MRCA WATERSHED REGULATION O. REG. 41/24 POLICY MANUAL

MATTAGAMI REGION CONSERVATION AUTHORITY

DECEMBER 2024

Mattagami Region Conservation Authority

Document Revisions

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1. INTRODUCTION

1.1 Purpose

This document is intended to provide the Mattagami Region Conservation Authority (MRCA), (the Authority) with a working Regulations Policy and Procedures Manual for the purposes of administering Ontario Regulation 41/24 made under the *Conservation Authorities Act (CA Act)*. The overall approach of this document is to provide for a consistent policy interpretation and implementation by staff across the watershed.

The manual will also provide information to the development community who can utilize these policies in preparing proposals for approval. Municipalities and community stakeholders can also use this manual to coordinate their own administration or interests and can be confident that matters of stated Provincial interest have been accurately interpreted and are being applied appropriately.

1.2 Document Organization

The policy manual is based on the *Conservation Authorities Act* and O. Reg 41/24 which recently repealed and replaced MRCA's previous regulation, O. Reg 165/06.

The first section of this document is an introduction including the purpose and organization of the document. The second section includes background information including the history of conservation authorities, their role and mandate and the legislative authority of conservation authorities. The next 6 sections of this document are organized according to the areas/features regulated under Section 28 of the *Conservation Authorities Act* and include a preliminary administrative section.

- Section 3: Policies and Guidelines for the Administration of O. Reg. 41/24
- Section 4: River or Stream Valleys
- Section 5: Large Inland Lakes
- Section 6: Hazardous Lands
- Section 7: Watercourses
- Section 8: Wetlands

Each of these sections is intended to be self-contained while minimizing repetition in the guidelines and all should be read in conjunction with Section 3–Policies and Guidelines for the Administration of Ontario Regulation 41/24. It should be noted that Hazardous Lands (flood, erosion, and dynamic beach hazards) have been included in Section 4 and Section 5 as they pertain to those features. Section 6 is limited to Hazardous Lands associated with Unstable Soil and Unstable Bedrock to avoid duplication. It should be noted that more than one type of regulated feature may exist for a given property and application, and as such, reference must be made to all relevant sections and the policies must be applied concurrently.

The development activity policies included in this manual are complementary to the Natural Hazards (Section 3.1) policies within the Provincial Policy Statement 2020 (PPS) issued under the *Planning Act*, 2014.

In general, each section provides:

- the relevant excerpts from the Regulation shown in green text; and
- policy standards for implementing the Regulation shown in blue text. In some cases, policies are preceded by the phrase "It is the policy of MRCA".

The Regulation policies in this manual must be considered in their entirety since development activity, interference and alteration activities relevant to the Regulation may influence valley and stream corridors, wetlands, shorelines, watercourses and hazardous lands, either singularly or in combination. These policies will be followed by MRCA in making decisions regarding the outcome of all applications made under the Regulation.

It should be noted that this document does not address the approval requirements for other potentially affected agencies at any government level.

2. BACKGROUND

2.1 History of the Mattagami Region Conservation Authority

FIGURE 1: MRCA WATERSHED

The Mattagami Region Conservation Authority (MRCA) was first established as the Mattagami Valley Conservation Authority by Order-In-Council on November 30, 1961 following serious flooding on the Mattagami River in 1960 and Town Creek in 1961. Upon amalgamation of the City of Timmins in 1974, the Conservation Authority was enlarged through Order-In-Council 322/74 to incorporate the entire Upper Mattagami River Watershed upstream of Jocko Creek to the Height of Land as well as a portion of the Abitibi River Watershed. This enlargement not only extended the jurisdiction of the Conservation Authority over the entire City of Timmins, but also made it the largest Conservation Authority in total area in Ontario, at 11,060 square kilometres. Since its establishment the MRCA has undertaken a comprehensive program of water and land management that has included land acquisition, infrastructure construction, maintenance, flood forecast and warning, and land use regulation.

2.2 Role of Conservation Authorities

Ontario's 36 conservation authorities (CA) have a number of important responsibilities:

Conservation authorities are corporate bodies created by the Province of Ontario (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*. As watershed-based resource management agencies, each conservation authority is governed by the *Conservation Authorities Act* and by a Board of Directors whose members are appointed by municipalities located within the CA's jurisdiction.

Conservation authorities have a legislated responsibility under Section 28 of the *Conservation Authorities Act* to regulate development activity in areas of natural hazards including flooding, erosion, dynamic beaches and unstable soil and bedrock, as well as areas associated with river or stream valleys. Additionally, conservation authorities are responsible for regulating the interference or alteration of a watercourse or wetland.

Conservation authorities also have delegated responsibilities from the Minister of Natural Resources (MNR) to represent provincial interests regarding natural hazards identified in Section 3.1 of the

Provincial Policy Statement, 2020. This delegation is detailed in a Memorandum of Understanding between Conservation Ontario, MNR and the Ministry of Municipal Affairs and Housing. 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 included in circulation of policy documents and planning and development activity applications as prescribed under the *Planning Act*. CAs may comment as per their mandate to the municipality/planning approval authority on these documents and applications.

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, septic system reviews.

Individual conservation authorities may also enter into agreements with provincial and federal ministries and with municipalities to undertake specific regulatory/approval responsibilities (e.g., *Fisheries Act* Section 35; septic tank approvals under the Ontario Building Code).

Conservation authorities are landowners and as such, may become involved in the planning and development process, either as an adjacent landowner or as a proponent/applicant.

2.3 Overview of Legislative Framework

2.3.1 Conservation Authorities Act

Conservation authorities have a long and distinguished history in Ontario. The *Conservation Authorities Act* was created in 1946 in response to erosion and drought concerns, recognizing that these and other natural resource initiatives are best managed on a watershed basis.

In 1956, in response to the severe economic and human losses associated with Hurricane Hazel (1954), amendments to the *Conservation Authorities Act* first empowered 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 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.

In 1998, the *Conservation Authorities Act* was amended as part of the *Red Tape Reduction Act* (Bill 25), to ensure that regulations under the *CA Act* were consistent across the province and complementary to provincial policies. Significant revisions were made to Section 28, which led to the replacement of the "Fill, Construction and Alteration to Waterways" Regulation with the "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses" Regulation (165/06). While some CAs had been regulating wetlands, shorelines and inter-connecting channels for years, the amendments required all CAs to regulate Great Lakes shorelines, inter-connecting channels, large inland lakes and wetlands in addition to the areas and features each CA historically regulated.

In subsequent years numerous amendments have been made to Section 28 of the *Conservation Authorities Act* and associated regulations. Ontario Regulation 686/21, among other provisions, requires that *"An authority shall provide programs and services to ensure that the authority satisfies its duties, functions and responsibilities to administer and enforce the provisions of Parts VI and VII of the Act and any regulations made under those Parts. O. Reg. 686/21, s. 16."*. In 2024, a new regulation was developed, Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits. This regulation replaces the individual CA regulations approved in 2006.

The current legislative structure includes requirements for the administration of PART VI of the *CA Act* in both the *CA Act* and O. Reg. 41/24. CA staff and their legal counsel must refer to both pieces of legislation to make decisions and develop policies and guidelines related to *CA Act* permit applications.

2.3.1.1 Prohibited Activities

Section 28 of the *Conservation Authorities Act*, includes the following section:

> *28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority:*
>
> *1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.*
>
> *2. Development activities in areas that are within the authority's area of jurisdiction and are,*
>
> *i. hazardous lands,*
>
> *ii. wetlands,*
>
> *iii. river or stream valleys the limits of which shall be determined in accordance with the regulations,*
>
> *iv. areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations; or,*
>
> *v. other areas in which development should be prohibited or regulated, as may be determined by the regulations. 2017, c. 23, Sched. 4, s. 25; 2022, c. 21, Sched. 2, s. 7 (1).*

The province established a legislative framework that includes most of the requirements for the implementation of Section 28 of the *CA Act*. This ensures CAs and their legal counsel can rely on the *CA Act* for any matters that may be challenged. The regulations established under the *CA Act* provide further requirements such as: identification of some natural hazard areas and definitions, requirements for CA policies, and other actions related to processing permit applications, etc. Therefore, CAs must ensure that they are using both the *CA Act* and Regulation 41/24 to prepare or update their CA policies.

For example, the *CA Act* prohibits development in a wetland and the Regulation defines the wetland and includes a reference to the 'other areas' next to the wetland.

2.3.1.2 Exceptions under the Conservation Authorities Act and O. Reg. 41/24

Section 28 (2) of the *Conservation Authorities Act* includes the following section specific to exceptions:

Exception, aggregates

(2) The prohibitions in subsection (1) do not apply to an activity approved under the Aggregate Resources Act after December 18, 1998, the date the Red Tape Reduction Act, 1998 received Royal Assent. 2017, c. 23, Sched. 4, s. 25.

Same, prescribed activities

(3) The prohibitions in subsection (1) do not apply to an activity or a type of activity that is prescribed by regulation and is carried out in accordance with the regulations. 2017, c. 23, Sched. 4, s. 25.

Same, prescribed areas

(4) The prohibitions in subsection (1) do not apply to any activity described in that subsection if it is carried out,

(a) in an area that is within an authority's area of jurisdiction and specified in the regulations; and

(b) in accordance with any conditions specified in the regulations. 2017, c. 23, Sched. 4, s. 25.

Further, O. Reg 41/24 includes the following section specific to exceptions:

Exceptions

5. Paragraph 2 of subsection 28 (1) of the Act does not apply to,

(a) the construction, reconstruction, erection or placement of,

(i) a seasonal or floating dock that,

(A) is 10 square metres or less,
(B) does not require permanent support structures, and
(C) can be removed in the event of flooding,

(ii) a rail, chain-link or panelled fence with a minimum of 75 millimetres of width between panels, that is not within a wetland or watercourse,

(iii) agricultural in-field erosion control structures that are not within and that do not have any outlet of water directed or connected to a watercourse, wetland or river or stream valley,

(iv) a non-habitable accessory building or structure that,

(A) is incidental or subordinate to the principal building or structure,
(B) is 15 square metres or less, and
(C) is not within a wetland or watercourse, or

(v) an unenclosed detached deck or patio that is 15 square metres or less, is not placed within a watercourse or wetland and does not utilize any method of cantilevering;

(b) the installation of new tile drains that are not within a wetland or watercourse, within 30 metre s of a wetland or within 15 metres of a watercourse, and that have an outlet of water that is not directed or connected to a watercourse, wetland or river or stream valley, or the maintenance or repair of existing tile drains;

(c) the installation, maintenance or repair of a pond for watering livestock that is not connected to or within a watercourse or wetland, within 15 metres of a wetland or a watercourse, and where no excavated material is deposited within an area where subsection 28 (1) of the Act applies;

(d) the maintenance or repair of a driveway or private lane that is outside of a wetland or the maintenance or repair of a public road, provided that the driveway or road is not extended or widened and the elevation, bedding materials and existing culverts are not altered;

(e) the maintenance or repair of municipal drains as described in, and conducted in accordance with the mitigation requirements set out in the Drainage Act and the Conservation Authorities Act Protocol, approved by the Minister and available on a government of Ontario website, as it may be amended from time to time; and

(f) the reconstruction of a non-habitable garage with no basement, if the reconstruction does not exceed the existing footprint of the garage and does not allow for a change in the potential use of the garage to create a habitable space.

2.3.1.2.1 Crown Activities

It is noted that the *Conservation Authorities Act* does not contain a subsection that specifically "binds the Crown". Therefore, activities of Provincial Ministries, Federal Departments and Crown Agencies or "Crown Corporations" are not bound by the *CA Act* and these entities are not legally required to obtain a permit under the *Conservation Authorities Act*.

Determining whether a particular body is an agent of the Crown depends on the specific functions of the body and the degree of control exercised over that body by the Crown. In some circumstances, changes to a corporation's ownership may result in the corporation's status changing from a Crown corporation to a private entity. For example, Hydro One and its affiliates no longer hold status as Crown corporations. Conservation Ontario and Hydro One developed an updated MOU (2021), acknowledging the new requirement for Hydro One and its affiliates (Hydro One Telecom Inc. and Hydro One Sault Ste. Marie LP) to obtain a CA permit under Section 28 of the *CA Act* for their work. This MOU outlines protocols and best practices that streamline the review process. (2021 Memorandum of Understanding between Conservation Ontario and Hydro One Networks Inc. is available on Conservation Ontario website members' section.)

While the *Conservation Authorities Act* does not bind Crown proponents for activities taking place on Crown land, a third-party proponent, not acting on behalf of the Crown would be subject to the *CA Act* and Section 28 regulations.

Voluntary compliance with the review process requirement is always a possibility for the Crown and its agencies. Through their policies, the CAs may invite the Crown and its agencies to voluntarily submit proposals for works through the permit review process. Although best practice suggests they comply to ensure sufficient technical review of their activity, they are within their legal rights to refuse to participate in the voluntary review process.

2.3.2 Permits

Section 28.1 of the *CA Act* outlines the legal requirements for CA decisions for a permit application. The *CA Act* includes two subsections that provide the criteria that a permit application must meet to the satisfaction of the CA. These include:

28.1 (1) An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

(a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and

(c) any other requirements that may be prescribed by the regulations are met. 2017, c. 23, Sched. 4, s. 25; 2022, c. 21, Sched. 2, s. 9 (1).

To receive permission for proposed works in regulated areas the proponent must submit a permit application to MRCA for approval prior to any works. A summary of the permit approval process is discussed in further detail in Section 3.4 of this document.

Permission from MRCA will be given in the form of a formal permit. For any type of application, submission of technical studies may be necessary.

Currently, there are no additional requirements under 28.1(1)(c).

2.3.2.1 Technical Studies

For any type of application, the submission of technical studies to determine the suitability of development proposals may be necessary and may be requested at the discretion of MRCA. These technical studies must be carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of the MRCA. All technical studies in support of development proposals are to be completed at the applicant's expense.

CAs may have technical guidelines that should be used by qualified professionals for studies, plans etc. for a permit application. Where the CA does not have technical guidelines, the applicant should consider MNR's Technical Guides for Natural Hazards (MNR, 2023, MNR, 2002a; MNR, 2002b; MNR, 1996a; MNR, 1996b; and MNR 1996c), and other Provincial guidelines and/or guidelines approved by the CA Board.

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.

Currently there are no provincial Technical Guides developed specifically for use in evaluating change or **interference with a wetland**. The Recommendations for Conducting Wetland Environmental Impact Studies (EIS) for Section 28 Regulations Permissions (Beacon) may be a helpful resource for CAs, while acknowledging that this document was prepared to assist with the implementation of the 2006 individual CA Section 28 regulations.

Expertise for reviewing technical studies varies among CAs. Where expertise within the CA is not available, the CA may request that the study be peer-reviewed by a qualified professional at the expense of the applicant.

2.3.2.2 Application/Hearing

Sections 28.1 (2) to (5) include sections that relate to: the requirement to apply for a permit, enabling a CA to include conditions in a permit, and the right to a hearing where an application may be refused, or conditions are being contested.

2.3.2.3 Renewable Energy Projects

Renewable energy projects (28.1 (6)) limit the 'tests' that may be applied to a CA consideration of a permit application and the conditions that can be attached to these permits. A CA shall not refuse an application unless it is of the opinion that it is necessary to do so to control flooding, erosion, dynamic beaches or unstable soil or bedrock; and the CA shall not attach conditions to the permit unless the conditions relate to controlling flooding, erosion, dynamic beaches or unstable soil or bedrock. In other words, the test broadly related to health or safety and found in 28.1 (1) (b) does not apply to these permits. As with similar applications, the applicant has a right to a hearing where an application may be refused, or conditions are being contested. After a hearing the CA shall provide an applicant with written reasons for the decision (28.1 (7)).

2.3.2.4 Request for Minister's Review

Sections 28.1 (8) to (19) outline, in detail, the steps and requirements in the process if an applicant appeals the decision of the CA or conditions attached to a permit. In general, these sections outline the hearing process, appeal timelines, the Minister's review process and timelines associated with that review (includes requirements for the CA and the applicant). The Minister is required to publish on the Environmental Registry a notice of the Minister's intention to review a decision made by an authority and shall do so within 30 days of giving a reply that a review will be undertaken. Upon the completion of the review, the Minister may confirm or vary the authority's decision or make any decision that the Minister considers appropriate, including issuing the permit subject to conditions. The decision made by the Minister in this process is final.

2.3.2.5 Appeal to Tribunal

Sections 28.1 (20) to (26) outline, in detail, the steps, requirements and timelines associated with appeals to the Minister and the Ontario Land Tribunal (OLT).

The following is a general overview of the potential permit processes outlined in s. 28.1 including the Minister's Review and Ontario Land Tribunal. It is important to note that CAs and legal counsel must refer to the *CA Act* for the exact requirements.

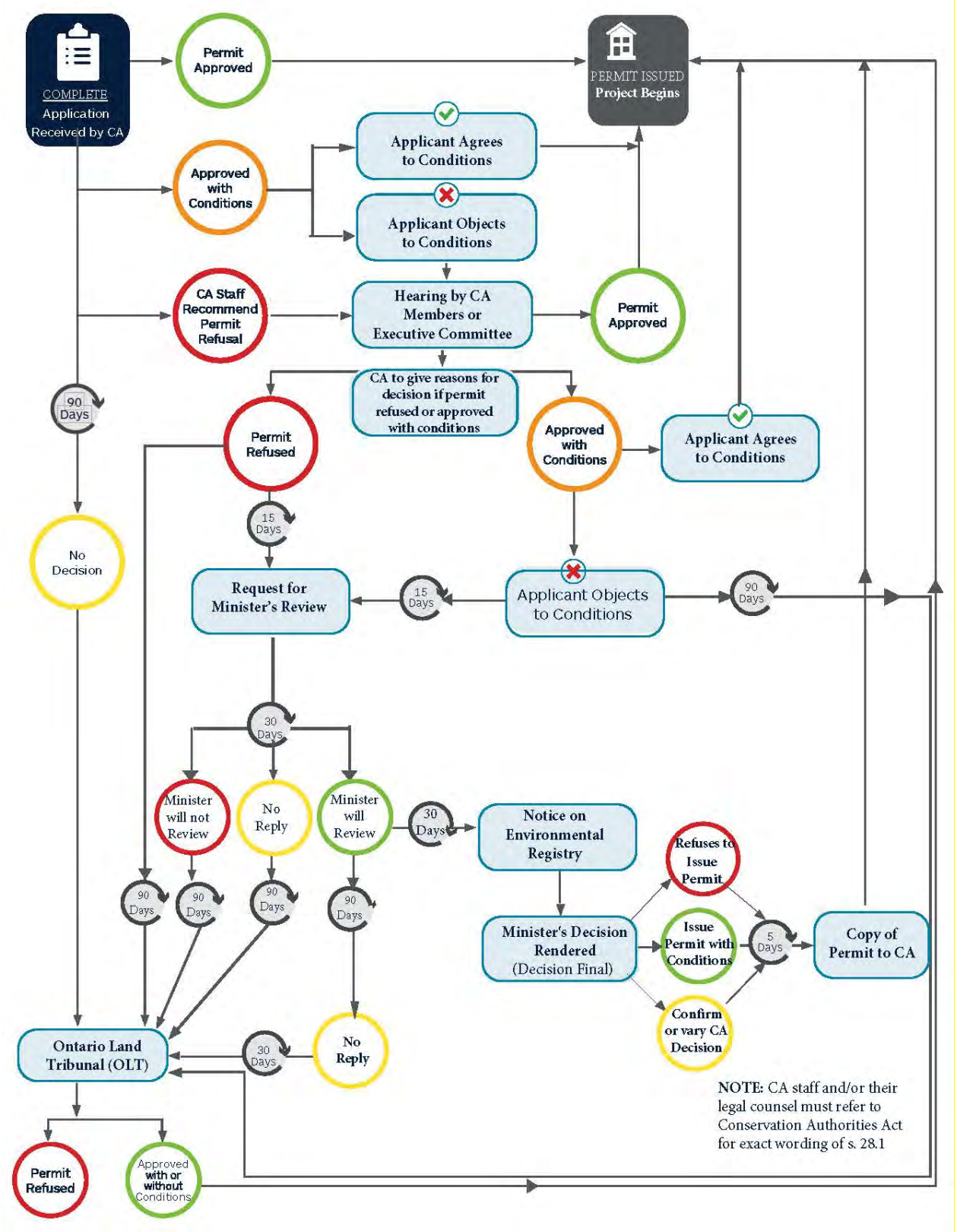

FIGURE 2: PERMIT PROCESS, POTENTIAL MINISTER'S REVIEW AND OLT

Further details on how to conduct a hearing under Part VI of the *CA Act* are available through the Conservation Ontario *Conservation Authorities Act* Hearing Guidelines (2021 as may be amended).

2.3.3 Permits issued by Minister

Section 28.1.1 of the *CA Act* outlines the powers of the Minister to issue an Order related to Section 28 permits. A general summary of this portion of the *CA Act* is included in this document and CAs and their legal counsel should refer to the *CA Act* if an Order under this section of the *Act* is received from the Minister.

The Minister may, by order, direct the CA not to issue a permit to a person (28.1.1(1)(a)). In addition, the Minister may direct a CA not to issue a permit for a type or class of activities for a specified period of time (28.1.1(1)(b)). If an order is made, the Minister can issue a permit for any activity in the order *"if, in the Minister's opinion, the criteria described in clauses 28.1 (1) (a), (b) and (c) are satisfied."* The order(s) apply before or after applications have been received by the CA and decisions are pending. Section 28.1.1 (5) outlines the notice provisions i.e., notice will be given to the applicable CA, to the applicants who submitted an application before the order was made and a decision is pending, and that it will be posted on the Environmental Registry within 30 days of being made.

Sections 28.1.1 (6) to (11) outline, in detail, the steps and requirements which generally include responsibilities of the CA and the applicant with respect to the order and information that they may have that will be provided to the Minister within the timelines specified by the Minister. It also includes application requirements and consultation process for permits to be considered by the Minister, conditions of an approval, and written reasons for a decision of the Minister. The CA shall receive a copy of the permit that includes the date of validity.

Sections 28.1.1 (12) to (14) identify the decision and appeal process. The Minister's decision is final. The application must comply with other sections of the *CA Act* (s. 28.1 (3) or clause 28.1.1 (7) (a)) and the applicable regulation e.g., complete application. However, in specific circumstances the decision may be appealed to the Ontario Land Tribunal i.e., no notice of a decision from the Minister within 90 days of the application being made. Subsections 28.1 (24), (25) and (26) apply with necessary modifications to an appeal to the Tribunal. These sections include an appeal of non-decision by the Minister, notice of appeal and hearing requirements of the Tribunal.

2.3.4 Mandatory permits, zoning orders

In 2020 changes were made to the *Conservation Authorities Act* that require conservation authorities to issue permits when a zoning order has been made by the Minister of Municipal Affairs and Housing under Section 34.1 of the *Planning Act*. The *Planning Act* (s. 34.1) gives the Minister of Municipal Affairs and Housing the authority to control the use of any land in the province. Zoning orders can be used to protect a provincial interest or to help overcome potential barriers or delays to critical projects. This includes an order for Community Infrastructure and Housing accelerator projects. This order authorizes a development project under the *Planning Act* even if the proposal does not comply with other requirements of the *Conservation Authorities Act*. Conservation authorities cannot refuse to issue these permits under a Minister's Zoning Order, hence the term "mandatory permit", but can require conditions to be placed on the permission.

The *CA Act* requires the implementation of a zoning order as outlined in Section 28.1.2. (1).

A general summary of this section of the *CA Act* is included in this document and CAs and their legal counsel should refer to the *CA Act* if a permit application is received related to a zoning order made by

the Minister of Municipal Affairs and Housing under Section 34.1 or 47 of the *Planning Act* (see Figure 3).

The zoning order received by the CA will apply to a 'development project' as defined by the *CA Act* provided that this project is not located in the Greenbelt Area under Section 2 of the *Greenbelt Act*, 2005. The CA shall issue the permit if all of the requirements in Section 28.1.2 (1) (a)-(c) are satisfied. The CA shall not refuse a permit despite the prohibitions in subsections 28(1) or the 'tests' or criteria in s. 28.1.(1). The CA may include conditions of approval on the permit as outlined in s. 28.1.2 below:

> *(6) Subject to subsection (7), an authority may attach conditions to the permit, including conditions to mitigate,*
>
> > *(a) any effects the development project is likely to have on the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;*
> >
> > *(b) any conditions or circumstances created by the development project that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; or*
> >
> > *(c) any other matters that may be prescribed by regulation. 2020, c. 36, Sched. 6, s. 17; 2022, c. 21, Sched. 2, s. 10 (4).*

Sections 28.1.2 (7) to (13) outline the process and timeline associated with attaching any conditions to a permit associated with a zoning order. In general, these clauses require a CA to provide a hearing before the authority and the applicant may appeal the CA's decision on a condition(s) to the Minister. The permit holder must submit their request for the Minister to conduct a review of the CA conditions within 15 days of the reasons being given under subsection (8). The Minister may amend the conditions and will consider the same mitigation criteria or tests noted above in their review. In the case of this review, the Minister's decision is final.

Alternatively, or in addition, sections 28.1.2 (14) to (16) outline, in detail, the appeal process to the Ontario Land Tribunal and criteria and timelines required in this process.

Subsection (14) states:

> *A permit holder who objects to any conditions attached to the permit by an authority may, within 90 days of the reasons being given under subsection (8), appeal to the Ontario Land Tribunal to review the conditions if,*
>
> > *(a) the permit holder has not submitted a request under subsection (9) to the Minister to review the conditions; or*
> >
> > *(b) the permit holder has submitted a request to the Minister to review the conditions under subsection (9) and,*
> >
> > > *(i) 30 days have elapsed following the day the permit holder submitted the request and the Minister did not make a reply in accordance with subsection 28.1 (9), or*
> > >
> > > *(ii) the Minister made a reply in accordance with subsection 28.1 (9) indicating that the Minister refused to conduct the review. 2020, c. 36, Sched. 6, s. 17; 2021, c. 4, Sched. 6, s. 39 (14); 2022, c. 21, Sched. 2, s. 10 (8).*

If the Minister is conducting a review of the conditions as outlined in earlier sections (28.1.2(9)), and the Minister's decision has not been provided within 90 days of the start of that review, the permit holder may, within 30 days, appeal this non-decision on the CA conditions directly to the Ontario Land Tribunal. The permit holder and the Tribunal are required to follow the notice requirements in s. 28.1 (24) and

(25). The powers of the tribunal include the authority to take evidence, to refuse the permit or to order the authority to issue the permit, with or without conditions (Subsection 28.1 (26)).

Subsections (17) to (18) outline the Agreement requirements. The CA shall enter into an agreement with the permit holder for the development project and they may add other parties to this agreement. The agreement under subsection (17) shall set out actions or requirements that the permit holder must complete or satisfy in order to compensate for ecological impacts and any other impacts that may result from the development project.

Subsections (19) and (19.1) outline the timing of the implementation of the 'development project' and the agreement with the CA. Subsection (19) includes, *"No person shall begin a development project until an agreement required under subsection (17) has been entered into. 2020, c. 36, Sched. 6, s. 17."* However, subsection (19.1) includes, *"If a regulation made under subsection 40 (4) provides that a development project may begin prior to entering into an agreement under subsection (17), but an agreement is not entered into by the date identified in the regulation, no person shall carry out the development project until such time the agreement is entered into. 2022, c. 21, Sched. 2, s. 10 (10)."* It is anticipated that the regulation for a 'development project' will be limited to a specific project. The province has the ability to create a regulation that permits the development project to begin prior to entering into an agreement.

The CA should also identify additional requirements that may apply to any application for a development project within a regulated area where a zoning order has been made by the Minister of Municipal Affairs and Housing under s. 34.1 or 47 of the *Planning Act* which authorizes the development project. These requirements may include information related to:

- costs e.g., administrative and legal, compensation, monitoring;
- CA permit shall be granted for development projects subject to zoning orders in accordance with s. 28.0.1 of the *Act*;
- conditions that comply with s. 28.1.2 requirements and tests;
- any requirement for an agreement;
- compensation for ecological impacts and any other impacts that may result from the development project (individual CAs should develop compensation guidelines);
- compensation monitoring and reporting.

The following provides a general overview of the permit process related to Mandatory Permits or a Zoning Order outlined in s. 28.1.2.

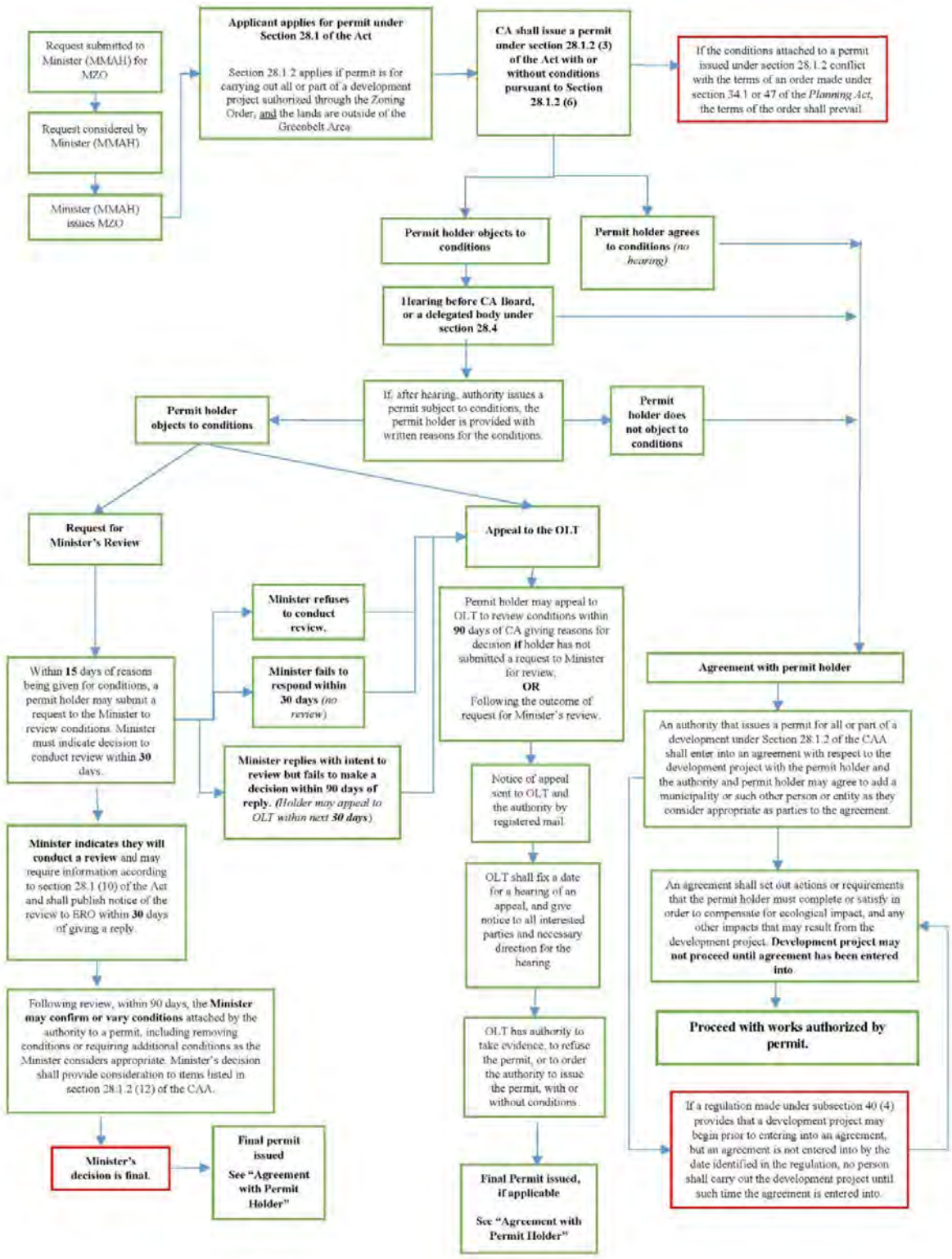

FIGURE 3: MANDATORY PERMITS, ZONING ORDERS, OLT

2.3.5 Cancellation of permits

Section 28.3 provides the CA with the option to cancel a permit issued if it is the CA's opinion that the conditions of the permit have not been met or that the circumstances that are prescribed by regulation exist. This section outlines the process the CA shall follow to cancel a permit. This includes notice requirements (intent to cancel, specified date, permit holder hearing request). Within 15 days of receiving the CA notice of intent to cancel, the permit holder must submit a written request for a hearing. The hearing will be scheduled within a reasonable time frame. The CA may confirm, rescind or vary the decision to cancel the permit. If the CA confirms the cancellation of the permit or varies the permit in such a way that the permit holder objects, the permit holder may, within 90 days of receiving notice of the authority's decision, appeal the decision to the Ontario Land Tribunal. The permit holder is required to send their notice of appeal to the Tribunal and the CA by registered mail.

2.3.6 Delegation of Power

Section 28.4 of the *CA Act* states *"An authority may delegate any of its powers relating to the issuance or cancellation of permits under this Act or the regulations, or to the holding of hearings in relation to the permits, to the authority's executive committee or to any other person or body, subject to any limitations or requirements that may be prescribed by regulation."*

The MRCA Board has delegated the approval and issuance of all permits to the General Manager and this has been approved by the CA Board through Resolution No. 2025 - 1678. Decisions that may be appealed (e.g., the cancellation of a permit) or a hearing where the CA staff are recommending refusal should be determined by the Authority Board.

2.3.7 Conservation Authority Board Approved Policies

Board-approved CA policies are required as outlined in the *CA Act* and in s. 12 of O. Reg. 41/24 to provide a decision-making framework for the review of applications. In general, policies ensure a consistent, timely and fair approach to the review of applications, staff recommendations and Board decisions. They also facilitate the effective and efficient use and allocation of available resources.

The hierarchy of legislation and policies described in this section is depicted below.

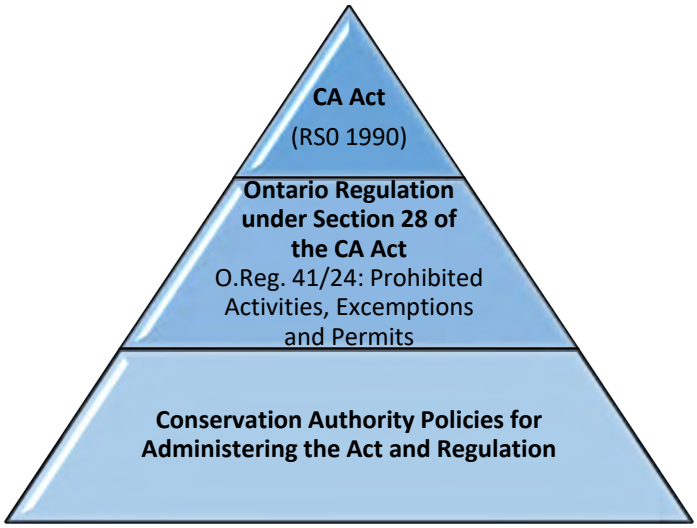

FIGURE 4: HIERARCHY OF LEGISLATION / REGULATION / POLICY

To receive a permit for a development activity, it must be demonstrated to the satisfaction of the CA, in the application that the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The control of dynamic beaches is generally applicable to the large inland lakes regulated areas.

Additionally, and depending on the application, it must be demonstrated to the satisfaction of the CA that interference in any way with a watercourse or change or interference in any way with a wetland is acceptable. The CA review may include the hydrologic functions of the watercourse and all components of the definition of a wetland. See Section 8.0 for additional information on wetlands.

A permit from a CA will be in the form of a formal permit. For all types of applications, submission of technical studies may be necessary (see Section 2.3.2.1).

For an application to be refused or where the applicant objects to the conditions of approval, the *CA Act* requires that the applicant be given the opportunity to a hearing by the local CA Board. The Conservation Ontario Section 28 *Conservation Authorities Act* Model Hearing Guidelines (2021) as may be amended, provides a step-by-step process for conducting hearings required under s. 28.1 (5) s. 28.1.2 (7) and s. 28.3 (4) of the *Conservation Authorities Act* or as required by Ontario Regulation 41/24. MRCA will conduct a hearing under the Regulation in a manner consistent with these guidelines. The Hearing Board is empowered by law to make a decision, governed by the *Statutory Powers Procedures Act*. It is the purpose of the Hearing Board to evaluate the information presented at the hearing by both the CA staff and the applicant and to decide whether the application will be approved with or without conditions or refused.

A description of the appeal processes available to the applicant is outlined in detail in other sections of this document.

2.3.8 Regulations under the CA Act

2.3.8.1 Ontario Regulation 97/04

Revisions to the *Conservation Authorities Act* in 2004 resulted in a new directive: Ontario Regulation 97/04 that required all conservation authorities to update their regulations to conform to a model developed by the province. 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” was approved in May 2004 following a prescribed public consultation process. This regulation established the content requirements to be met in a regulation made by a Conservation Authority under Subsection 28(1) of the *Conservation Authorities Act*.

The objectives of the regulation are:

- minimize the potential for loss of life and property damage;
- reduce the necessity for public and private expenditures for emergency operations, evacuation and restoration of properties subject to flooding;
- regulate floodplain and hazardous lands development that could limit channel capacity and increase flood flow, leading to emergency and protective measures;
- make information available regarding flood prone or hazardous lands areas;
- regulate the draining or filling of wetlands which may reduce natural water storage capacity;
- regulate development on or adjacent to potentially hazardous slopes;
- reduce soil erosion from valley slopes; and

- minimize water pollution or degradation of water quality associated with filling, development activity, and alteration activities.

2.3.8.2 Ontario Regulation 165/06

In 2006, the Minister of Natural Resources approved the "Development, Interference and Alteration Regulations" (individual Conservation Authority Regulations) for all conservation authorities consistent with Ontario Regulation 97/04 of the *Conservation Authorities Act*. Each conservation authority was then given a new regulation number. It is important to recognize that the general intent of the regulation did not change. The intent of the regulation update was to provide consistency between and within conservation authority jurisdictions, as well as to more closely support the Provincial Policy Statement (2020).

2.3.8.3 Mandatory Programs and Services - Ontario Regulation 686/21

Further to the *Conservation Authorities Act* s, 21.1, in October 2021, the provincial government defined the Mandatory Programs and Services to be offered by conservation authorities in a new regulation under the *Conservation Authorities Act*. O. Reg. 686/21 came into effect on January 1, 2022. This regulation requires CAs to provide mandatory programs and services related to the risk of natural hazards (see s.1-8). (Category 1 Program or Service). CAs are required to satisfy their duties, functions, and responsibilities to administer and enforce the provisions of Part VI and VII of the *CA Act* and any regulations made under those Parts. Programs and services related to the risk of natural hazards include:

- Comment regarding applications, proposals (ss. 6. (1) and ss. 6. (2))
- Plan Review, comments (ss. 7 (1) and ss. 7 (2))
- Administering and enforcing the *Act* (s 8)

In addition to Part VI regulatory responsibilities, CAs that fulfil an additional legal responsibility will administer their responsibilities for these duties under the applicable legislation.

Applications or projects under other legislation may be the earliest opportunity for CAs to provide input on natural hazards. In the review of these applications or proposals, CAs should identify natural hazards and attempt to resolve any issues with the proposal that may arise due to natural hazards. This will result in a streamlined CA permit application or remove the need for a permit.

Under s. 6. (1) CAs shall provide programs and services to enable the authority to review applications or proposals to comment on the risks related to natural hazards arising from the proposal made under the Acts noted below:

- The *Aggregate Resources Act*
- The *Drainage Act*
- The *Environmental Assessment Act*
- The *Niagara Escarpment Planning and Development Act*

Subsection 7 (1) of Ontario Regulation 686/21 outlines the requirements for CAs to review and provide comments on policy documents (e.g., Official Plans and comprehensive Zoning By-laws) and applications submitted pursuant to the *Planning Act* in accordance with the Mandatory Programs and Services Regulation.

CAs provide technical support and advisory services to municipalities for planning applications for natural hazards (not including hazardous forest types for wildland fire). In this capacity, CA staff provide

technical input regarding potential natural hazard impacts and advice about how negative impacts can be avoided or minimized.

Subsection 7 (2) 1 to ss. 7 (2) outline additional responsibilities of CAs for natural hazard land use planning related matters. These include providing comments, technical support, information, notice and/or training to municipalities or planning boards, as well as providing comments and other support to the Ministry of Municipal Affairs and Housing and MNR when requested to do so.

2.3.8.4 Prescribed Acts – Ontario Regulation 596/22

In 2022, the *CA Act* was amended, and the province included an exception to the services a CA may provide.

Municipal programs and services

21.1.1 (1) Subject to subsection (1.1), an authority may provide, within its area of jurisdiction, municipal programs and services that it agrees to provide on behalf of a municipality situated in whole or in part within its area of jurisdiction under a memorandum of understanding, or such other agreement as may be entered into with the municipality, in respect of the programs and services. 2020, c. 36, Sched. 6, s. 8 (1). 2022, c. 21, Sched. 2, s. 3 (1).

Exception, prescribed Acts

Subsection *21.1.1(1.1) An authority shall not provide under subsection (1), within its area of jurisdiction, a municipal program or service related to reviewing and commenting on a proposal, application or other matter made under a prescribed Act. 2022, c. 21, Sched. 2, s. 3 (2).*

Ontario Regulation 596/22: Prescribed Acts enabled under the *CA Act* s. 21.1.1 (1.1) and s. 21.1.2 (1.1)) came into effect on January 1, 2023. This regulation stipulates that CAs shall not provide a Municipal (Category 2) or Other (Category 3) program or service related to reviewing and commenting on proposals, applications, or other matters under a prescribed Act.

The prescribed Acts include:

- The *Aggregate Resources Act*
- The *Condominium Act, 1998*
- The *Drainage Act*
- The *Endangered Species Act, 2007*
- The *Environmental Assessment Act*
- The *Environmental Protection Act*
- The *Niagara Escarpment Planning and Development Act*
- The *Ontario Heritage Act*
- The *Ontario Water Resources Act*
- The *Planning Act*

Under the Mandatory Programs and Services Regulation (O. Reg. 686/21) which includes natural hazards, the CAs continue to provide review and comments on applications related to natural hazards and regulatory requirements. O. Reg. 596/22 does not affect the CA provision of mandatory (Category 1) programs or services related to the prescribed *Act*s. Subject to the individual legislative and regulatory requirements, applications made under *Act*s including the *Planning Act, Environmental Assessment Act, Drainage Act, Niagara Escarpment Planning and Development Act* etc. must continue to be circulated for mandatory program and service delivery for CAs to review and provide comments.

2.3.8.5 Ontario Regulation 41/24: Prohibited Activities, Exemptions, and Permits

Ontario Regulation 41/24 was approved on April 1, 2024.

The MRCA regulates all components noted in s. 28 of the *Act* within its jurisdiction and the Regulation includes some components of the regulated areas. The MRCA will use the *CA Act* as well as Ontario Regulation 41/24 in the administration of the permit process. The MRCA regulates:

- development in river or stream valleys, wetlands, shorelines and hazardous lands and associated allowances;
- 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; and
- other areas where, in the opinion of the Minister, development should be prohibited or regulated or should require the permission of the Authority.

2.3.9 Other Related Legislation

2.3.9.1 The Planning Act

The principle of development is established through the *Planning Act* process and CAs' are involved in the review of planning applications under the *Planning Act* primarily in three ways: as an agency with delegated responsibilities for the review of natural hazards; as a technical advisor; and as a commenting agency.

Ontario Regulation 41/24 complements the Natural Hazard (Section 3.1), policies of the Provincial Policy Statement (2020) under the *Planning Act*. Delegated responsibility for a conservation authority for providing input with respect to provincial interests under the PPS, 2020 is limited to Section 3.1 – Natural Hazards. This delegation of responsibility requires the Mattagami Region Conservation Authority to review and provide comments on policy documents (Official Plans and comprehensive Zoning By-laws) and applications submitted pursuant to the *Planning Act* as part of the Provincial One Window Planning Service. Natural hazards include:

- Floodplain management;
- Hazardous slopes;
- Large inland lakes; and
- Unstable soils and erosion hazards.

In addition, regulations under the *Planning Act* (O. Reg. 545/06, 543/06 and 200/96) require municipalities to give notice to the Mattagami Region Conservation Authority regarding planning applications and changes to policy documents. In its capacity as a commenting agency, the Mattagami Region Conservation Authority may provide additional advisory comments which relate to its goals and objectives for watershed management.

In addition, the *Planning Act* limits conservation authority input on appeal unless it is related to natural hazard policies as outlined in s. 1 (4.1). Regulations under this *Act* (e.g., O. Reg. 545/06, 543/06 and 200/96) require municipalities to give notice to CAs regarding planning applications and changes to policy documents. CAs may comment on natural hazard matters as outlined in the *CA Act* and *Planning Act*. Consistent with its watershed-based resource management strategy, a CA may provide observations which relate to its goals and objectives for watershed management.

One of the main differences between the PPS and O. Reg. 41/24 is that the *Planning Act* establishes the principle of development and the Regulation and this policy document, much like a building permit, identifies specific site requirements prior to activities taking place. Prior to the review of a regulation

application, the MRCA will often see the proposal through their Plan Review process including applications under the *Planning Act* (e.g., severances, site plan, subdivision applications). Although MRCA permission for an application under our regulations may not be issued for many years after the planning application, MRCA endeavours to ensure, through its comments on the planning application, that the requirements under the Regulation process can be fulfilled at the time an application under the Regulation is received.

If an application under the *Planning Act* does not meet the MRCA Board approved policies (for its regulations), staff should work with the municipality and the proponent to modify the application. As previously noted, the principle of development is established through the *Planning Act* process. Therefore, it is not acceptable to recommend approval of a planning application and then recommend refusal of a regulatory permission, unless the applicant refuses to meet the specific requirements under the Regulation. If an issue remains unresolved, MRCA should not recommend approval of the *Planning Act* application and assess the option of making an appeal to the Ontario Land Tribunal (OLT).

Alternatively, it is also recognized that there may be historic planning approval decisions that were made in the absence of current technical information or prior to the establishment of the current regulations and policies, which would now preclude development. In these situations, innovative efforts may be necessary to address the site constraints and accommodate the development. However, in some cases approval should not be granted.

2.3.9.2 Unresolved *Planning Act* Approvals

Applications for development activity which still require a *Planning Act* approval (re-zoning / severance / minor variance) to be resolved within the applicable municipality will not be accepted.

2.3.9.3 Environmental Assessment Act

Through the Mandatory Program and Service Regulation, CAs review proposals under the *Environmental Assessment Act* for the purpose of commenting on the risks related to natural hazards. Where an Environmental Assessment (EA) was approved and the CA was satisfied with the natural hazard evaluation(s) and the preferred alternative in the EA, the CA may consider evaluations completed through this process as part of their review of a permit application. In some cases, the text or recommendations included in the EA may outline additional studies that may be required as part of the final design process.

2.3.10 Other Legislation

There are many other pieces of legislation that address various water and related resource management activities. Some of the key pieces of legislation include:

- *Fisheries Act* (Fisheries and Oceans Canada);
- *Lakes and Rivers Improvement Act* (MNR);
- *Public Lands Act* (MNR);

It is important to note that CA 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. Alternatively, complying with or obtaining all other approvals, laws, statutes, ordinances, directives, regulations, etc. does not exempt the applicant from obtaining permission under Section 28 of the *Conservation Authorities Act*.

2.4 Definitions and Interpretations

The following sections outline the key definitions and interpretations recommended for implementing the CA regulation. Section 28 of the *CA Act* and the Regulation allows CAs to prohibit or restrict activities as noted above. The *CA Act* and the Regulations do not provide definitions for many of these terms. Therefore, other relevant documents were reviewed to establish interpretations for those terms not defined in the *CA Act* and Regulation. It is important to note that where definitions are provided in the *CA Act* and Regulation these definitions (e.g., "development activity") prevail for the implementation of the Regulation, even if other definitions exist in other relevant documents. In addition to this section there are definitions of common terms throughout the document and in Appendix A: Definitions.

2.4.1 Definitions from the Conservation Authorities Act and O. Reg 41/24

Section 28.1.2 (2) of the *Conservation Authorities Act* provides the following definition in relation to Mandatory Permits Zoning Orders:

"Development project" means development activity as defined in subsection 28 (5) or any other act or activity that, without a permit issued under this section or Section 28.1, would be prohibited under Section 28. 2020, c. 36, Sched. 6, s. 17; 2022, c. 21, Sched. 2, s. 10 (2). Therefore 'development activity' is used throughout this document.

Ontario Regulation 41/24 includes, for the purposes of Section 28 of the Act, the following terms with the following meanings:

Definitions

1. (1) In section 28 of the Act and in this Regulation,

"development activity" means,

(a) the construction, reconstruction, erection or placing of a building or structure of any kind,

(b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,

(c) site grading, or

(d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere;

"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;

"watercourse" means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs;

"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 have been caused by the presence of abundant water, and

(d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which have been favoured by the presence of abundant water.

(2) The definition of "wetland" in subsection (1) does not include periodically soaked or wet land used for agricultural purposes which no longer exhibits a wetland characteristic referred to in clause (c) or (d) of that definition.

Although each of the natural hazards included in the 'hazardous land' definition are not included in the definition section of the Regulation, the regulated area of some of these terms are included in other sections of the Regulation such as the River and Stream Valley or Shoreline e.g., flooding, erosion, dynamic beaches.

2.4.2 Definitions from the Provincial Policy Statement (PPS) 2020

To assist CA staff, this guideline provides a description of some natural hazards that are included in the Provincial Policy Statement (PPS). The PPS (2020) provides the following definitions.

***Erosion Hazard**: means the loss of land, due to human or natural processes, that poses a threat to life and property. The erosion hazard limit is determined using considerations that include the 100 year erosion rate (the average annual rate of recession extended over a one hundred year time span), an allowance for slope stability, and an erosion/erosion access allowance.*

NOTE: This definition should be used for defining the Erosion Hazard as it applies to the CA Regulation. The Regulation includes an allowance of 15 metres outside of the limit of the natural hazard. CAs should ensure that an appropriate setback from the Erosion Hazard is maintained within the allowance. Access standards for an erosion access allowance may be a consideration in the CA's review of an application pursuant to S 28.1 (1) (b) "*the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property*".

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

a) along the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes, the flooding hazard limit is based on the one hundred year flood level plus an allowance for wave uprush and other water-related hazards;

b) along river, stream and small inland lake systems, the flooding hazard limit is the greater of:

1. the flood resulting from the rainfall actually experienced during a major storm such as the Hurricane Hazel storm (1954) or the Timmins storm (1961), transposed over a specific watershed and combined with the local conditions, where evidence suggests that the storm event could have potentially occurred over watersheds in the general area;

2. the one hundred year flood; and

3. a flood which is greater than 1. or 2. which was actually experienced in a particular watershed or portion thereof as a result of ice jams and which has been approved as the standard for that specific area by the Minister of Natural Resources and Forestry;

except where the use of the one hundred year flood or the actually experienced event has been approved by the Minister of Natural Resources and Forestry as the standard for a specific watershed (where the past history of flooding supports the lowering of the standard).

Note: Flood Event Standards that CAs shall use are outlined in Schedule 1 of O. Reg. 41/24. The Regulation also outlines, in text, the extent of the floodplain regulated area (see Section 4.0: River or Stream Valleys and Section 5.0: Large Inland Lakes in this document).

Dynamic Beach Hazard: *means areas of inherently unstable accumulations of shoreline sediments along the Great Lakes - St. Lawrence River System and large inland lakes, as identified by provincial standards, as amended from time to time. The dynamic beach hazard limit consists of the flooding hazard limit plus a dynamic beach allowance.*

Hazardous Sites *(definition from Provincial Planning Statement 2024): means property or lands that could be unsafe for development and site alteration due to naturally occurring hazards. These may include unstable soils (sensitive marine clays [leda], organic soils) or unstable bedrock (karst topography).*

2.4.3 Additional Interpretations

In addition, the *Conservation Authorities Act*, Ontario Regulation 97/04 and O. Reg. 41/24 do not define "interference" nor was any definition found in any other planning document; hence, the interpretation below was developed by the Conservation Ontario Section 28 Peer Review and Implementation Committee with representatives from the MNR. Under the Regulation, "interference" only applies to projects within watercourses and wetlands.

Interference in any way is interpreted as:

"*any anthropogenic act or instance which hinders, disrupts, degrades or impedes in any way the natural features or hydrologic and ecologic functions of a wetland or watercourse*" (March 2008).

The common uses of words in this interpretation can be found in the Oxford Dictionary as follows:

Hinder means to delay or impede

Disrupt means to interrupt or disturb (an activity or process)

Degrade means lower the character or quality of

Impede means to delay or block the progress or action of

2.4.4 Health or Safety

Conservation authorities have historically considered the health or safety of people and emergency responders in the evaluation of permits. Typically, this included the evaluation of an application under the 'tests' of flooding, erosion, dynamic beach etc. and may have included other tests that are no longer part of the *CA Act* (e.g., pollution, conservation of land). In addition to the current tests of: "*the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock*;" the province has included an additional test of "*the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property*;" (*CA Act* S. 28 (1) (a)-(b)).The latter section reflects the decision of the Court of Appeal for Ontario that confirms CAs consider health or safety and damage or destruction of property in their decisions (Gilmor v. Nottawasaga Valley Conservation Authority).

The sections below (2.4.4.1 - 2.4.4.4) outline some factors that address the health and/or safety of people and the potential for damage or destruction of property. These factors should also be considered

relative to, and building upon, the sections of this document which speak to specific natural hazards. Currently, there is no legislative or regulatory definition or legal interpretation of the scope of 'health' as it relates to the *Conservation Authorities Act*.

Health may include the physical health of people such as injury and/or the potential for loss of life/fatality. Under the test of 'health', CAs may consider detrimental social disruption or short- and long-term mental health effects on people in the event of a natural hazard, and the potential for injury to a landowner, future landowner/occupant, or an emergency responder. The potential loss of life is more commonly considered under the 'safety' test but CAs may consider it under 'health' as well. Factors that may be considered include direct impacts (e.g., a fatality due to flooding in a basement or elevator, vehicle submerged in flood waters) or indirect factors (e.g., a fatality due to the inability for emergency responders to reach a person in a medical emergency during a natural hazard).

It is important to note that CAs rely on the best available information at the time of reviewing a permit application. This may include technical studies and plans prepared by a qualified professional and CA staff technical and policy opinions. The final decision is determined when, in the opinion of the CA, they have 'reasonable grounds' to approve, approve with conditions, or recommend refusal of a permit application.

2.4.4.1 Consideration of Access (Ingress/Egress)

The ability for the landowner, future landowners/occupants, public and emergency operations staff (police, firefighters, ambulance, municipal flood response teams etc.) to safely access a site during an emergency, such as a flooding or erosion event, is an important factor when considering any application for development activities. A permit application must be reviewed to ensure access to the proposed development is safe and appropriate for the proposed use. The applicant shall provide to the satisfaction of the CA, studies and/or plans that demonstrate how pedestrians, vehicles, emergency responders and equipment can gain access to and from the regulated feature in the event of a natural hazard. This includes ingress/egress that meets the access standards in these circumstances: during an event, for maintenance or repair, and/or construction of new remedial works.

In the context of new development activities, the risks should be controlled by prohibiting development in potentially dangerous or inaccessible portions of the regulated feature.

For existing development, safety risks are a function of the occupancy of structures, the susceptibility of the structure and the access routes to the structure. For existing development, the following factors should be considered:

- The degree of risk with the use of the existing access;
- The ability to modify the existing private or public access or construct a new safe access;
- The ability to find and use the access during an emergency;
- The ability and willingness of the municipality to allow staff and emergency vehicles to use the access (confirmation in writing may be considered); and
- The access will be in place prior to the completion of the development activity.

The risk can also be controlled by limiting the size (and therefore limiting the occupancy) of additions or reconstruction projects. If the risk is determined to be too great, no modifications/ alterations/ reconstructions of existing structures should be considered.

Where applications propose development within areas that have ingress/egress issues, it is recommended that the CA work with the applicant to ensure that safe access is achieved. Where safe

access is not demonstrated or is not possible based on the proposed permit application, the CA should advise the applicant and try to work with the applicant to identify alternative options (if available).

If safe access cannot be ensured to the satisfaction of the CA, consideration should be given to recommending refusal of the permit application.

Safe access is defined as conforming to the depth and velocity criteria for pedestrians and vehicles in the following table.

TABLE 1: DEPTH AND VELOCITY CRITERIA

Acceptable Vehicle Depths	Acceptable Pedestrian Depths	Acceptable Velocities
0.1 m	0.1 m	1.7 m/s (max allowable)
0.2 m	0.2 m	1.7 m/s
0.3 m (max. allowable)	0.3 m	1.3 m/s
	0.4 m	1.0 m/s
*depth for vehicle access may not exceed 0.3 metres	0.5 m	0.8 m/s
	0.6 m	0.7 m/s
	0.7 m	0.6 m/s
	0.8 m (max. allowable)	0.5 m/s

Source: Provincial Floodplain Planning Policy Statement (1988)

The MNR Technical Guide: River & Stream Systems: Flooding Hazard Limit (2002) and Technical Guide: River &Stream Systems: Erosion Hazard Limit (2002) include further guidance regarding access.

2.4.4.2 Floodproofing

The PPS (2020) provides a definition of floodproofing standard.

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

Floodproofing includes alteration to the design of specific buildings, raising of ingress and egress roadways and driveways, the construction of dikes, flood control channels, etc. The variety of floodproofing options and requirements are too detailed and extensive to include in a policy guideline. For more guidance, CAs should consult Appendix 6: "Floodproofing" of the "Technical Guide – River and Stream Systems: Flooding Hazard Limit" (MNR, 2002 as may be amended). It is noted that there have been advances in floodproofing methodologies since this guide was prepared. MRCA may consider other technical or construction options prepared by a qualified professional.

2.4.4.3 Internal Renovations

The definition of development activity in Ontario Regulation 41/24 includes:

> *1. (1) (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.*

Repairs and renovations to an existing building within the existing roofline and exterior walls and above the existing foundation within a hazard area would generally not require a permit of the CA, unless the proposal is associated with a change in use or increases the number of dwelling units (see definition of 'development activity'.) When reviewing internal renovation proposals MRCA will consider other changes that may be associated with an internal renovation e.g., upgrades or replacement of a septic system, new openings for doors or windows, etc. These additional activities may meet the definition of development activity and may be considered under the health or safety tests e.g., increase to the risk of injury or fatalities, social disruption, or result in damages from the hazard. MRCA may consider establishing limits on the size and number of proposed works.

2.4.4.4 Cumulative Impacts

Following guidance from Conservation Ontario, MRCA's review of permit applications and the assessment of impacts will include the potential for cumulative impacts of applications in the watershed or drainage system. Where necessary, MRCA may restrict development that may, singularly or cumulatively, affect the natural hazards or impact other properties. Examples of cumulative impact are: development activities that restrict riverine channel capacities to pass flood flows or reduce storage capacity in floodplains and wetlands resulting in increased flood levels and creation of a potential danger to upstream and downstream landowners, and alterations to shorelines and watercourses to address erosion that may disrupt the channel or shoreline natural processes for erosion and deposition of material.

2.5 Provincial Perspective on Natural Hazards

The MNR is responsible for natural hazard management in Ontario. Where CAs have been established, the responsibility for natural hazard management has been delegated to them. The province, however, continues to provide the overall direction, guidance and technical standards with respect to natural hazard management. The following is an executive summary of the province's approach to natural hazard management in Ontario.

> *Natural, physical environmental processes that occur near or at the surface of the earth can produce unexpected events of unusual magnitude or severity. Such occurrences are generally regarded as natural hazards. The outcome can be catastrophic, frequently resulting in damage to property, injury to humans and other organisms, and tragically even loss of life. In these cases, natural hazards are considered natural disasters.* (excerpt from Understanding Natural Hazards, MNR (2001) p. 4)

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

1. Prevention – of new development locating within areas subject to loss of life and property damage 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 evacuate and mitigate existing residents through flood forecasting and warning including disaster relief; and
4. Co-ordination – between natural hazard management and planning and development.

2.5.1 Principles

The guiding principles behind natural hazard management are:

- Proper natural hazard management requires that natural hazards (flooding, erosion, dynamic beaches, leda clay, organic soils, karst bedrock) 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 development effects and associated environmental and ecosystem impacts;
- Local conditions vary along floodplains and shorelines including depth, velocity, littoral drift, seiche, fetch, accretion, deposition, valleyland characteristics, etc., and accordingly must be considered in the planning and management of natural hazards;
- New development which is susceptible to natural hazards or which will cause or aggravate the hazards to existing and approved land uses or which will cause adverse environmental impacts must not be permitted to occur unless the natural hazard and environmental impacts have been addressed; and
- 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, and the Ministry of Municipal Affairs and Housing.

There are two reports that provide an overview of the perspective of the province on flooding, one of the natural hazards. In 2019 the province released "*Protecting people and property: Ontario's flooding strategy*" (Flooding Strategy). Prior to this strategy, they released a commissioned report "*Ontario's Special Advisor on Flooding Report to Government an Independent Review of the 2019 Flood Events in Ontario*" which also provides an overview of the provincial perspective on flooding hazards (see Chapter 5). Although these reports are focused on flooding hazards in general, the principles may be considered for other natural hazards.

2.5.1.1 Ontario's Flooding Strategy

The flooding strategy includes the following provincial goals, priorities and objectives. As noted above, these are focused on flooding, however they generally align with CA regulation of activities in all natural hazards. It's important to note that CAs are focused on the hazard areas and environmental damage is limited to the scope of the *CA Act* and Ontario Regulation 41/24.

Goals

1. Increase public health and safety
2. Reduce property and environmental damage
3. Reduce economic losses
4. Reduce social disruption
5. Reduce public and private expenditures
6. Reduce critical infrastructure disruption

Priorities

1. Understand flood risks
2. Strengthen governance of flood risks

3. Enhance flood preparedness
4. Enhance flood response and recovery
5. Invest in flood risk reduction

Objectives

1. Keeping people and property out of high-risk areas and not creating new, or aggravating existing, flood risks;
2. Reducing the impacts of flooding on existing communities;
3. Ensuring Ontarians are aware of flood risks and are taking steps to prepare for them;
4. Ensuring efficient and effective services are in place to respond to flood-related emergencies when they occur; and
5. Ensuring Ontarians impacted by flooding can get back on their feet as soon as possible.

2.5.1.2 Climate Change

The Ontario's Flooding Strategy, Priority # 2 - Strengthen Governance of Flood Risks, includes an activity to update existing (provincial) technical guidelines (see page 21). Conservation Ontario and CAs have provided input to the province that the series of technical guidelines for natural hazards should be updated, and it's anticipated any update would include information regarding the impacts of climate change and guidance on the provincial approach to address this significant issue. When the updated guidelines or bulletins are completed for each natural hazard, they will inform CA policies and technical review of permits in relation to climate change. Individual CAs may also develop policies and technical criteria for the review of a permit to address climate change considerations.

2.5.1.3 Ontario's Special Advisor on Flooding Report

Ontario's Special Advisor on Flooding Report to Government: An Independent Review of the 2019 Flood Events in Ontario, Chapter 5 outlines in more detail Ontario's approach to managing flood risk. The section below is an excerpt from this report and CA staff should review the text in the original document. An important element of this report is the inclusion of 'Prevention' in managing flood risks: This report includes the following information:

> *"Ontario's current approach to managing risks associated with flooding is based on the five core components of emergency management: 1) Prevention; 2) Mitigation; 3) Preparedness; 4) Response; and 5) Recovery. Management is achieved through the use of a series of provincial acts, regulations, policies and technical guides that are implemented through partnerships with a number of provincial ministries, municipalities, First Nations and conservation authorities.*
>
> *The objectives with this approach are to save lives and money, protect property, public health and the environment, maintain economic stability, help assure the continuance of critical infrastructure, and reduce social disruption associated with emergencies."*

Prevention (5.1.1)

> *Prevention includes actions taken to prevent flood-related emergencies or disasters from occurring, and includes land use planning and regulatory restrictions to keep development out of the floodplains and other hazardous areas. While we cannot prevent flooding from occurring, keeping people and property out of flood-prone areas helps ensure naturally occurring flood events do not result in local emergencies.*

As an overall principle for flood management, the MNRF prioritizes the use of non-structural and land use planning measures as its preferred approach to manage flood risks. This includes the identification of hazardous areas, including floodplains. Municipalities can then plan to prohibit/limit activities, including development, in these areas. The main legislative tools used to support this approach include the Planning Act together with the Provincial Policy Statement and the Conservation Authorities Act.

Mitigation (5.1.2)

Mitigation includes actions taken to reduce the effects of flooding, and includes the use of structural measures and floodproofing standards to protect development. Structural measures can include dams, dikes, channels, diversions and other flood control works. Floodproofing standards can include a combination of measures incorporated into the basic design and/or construction of buildings, structures or properties to reduce or eliminate flooding hazards, wave uprush and other water-related hazards, such as constructing the lowest occupancy floor of dwellings, water shut off and electrical control panel above the design flood level, and having water resistant electrical systems.

Preparedness (5.1.3)

Preparedness includes the use of flood forecasting and warning to assess the potential for flooding, predict when and where flooding will occur, and help ensure an effective response (e.g. any required evacuations or mitigative activities).

The Province conducts flood forecasting and warning via the MNRF's Surface Water Monitoring Centre, which monitors weather, rainfall and stream flows, and provides advisories and a suite of products and tools (e.g. weather panels, snow survey reports) to conservation authorities (CAs), municipalities and MNRF district offices on flood potential. The monitoring of flood conditions occurs seven days a week, and the Province is able to contact CAs and other stakeholders immediately with updates.

Local scale flood forecasting and warning is provided by MNRF district offices and conservation authorities. Many of the CAs conduct more detailed flood forecasting and warning for their respective jurisdictions.

Response (5.1.4)

Response includes actions taken to respond to flood emergency, such as the use of emergency services (e.g. providing sandbags, community evacuations, etc.) to protect people and property during flood events. Response can also include training for emergency response staff and meeting with stakeholders/partners to ensure an effective response. It also includes providing logistical support and social and health services.

The Emergency Management and Civil Protection Act (EMCPA) establishes Ontario's legal basis and framework for managing emergencies (see Section 5.2.4). It does this by defining the authority, responsibilities and safeguards accorded to provincial ministries, municipalities and specific individual appointments, such as the Commissioner of Emergency Management.

Recovery (5.1.5)

Recovery includes actions taken to recover from a flood emergency, such as the use of disaster financial assistance to restore property to pre-flood conditions.

Provincially, financial assistance is delivered through two programs—the Disaster Recovery Assistance for Ontarians (DRAO) program for homeowners, tenants, small owner-operator

businesses and farms, and not-for-profit organizations; and the Municipal Disaster Recovery Assistance (MDRA) program for municipalities. These programs provide funds for eligible expenses following a natural disaster to help Ontarians and municipalities recover from extraordinary costs.

Acts, Regulations, Policies and Technical Guides (5.2)

Ontario's preventative approach of directing development away from floodplains and other hazardous areas is highly effective in preventing property damage. Property damage associated with the same storm event are often exponentially lower in Ontario than they are in Great Lakes states, with the differences in losses primarily attributed to differences in floodplain management policies and approaches.

Provincial policies have been shown to reduce capital and operating costs associated with managing flooding and other natural hazards, reducing pressure on provincial and municipal infrastructure debts. The existing policies have been estimated to reduce costs associated with ongoing flood and natural hazard management, including costs associated with the operation and maintenance of flood and erosion control infrastructure by 20 to 80% depending on differences in urban density and property values.

These policies have been credited with keeping losses associated with flooding in Ontario lower than losses seen in other Canadian provinces. Responsibility for keeping development out of floodplains is a shared responsibility between municipalities (enforced through municipal planning) and conservation authorities (enforced through regulations made under Section 28 of the Conservation Authorities Act).

These policies will be increasingly valuable in protecting Ontarians from flooding and other natural hazards. Losses associated with flooding and other natural hazards continue to increase because of increasing property values and income levels, urbanization, ongoing loss of wetlands and other green infrastructure, and the increasing frequency and intensity of extreme rainfall events. As these losses rise, so does the value of Ontario's floodplain and broader hazard management policies. ….

These regulations are a critical component of Ontario's broader natural hazard management framework and are designed to achieve the following policy objectives:

- *Preventing loss of life, minimizing property damage and social disruption;*
- *Reducing public and private expenditure for emergency operation, evacuation, restoration and protection measures;*
- *Regulating development which, singularly or collectively, impact upon existing flood levels, and increasing potential risks to upstream and downstream landowners;*
- *Control interference with natural storage areas such as wetlands;*
- *Conserving land through the control of development on existing or potentially unstable valley slopes or shoreline bluffs; and*
- *Controlling development impacts as they relate to pollution (including erosion & sedimentation) or other degradation of existing and water resources, including groundwater."*

The provincial natural hazards technical guides available on the Conservation Ontario Section 28 program webpage includes, but is not limited to, the following documents:

a) Understanding Natural Hazards (2001), which provides the planning concepts to address natural hazards.

b) Technical Guide – River & Stream Systems: Flooding Hazard Limit (2002), which documents standardized approaches to manage flood susceptible lands across the province. It outlines the three flood event standards used in Ontario and outlines hydrologic and hydraulic work needed to conduct floodplain analysis and delineate flood-prone areas.
c) Procedures for Approval of New Special Policy Areas (SPAs) and Modifications to Existing SPAs Under the Provincial Policy Statement, 2005 (PPS, 2005), Policy 3.1.3 – Natural Hazards – Special Policy Areas. The procedural document that supersedes and replaces the information in Part B of Appendix 5 of the Technical Guide – River & Streams: Flooding Hazard Limit (2002).
d) Technical Guide – River & Stream Systems: Erosion Hazard Limit (2002) which has the purpose of providing a consistent and standardized procedure for the identification and management of riverine erosion hazards in Ontario.
e) Great Lakes-St. Lawrence River Shorelines: Flooding, Erosion and Dynamic Beaches (2001), which focuses on documenting standardized approaches to shoreline management and land use planning and management to address shoreline flooding, erosion and dynamic beaches, with a focus on the need to better understand the system, particularly its formation, evolution and potential impacts.
f) Technical Guide for Large Inland Lakes Shorelines: Flooding, Erosion and Dynamic Beaches (1996), which addresses effective shoreline management and land use management approach for addressing shoreline natural hazards.
g) Hazardous Sites – Technical Guide (1996), which provides technical support in Identifying areas of unstable soils, including sensitive marine clays and organic soils as well as unstable bedrock, including karst bedrock.

3. POLICIES AND GUIDELINES FOR THE ADMINISTRATION OF ONTARIO REGULATION 41/24

3.1 Introduction

The Regulation gives MRCA the mandate to prohibit development throughout its watershed in those areas described in Section 3.3.1 of this document. Under the *Conservation Authorities Act*, development (development activity) means:

(a) the construction, reconstruction, erection or placing of a building or structure of any kind,

(b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,

(c) site grading, or

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

The Regulation also gives MRCA authority to regulate activities which would result in:

- impacts to the control of flooding, erosion, dynamic beaches and/or unstable soil and bedrock;

- the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, or watercourse;
- changing or interfering in any way with a wetland; and/or
- conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

MRCA will hold all applications to the following standards and will be guided by the following general administrative guidance with respect to the implementation of its regulatory responsibilities:

- Development, interference and/or alteration activities shall not be undertaken in a regulated area without written permission from MRCA.
- Where a regulated area covers more than one water-related hazard (e.g., lands susceptible to flooding that are part of a wetland), all of the policies that pertain will be applied and where applicable, the more restrictive policies will apply.
- Technical studies and/or assessments, site plans and/or other plans submitted as part of an application must be completed by a qualified professional to the satisfaction of the MRCA, the cost of which is borne by the applicant. Compliance with current standards is required.

Similar to the MNR recommended 6 metre erosion access allowance (Section 3.4, Technical Guide for River and Stream Systems: Erosion Hazard Limit, MNR), MRCA recommends that a 6 metre access allowance is applied to all hazard lands. Note that emergency access is required along the hazard as well as between the buildings and the lot line to allow for heavy equipment access to the hazard area.

Three main principles support the inclusion of an access setback:

- providing for emergency access to hazard areas;
- providing for construction access for regular maintenance and access to the site in the event of a natural hazard or failure of a structure; and
- providing protection against unforeseen or predicted external conditions which could have an adverse effect on the natural conditions or processes acting on or within a hazard prone area.

Activities in regulated areas that are carried out by other provincial ministries or the federal government do not require a permit.

Activities conducted on provincial Crown land by third-party proponents in a regulated area may require a permit, unless acting as an agent of the Crown. Works for which permission is required under the Regulation may also be subject to other legislation, policies and standards that are administered by other agencies and municipalities, such as the *Planning Act, Public Lands Act, Nutrient Management Act, Drainage Act, Environmental Assessment Act,* the federal *Fisheries Act*, etc. It is the responsibility of the applicant (or applicant's agent) to ensure that all necessary approvals are obtained prior to undertaking any works for which a permit under this regulation has been obtained.

In general, the conservation authority will not grant approval where:

- The application for development is in the regulatory floodplain.
- Approval of the application would have the likely effect of increasing flood damages or erosion for the subject property or other properties, pollution in the watershed or be otherwise contrary to the objectives of the authority.
- Approval of the application would adversely affect the conservation of land in consideration of wetlands, dynamic beaches, areas of natural or scientific interest, or other ecologically or geologically sensitive areas.

3.2 Activities Typically Regulated

The following identifies examples of development activities that CAs typically regulate. In many cases, the proposed development and proposed ancillary uses of the development could detrimentally affect the control of flooding, erosion, dynamic beaches or unstable soil and bedrock. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

These development activities may include, but are not limited to:

- Construction of all buildings and additions over 15 m^2 including modification or reconstruction of foundations which support existing buildings;
- Breakwalls, revetments, rubble groynes, jetties, etc.;
- Other works on or near shorelines or lakeshores;
- Dock repairs and new abutments;
- New boardwalks and boardwalk repairs;
- Stairs, decks, gazebos;
- Boat ramps, boat storage structures;
- Dredging;
- In-ground and above-ground pools;
- Temporary or permanent placement of fill, grading, removal of fill, or site alteration;
- Retaining walls;
- Trailers, shipping containers and mobile homes; and
- Bridges, crossings, roads and pipelines.

3.2.1 Activities That Do Not Require a Permit

Specific types of development are listed as exceptions in S. 5 of O. Reg. 41/24. The following activities may be undertaken without written permission although it is recommended that appropriate best management practices are implemented to control sediment and erosion, and provided there are no adverse impacts associated with the activity.

(a) the construction, reconstruction, erection or placement of,

(i) a seasonal or floating dock that,

(A) is 10 square metres or less,

(B) does not require permanent support structures, and

(C) can be removed in the event of flooding,

(ii) a rail, chain-link or panelled fence with a minimum of 75 millimetres of width between panels, that is not within a wetland or watercourse,

(iii) agricultural in-field erosion control structures that are not within and that do not have any outlet of water directed or connected to a watercourse, wetland or river or stream valley,

(iv) a non-habitable accessory building or structure that,

(A) is incidental or subordinate to the principal building or structure,

(B) is 15 square metres or less, and

(C) is not within a wetland or watercourse, or

(v) an unenclosed detached deck or patio that is 15 square metres or less, is not placed within a watercourse or wetland and does not utilize any method of cantilevering;

(b) the installation of new tile drains that are not within a wetland or watercourse, within 30 metres of a wetland or within 15 metres of a watercourse, and that have an outlet of water that is not directed or connected to a watercourse, wetland or river or stream valley, or the maintenance or repair of existing tile drains;

(c) the installation, maintenance or repair of a pond for watering livestock that is not connected to or within a watercourse or wetland, within 15 metres of a wetland or a watercourse, and where no excavated material is deposited within an area where subsection 28 (1) of the Act applies;

(d) the maintenance or repair of a driveway or private lane that is outside of a wetland or the maintenance or repair of a public road, provided that the driveway or road is not extended or widened and the elevation, bedding materials and existing culverts are not altered;

(e) the maintenance or repair of municipal drains as described in, and conducted in accordance with the mitigation requirements set out in the Drainage Act and the Conservation Authorities Act Protocol, approved by the Minister and available on a government of Ontario website, as it may be amended from time to time; and

(f) the reconstruction of a non-habitable garage with no basement, if the reconstruction does not exceed the existing footprint of the garage and does not allow for a change in the potential use of the garage to create a habitable space.

Additional development projects that do not require a permit include:

- Repairs and renovations to an existing structure within the existing roofline and exterior walls and above the existing foundation (window repair, siding, etc.);
- Non-structural activities associated with existing agricultural use (cropping, pasturing, tilling, fence row clearing, stone pile removal, etc.);
- Landscaping that does not result in alterations to existing grade (e.g., gardens, nurseries, timber harvesting without stump removal, etc.);
- Drilled well installation.

So long as these activities do not result in the straightening, changing, diversion or interference in any way with a watercourse, or interference in any way with a wetland, they are not subject to Ontario Regulation 41/24 and do not require written permission from MRCA.

3.3 The Regulation Limit (Regulated Area)

The approximate extent of regulated areas associated with hazardous lands, wetlands, areas of interference with wetlands, watercourses, and river or stream valleys is identified by a regulation limit which is also referred to as “the regulated area”. The regulated area represents the greatest physical extent of the combined hazards plus a prescribed allowance as set out in the Regulation.

3.3.1 Areas Subject to the Regulation

Ontario Regulation 41/24 sets out areas where development is prohibited as well as setbacks from various environmental features. All areas within the jurisdiction of the MRCA are described in this section. The features that are encompassed by the Regulation are as follows:

River or Stream Valleys

This component of the Regulation applies to development within river and stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse. See Section 4.0 of this document for policy guidance on River or Stream Valleys. Ontario Regulation 41/24 includes the legal description of the river or stream valley. The Regulation states:

2. (1) For the purposes of subparagraph 2 iii of subsection 28 (1) of the Act, river or stream valleys include 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 as follows:

1. Where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of the bank, plus 15 metres, to a similar point on the opposite side.

2. 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.

3. Where the river or stream valley is not apparent, the valley extends,

(i) to the furthest of the following distances:

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

(ii) an additional 15-metre allowance on each side, except in areas within the jurisdiction of the Niagara Peninsula Conservation Authority.

Inland Lakes

This component of the Regulation applies to development adjacent or close to the shoreline of an inland lakes that may be affected by flooding, erosion, dynamic beaches or unstable soil and bedrock. See Section 5.0 of this document for policy guidance on Inland Lakes. Ontario Regulation 41/24 includes the legal description for these natural hazards. The Regulation states:

2. (2) For the purposes of subparagraph 2 iv of subsection 28 (1) of the Act, areas 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 beach hazards include,

(a) the area starting from the furthest offshore extent of the authority's boundary to the furthest of the following distances:

(i) the 100-year flood level, plus the appropriate allowance for wave uprush, and, if necessary, for other water-related hazards, including ship-generated waves, ice piling and ice jamming, except in respect of Wanapitei Lake in the Nickel District Conservation Authority, the applicable flood event standard for that lake being the one set out in item 1 of Table 16 of Schedule 1,

(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, and

(iii) where a dynamic beach is associated with the waterfront lands, an allowance of 30 metre s inland to accommodate dynamic beach movement, except in the areas within the jurisdictions of the Mattagami Region Conservation Authority, the Nickle District Conservation Authority and the North Bay-Mattawa Conservation Authority where the allowance is 15 metres inland; and

(b) the area that is an additional 15 metres allowance inland from the area described in clause (a).

Areas Within 30 metres of a Wetland

This component of the Regulation applies to development within a wetland or interference in any way with a wetland. See Section 8.0 of this document for policy guidance on wetlands and adjacent lands.

Ontario Regulation 41/24 includes the definition of a wetland and the legal description for the regulated 'other area' within 30m of a wetland. The Regulation states:

2. (3) For the purposes of subparagraph 2 v of subsection 28 (1) of the Act, other areas in which development activities are prohibited are the areas within an authority's area of jurisdiction that are within 30 metre s of a wetland.

Flood Event Standards

Ontario Regulation 41/24 defines the flood standards that shall be used by CAs in Ontario. The flood standards are specific to each CA and include rivers and streams as well as lakes e.g., Hurricane Hazel, 100-year flood event standard, Timmins flood event, 100-year flood level plus wave uprush, etc.
The Regulation states:

3. The applicable flood event standards with respect to an authority, for the purposes of paragraph 3 of subsection 2 (1) and to determine the maximum susceptibility to flooding of lands or areas in the area of jurisdiction of an authority are the standards specified in Schedule 1 as those standards are described in Schedule 2.

Hazardous Lands

This component of the legislation applies to development within hazardous lands which is defined under Section 28 of 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*. Unstable soil and bedrock include, but is not limited to sensitive marine clays, organic soils, and karst topography. Sensitive marine clays are not identified within the MRCA watershed. Organic soils are normally formed by the decomposition of vegetative and other organic materials. Peat soils are the most common type of organic soil in Ontario. Karst topography may be present in limestone or dolomite bedrock and are extremely variable in nature. See Section 6.0 of this document for policy guidance on hazardous lands.

Lakes, Rivers, Creeks, Streams and Watercourses

This component of the legislation applies to the straightening, changing, diversion, or interference in any way with the existing channel of a watercourse, including lakes and their shorelines that are within the MRCA watershed. See Section 7.0 of this document for policy guidance on watercourses.

This component of the Regulation does not apply to dug-out or isolated ponds located outside of any wetland or area of interference with a wetland, river or stream valley, hazardous land associated with unstable soil or bedrock, and/or the applicable regulated allowance. For small islands it is assumed that the entire island is regulated.

3.3.2 Regulation Allowances and Access Setback

All regulated features are subject to an allowance or setback that is required adjacent to flooding, erosion and dynamic beach hazards as well as wetlands and watercourses 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 feature.

Allowances give MRCA the opportunity to protect access to and along a valley and/or hazardous areas. This access may be required for emergency purposes, regular maintenance to existing structures or to repair failed structures.

Development within the allowance is regulated to ensure that existing hazards are not aggravated and that new hazards are not created. The allowance also can serve to maintain and enhance the natural features and ecological functions of the feature.

Regulation of development in the allowance also recognizes 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 development should generally be set back a minimum of 6 metres adjacent to erosion and flooding hazards (Sections 3.0 and 3.4, Erosion Access Allowance, Technical Guide – River and Stream Systems: Erosion hazard Limit (MNR, 2002b)). MNR recommends that this setback 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. For those situations where additional study is warranted to determine the development setback required to provide the required public safety and access, a study should be undertaken using accepted scientific, geotechnical, and engineering principles.

Protection of public safety and access, however, may not be sufficient to provide for all of the above-noted requirements or purposes for the allowances. Additional technical studies by qualified professionals may be required to establish the appropriate extent and location of development within the allowance.

3.4 Permission to Develop

The MRCA may grant permission for development in or on the areas described in subsection 3.3.1 if, in its opinion, the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected by the development. Further, any activity must demonstrate that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. To receive permission for proposed works in regulated areas the proponent must submit a permit application to MRCA for approval prior to any works. A summary of the permit approval process is discussed in further detail in Section 3.4.1 of this document. For any type of application, submission of technical studies may be necessary (see Section 2.3.2.1).

Permission from MRCA will be given in the form of a formal permit. This permission will be given in writing with or without condition and is valid for a period of a of 24 months, with the potential to extend to a maximum of 60 months. Failure to meet any one or a combination of the tests may result in the denial of the application.

Permits will only be granted to the landowner and are not transferrable. In the case of development proposed on common lands, a permit will not be processed until acknowledgment and approval is granted from all joint owners of the land in question.

Section 8 of Ontario's *Building Code Act* requires compliance with all applicable law prior to the issuance of a municipal building or demolition permit. Regulations made under the *Conservation Authorities Act* are defined as applicable law. Within MRCA regulated areas, municipal building officials must receive a copy of a MRCA permit for those regulated activities under the realm of the *Building Code Act* prior to the issuance of a municipal building permit.

3.4.1 Application Process

MRCA is committed to adhering to the consistent approach developed by Conservation Ontario for permitting. To this end we will work with applicants through the process to ensure understanding and a timely turnaround for all applications. We will also ensure the regulations permitting process is aligned with the approval process under the *Planning Act*. While the process to obtain a permit is standardized, MRCA evaluates each application based on its own merits to ensure that it is consistent with the policies contained in this manual and also to ensure it meets provincial legislation, regulations, and policy.

Prior to undertaking any development, applicants are encouraged to contact MRCA either in person, by phone or by email to determine if the property in question falls within or adjacent to a regulated area.

3.4.1.1 Pre-Submission Consultation

The Regulation includes minimum requirements for CAs regarding the pre-submission requirements and process for a permit application:

> *6. (1) Prior to submitting an application for a permit under section 28.1 of the Act, an authority and the applicant may engage in pre-submission consultation for the purposes of confirming the requirements of a complete application to obtain a permit for the activity in question, which may include,*
>
> *(a) requests by the authority to the applicant for,*
>
> *(i) initial information on the proposed activity such as a description of the project and any associated plans, or*
>
> *(ii) details about the property upon which the activities are proposed to be carried out, including copies of plans, maps or surveys; or*
>
> *(b) meetings between the authority and the applicant prior to the submission of an application, including any site visits to the property where the activities are proposed to be carried out.*
>
> *(2) If the applicant requests a pre-submission consultation under subsection (1), the authority is required to engage in the pre-submission consultation.*

MRCA may identify additional requirements e.g., plans and technical studies that may be necessary for staff to conduct a review of the application.

3.4.1.2 Application for Permit

MRCA is committed to streamlining the review of *CA Act* permits. The submission of a complete application is a critical component for MRCA to review an application and provide timely feedback and approvals (where appropriate). Should a permit be required, applicants are required to complete and submit a permit application form. The permit fee must be submitted with the permit application which

must include the property information (civic address, lot/concession number/township, etc.), as well as the minimum requirements for an application as identified in S.7(1) of O. Reg. 41/24:

7. (1) An application for a permit under section 28.1 of the Act shall be submitted to an authority and shall include,

(a) a plan of the area showing the type and location of the proposed development activity or a plan of the area showing plan view and cross-section details of an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;

(b) the proposed use of any buildings and structures following completion of the development activity or a statement of the purpose of an activity 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;

(c) the start and completion dates of the development activity or other activity;

(d) a description of the methods to be used in carrying out an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;

(e) the elevations of existing buildings, if any, and grades and the proposed elevations of any buildings and grades after the development activity or other activity;

(f) drainage details before and after the development activity or other activity;

(g) a complete description of any type of fill proposed to be placed or dumped;

(h) a confirmation of authorization for the proposed development activity or other activity given by the owner of the subject property, if the applicant is not the owner; and

(i) any other technical information, studies or plans that the authority requests including information requested during pre-submission consultations between the authority and the applicant.

(2) Upon receipt of the information required under subsection (1) and payment by the applicant of the fee charged by the authority under subsection 21.2 (4) of the Act, the authority shall notify the applicant in writing, within 21 days, whether or not the application complies with subsection 28.1 (3) of the Act and is deemed to be a complete application.

Permit application forms are available at the MRCA Office and on our website (www.mattagamiregion.ca).

Permit application fees vary depending on the nature of the application. Fees are posted online and MRCA staff can advise of the applicable permit fee(s) prior to submitting a permit application[1].

Following the submission of a permit application, MRCA is responsible for determining and communicating to the applicant whether an application is deemed complete. This determination must be communicated within 21 days of receiving an application and this initiates the timelines and appeal process as outlined in the *CA Act*. It is common that the process for reviewing an application and

[1] All application fees are established by the MRCA Board of Directors. The schedule of fees is posted on the MRCA website and is available in hard copy from the MRCA office.

applicable studies and plans is an iterative process between the applicant and the CA. This process includes the need to clarify technical information, address any information that may be missing in the submission, correction of errors, etc. MRCA staff may consider conducting a site visit as part of the pre-submission requirements to ensure that all natural hazards are identified on the site. It should be noted, however, that substantial changes to a proposal or a site visit by MRCA staff may affect the information required.

If an application is deemed incomplete, MRCA will require additional information so that a complete analysis can be conducted. For any type of application, submission of technical studies may be necessary and may be requested at the discretion of MRCA (see Section 2.3.2.1.).

Any timeline associated with MRCA's review of a permit application do not begin until a complete application has been submitted. An application will be deemed incomplete until the fee has been received.

MRCA staff will review applications made pursuant to O. Reg 41/24. Prior to the issuance of a permit, a designated MRCA staff member will often conduct a site inspection. At this time, photos to represent the pre-development conditions may be taken and notes regarding the nature of slopes, water features and any other items will be recorded and added to the file. If a site inspection is deemed necessary by staff, but due to snow cover or other conditions it cannot be sufficiently inspected, then the applicant will be advised that the review of the application will be suspended until a proper inspection can be conducted.

In keeping with the standard permit process, MRCA is required to decide (i.e., recommendation to approve, deny or refer to a hearing) on a complete application within 90 days. Permission from MRCA will be given in the form of a formal permit letter. This letter will be provided to the applicant, their agent (if listed) and the appropriate municipality.

Where possible, the Authority (MRCA) will not process a permit application if there is an outstanding municipal zoning issue, or other planning-related issue that needs to be addressed.

The Authority will not accept permit applications "after the fact" (development undertaken without a permit). If a permit has not been obtained from the Authority, the landowner/contractor is in violation and the necessary proceedings will apply.

All permits issued by MRCA are subject to the *Municipal Freedom of Information Protection and Privacy Act*, RSO 1990, c.M.56.

Applicants should be aware that MRCA will assess any new applications against the policies that apply at the time the application is submitted. It is important to note that the applicant may be required to obtain approvals from other agencies at the federal, provincial and municipal level. Obtaining an approval from MRCA does not ensure that these other approvals will be forthcoming.

3.4.2 Request for Review

The Regulation is clear that the information identified in the pre-submission process and for a complete application is required before the applicant may be notified that the application for a permit can be deemed complete. Pursuant to subsection 8 (1) of Ontario Regulation 41/24, an applicant may request a review by the General Manager if:

> *(a) the applicant has not received a notice from the authority within 21 days in accordance with subsection 7 (2);*

(b) the applicant disagrees with the authority's determination that the application for a permit is incomplete; or

(c) the applicant is of the view that a request by the authority for other information, studies or plans under clause 7 (1) (i) is not reasonable.

Requests must be submitted in writing to info@mattagamiregion.ca and must identify what element is to be reviewed (a, b, or c above). Requesters should use "Section 8 Review Request" in the subject line.

Pursuant to subsection 8 (2) of Ontario Regulation 41/24, a review request shall be completed by MRCA no later than 30 days after it is requested and MRCA shall, as the case may be:

(a) confirm that the application meets the requirements of subsection 7 (1) and is complete or provide reasons why the application is incomplete; or

(b) provide reasons why a request for other information, studies or plans under clause 7 (1) (i) is reasonable or withdraw the request for all or some of the information, studies or plans.

3.4.3 Conditions of Permits

MRCA, and all CAs may apply conditions of approval to a permit. These conditions must be completed to the satisfaction of the MRCA. Generally, the decision to issue permits under Section 28.1 of the *Conservation Authorities Act* is based on several considerations, including: the *CA Act* and its accompanying regulations, the proposed works (activities and timing), current site conditions and alignment with current applicable Board-approved policies or guidelines.

The O. Reg 41/24 includes the following requirements for conditions of a permit:

9. (1) An authority may attach conditions on a permit issued under section 28.1 of the Act only if, in the opinion of the authority, the conditions,

(a) assist in preventing or mitigating any effects on the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) assist in preventing or mitigating any effects on human health or safety or any damage or destruction of property in the event of a natural hazard; or

(c) support the administration or implementation of the permit, including conditions related to reporting, notification, monitoring and compliance with the permit.

An example of a condition that mitigates the effect of development, alteration or interference would include the installation and maintenance of erosion and sediment control under the test of erosion (e.g., surface erosion during site preparation activities removal of vegetation, pre-grading, and construction, etc.).

3.4.3.1 Agreement on Title

The Conservation Authority may, at its discretion, require that an Agreement be placed on title for a particular property for any approvals given under the Regulation. The purpose of the Agreement is both to enforce the conditions of any approvals as well as give notice to any future property owners that land use restrictions are in place. An Agreement would include:

- a legal description of the lands affected,
- the legislation under which it is being applied,

- a description of the permitted use along with all the conditions that are to be met and any restrictions on any future use,
- allocation of any legal and administrative costs associated with processing,
- recognition by the owner of any and all conditions, and
- a statement that indemnifies and holds harmless the Conservation Authority for any future flood damages and impacts.

These Agreements would typically apply to the development of hazards lands that are supported by the regulations and policies including seasonal campgrounds, marinas and reconstruction of existing structures

3.4.4 Period of Validity of Permits and Extensions

If the permit is granted (either with or without conditions), it is issued for a period of up to 24 months. Section 11 of O. Reg. 41/24 stipulates that the maximum period of validity of a permit, including any extensions is 60 months. A permit holder can apply for an extension to their permit if the work has not been completed within 24 months of the date of issuance and if the existing permit is still valid. A permit renewal is not guaranteed as applications will be assessed based on the current policies and regulations. In general extensions may be granted provided:

- there are no material changes to the permit activities or plans in the opinion of the CA,
- ongoing activities follow the original approval or will be brought into compliance within the requested extension period, and
- the proposed activities are still consistent with the CA Board approved policies, etc.

The Regulation includes the following:

11. (1) The maximum period of validity of a permit issued under sections 28.1, 28.1.1 and 28.1.2 of the Act, including any extension, is 60 months.

(2) If a permit is issued for less than the maximum period of validity, the holder of a permit may, at least 60 days before the expiry of the permit, submit an application for an extension of the permit to,

(a) the authority that issued the permit, in the case of permits issued under section 28.1 or 28.1.2 of the Act; or

(b) the Minister, in the case of permits issued under section 28.1.1 of the Act.

(3) An authority or the Minister, as the case may be, may approve an extension of the period of validity of a permit that was issued for a period of less than 60 months but the total period of validity of the permit, including the extension, shall not exceed 60 months.

(4) If an authority intends to refuse a request for an extension, the authority shall give notice of intent to refuse to the holder of the permit, indicating that the extension will be refused unless the holder requests a hearing under subsection (5).

(5) Within 15 days of receiving a notice of intent to refuse a request for an extension, the holder of the permit may submit a written request for a hearing to the authority.

(6) If a request for hearing is submitted under subsection (5), the authority shall hold the hearing within a reasonable time, and shall give the holder at least five days notice of the date of the hearing.

(7) After holding a hearing under subsection (6), the authority may,

(a) confirm the refusal of 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 permit does not exceed the applicable maximum period specified in subsection (1).

3.4.4.1 Amendments

If a proposal is revised in a minor nature after the issuance of a permit but prior to the completion of works, the permit may be amended. All revisions to a proposal that are not in keeping with the original permission require approval from MRCA. If approved, a permit amendment letter will be issued reflecting the revised permission. Amendments requested for major changes (i.e., new projects) will not be permitted and a new application will be required.

3.4.5 Hearings under the Conservation Authorities Act

If staff are unable to recommend permission for the proposed works (i.e., the application) or if conditions are imposed that the applicant does not agree with, the applicant may request a hearing of the MRCA Board. This is a requirement under Section 28.1(5) of the *Conservation Authorities Act* which states: *"An authority shall not refuse an application for a permit or attach conditions to a permit unless the applicant for the permit has been given an opportunity to be heard by the authority."* The requirements associated with a hearing are outlined in various sections of the *Conservation Authorities Act* and the "MNR/CO Hearings Guideline" that outlines the process to be followed (Appendix E: Hearing Guidelines).

Each MRCA Board Member must be aware of any potential conflict of interest and declare a conflict immediately if necessary. No member of the Authority taking part in the hearing should be involved, either through participation in committee or intervention on behalf of the applicant or other interested parties with the matter, prior to the hearing. Otherwise, there is a danger of an apprehension of bias which could jeopardize the hearing.

At these hearings, the Board acts in the capacity of a tribunal. The tribunal exercises its statutory powers deciding or prescribing the legal rights, powers, privileges, immunities, duties or liabilities of a person or party. In exercising this statutory power in a hearing, as required by the *Conservation Authorities Act*, the minimum rules for proceedings as set out in the *Statutory Powers and Procedures Act* must be followed.

The *Statutory Powers and Procedures Act* is designed to ensure a fair and open hearing. The minimum roles for the proceedings to ensure this are set out in Section 4 through 25 of the *Act*. This *Act* sets out minimum rules for giving notice of the applicant of the upcoming hearing, procedure at a hearing, the manner in which evidence is given and the notice of decision.

After holding a hearing, the MRCA Board can:

- grant the permission without conditions;
- grant the permission with conditions; or,
- refuse the permission.

Section 17 of the *Statutory Powers Procedures Act* provides that *"a tribunal shall give its formal decision and order, if any, in writing."*

3.4.5.1 Application Approval Subsequent to Hearing

If the MRCA Board's decision is to grant permission to the applicant, the permission will be in the form of a permit signed by the General Manager (GM) of the Authority or the applicable Chair of the MRCA Board. Any applications for development in the floodplain that are approved must meet the standard of dry passive flood-proofing measures as outlined in Appendix C: Floodproofing Guidelines.

The decision to grant permission and issue a permit against the staff recommendation will result in the permit being valid for the lesser of two years or the term of the applicable MRCA Board.

3.4.5.2 Application Denial Subsequent to Hearing

If the decision is to deny permission, the applicant will be notified of the reasons as required under Section 28.1(7) of the *Conservation Authorities Act* which states: *"If the authority, after holding a hearing, refuses a permit or issues the permit subject to conditions, the authority shall give the applicant written reasons for the decision."*

3.4.5.3 Appeal of Hearing Decision to the Minister

An applicant who has been refused permission by the MRCA Board or objects to conditions imposed on a permission may, within 15 days of receiving the written notice of the hearing decision, appeal to the Minister of Natural Resources, who may refuse the permission or grant permission, with or without conditions. The Ontario Land Tribunal has been assigned the authority, duties and powers of the under the MNR *Natural Resources Act* to hear appeals from the decisions of conservation authorities made under the *Conservation Authorities Act*. The Tribunal's decision is final and binding. There are no further appeal procedures with the exception of a “judicial review” based on a decision where there is a perceived “error in law.” The Ontario Land Tribunal, upon receiving the appeal will set the time and the place for the appeal to be heard. The hearing before the Ontario Land Tribunal is also a tribunal and is therefore also subject to the *Statutory Powers and Procedures Act*. The decision of the Ontario Land Tribunal will be final.

3.4.5.4 Notice of Decision from the Ontario Land Tribunal

The Authority and the applicant will receive the written notice of decision from the Tribunal. Upon receipt of the notice, the Authority will proceed in one of the following two manners:

If the appeal is upheld, a permit will be issued which must be signed by the GM of the Authority or the Chair of the applicable MRCA Board of the Authority. If the appeal is denied, the file will be closed.

3.4.6 Violations

All works in a regulated area require permission from MRCA. If permits are not obtained or if work is carried out that is not in keeping with the terms and/or conditions of the permit, this work is in violation of Ontario Regulation 41/24.

MRCA has the legal authority (Section 30.2 (1) of the *Conservation Authorities Act*) to investigate an activity to determine whether or not a contravention of Ontario Regulation 41/24 has taken place. Violations of the *Act* may be subject to a fine or imprisonment. If convicted, contraventions must be addressed and any development/interference removed at the expense of the landowner. Depending on the nature of the contravention, landowners may also be required to undertake rehabilitation in a manner prescribed by the Court.

MRCA is committed to working with landowners. Before any work is undertaken, all landowners are encouraged to contact MRCA in order to obtain the necessary permits and are required to adhere to any conditions identified by MRCA.

3.5 Flood, Erosion and Dynamic Beach Hazard

Applications in the Mattagami Region Conservation Watershed

3.5.1 Mattagami River and Frederick House River Watersheds

Not all lakes and watercourses in the MRCA watershed have delineated floodplains, however the following areas have associated floodplain elevations. The lake or waterbody names and applicable flood event standards are noted in the table below.

TABLE 2: FLOODPLAIN REPORTS IN MRCA WATERSHED

Watershed	Waterbody/Watercourse	Storm Event
Mattagami River	Mattagami River	1:100
	Town Creek	Timmins
	Kamiskotia Lake	Timmins
Frederick House River	Porcupine Lake	Timmins
	Porcupine River	Timmins

3.6 General Regulation Policies

Under the *CA Act* each application will be reviewed on its own merits to determine if it can meet the 'tests' outlined in the *Act*. A permit application for development activity may be permitted subject to the applicant providing complete studies and plans that demonstrate to the satisfaction of the Conservation Authority that the activity will not affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

Within areas defined by the Regulation (i.e., regulated areas), including inland lake shorelines, river or stream valleys including an allowance; wetlands or other areas where development could interfere with the hydrophytic vegetation and or hydrologic functions of a wetland, watercourses, or hazardous lands, the following general policies will apply.

It is the policy of MRCA:

3.6.1 That development activity, interference or alteration will not be permitted within a regulated area, except in accordance with the policies contained within this document. In the event of a conflict between the policies applicable to the development activity, interference or alteration, the most restrictive policy shall apply.

Prohibited Development Activity, Interference and Alterations

3.6.2 That development activity will not be permitted within the flood or erosion hazard of valley and stream corridors, erosion or dynamic beach hazards, a wetland or hazardous lands, where the use is:

a) an institutional use including but not limited to those associated with a hospital, pre-school, school nurseries, daycare and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young;
b) an essential emergency service such as that provided by fire, police, and ambulance stations, and electrical substations; or
c) associated with the disposal, manufacture, treatment, or storage of hazardous substances.

3.6.3 That where there is an existing vacant lot of record, (including an infill lot), no new development activity will be permitted where the lot has no safe access, or is entirely within one or more of the following;

a) the flood hazard or erosion hazard of valley and stream corridors, other hazardous lands;
b) the flood, erosion or dynamic beach hazards;
c) wetland;
d) any natural features, areas and systems, including areas providing hydrologic functions or ecological functions; or
e) the required setbacks from any feature listed in in a)-d). The required setbacks are described in Section 3.6.9 of this document.

3.6.4 Permission will not be granted for development activity where the purpose is to create additional area or space which will accommodate or facilitate new development activity or intensification or will modify, interfere or alter in any way with:

a) watercourses;
b) wetlands;
c) hazardous lands, including such lands within valley and stream corridors, natural features, areas and systems including areas providing hydrologic functions or ecological functions.

3.6.5 In circumstances where the MRCA agrees that modifications will result in permanent remediation and reduction of risk to existing development, serve to improve public safety or significantly improve existing hydrological or ecological conditions, such modifications may be considered where it can be demonstrated to the satisfaction of MRCA that:

a) the modifications have been evaluated on a valley or stream corridor or shoreline reach basis;
b) acceptable justification has been provided through a sub-watershed plan, an environmental assessment or comprehensive environmental study;
c) that the interference is acceptable and the control of flooding, erosion, dynamic beaches, or unstable soil and bedrock will not be affected; and
d) Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

Emergency Works

3.6.6 Permission will be granted to municipalities and other agencies for emergency works to repair existing infrastructure within a regulated area that is at immediate risk of failure or other public safety concerns provided that MRCA is notified prior to or as soon as possible to conducting remediation works, and where appropriate or possible given the opportunity to review, provide technical guidance related to the control of flooding, pollution and/or the, and supervise. Municipalities shall provide a description of the emergency works or 'as built' information upon the completion of emergency works.

Permission for Development Activity, Interference and Alterations

3.6.7 Notwithstanding Policy 3.6.1, the MRCA's Board of Directors may grant permission for development activity, interference and/or alteration through a hearing where the application provided evidence acceptable to the Board of Directors that documents the development and/or activity will have no adverse effect on the control of flooding, erosion, dynamic beaches, or unstable soil and bedrock or stream valleys, hazardous land, wetland and areas of interference, or result in unacceptable interference with a watercourse or wetland. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

3.6.8 In addition to specific conditions outlined through this document, development activity, interference and/or alteration within a regulated area may be permitted only where it can be demonstrated to the satisfaction of MRCA, through appropriate technical reports, assessments, site plans and/or other documents as required by MRCA, that:

a) there is no feasible alternative location for development activity outside the hazard;
b) the control of flooding, erosion, dynamic beaches, or unstable soil and bedrock will not be affected;
c) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property;
d) the risk to public safety is not increased;
e) susceptibility to natural hazards is not increased and no new hazards are created (e.g., there will be no impacts on adjacent properties with respect to natural hazards);
f) safe ingress/egress is available for proposed development activity that increases habitation outside of hazard lands;
g) pollution, sedimentation and erosion during construction and post-construction is minimized using best management practices including site, landscape, infrastructure and/or facility design, construction controls, and appropriate remedial measures;
h) access for emergency works and maintenance of flood or erosion control works is available;
i) proposed development activity is constructed, repaired and/or maintained in accordance with accepted engineering principles and approved engineering standards or to the satisfaction of MRCA, whichever is applicable based on the structural scale and scope, and purpose of the project;
j) there are no adverse hydraulic or fluvial effects on rivers, creeks, streams, or watercourses;
k) there are no adverse effects on the hydrologic function of wetlands;

l) negative or adverse ecological impacts on natural features and functions, including wetlands, are avoided or mitigated as demonstrated by a qualified professional;
m) intrusions on natural features, areas and systems contributing to the, including areas providing ecological functions and hydrologic functions, are avoided or mitigated as demonstrated by a qualified professional;
n) the control of flooding, erosion, dynamic beaches, or unstable soil and bedrock is not adversely affected during and post-development activity; and
o) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

Development Activity Setbacks

3.6.9 That notwithstanding supplementary policies or stand-alone policies as specified in Sections 4.0 through to and including 8.0, new development activity within a regulated area shall be set back from the greater of the following:

a) Where new development activity is proposed along other watercourses and waterbodies and the elevation of the 1:100-year floodplain is known, all development activity must be located a minimum of 15-metres beyond the extent of the 1:100-year floodplain.
b) Where the elevation of the 1:100-year floodplain is unknown, a minimum setback of 30-metres from the high-water mark will be applied for new development activity. However, if a site assessment reveals that the extent of the floodplain can be established (e.g., high granite bank); a minimum 15-metre setback is applied from that point. In cases where there is a dispute over the extent of the floodplain it is the responsibility of the proponent to bring forward documentation such as an engineering analysis or professional survey of the floodplain in support of their position.
c) For slopes, bluffs, and embankments that do not have an established erosion hazard, a minimum 30-metre setback shall be applied horizontally from the stable top of bank for new development activity. For development activity located between the water and the toe of the slope or embankment, a minimum 30-metre setback from the stable toe of slope will be applied. A geo-technical review will be requested to support any reduction in this setback.
d) For evaluated wetlands and wetlands greater than 2 hectares in size, a minimum 30-metre setback is applied from the wetland boundary.

Floodproofing Standards

3.6.10 All re-development activity proposed within the flood hazard limit must meet the minimum floodproofing requirements as outlined in Appendix C, plus a freeboard as determined by the MRCA. Recognizing the required floodproofing measures are the minimum standard, where feasible MRCA will continue to encourage the most effective flood damage reduction measures in an effort to reach maximum protection standards possible based on the following alternatives consistent with MRCA standards, listed in order of priority:

a) flood control remedial works;
b) dry passive floodproofing measures;

c) wet floodproofing measures; and
d) dry active floodproofing measures, which may be implemented to further minimize flood risk in combination with any of the above.

Safe Access (Ingress/Egress) and Parking

3.6.11 All development activity, including new parking facilities (above-ground and underground structures and at-grade parking lots), must meet the minimum requirements for safe access for the nature of the development activity as outlined in the policies in Appendix C in accordance with Provincial and MRCA Standards, and demonstrate to the satisfaction of the MRCA that:

a) risks due to both flooding and erosion have been addressed;
b) within the flood hazard, flood depth and velocity criteria for pedestrian access, vehicular access and emergency services have been met;
c) within the flood hazard, filling or regrading to achieve compliance with flood depth and velocity criteria shall not be permitted unless such works are associated with an environmental assessment process, comprehensive environmental study or technical report supported by MRCA;
d) where applicable, confirmation from the affected municipal emergency services that flood emergency response procedures have been developed and can be implemented to the satisfaction of the municipality;
e) intrusions on natural features, areas, and systems contributing to the, including areas providing ecological functions and hydrologic functions, are avoided or mitigated;
f) negative or adverse hydrological or ecological impacts on natural features and functions are avoided and mitigated; and
g) the level of ingress/egress available is appropriate to effectively manage the risks associated with the use.

4. RIVER OR STREAM VALLEYS

4.1 Discussion of River or Stream Valleys

To provide guidance in regulating river and stream valleys, it is necessary to highlight their hydrological and ecological functions. It should be noted that inland lakes are considered to be within or a part of the river or stream valley.

To define the regulation limits for river and stream valleys, it is important to understand the landforms through which they flow. While there are many different types of systems, the application of the regulation limit for rivers and stream systems is based on two simplified landforms, as explained in the technical guides for river and stream systems (MNR, 2002a; and MNR, 2002).

River and stream systems also provide physical, biological and chemical support functions for sustaining ecosystems. These functions are directly associated with the physical processes of discharge, erosion, deposition and transport which are inherent in any river and stream system. The interplay between surface and ground water and the linkages, interactions and inter-dependence of aquatic environments

with terrestrial environments supply hydrologic and ecological functions critical to sustaining watershed ecosystems.

Furthermore, river and stream systems are part of larger overall drainage watersheds, and the river and stream mechanics are linked to the watershed processes. The natural importance of river and stream systems in providing physical, biological and chemical support functions for sustaining ecosystems (including that of humans) is well established. These support functions are strongly associated with the physical processes of discharge (flow), erosion, deposition and transport that are inherent in any fluvial system. Given that ecological sustainability is based on the dynamic nature of these systems, it is essential that their physical processes (i.e., flow dynamics) be allowed to function in a natural state.

River or stream valleys are shaped and re-shaped by the natural processes of erosion, slope stability and flooding. Erosion and slope stability are two natural processes that are quite different in nature yet often linked together. Erosion is essentially the continual loss of earth material (i.e., soil or sediment) over time as a result of the influence of water or wind. 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 the physical change will occur in these systems depends on the interaction of a number of interrelated factors including hydraulic flow, channel configuration, sediment load in the system, storage and recharge functions, 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 results in hazardous conditions which pose a risk to life and cause property damages.

River and stream systems can exhibit erosion potential of the actual river and stream bank, as well as potential slope instability issues related to valley walls. Slopes steeper than 3:1 (horizontal: vertical) with a height greater than 3 metres are generally considered potentially unstable. Slopes in sandy soil areas may be unstable if the slope is steeper than 5:1 (horizontal: vertical). Erosion hazards and slope instability 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 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 the spring freshet and may occur again as a result of extreme rainfall events. Rivers naturally accommodate flooding within their valleys. Historically, development occurred in floodplain areas because of the availability of water for power, transportation, energy, waste assimilation, and domestic and industrial consumption. However, floodplain development is susceptible to flooding which can result in property damage and/or loss of life.

In Ontario, either storm-centred events, observed events, or a flood frequency-based event may be used to determine the extent of the Regulatory floodplain, as prescribed by each individual CA regulation.

4.2 Defining the River or Stream Valley

River or stream valleys are described in the Regulation as *"depressional features associated with a river or stream, whether or not they contain a watercourse"*. The limit of the river or stream valley is the furthest extent of the erosion hazard or flooding hazard plus an allowance. For the purpose of

administering the Regulation, inland lakes that do not meet the definition of “large inland lake” (i.e., waterbody that has a surface area equal to or greater than 100 square kilometers where there is no measurable or predictable response to a single runoff event) should be treated in a manner similar to a river or stream valley.

While there are many different types of systems, the application of the regulation limit for rivers and stream systems is based on two simplified landforms, as explained in the Technical Guides for River and Stream Systems (MNR, 2002a; and MNR, 2002b). The following sections describe how the various components of a river or stream valley are determined.

Apparent[2] (confined) river and stream valleys: 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 discernible (i.e., valley walls are clearly definable) from the surrounding landscape by either field investigations, aerial photography and/or map interpretation. The location of the river or stream channel may be located at the base of the valley slope, in close proximity to the toe of the valley slope (i.e., within 15 metres), or removed from the toe of the valley slope (i.e., greater than 15 metres).

Not Apparent (unconfined) river and stream valleys: are ones in which a river or stream is present but there is no discernible valley slope or bank that can be detected from the surrounding landscape. For the most part, unconfined systems are found in fairly flat or gently rolling landscapes and may be located within the headwater areas of drainage basins. The river or stream channels contain either perennial (i.e., year-round) or ephemeral (i.e., seasonal or intermittent) flow and range in channel configuration from seepage and natural channels to detectable channels.

4.2.1 Apparent/Confined Valleys

Where the physical presence of a valley corridor containing a river or stream channel, which may or may not contain flowing water, is visibly discernible (i.e., valley walls are clearly definable) from the surrounding landscape, the regulated area (or regulation limit) for apparent/confined valley systems considers the following three considerations:

- toe erosion;
- a stable slope limit; and
- a 15 metre allowance.

The limit of the regulated area associated within an apparent/confined valley is based on whether or not the valley slopes are stable, unstable, and/or subject to toe erosion.

Valley slopes are considered stable when the valley is not subject to toe erosion, the valley walls are no more than 3 metres in height, and the existing slope angle is no steeper than 3:1 (horizontal: vertical units). The valley slopes in these circumstances typically resist slumping and rotational slippage but may become unstable as a consequence of the increased loading forces of development, depending on the soil structure and underlying geology. The regulated area includes the river or stream and the valley walls extending landward to the stable top of bank plus an allowance of 15 metres (Figure 5).

[2] The individual CA Regulations describe river or stream valleys as “apparent” and “not apparent”. Provincial Technical Guides utilize the terminology “confined” and “unconfined”, respectively.

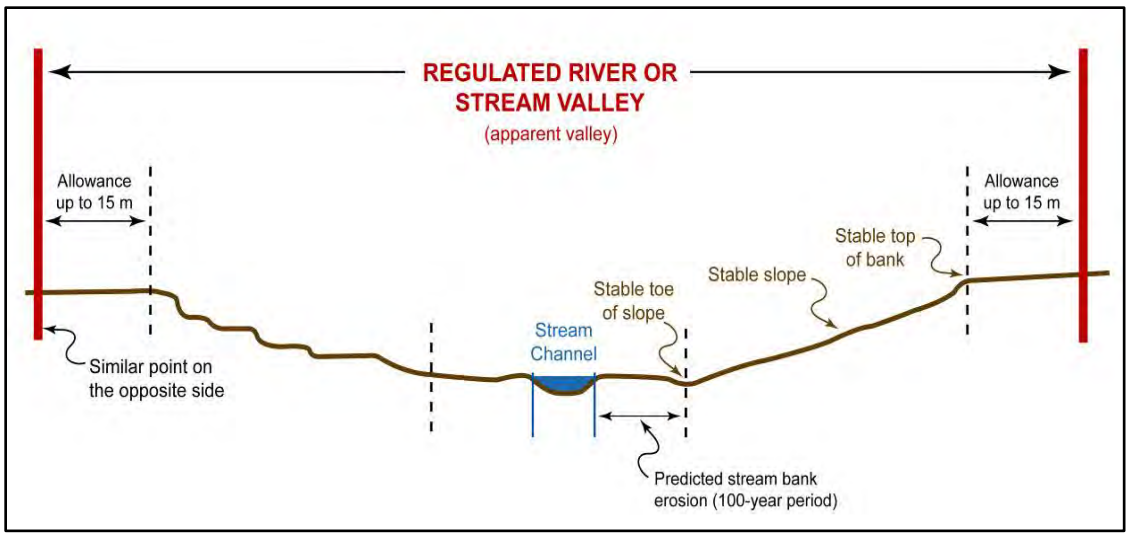

FIGURE 5: APPARENT RIVER OR STREAM VALLEY (WHERE THE VALLEY SLOPES ARE STABLE)

Valley slopes are considered unstable when the valley slope may be impacted by toe erosion and/or slope instabilities (i.e., existing slope angle steeper than 3:1 (horizontal: vertical units) and/or greater than 3 metres in height). The regulated area includes the river or stream and the valley walls extending landward to the predicted long-term stable top of slope projected at a 3:1 (horizontal: vertical) (or 5:1 (horizontal: vertical) for sandy soils) slope ratio from the predicted stable toe of slope (taking into consideration a toe erosion allowance of 15 metres, unless otherwise determined through a technical analysis) plus an allowance of 15 metres (Figures 6 and 7).

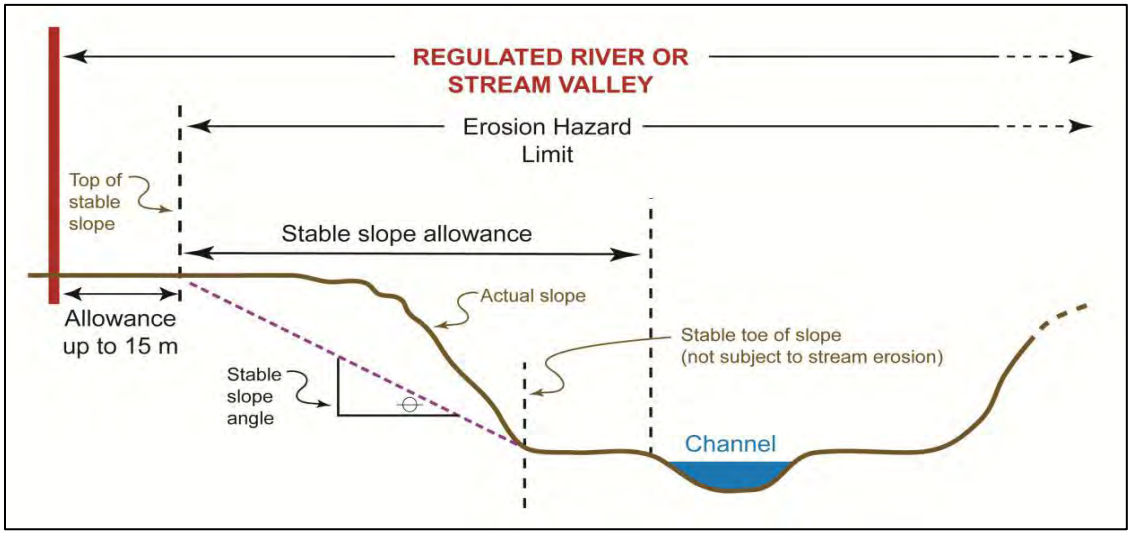

FIGURE 6: APPARENT RIVER OR STREAM VALLEY (VALLEY SLOPE UNSTABLE WITH STABLE TOE)

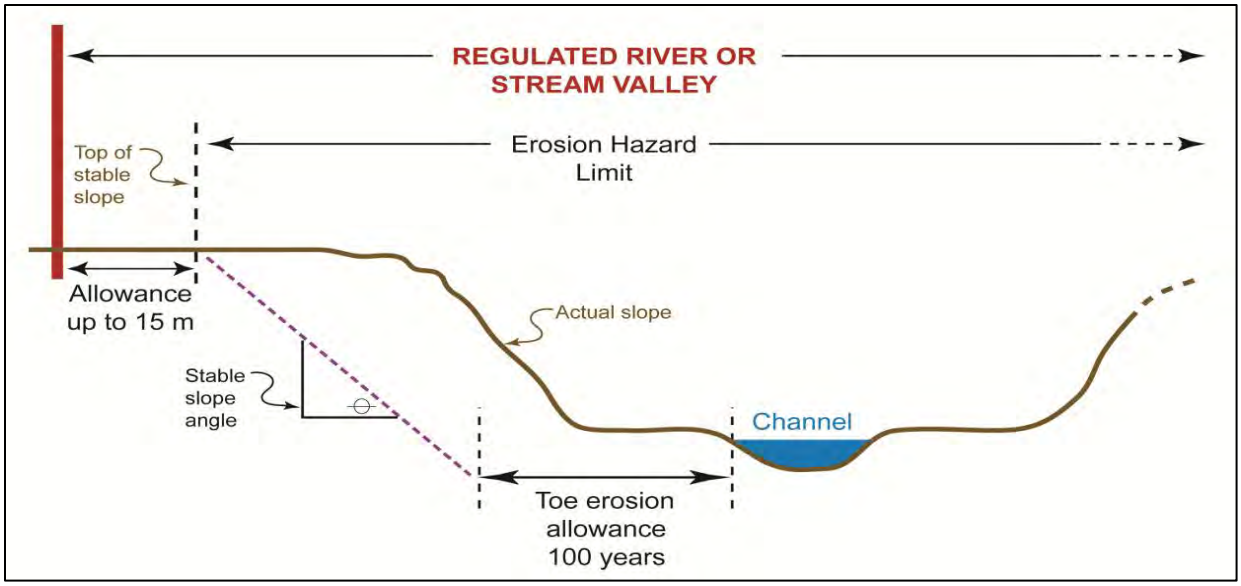

FIGURE 7: APPARENT RIVER OR STREAM VALLEY (WHERE VALLEY SLOPES ARE UNSTABLE WITH ACTIVE TOE EROSION)

4.2.2 Not Apparent/Unconfined Valleys

Where a watercourse is not contained within a clearly visible valley section (that is, a river or stream is present but there is no discernible valley slope or bank that can be detected from the surrounding landscape), the flow of water is free to shift across the shallower land. Although toe erosion and slope stability are not deemed potential hazards, consideration of the meandering (erosion potential) tendencies of the system must be taken into account. In these valley systems, the regulated area consists of the maximum extent of whatever is greater: the floodplain or the predicted meander belt width (erosion hazard) of the river or stream plus an allowance of 15 metres (Figure 8).

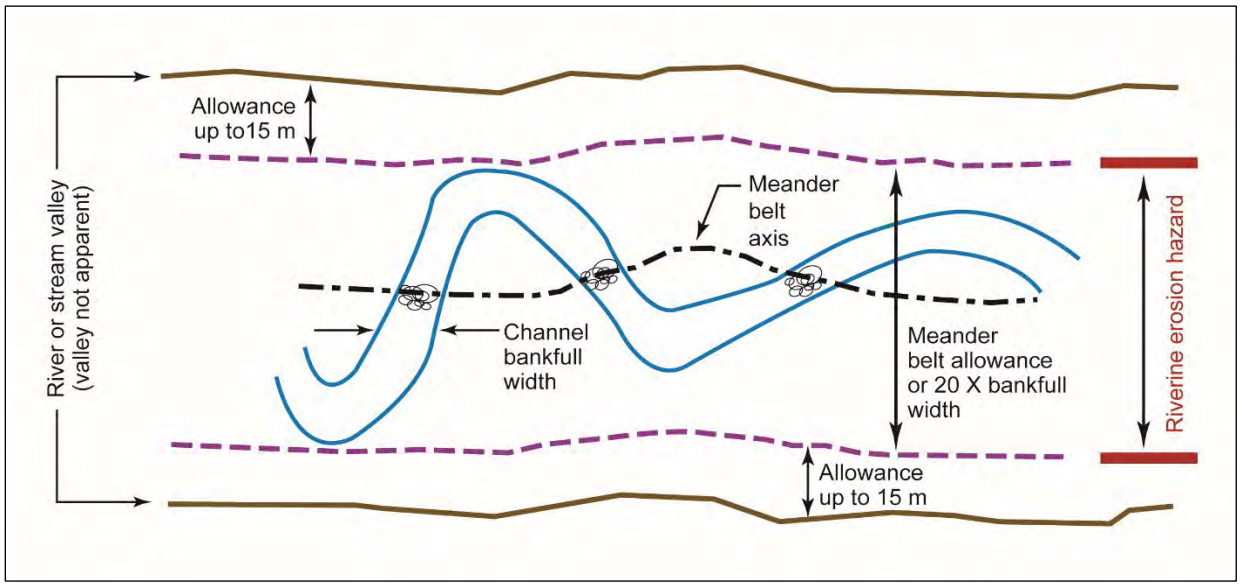

FIGURE 8: NOT APPARENT RIVER OR STREAM VALLEY (MEANDER BELT)

River or stream systems may contain lands that are not subject to flooding or erosion. Examples of these non-hazardous lands include isolated flat plateau areas or areas of gentle slopes (Figure 9). In these situations, the CA shall determine the applicability of the Regulation.

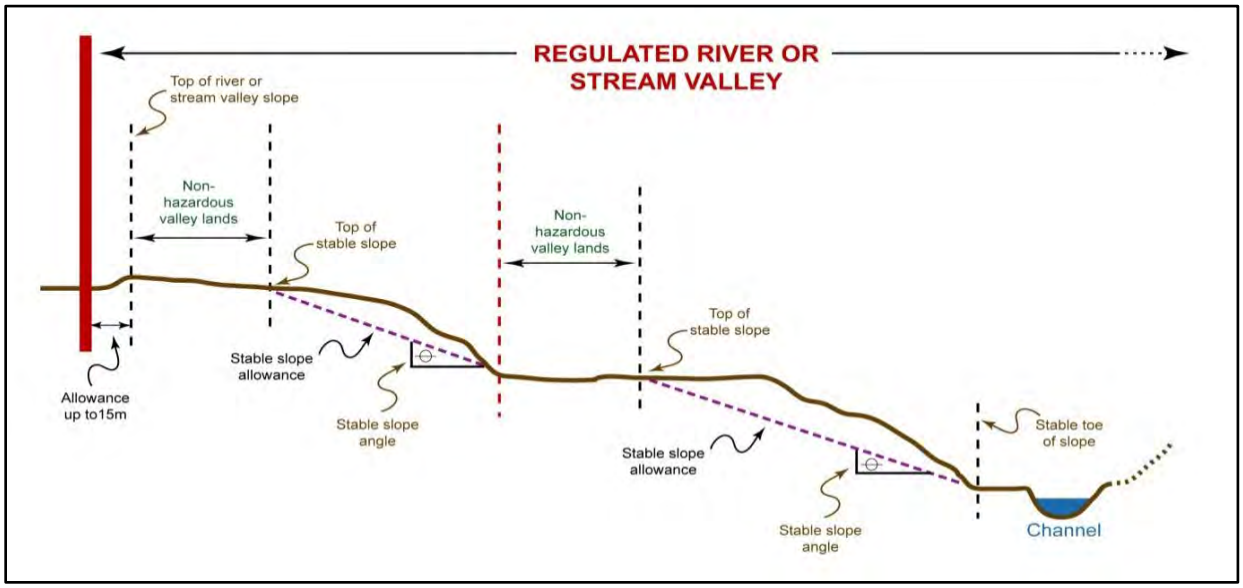

FIGURE 9: REGULATED RIVER OR STREAM VALLEY CONTAINING NON-HAZARDOUS VALLEY LANDS

4.3 Defining the Erosion Hazard and Associated Regulated Area

The erosion hazard is that area of a watercourse bank and lands adjacent to a watercourse (i.e., a watercourse valley) where erosion is actively occurring and/or where development could create slope stability issues. The erosion hazard addresses both the erosion potential of the actual watercourse bank and the potential slope instability related to valley walls.

Development adjacent to valley slopes can cause increased loading forces on the top of slope, compromise slope stability or increase erosion of the slope face, and result in the loss of stabilizing vegetation. Where there is no apparent valley, the regulated area associated with an erosion hazard is comprised of the meander belt (i.e., the meander belt width). Where the valley is apparent the regulated area associated with an erosion hazard is comprised of the stream bank and slope erosion (i.e., the toe erosion allowance and the stable slope allowance).

4.3.1 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 MRCA. 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. Sections 3.0, 3.1, 4.1, and 4.3 of the Technical Guide are particularly relevant in this regard. 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 sedimentation 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.

Sections 3.0, 3.2, 4.1, and 4.3 of the Technical Guide provide important direction with respect to slope stability analysis. Slope stability analysis should also be undertaken in accordance with the Geotechnical Principles for Stable Slopes (Terraprobe Limited and Aqua Solutions, 1998). Recognized analytical methods should be utilized. An appropriate Factor of Safety should be incorporated into all designs/analysis based on the consequences or 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, 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, and ecology. 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.

Within non-apparent valleys, there may be on occasion areas within the meander belt allowance that are not actually susceptible to erosion within a 100-year planning horizon. These areas may arise for a variety of reasons such as, but not limited to, soil type, hydraulic regime changes, implementation of publicly owned erosion protection works, etc. In these areas, some development, particularly development associated with existing uses, may be considered as the development would not be susceptible to actual stream erosion over the 100-year planning horizon.

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.

As part of the review of an application, MRCA may request an environmental impact assessment (EIA) to address development within erosion hazards. An EIA is a mechanism for assessing impacts to determine the suitability of a proposal. The submission of an EIA does not guarantee approval of the works. An EIA 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 MRCA.

4.3.2 Determining the Erosion Hazard of an Apparent (Confined) River or Stream Valley

The following method will be used to determine the erosion hazard for an apparent (confined) river or stream valley:

1. In general, where there is an apparent river or stream valley, the erosion hazard will consist of a toe erosion allowance plus a stable slope allowance. The toe erosion allowance is determined in accordance with Table 3 below (or as determined by a study using accepted geotechnical and engineering principles). The stable slope allowance is defined as being no steeper than 1(h):1(v)

for bedrock shorelines and no steeper than 3(h):1(v) for all other situations (or as determined by a study using accepted geotechnical principles);

2. Notwithstanding point 1), a scoped erosion (recession) study and/or geotechnical analysis may be completed by a qualified professional using accepted scientific and engineering principles to re-evaluate the erosion hazard allowance for development proposals. These studies are to be done at the applicant's expense and must be completed to the satisfaction of MRCA staff.

TABLE 3: DETERMINATION OF TOE EROSION ALLOWANCE

Minimum Toe Erosion Allowance – River Within 15m 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)*	0-2m	0m	0m	1m
2. Soft Rock (shale, limestone) Cobbles, Boulders*	2-5m	0m	1m	2m
3. Stiff/Hard Cohesive Soil (clays, clay silt), Coarse Granular (gravel) Tills*	5-8m	1m	2m	4m
4. Soft/Firm Cohesive Soil, loose granular (sand, silt) Fill*	8-15m	1-2m	5m	7m

*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 allowance presented in the right half of the table are suggested for sites with this condition.

***Competent Flow Velocity is the flow velocity that the bed material in the stream can support without resulting in erosion or scour.

Source: Technical Guides for River and Stream Systems (MNRF, 2002a; and MNRF, 2002b)

4.3.3 Determining the Erosion Hazard of a Non-Apparent (Unconfined) River

The following method will be used to determine the erosion hazard for a non-apparent (unconfined) river or stream valley:

1. In general, the erosion hazard of a non-apparent river or stream valley (meander belt) or predicted meander belt allowance is determined by multiplying 20 times the bankfull channel width centred over the meander belt axis (or as determined by a study using accepted engineering principles);
2. Notwithstanding point 1), a scoped erosion (recession) study and/or geotechnical analysis may be completed by a qualified professional using accepted scientific and engineering principles to re-evaluate the erosion hazard (predicted meander belt allowance) for development proposals. These studies are to be done at the applicant's expense and must be completed to the satisfaction of MRCA staff.

4.4 Defining the Flood Hazard and Associated Regulated Area

In Ontario, either storm-centred events, flood frequency-based events, or an observed event may be used to determine the extent of the Regulatory floodplain[3]. These events are:

a) A **storm-centred event**, either Hurricane Hazel storm (1954) or Timmins storm (1961). A storm-centred event refers to a major storm of record which is used for land use planning purposes. The rainfall actually experienced during a major storm event can be transposed over another watershed and when combined with the local conditions, regulatory floodplains can be determined. This centering concept is considered acceptable where the evidence suggests that the storm event could have potentially occurred over other watershed in the general area.

b) **100-year flood event** is a frequency-based flood event that is determined through analysis of precipitation, snow melt, or a combination thereof, having a return period (or a probability of occurrence) of once every 100 years on average (or having a 1% chance of occurring or being exceeded in any given year). The 100-year flood event is the minimum acceptable standard for defining the Regulatory floodplain.

c) An **observed event**, which is a flood that is greater that the storm-centred events or greater that the 100-year flood and which was actually experienced in a particular watershed, or portion thereof, for example as a result of ice jams[4], and which has been approved as the standard for that specific area by the Minister of Natural Resources.

The province has adopted standards for addressing floodplain management. Unless otherwise approved by the Minister of Natural Resources, the regulatory flood standard is the Hurricane Hazel (1954) standard for the south and central part of the Province, the Timmins Storm (1961) for the central and

[3] High points of land not subject to flooding but surrounded by floodplain or "flooded land" are considered to be within the flood hazard and part of the regulated floodplain.

[4] However, localized chronic conditions (e.g. ice or debris jams) related to flood prone areas may be used to extend the regulated area beyond the Regulatory Flood limit without the approval of the Minister of Natural Resources. It will be necessary to inform the property owner(s) as well as ensuring that the revised limits are reflected in the appropriate municipal documents at the first opportunity.

northern part of the province and the 100-year flood for the eastern part of the province (Figure 10). An observed event may take place in any part of the province, exceeding either the storm-centred events or the 100-year frequency-based flood. These standards may be increased by the Minister of Natural Resources if a known flood (maximum observed) exceeds these criteria (Natural Hazards Technical Guidelines, 2002 (MNR) – Section 7.0, River and Stream Systems of Understanding Natural Hazards and River and Stream Systems Flooding Hazard Limit Technical Guide). The entire MRCA watershed uses the Timmins Storm event, except for the Mattagami River which uses the 100-year flood event.

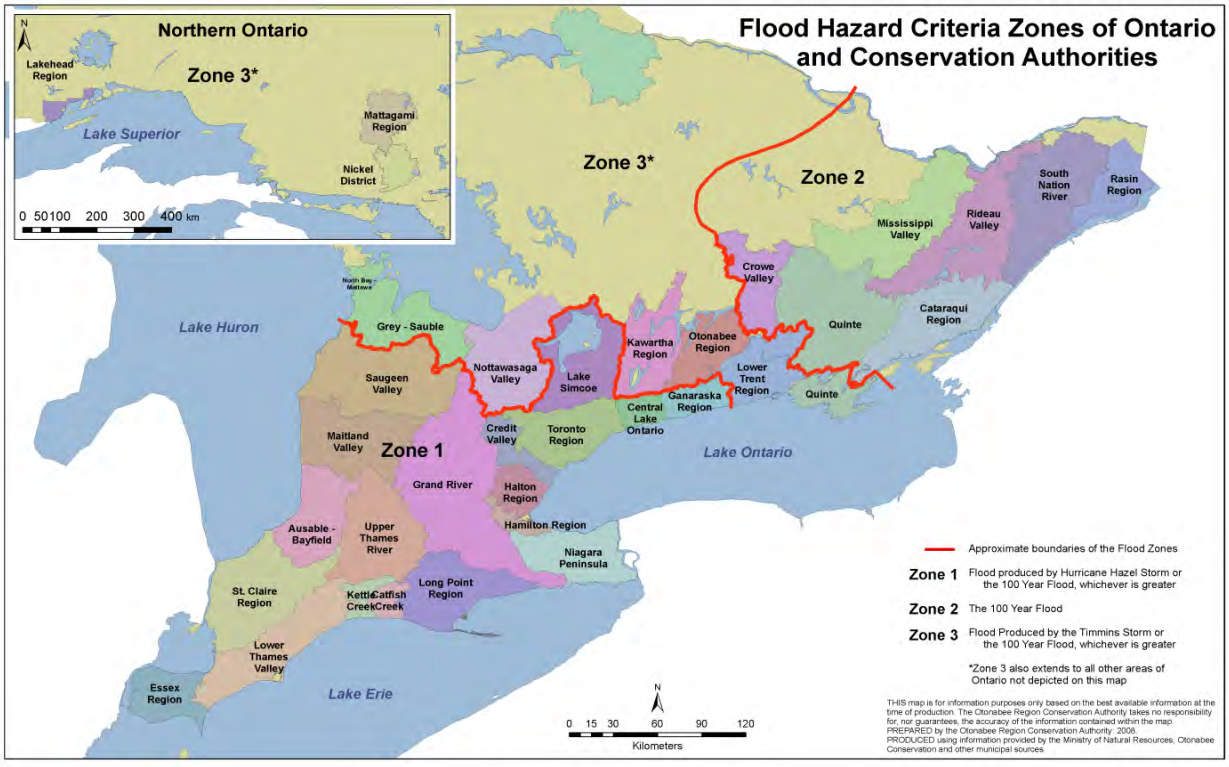

FIGURE 10: FLOOD HAZARD CRITERIA ZONES OF ONTARIO

Thus, the Regulatory floodplain for river or stream valley systems is defined as the area adjacent to the watercourse which would be inundated by a flood event resulting from either Hurricane Hazel, the Timmins Storm, an observed event, or by the 100-year frequency-based event. The regulated area includes the floodplain and for not apparent valley systems, an allowance. The allowance is not to exceed 15 metres from the hazard (Figure 11).

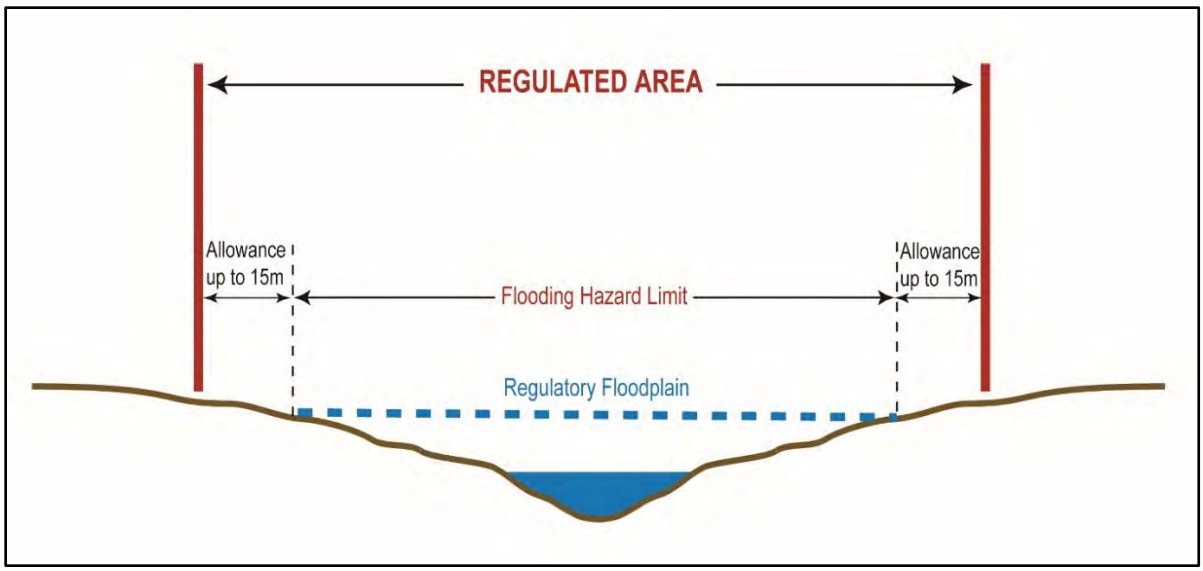

FIGURE 11: REGULATED AREA OF FLOODPLAIN

4.4.1 One Zone Concept

The MRCA has implemented a One Zone Policy Area as per the Provincial Technical Guidelines. In a One Zone Policy Area, the entire Regulatory Floodplain is considered the Floodway. For the Mattagami River, the 100 Year Flood Event Standard defines the Flooding Hazard Limit/Floodway. For all other watercourses, the Timmins Flood Event Standard defines the Regulatory Flood Line. This one zone concept is the preferred approach for the management of flooding hazards within river and stream systems as it provides the most cost-effective means of minimizing potential threats to life and risks of property damage and social disruption. Where the one zone concept is applied, the entire floodplain or the entire flooding hazard limit defines the floodway.

Using the one zone concept, development activities are restricted within the Regulatory Floodplain. Permitted development may include reconstruction or minor additions to existing structures as well as extension to existing agricultural operations. Other uses, such as open space, that is not likely to create damage to other properties from floodwater, or cause a threat to public safety, or are not of a polluting nature may be permitted within the floodplain. Examples of uses or structures that would create adverse impacts in the floodplains of our riverine systems include, but are not limited to, new buildings, swimming pools, filling activities, septic tile fields and tanks, as well as manure storage and handling facilities.

4.4.1.1 Conditional Development Zones (CDZs)

The MRCA originally identified two Conditional Development Zones (CDZ) when O. Regulation 165/06 was approved in 2014. In these zones, limited or conditional development may occur and will be addressed on a case-by-case basis to ensure no adverse impacts occur adjacent to, or within the identified floodplain.

Conditional Development Zones have been established for both Riverside Drive and Bristol Road. The Riverside Drive CDZ includes the south side between Shirley Street and Girouard Road for a distance of 82 metres (270 feet) from the front lot line and the north side between Clifford Street and Joseph Street. The Bristol Road CDZ is that area between Bannerman Street (now Rekela St.) and Florence Street.

Development may be permitted in a Conditional Development Zone (CDZ) that is located within the Riverine Flooding Hazard provided that:

- The building is of a “slab on grade” design with no basement/crawl space.
- The slab is constructed at a minimum finished elevation of .3 metres (1 foot) above the Regulatory Flood Elevation.
- Ingress and egress to the building site is “dry” where this standard can be practically achieved.
- In the Bristol Road CDZ, any fill apron around the foundation of the building can extend to a maximum of 4.5 metres (15 feet) into the Riverine Flooding Hazard. This apron must be graded up to at least the Regulatory Flood Elevation and be graded away from the foundation slab.
- In the Riverside Drive CDZ, any new structure and the fill required for the development must be located as closely as possible to non-flooding lands.

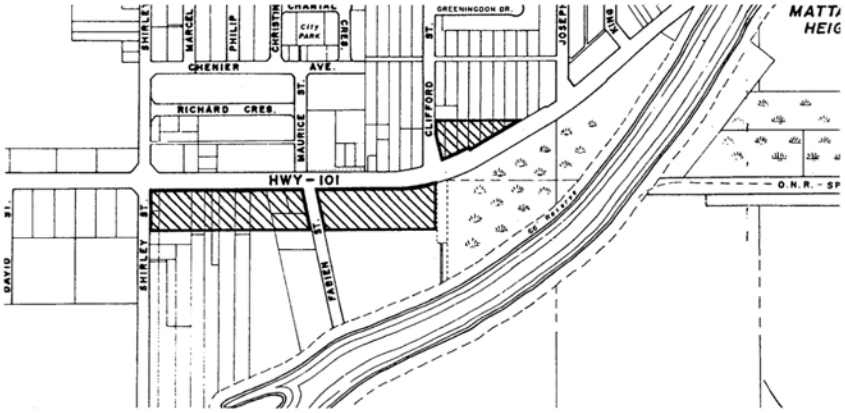

FIGURE 12: RIVERSIDE DRIVE CONDITIONAL DEVELOPMENT ZONE

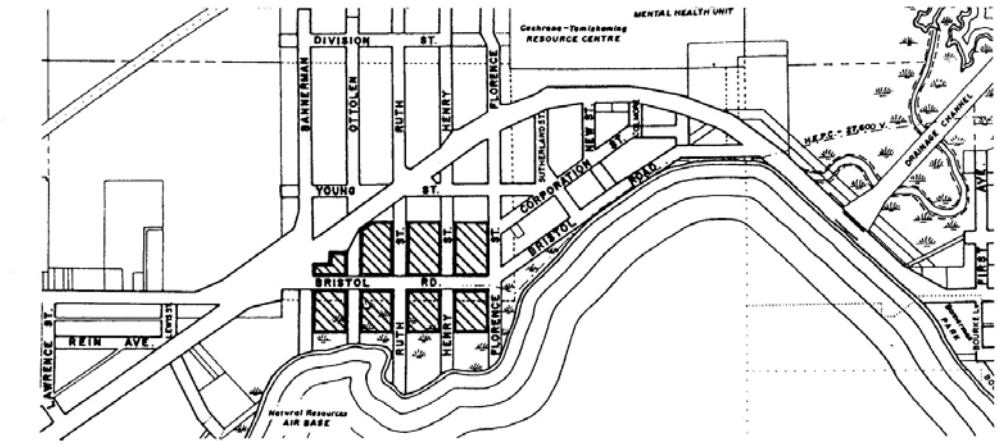

FIGURE 13: BRISTOL ROAD CONDITIONAL DEVELOPMENT ZONE

4.4.2 Technical Standards for the Flooding Hazard

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 (MNR, 2002a). Depths and velocities should be such that pedestrian and vehicular emergency evacuations are possible. For minor additions and 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. In the absence of a site-specific detailed analysis, it is recommended that the depths for safe access not exceed 0.3 metre and velocities not exceed 1.7 metres per second. Despite provincial guidance, MRCA can be more restrictive based on the abilities of local emergency responders to access flooded lands and undertake emergency evacuation.

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. Risk should be controlled by limiting the size and type of additions or reconstruction projects in the regulatory floodplain. Floodproofing measures should be in keeping with the standards of Appendix 6 of the "Technical Guide – River and Stream Systems: Flooding Hazard Limit" (MNR, 2002a).

MRCA may also request a hydrology / hydraulic study to be prepared by a qualified professional using accepted scientific and engineering principles. These studies must be completed to the satisfaction of MRCA staff. All technical studies in support of development proposals are to be completed at the applicant's expense.

4.4.3 Determining the Regulatory Floodplain (Hazard) of River or Stream Valleys

The following method will be used to determine the flood hazard for river and stream valleys:

1) In general, the regulatory floodplain for inland river and stream valleys is determined by:
    i. using engineered floodplain mapping tools where available;
    ii. where engineered floodplain mapping tools are not available, by using the best available data (i.e., maximum recorded water level), by estimating the extent of the regulatory floodplain using accepted scientific and engineering principles, or by undertaking a scoped engineering study performed by a qualified professional using accepted scientific and engineering principles to determine the extent of the regulatory floodplain. These studies are to be done at the applicant's expense and must be completed to the satisfaction of MRCA staff; and
    iii. where an observed event has exceeded the floodplain mapping tools and/or best available data noted above, the observed flood event is utilized to define the regulatory floodplain.

4.5 Regulation Allowances

River or stream valley allowances, MRCA 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. Allowances give MRCA the opportunity to protect access to and along a valley and/or floodplain. This access may be required for emergency purposes, regular maintenance to existing structures or to repair failed structures.

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 affected. The allowance provides MRCA 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.

MRCA requires that all development be setback a minimum of 30 metres from an apparent unstable slope or an unapparent valley with no known erosion or flood hazard. A setback of 15 metres is applied to an apparent stable slope or an unapparent valley with a known erosion or flood hazard. Any reduction in these setbacks must be supported by an appropriate study completed to the satisfaction of MRCA staff.

To provide access and protection against unforeseen conditions, provincial guidelines recommend that development should generally be set back a minimum of 6 metres adjacent to erosion and flooding hazards (Sections 3.0 and 3.4, Erosion Access Allowance, Technical Guide – River and Stream Systems: Erosion Hazard Limit (MNR, 2002b)). MNR recommends that this setback not only be applied to the erosion hazards 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. For those situations where additional study is warranted to determine the development setback required to provide the required public safety and access, a study should be undertaken using accepted scientific, geotechnical, and engineering principles.

Protection of public safety and access, however, may not be sufficient to provide for all of the above noted requirements or purposes for the allowances. Additional technical studies by qualified professionals may be required to establish the appropriate extent and location of development within the allowance. MRCA may also determine that a reduced development setback 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.

In order to ensure that valley systems can preserve the functionality of their physical processes it is important to maintain their natural state in order to prevent property damage and/or loss of life resulting from hazards associated with erosion, slope instability and flooding. For this reason, MRCA encourages development to take place outside of the regulated area associated with any river or stream valley.

4.6 Legislative Authority

The current legislative structure embeds requirements for administration of s. 28 in both the *CA Act* and Ontario Regulation 41/24. CA staff and legal counsel must refer to both pieces of legislation to make decisions and develop policies and guidelines related to s. 28.1 permit applications.

Conservation Authorities Act

The *CA Act* contains the following sections dealing with river or stream valleys:

Prohibited activities re watercourses, wetlands, etc.

28 (1) no person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority: …

2. Development activities in areas that are within the authority's area of jurisdiction and are, …

iii. river or stream valleys the limits of which shall be determined in accordance with the regulations, …

Permits

28.1 (1) An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or pollution or the conservation of land;

b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and …

Ontario Regulation 41/24

The Regulation contains sections dealing with river or stream valleys. Inland lakes that do not meet the definition of "large inland lake" (i.e., waterbody that has a surface area equal to or greater than 100 square kilometers where there is no measurable or predictable response to a single runoff event) should be treated in a manner similar to a river or stream valley. The CA regulation contains the following sections dealing with river or stream valleys.

Prohibited activities, subparagraph 2 iii of s. 28 (1) of the Act

2. (1) For the purposes of subparagraph 2 iii of subsection 28 (1) of the Act, river or stream valleys include 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 as follows:

1. Where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of the bank, plus 15 metres, to a similar point on the opposite side.

2. 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.

3. Where the river or stream valley is not apparent, the valley extends,

(i) to the furthest of the following distances:

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

B. the distance from the predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood event standard to a similar point on the opposite side, and

(ii) an additional 15-metre allowance on each side, except in areas within the jurisdiction of the Niagara Peninsula Conservation Authority.

4.7 Policies for River or Stream Valleys

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As stated in Policy 3.6.1, development will not be permitted within the regulated area associated with a river or stream valley, except in accordance with the policies contained in this section. The policies contained in this section will apply to all lakes and rivers in the MRCA watershed.

The policies are separated by the type of hazard: erosion or flooding. **In instances where there are two or more natural hazards associated with a development activity proposal, the greater setback allowance will be applied.**

4.8 General Policies for Erosion Hazards

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development activity will not be permitted within the regulated area associated with an erosion hazard, except in accordance with the policies contained in this section.

It is the policy of MRCA that:

4.8.1 Development activity within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.8.2 In general, stabilization works within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley to allow for future/proposed development activity or an increase in development activity envelope or area shall not be permitted.

4.8.3 Development activity associated with new and/or the expansion of existing trailer parks/campgrounds within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.8.4 Stormwater management facilities within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.8.5 New basements within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.8.6 In general, underground and above-ground parking structure within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.8.7 Redevelopment of derelict and abandoned buildings within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted; An abandoned building is one that has been unused for its intended purpose for 5 or more years.

4.8.8 Development activity shall be prohibited within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley where the use is:

a) an institutional use associated with hospitals, nursing homes, preschool, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during an emergency as a result of erosion and/or failure of protection works/measures;

b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations which would be impaired during an emergency as result of erosion, or any other hazard associated with erosion and/or as a result of failure of protection works/measures; or

c) uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

4.8.9 Development activity associated with uses that by their nature are located within the erosion hazard such as the construction or reconstruction of an erosion control works (including stream, bank, slope and valley stabilization to protect existing development), conservation or restoration projects, stairs, and shore wells may be permitted within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley subject to the activity being approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected. In order to be considered, the submitted plans must demonstrate that:

a) development activity will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
b) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/ restoration plans; and
c) MRCA may request a technical study to ensure that the development is not subject to risk.

4.8.10 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 activity may be permitted. The submitted plans should demonstrate that:

a) access through the erosion susceptible area is required;
b) development activity 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 and future slope stability;
e) bank stabilization or erosion protection works are not required; and
f) flooding hazards have been adequately addressed.

4.9 Specific Policies for Erosion Hazards

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development will not be permitted within the regulated area associated with an erosion hazard, except in accordance with the policies contained in this section.

4.9.1 Structural Development

4.9.1.1 New structural development will not be permitted within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley, regardless of any approvals previously obtained under the Planning Act or other regulatory process (e.g., *Building Code Act*).

4.9.1.2 Structural repairs, replacement or relocation of an existing building or structure recently (within 5 years) damaged or destroyed either by accident of by an Act of God (other than flooding) may be permitted within erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley provided that the applicant is advised of the risk to the building or structure and if it has been demonstrated to the satisfaction of MRCA that the

control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and that:

a) there is no feasible alternative site outside of the hazard;
b) the structure is not derelict, demolished or abandoned;
c) the building or structure does not exceed the original footprint, is of the same use, same square footage and same number of storeys;
d) the proposed works do not create new hazards or aggravate erosion on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
e) bank stabilization or flood protection works are not required;
f) structural development would not be susceptible to stream erosion and will have no impact on natural stream meandering or fluvial processes;
g) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
h) development activity will not prevent access into and through the valley in order to undertake preventative actions/maintenance or during an emergency; and
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

4.9.2 Infrastructure

4.9.2.1 Public infrastructure (e.g., roads, sewers, flood and erosion control works) and various utilities (e.g., pipelines) may be permitted within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley where it has been demonstrated that:

a) all feasible alternatives sites and alignments have been explored through a satisfactory Environmental Assessment process, comprehensive environmental study or equivalent technical report;
b) the control of flooding, erosion, dynamic beaches or unstable soil and bedrock, will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.
c) there is no increase in risk associated with erosion hazards to upstream or downstream properties within valley and stream corridors; and
d) a more detailed site-specific study (i.e., a geotechnical study) is conducted to determine a more precise erosion hazard limit(s) in accordance with the Ministry of Natural Resources "Technical Guide – River & Stream Systems: Erosion Hazard Limit" (2002) and demonstrates how impacts to the erosion hazard will be mitigated to ensure that there is no impact on existing and future slope stability and that the infrastructure or utility will not prevent access into and through the valley in order to undertake preventative actions or maintenance or during an emergency.

N.B. Where infrastructure is permitted within hazardous lands or hazardous sites, an environmental monitoring and contingency plan may be required to address potential emergencies during construction and operation.

4.9.3 Fill Placement, Excavation and/or Grade Modifications

4.9.3.1 Fill placement, excavation, and/or grade modifications associated with existing access roads and driveways; required for the purpose of erosion protection; and/or, to facilitate the installation of geothermal, sewage systems and wells within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley may be permitted provided it can be demonstrated through appropriate technical reports (e.g., topographic survey, geotechnical study) that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and

a) there is no feasible alternative site outside of the apparent river or stream valley or the meander belt of a non-apparent valley or, in the event that there is no feasible alternative site, that the proposed development activity is located in an area of least (and acceptable) risk;
b) there is no impact on existing and future slope stability;
c) bank stabilization or erosion protection works are not required;
d) the provisions of safe access are met;
e) fill placement will have no negative impacts on natural stream meandering/fluvial processes;
f) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
g) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed;
h) fill placement will not prevent access into and through the valley in order to undertake preventative actions/maintenance or during an emergency;
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA;
j) inert fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the is not impacted; and
k) the erosion susceptibility of existing structures or adjacent properties will not be impacted.

4.9.3.2 Fill placement in the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley associated with a new septic system will not be permitted.

4.9.3.3 Fill placement associated with the replacement of a septic system may be permitted:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) MRCA may request a technical study to ensure that the system will not have an impact on the control of erosion; and
c) the system is servicing an existing dwelling.

4.9.3.4 In general, excavated well installation within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted. Drilled wells do not require a permit.

4.9.3.5 Repairs associated with a well located in the flood/erosion and/or dynamic beach hazard may be permitted:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk; and
b) the well is servicing an existing dwelling.

4.9.3.6 Development activity associated with the construction of a driveway or access way through the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley in order to provide access to lands outside of the apparent river or stream valley, or to provide access to water may be permitted within the erosion hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must demonstrate that:

a) there is no viable alternative outside of the erosion hazard;
b) the provision of safe access as identified in Section 2.4.4.1 have been met;
c) there is no impact on existing and future slope stability.

N.B. Permitted fill placement, excavation and/or grade modifications may be seasonally restricted and subject to a specified time frame to enable stabilization/re-vegetation of the disturbed area.

4.9.4 Shoreline Erosion Protection

4.9.4.1 Stream bank, slope and valley stabilization to protect existing development and conservation or restoration projects may be permitted within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley subject to the activity being approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, pollution, or the conservation of land will not be affected. The application must demonstrate that there is active erosion present and that the work is not for aesthetics only. Submitted plans must also demonstrate that:

a) alignment or realignment of the shoreline must not result in significant negative effects on river hydraulics or shoreline processes;
b) transitions from proposed protection to adjacent shorelines must be designed so that local erosion, debris accumulation or undesirable changes in local currents will not occur;
c) where shoreline proposals are in the vicinity of marginally stable or unstable slopes, professional geo-technical engineering input may be required, at the Authority's discretion;
d) professional coastal engineering input may be required, at the Authority's discretion;
e) The Mattagami Region Conservation Authority will promote the use of soft, environmentally friendly natural shoreline protection measures. Therefore, new proposals for hard structural shoreline protection measures such as wooden, steel, or concrete walls are not permitted in the floodplain;

f) shoreline projects must not result in a net reduction in flood storage capacity; and

g) the erosion protection cannot result in an increase in developable space, or a reduced setback from any flood or erosion hazard.

4.9.5 Docks / Boat Lifts / Boathouses

4.9.5.1 New permanent structures are not permitted in the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley.

4.9.5.2 Floating docks, cantilever docks and removable docks do not require a permit unless there is a shoreline alteration proposed to anchor the dock to land. The anchor/abutment will require a permit and may be allowed within the floodplain, provided it is placed above the high-water mark.

4.9.5.3 Boat lifts and marine railways may require a permit.

4.9.5.4 Repairs within the existing footprint to existing boathouses may be permitted within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, pollution or the conservation of land will not be affected, and the boathouse is constructed as a single storey with no habitable space.

Additions and/or expansions of existing boathouses will not be permitted.

4.9.6 Passive Low-Intensity Recreational Uses and Conservation Activities

4.9.6.1 Development activity associated with public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities may be permitted within the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, pollution, or the conservation of land will not be affected and that:

a) there is no feasible alternative to locate the development activity outside of the erosion hazard and that the development activity will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);

b) there is no negative impact on existing and future slope stability;

c) the use will not prevent access into and through the valley in order to undertake preventative actions or maintenance or during an emergency; and

d) the potential for erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans.

4.10 Development Activity Within the Allowance (Setback) of the Erosion Hazard

As mentioned in Section 3.3.2 the guidelines for development activity within the setback to an erosion hazard include a 6 metre access allowance. MRCA requires that all development activity be setback a minimum of 30 metres from the top of bank of an apparent valley with an unstable slope or an unapparent valley with no known erosion hazard. A setback of 15 metres is applied from the top of bank to an apparent valley with a stable slope or an unapparent valley with a known erosion hazard. Any reduction in these setbacks must be supported by an appropriate geotechnical study completed to the satisfaction of MRCA staff.

It is the policy of MRCA that:

4.10.1 Development activity may be permitted within the setback adjacent to the erosion hazard of an apparent river or stream valley or the meander belt of a non-apparent valley provided it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock or the conservation of land will not be affected; and that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans should demonstrate that:

a) development does not create or aggravate an erosion hazard;
b) development does not impede access to and along the top of the slope, or to and along the meander belt for emergency works, maintenance and evacuation;
c) 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;
d) for reconstruction of buildings or structures located within the setback, the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the setback from the erosion hazard than the original building or structure;
e) the original use of the building or structure does not change (i.e., non-habitable space cannot be converted into habitable space as a result of the reconstruction);
f) for additions to existing buildings or structures located within the setback allowance, the addition cannot encroach further into the setback from the erosion hazard than the original building or structure;
g) development does not change drainage or vegetation patterns that would compromise slope stability or exacerbate erosion of the slope face;
h) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans;
i) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed; and
j) the plan is carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of the CA.

N.B. Where development activity is proposed and the extent of the erosion hazard is unknown, MRCA will require a technical study, completed by a qualified professional, to determine the extent of the hazard. These studies are completed at the applicant's expense and must be completed to the satisfaction of MRCA.

4.10.2 For slopes and embankments that exist above a proposed site for development activity, and all or a portion of the upper slope lies within the regulated area, a 15 metre setback from the stable toe of slope will be applied. MRCA may consider a reduction of this allowance if it can be demonstrated that the hazard will not be aggravated and the development activity will not be negatively affected by the hazard. Generally, a technical study conducted by a qualified professional will be required for a reduction to be considered.

4.10.3 Swimming pools, in-ground or above-ground, and inclusive of all fencing and landscaping, must meet a 15 m setback from the top of the slope of an apparent stable slope or an unapparent valley with a known erosion hazard, and a 30 m setback from an apparent unstable slope or an apparent valley with no known erosion hazard.

4.10.4 The following may be permitted to encroach farther into the setback from the top of bank of an apparent stable slope or an unapparent valley with a known erosion hazard than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. At a minimum the 6 metre access allowance setback is met:

a) decks, provided that they are not enclosed or covered;
b) dug wells, drilled wells;
c) importation of fill for the repair/replacement of a sewage system, providing that the sewage system meets Ontario Building Code standards; and
d) stormwater management facilities

4.10.5 The following may be permitted to encroach farther into the setback from the top of bank of an apparent stable slope or an unapparent valley with a known erosion hazard than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The 6 m access allowance setback is not required for this development activity however development cannot be located in any hazard:

a) concrete abutments or anchors for docks; and
b) boat houses that conform to the definition of a boat house as described in Appendix A.

4.11 General Policies for Flood Hazards

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development activity will not be permitted within the regulated area associated with a flood hazard of an apparent river or stream valley or the meander belt of a non-apparent valley, except in accordance with the policies contained in this section.

It is the policy of MRCA that:

4.11.1 Development activity within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.11.2 In general, flood protection and bank stabilization works to allow for future/proposed development or an increase in development envelope or area within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.11.3 Floating dwellings/structures within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted. Open, unenclosed floating docks will be permitted.

4.11.4 Development activity associated with new and/or the expansion of existing trailer parks/campgrounds within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.11.5 Stormwater management facilities within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.11.6 New basements within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.11.7 In general, underground and above-ground parking structures within the regulatory floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted.

4.11.8 Redevelopment of derelict and abandoned buildings within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted. An abandoned building is one that has been unused for its intended purpose for 5 or more years.

4.11.9 Development activity shall be prohibited within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley where the use is:

a) an institutional use associated with hospitals, nursing homes, preschool, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during an emergency as a result of erosion and/or failure of protection works/measures;
b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations which would be impaired during an emergency as result of erosion, or any other hazard associated with erosion and/or as a result of failure of protection works/measures; or
c) uses associated with the disposal, manufacture, treatment or storage of hazardous substance.

4.11.10 Development activity associated with uses that by their nature are located within the floodplain such as the construction or reconstruction of a marine facility, erosion control measures (including stream, bank, slope and valley stabilization to protect existing development), conservation or restoration projects may be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley subject to the activity being approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, pollution, or the conservation of land will not be affected. In order to be considered, the submitted plans must demonstrate that:

a) development activity will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
b) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/ restoration plans.

MRCA may request a technical study to ensure that the development activity is not subject to risk.

4.12 Specific Policies for Flood Hazards

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development activity will not be permitted within the regulated area associated with a flood hazard, except in accordance with the policies contained in this section.

4.12.1 Structural Development

4.12.1.1 New structural development will not be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley regardless of any approvals previously obtained under the Planning Act or other regulatory process (e.g., Building Code Act).

4.12.1.2 Structural repairs, replacement or relocation of an existing building or structure recently (within 5 years) damaged or destroyed by accident or by an Act of God (other than flooding) may be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley provided the applicant is advised of the risk to the building or structure and if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and that:

a) there is no feasible alternative site outside of the hazard;
b) the structure is not derelict, demolished or abandoned;
c) the building or structure does not exceed the original footprint, is of the same use, same square footage and same number of storeys;
d) the proposed works do not create new hazards or aggravate flooding on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
e) floodproofing measures are incorporated to the maximum extent and level possible based on site-specific conditions. Dry passive floodproofing measures as outlined in Appendix C are required.
f) bank stabilization or flood protection works are not required;
g) structural development would not be susceptible to stream erosion;
h) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
i) erosion and flooding hazards have been adequately addressed;
j) development will not prevent access into and through the valley in order to undertake preventative actions/maintenance or during an emergency; and
k) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

4.12.2 Infrastructure

4.12.2.1 Public infrastructure (e.g., roads, sewers, flood and erosion control works) and various utilities (e.g., pipelines) may be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley where it has been demonstrated that:

a) all feasible alternatives sites and alignments have been explored through a satisfactory Environmental Assessment process, comprehensive environmental study or equivalent technical report;
b) the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected;
c) there is no increase in risk associated with flood hazards to upstream or downstream properties within valley and stream corridors; and
d) a more detailed site-specific study (i.e., a geotechnical study) is conducted to determine a more precise flood hazard limit(s) in accordance with the Ministry of Natural Resources "Technical Guide – River & Stream Systems: Erosion Hazard Limit" (2002) and demonstrates how impacts to the flood hazard will be mitigated to ensure that there is no impact on existing and future slope stability and that the infrastructure or utility will not prevent access into and through the valley in order to undertake preventative actions or maintenance or during an emergency.

N.B. Where infrastructure is permitted within hazardous lands or hazardous sites, an environmental monitoring and contingency plan may be required to address potential emergencies during construction and operation.

4.12.3 Fill Placement, Excavation and/or Grade Modifications

4.12.3.1 Fill placement, excavation, and/or grade modifications: associated with existing access roads and driveways; required for the purpose of flood protection; and/or, to facilitate the installation of geothermal, water and/or sewage systems and wells within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley may be permitted provided it can be demonstrated through appropriate technical reports (e.g., topographic survey, geotechnical study) that the control of flooding, erosion, dynamic beaches will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and:

a) there is no feasible alternative site outside of the apparent river or stream valley or the meander belt of a non-apparent 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) there is no impact on existing and future slope stability;
c) bank stabilization, flood protection or erosion protection works are not required;
d) fill placement will have no negative impacts on natural stream meandering/fluvial 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;
f) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed;
g) fill placement will not prevent access into and through the valley in order to undertake preventative actions/maintenance or during an emergency;
h) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA;

i) inert fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the is not impacted; and

j) the flood susceptibility of existing structures or adjacent properties will not be impacted.

4.12.3.2 Fill placement in the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley associated with a new septic system will not be permitted.

4.12.3.3 Fill placement associated with the replacement of a septic system may be permitted in the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley provided that:

a) the system be located outside of the regulatory floodplain where possible, and only permitted within the regulatory floodplain subject to being located in the area of lowest risk;

b) the sewage system must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and

c) the system is servicing an existing dwelling.

4.12.3.4 In general, excavated well installation within the in the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley shall not be permitted. Drilled wells do not require a permit.

4.12.3.5 Repairs associated with a well located in the in the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley will be permitted provided that:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;

b) the well must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and

c) The well is servicing an existing dwelling.

4.12.3.6 Development activity associated with the construction of a driveway or access way through the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley in order to provide access to lands outside of the apparent river or stream valley, or to provide access to water may be permitted within the flood hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must demonstrate that:

a) there is no viable alternative outside of the flood hazard;

b) the provision of safe access as identified in Section 2.4.4.1 have been met;

c) there is no impact of flooding on neighbouring properties; and

d) if required, the conditions for a balanced cut and fill are met.

4.12.3.7 In specific situations a balanced floodplain storage compensation (balanced cut and fill) study using accepted scientific and engineering principles may be completed by a qualified

professional to adjust the regulatory floodplain boundary for development activity proposals. These proposals will not be accepted for the purposes of moving the floodplain to accommodate future development on vacant land. These studies are to be done at the applicant's expense and must be completed to the satisfaction of MRCA staff. As a condition of approval, the applicant may be required to demonstrate that:

a) the purpose of the balanced cut and fill (as defined in Appendix A) is not to create a building envelope on vacant land located in the hazard;
b) the proposed placing of fill will have no detrimental effects on upstream water levels or local stream flow velocities or other environmental impacts. Hydraulic analyses may be required, at the discretion of the Authority, to demonstrate that the latter condition has been met;
c) finished grades are in accordance with an approved grading plan to the satisfaction of MRCA. If required, a plan depicting surveyed elevations of the finished grade, prepared and certified by a professional engineer or an Ontario Land Surveyor, must be submitted within 30 days after completion of the filling.;
d) the development activity setbacks outlined in Policy 3.6.9 are met; and
e) fill material, must be placed to the Authority's satisfaction, meeting all setbacks as previously outlined, and must:
    i. not be susceptible to erosion by ice and/or water;
    ii. be placed to ensure the long-term stability of slopes in accordance with sound engineering standards; and
    iii. be composed of inert or non-contaminated material.

4.12.3.8 New dug-out or isolated ponds may be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley. The plans must demonstrate that:

a) the pond is not connected to a watercourse;
b) that proper construction techniques are used; and
c) that the proposed location for the pond does not have an adverse effect on any wetland or fish habitat.

N.B. Permitted fill placement, excavation and/or grade modifications may be seasonally restricted and subject to a specified time frame to enable stabilization/re-vegetation of the disturbed area.

4.12.4 Shoreline Erosion Protection

4.12.4.1 Stream bank, slope and valley stabilization to protect existing development and conservation or restoration projects may be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley subject to the activity being approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected. The application must demonstrate that there is active erosion present and that the work is not for aesthetics only. Submitted plans must also demonstrate that:

a) alignment or realignment of the shoreline must not result in significant negative effects on river hydraulics or shoreline processes;

b) transitions from proposed protection to adjacent shorelines must be designed so that local erosion, debris accumulation or undesirable changes in local currents will not occur;
c) where shoreline proposals are in the vicinity of marginally stable or unstable slopes, professional geo-technical engineering input may be required, at the Authority's discretion;
d) professional coastal engineering input may be required, at the Authority's discretion;
e) shoreline projects must not result in a net reduction in flood storage capacity; and
f) the erosion protection cannot result in an increase in developable space, or a reduced setback from any flood or erosion hazard.

4.12.5 Docks / Boat Lifts / Boathouses

4.12.5.1 New structures are not permitted in the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley.

4.12.5.2 Floating docks, cantilever docks and removable docks do not require a permit unless there is a shoreline alteration proposed to anchor the dock to land. The abutment will require a permit and may be allowed within the floodplain, provided it is placed above the high-water mark.

4.12.5.3 Boat lifts and marine railways may require a permit.

4.12.5.4 Repairs within the existing footprint to existing boathouses may be permitted within the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock or the conservation of land will not be affected, and the boathouse is constructed as a single storey with no habitable space.

Additions and/or expansions of existing boathouses located in the floodplain of an apparent river or stream valley or the meander belt of a non- apparent valley will not be permitted.

4.12.6 Passive Low-Intensity Recreational Uses and Conservation Activities

4.12.6.1 Development activity associated with public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities may be permitted within the flood hazard of an apparent river or stream valley or the meander belt of a non-apparent valley if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected and that:

a) there is no feasible alternative to locate the development activity outside of the flood hazard and that the development activity will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);
b) the use will not prevent access into and through the valley in order to undertake preventative actions or maintenance or during an emergency; and
c) the potential for flooding has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans.

4.13 Development Activity Within the Allowance (Setback) of the Flood Hazard

As mentioned in Section 4.5 the guidelines for development activity within the setback to a flood hazard include a 6 metre access allowance. Where development activity is proposed and the elevation of the regulatory floodplain is known, all buildings or structures must be located a minimum horizontal distance of 15 metres beyond the furthest landward extent of the regulatory floodplain. Where development activity is proposed and the elevation of the regulatory floodplain is unknown, a setback of 30 metre s from the average high-water mark or top of bank will be applied provided that there is a sufficient difference in elevation (to be determined on a case-by-case basis). However, if a site assessment reveals that the extent of the floodplain can be established (e.g., high granite bank) a minimum 15 metre setback is applied from that point. In cases where there is a dispute over the extent of the floodplain it is the responsibility of the proponent to bring forward documentation such as an engineering analysis or professional survey of the floodplain in support of their position. However, if the extent of the regulatory floodplain can be estimated using accepted scientific and engineering principles, a reduction of the 30 metre setback may be considered.

It is the policy of MRCA that:

4.13.1 Development activity may be permitted within the setback adjacent to the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley provided it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock or the conservation of land will not be affected; and that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans should demonstrate that:

a) development activity does not create or aggravate a flood hazard;
b) development activity is set back a sufficient distance from the potential wave uprush limit;
c) for reconstruction of buildings or structures located within the setback, the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the setback from the flood hazard than the original building or structure;
d) for additions to existing buildings or structures located within the setback allowance, the addition cannot encroach further into the setback from the flood hazard than the original building or structure and the addition must meet the minimum floodproofing measures in Appendix C;
e) development activity does not change drainage or vegetation patterns that would compromise the control of flooding;
f) development activity will not prevent access to and along the flood hazard in order to undertake preventative actions/maintenance or during an emergency;
g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans;
h) erosion and flooding hazards have been adequately addressed; and
i) the plan is carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of the CA.

N.B. Where development activity is proposed and the extent of the flood hazard is unknown, MRCA may require a technical study, completed by a qualified professional, to determine the extent of the hazard. These studies are completed at the applicant's expense and must be completed to the satisfaction of MRCA.

4.13.2 Infilling within the within the setback adjacent to the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley on a small vacant lot of record may be permitted within the established building line in situations where the setback seems unreasonable and due to a lack of space; or where site lines are restricted provided: safe access exists to the property; the dwelling does not encroach closer to the hazard than what exists within the established building line (i.e., neighbour's dwelling); and a minimum 6 metre setback from the hazard is maintained.

4.13.3 The following may be permitted to encroach farther into the setback to the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock, will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. Additionally, a minimum the 6 metre access allowance setback is met:

- decks, provided that they are not enclosed or covered;
- swimming pools, in-ground or above ground, inclusive of all fencing and landscaping;
- dug wells, drilled wells;
- importation of fill for the repair/replacement of a sewage system, providing that the sewage system meets Ontario Building Code standards; and
- stormwater management facilities.

4.13.4 The following may be permitted to encroach farther into the setback adjacent to the floodplain of an apparent river or stream valley or the meander belt of a non-apparent valley than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The 6 m access allowance setback is not required for this development activity however development activity cannot be located in any hazard:

- concrete abutments or anchors for docks; and
- boat houses that conform to the definition of a boat house as described in Appendix A.

5. LARGE INLAND LAKES

Within the Mattagami Region Watershed both Nighthawk Lake and Frederick House Lake are considered large inland lakes. The shorelines of these lakes are affected by flooding, erosion and dynamic beaches and as such policies and guidelines have been developed to disallow or restrict the use of these potential hazard areas.

5.1 Introduction to Shoreline Hazards

Shorelines are comprised of three components which affect the processes and functions along a shoreline:

1. Flooding Hazards;
2. Erosion Hazards; and
3. Dynamic Beach Hazards.

In general, flooding is a phenomenon influenced by and sensitive to water level fluctuations. Inundation of large inland lakes 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. Of importance in managing a potential flood susceptible shoreline is the need to understand the interrelationship between pre-storm flooding, storm setup, wave height, wave uprush and other water related hazards (e.g., wave spray, ice). If the area of inundation is a wetland or an undeveloped area, the resultant "damage" caused by a storm event may be minimal if measured in terms of human losses (i.e., property and life). Indeed, periodic flooding of wetland complexes have been found to be beneficial for the continued maintenance and enhanced diversity of wetland vegetation itself, by helping to eliminate the invasion of water sensitive upland vegetation into low-lying shorelines during periods of low water levels.

In terms of human use and occupation of the large inland lake 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 (MNR, 1996b).

Erosion within large inland lakes is a concern. Erosion rates are dependent upon a number of lake and land processes as well as the composition and morphology of the shore. In general terms, identification of erosion susceptible shorelines is rather simple in that erosion of bedrock and cohesive shores involves a unidirectional process. 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 temporary period of time.

Given the naturally complex and dynamic nature of the beach environment, determining hazard susceptibility of a given beach formation requires careful assessment of a wide range of parameters. Over the short term, beach environments, impacted by flood and erosion processes, may undergo alternating periods of erosion and accretion as they attempt to achieve a dynamic equilibrium with the forces acting upon them. Over the long term, beaches experiencing a positive sediment budget (i.e., more sand and gravel is incoming than outgoing) are generally in fact accreting shore forms while those experiencing a negative sediment budget are eroding. 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.

5.1.1 Shoreline Flood Hazard

Of the two key factors influencing long-term and short-term changes in lake levels, natural phenomena (e.g., rainfall, evaporation, wind, storms) by far, cause the greater magnitudes of changes, than does human intervention (e.g., diversions, water control structures).

The shoreline refers to the furthest landward limit bordering a large body of water. Factors to be addressed in the areas susceptible to flooding along the shoreline include: the 1:100-year flood level; and flood allowance for wave uprush and/or other water related hazards as seen in Figure 14.

The 1:100-year flood level is the water level due to the combined occurrences of mean monthly lake levels and wind set up having a 1% chance of occurring during any year. The 1:100-year wave uprush level is based on mean monthly lake levels, wind setup and wind generated waves.

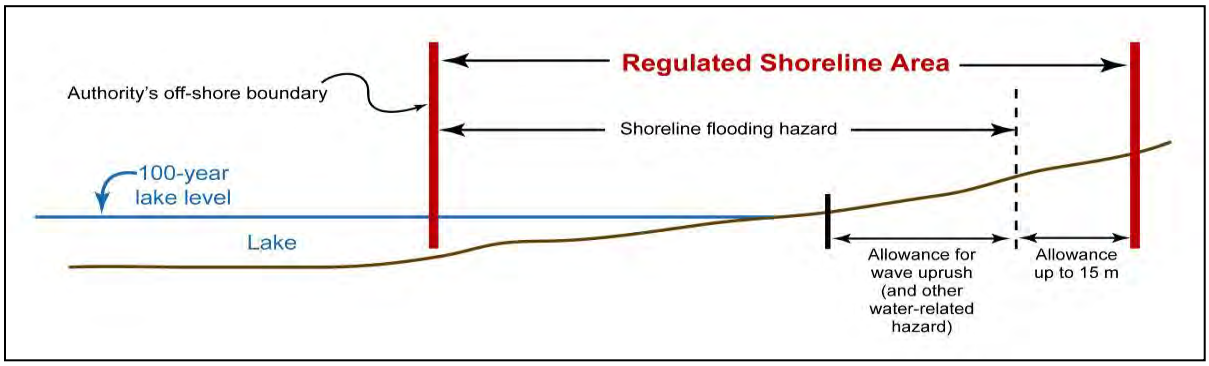

FIGURE 14: LAKE FLOODING HAZARD

In areas susceptible to wave action, shoreline flood hazards extend landward beyond the 100-year flood level to the limit of wave action. All shorelines should be considered susceptible to wave action unless site specific studies using accepted engineering principles demonstrate that wave action is not significant.

Wave action includes wave uprush, wind setup, wave overtopping and/or wave spray. Wind setup is the mean increase in the water level caused by the onshore transport of water due to waves breaking at the shoreline, while wave uprush is the distance that the water will run-up on the shoreline. For straight, uniform shoreline reaches without protection works, the landward limit of wave action can be represented by the maximum sum of wind setup and wave uprush.

In areas where waves act on shore protection works and other structures, and in areas with irregular shorelines, the wave action may include wave overtopping and wave spray which are more difficult to determine and may require detailed study.

Wave overtopping essentially occurs when the height of the natural shoreline, or of the protection work, above the still water line is less than the limit of the wave uprush. As a result, wave overtopping the shoreline or protection work can cause flooding of the onshore area and can threaten the structural stability of protection works.

Wave spray has been observed passing over structures (e.g., houses) and well past them. The landward extent and quantity of wave spray depends on such factors as the type of shore, nearshore bathymetry, type of protection works, size of incident waves and wind conditions. Generally, during storms a significant amount of wave spray will occur behind structures that are near vertical and subjected to large breaking waves.

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 shore fast ice (anchor ice). The impact on 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 shore fast ice action on a shoreline has 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.

Depending on the shoreline configuration and slope characteristics, ship generated waves can rush up the shoreline past the 100-year flood level. In addition to ship generated wave uprush, the subsequent ship generated wave drawdown can scour and damage a shoreline or protection work.

High points of land not subject to flooding but surrounded by the shoreline flood hazard or “flooded land” are considered to be within the flood hazard and part of the shoreline flood hazard.

5.1.2 Shoreline Erosion Hazard

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. Erosion over the long-term is a continuous process influenced by these lakeside (e.g., wave action, water levels) and landside factors (e.g., surface/subsurface drainage, loading/weight of buildings; removal of surface vegetation).

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 readily visible immediately following major storm events, at times can obscure the more continuing long-term processes. 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 following as seen in Figure 15:

- 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.

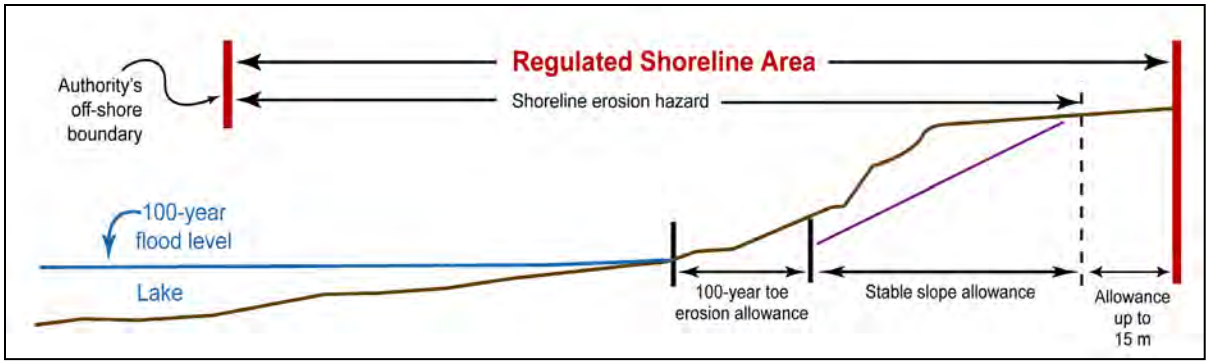

FIGURE 15: LAKE EROSION HAZARD

To slow the erosion of shorelines, structures such as breakwaters, seawalls and revetments have been used. However, 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 temporary period of time. Even if the shoreline is successfully armoured, the near shore lake bottom continues to erode or down cut eventually on all shorelines. This process is more active typically on cohesive shorelines. Eventually the lakebed down cutting will undermine the shoreline armouring causing the structure present to ultimately fail (Figure 16). The failure and ultimate property loss may extend back to the point at which the natural shoreline occurs. The natural shoreline position is typically not the present waterline or break wall interface, but actually some point inland from the armoured shoreline position.

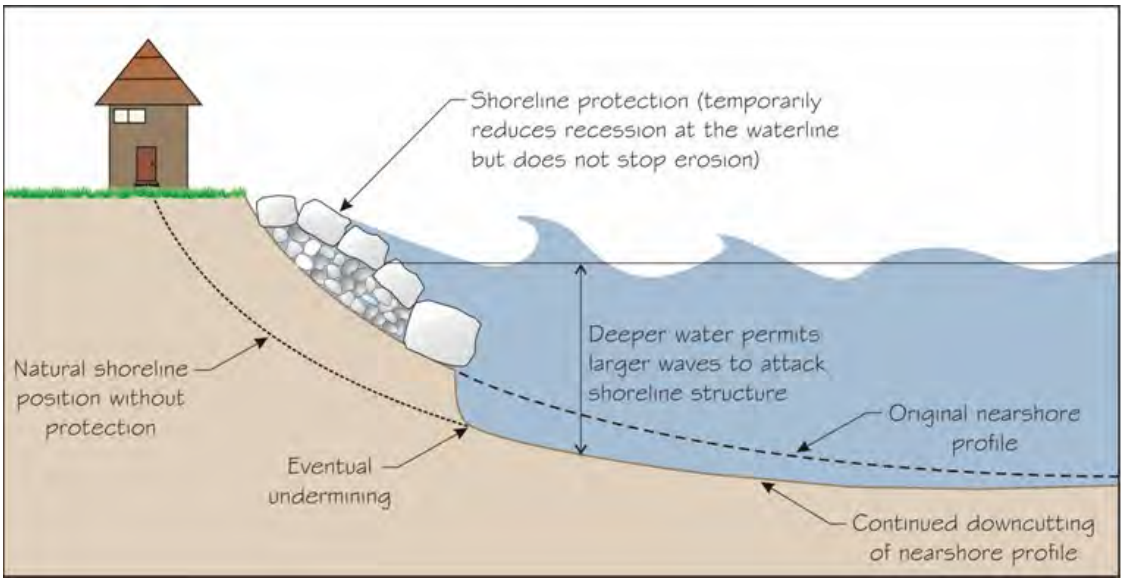

FIGURE 16: LAKE EROSION DOWN CUTTING

These problems usually occur on updrift and/or downdrift properties, aggravating existing off-site hazards, and/or posing unacceptable detrimental impacts on a wide array of environmental components of the shoreline ecosystem (e.g., fisheries, wetlands, water quality). The natural movement of the shoreline due to erosion can be aggravated by human activities and attempts to harden the shoreline and the impact of the activity can be transferred some distance from the impact site.

Therefore, it is recommended as a general principle, that measures which harden the shoreline be avoided. Further, it is recommended that Shoreline Management Plans be undertaken to assist in development of shoreline specific policies and, specifically to evaluate whether the implementation of erosion protection structures (revetments, seawalls, etc.) are appropriate in the context of the overall shoreline processes (MNR, 1987).

5.1.3 Dynamic Beach Hazard

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. In dynamic beach areas, elevations can change quite dramatically from season to season and year to year due to build up and erosion of sand, cobbles and other beach deposits. A dynamic beach is considered an unstable accumulation of shoreline sediments generally along large inland lakes. In dynamic beach areas, topographic elevations can change quite rapidly 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.

If considered as an elevation, the location of the 100-year lake level will move with the accretion or loss of beach materials. For example, during a period of low lake levels, it is expected that the accretion of beach materials would occur. If established as an elevation, the 100-year lake level (and the subsequent flood hazard) would move lakeward. Under this approach the regulation limit could be construed 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 be at risk.

The dynamic beach hazard is only applied where:

- Beach or dune deposits exist landward of the water line (i.e., 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 kilometres (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).

The Dynamic Beach Hazard as shown in Figure 17 includes the following:

- 1:100-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 15 metres to accommodate for dynamic beach movement for large inland lakes.

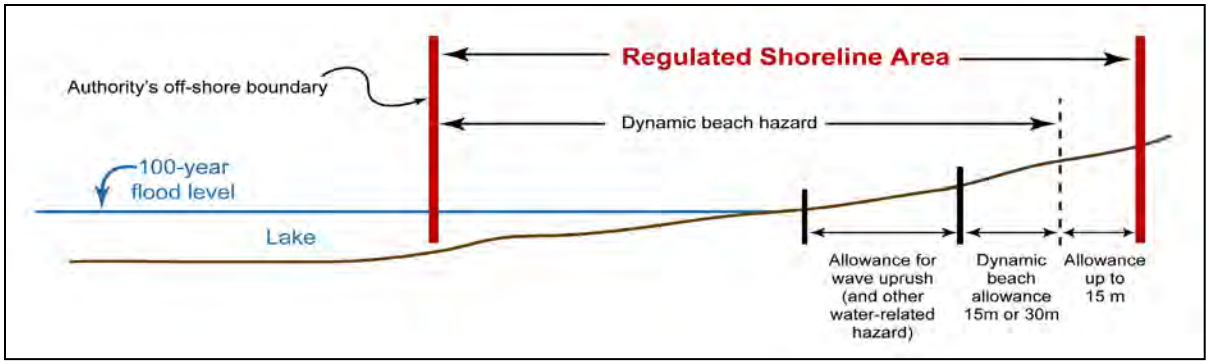

FIGURE 17: DYNAMIC BEACH HAZARD

5.2 Regulation Allowances (Setbacks) for Large Inland Lake Shorelines

The allowances adjacent to shoreline flood, erosion and/or dynamic beach hazards allow MRCA to regulate development in these areas in a manner that:

- Provides protection against unforeseen or predicted external conditions that could have an adverse effect on public safety, property damage and the natural conditions or processes of the shoreline;
- Protects access to and along the shoreline hazard areas. Access may be required for emergency purposes, regular maintenance to existing structures or to repair failed structures;
- 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 affected;
- Maintains and enhances the natural features and ecological functions of shorelines; and
- Addresses issues related to accuracy of the modeling and analysis tools utilized to establish the limits of the flooding, erosion and dynamic beach hazards.

A 6 m access allowance is added to all shoreline hazards along Nighthawk and Frederick House Lakes.

5.3 Legislative Authority

The current legislative structure embeds requirements for administration of s. 28 in both the *CA Act* and Ontario Regulation 41/24. CA staff and legal counsel must refer to both pieces of legislation to make decisions and develop policies and guidelines related to s. 28.1 permit applications.

Conservation Authorities Act

The *CA Act* contains the following sections dealing with watercourses:

Prohibited activities re watercourses, wetlands, etc.

28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority: …

2. Development activities in areas that are within the authority's area of jurisdiction and are, …

iv. areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations…

Permits

28.1 (1) An Authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and

b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; …

(4) Subject to subsection (5), an authority may issue a permit with or without conditions.

Ontario Regulation 41/24

The following section indicates how the extent of Great Lakes and large inland lakes shorelines are determined for the purpose of administering the Regulation. The Regulation contains the following sections dealing with Great Lakes and large inland lakes shorelines.

Prohibited activities, subparagraph 2 of ss. 28 (1) of the Act

2. (2) For the purposes of subparagraph 2 iv of subsection 28 (1) of the Act, areas 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 beach hazards include,

(a) the area starting from the furthest offshore extent of the authority's boundary to the furthest of the following distances:

(i) the 100-year flood level, plus the appropriate allowance for wave uprush, and, if necessary, for other water-related hazards, including ship-generated waves, ice piling and ice jamming, except in respect of Wanapitei Lake in the Nickel District Conservation Authority, the applicable flood event standard for that lake being the one set out in item 1 of Table 16 of Schedule 1,

(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, and

(iii) where a dynamic beach is associated with the waterfront lands, an allowance of 30 metre s inland to accommodate dynamic beach movement, except in the areas within the jurisdictions of the Mattagami Region Conservation Authority, the Nickle District Conservation Authority and the North Bay-Mattawa Conservation Authority where the allowance is 15 metres inland; and

(b) the area that is an additional 15 metres allowance inland from the area described in clause(a).

5.4 General Policies for Shoreline Flood, Erosion and/or Dynamic Beach Hazards

The following sections outline the policies for implementing the Regulation with respect to large inland lakes and the associated allowances. Inland lakes that do not meet the definition of "large inland lake" (i.e., waterbody that has a surface area equal to or greater than 100 km^2 where there is no measurable

or predictable response to a single runoff event) should be treated in a manner similar to a river or stream valley and should be referred to in Section 4 for policies that apply to these areas.

MRCA may require technical studies be undertaken to demonstrate the suitability of development proposals. Technical studies must be carried out by a qualified professional, with recognized expertise in the appropriate discipline, and prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

For the purposes of the following policies, the shoreline hazards have been defined as follows:

- Shoreline Flood Hazard: the limit of the landward extent of flooding accounting for the 100-year flood elevation, plus an allowance for wave uprush and other water related hazards. The 100-year flood elevation consist of the 100-year static level plus the storm surge. The allowance for wave uprush and other water related hazards is 15 m.
- Shoreline Erosion Hazard: the limit of the landward extent of the stable slope measured from the existing or unprotected toe of slope, plus the limit of the 100-year erosion rate.
- Dynamic Beach Hazard: the limit of the landward extent of the 100-year flood elevation limit, plus an allowance for wave uprush and other water related hazards, plus the dynamic beach allowance. The allowance for wave uprush and other water related hazards is 15m and the dynamic beach allowance is 30 m.

The policies in this and following sections are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development activity will not be permitted within the regulated area associated with a shoreline flood, erosion and/or dynamic beach hazard, except in accordance with the policies contained in this section.

It is the policy of MRCA that:

5.4.1 Development activity within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted;

5.4.2 In general, flood protection and bank stabilization works to allow for future/proposed development or an increase in development envelope or area within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted;

5.4.3 Floating dwellings/structures within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted;

5.4.4 Development activity associated with new and/or the expansion of existing trailer parks/campgrounds within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted;

5.4.5 Stormwater management facilities within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted;

5.4.6 New basements within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted.

5.4.7 In general, underground and above-ground parking structures within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted;

5.4.8 Redevelopment of derelict and abandoned buildings within the shoreline flood, erosion and/or dynamic beach hazard shall not be permitted; An abandoned building is one that has been unused for its intended purpose for 5 or more years.

5.4.9 Development activity shall be prohibited within the shoreline flood, erosion and/or dynamic beach hazard where the use is:

a) an institutional use associated with hospitals, nursing homes, preschool, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during an emergency as a result of erosion and/or failure of protection works/measures;
b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations which would be impaired during an emergency as result of erosion, or any other hazard associated with erosion and/or as a result of failure of protection works/measures; or
c) uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

5.4.10 Development activity associated with uses that by their nature are located within the shoreline flood, erosion and/or dynamic beach hazard such as the construction or reconstruction of a marine facility, maintenance dredging, erosion control measures (including stream, bank, slope and valley stabilization to protect existing development), or conservation or restoration projects, may be permitted within the shoreline flood, erosion and/or dynamic beach hazard subject to the activity being approved through a satisfactory Environmental Impact Statement or Assessment process and/or if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected. In order to be considered, the submitted plans must demonstrate that:

a) development activity will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
b) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/ restoration plans;
c) MRCA may request a technical study to ensure that the development activity is not subject to risk; and

5.5 Specific Policies for the Shoreline Flood Hazard

5.5.1 Structural Development

5.5.1 New structural development will not be permitted within the shoreline flood hazard regardless of any approvals previously obtained under the *Planning Act* or other regulatory process (e.g., *Building Code Act*).

5.5.2 Structural repairs, replacement or relocation of an existing building or structure recently (within 5 years) damaged or destroyed either by accident of by an Act of God (other than flooding) may be permitted within shoreline flood hazard provided that the applicant is advised of the risk to the building or structure and if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and that:

a) there is no feasible alternative site outside of the hazard;

b) the structure is not derelict, demolished or abandoned;
c) the building or structure does not exceed the original footprint, is of the same use, same square footage and same number of storeys;
d) safe access is existing to the structure and the flood depths on access roads do not exceed 0.3 m;
e) the proposed works do not create new hazards or aggravate flooding and/or erosion on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
f) floodproofing measures are incorporated to the maximum extent and level possible based on site-specific conditions. Dry passive floodproofing measures as outlined in Appendix C are required;
g) bank stabilization or flood protection works are not required;
h) structural development would not be susceptible to erosion;
i) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
j) flooding, erosion and dynamic beach hazards have been adequately addressed;
k) development will not prevent access in order to undertake preventative actions / maintenance or during an emergency; and
l) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.5.2 Infrastructure

5.5.2.1 New and/or existing public infrastructure (e.g., roads, sewers, flood and erosion control works) and various utilities (e.g., pipelines) may be permitted within the shoreline flood hazard where it has been demonstrated that:

a) all feasible alternatives sites and alignments have been explored through a satisfactory Environmental Assessment process, comprehensive environmental study or equivalent technical report;
b) the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected;
c) it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property;
d) there is no increase in risk associated with flood hazards to upstream or downstream properties within valley and stream corridors;
e) a more detailed site-specific study (i.e., a geotechnical study) is conducted to determine a more precise flood hazard limit(s) in accordance with the Ministry of Natural Resources "Technical Guide – River & Stream Systems: Erosion Hazard Limit" (2002) and demonstrates how impacts to the flood hazard will be mitigated to ensure that there is no impact on existing and future slope stability and that the infrastructure or utility will not prevent access

into and through the valley in order to undertake preventative actions or maintenance or during an emergency; and

f) the application is for public utilities, municipal services or provincial services in which, in the opinion of the Authority, the public benefit is seen to outweigh the consideration of the general policies in Section 3.6.

N.B.: Where infrastructure is permitted within hazardous lands or hazardous sites, an environmental monitoring and contingency plan may be required to address potential emergencies during construction and operation.

5.5.3 Fill Placement, Excavation and/or Grade Modifications

5.5.3.1 Fill placement, excavation, and/or grade modifications: associated with existing access roads and driveways; required for the purpose of flood protection; and/or, to facilitate the installation of geothermal, sewage systems and wells within the shoreline flood hazard may be permitted provided it can be demonstrated through appropriate technical reports (e.g., topographic survey, geotechnical study) that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock, will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and:

a) there is no feasible alternative site outside of the hazard or, in the event that there is no feasible alternative site, that the proposed development activity is located in an area of least (and acceptable) risk;
b) there is no impact on existing and future slope stability;
c) the provisions of safe access are met;
d) flood protection, bank stabilization or erosion protection works are not required;
e) fill placement will have no negative impacts on natural stream littoral/fluvial processes;
f) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
g) natural features and/or ecological functions contributing to the are protected, pollution is prevented, and flooding hazards have been adequately addressed. Where placement of fill could affect the ecology of valley land, escarpment or other sensitive areas, vegetation, slope stability or an Environmental Impact Study/Geo-technical Analysis/Hydrological Assessment may be required at the discretion of the Authority;
h) fill placement will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA;
j) inert fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the is not impacted; and
k) the flood and erosion susceptibility of existing structures or adjacent properties will not be impacted.

5.5.3.2 Fill placement in the shoreline flood hazard associated with a new septic system will not be permitted.

5.5.3.3 Fill placement associated with the replacement of a septic system may be permitted provided:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the sewage system must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and
c) the system is servicing an existing dwelling.

5.5.3.4 In general, excavated well installation within the shoreline flood hazard shall not be permitted. Drilled wells do not require a permit.

5.5.3.5 Repairs associated with a well located in the shoreline flood hazard will be permitted provided that:

a) the well be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the well must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and
c) the well is servicing an existing dwelling.

5.5.3.6 Development activity, including excavation and/or placement of fill, associated with the construction of a driveway or access way through the shoreline flood hazard in order to provide access to lands outside of the hazard or to provide access to water shall not be permitted.

5.5.3.7 In certain situations, a floodplain storage compensation (balanced cut and fill as per the definition in Appendix A) study using accepted scientific and engineering principles may be completed by a qualified professional to adjust the regulatory floodplain boundary for development activity proposals. These studies are to be done at the applicant's expense and must be completed to the satisfaction of MRCA staff. As a condition of approval, the applicant may be required to demonstrate that:

a) the purpose of the cut and fill is not to create a building envelope on vacant land located in the hazard;
b) the proposed placing of fill will have no detrimental effects on upstream water levels or local stream flow velocities or other environmental impacts. Hydraulic analyses may be required, at the discretion of the Authority, to demonstrate that the latter condition has been met;
c) finished grades are in accordance with an approved grading plan to the satisfaction of MRCA. If required, a plan depicting surveyed elevations of the finished grade, prepared and certified by a professional engineer or an Ontario Land Surveyor, must be submitted within 30 days after completion of the filling.;
d) the development activity setbacks outlined in Policy 3.6.9 are met; and
e) fill material, must be placed to the Authority's satisfaction, meeting all setbacks as previously outlined, and must:

i. not be susceptible to erosion by ice and/or water;
ii. be placed to ensure the long-term stability of slopes in accordance with sound engineering standards; and
iii. be composed of inert or non-contaminated material.

N.B. Permitted fill placement, excavation and/or grade modifications may be seasonally restricted and subject to a specified time frame to enable stabilization/re-vegetation of the disturbed area. Where placement of fill, excavation and/or grade modifications, could affect the ecology of the valley land, escarpment or other sensitive area vegetation, or the by reducing slope stability, an Environmental Impact Study/Geo-technical Analysis/Hydrogeological Assessment may be required to be completed to the satisfaction of MRCA staff. The analysis must demonstrate that the proposal is ecologically and hydrologically sound.

5.5.4 Shoreline Erosion Protection

5.5.4.1 Stream bank, slope and valley stabilization to protect existing development and conservation or restoration projects may be permitted within the shoreline flood hazard subject to the activity being approved through a satisfactory coastal engineering review and/or design and/or if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected. The application must demonstrate that there is active erosion present and that the work is not for aesthetics only. Submitted plans must also demonstrate that:

a) alignment or realignment of the shoreline must not result in significant negative effects on lake/river hydraulics or shoreline processes;
b) transitions from proposed protection to adjacent shorelines must be designed so that local erosion, debris accumulation or undesirable changes in local currents will not occur;
c) where shoreline proposals are in the vicinity of marginally stable or unstable slopes, professional geo-technical engineering input may be required, at the Authority's discretion;
d) MRCA will promote the use of soft, environmentally friendly natural shoreline protection measures. Therefore, new proposals for hard structural shoreline protection measures such as wooden, steel, or concrete walls are generally not permitted in the floodplain. Where it has been demonstrated that bioengineering solutions have been considered and are deemed not appropriate or insufficient, hardened surfaces (e.g., sloped rock) may be considered however, the shoreline/bank stabilization technique employed cannot result in an exclusively vertical structure;
e) shoreline projects should not result in a net reduction in flood storage capacity; and
f) the erosion protection cannot result in an increase in developable space, or a reduced setback from any flood, erosion or dynamic beach hazard.

The Authority's review of shoreline protection/improvement applications shall be conducted in cooperation with any other applicable agencies.

5.5.5 Docks / Boat Lifts / Boathouses

5.5.5.1 New structures are not permitted in the shoreline flood hazard.

5.5.5.2 Floating docks, cantilever docks and removable docks do not require a permit unless there is a shoreline alteration proposed to anchor the dock to land. The anchor/abutment will require a

permit and may be allowed within the floodplain, provided it is placed above the high-water mark.

5.5.5.3 Boat lifts and marine railways may require a permit.

5.5.5.4 Repairs within the existing footprint to existing boathouses, that meet the definition outlined in Appendix A, may be permitted within the shoreline flood hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock or the conservation of land will not be affected, and the boathouse is constructed as a single storey with no habitable space.

Additions and/or expansions of existing boathouses, that meet the definition outlined in Appendix A, located in the shoreline flood hazard will not be permitted.

5.5.6 Passive Low-Intensity Recreational Uses and Conservation Activities

5.5.6.1 Development activity associated with public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities may be permitted within the shoreline flood hazard if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, or unstable soil and bedrock will not be affected and that:

a) there is no feasible alternative to locate the development activity outside of the hazard and that the development activity will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);

b) the use will not prevent access in order to undertake preventative actions or maintenance or during an emergency; and,

c) the potential for flooding has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans.

5.6 Development Activity within the Allowance of the Flood Hazard

As mentioned in Section 4.4 the flood hazard is comprised of the 100-year static elevation and a 15 m allowance to account for wave uprush and other water related hazards. While new development is generally not approved within the flood hazard some types of development are permitted within the allowance.

It is the policy of MRCA that:

5.6.1 New habitable development is not permitted in the allowance (15m from the static flood elevation) of the shoreline flood hazard.

5.6.2 New development activity associated with existing habitable structures may be permitted within the allowance of the shoreline flood hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must also demonstrated that:

a) development activity does not aggravate the flood, erosion or dynamic beach hazard or create a new one;

b) development activity does not impede access for emergency works, maintenance, and evacuation;
c) floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
d) for reconstruction of habitable buildings or structures, including enclosing existing open decks, located within the allowance, the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the allowance than the original building or structure. Enclosing an open deck will only be permitted provided it does not result in habitable space encroaching further into the allowance;
e) for additions to existing habitable buildings located within the allowance the addition cannot encroach further into the allowance than the original building or structure;
f) there is no change in use to the structure as a result of reconstruction or an addition
g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;
h) the natural features and/or ecological functions associated with are protected, pollution is prevented, and erosion hazards have been adequately addressed; and
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.6.3 Non-habitable development activity may be permitted within the allowance of the shoreline flood hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must also demonstrated that:

a) development activity does not aggravate the flood hazard or create a new one;
b) development activity does not impede access for emergency works, maintenance, and evacuation;
c) floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
d) for reconstruction of non-habitable structures, including enclosing existing open decks, located within the allowance, the new structure is constructed in the same location as the original structure provided that there are no reasonable alternatives to locate the structure outside of the required setback, and the new building or structure cannot encroach further into the allowance than the original structure. Enclosing an open deck will only be permitted provided it does not result in development activity encroaching into the allowance;
e) for additions to existing non-habitable structures located within the allowance the addition cannot encroach further into the allowance than the original structure;

f) there is no change in use to the structure as a result of reconstruction or an addition. The conversion of non-habitable space to habitable space will not be permitted
g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;
h) the natural features and/or ecological functions associated with are protected, pollution is prevented and erosion hazards have been adequately addressed; and
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.6.4 Infilling within the allowance along the shoreline of the flood hazard on a small vacant lot of record may be permitted within the established building line in situations where the setback seems unreasonable and due to a lack of space; and where site lines are restricted; safe access exists to the property; the dwelling does not encroach closer to the hazard than what exists within the established building line (i.e., neighbour's dwelling); and a minimum 6 metre setback from the flood, erosion and/or dynamic beach hazard is maintained.

5.6.5 The following may be permitted to encroach further into the allowance of the shoreline flood, hazard than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. Additionally, at a minimum the 6-metre access allowance setback from the 100-year flood elevation is met:

a) open decks;
b) swimming pools, in-ground or above-ground, inclusive of all fencing and landscaping;
c) dug well, drilled wells;
d) importation of fill for the repair/replacement of sewage systems provided the sewage system meets Ontario Building Code standards; and
e) stormwater management facilities.

5.6.6 The following may be permitted to encroach farther into the allowance of the shoreline flood hazard than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The 6 m access allowance setback is not required for this development activity however development activity cannot be located within the 100-year flood elevation:

a) concrete abutments or anchors for docks; and
b) boat houses that conform to the definition of a boat house as described in Appendix A.

5.7 Specific Policies for Shoreline Erosion Hazards

5.7.1 Structural Development

5.7.1.1 New structural development will not be permitted within the shoreline erosion hazard regardless of any approvals previously obtained under the *Planning Act* or other regulatory process (e.g., *Building Code Act*).

5.7.1.2 Structural repairs, replacement or relocation of an existing building or structure recently (within 5 years) damaged or destroyed either by accident of by an Act of God (other than flooding) may be permitted within shoreline erosion hazard provided that the applicant is advised of the risk to the building or structure and if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and that:

a) there is no feasible alternative site outside of the hazard;
b) the structure is not derelict, demolished or abandoned;
c) the building or structure does not exceed the original footprint, is of the same use, same square footage and same number of storeys;
d) the proposed works do not create new hazards or aggravate flooding and/or erosion on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
e) floodproofing measures are incorporated to the maximum extent and level possible based on site-specific conditions. Dry passive floodproofing measures as outlined in Appendix C are required;
f) bank stabilization or flood protection works are not required;
g) structural development would not be susceptible to stream erosion;
h) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
i) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed;
j) development activity will not prevent access in order to undertake preventative actions/maintenance or during an emergency; and
k) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.7.2 Infrastructure

5.7.2.1 New and/or repairs to existing public infrastructure (e.g., roads, sewers, flood and erosion control works) and various utilities (e.g., pipelines) may be permitted within the shoreline erosion hazard where it has been demonstrated that:

a) all feasible alternatives sites and alignments have been explored through a satisfactory Environmental Assessment process, comprehensive environmental study or equivalent technical report;
b) the control of flooding, erosion, dynamic beaches or unstable soil and bedrock, will not be affected;

c) it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property;
d) there is no increase in risk associated with flood hazards to upstream or downstream properties within valley and stream corridors;
e) a more detailed site-specific study (i.e., a geotechnical study) is conducted to determine a more precise flood hazard limit(s) in accordance with the Ministry of Natural Resources "Technical Guide – River & Stream Systems: Erosion Hazard Limit" (2002) and demonstrates how impacts to the flood hazard will be mitigated to ensure that there is no impact on existing and future slope stability and that the infrastructure or utility will not prevent access into and through the valley in order to undertake preventative actions or maintenance or during an emergency; and
f) the application is for public utilities, municipal services or provincial services in which, in the opinion of the Authority, the public benefit is seen to outweigh the consideration of the general policies in Section 3.6.

N.B.: Where infrastructure is permitted within hazardous lands or hazardous sites, an environmental monitoring and contingency plan may be required to address potential emergencies during construction and operation.

5.7.3 Fill Placement, Excavation and/or Grade Modifications

5.7.3.1 Fill placement, excavation, and/or grade modifications: associated with existing access roads and driveways; required for the purpose of flood protection; and/or, to facilitate the installation of geothermal, sewage systems and wells within the shoreline erosion hazard may be permitted provided it can be demonstrated through appropriate technical reports (e.g., topographic survey, geotechnical study) that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and:

a) there is no feasible alternative site outside of the hazard or, in the event that there is no feasible alternative site, that the proposed development activity is located in an area of least (and acceptable) risk;
b) there is no impact on existing and future slope stability;
c) flood protection, bank stabilization or erosion protection works are not required;
d) fill placement will have no negative impacts on natural littoral/fluvial 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;
f) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed. Where placement of fill could affect the ecology of valley land, escarpment or other sensitive areas, vegetation, slope stability or an Environmental Impact Study/Geo-technical Analysis/Hydrological Assessment may be required at the discretion of the Authority;

g) fill placement will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
h) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA;
i) inert fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the is not impacted; and
j) the flood and erosion susceptibility of existing structures or adjacent properties will not be impacted.

5.7.3.2 Fill placement in the shoreline erosion hazard associated with a new septic system will not be permitted.

5.7.3.3 Fill placement associated with the replacement of a septic system may be permitted provided that:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the sewage system must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and
c) the system is servicing an existing dwelling.

5.7.3.4 In general, excavated well installation within the shoreline erosion hazard shall not be permitted. Drilled wells do not require a permit.

5.7.3.5 Repairs associated with a well located in the erosion hazard will be permitted provided that:

a) the well be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the well must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and
c) the well is servicing an existing dwelling.

5.7.3.6 Development activity, including excavation and placement/removal of fill, associated with the construction of a driveway or access way through the erosion hazard in order to provide access to lands outside of the hazard or to provide access to water shall not be permitted.

N.B. Permitted fill placement, excavation and/or grade modifications may be seasonally restricted and subject to a specified time frame to enable stabilization/re-vegetation of the disturbed area.

Where placement or removal of fill, excavation or grade modifications could affect the ecology of the valley land, escarpment or other sensitive area vegetation, or the by reducing slope stability, an Environmental Impact Study/Geo-technical Analysis/Hydrogeological Assessment may be required to be completed to the satisfaction of MRCA staff. The analysis must demonstrate that the proposal is ecologically and hydrologically sound.

5.7.4 Shoreline Erosion Protection

5.7.4.1 Stream bank, slope and valley stabilization to protect existing development and conservation or restoration projects may be permitted within the shoreline erosion hazard subject to the activity being approved through a satisfactory Environmental Impact Statement and/or if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected. The application must demonstrate that there is active erosion present and that the work is not for aesthetics only. Submitted plans must also demonstrate that:

a) alignment or realignment of the shoreline must not result in significant negative effects on lake/river hydraulics or shoreline processes;
b) transitions from proposed protection to adjacent shorelines must be designed so that local erosion, debris accumulation or undesirable changes in local currents will not occur;
c) where shoreline proposals are in the vicinity of marginally stable or unstable slopes, professional geo-technical engineering input may be required, at the Authority's discretion;
d) MRCA will promote the use of soft, environmentally friendly natural shoreline protection measures. Therefore, new proposals for hard structural shoreline protection measures such as wooden, steel, or concrete walls are generally not permitted in the floodplain. The repair or replacement of an existing hard wall structure will be considered if alternative soft measures are not considered to be practical. Where it has been demonstrated that bioengineering solutions have been considered and are deemed not appropriate or insufficient, hardened surfaces (e.g., sloped rock) may be considered however, the shoreline/bank stabilization technique employed cannot result in an exclusively vertical structure;
e) shoreline projects should not result in a net reduction in flood storage capacity; and
f) the erosion protection cannot result in an increase in developable space, or a reduced setback from any flood, erosion or dynamic beach hazard.

The Authority's review of shoreline protection/improvement applications shall be conducted in cooperation with any other applicable agencies.

5.7.5 Docks / Boat Lifts / Boathouses

5.7.4.2 New structures are not permitted in the shoreline erosion hazard.

5.7.4.3 Floating docks, cantilever docks and removable docks do not require a permit unless there is a shoreline alteration proposed to anchor the dock to land. The anchor/abutment will require a permit and may be allowed within the floodplain, provided it is placed above the high-water mark.

5.7.4.4 Boat lifts and marine railways may require a permit.

5.7.4.5 Repairs within the existing footprint to existing boathouses, as defined in Appendix A, may be permitted within the shoreline erosion hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, or unstable soil and bedrock or the conservation of land will not be affected, and the boathouse is constructed as a single storey with no habitable space.

Additions and/or expansions of existing boathouses, as defined in Appendix A, located in the shoreline erosion hazard will not be permitted.

5.7.5 Passive Low-Intensity Recreational Uses and Conservation Activities

5.7.5.1 Development activity associated with public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities may be permitted within the shoreline erosion beach hazard if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected and that:

a) there is no feasible alternative to locate the development activity outside of the hazard and that the development activity will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);
b) the use will not prevent access in order to undertake preventative actions or maintenance or during an emergency; and,
c) the potential for flooding has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans.

5.8 Development Activity within the 6 m Access Allowance to the Shoreline Erosion Hazard

As mentioned in Section 5.1.2 the erosion hazard is comprised of the limit of the landward extent of the stable slope measured from the existing or unprotected toe of slope, plus the limit of the 100-year erosion rate. A 6 m access allowance is measured from the limit of the erosion hazard and new development is generally not approved in the access allowance. Development associated with existing structures, or development which by its nature must be located in the erosion hazard (i.e., shoreline protection) may, however, be permitted.

It is the policy of MRCA that:

5.8.1 New habitable development is not permitted in the shoreline erosion hazard.

5.8.2 New development activity associated with existing habitable structures may be permitted within the allowance of the shoreline erosion hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must also demonstrated that:

a) development activity does not aggravate the flood, erosion or dynamic beach hazard or create a new one;
b) development activity does not impede access for emergency works, maintenance, and evacuation;
c) floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
d) for reconstruction of habitable buildings or structures, including enclosing existing open decks, located within the allowance, the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable

alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the allowance than the original building or structure. Enclosing an open deck will only be permitted provided it does not result in habitable space encroaching further into the allowance;

e) for additions to existing habitable buildings located within the allowance the addition cannot encroach further into the allowance than the original building or structure;
f) there is no change in use to the structure as a result of reconstruction or an addition
g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;
h) the natural features and/or ecological functions associated with are protected, pollution is prevented, and erosion hazards have been adequately addressed; and
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.8.3 Non-habitable development activity may be permitted within the allowance of the shoreline erosion hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must also demonstrated that:

a) development activity does not aggravate the flood hazard or create a new one;
b) development activity does not impede access for emergency works, maintenance, and evacuation;
c) floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
d) for reconstruction of non-habitable structures, including enclosing existing open decks, located within the allowance, the new structure is constructed in the same location as the original structure provided that there are no reasonable alternatives to locate the structure outside of the required setback, and the new building or structure cannot encroach further into the allowance than the original structure. Enclosing an open deck will only be permitted provided it does not result in development activity encroaching into the allowance;
e) for additions to existing non-habitable structures located within the allowance the addition cannot encroach further into the allowance than the original structure;
f) there is no change in use to the structure as a result of reconstruction or an addition. The conversion of non-habitable space to habitable space will not be permitted
g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;
h) the natural features and/or ecological functions associated with are protected, pollution is prevented and erosion hazards have been adequately addressed; and

i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.8.4 The following may be permitted to encroach farther into the setback to the shoreline erosion hazard than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The 6m access allowance setback is not required for this development:

a) concrete abutments or anchors for docks;
b) boat houses that conform to the definition of a boat house as described in Appendix A; and
c) repairs to existing water access points or structures (i.e., stairs) provided the footprint is maintained and there is no expansion or change in use.

5.9 Specific Policies for Dynamic Beach Hazards

5.9.1 Structural Development

5.9.1.1 New structural development will not be permitted within the dynamic beach hazard regardless of any approvals previously obtained under the *Planning Act* or other regulatory process (e.g., *Building Code Act*).

5.9.1.2 Structural repairs, replacement or relocation of an existing building or structure recently (within 5 years) damaged or destroyed either by accident of by an Act of God (other than flooding) may be permitted within dynamic beach hazard provided that the applicant is advised of the risk to the building or structure and if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and that:

a) there is no feasible alternative site outside of the hazard;
b) the structure is not derelict, demolished or abandoned;
c) the building or structure does not exceed the original footprint, is of the same use, same square footage and same number of storeys;
d) the proposed works do not create new hazards or aggravate flooding and/or erosion on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
e) bank stabilization or flood protection works are not required;
f) structural development would not be susceptible to stream erosion;
g) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
h) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed;

i) development activity will not prevent access in order to undertake preventative actions/maintenance or during an emergency; and

j) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.9.2 Infrastructure

5.9.2.1 New public infrastructure will not be permitted in a dynamic beach hazard.

5.9.2.2 Repairs to existing public infrastructure (e.g., roads, sewers, flood and erosion control works) and various utilities (e.g., pipelines) may be permitted within the dynamic beach hazard where it has been demonstrated that:

a) all feasible alternatives sites and alignments have been explored through a satisfactory Environmental Assessment process, comprehensive environmental study or equivalent technical report;

b) the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected;

c) it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property;

d) there is no increase in risk associated with flood hazards to upstream or downstream properties within valley and stream corridors;

e) the application is for public utilities, municipal services or provincial services in which, in the opinion of the Authority, the public benefit is seen to outweigh the consideration of the general policies in Section 3.6.

5.9.3 Fill Placement, Excavation and/or Grade Modifications

5.9.3.1 New fill placement, excavation and/or grade modifications will not be permitted in a dynamic beach hazard.

5.9.3.2 Fill placement for the purposes of the erosion protection cannot result in an increase in developable space, or a reduced setback from any flood, erosion or dynamic beach hazard.

5.9.3.3 Fill placement, excavation, and/or grade modifications associated with existing access roads and driveways within the dynamic beach hazard may be permitted provided it can be demonstrated through appropriate technical reports (e.g., topographic survey, geotechnical, coastal study) that the control of flooding, erosion, dynamic beaches or unstable soil will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and:

a) there is no feasible alternative site outside of the hazard or, in the event that there is no feasible alternative site, that the proposed development activity is located in an area of least (and acceptable) risk;

b) there is no impact on existing and future slope stability;

c) flood protection, bank stabilization or erosion protection works are not required;

d) fill placement will have no negative impacts on natural stream meandering/fluvial 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;
f) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed. Where placement of fill could affect the ecology of valley land, escarpment or other sensitive areas, vegetation, slope stability or an Environmental Impact Study/Geo-technical Analysis/Hydrological Assessment may be required at the discretion of the Authority;
g) fill placement will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
h) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA;
i) inert fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the is not impacted; and
j) the flood and erosion susceptibility of existing structures or adjacent properties will not be impacted.

5.9.3.4 Fill placement in the dynamic beach hazard associated with a new septic system will not be permitted.

5.9.3.5 Fill placement associated with the replacement of an existing septic system may be permitted provided the conditions in Section 4.9.3.2 are met and that:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the sewage system must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and
c) the system is servicing an existing dwelling.

5.9.3.6 In general, excavated well installation within the dynamic beach hazard shall not be permitted. Drilled wells do not require a permit.

5.9.3.7 Repairs associated with an existing well located in the dynamic beach hazard will be permitted provided the conditions in Section 4.9.3.2 are met and that:

a) the well be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the well must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the well will not have an impact on the control of flooding; and
c) the well is servicing an existing dwelling.

5.9.3.8 Development activity associated with the construction of a new driveway or access way through the dynamic beach hazard in order to provide access to lands outside of the hazard or to provide access to water shall not be permitted.

N.B. Permitted fill placement, excavation and/or grade modifications may be seasonally restricted and subject to a specified time frame to enable stabilization/re-vegetation of the disturbed area.

Where placement or removal of fill, excavation or grade modifications could affect the ecology of the valley land, escarpment or other sensitive area vegetation, or the by reducing slope stability, an Environmental Impact Study/Geo-technical Analysis/Hydrogeological Assessment may be required to be completed to the satisfaction of MRCA staff. The analysis must demonstrate that the proposal is ecologically and hydrologically sound.

5.9.4 Passive Low-Intensity Recreational Uses and Conservation Activities

5.9.4.1 Development activity associated with new public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities are not permitted in the dynamic beach hazard.

5.9.4.2 Development activity associated with repairs and maintenance to existing public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities may be permitted within the dynamic beach hazard if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion, or unstable soil and bedrock, or the conservation of land will not be affected and that:

a) there is no feasible alternative to locate the development activity outside of the hazard and that the development activity will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);
b) the use will not prevent access in order to undertake preventative actions or maintenance or during an emergency; and,
c) the potential for flooding has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans.

5.10 Development Activity within the 6 m Access Allowance of a Dynamic Beach Hazard

As mentioned in Section 4.4 the dynamic beach hazard is comprised of the limit of the landward extent of the 100-year flood elevation limit, plus an allowance for wave uprush and other water related hazards, plus the dynamic beach allowance. The allowance for wave uprush and other water related hazards is 15 m and the dynamic beach allowance is 30 m. A 6 m access allowance is measured from the limit of the dynamic beach hazard. New development is generally not permitted in the access allowance. Development associated with existing structures may be permitted subject to the following policies.

It is the policy of MRCA that:

5.10.1 New habitable development is not permitted in the shoreline dynamic beach hazard.

5.10.2 New development activity associated with existing habitable structures may be permitted within the allowance of the shoreline dynamic beach hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might

jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must also demonstrated that:

a) development activity does not aggravate the flood, erosion or dynamic beach hazard or create a new one;
b) development activity does not impede access for emergency works, maintenance, and evacuation;
c) floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
d) for reconstruction of habitable buildings or structures, including enclosing existing open decks, located within the allowance, the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the allowance than the original building or structure. Enclosing an open deck will only be permitted provided it does not result in habitable space encroaching further into the allowance;
e) for additions to existing habitable buildings located within the allowance the addition cannot encroach further into the allowance than the original building or structure;
f) there is no change in use to the structure as a result of reconstruction or an addition
g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;
h) the natural features and/or ecological functions associated with are protected, pollution is prevented, and erosion hazards have been adequately addressed; and
i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

5.10.3 Non-habitable development activity may be permitted within the allowance of the shoreline dynamic beach hazard if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. The submitted plans must also demonstrated that:

a) development activity does not aggravate the flood hazard or create a new one;
b) development activity does not impede access for emergency works, maintenance, and evacuation;
c) floodproofing will be undertaken in accordance with floodproofing standards identified in Appendix C – Floodproofing Guidelines;
d) for reconstruction of non-habitable structures, including enclosing existing open decks, located within the allowance, the new structure is constructed in the same location as the original structure provided that there are no reasonable alternatives to locate the structure outside of the required setback, and the new building or structure cannot encroach further

into the allowance than the original structure. Enclosing an open deck will only be permitted provided it does not result in development activity encroaching into the allowance;

e) for additions to existing non-habitable structures located within the allowance the addition cannot encroach further into the allowance than the original structure;

f) there is no change in use to the structure as a result of reconstruction or an addition. The conversion of non-habitable space to habitable space will not be permitted;

g) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/ restoration plans;

h) the natural features and/or ecological functions associated with are protected, pollution is prevented and erosion hazards have been adequately addressed; and

i) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

The following may be permitted to encroach farther into the allowance to the dynamic beach hazard than established development if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil and bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property:

5.10.4 The 6 m access allowance setback is not required for this development activity: concrete abutments or anchors for docks.

6. HAZARDOUS LANDS

6.1 Defining Hazardous Lands and Associated Regulated Area

The Mattagami Region Conservation Authority promotes a comprehensive hazardous lands management program consisting of several integrated components.

1. MRCA Watershed Regulation O. Reg 41/24 Policy Manual
2. Floodplain Mapping
3. Wetland Mapping
4. Hazardous Lands Mapping
5. Municipal Plan Input and Review
6. Flood Warning/Contingency Planning
7. Information/Education Programs
8. Capital Works and Maintenance

It should be emphasized that hazardous lands programs are undertaken in cooperation with watershed municipalities. Municipalities have the responsibility to identify, with the assistance of the Conservation Authority, hazardous lands in their planning documents. In addition, municipalities should ensure that MRCA approval has been granted for proposed development in areas covered by the Regulation prior to the issuance of a building permit. By doing so, they can help ensure safe and appropriate land uses.

Hazardous lands are defined in the *Conservation Authorities Act* as land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches and/or unstable soil or bedrock. If the activity is located within unstable soil and/or unstable bedrock hazardous lands, then this chapter applies, otherwise refer to Section 5: Large Inland Lakes and Section 4: River or Stream Valleys for policies on other hazards including flooding, erosion and dynamic beaches.

Any development activity within hazardous lands requires permission from MRCA.

6.2 Identification of the Hazard Limit – Unstable Soil or Bedrock

In cases where development is proposed within or adjacent to hazardous lands associated with unstable soil or unstable bedrock, MRCA will require that the applicant (or agent) provide appropriate technical reports identifying a precise boundary associated with the limit of the unstable soil or bedrock to the satisfaction of MRCA.

6.3 Defining the Regulated Area Associated Unstable Soils or Bedrock

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 is based on the conclusions and recommendations of such studies.

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

6.3.1 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 (MNR & CO, 2005).

6.3.1.1 Sensitive Marine Clays (Leda Clay)

Sensitive marine clays, also known as leda clays, are clays that were deposited as sediment during the last glacial period in the Champlain Sea. Undisturbed, the clays can appear as solid and stable. But when disturbed by excessive vibration, shock or when they become saturated with water, the clays can turn to liquid (MNR, 2001). The resulting failures or earthflows can be sudden and catastrophic.

Sensitive marine clays are restricted to specific locations in the province, however, are not restricted to just along rivers and streams. In addition to the mapping that individual CAs may have developed or obtained, information is also available from Geological Survey of Canada and the MNR.

To determine regulation limits, it is recommended that site specific studies be undertaken to determine the full extent of the sensitive marine clays and their full potential for retrogressive failures. While useful standards for defining the limits of the hazardous lands are provided within the "Understanding Natural Hazards" (MNR, 2001) document and Hazardous Sites Technical Guide (MNR, 1996a), it is crucial to recognize that these standards only address a first occurrence of slope failure. As such, the Guidelines for Developing Schedules of Regulated Areas recommend the use of a site/area specific study in defining the appropriate hazard (and therefore the regulation limit) to account for the potential of subsequent failures.

Section 3.0 of the Hazardous Sites Technical Guide (MNR, 1996a) provides important guidance with respect to assessing marine sensitive clays and the potential for development within this type of hazardous lands.

6.3.1.2 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 (MNR, 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, MNR, Ministry of Northern Development, Ministry of Mines, Ministry of Agriculture, Food and Agribusiness, and the Ministry of 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 (MNR, 1996a) provides important guidance in this regard.

6.3.2 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 (MNR and CO, 2005).

As with unstable soils, the potential for development to be undertaken safely in an area of unstable bedrock is site specific. Section 5.0 of the Hazardous Sites Technical Guide (MNR, 1996a) provides important guidance in this regard.

The regulated area associated with unstable soil or bedrock includes the maximum extent of the unstable soil or bedrock.

Any development on unstable soil or unstable bedrock requires permission from MRCA.

6.4 Legislative Authority

The current legislative structure embeds requirements for the administration of s. 28 in both the *CA Act* and O. Reg 41/24. CA staff and their legal counsel must refer to both pieces of legislation to make decisions and develop policies and guidelines related to s. 28 permit applications.

Conservation Authorities Act

The *CA Act* contains the following sections dealing with watercourses:

> *28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority:*
>
> > *2. Development activities in areas that are within the authority's area of jurisdiction and are,*
> >
> > > *i. hazardous lands,…*

Permits

28.1 (1) An Authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and

b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; …

(4) Subject to subsection (5), an authority may issue a permit with or without conditions.

Ontario Regulation 41/24

The Authority may grant a permit for development activity in or on Hazardous Lands subject to the tests or criteria in the *CA Act*. The Regulation contains the following definition for hazardous lands.

"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;

6.5 General Policies for Unstable Soils or Bedrock Hazards

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development will not be permitted within the regulated area associated with an unstable soils or bedrock of an apparent river or stream valley or the meander belt of a non-apparent valley, except in accordance with the policies contained in this section.

It is the policy of MRCA that:

6.5.1 Development activity within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted;

6.5.2 In general, stabilization works to allow for future/proposed development or an increase in development envelope or area within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted;

6.5.3 Development activity associated with new and/or the expansion of existing trailer parks/campgrounds within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted;

6.5.4 Stormwater management facilities within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted;

6.5.5 New basements within the hazardous lands associated with unstable soils or unstable bedrock shall not be permitted;

6.5.6 In general, underground and above-ground parking structures within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted;

6.5.7 Redevelopment of derelict and abandoned buildings within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted. An abandoned building is one that has been unused for its intended purpose for 5 or more years.

6.5.8 Development activity shall be prohibited within hazardous lands associated with unstable soils or unstable bedrock where the use is:

a) an institutional use associated with hospitals, nursing homes, preschool, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly,

persons with disabilities or the young during an emergency as a result of erosion and/or failure of protection works/measures;

b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations which would be impaired during an emergency as result of erosion, or any other hazard associated with erosion and/or as a result of failure of protection works/measures; or

c) uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

6.6 Specific Policies for Unstable Soils or Bedrock Hazards

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6. As per Policy 3.6.1, development activity will not be permitted within the regulated area associated with hazardous lands associated with unstable soils or unstable bedrock, except in accordance with the policies contained in this section.

6.6.1 Structural Development

6.6.1.1 New structural development will not be permitted within hazardous lands associated with unstable soils or unstable bedrock regardless of any approvals previously obtained under the *Planning Act* or other regulatory process (e.g., *Building Code Act*).

6.6.1.2 Structural repairs, replacement or relocation of an existing building or structure recently (within 5 years) damaged or destroyed either by an accident or an Act of God (other than destruction caused by unstable bedrock) may be permitted within hazardous lands associated with unstable soils or unstable bedrock provided the applicant is advised of the risk to the building or structure and if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and that:

a) there is no feasible alternative site outside of the hazard;

b) the structure is not derelict, demolished or abandoned;

c) the building or structure does not exceed the original floor space, is of the same use, same square footage and same number of stories;

d) all hazards/risks associated with unstable soils or unstable bedrock have been adequately addressed;

e) the proposed works do not create new hazards or aggravate existing hazards;

f) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;

g) development activity will not prevent access in order to undertake preventative actions/maintenance or during an emergency; and

h) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

6.6.2 Infrastructure

6.6.2.1 Public infrastructure (e.g., roads, sewers, flood and erosion control works) and various utilities (e.g., pipelines) may be permitted within hazardous lands associated with unstable soils or unstable bedrock where it has been demonstrated that:

a) all feasible alternatives sites and alignments have been explored through a satisfactory Environmental Assessment process, comprehensive environmental study or equivalent technical report;
b) the control of flooding, erosion or unstable soil and bedrock will not be affected;
c) a more detailed site-specific study (i.e., a geotechnical study) is conducted to determine a more precise unstable soils or bedrock limit(s) and demonstrates how the risks to public safety and the impacts to the hazard will be mitigated, if not included in the above plan(s); and
d) the infrastructure or utility will not prevent access in order to undertake preventative actions or maintenance or during an emergency.

6.6.3 Fill Placement, Excavation and/or Grade Modifications

6.6.3.1 Fill placement for new access routes will not be permitted within hazardous lands associated with unstable soil or unstable bedrock.

6.6.3.2 Fill placement, excavation, and/or grade modifications: associated with existing access roads and driveways; required for the purpose of flood protection; and/or, to facilitate the installation of geothermal, water and/or sewage systems and wells within hazardous lands associated with unstable soils or unstable bedrock may be permitted provided it can be demonstrated through appropriate technical reports (e.g., topographic survey, geotechnical study) that the control of flooding, erosion, or unstable soil and bedrock, dynamic beaches or the conservation of land will not be affected. Further, it must be demonstrated that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property, and:

a) there is no feasible alternative site outside of the hazardous lands associated with unstable soils or unstable bedrock, in the event that there is no feasible alternative site, that the proposed development activity is located in an area of least (and acceptable) risk;
b) there is no impact on existing and future slope stability;
c) stabilization works are not required;
d) the stability of existing structures and/or adjacent properties will not be impacted;
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 contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed;
g) fill placement will not prevent access in order to undertake preventative actions/maintenance or during an emergency;
h) the plan has been carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA; and

i) inert fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the is not impacted.

6.6.3.3 Fill placement associated with a new septic system will not be permitted.

6.6.3.4 Fill placement associated with the replacement of a septic system may be permitted provided that:

a) the system be located outside of the hazardous lands associated with unstable soils or unstable bedrock regulatory floodplain where possible, and only permitted within the hazardous lands subject to being located in the area of lowest risk; and
b) the system is servicing an existing dwelling.

6.6.3.5 In general, excavated well installation within hazardous lands associated with unstable soils or unstable bedrock shall not be permitted. Drilled wells do not require a permit.

6.6.3.6 Repairs associated with a well located in hazardous lands associated with unstable soils or unstable bedrock will be permitted provided the conditions in Section 6.6.3.2 are met and that:

a) the system be located outside of the hazard where possible, and only permitted within the hazard subject to being located in the area of lowest risk;
b) the well must meet MRCA's flood proofing standards found in Appendix C, and MRCA may request a technical study to ensure that the system will not have an impact on the control of flooding; and
c) the well is servicing an existing dwelling.

6.6.3.7 New dug-out or isolated ponds may be permitted within hazardous lands associated with unstable soils or unstable bedrock. The plans must demonstrate that:

a) the pond is not connected to a watercourse;
b) that proper construction techniques are used; and
c) that the proposed location for the pond does not have an adverse effect on any wetland or fish habitat.

N.B.: Permitted fill placement, excavation and/or grade modifications may be seasonally restricted and subject to a specified time frame to enable stabilization/re-vegetation of the disturbed area.

6.6.4 Passive Low-Intensity Recreational Uses and Conservation Activities

6.6.4.1 Development activity associated with public parks (e.g., passive or low intensity outdoor recreation and education, trail systems), outdoor recreation and education, trail systems, watercourse access points or conservation activities may be permitted within hazardous lands associated with unstable soils or unstable bedrock if it has been demonstrated to the satisfaction of the Conservation Authority that the control of flooding, erosion or unstable soil or bedrock will not be affected and that:

a) there is no feasible alternative to locate the development activity outside of the unstable soils or bedrock and that the development activity will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);

b) the use will not prevent access in order to undertake preventative actions or maintenance or during an emergency; and
c) the potential for bedrock failure has been addressed through the submission of technical documents completed by a qualified professional.

6.7 Development Activity Within the Allowance (Setback) of Unstable Soils or Unstable Bedrock

As mentioned in Section 4.5 the guidelines for development within the setback to a hazard include a 6 metre access allowance. MRCA requires that all development be setback a minimum of 15 m from the hazardous lands associated with unstable soils or unstable bedrock provided the limit of the hazard has been accurately delineated by a qualified professional.

It is the policy of MRCA that:

6.7.1 New development activity will not be permitted within the setback adjacent to hazardous lands associated with unstable soils or bedrock.

6.7.2 Development activity associated with existing structures/access roads may be permitted within the setback adjacent to hazardous lands associated with unstable soils or unstable bedrock provided it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion or will not be affected. The submitted plans should demonstrate that:

a) development activity does not create or aggravate the existing hazard;
b) development activity is set back a sufficient distance from the hazard to avoid increases in loading forces on the top of the hazard;
c) for reconstruction of buildings or structures located within the setback allowance, the new building or structure is constructed in the same location as the original building or structure provided that there are no reasonable alternatives to locate the new building or structure outside of the required setback, and the new building or structure cannot encroach further into the setback from the unstable soils or bedrock than the original building or structure and must maintain the same footprint and square footage;
d) development activity does not change drainage or vegetation patterns that would compromise slope stability or exacerbate erosion of the slope face;
e) development activity will not prevent access to and along the hazard in order to undertake preventative actions/maintenance or during an emergency;
f) the potential for surficial erosion has been addressed through proper drainage, erosion and sediment control and site stabilization/restoration plans;
g) natural features and/or ecological functions contributing to the are protected, pollution is prevented and flooding hazards have been adequately addressed; and
h) the plan is carried out by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of the CA.

Where development activity is proposed and the extent of the hazardous lands associated with unstable soils or unstable bedrock is unknown, MRCA will require a technical study, completed by a qualified

professional, to determine the extent of the hazard. These studies are completed at the applicant's expense and must be completed to the satisfaction of MRCA.

7. WATERCOURSES

7.1 Discussion of Watercourses

As identified earlier in this document, watercourse means "a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs". These policies must be read in conjunction with the Section 4—River or Stream Valleys.

To provide guidance in the regulation of watercourses, it is necessary to highlight the functions of watercourses.

7.2 Function of Watercourses

Watercourses transport both water and sediment from areas of high elevation to areas of low elevation. Watercourses also transfer energy (e.g., heating and cooling of stream waters) and organisms (e.g., movement of mammals, fish schooling and insect swarming) and provide habitat for fish and other species either in-stream or at the air-water interface. Moreover, watercourses provide a source of water supply for wildlife and livestock.

From a human perspective, watercourses provide social and economic values such as water supply, food resources, recreational opportunities (canoeing and fishing), hydro generation, land drainage, education experiences, and aesthetics.

Watercourses are dynamic, living systems with complex processes that are constantly undergoing change. The structure and function of watercourses are influenced by channel morphology, sediment characteristics (soil type, bedrock, and substrate characteristics) and the nature of the riparian vegetation both on the overbank and rooted in the bed of the watercourse. Any changes to one of these influences can have significant impacts upon other parts of the system. One of the key influences on the structure and function of a watercourse is related to the hydrology of the stream and its normal hydrograph. Changes in the volume, peaks and timing of flows can significantly impact the stream morphology, sediment transport and even riparian vegetation.

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. These changes, in turn, degrade near shore and aquatic habitat and impair the watercourse for human use.

7.2.1 Discussion of Shorelines

Shorelines are the interface where land meets a body of water. Shorelines are dynamic in nature and are subject to fluvial and coastal processes. They act as a natural water quality filter for surface runoff and often absorb certain nutrients and contaminants, as well as trap sediment.

Naturalized shorelines with an abundance of vegetation provide erosion protection by assisting with the mitigation of surface runoff. Plant and tree root systems also play a role in binding the soil in place preventing further erosion of earthen material that is often lost due to natural processes such as wave action or changes in water level.

Applicants and their agents should be advised that where any in water or near water works are being proposed, there may be restrictions relating to the timing of activities (e.g., seasonal restrictions) that may be required by MNR and/or Fisheries and Oceans Canada.

Permits and/or authorization may also be required from the MNR and DFO.

7.3 Legislative Authority

The current legislative structure embeds requirements for the administration of s. 28 in both the *CA Act* and O. Reg. 41/24. CA staff and their legal counsel must refer to both pieces of legislation to make decisions and develop policies and guidelines related to s. 28 permit applications.

Conservation Authorities Act

The *CA Act* contains the following sections dealing with watercourses.

Prohibited activities re watercourses, wetlands, etc.

28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority:

1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.

2. Development activities in areas that are within the authority's area of jurisdiction and are,

iii. river or stream valleys the limits of which shall be determined in accordance with the regulations, …

Permits

28.1 (1) An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

(a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and …

(4) Subject to subsection (5), an authority may issue a permit with or without conditions.

Ontario Regulation 41/24

Ontario Regulation 41/24 includes the following definition of a watercourse:

"watercourse" means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs

A watercourse shall have a 15 metre allowance in accordance with the Regulation for River or Stream Valleys.

7.4 General Policies for Watercourses

The term "interference" below includes all alterations mentioned within the individual CA regulations (straighten, change, divert or interfere in any way).

It is the policy of MRCA that:

7.4.1 In general, interference and alteration with a watercourse shall not be permitted.

7.4.2 In general, proposals for channelization and/or realignment will not be considered where the purpose of the proposal is to increase the development potential of the lands.

7.5 Specific Policies for Watercourses

The policies in this section are to be applied in conjunction with the General Policies in Section 3.6 and Section 4.4.

In each policy noted below, the activity may be permitted subject to the applicant providing complete studies and plans that demonstrate to the satisfaction of MRCA that the activity will not affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. 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 MRCA.

7.5.1 Structures

Crossings

7.5.1.1 Crossings include but are not limited to: bridges, culverts, and causeways, and may be permitted to be constructed, replaced or upgraded if it has been demonstrated to the satisfaction of MRCA that the interference on the natural features and the hydrologic functions of the watercourse has been deemed acceptable and subject to the following:

a) in the case of public infrastructure, all feasible alternative sites and alignments have been considered through an approved Environmental Assessment, or other comprehensive plan, where applicable, or in the case of replacements and/or upgrades, the crossing design is engineered through site-specific studies;

b) in the case of private infrastructure, all feasible alternative sites and alignments have been considered and, crossing design engineered through site-specific studies with the possible exception of temporary crossings based on the structural scale and scope, and the purpose of the temporary crossing;

c) and, in either instance a) or b), where it can be demonstrated that:

i. culverts have an open bottom where it is feasible, or where it is not feasible, the culverts should be appropriately embedded into the watercourse;

ii. 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;

iii. crossings are located to take advantage of existing impacted or open areas on the channel bank or valley slope, wherever possible;

iv. crossing structures avoid the erosion hazard in order to accommodate natural watercourse movement;

v. the risk of flood damage to upstream or downstream properties is reduced through site and crossing design;

vi. the design encourages fish passage where possible;
vii. interference with hydraulic and hydrologic function (e.g., water quality and quantity control) is minimized and it can be demonstrated that best management practices including site and crossing design and appropriate remedial measures will mitigate disturbance to features and functions;
viii. the submitted plans should incorporate detailed information related to installation and sequencing;
ix. physical realignments or alterations to the river, creek, stream or watercourse channel associated with a new crossing are avoided or are in accordance with MRCA channelization policies that follow; and,
x. maintenance requirements are minimized.

7.5.1.2 Bed-level crossings will be permitted to be constructed, replaced or upgraded where it can be demonstrated that:

a) stable, non-erodible, rounded inorganic material is used;
b) crossings avoid any bends in the watercourse to the extent practical;
c) crossings are located to take advantage of existing impacted or open areas on the channel bank or valley slope, wherever possible;
d) the risk of flood damage to upstream or downstream properties is reduced through site and structure design;
e) design encourages fish passage where possible;
f) physical realignments or alterations to the river, creek, stream or watercourse channel associated with a new crossing are avoided or are in accordance with MRCA channelization policies that follow; and,
g) maintenance requirements are minimized.

Alterations and/or Maintenance of Existing Water Control Structures

7.5.1.3 Alterations and/or maintenance of existing water control structures will be permitted where it can be demonstrated that:

a) impacts on hydrologic functions (e.g., water quality and quantity control) are avoided or that site and structure design and appropriate remedial measures will mitigate and/or compensate for disturbance to features and functions;
b) there will be no adverse hydraulic or fluvial impacts;
c) there are no adverse impacts on the capacity of the structure to pass flows; and
d) the integrity of the original structure is maintained or improved.

7.5.1.4 Notwithstanding the above, where the alteration/maintenance will not affect the footprint or height of the existing water control structure and in the opinion of MRCA, would not affect the control of flooding, erosion or unstable soil and bedrock and would not result in changes to the capacity to pass river flows or impact on the integrity of the structure or in-water works, a permit will not be required.

7.5.1.5 Decommissioning of dams which are structurally unsound or no longer serve their intended purpose, located within a river, stream, creek or watercourse will be permitted provided a decommissioning plan demonstrates, at a minimum, that:

a) impacts on hydrologic functions (e.g., water quality and quantity control) within or adjacent to the river, creek, stream or watercourse will be avoided or that site and structure design and appropriate remedial measures will mitigate and/or compensate for disturbance to features and functions;
b) there will be no adverse hydraulic or fluvial impacts; and
c) the risk of pollution and sedimentation during and after retirement or removal is addressed through a draw down plan.

The MNR is responsible for the approval of water control structures under the *Lakes & Rivers Improvement Act* (LRIA). Furthermore, dams are subject to various other pieces of legislation and regulations.

New In-Water Boathouses, Floating Dwellings/Structures

7.5.1.6 New in-water boathouses, floating dwellings/structures that are within the channel of a watercourse will not be permitted.

Existing In-Water Boathouses and Structures

7.5.1.7 Repairs to existing in-water boathouses and structures may be permitted provided that the repairs:

a) do not impede the flow of water;
b) do not provide an opportunity for conversion into habitable space in the future (to ensure no habitable component, the boathouse/structure shall contain no services other than electricity);
c) maintain the existing footprint and do not result in a change in size;
d) do not result in a change in use;
e) rooftop patios must be within the footprint of the boathouse;
f) do not alter the natural contour of the shoreline; and
g) do not create a navigational hazard.

Repairs to the foundation of an existing boathouse or structure will be required to be designed by an appropriate and qualified professional (i.e., an engineer).

Cantilever Docks

7.5.1.8 Cantilever docks that are anchored to the shoreline will be permitted provided that:

a) they do not impede the flow of water;
b) they are placed in a location that minimizes vegetation removal and disturbance; and
c) the hinge is located above the flood elevation.

Floating Docks

7.5.1.9 Floating docks do not require a permit from MRCA, however a work permit may be required from other agencies.

Public Infrastructure

7.5.1.10 Public infrastructure (e.g., sewers, flood and/or erosion control works) and various utilities (e.g., pipelines) may be permitted within a watercourse provided that all feasible alignments have been considered through an approved Environmental Assessment, other comprehensive plan or site-specific technical studies supported by MRCA, whichever is applicable based on the scale and scope of the project. The plan must demonstrate that the infrastructure has been designed in a manner that:

a) does not decrease the base flow characteristics of watercourses;
b) minimizes the interference with natural features and hydrological functions;
c) does not increase the risk associated with flood hazards and erosion hazards to upstream or downstream properties within valley and stream corridors;
d) does not create an impediment to the safe passage of flood flows;
e) considers options for remediation of existing natural hazards;
f) minimizes the area of construction disturbance and vegetation removal;
g) does not impair surface water and groundwater quality through the introduction of pollutants such as sediments or contaminants;
h) does not prevent access for maintenance, evacuation, or during an emergency;
i) the control of flooding, erosion, dynamic beach, or unstable soil and bedrock will not be affected; and
j) demonstrates that clean fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material.

7.5.2 Conservation Activities

Conservation activities (e.g., stream/wetland rehabilitation) will be permitted within a watercourse provided that the natural features and hydrologic function of the watercourse (e.g., water quality and quantity control) will be maintained, restored, or enhanced. In addition to the conditions listed in Policy 7.5.1.10 the submitted plans will be required to demonstrate that:

a) based on documentation of existing watercourse characteristics (e.g., thermal regime, substrate type, fish communities), there will be direct conservation benefits of the project (e.g., enhancement in watercourse feature and/or function);
b) there will be no negative impact on watercourse functionality;
c) best management practices including site and project design and appropriate remedial measures will be employed to minimize disturbance;
d) natural channel design practices will be followed; and
e) maintenance requirements will be minimized.

If the above noted requirements cannot be met an Environmental Impact Study will be required that demonstrates no negative impact on the hydrologic function of the watercourse.

7.5.3 Ponds

Ponds exist for many reasons, such as recreation, irrigation, watering, landscaping and aquaculture. This section applies to these types of ponds but not to stormwater management ponds, reservoirs

constructed for the purpose of generating hydroelectricity or ponds associated with conservation activities. If a pond is proposed in a wetland refer to Section 8.

New Ponds

7.5.3.1 MRCA will not support the construction of ponds that are directly connected to a watercourse (e.g., online ponds, in-stream ponds, bypass ponds, etc.). There must be 6 metre minimum setback between a watercourse and a new pond.

Existing Ponds

7.5.3.2 Bank alterations and/or dredging of existing online ponds will be considered provided that

a) impacts on natural features and hydrologic function (e.g., water quality and quantity control) of the pond are avoided or it can be demonstrated that best management practices including project design and appropriate remedial measures will mitigate and/or compensate for disturbance to features and functions;
b) there is no negative impact on the hydrologic function (e.g., water quality and quantity control) of the receiving river, creek, stream or watercourse;
c) there is no negative impact on the downstream thermal regime;
d) any excavated material is removed from the hazard area; and
e) the works are designed to limit the need for future maintenance.

7.5.4 Channel or Shoreline Alterations

Realignment, Channelization or Straightening

7.5.4.1 Realignment, channelization or straightening of a river, creek, stream or watercourse is generally discouraged, but may be permitted to improve hydraulic characteristics and fluvial processes, facilitate public infrastructure projects (e.g., highway construction or reconstruction), facilitate works approved pursuant to the *Drainage Act* and/or on-going operations associated with existing agricultural use, or to improve aquatic habitat or water quality where a site plan and/or other site-specific study demonstrates that:

a) all feasible alternative alignments have been considered through an approved Environmental Assessment, other comprehensive plan or though site-specific studies supported by MRCA, whichever is applicable based on the scale and scope of the project;
b) impacts on natural features and hydrologic functions (e.g., water quality and quantity control) are minimized and it can be demonstrated that best management practices including project design and appropriate remedial measures will mitigate and/or compensate for disturbance to features and functions; and
c) natural channel design practices are followed to the maximum extent possible.

Enclosures

7.5.4.2 Enclosures of rivers, creeks, streams or watercourses are discouraged, but may be permitted where there is a risk to public safety and/or potential property damage and where a site-specific study demonstrates that:

a) all feasible options and methods have been explored to address the hazard(s);

b) impacts on natural features and hydrologic functions (e.g., water quality and quantity control) are minimized and it can be demonstrated that best management practices including project design and appropriate remedial measures will mitigate and/or compensate for disturbance to features and functions;
c) there is no negative impact on the downstream thermal regime; and
d) design encourages fish passage to the extent possible.

Dredging

7.5.4.3 New dredge projects will not be permitted in the channel of a river, creek, stream or watercourse.

7.5.4.4 Maintenance dredging (within past 10 years) of an existing channel of a river, creek, stream or watercourse may be permitted to maintain existing boating or shipping channels (e.g., harbours, marinas, canals), enhance water flow in the case of drains, improve hydraulic characteristics and fluvial processes or to improve aquatic habitat or water quality where a dredging plan demonstrates that:

a) stream bank stability is not impacted or is improved;
b) the size and depth of the area proposed for dredging while meeting the need is minimized;
c) impacts on natural features and hydrologic functions (e.g., water quality and quantity control) are minimized and it can be demonstrated that best management practices including project design and appropriate remedial measures will mitigate and/or compensate for disturbance to features and functions;
d) all dredged material is removed from flooding and erosion hazards and safely disposed of in accordance with the policies in provincial guidelines; and
e) are designed to limit future maintenance requirements.

Shoreline Excavation

7.5.4.5 Excavating the shoreline for any purpose will not be permitted, with the exception of excavation works required for erosion protection and/or shoreline/bank stabilization. Stream, bank and channel stabilization to protect existing development or for conservation or restoration projects may be permitted within a watercourse if the interference on the natural features and hydrologic functions of the watercourse has been deemed acceptable by MRCA and in accordance with the Policy 7.5.4.7.

7.5.4.6 Boat slips and inland marinas may be permitted provided a plan has been submitted by a qualified professional which demonstrates that:

a) the slip/marina has been appropriately designed by a qualified professional (i.e., coastal engineer) if required;
b) it has been demonstrated by a qualified professional (i.e., coastal engineer) that ongoing maintenance dredging will not be required;
c) the slip/marina is not in a sensitive shoreline area;
d) all excavated material is removed from the flood hazard;
e) the bottom of the slip/marina is natural material, not concrete; and
f) other agencies (MNR, DFO) are contacted for additional permit requirements.

Erosion Protection, Shoreline/Bank Stabilization and Sediment Control

7.5.4.7 New and/or replacement of erosion protection and shoreline/bank stabilization measures may be permitted where there is a demonstrated erosion or bank instability problem resulting in property loss and/or potential damage to existing habitable structures and/or risk to public safety subject to the following:

a) impacts on natural features and hydrologic functions (e.g., water quality and quantity control) are minimized;
b) the works will not result in a shoreline that is higher or further out into the water than what is existing;
c) the works will result in a stable slope;
d) the natural contours of the shoreline will be maintained;
e) 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; and
f) shoreline/bank stabilization will employ best management practices that utilize natural materials that integrate with the existing natural features and processes (e.g., bio-engineering) rather than hardening;

OR

g) where it has been demonstrated that bioengineering solutions have been considered and are deemed inappropriate or insufficient, hardened surfaces (e.g., sloped rock) may be considered however, the shoreline/bank stabilization technique employed cannot result in an exclusively vertical structure;
h) replacement of failed erosion protection must be designed by a qualified professional (i.e., coastal engineer); and
i) the erosion protection cannot result in an increase in developable space, or a reduced setback from any flood, erosion or dynamic beach hazard.

Armourstone or a similar type rock with a vertical face is generally not encouraged unless it is to replace existing armourstone or another vertical structure, or where it has been demonstrated that the creation of a stable slope using bioengineering techniques or an appropriate sized stone (rip rap) is not appropriate. It must be demonstrated that there will be no impacts to neighbouring properties. Any armourstone wall higher than 2 metres must be designed by a qualified engineer.

Repair and Maintenance

7.5.4.8 Repair/maintenance* of existing erosion protection and shoreline/bank stabilization structures will be permitted where the repair/maintenance will not result in an increase in footprint or height of the existing structure. When considering repair/maintenance, proponents are encouraged to replace existing hardened shoreline surfaces with bio-engineered solutions. The submitted plans must demonstrate:

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) intrusions on natural features and hydrologic functions (e.g., water quality and quantity control) are minimized, and it can be demonstrated that best management practices including site and structure; and
c) design and appropriate remedial measures mitigate and/or compensate for disturbance features and functions.

*Repair/maintenance involves using the existing material on site with a minimal amount of imported fill.

7.6 Development Activity within the Allowance (Setback) of a Watercourse

The setback around a watercourse is 30 metres unless MRCA staff determine that a reduced setback is appropriate.

8. WETLANDS

8.1 Functions of Wetlands

Wetlands provide functions that have both ecosystem and human values. From an ecosystem perspective these include primary production, sustaining biodiversity, wildlife habitat, habitat for species at risk, maintenance of natural cycles (carbon, water) and food chains. From a human perspective, wetlands provide social and economic values such as flood attenuation, recreation opportunities, production of valuable products, improvement of water quality and educational benefits.

Wetlands retain waters during periods of high-water levels or peak flows (i.e., spring freshet and storm events) allowing the water to be slowly released into the watercourse, infiltrate into the ground, and evaporate. As well, wetlands within the floodplain of a watercourse provide an area for the storage of flood waters and reduce the energy associated with the flood waters.

Wetlands retain and modify nutrients, chemicals and silt in surface and groundwater thereby improving water quality. This occurs temporarily in the plants of the wetland but long term in the organic soils.

In addition, wetlands provide a variety of hydrologic functions. Over 60 potential hydrological functions have been identified for wetlands when developing the Southern Ontario Wetland Evaluation System (OWES). However, confirmation of many of these functions requires hydrological experts and field studies by qualified hydrologists. Therefore, the OWES utilizes easily identifiable features and measures as surrogate values for these hydrological features.

8.1.1 Additional Definitions and Interpretations

Hydrologic Function in the Provincial Policy Statement 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 a change or interference to wetlands. The Southern Ontario Wetland Evaluation System (pg. 85 MNR, 2022) states "it must be recognized that many of the 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."

The 'Guidelines for Developing Schedules of Regulated Areas, October 2005' approved by MNR and CO includes the following *"The requisite function of a wetland - `... directly contributes to … hydrological function/through connection with a surface watercourse…' is deemed to exist for all wetlands. Where a surface connection between a wetland and surface watercourse is not apparent, it is assumed that a groundwater connection exists between them, unless there is information to the contrary."* (pg. 27). CAs may continue to use this interpretation and require the applicable studies to assess the application e.g., hydrological, hydrogeological, geotechnical study.

It should be noted that the *Conservation Authorities Act* and the CA Regulation uses the wording "in any way" when describing change or interference with a wetland. Activities proposed within the wetland boundary that could interfere in any way with the wetland, including both those activities that meet the definition of "development activity" and those that do not necessarily meet the definition of "development activity". An example of an activity that does not strictly meet the definition of "development activity" and could represent "change or interference" is the removal of hydrophytic or water tolerant plants in the wetland.

'Natural features' include vegetation as outlined in the definition of a wetland "…(d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water, …".

8.2 Development and Interference

Applications to undertake a development activity must be assessed with respect to the "tests" outlined in the *Conservation Authorities Act*.

There are three ways through which the *Conservation Authorities Act* and the CA Regulation addresses wetlands and other areas within which development and other activities may interfere with a wetland (includes all components of the definition of a wetland) (Figure 18):

1. Development activities within the wetland boundary (Section 28 (1) 2. ii. of the *CA Act*)
2. Development activity within the 'other areas' 30 metre s from the wetland (Section 28 (1) 2. v. of the *CA Act*)

To be regulated, the activities must meet the definition of development activity. See below for definition of "other areas" (Section 2. (3) of O. Reg 41/24.

3. Activities to change or interfere in any way with a wetland (Section 28 (1) 1. of the *CA Act*)

The activity must constitute a change or interference in any way with the wetland and to be regulated, the 'activity' should occur within the wetland boundary. Applications that include change or interference

may be assessed with respect to the natural features (e.g., hydrophytic plants) and hydrologic functions etc.

Given the proximity of the 'other area' to a wetland i.e., 30 m it is likely that most development activities in these areas will interfere with the adjacent wetland, subject to the scale of the proposed activities in this area. Applications for development activity or change or interference must be assessed using the three components of the definition of a wetland in the Regulation e.g., the effect a permit application may have on the hydrology, hydrologic functions maintaining the wetland, effect on hydrophytic plants etc.

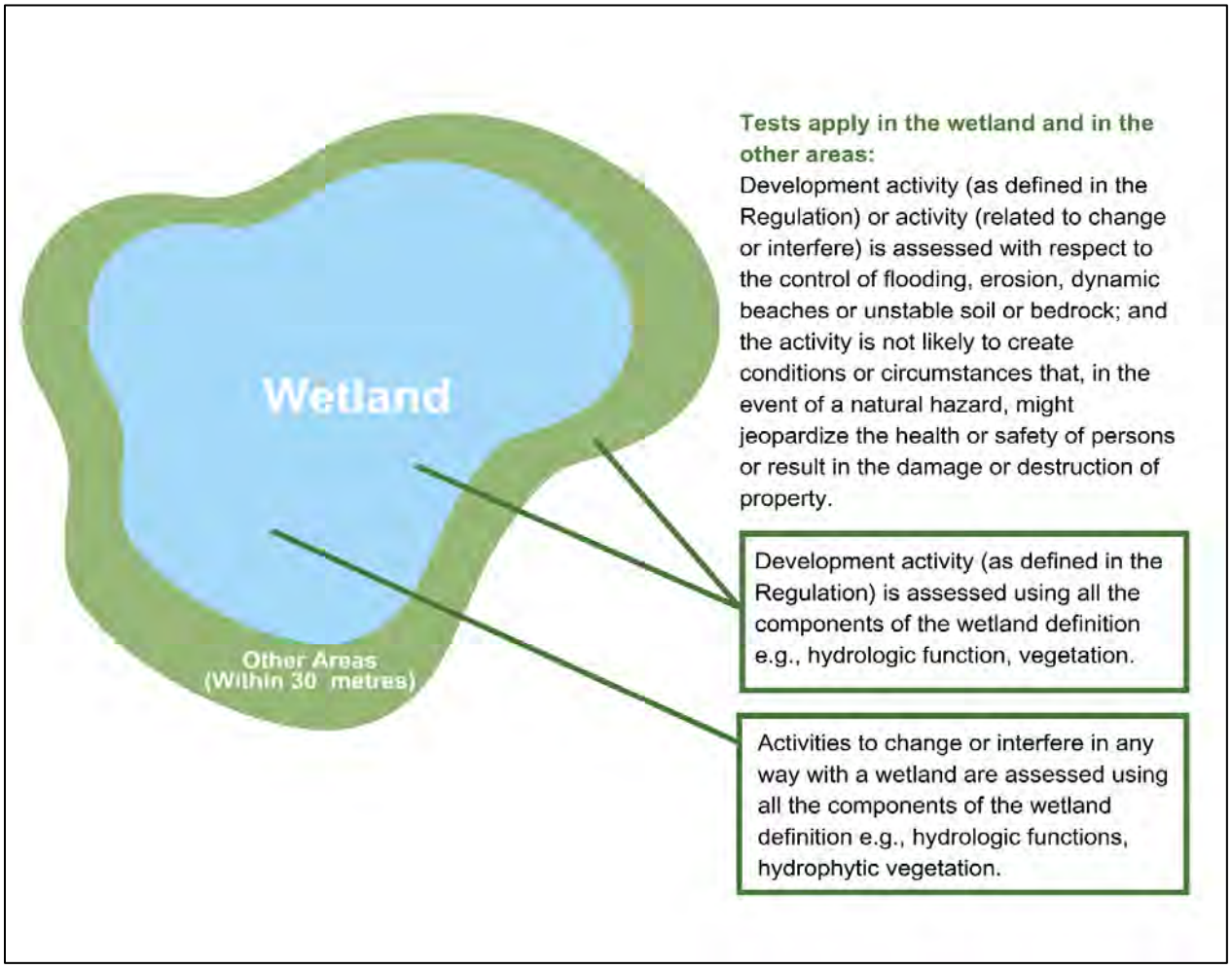

FIGURE 18: WETLANDS AND OTHER AREAS

CAs assessment of the application may consider, depending upon the scope of the proposal, the following direct or indirect effects for activities that may change or interfere with the wetland:

- changes to the hydrologic function e.g., quantity or depth of water based on the existing hydrology and hydroperiod, retention of water; water regime maintaining the wetland (e.g., surface or groundwater, water balance, recharge and/or discharge);
- water quality during or after the activity will not result in filling the wetland or "other areas" with sediment etc. or affect the hydrophytic vegetation;
- impacts to the hydroperiod (seasonally);

- impact to the hydric soils or vegetation (e.g., removal);
- the potential for damage to a wetland or a watercourse associated with the wetland on an adjacent property; and
- other criteria identified by the CA.

To receive a permit for activities associated with wetlands, it must be demonstrated in an application that interference on all components of the definition of a wetland as noted above, are not likely to be affected by any activities of the application (site preparation, during construction and long term).

Portions of wetlands may also be regulated due to presence of hazardous lands such as regulated floodplains or unstable soils. The applicable sections of this document 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.

Many wetlands develop on organic soils and, as a result, when reviewing development within a wetland the soil composition should be reviewed. Where the soil is organic Section 5.0 (Hazardous Lands) should also be reviewed and the policies from this section should be incorporated in the decision making of the CA.

When reviewing an application with respect to change or interference, or development, the evaluation done under the Ontario Wetland Evaluation System (OWES) may be used as an information resource because it identifies the features and functions of the wetland. It should be noted that when reviewing an application with respect to development activity under the Regulation, the significance of the wetland as determined by the Ontario Wetland Evaluation System is not a reason to deny or approve the application. The application must be reviewed with respect to the following: the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

Determining what represents a change or interference can be very challenging and is dependent on a variety of parameters such as the type and the scale of activity. The legal and practical implications associated with regulating change or interference will require ongoing discussions and court decisions over the upcoming years.

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, stormwater, and upstream constrictions to flow.

Impacts to the components of a wetland e.g., 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.

8.2.1 Wetland Boundary Identification

There are a variety of sources for identifying wetlands. Many wetlands have been identified through the provincial wetland evaluation program and municipalities. A CA may have identified wetlands through a Natural Heritage or Sub-watershed Study or technical assessments and site visits. Conservation

authorities may also identify wetlands as part of other natural hazard programs. Soils mapping (OMAFRA) may be useful in identifying organic soils which would indicate the potential for wetlands.

The province uses the Ontario Wetland Evaluation System (OWES), originally developed in 1983, to identify and evaluate wetlands primarily to support land use planning processes under the *Planning Act*. The OWES currently consists of two manuals: the Southern Ontario Wetland Evaluation System and the Northern Ontario Wetland Evaluation System (MNR, 2022). Wetlands identified and evaluated using the OWES can be a valuable resource for implementing Section 28 of the *Conservation Authorities Act*, however, it is important to note that a wetland must meet the definition of 'wetland' within O. Reg. 41/24.

For development proposals where a wetland is present on or adjacent to lands subject to the development proposal, MRCA may require on-site wetland boundary delineation/staking completed by an OWES qualified professional. The boundary delineation shall be illustrated on a Reference Plan or Site Plan. Where a wetland boundary identified on-site differs from the approved MNR Provincially Significant Wetland (PSW) boundary, the proponent will be responsible for obtaining acceptance of the new wetland boundary from the MNR.

For the Mattagami Region Watershed Area, wetland evaluations have been completed for:

Porcupine Lake and River Complex	Carmen Bay	Frederick House River
Moose Lake	Driