterflies

Special time requirements – track flowering times

Vegetation Community Classification

The overall goal of the provincial **Ecological Land Classification** program (Lee et al. 1998) is to establish a comprehensive and consistent approach for ecosystem inventory, description, and interpretation that will facilitate key conservation, planning, and ecosystem management at various scales. The site-specific goal of an ELC is to identify, describe, classify, and map discrete ecological land units within a defined study area using a consistent and well-defined methodology. Although ELC methodology can be applied at coarse scales (Community Class and Series), a site-specific EIS involving field work will enable classification of natural and cultural areas into discrete Vegetation Types, which is the finest level of resolution. The following technical information should be included in tables in the report body or as appendices:

Required:

1. A fully annotated checklist of vascular plant and animal species, including an indication of their provincial abundance (i.e. Sub-national Rank assigned by the Natural Heritage Information Centre), provincial or national status (i.e. as assigned by OMNR and/or the Committee on the Status of Endangered Wildlife In Canada), and any municipal or regional designations
2. The element rank for each ELC Vegetation Type (following NHIC)
3. An assessment of soil type(s), drainage regime, and moisture regime for each ELC Vegetation Type
4. A summary of tree species, with age and/or size class distribution, including basal area by size class for upland forest and swamps units
5. A summary of disturbance factors, including their intensity and extent for each ELC Vegetation Type

Optional:

6. Calculation of the following floristic quality indicators (Oldham et al. 1996): number of native species, number of non-native species, number of conservative species (conservatism coefficient ≥ 7), mean coefficient of conservatism, mean coefficient of native species, and sum of weediness scores

APPENDIX D
Buffer & Setback Guidelines

Buffers are planned and managed strips of vegetated land located between wetlands and development sites, which are intended to protect the wetland and sustain its identified ecological functions. The ecological and hydrological benefits of buffers include but are not necessarily limited to the following:

1. Erosion and sediment control through passive or active vegetation enhancement
2. Promote infiltration and groundwater recharge/discharge
3. Attenuate and filter surface runoff from adjacent agricultural or urban lands
4. Maintain nutrient balance and water quality within wetlands
5. Maintain and protect wildlife habitat within and adjacent to wetlands
6. Control the spread of exotic and/or invasive plants into wetlands
7. Mitigate impacts of wind, noise, and artificial light
8. Reduce or prevent encroachment by humans and pets
9. Provide passive recreational opportunities and increased quality of life

Setback refers to the physical separation (measured in metres) between the wetland and the proposed development site. Impacts generally expected of development can often be avoided or mitigated if a very broad area of land is maintained in a naturally vegetated state or as green space. The width of the development setback is determined in general terms in planning guidelines, subwatershed studies and comprehensive Environmental Impact Studies.

In some areas proposed for development, the setback distance may be the entire width of the proposed buffer. In other areas and depending on the results of detailed investigations, planning studies and site-specific environmental impact studies, buffers and development setbacks can be narrower or wider depending upon a number of factors, including the type and scope of development. Buffer and setback widths will be dependent upon a number of factors, including:

1. The ecological status of the wetland, and its sensitivity to disturbance
2. The surrounding topography, soils, and hydrology
3. The existing and proposed land uses surrounding the wetland

Because of site-specific differences, a one-size-fits-all buffer width is not recommended. The scientific literature (Woodward and Rock 1995, Castelle et al. 1994) dealing with buffer functions consistently recommends a minimum buffer width of 15-30 metres on slopes less than 12 percent with good ground cover to protect wetlands under most circumstances. A 15 metre buffer would be effective for sediment and nutrient removal, except where steep slopes are present. Buffers in excess of 30 metres may also be warranted to protect environmentally sensitive bogs and fens or wetlands harbouring locally, regionally, or provincially significant species. Based on current knowledge, the literature increasingly indicates that larger buffer requirements tend to be associated with the habitat requirements of wildlife, especially those species inhabiting marshes (Environment Canada 2004). Therefore, minimum buffer widths based on water quality parameters alone are unlikely to be sufficient for wildlife protection.

The concept of a **Critical Function Zone (CFZ)** has been recently introduced by Environment Canada (2004) to describe non-wetland areas containing biophysical functions or attributes related to wetlands. For example, these

zones could encompass adjacent upland nesting habitat for waterfowl or groundwater recharge areas critical for the wetland of concern. The CFZ is essentially a function extension of the wetland into the adjacent upland area. Once identified, even the CFZ needs to be protected from adjacent land uses by a **Protection Zone (PZ)**. These two layers together constitute the wetland *buffer zone*. This protection may range in scope from a naturalized area, which would intercept stormwater discharge to fencing, which would prevent encroachment into ecologically sensitive areas. The combined CFZ and its Protection Zone may range from a few metres to hundreds of metres in width. However, the PZ can be integrated into urban designs, offering opportunities that would enable better integration of public trails and urban infrastructure (e.g. stormwater management facilities).

Once a wetland boundary has been identified and a suitable buffer width established, the *buffer zone* should be measured outward from the edge of the wetland. Some land uses or activities may be permitted in the buffer areas. The identification of permitted land uses within prescribed buffer zones is one of the on-going challenges of land-use planning. For instance, although some buffer functions could be enhanced by a storm water management facility designed for water quality and quantity control, the location of such facilities entirely within the buffer zone should be discouraged because discharge from these facilities is often directed toward wetlands and associated watercourses. The need for outlet structures, cooling trenches, and spreader berms also requires grading, an activity that should not take place within a natural buffer zone. Storm water management facilities also tend to accumulate toxins that are harmful to wetland dependent wildlife. Though sometimes designed to function like a wetland, these facilities do not provide suitable habitat for wildlife, and as such should remain physically separated as much as possible from natural wetlands.

Appendix G: Erosion Control Guidelines

August 25, 2016

Saugeen Valley Conservation Authority

Slope Stability Assessment Guidelines

Prepared by: B. Singh, M.A.Sc., P. Eng., Principal
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11 Indell Lane
Brampton, Ontario
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1.0 INTRODUCTION

The Ministry of Natural Resources defines natural hazards as “natural, physical environmental process that occurs near or at the surface of the earth (that) can produce unexpected events of unusual magnitude or severity”.

One of the natural hazards as identified in MNR is the Erosion Hazard. The erosion hazard refers to the loss of land due to human or natural processes that poses a threat to life and/or property. The erosion hazard for a development is established for the long-term planning horizon, typically a one hundred year time span. The determination of Erosion Hazard Limit is required for developments both near the stream valley corridors and shorelines of Great Lakes.

The natural valley systems in a stream corridor environment can either be a Defined Valley System or an Undefined Valley System. In a defined valley system the watercourse flows through a valley system confined by valley walls while in case of an undefined valley system the landscape is relatively flat, and the river or stream is not confined or bounded by any discernable valley walls.

The Erosion Hazard Limit associated with a slope in a defined or confined stream corridor environment is generally established based on the Toe Erosion Allowance, Stable Slope Allowance and Erosion Access Allowance. The toe erosion allowance is determined by using the 100-year erosion rate (the average annual rate of recession extended over the development planning horizon – typically a hundred year time span) or default a value included in the Table 3 of Technical Guide MNR, River & Stream Systems: Erosion Hazard Limit. The stable slope allowance is a setback related to potential slope stability issues of the valley walls (slope) through which a river or stream flows (typically a 3 horizontal to 1 vertical setback is applied – in absence of a site specific study). The erosion access allowance is provided at the top of the slope (tableland) in consideration of potential access required to the slope during emergencies or for maintenance. The erosion hazard limit for an unconfined valley system is determined based on flooding hazard limit OR meander belt allowance (20 times the bankfull channel width centred over the meander belt axis) OR as determined by a valid study, plus the erosion access allowance.

The Erosion Hazard Limit for shoreline slopes is typically determined based on Stable Slope Allowance (as described above) and 100 year recession OR Erosion Allowance where there is no reliable recession information (the province suggests a default setback distance to allow for 30 metre erosion allowance along the Great Lakes).

New developments are generally directed to be outside of the Erosion Hazard Limit to avoid natural risks associated with the slope instability and erosion hazards. A site-specific slope stability assessment and an erosion study (geomorphic or coastal, as applicable) may result in a lesser hazard limit than the one calculated based on the generalized and default setbacks.

The MNR policy guidelines for stable slopes typically apply to slopes over 2 meters in height and an inclination steeper than 3 horizontal. to 1 vertical.

2.0 TYPICAL SLOPE FEATURES AND TERMINOLOGY

Slopes occur in many environments such as pits and quarries, shoreline bluffs, and river valleys. A slope in geological terms represents an inclined landform with an elevation relief along its profile. The slopes are natural and manmade:

Natural Slopes:

Slopes formed by geological events (i.e., weathering, erosion, depositions)

Man-made Slopes:

Artificial slopes constructed by humans; typically by cutting or filling (example, earth dams, earth berms, excavation slopes)

A typical slope consists of a slope toe (the point of lowest elevation along the slope profile), slope crest (the point of highest elevation along the slope profile) and the inclined surface with elevation relief along the profile. The landforms beyond the slope crest and the slope toe of a well-defined slope are relatively flat and are known as tableland and floodplain (if a slope is associated with a watercourse valley system), respectively.

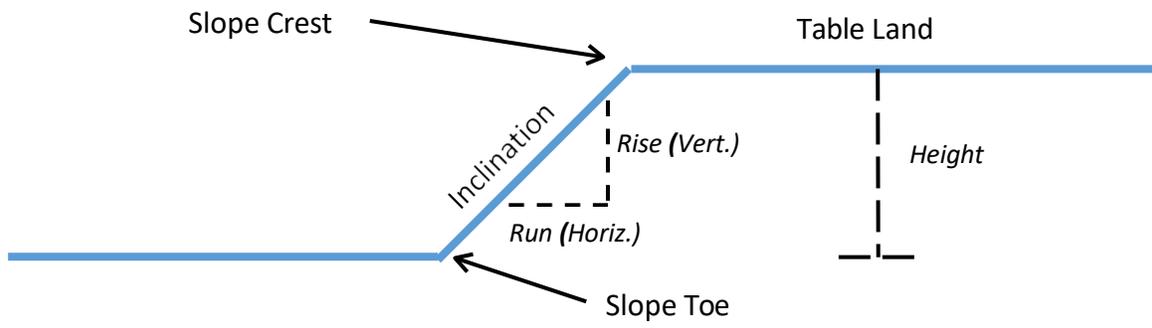


Figure 1: Slope terminology

3.0 SLOPE INSTABILITY – RISKS AND IMPLICATIONS

Slope instability (commonly referred to as a 'slope failure of slope slide') can result in a sudden movement or sliding of a large mass of soil over a failure plane (also called slip plane) resulting in ground loss, that could affect structures or natural features at the top or bottom of the slope. Slope movements tend to occur rapidly, when compared to erosion processes. The slope movement often leaves a 'scarp' at the top of the slope movement area and a slumped ground below.

The slope movement could lead to loss of ground support and damage to property, buildings, roads, buried utilities, or to siltation or blockage of rivers (creeks or channels) and local flooding, damage to human life & livestock. Slope instability implications could be significant and may have legal implications and liabilities for review and enforcement authorities. Despite increased understanding and advancement in prediction and mitigation, worldwide slope failures are increasing, likely due to increased urbanization and development in slide prone areas, continued deforestation, and increased precipitation through climate change.

In view of the safety and potential liability issues associated with slope movements, it is important that there be awareness and recognition of slope stability principles. This is reflected by requirements for geotechnical engineering reports on slope stability in various government regulations including the Aggregate Resources and Petroleum Act, the National Building Code (building departments), and by policies of local conservation authorities and municipal planning authorities.

Through prolonged natural weathering, most slopes tend to achieve a stable inclination and vegetation cover. Changes or disturbances to the slope conditions can result in slope slides when a slope is attempting to achieve a more stable and flatter inclination. The instability is primarily driven by gravity, hence, the slope inclination or the steepness, has the greatest effect on its stability. Steep slopes are most susceptible or vulnerable to failure, even if there are relatively minor changes in other variables (loading, undercutting, wet weather). Flatter slopes tend to be affected less by changes in these other variables.

The stability of a slope depends on slope height and inclination, slope soil types, soil strengths, and ground water conditions. Decrease in soil strength caused by increase in ground water level, weathering, shocks and vibrations can also have a potential to trigger instability. The potential instability of a slope for the long-term planning horizon can be determined by a professional engineer based on visual inspection, and a limited or a detailed investigation - as deemed appropriate based on site specific considerations. Factors of safety of 1.5 for normal ground water level (long-term condition) and 1.3 for elevated ground water level (temporary condition) are typically required to establish stable slope inclination.

Slope movement or instability can occur in many ways¹, such as rotational, flow, block and wedge, transitional, spread³⁴ (refer to Figure 2), but is generally the result of:

- changes in slope configuration, such as height, steepness or inclination,

³⁴ Geotechnical Principles for Stable Slopes

- increases in loading on a slope, such as structures or filling near the crest,
- changes in drainage of the soil which create higher water levels or water pressures, such as heavy rainfall, blocked drainage, broken watermains etc.
- loss of vegetation, and
- seismic events.

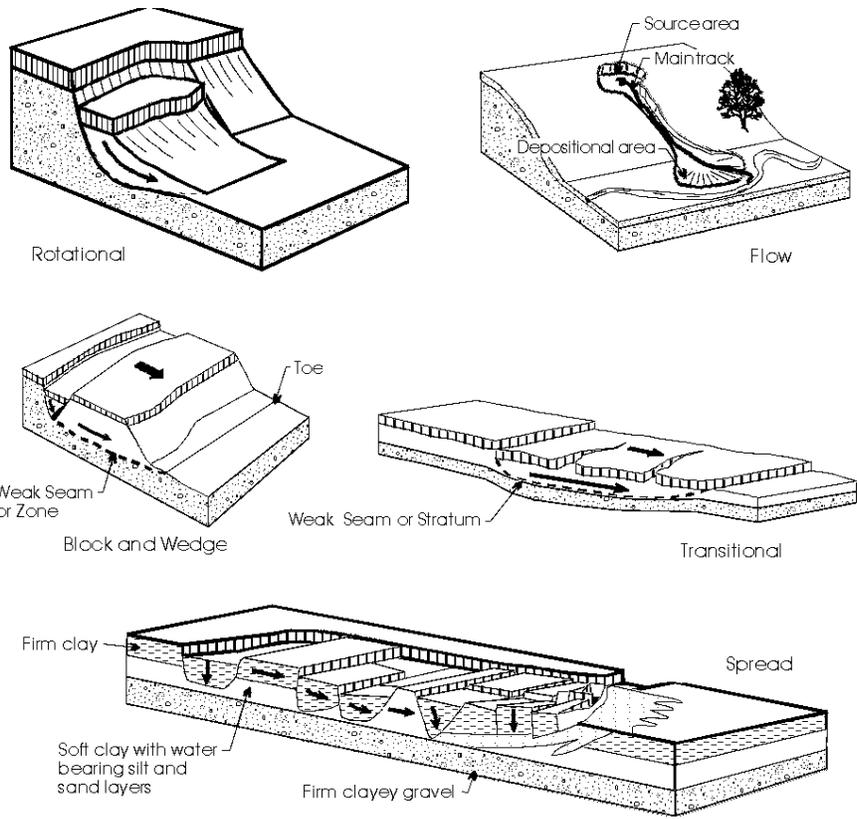


Figure 2 Typical slope movements

The presence of vegetation cover on a slope surface is critical and a primary defence against surficial soil erosion. By reducing the surface erosion, the likelihood of shallow slope instability is also decreased. The vegetation cover provides the long term protection against surface erosion and shallow translational slope slides by³⁵:

- holding, binding, or reinforcing the soil with a root system,
- removing water from the soil by uptake and transpiration,

³⁵ Geotechnical Principles for Stable Slopes

- reducing run-off flow velocity,
- reducing frost penetration,
- buttressing or reinforcing action of large tree roots.

Urbanization and land development activities, fill placement near slope crests and excavations into slopes (or retaining walls) may alter the stability of shorelines, valleys, and sloping ground. Filling is a common practice in most urban areas to reclaim more usable flat tableland along existing slope crest. This fill placement often occurs in an uncontrolled manner (sometimes over an extended period of time) and may result in an unstable fill mass which eventually may experience movement, particularly related to heavy precipitation and high groundwater events. Slides within fill materials (placed in an uncontrolled manner without engineering design and supervision) can be unpredictable and extensive. The resulting instability may occur through the fill materials only or through both fill and the underlying native soil (depending upon the native soil strength characteristics). However filling on slopes if approved by applicable authorities, can be carried out in a safe and stable manner with suitable design, control, precautions and construction under the supervision of a qualified geotechnical engineer.

3.1 Typical Signs of Slope Instability

Sometimes there may be precursor(s) preceding a slope failure. The following information includes some of the typical slope instability signs. These signs may indicate that a slope slide is possible however the timing of the actual slide is often very difficult to predict. Experience indicates that a slide is relatively more likely to take place during or after heavy precipitation event. There may be other, or no evidence of slope instability at all, prior to a slope slide depending upon the site specific conditions³⁶.

Bare slope areas (no vegetation)

Lack or loss of vegetation is a typical sign of over-steepened slope. Vegetation establishment is relatively difficult on steep slopes (generally steeper than 2 horizontal to 1 vertical). A recent formation of bare area or loss of vegetation on a slope may indicate a slump, soil erosion or formation of an over-steepening zone.



Property Owners; Ausable Bayfiled

³⁶ Shoreline Slope Stability Risks and Hazards – Fact Sheet for Conservation Authority

Bent Tree Trunks

Bent and bowed trees may be due to slope soil creep, however, it may also be due to initial root development and twisting or bowing growth in response to reaching for sunlight.



Tension Cracks

A tension crack formation close to the top of slope may indicate a pending slope failure. A tension crack is a void that generally runs parallel to the slope face. It can significantly affect the future stability of the slope because a crack filled with water reduces the stability due to the hydrostatic pressure. The ice formation within the crack during sub-zero temperature expands and loosens the slope soil in the vicinity, increasing risk of future slope movement.



Irregular Slope Surfaces, Slumps, Scarps, Bumps, Bulges

A presence of irregular slope surfaces such as slumps, scarps, bumps, bulges, etc. generally indicate a soil movement. Slumps and scarps result in an over-steepened (even near vertical) and bare zone at the 'head' or 'crown' where the sliding mass has separated from the slope. A slump or slide may also result in tension cracks above the slide.



Other Indicators

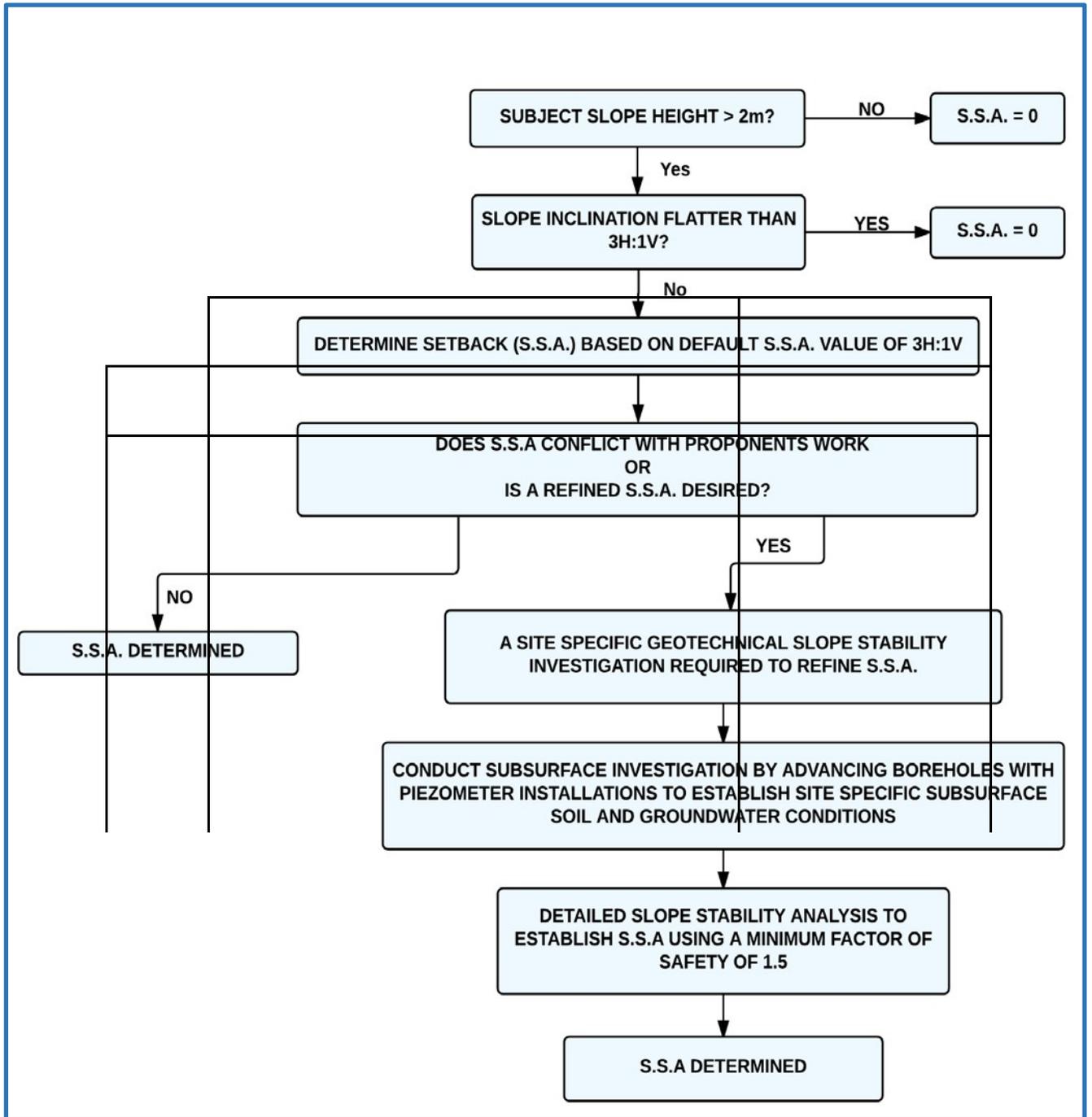
Some other slope instability indicators may include displaced posts/fences, poles, monuments, guardrails, broken/displaced retaining walls, and stairs.



3.2 Stable Slope Allowance

A stable slope allowance (setback) is applicable for slopes with a potential instability risk(s) over the planning horizon. The stable slope allowance is a setback that is applied to address and account for potential slope instability risk to the development over the planning horizon. A stable slope allowance of 3 horizontal to 1 vertical is applied in absence of a site specific study. A site-specific slope stability assessment may however result in a steeper stable slope inclination (lesser setback) than the one calculated based on the default setback value (3 horizontal to 1 vertical).

A generalized procedure to determine the Stable Slope Allowance (S.S.A.), a component of the total erosion hazard zone, is illustrated in the following flow chart:



4.0 EROSION

The erosion process affects the soil at the particle level, by dislodging and removing (transporting) the soil particles from the parent mass (with water movement as the agent). Other processes such as wind and frost may assist in the weathering or dislodging and transport of soil particles. Erosion, in context of slopes, is generally a process of gradual washing away of soil by water movement or seepage. Erosion generally occurs in one of the following manners³⁷:

- rainfall or snowmelt and surface run-off (sheet or rill or gully erosion),
- internal seepage (springs) and piping,
- water flow (banks or base of river, creek, channel),
- wave action (shorelines of ponds, lakes, bays).

Slope instability and erosion are two, often associated but completely different processes which may or may not occur together. Erosion is the loss of soil at the ground surface, while slope failures consist of a large mass of soil sliding along a planar surface. One very common event is the 'toe erosion' that can trigger slope instability, due to steepening or undercutting of the slope.

Water action and erosion (by flowing water or waves) are integral to slope instability. Slope slides may be caused by undercutting or steepening of the slope toe (removing support for the slope). Water seepage or groundwater levels can also affect slope stability since they affect the slope properties.

The erosion features may consist of (including but not limited to) the following:

- Rills and Gully Erosion,
- Piping Erosion,
- Streambank Erosion,
- Shoreline Bluff / Wave Erosion

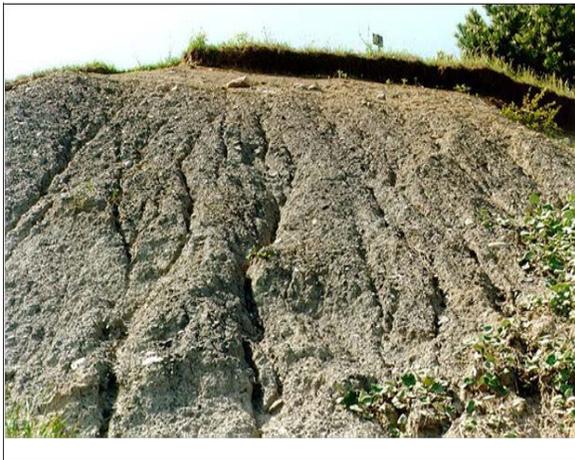
Rills and Gully Erosion

Gully development is common on high bluff shorelines along the Great Lakes, and along river valleys where surface drainage may become concentrated. The process begins with the accumulation or concentration of surface run-off in narrow surficial channels (rills), which then experience progressive erosion and the

³⁷ Geotechnical Principles for Stable Slopes

formation of larger channels or gullies. The gully erosion process is attributed to downcutting of the gully base by swiftly flowing water and slumping or failure of the gully banks (causes the gully to become wider). The typical gully erosion process is summarized as follows;

- sufficient run-off drainage to disrupt natural vegetation cover,
- establishment of a drainage channel and start of downcutting,
- channel banks steepen by continuing base erosion, until slope failure
- gully widens with slope slides, and debris interrupts downcutting,
- cycle of downcutting and slumping is repeated after debris is washed away and downcutting resumes,
- gully can mature once stable gradient is achieved by drainage flows.



Rill Erosion

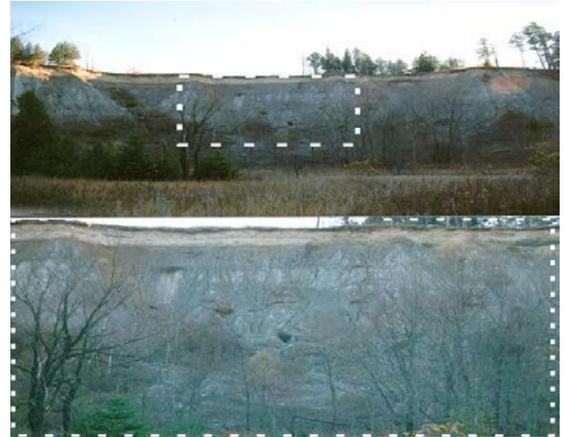


Gully Erosion

Erosion of the gully base followed by slumping of the side-slopes, results in the gully slope crest receding and the loss of table land. The erodibility (erosion) is influenced predominantly by the nature of the soil, and by the slope gradient (steepness). Strongly bonded 'cohesive' soils (clays, clayey silts, tills) are generally less erodible than 'cohesionless' soils (sands, silts).

Piping Erosion

'Piping' on a slope face can be related to 'springs' or seepage, where soil erosion occurs in water bearing sands on slopes. As water drains from a sand layer on the slope face, the flow sometimes dislodges and transports (erodes) the sand particles away from the parent soil mass, leaving voids termed 'pipes'. The most susceptible location for piping to occur is near the bottom of a sand layer where the underlying soil is much less permeable than the sand (silt, clay, till, rock).



Streambank Erosion

Streambank erosion is caused by flowing water in rivers, creeks, and streams resulting in surface erosion of the bank or channel. The toe erosion results in steepening (undercutting) of the lower portion of the slope thus making the slope unstable. The lower over-steepened portion slumps to attain a relatively stable configuration but in turn makes the upper (unslumped) portion of the slope steep and unstable resulting in progressive slumping. The streambank erosion is usually due to increased flow velocities from climatic events such as heavy rains or snowmelt. Locations which are particularly susceptible to river bank erosion, are where the river abuts the slope and changes flow direction such as the outside of 'meanders' or bends in the river alignment.

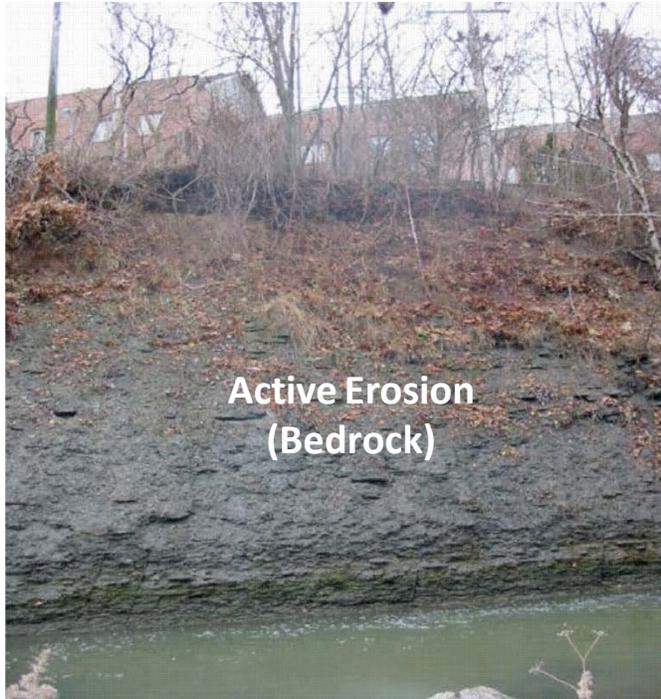
The streambank erosion primarily consists of the following³⁸:

Active Erosion: Bank material exposed directly to stream flow under normal or flood flow conditions where undercutting, over-steepening, slumping of a bank or downstream sediment loading is occurring.

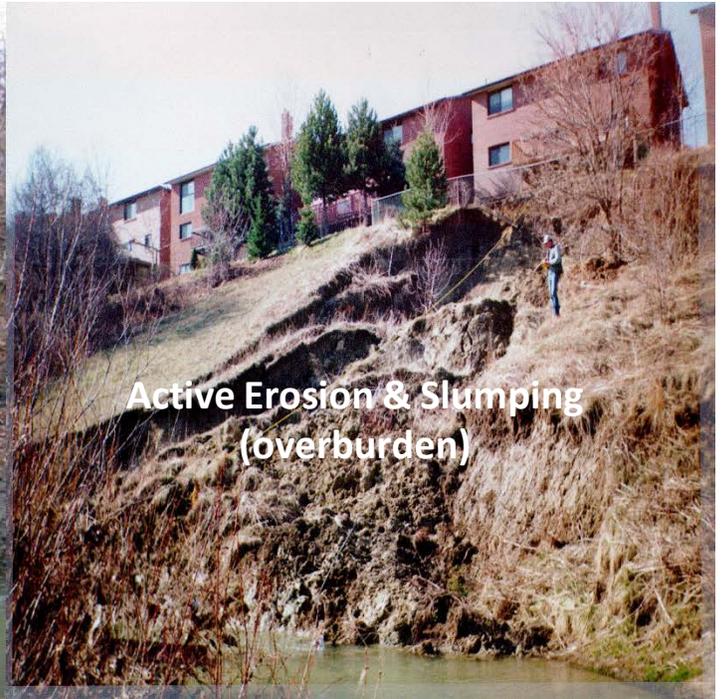
No evidence of Active Erosion: An area may have erosion, but there may not be evidence of 'active erosion', either as a result of well rooted vegetation or as a result of a condition of net sediment deposition. The area may still experience erosion at some point in the future as a result of shifting of the channel.

The most important initial step in stabilization of river erosion is to ensure that the slope toe is suitably protected from the water flow velocity, prior to undertaking slope stabilization works.

³⁸ Technical Guide – River and Stream Systems: Erosion Hazard Limit; Ontario, Ministry of Natural Resources



**Active Erosion
(Bedrock)**



**Active Erosion & Slumping
(overburden)**



No Active Erosion

Shoreline Bluff / Wave Erosion

Wave action at the slope toe of Shoreline bluffs undercuts the slope toe resulting in cycles of erosion and slope instability. The slumping leads to crest recession (loss of table land). Toe erosion may start when lake levels rise and cover previous beach areas along the bluff toe. This allows wave action to undercut and locally over-steepen the slope toe. Similar to gully and river erosion, this toe undercutting initially triggers the loss of vegetation cover near the slope toe, which progressively spreads up the slope face. The lower



over-steepened slope portion slumps to attain a comparatively stable configuration but in turn over-steepens the portion above the slump. This upper over-steepened portion then slumps resulting in a progressive slumping approaching the slope crest and hence the loss of tableland.

The most important initial step in stabilization of bluff erosion is to ensure that the slope toe is protected from wave action (where possible), prior to undertaking slope works. Any shore protection works should consider possible effects on the littoral system and sediment transport.

4.1 Toe Erosion Allowance River Slope

The toe erosion allowance (setback) for a river slope ensures safety if the toe of the slope adjacent to the river or stream erodes and weakens the bank, increasing the risk of slumping. The setback is determined by one of the four following methods:

- Average annual recession rate (25 years of data extended over a 100-year horizon)
- 15 metre toe erosion allowance where the distance between the watercourse and the base of the valley wall is 15 meters or less
- Toe erosion allowance based on soil types and hydraulic processes where the watercourse is 15 meters or less from the base of the valley wall
(Table 3 of Technical Guide MNR, River & Stream Systems: Erosion Hazard Limit, see below)
- Study using accepted geotechnical & engineering principles on a minimum of 25 years of record or data

Table 3: Determination of Toe Erosion Allowance

MINIMUM TOE EROSION ALLOWANCE - River Within 15 m of Slope Toe*

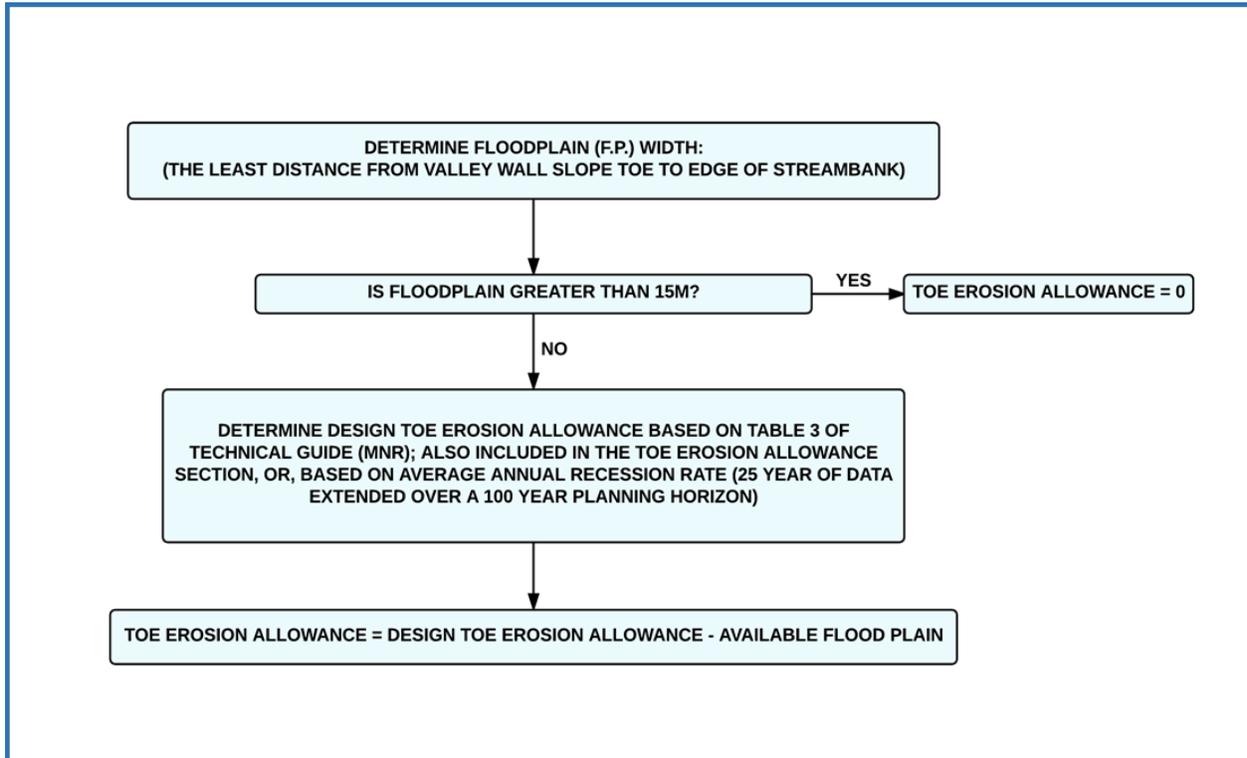
Type of Material Native Soil Structure	Evidence of Active Erosion** OR Bankfull Flow Velocity > Competent Flow Velocity*** RANGE OF SUGGESTED TOE EROSION ALLOWANCES	No evidence of Active Erosion** OR Bankfull Flow Velocity <Competent Flow Velocity***		
		Bankfull Width		
		< 5m	5-30m	> 30m
1.Hard Rock (granite) *	0 - 2 m	0 m	0 m	1 m
2.Soft Rock (shale, limestone) Cobbles, Boulders *	2 - 5 m	0 m	1 m	2 m
3.Stiff/Hard Cohesive Soil (clays, clay silt), Coarse Granular (gravels) Tills *	5 - 8 m	1 m	2 m	4 m
4.Soft/Firm Cohesive Soil, loose granular, (sand, silt) Fill *	8 - 15 m	1-2 m	5 m	7 m

*Where a combination of different native soil structures occurs, the greater or largest range of applicable toe erosion allowances for the materials found at the site should be applied

****Active Erosion** is defined as: bank material is exposed directly to stream flow under normal or flood flow conditions where undercutting, oversteepening, slumping of a bank or down stream sediment loading is occurring. An area may have erosion but there may not be evidence of 'active erosion' either as a result of well rooted vegetation or as a result of a condition of net sediment deposition. The area may still suffer erosion at some point in the future as a result of shifting of the channel. The toe erosion allowances presented in the right half of Table 3 are suggested for sites with this condition. See Step 3.

*****Competent Flow Velocity** is the flow velocity that the bed material in the stream can support without resulting in erosion or scour. For *bankfull width* and *bankfull flow velocity*, see Section 3.1.2.

A generalized procedure to determine the Toe Erosion Allowance in a stream corridor environment, a component of the total erosion hazard zone, is illustrated in the following flow chart:



Shoreline/Bluff Slope

Erosion setback for shoreline/Bluff slopes is determined based on Average Annual Recession rate. The average annual recession rate is an average rate of erosion of the shoreline per year for a site where there is at least 35 years of reliable recession information is available.

Where there is no reliable recession information, the province suggests a setback distance to allow for 30 metre Erosion Allowance along the Great Lakes.

4.2 Erosion Access Allowance

Erosion Access Allowance³⁹ is the setback required to ensure that there is an adequate safety zone for people and vehicles to enter and exit an area during an emergency, such as a slope failure or flooding. This is one of the components used to determine the landward limit of the erosion hazard and is applied for both confined and unconfined systems.

³⁹ Understanding Natural Hazards - Great Lakes – St. Lawrence River System and large inland lakes, river and stream systems hazardous sites.

The erosion access allowance is provided to facilitate:

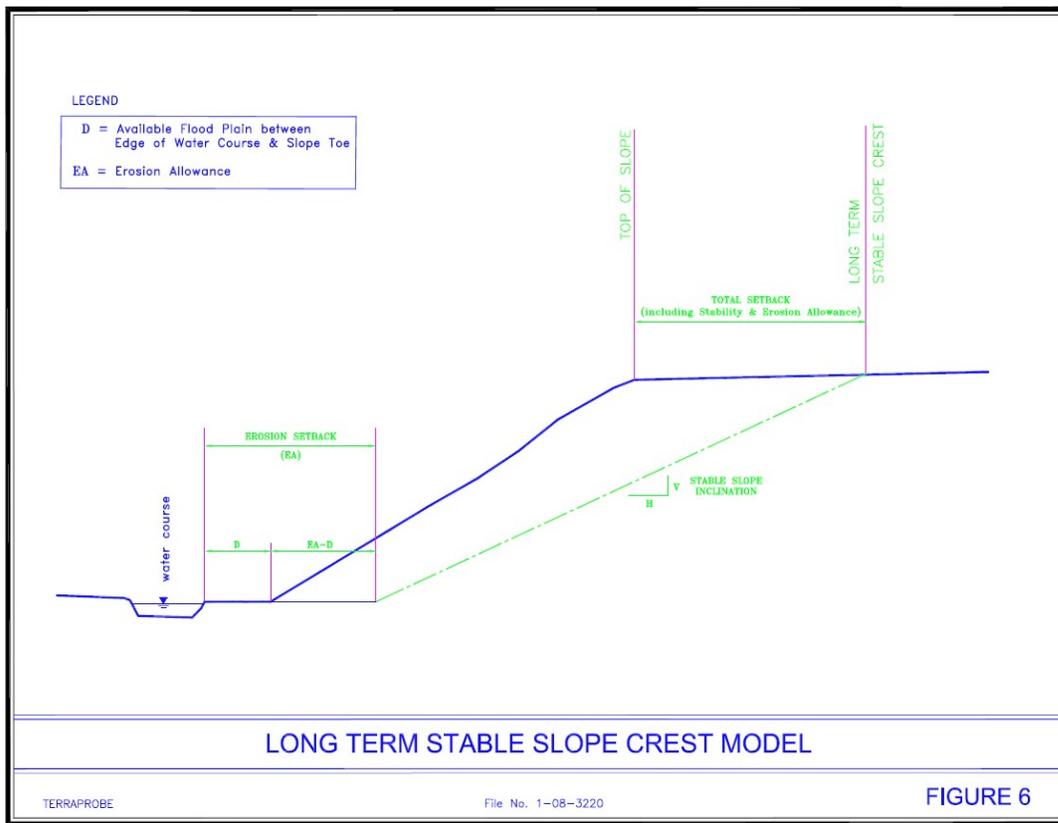
- access during emergencies,
- regular maintenance and construction access to repair failed structures, and
- protection from external events that affect an erosion prone area.

The suggested minimum erosion access allowance for river and stream systems is 6 metres⁴⁰ but allows for planning boards or municipalities to have flexibility. The erosion access allowance also helps connect green space, bicycle paths, natural habitat, and acts as a buffer. The 6 m allowance was originally designed to allow two-way traffic of large vehicles.

5.0 LONG-TERM STABLE SLOPE CREST

The long-term Stable Slope Crest (LTSSC) is the location on the tableland which is determined based on both the Stable Slope Allowance and Toe Erosion Allowance (as applicable). This location represents the worst case scenario of the physical top of slope/slope crest recession over the long-term planning horizon (100 year). A Long-term Stable Slope Crest model illustrating the methodology to determine LTSSC position is presented below:

⁴⁰ An Introductory Guide for Public Health and Safety Policies 3.1, Provincial Policy Statement



Note: LTSSC does not include Erosion Access Allowance

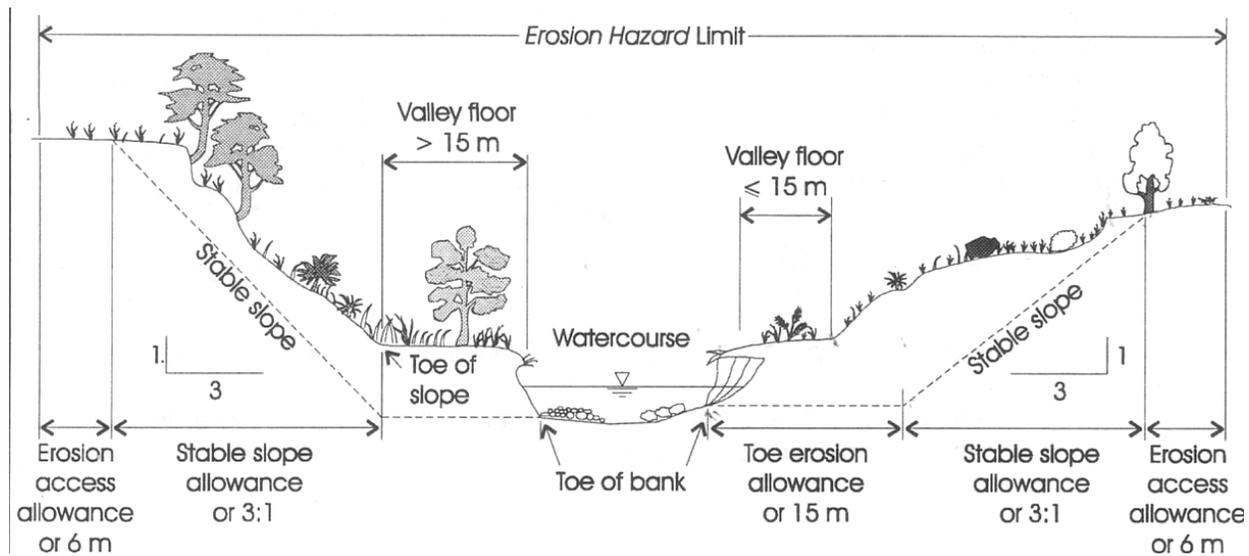
LTSSC = Toe Erosion Setback + Stability Setback

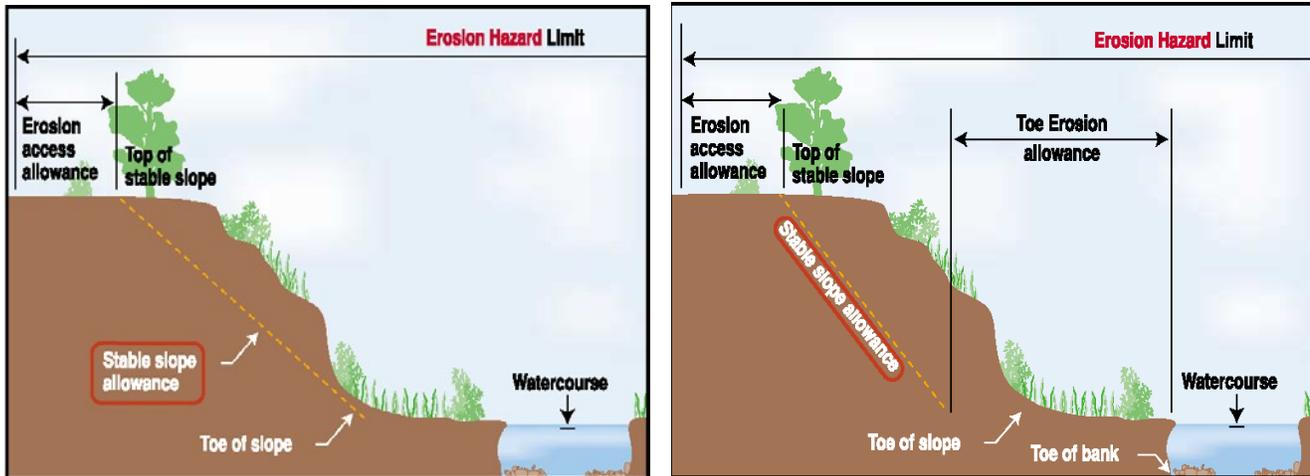
(No Toe Erosion Setback if watercourse is 15m or more away from the slope toe)

6.0 EROSION HAZARD LIMIT

The erosion hazard limit for a **confined valley system** is the limit that estimates the expected extent of erosion/slope crest loss (due to both toe erosion and slope instability) over the planning horizon of 100 year, plus the erosion access allowance.

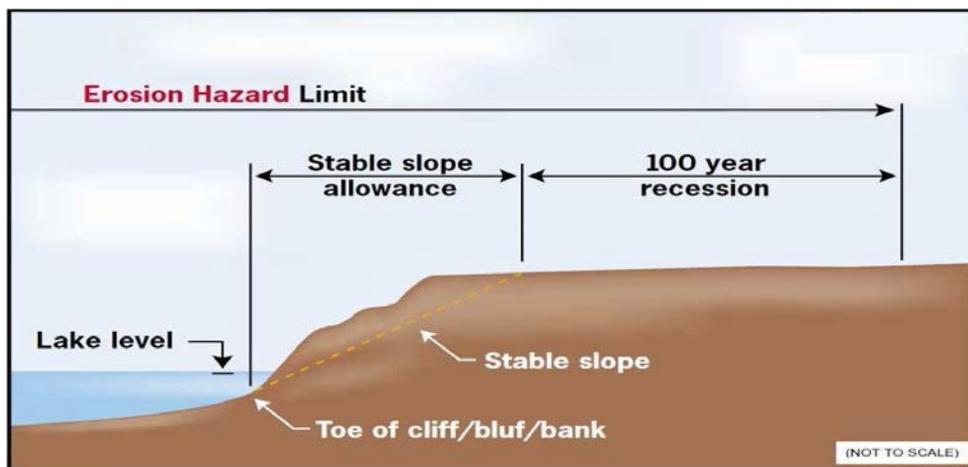
The Erosion Hazard Limit = Toe Erosion Allowance + Stable Slope Allowance + Erosion Access Allowance





a) Stable toe (floodplain \geq design toe erosion allowance) b) unstable toe, floodplain $<$ design toe erosion allowance

The erosion hazard limit for **shoreline/bluff** slope is determined based on the stable slope allowance and average annual recession (the average annual recession rate is an average rate of erosion of the shoreline per year for a site where there is at least 35 years of reliable recession information is available) extended over 100 year time span. Alternatively, if reliable average annual recession information is not available, the province suggests a setback distance to allow for 30 metre erosion allowance along the Great Lakes⁴¹.



The erosion hazard limit for an **unconfined valley system** is determined based on flooding hazard limit OR meander belt allowance (20 times the bankfull channel width centred over the meander belt axis) OR as determined by a valid study, plus the erosion access allowance.

⁴¹ Understanding Natural Hazards - Great Lakes – St. Lawrence River System and large inland lakes, river and stream systems hazardous sites.

7.0 GEOTECHNICAL REPORT – TERMS OF REFERENCE

The following terms of reference should be followed in the geotechnical slope stability and streambank erosion assessment:

- Determine subsurface conditions & groundwater condition to a depth equal to at least the height of the slope/ravine.
- Evaluate the pertinent soil strength parameters and slope geometry
Assess the stability of the slope
- Provide relevant cross-sections and Factor of Safety
- Assess toe erosion allowance
- Determine the location of the Long-Term Stable Slope Crest (LTSSC) line and plot it on the topographical site plan
- Provide a geotechnical engineering analysis for retaining structures, if applicable
- Provide retaining wall design details, if applicable including depth of embedment, buttressing gradient, tie-backing, drainage and fines migration protection.

A geotechnical report should include:

- Site and project description
- Field procedure
- Subsurface conditions
- Discussion and recommendations
- Visual slope inspection results

- Slope stability analysis
- Toe erosion allowance, Development setback/erosion access allowance
- Summary

Appendix

Borehole logs

Laboratory test results

Site location plan

Aerial photograph

Topographic plan with long-term stable slope crest location

Existing slope cross-sections

Long-term stable slope crest sections

Slope stability analysis results

Photographs

Appendix H: Violations: SVCA Policy & Procedures

SVCA Powers of Entry are outlined below:

Powers of entry

s. 28 (20) an authority or an officer appointed under a regulation made under clause (1) (d) or (e) may enter private property, other than a dwelling or building, without the consent of the owner or occupier and without a warrant, if,

- a. the entry is for the purpose of considering a request related to the property for permission that is required by a regulation made under clause (1) (b) or (c); or*
- b. the entry is for the purpose of enforcing a regulation made under clause (1) (a), (b) or (c) and the authority or officer has reasonable grounds to believe that a contravention of the regulation is causing or is likely to cause significant environmental damage and that the entry is required to prevent or reduce the damage.*

(21) Subject to subsection (22), the power to enter property under subsection (20) may be exercised at any reasonable time

(22) The power to enter property under subsection (20) shall not be exercised unless,

- a. the authority or officer has given reasonable notice of the entry to the owner of the property and, if the occupier of the property is not the owner, to the occupier of the property; or*
- a. the authority or officer has reasonable grounds to believe that significant environmental damage is likely to be caused during the time that would be required to give notice under clause (a).*

(23) Subsection (20) does not authorize the use of force.

(24) Any person who prevents or obstructs an authority or officer from entering property under subsection (20) is guilty of an offence and on conviction is liable to a fine of not more than \$10,000.

Restriction on entry

s. 30.1(1) An authority or an officer appointed under a regulation made under clause 28 (1) (d) or (e) shall not enter land without,

- a. the consent of the owner of the land, and if the occupier of the land is not the owner, the consent of the occupier of the land; or*
- b. the authority of a warrant under the Provincial Offences Act.*

Exceptions

s. 30.1(2) Subsection (1) does not apply to entry under clause 21 (1) (b) or subsection 28 (20). 1998, c. 18, Sched. I, s. 14.

Appendix I: Conservation Authorities Act

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

ONTARIO REGULATION 169/06

SAUGEEN VALLEY 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: O. Reg. 79/13.

This Regulation is made in English only.

Definition

1. In this Regulation,

“Authority” means the Saugeen Valley Conservation Authority. O. Reg. 169/06, 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 an allowance of 15 metres for wave uprush and other water-related hazards,
- (ii) 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,
- (iii) where a dynamic beach is associated with the waterfront lands, an allowance of 30 metres inland to accommodate dynamic beach movement, or for the applicable area the appropriate allowance inland shown in the most recent document entitled “Assessment of Flood and Dynamic Beach Hazards Pilot Study, Town of Southampton” available at the head office of the Authority, and
- (iv) an allowance of 15 metres inland, except where there is a dynamic beach;

(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, plus 15 metres, to a similar point on the opposite side, and

- (B) the distance from the predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood event standard, plus 15 metres, 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 within 120 metres of all provincially significant wetlands and within 30 metres of all other wetlands. O. Reg. 169/06, s. 2 (1); O. Reg. 79/13, s. 1 (1, 2).

(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. 79/13, s. 1 (3).

(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. 79/13, s. 1 (3).

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. 169/06, s. 3 (1).

(2) The permission of the Authority shall be given in writing, with or without conditions. O. Reg. 169/06, 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. 79/13, 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. 79/13, 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. 169/06, s. 4; O. Reg. 79/13, 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. 169/06, 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. 169/06, s. 6 (1); O. Reg. 79/13, s. 4 (1).

(2) The permission of the Authority shall be given in writing, with or without conditions. O. Reg. 169/06, 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. 79/13, 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. 79/13, 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. 169/06, s. 7; O. Reg. 79/13, 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. 169/06, s. 8 (1); O. Reg. 79/13, 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. 169/06, 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. 169/06, s. 8 (3); O. Reg. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, 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. 79/13, s. 7.

Appointment of officers

10. The Authority may appoint officers to enforce this Regulation. O. Reg. 169/06, s. 10.

Flood event standards

11. 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. 169/06, s. 11.

12. REVOKED: O. Reg. 79/13, s. 8.

13. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 169/06, s. 13.

SCHEDULE 1

1. The Hurricane Hazel Flood 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

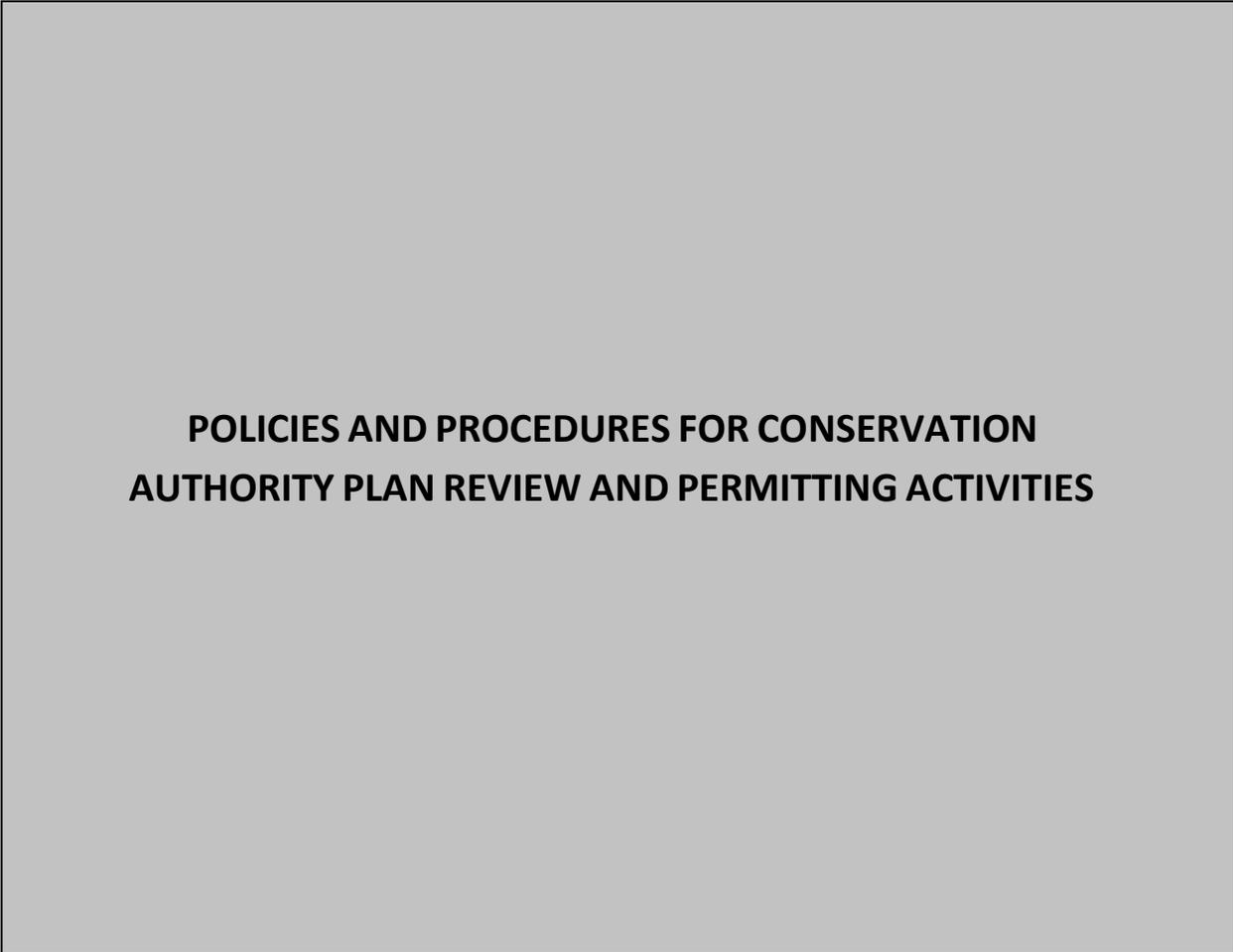
Column 1	Column 2
Drainage Area (square kilometres)	Percentage
26 to 45 both inclusive	99.2
46 to 65 both inclusive	98.2
66 to 90 both inclusive	97.1
91 to 115 both inclusive	96.3
116 to 140 both inclusive	95.4
141 to 165 both inclusive	94.8
166 to 195 both inclusive	94.2
196 to 220 both inclusive	93.5
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 Huron in the Great Lakes-St. Lawrence River System that has a probability of occurrence of one per cent during any given year.

O. Reg. 169/06, Sched. 1

Appendix J: Policies and Procedures for Conservation Authority Plan Review & Permitting Activities – May 2010



POLICIES AND PROCEDURES FOR CONSERVATION AUTHORITY PLAN REVIEW AND PERMITTING ACTIVITIES

The intent of this chapter is to describe the roles of Conservation Authorities (CAs) in the areas of municipal planning, plan review, and Conservation Authorities Act S. 28 permitting related to development activity and natural hazard prevention and management and the protection of environmental interests.

PART A - BACKGROUND

1.1 DESCRIPTION OF CONSERVATION AUTHORITY ROLES AND ACTIVITIES

Conservation Authorities (CAs) are corporate bodies created through legislation by the Province at the request of two or more municipalities in accordance with the requirements of the *Conservation Authorities Act (CA Act)*. Each CA is governed by the CA Act and by a Board of Directors whose members are appointed by participating municipalities located within a common watershed within the CA jurisdiction. CA Board composition is determined by the CA Act according to the proportion of the population from participating municipalities within the watershed.

Section 20 of the *CA Act* sets out the objects for CAs 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. Section 21 of the *CA Act* outlines the powers of CAs including the power to establish watershed-based resource management programs and/or policies and the power to charge fees for services, the services for which are approved by the Minister of Natural Resources.

The fundamental provincial role for all CAs focuses on water related natural hazard prevention and management and includes flood and erosion control.

CAs may undertake the following roles and activities:

- i. Regulatory Authorities- Under Section 28 of the *CA Act*, subject to the approval of the Minister of Natural Resources and in conformity with the Provincial Regulation 97/04 governing the content, CAs may make regulations applicable to the area under its jurisdiction to prohibit, restrict, regulate or give required permission for certain activities in and adjacent to watercourses (including valley lands), wetlands, shorelines

of inland lakes and the Great Lakes-St. Lawrence River System and other hazardous lands

- ii. Delegated 'Provincial Interest' in Plan Review- As outlined in the Conservation Ontario/ Ministry of Natural Resources (MNR) /Ministry of Municipal Affairs and Housing (MMAH) Memorandum of Understanding (MOU) on CA Delegated Responsibilities (Appendix 1), CAs have been delegated responsibilities from the Minister of Natural Resources to represent the provincial interests regarding natural hazards encompassed by Section 3.1 of the *Provincial Policy Statement, 2005 (PPS, 2005)*. These delegated responsibilities require CAs to review and provide comments on municipal policy documents (Official Plans and comprehensive zoning by-laws) and applications submitted pursuant to the *Planning Act* as part of the Provincial One-Window Plan Review Service
- iii. Resource Management Agencies- In accordance with Section 20 and 21 of the CA Act, CAs are local watershed-based natural resource management agencies that develop programs that reflect local resource management needs within their jurisdiction. Such programs and/or policies are approved by the CA Board of Directors and maybe funded from a variety of sources including municipal levies, fees for services, provincial and/or federal grants and self-generated revenue.
- iv. Public Commenting Bodies- Pursuant to the *Planning Act*, CAs are 'public commenting bodies', and as such are to be notified of municipal policy documents and planning and development applications. CAs may comment as per their Board approved policies as local resource management agencies to the municipality or planning approval authority on these documents and applications.

CAs may also be identified as commenting bodies under other Acts and Provincial Plans as outlined under Section 2.0 of this document and Appendix 4.

- v. Service Providers- Individual CAs may enter into service agreements with federal and provincial ministries and municipalities to undertake regulatory or approval responsibilities and/or reviews (e.g. reviews under the *Fisheries Act* Section 35; sewage disposal system approvals under the Ontario Building Code).

CAs may also perform a technical advisory role to municipalities. as determined under the terms of service agreements. These services may include, matters related to policy input and advice, the assessment or analysis of water quality and quantity, environmental impacts, watershed science and technical expertise associated with activities near or in the vicinity of sensitive natural features, hydrogeology and storm water studies.

- vi. Landowners- CAs are landowners, and as such, may become involved in the planning and development process, either as an adjacent landowner or as a proponent. Planning Service Agreements with municipalities have anticipated that as CAs are also landowners this may lead to a conflict with the CA technical advisory role to municipalities. This potential conflict of interest is addressed by establishing a mechanism for either party to identify a conflict and implement an alternative review mechanism as ~~necessary~~.

2.0 LEGISLATION

2.1 *Conservation Authorities Act*

2.1.1 Section 20 of the *CA Act* describes the objects of a CA, which 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.

2.1.2 Section 21 of the *CA Act* lists the powers which CAs have for the purpose of accomplishing their objects. The objects identified in the *CA Act* relevant to this chapter include:

- (a): to study and investigate the watershed and to determine a program whereby the natural resources of the watershed may be conserved, restored, developed and managed;
- (e) to purchase or acquire any personal property that it may require and sell or otherwise deal therewith;
- (l) to use lands that are owned or controlled by the authority for purposes, not inconsistent with its objects, as it considers proper;
- (m) to use lands owned or controlled by the authority for park or other recreational purposes, and to erect, or permit to be erected, buildings, booths and facilities for such purposes and to make charges for admission thereto and the use thereof;
- (m.1) to charge fees for services approved by the Minister (see Policies and Procedures manual chapter on CA fees);
- (n): to collaborate and enter into agreements with ministries and agencies of government, municipal councils, local boards and other organizations;
- (p) to cause research to be done;
- (q) generally to do all such acts as are necessary for the due carrying out of any project. R.S.O. 1990, c. C.27, s. 21; 1996, c. 1, Sched. M, s. 44 (1, 2); 1998, c. 18, Sched. I, s. 11.

2.1.3 Pursuant to Section 28 (1) of the *CA Act* and in accordance with Ontario Regulation (O. Reg.) 97/04 “Content of Conservation Authority Regulations under Subsection 28(1) of the Act: Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses” (i.e. Generic or Content Regulation)”, *“subject to the approval of the Minister, an authority may make regulations applicable in the area under its jurisdiction,*

(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.

2.1.4 Section 28 (25) of the *CA Act* defines development as meaning:

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

Note: This definition for “development” differs from the definition that is contained in the *PPS, 2005* (see Section 2.2.5). The relevant definition needs to be applied to the appropriate process.

2.1.5 *CA Act S. 28 and the Green Energy Act*

Conservation Authorities review renewable energy project proposals within their regulated areas as per the provisions of *CA Act* sections 28. (1)(b) and (c).

Permission of the CA is required 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.

As per Section 28. (13.1), permission will be granted, with or without conditions, for development related to a renewable energy project unless it is in the opinion of the Conservation Authority, the control of flooding, erosion, dynamic beaches or pollution will be affected by the development or activity. Where possible, CA permit application review and decision-making will be concurrent with the review and issuance of approvals from provincial Ministries. The timelines for permit applications related to renewable energy projects may differ from the timelines prescribed in this document due to the alignment with provincial Ministries.

2.2 *Planning Act*

2.2.1 Section 3(1) of the *Planning Act* provides for the issuance of policy statements on matters relating to municipal planning that are of provincial interest (e.g. *PPS, 2005*). Through the Minister’s delegation letter and the accompanying MOU (Appendix 1), specific responsibilities have been delegated to CAs to ensure that decisions on development applications by planning approval bodies made pursuant to the *Planning Act* are consistent with the natural hazard policies of the *PPS, 2005*.

2.2.2 Section 3(5) and 3 (6) of the *Planning Act* requires that in respect of the exercise of any authority that affects a planning matter including comments, submissions, advice and decisions of the council of a municipality, a local board, a planning board, a minister of the Crown and a ministry, board, commission or agency of the government, including the Ontario Municipal Board, shall be consistent with provincial policy statements that are in effect on the date of the decision and conform with and not conflict with provincial plans (e.g. Greenbelt Plan, Growth Plan for the Greater Golden Horseshoe, Oak Ridges Moraine Conservation Plan, Central Pickering Development Plan, Lake Simcoe Protection Act etc.) that are in effect on that date (See Appendix 4 for listing).

2.2.3 Section 26 of the *Planning Act* requires municipalities to revise Official Plans every five years to ensure the Municipal Official Plans do not conflict with and must conform to provincial plans and have regard to provincial interests as outlined in Section 2 of the *Planning Act* and are consistent with provincial policy statements issued under Section 3(1).

2.2.4 Development, as defined in the *PPS*, means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the *Planning Act*, but does not include:

- a) activities that create or maintain *infrastructure* authorized under an environmental assessment process
- b) works subject to the *Drainage Act*; or
- c) for the purposes of policy 2.1.3(b), 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 2.1.4(a).

2.3. Other Acts

While the primary purpose of this chapter is to address the roles of CAs under the *Planning Act* and the *CA Act*, CAs may have responsibilities under additional legislation including the federal *Fisheries Act* and the *Clean Water Act*. In addition to these pieces of legislation, there are various authorizations, approvals, permits, etc., which may be required from other agencies. It should be noted that a *CA Act* Section 28 permission, if granted for work, does not exempt the applicant from complying with any or all other approvals, laws, statutes, ordinances, directives, regulations, etc. that may affect the property or the use of same.

2.3.1 Fisheries Act

CAs may have individual agreements with Fisheries and Oceans Canada (DFO) to review proposed works for its potential harmful alteration, disruption or destruction (HADD) of fish habitat pursuant to Section 35 of the federal *Fisheries Act*.

There are three different levels of agreements:

- Level 1 screening where the CA conducts the initial review of the project to identify any impacts to fish and fish habitat and if potential impacts to fish and fish habitat are found, the project is forwarded to the local DFO district office for further review;
- Level 2 screening and mitigation planning where in addition to the above, the CA determines how the proponent can mitigate any potential impacts to fish and fish habitat and if mitigation is not possible the project is forwarded to the local DFO district office for further review; and,
- Level 3 full mitigation and compensation planning, where in addition to all of the above, the CA works with the proponent and DFO to prepare a fish habitat compensation plan and the project is then forwarded to the local DFO office for authorization under the federal *Fisheries Act*.

CAs do not possess the authority to grant an authorization for a HADD of fish habitat. Applications requiring an authorization for a HADD are referred by the CA to DFO for approval.

2.3.2 Clean Water Act

CAs have a role in the Ministry of the Environment (MOE) led provincial initiative under the *Clean Water Act* (CWA)(2006) in exercising and performing the powers and duties of a source protection authority for a source protection area established by CWA regulation. In acting as source protection authorities under the CWA, during the source protection plan development phase, tasks include:

- Collection, analysis and compilation of technical and scientific information and data (watershed characterizations, water budgets, etc.)
- Local engagement, consultation, information management and

communications

- Key supporting role to respective source protection committees which includes funding
- Coordinating technical work with municipalities and others

Once the first source protection plan is approved, the Minister of the Environment will specify a date by which a review of the plan must begin and the source protection authority ensures that the review and those that follow are conducted in accordance with the *CWA* and the regulations

2.3.3 *Environmental Assessment Act (EA 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. CAs review and comment on Class and Individual Environmental Assessments that occur within their jurisdiction under the *EA Act*. CAs bring local environmental and watershed knowledge into the review and assessment process.

It is a requirement for proponents to identify and consult with government agencies and may include CAs if the proposed project may have an impact on an item related to the CA's areas of interest (e.g. regulatory authority or as service providers-see section 1.0). The MOE is responsible for the administration of the *Environmental Assessment Act* and ensuring that proponents meet the requirements of this Act. The Minister of Environment is the approval authority for decisions under the *Environmental Assessment Act*.

CAs as landowners may also be the proponent under the *EA Act* for proposed projects that may occur on CA lands. The *Class Environmental Assessment for Remedial Flood and Erosion Control Projects* (Class EA) establishes a planning and approval process for a variety of remedial flood and erosion control projects that may be carried out by CAs. This Class EA sets out procedures and environmental planning principles for CAs to follow to plan, design, evaluate, implement and monitor a remedial flood and erosion control project so that environmental effects are considered as required under the *Environmental Assessment Act*. Approval of this Class EA allows CAs to undertake these projects without applying for formal approval under the *Environmental Assessment Act*, on the condition that the planning and design process outlined in the Class EA is followed and that all other necessary federal and provincial approvals are obtained.

2.3.4 Aggregate Resources Act (AR Act)

The purposes of the *AR Act* are to provide for the management of the aggregate resources of Ontario; to control and regulate aggregate operations on Crown and private lands; to require the rehabilitation of land from which aggregate has been excavated; and to minimize adverse impact on the environment in respect of aggregate operation.

Under *CA Act* Section 28 (11), areas licensed for aggregate extraction under the *AR Act* are exempt from *CA* permitting activities. However, CAs may bring local environmental and watershed knowledge into the application review process.

CAs are afforded an opportunity to review and provide comments directly, or through their participating municipalities, to MNR on applications submitted under the *AR Act*, during the application review and consultation process. MNR is the approval authority for license applications submitted pursuant to the *AR Act*, whereas municipalities are the approval authorities with respect to applications submitted pursuant to the *Planning Act*.

As with other applications submitted pursuant to the *Planning Act*, CAs may review Official Plan amendments, zoning bylaw amendments and other applications for proposed new or expanded aggregate operations submitted pursuant to the *Planning Act*, and comment in an advisory capacity to municipalities making decisions on *Planning Act* applications.

2.3.5 Drainage Act

The Drainage Act is administered by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and is implemented by the local municipality. The Drainage Act defines the terms by which a drainage project may be initiated and prescribes the various stages of the procedure (e.g. engineer's report, consultation, appeals, construction) that must be followed by municipalities in the development of this municipal drainage infrastructure. The local municipality is also responsible for the maintenance, repair and management of the drainage systems that are developed through this procedure.

CAs are involved with drainage matters in three ways:

- 1) Since 1949, drainage petitions for new drains and improvements to existing drains are circulated to CAs for comment as required under the Drainage Act S. 4 and S. 78 respectively. CAs may request an environmental appraisal for new drainage works. Once an engineer's report has been drafted for the proposed drainage works, the Drainage Act provides CAs with a right to appeal the proposed project to the Drainage Tribunal.
- 2) CAs under agreement with Fisheries and Oceans Canada (DFO) undertake *Fisheries Act* Section 35 authorization reviews under a drainage class system. While CAs do not give final approval on authorization requests, they review applications and form recommendations that are forwarded to DFO for approval decisions.

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- 3) As some drains meet the definition of a 'watercourse' under Section 28 of the CA Act, CA permissions (permits) may be required for new drainage works and drain improvements, maintenance and repair activities. Please refer to the Drainage Act and (CA) Regulation Protocol (under development 2010) for more details.

2.3.6 Ontario Water Resources Act(OWRA)

Under the OWRA, Certificates of Approval are required for stormwater management infrastructure from MOE as the approval authority. CAs often undertake a public commenting role on Certificates of Approval applications.

SUMMARY TABLE: CA Roles, Relevant Reference Sections and Legal Authority

Role	Relevant Section in this document	Legal Authority- legislation (or other)
Regulatory Authorities	Section 3.7 Section 6.0 (6.2, 6.3, 6.5, 6.6, 6.7) Section 7.0 Section 8.0 Appendix 2c Appendix 3	CA Act S. 28 O. Reg 97/04 O. Regs 42/06, 146/06 to 179/06, 181/06, 182/06, and 319/09.
Delegated 'Provincial Interest' in Plan Review	Section 3.0 (3.1, 3.2, 3.7) Section 6.0 (6.1,6.2,6.3,6.4, 6.5, 6.8) Section 8.0 Appendix 1 Appendix 2 a and b	CO/MNR/MMAH MOU of CA Delegated Responsibilities Section 3.1 of the Provincial Policy Statement
Resource Management Agencies	Section 3.0 (3.4, 3.6, 3.8) Section 4.0 Section 6.0 (6.5, 6.8, 6.9,6.10) Section 8.0	CA Act S. 20 and S. 21 CA Board Approved policies and programs
Public Commenting Bodies	Section 3.0 (3.3,3.4,3.6,3.7) Section 6.0 (6.2,6.5,6.6,6.8,6.9, 6.10)	Planning Act: S. 17.15, 17.20, 17.21 Other legislation: Clean Water Act S. 4.2, S. 6, S. 7.6, S. 10.1 etc. Drainage Act S. 4, S. 5.1, S. 6.1, S. 10.2, S. 10.8, S. 41.1, S. 49, S. 74, S. 78.2, Aggregates Resource Act Environmental Assessment Act Provincial Plans (see appendix 4)
Service Providers	Section 3.0 (3.4,3.5, 3.7, 3.8) Section 4.4 Section 6.0 (6.2, 6.3, 6.5, 6.6,.6.7,6.8,6.9) Section 8.0	CA Act S. 21 Federal Fisheries Act via Agreements MOUs (Municipal and other agency)
Landowners	Section 3.0 (3.8)	CA Act S. 21, and S. 29

PART B – POLICY

3.0 GENERAL

3.1 CAs have been delegated responsibility to review municipal policy documents and applications under the *Planning Act* to ensure that they are consistent with the natural hazards policies Section 3.1 of the *PPS, 2005*. CAs have not been delegated responsibilities to represent or define other provincial interests on behalf of the Province under the *Planning Act*, the *PPS, 2005* or other provincial legislation (e.g. *Endangered Species Act, 2007*) or provincial plans (e.g. Oak Ridges Moraine Conservation Plan, etc.).

3.2 Under the CO/MNR/MMAH MOU on CA Delegated Responsibilities, CAs have a commenting role in approval of new or amended ‘Special Policy Areas’ for flood plains under Section 3.1.3 of the *PPS*, where such designations are feasible. Special Policy Areas (SPAs) are areas within flood plain boundaries of a watercourse where exceptions to the development restrictions of the natural hazards policy (3.1) in the Provincial Policy Statement (*PPS*), 2005, may be permitted in accordance with technical criteria established by the MNR.

CAs provide supportive background and technical data regarding existing and proposed SPAs. New SPAs and any proposed changes or deletions to existing boundaries and/or policies are approved by both the Ministers of Natural Resources and Municipal Affairs and Housing, with advice from CAs, prior to being designated by a municipality or planning approval authority.

3.3 CAs are considered public commenting bodies pursuant to Section 1 of the *Planning Act* and regulations made under the *Planning Act*. As such, CAs must be notified of municipal policy documents and applications as prescribed. To streamline this process, CAs may have screening protocols with municipalities, normally through service agreements, which identifies those applications that CAs should review.

3.4 In addition to CAs’ legislative requirements and mandated responsibilities under the *CA Act*, Section 28 Regulations as regulatory authorities, and Section 3.1 of the *PPS* as delegated plan reviewers for provincial interest, the CAs’ role as watershed-based, resource management agencies also allows CAs to review municipal policies, planning documents and applications pursuant to the *Planning Act* as a ‘public commenting body’ as outlined in the CO/MNR/MMAH MOU on CA Delegated Responsibilities. (Appendix 1)

To inform their review of municipal planning documents and planning applications, under the *Planning Act*, CAs may develop policies and strategies related to their CA Board mandates and agreements for technical services with municipalities and other levels of government. Such CA policies are advisory and may be incorporated into an Official Plan in which case they become adopted as municipal policy. When providing comments to municipalities or planning approval authorities, CAs should identify the role(s) and legislative authority under which they are doing so (e.g. *PPS, 2005*, *CA Act* Section 28 Regulations, *Federal Fisheries Act*, advisory, etc.).

3.5 Where CAs have entered into an agreement with municipalities or other levels of government for any technical services, CAs should provide the technical services (e.g. providing natural heritage advice), as prescribed by the agreement. Technical service agreements with municipalities may cover a broad range of issues, including stormwater management, natural heritage features and systems advice, groundwater monitoring, etc. These agreements may also include a process to resolve disputes that may occur in the delivery of the services between the municipality and a conservation authority.

3.6 In some cases, provincial plan (e.g. Oak Ridges Moraine Conservation Plan; Greenbelt Plan; Lake Simcoe Protection Plan, Central Pickering Development Plan) requirements may exceed CA regulatory requirements and such greater requirements take precedence. For example, the provincial plans may have greater requirements for vegetation buffers or more restrictions on the uses permitted than the CA regulatory requirements.

A typical requirement of the legislation for those plans is that comments, submissions, or advice provided by CAs, that affect a planning matter within those areas, shall conform with the provincial plan (refer to 6.9). Similarly, where there are regulations (including *CA Act* Section 28 and the *Fisheries Act*) that are more restrictive than those contained in these provincial plans, the more restrictive provisions prevail.

3.7 The “principle of development” is established through *Planning Act* approval processes, whereas the *CA Act* permitting process provides for technical implementation of matters pursuant to Section 28 of the *CA Act*. The scope of matters that are subject to *CA Act* S. 28 regulations is limited to the activities in areas set out under Section 28(1) and Section 28(5) of the *CA Act*.

CAs should ensure that concerns they may have regarding the establishment of the “principle of development” are conveyed to the municipality/planning approval authority during the preparation of a municipal Official Plan, secondary plan or Official Plan amendment, or during the *Planning Act* approvals process and not through the *CA Act* S. 28 permitting process.

An established ‘principle of development’ does not preclude the ability of the CA (or MMAH as per the MOU) to appeal a planning matter to the Ontario Municipal Board (OMB) (e.g., based on newer technical information relevant to the PPS). It is recognized that there may be historic planning approval decisions that were made in the absence of current technical information which could now preclude development under the *CA Act* regulations. Where possible, if an issue remains unresolved, the CA should work with the proponent and the municipality to pursue a resolution.

3.8 CAs may provide a number of other programs and services (extension services, community relations, information, education services and permissions under other legislation) that may or may not be linked to applications made pursuant to the *Planning Act* or *CA Act* S. 28 regulation permissions. These programs and services are not governed by this chapter.

4.0 CONSERVATION AUTHORITY POLICYFORMATION AND CONSULTATION

4.1 CAs should give public notice and undertake public and stakeholder consultation prior to submission for CA Board approval of all proposed policies, watershed and subwatershed plans, guidelines or strategies that are intended to be used by the CA to comment on future land use and land use planning and inform CA review of applications made pursuant to the *Planning Act*. The CA is only responsible for coordinating consultation where it has been delegated as the lead for the watershed or subwatershed planning processes by the participating municipality or municipalities..

4.2 CAs should give public notice and undertake public consultations prior to submission for CA Board approval of proposed service delivery policies and procedures for *CA Act* Section 28 permit applications (e.g. complete applications).

4.3 The public should be provided the opportunity to speak to the proposed policies and guidelines referenced in 4.1 and 4.2 at the relevant CA Board meetings.

4.4 CAs should make any agreements between the CA and participating municipalities or other

government agency publicly accessible (e.g. posted on the CA's website where available).

5.1 APPLICATION PROCESSES

Attached are **three charts** which illustrate the application processes under both the *Planning Act* and the *Conservation Authorities Act S. 28* and practices to promote effective and efficient processes between them:

- municipal planning application process with CA review (e.g. stand-alone site plan control) (Appendix 2a)
- municipal planning application process (e.g. subdivision) with CA review and requirement for CA Act S. 28 permit(s) (Appendix 2b)
- stand-alone CA Act S. 28 "Development, Interference with Wetlands, Alterations to Shorelines and Watercourses" regulation permit application process (Appendix 2c)

6.0 POLICIES AND PROCEDURES FOR MUNICIPAL PLAN REVIEW BY CONSERVATION AUTHORITIES

6.1 'Provincial Interest' Memorandum of Understanding of CA Delegated Responsibilities

Through the Minister's delegation letter and under the accompanying MOU signed in 2001, CO, MNR and MMAH agreed to support the provisions of the MOU as an appropriate statement of the roles and responsibilities of the relevant Ministries and CAs in the implementation of the *PPS* and now continued in the *PPS, 2005*.

Pursuant to the delegation letter and the MOU, CAs have been delegated the responsibility to review municipal policy documents and planning and development applications submitted pursuant to the *Planning Act* to ensure that they are consistent with the natural hazards policies found in Section 3.1 of the *PPS, 2005*. These delegations do not extend to other portions of the *PPS, 2005* unless specifically delegated or assigned in writing by the Province. For further detail, please refer to the MOU in Appendix 1.

Note: At the time of signing, the 2001 CO/MNR/MMAH MOU stipulates that plan review was to determine whether application had "regard to" Section 3.1 of the *PPS, 1997*, while the amendment made to the *Planning Act* 3 (5) and 3 (6) by the *Strong Communities (Planning Amendment) Act* (Bill 51) and described in S. 4.2 of the *PPS, 2005* changes this wording, "to be consistent with" the policies outlined in the *PPS, 2005*.

6.2 The *PPS, 2005* provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural environment. The policies of the *PPS* may be complemented by provincial plans or by locally-generated policies regarding matters of municipal interest. Provincial plans and municipal Official Plans provide a framework for comprehensive, integrated and long-term planning that supports and integrates the principles of strong communities, a clean and healthy environment and economic growth, for the longterm.

CAs are encouraged to develop watershed and subwatershed management plans to inform municipalities in the municipalities creation and updating of Official Plan policies*. Watershed plans may also provide technical information and recommendations for municipalities when making decisions on planning applications.

In carrying out their delegated responsibilities, CAs should identify natural hazard lands for protection in Official Plans and comprehensive zoning by-laws. This will ensure that development is directed away from areas of natural hazards where there is an unacceptable risk to public health or safety or of property damage (Section 3.1, *PPS, 2005*). The understanding by all parties as to the establishment of the “principle of development” by *Planning Act* approval process and the location of proposed works at the planning stage, as per section 3.7 of this Chapter, allows the CA to focus on technical requirements and site constraints at the *CA Act* S. 28 permitting review process.

*Footnote: in some areas of the province (e.g., Oak Ridges Moraine Conservation Plan Area) there is a requirement for every municipality to prepare a watershed plan and to incorporate the objectives and requirements of the watershed plan into the Official Plan if the municipality wishes to permit major development within that watershed.

6.3 CAs should collaborate with municipalities to recommend policies and provisions for inclusion into Official Plan policies for complete planning application requirements so that information or studies needed by the CA for reviewing *Planning Act* applications from the delegated responsibility for natural hazards policies found in Section 3.1 of the *PPS* is addressed early in the process.

6.4 CAs should ensure that all concerns relevant to their delegated responsibilities for natural hazards are made available to municipalities and planning approval authorities under the *Planning Act* during the application review process.

In participating in the review of development applications under the *Planning Act*, CAs should, at the earliest opportunity:

- (i) ensure that the applicant and municipal planning authority are also 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.

6.5 CAs should confer with municipalities to recommend policies and provisions for potential inclusion into Official Plans and comprehensive zoning by-laws that may be complementary to their CA Board-approved policies as resource management agencies and other planning responsibilities as outlined in Section 1.0 to ensure that municipal land use decisions may address them.

6.6 Recognizing that there is no requirement for municipalities to invite CAs to pre-consultation meetings, CAs should also contact municipalities, where appropriate, to ensure that the CAs are involved in pre-consultation and attend associated meetings on *Planning Act* applications, especially where such applications may trigger a related permit application under the *CA Act* S. 28. Technical service agreements between municipalities and individual CAs may formalize arrangements for CA involvement in pre-consultation. As coordinated by the municipality or planning approval authority, depending on the scope of the project, pre-consultation could include staff from the following parties: CAs, the municipality (for example, planning and engineering staff), the applicant, consultants, the developer (owner) and may be supplemented by staff from provincial ministries, Parks Canada and any other government agencies.

6.7 If involved in providing a technical advisory role, CAs and municipalities should establish formal technical service agreements. CAs should ensure that the service agreement with a municipality addresses obligations of the CA to participate in pre-consultation and other meetings; how the CA may participate in OMB hearings or other tribunals; how the parties or participants may be represented at hearings for the purpose of legal representation; and, limits on the CA’s ability to represent the municipality’s interests. Service agreements or contracts should specify that regular

reviews by the parties of the agreement or contract are required and should be publicly accessible (e.g. posted on the respective CA and municipal websites).

6.8 CAs shall operate in accordance with the provisions of the CO-MNR- MMAH MOU when undertaking their roles in plan review. This will include informing a municipality as to which of their CA comments or inputs, if any, pertain to the CA's delegated responsibilities for the provincial interest on natural hazards and which set of comments are provided on an advisory basis or through another type of authority (e.g. as a 'resource management agency' or as a 'service provider' to another agency or the municipality).

6.9 MNR has natural heritage responsibilities under the *PPS 2005* and some provincial plans (as outlined in appendix 4) for the delineation and technical support in the identification of natural heritage systems, the identification or approval of certain natural heritage features as significant or key features, and the identification of criteria related to these features. As part of the CA commenting or technical advisory function, some CAs identify natural heritage features and systems through the initial plan review process. CA developed natural heritage systems are advisory unless corresponding designations and policies are incorporated into the municipal Official Plan (i.e., municipality has the decision-making authority under the *Planning Act*). Where service agreements are in place with participating municipalities, CAs are encouraged to collaborate with local MNR District offices to ensure the appropriate and best available information on natural heritage is provided to a municipality. MNR is responsible for notifying municipalities and CAs when there is new information about a feature for which MNR has responsibilities; for example, a wetland is evaluated and approved as a provincially significant wetland (PSW), so that advice can be given and decisions made accordingly.

Where provincial plans and associated guidance materials apply, CA comments shall reflect the policy direction contained in these provincial plans or guidance materials as these pertain to matters relating to natural heritage systems and features, including:

1. Definitions of "significant" features;
2. Minimum setbacks for these defined features;
3. Outlining a process for determining whether the minimum setbacks are adequate and, if not, recommend appropriate setbacks;
4. Specifying permitted uses, setbacks and policies within identified significant features;
5. Delineation of natural heritage systems.

6.10 CAs may provide input, as a public commenting body or 'resource management agency', on matters of local or regional interest within their watershed with respect to natural heritage with participating municipalities and liaise with the MNR regarding natural heritage interests including and beyond those covered by 6.9 (those of "provincial interest") to promote sharing of the most up-to-date natural heritage information and to promote coordinated planning approaches for these interests.

7.0 CONSERVATION AUTHORITIES ACT SECTION 28 PERMITTING

7.1 Background Information

Pursuant to Section 28 of the *CA Act*, under Ontario Regulation 97/04 "Content of Conservation Authority Regulations under Subsection 28 (1) of the Act: "Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses" (Generic or Content Regulation), each CA has developed individual regulations approved by the Minister that identify and regulate certain activities in and adjacent to watercourses (including valley lands), wetlands, shorelines of inland lakes and hazardous lands. In general, permissions (permits) may be granted where, in the opinion of the CA, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land is not impacted.

An application for a CA Act S. 28 permission (permit) is made, usually by the landowner or an agent on behalf of a landowner or an infrastructure manager and owner such as a municipal corporation. Information required to support an application is outlined in Appendix 3.

When the O. Reg 97/04 (the Content or Generic Regulation) was developed, three related procedural guidelines were prepared to assist in delivering the individual CA regulations:

1. Guidelines for developing schedules of regulated areas
2. Section 28(12) *CA Act* Hearings Guideline
3. Approvals Process Guideline

These and other future MNR approved guidelines or protocols may be used in implementation of the Regulation (e.g. *Drainage Act* and Regulation Protocol currently being prepared for 2010).

7.2 Pre-consultation on Permission (Permit)Applications

7.2.1 Pre-consultation is encouraged to provide clarity and direction, to facilitate receipt of complete applications and to streamline the CA Act S. 28 permission (permit) review and decision making process. To meet these objectives, depending on the scale and scope of the project, pre-consultation may include staff from the following parties: CAs, the municipality (for example, planning and engineering staff), the applicant, consultants, the developer and owner, and may be supplemented by staff from provincial ministries, Parks Canada and any other appropriate government agencies; and may occur concurrently with *Planning Act* pre-consultation.

7.2.2 CAs may request pre-consultation, prior to the submission of a permission (permit) application, to provide an opportunity for CAs and applicants to determine complete application requirements for specific projects. Applicants are encouraged to engage in pre-consultation with CAs prior to submitting an application.

7.2.3 Applicants may request CAs to undertake pre-consultation, prior to the submission of a permission (permit) application, to provide an opportunity for CAs and applicants to determine complete permit application requirements for specific projects. CAs should engage in pre-consultation in a timely manner so as not to delay the proponent's ability to submit an application.

7.2.4 In order to determine complete application requirements, applicants should submit in writing adequate information for pre-consultation, such as property information (lot number, concession number, township, etc.), a concept plan of the proposed development which shows the property limit, and a description of what is being proposed (i.e. what is being planned and when the work will take place).

7.2.5 CAs should identify and confirm complete application requirements for specific projects, in writing, within 21 days of the pre-consultation meeting. However, substantial changes to a proposal or a site visit after pre-consultation may warrant further pre-consultation and/or necessitate changes to the complete application requirements.

7.3 Complete Permission (Permit)Application

CAs are encouraged to develop written, CA Board-approved, publicly accessible, procedures and guidelines or checklists that define the components

of a complete application, and reflect recommended timelines to process applications and provide comments in response (see Appendix 3 for examples of Section 28 Regulation information requirements).

7.3.1 CAs are to notify applicants, in writing, within 21 days of the receipt of a permission (permit) application, as to whether the application has been deemed complete or not.

7.3.2 If a permission (permit) application is deemed incomplete, CAs should provide the applicant with a written list of missing and needed information when notifying the applicant that the application has been deemed incomplete.

7.3.3 If not satisfied with the decision on whether an application is deemed complete, the applicant can request an administrative review by the CA General Manager (GM) or Chief Administrative Officer (CAO) and then if not satisfied, by the CA Board of Directors. This review will be limited to a complete application policy review and will not include review of the technical merits of the application.

7.3.4 During the review of a 'complete application', a CA may request additional information if the CA deems a permission (permit) application does not contain sufficient technical analysis. Delays in timelines for decision making may occur due to CA requests for additional information to address errors or gaps in information submitted for review (refer to 7.4.3). Thus, an application can be put "on hold" or returned to the applicant pending the receipt of further information. If necessary, this could be confirmed between both parties as an "Agreement to Defer Decision".

7.4 Decision Timelines for Permissions (Permits)

7.4.1 From the date of written confirmation of a complete application, CAs are to make a decision (i.e. recommendation to approve or referred to a Hearing) with respect to a permission (permit) application and pursuant to the CA Act within 30 days for a minor application and 90 days for a major application.

Major applications may include those that:

- are highly complex, requiring full technical review, and need to be supported by comprehensive analysis
- do not conform to existing CA Board-approved Section 28 policies

7.4.2 If a decision has not been rendered by the CA within the appropriate timeframe (i.e. 30 days for minor applications / 90 days for major applications) the applicant can submit a request for administrative review by the GM or CAO and then if not satisfied, by the CA Board of Directors.

7.4.3 Subsequent to receipt of a complete application, delays in timelines for decision making on a permission (permit) may occur due to CA requests for

additional information to address errors or gaps in technical information submitted for review (refer to 7.3.5). Through an “Agreement to Defer Decision” between the applicant and the CA, applications can be put “on hold” or returned to the applicant pending the receipt of further information to avoid premature refusals of permissions (permits) due to inadequate information.

7.5 Hearings and Appeals

7.5.1 If the decision is “referred to a Hearing of the Authority Board” the *MNR/CO Hearings Guidelines* (approved 2005) referenced in Section 7.1 will be followed. Copies of the Hearing Guidelines can be obtained by contacting the Integration Branch of the Ministry of Natural Resources.

As per the guidelines and subsections 28 (12), 28 (13), 28 (14) and 28 (15) of the *CA Act* and in summary:

After holding a hearing, the CA shall: refuse the permission (permit); grant the permission with conditions; or, grant the permission without conditions. If the CA refuses permission or grants permission subject to conditions, the CA, shall give the person who requested permission written reasons for the decision.

A person who has been refused permission or who objects to conditions imposed on a permission may, within 30 days of receiving the written reasons appeal in writing to the Minister of Natural Resources.

The Office of the Mining and Lands Commissioner (OMLC) has been delegated the authority, duties and powers of the Minister of Natural Resources under the *Ministry of Natural Resources Act O. Reg. 571/00* to hear appeals from the decisions of CAs made under *CA Act S. 28* regarding a refusal to grant permission (permit) or with respect to conditions imposed on a permission (permit) granted by the CA. The Mining and Lands Commissioner (MLC) may: refuse the permission; or, grant the permission, with or without conditions.

If the applicant does not agree with the MLC decision, under the *Mining Act* an appeal can then be made to the Divisional Court, a Branch of the Superior Court of Justice.

7.6 Expiry of Permission (Permit)

By regulation, a permission (permit) shall not be extended. The maximum period of validity of a permission (permit) is 24 months. If the works covered by the application are not completed within the legislated timeframe, the applicant must reapply and delays in approval may result. Typically, the policies in place at the time of the re-application will apply.

7.7 CA Act S. 28 Permission (Permit) Review Procedures

7.7.1 CA Act S. 28 permission (permit) review procedures should be determined in such a manner as to ensure applicants receive due process.

7.7.2 When developing CA permission (permit) review procedures, CAs should consider:

- the timely delivery of services through efficiency of process and adherence to timelines as outlined;
- the “best practices” and procedures used by neighbouring CAs, to promote consistency;
- the nature and level of procedures used by local municipalities and other agencies and ministries for related application reviews to prevent duplicative procedures and to promote consistency;
- the setting of application review procedures is dependent on the complexity of applications and the level of effort required to administer the application.

8.0 SERVICE DELIVERY ADMINISTRATION

8.1 CAs shall develop policies, procedures and guidelines for their municipal plan review activities and for CA Act S. 28 permitting activities (i.e. administration of the regulation and review of applications) with regard to the best practices outlined in this Policies and Procedures chapter. The CA documents should be approved by their Board of Directors and made available to the public.

8.2 Fees

See separate chapter regarding fees in the Policies and Procedures Manual.

8.2.1 Fees for planning services should be developed in conjunction with the appropriate planning authorities and are set to recover but not exceed the costs associated with administering and delivering the services on a program basis.

8.2.2 Fees for permitting services should be developed and are set to recover but not exceed the costs associated with administering and delivering the services on a program basis.

9.0 ADHERENCE TO POLICIES

9.1 All CAs are required to adhere to these policies and procedures.

9.2 MNR reserves the right to audit CAs for adherence to these policies and procedures and to review the effectiveness of the policies and procedures with regard to implementation of provincial policies and protection of the provincial interest.

APPENDICES

As identified in body of the chapter:

1. CO-MMAH-MNR Delegated Responsibilities MOU
2. Schematics of Application processes under both the Planning Act and the Conservation Authorities Act
3. Information Requirements – Section 28 Regulation Application
4. Provincial Plans and Associated Guidelines/Technical Papers

**Appendix 1: CO/MNR/MMAH – DELEGATED RESPONSIBILITIES MOU CONSERVATION ONTARIO, MINISTRY OF
NATURAL RESOURCES &
MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING**

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

PURPOSE OF THE MOU

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

BENEFITS TO SIGNATORY PARTIES

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

DELEGATED RESPONSIBILITY FOR NATURAL HAZARDS

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

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

ROLES AND RESPONSIBILITIES

Ministry of Natural Resources

- a) MNR retains the provincial responsibility for the development of flood, erosion and hazard land management policies, programs and standards on behalf of the province pursuant to the *Ministry of Natural Resources Act*.
- b) Where no conservation authorities exist, MNR provides technical support to the

Ministry of Municipal Affairs and Housing on matters related to Section 3.1 of the Provincial Policy Statement in accordance with the “Protocol Framework – One Window Plan Input, Review and Appeals”.

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

Ministry of Municipal Affairs and Housing

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

Conservation Authorities (CAs)

- a) The CAs will review policy documents and development proposals processed under the *Planning Act* to ensure that the application has appropriate regard to Section 3.1 of the PPS.
- b) Upon request from MMAH, CAs will provide comments directly to MMAH on planning matters related to Section 3.1 of the PPS as part of the provincial one window review process.
- c) Where there may be a potential conflict regarding a Conservation Authority’s comments on a planning application with respect to Section 3.1 of the PPS and comments from provincial ministries regarding other Sections of the PPS, the Ministry of Municipal Affairs and Housing will facilitate discussions amongst the

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

FURTHER CA ROLES IN PLAN INPUT, PLAN REVIEW AND APPEALS

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

1. Watershed Based Resource Management Agency

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

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

2. Planning Advisory Service to Municipalities

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

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

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

3. CAs as Landowner

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

4. Regulatory Responsibilities

a) *CA Act* Regulations

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

b) Other Delegated or Assigned Regulatory/Approval Responsibility

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

CANCELLATION OR REVIEW OF THE MOU

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

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

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

Jan 19, 2001: Original signed by

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

Date

Feb 12, 2001: Original signed by

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

Date

Jan 01, 2001: Original signed by

R.D. Hunter
General Manager
Conservation Ontario

Date



Ministry of
Natural
Resources

Minister

Ministère des
Richesses
naturelles

Ministre

Queen's Park
Toronto, Ontario
M7A 1W3
416 / 314-2301

APR 19 1995

95-01252-MIN

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

Dear Mr. Hocking:

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

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

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

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

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

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

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

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

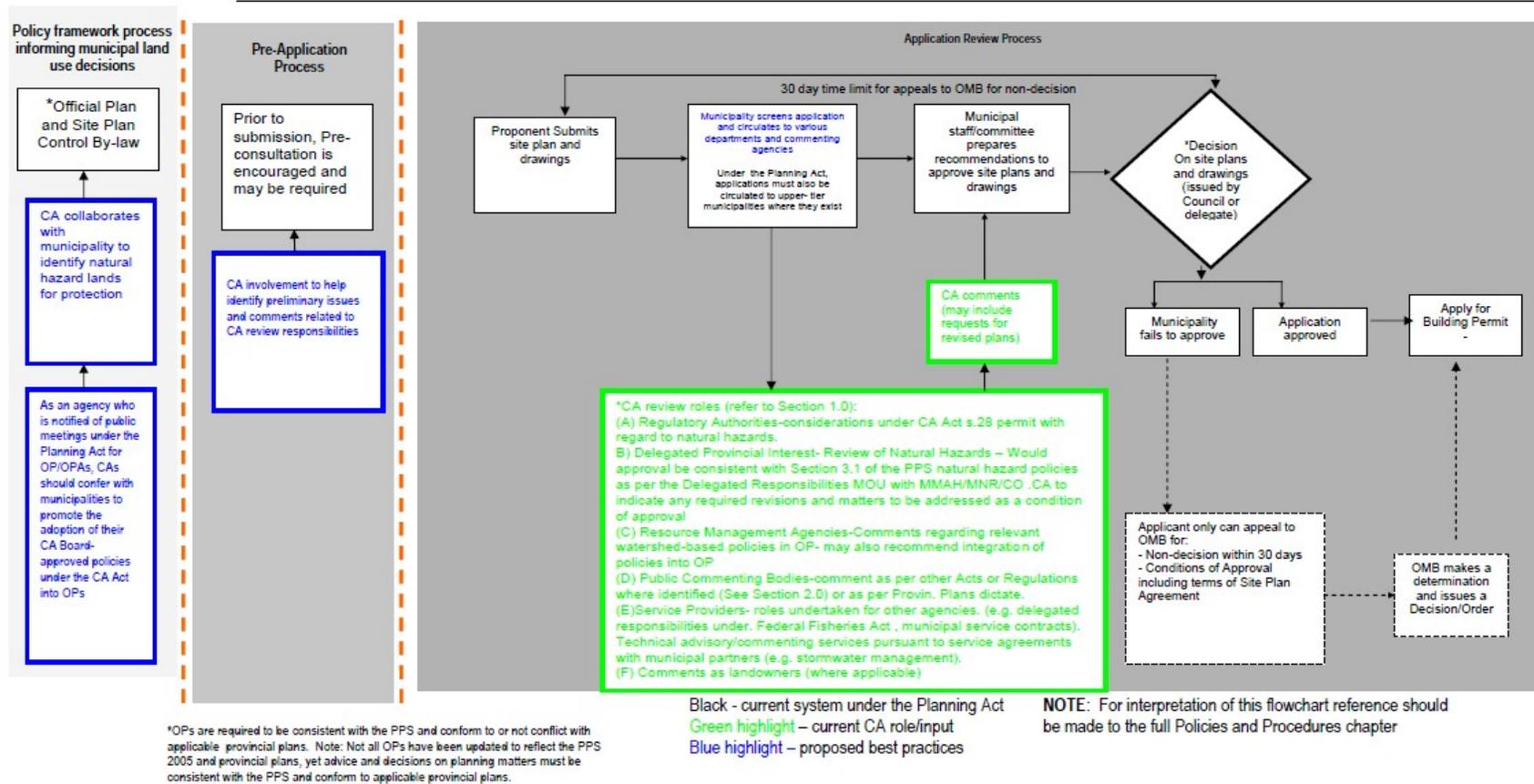
Yours sincerely,



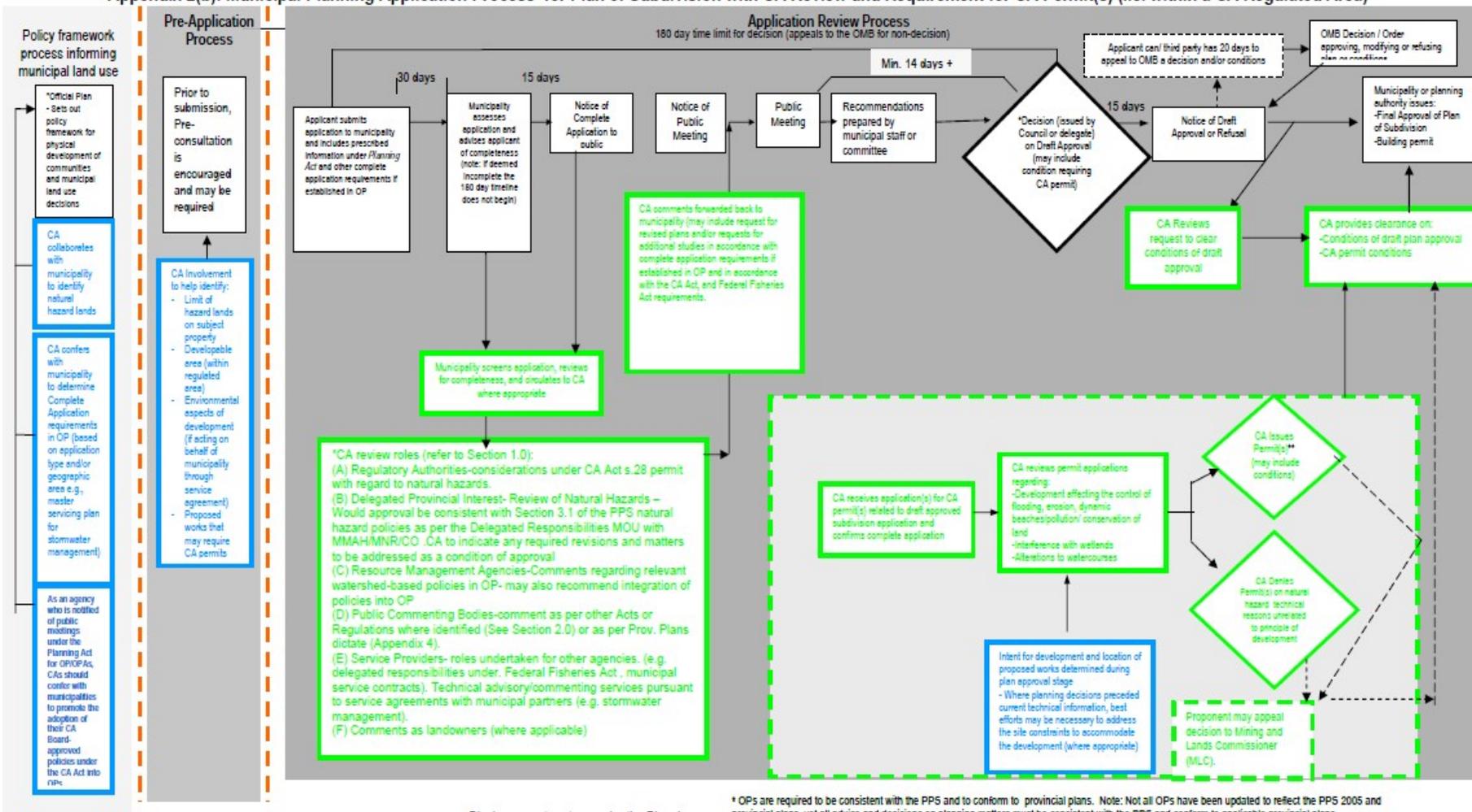
Howard Hampton
Minister

Appendix 2: Schematics of Application processes under both the *Planning Act* and the Conservation Authorities Act

Appendix 2(a): Municipal Planning process for Site Plan Control with CA Review in a non- CA regulated area (i.e. Section 28 does not apply)



Appendix 2(b): Municipal Planning Application Process for Plan of Subdivision with CA Review and Requirement for CA Permit(s) (i.e. within a CA Regulated Area)



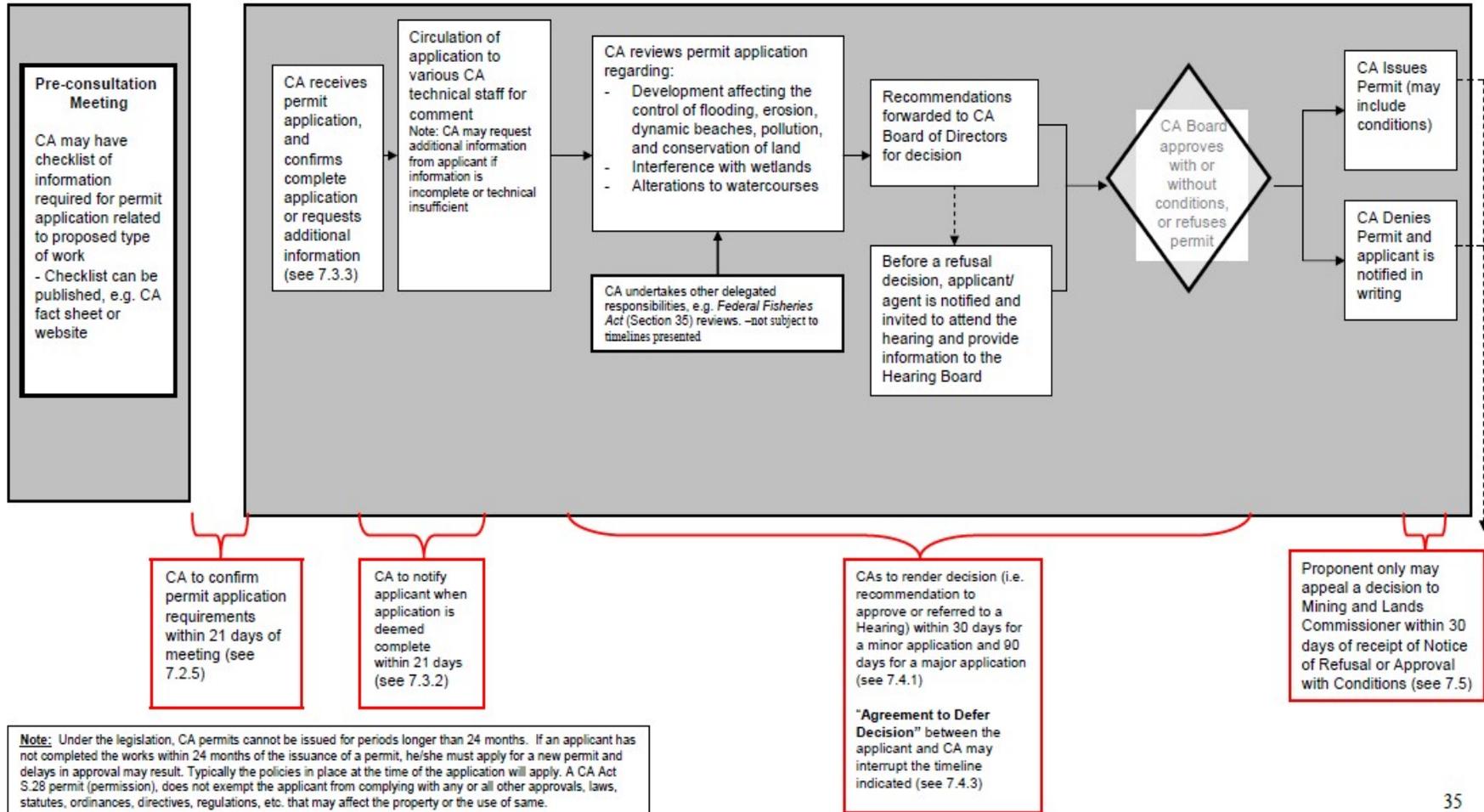
NOTE: For interpretation of this flowchart reference should be made to the full Policies and Procedures chapter

Black - current system under the Planning Act
 Green highlight - current CA role/input
 Blue highlight - proposed best practices

* OPs are required to be consistent with the PPS and to conform to provincial plans. Note: Not all OPs have been updated to reflect the PPS 2005 and provincial plans, yet all advice and decisions on planning matters must be consistent with the PPS and conform to applicable provincial plans.

** Under legislation, if an applicant has not completed the permitted works within 24 months, they must reapply. CA permits cannot be extended for periods longer than 24 months. Generally, policies in place at time of re-application will apply to permit decisions.

Appendix 2(c): Stand-Alone CA Act S. 28 “Development, Interference with Wetlands, Alterations to Shorelines and Watercourses” Regulation Permit Application Process



Appendix 3: Information Requirements – Section 28 Regulation Application

Specific information is required from the applicant in support of a permit application. **Two examples are set out below.**

Permission to Develop

A signed application may contain, but is not limited to the following information:

1. four copies of a plan of the area showing the type and location of the 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 development
5. drainage details before and after development
6. a complete description of the type of fill proposed to be placed or dumped
7. signed land owner authorization for the CA to enter the property (may not be applicable for works completed under the Drainage Act-see Drainage Act protocol for more details)
8. technical studies/plans as required to meet the regulatory provisions of CA Act S.28 (NOTE: this is dependant on the proposed extent of intrusion into a regulated area and/or the associated potential negative impacts. Major applications generally require more complex technical studies).
9. submission of the prescribed fee set by the CA for review of the application.

Permission to Alter

A CA may grant a person permission to straighten, change, divert, or interfere with an existing channel of a river, creek, stream, or watercourse or to change or interfere with a wetland. A signed application may contain, but is not limited to 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. signed land owner authorization for the CA to enter the property (may not be applicable for works completed under the Drainage Act-see Drainage Act protocol for more details)
6. technical studies/plans as required to meet the regulatory provisions of CA Act S.28 (NOTE: this is dependent on the proposed extent of intrusion into a regulated area and/or the associated potential negative impacts. Major applications generally require more complex technical studies).
7. submission of the prescribed fee set by the CA for review of an application.

When all of the information listed above is received in a form satisfactory to the CA, and a pre-consultation or site assessment is conducted as necessary, an application will then be deemed to be complete. An application can be put “on hold” or returned to the applicant pending the receipt of further information.

Appendix 4a: Provincial Plans and Associated Guidelines or Technical Papers

1. **Greenbelt Plan, 2005**

- 1) Greenbelt Technical Paper 1: Technical Definitions and Criteria for Key Natural Heritage Features in the Natural Heritage System of the Protected Countryside Area of the of the Greenbelt Plan, 2005 (Draft posted in the EBR on Sept. 19, 2008 (EBR Registry Number: 010-4559)
- 2) Greenbelt Technical Paper 2: Technical Definitions and Criteria for Significant Woodlands in the Natural Heritage System of the Protected Countryside Area of the Greenbelt Plan, 2005 (Draft posted in the EBR on Sept. 19, 2008 (EBR Registry Number: 010-4559)
- 3) Greenbelt Technical Paper 3: Technical Process for the Identification of Significant Habitat of Endangered, Threatened and Special Concern Species in the Natural Heritage System of the Protected Countryside Area of the Greenbelt Plan, 2005, (Draft posted in the EBR on Sept. 19, 2008 (EBR Registry Number: 010-4559)

2. **Oak Ridges Moraine Conservation Plan, 2002** Following technical papers are available online:

- 1) Identification of Key Natural Heritage Features
- 2) Significant Wildlife Habitat
- 3) Supporting Connectivity
- 4) Landform Conservation
- 5) Identification and Protection of Vegetation Protection Zones for Areas of Natural and Scientific Interest (ANSI, Life Science)
- 6) Identification of Significant Portions of Habitat for Endangered, Rare and Threatened Species
- 7) Identification and Protection of Significant Woodlands
- 8) Preparation of Natural Heritage Evaluations for all Key Natural Heritage Features
- 9) Watershed Plans
- 10) Water Budgets
- 11) Water Conservation Plans
- 12) Hydrological Evaluations for Hydrologically Sensitive Features
- 13) Subwatersheds - Impervious Surfaces
- 14) Wellhead Protection - Site Management and Contingency Plans
- 15) Recreation Plans and Vegetation Management Plans
- 16) Sewage and Water System Plans
- 17) Stormwater Management Plans

4. **Lake Simcoe Protection Plan, 2009**

5. **Central Pickering Development Plan, 2006**

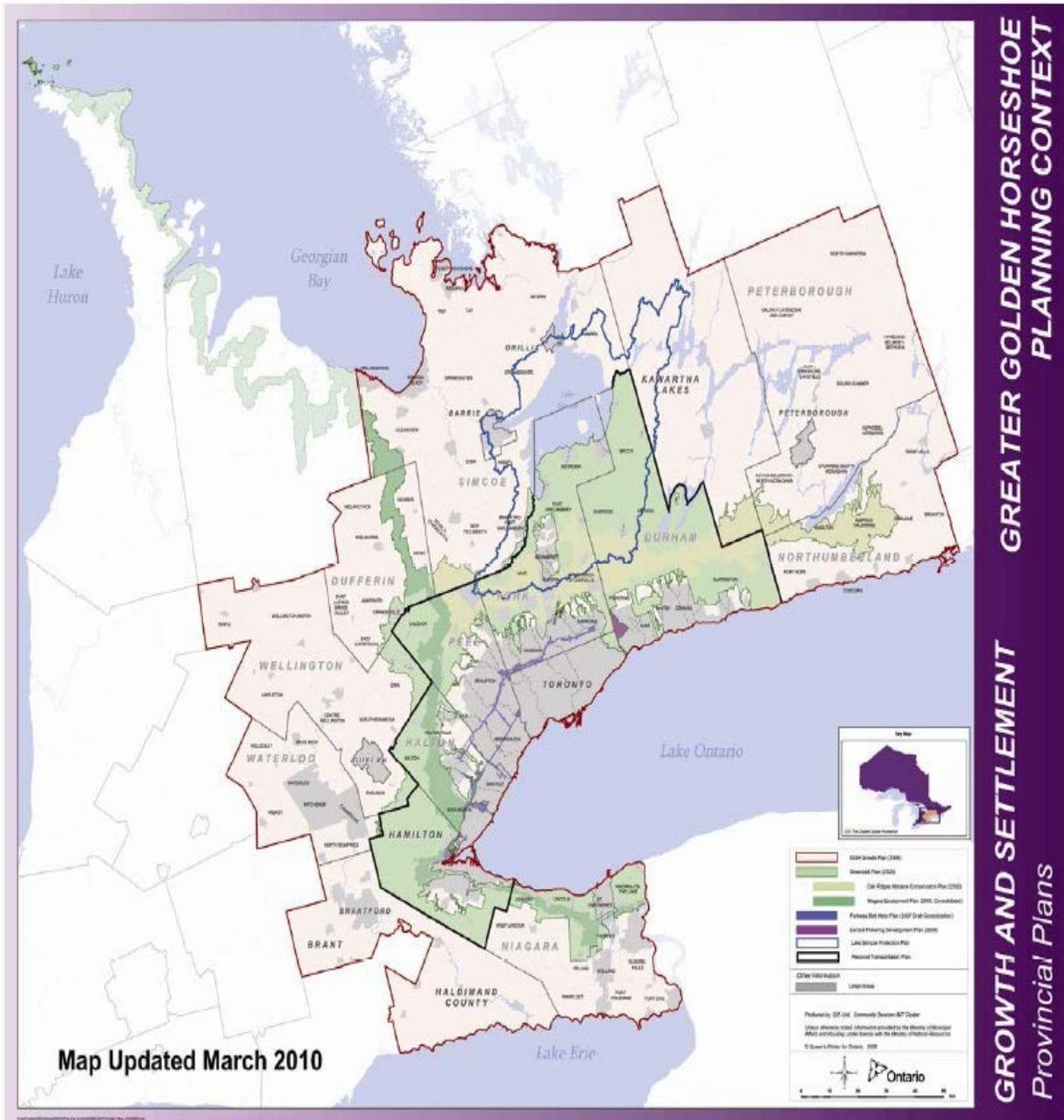
6. **Niagara Escarpment Plan** (Office consolidation, March 11, 2010)

7. **Parkway Belt West Plan** (Consolidated to June 2008)

8. **Growth Plan for the Greater Golden Horseshoe, 2006**

9. **Source Protection Plans** (pending completion 2012)

Appendix 4b: Provincial Plans Map



Appendix K: Excerpt from the Provincial Policy Statement, Section 3.1

3.1 Natural Hazards

3.1.1 Development shall generally be directed to areas outside of:

- a) hazardous lands adjacent to the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards;
- b) hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards; and
- c) hazardous sites.

3.1.2 Development and site alteration shall not be permitted within:

- a) the dynamic beach hazard;
- b) defined portions of the flooding hazard along connecting channels (the St. Mary's, St. Clair, Detroit, Niagara and St. Lawrence Rivers);
- c) areas that would be rendered inaccessible to people and vehicles during times of flooding hazards, erosion hazards and/or dynamic beach hazards, unless it has been demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard; and
- d) a floodway regardless of whether the area of inundation contains high points of land not subject to flooding.

3.1.3 Planning authorities shall consider the potential impacts of climate change that may increase the risk associated with natural hazards.

3.1.4 Despite policy 3.1.2, development and site alteration may be permitted in certain areas associated with the flooding hazard along river, stream and small inland lake systems:

- a) in those exceptional situations where a Special Policy Area has been approved. The designation of a Special Policy Area, and any change or modification to the official plan policies, land use designations or boundaries applying to Special Policy Area lands, must be approved by the Ministers of Municipal Affairs and Housing and Natural Resources prior to the approval authority approving such changes or modifications; or
- b) where the development is limited to uses which by their nature must locate within the floodway, including flood and/or erosion control works or minor additions or passive non-structural uses which do not affect flood flows.

3.1.5 Development shall not be permitted to locate in hazardous lands and hazardous sites where the use is:

- a) an institutional use including hospitals, long-term care homes, retirement homes, pre-schools, school nurseries, day cares and schools;
- b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations; or
- c) uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

3.1.6 Where the two zone concept for flood plains is applied, development and site alteration may be permitted in the flood fringe, subject to appropriate floodproofing to the flooding hazard elevation or another flooding hazard standard approved by the Minister of Natural Resources.

3.1.7 Further to policy 3.1.6, and except as prohibited in policies 3.1.2 and 3.1.5, development and site alteration may be permitted in those portions of hazardous lands and hazardous sites where the effects and risk to public safety are minor, could be mitigated in accordance with provincial standards, and where all of the following are demonstrated and achieved:

- a) development and site alteration is carried out in accordance with floodproofing standards, protection works standards, and access standards;
- b) vehicles and people have a way of safely entering and exiting the area during times of flooding, erosion and other emergencies;
- c) new hazards are not created and existing hazards are not aggravated; and
- d) no adverse environmental impacts will result.

3.1.8 Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire.

Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards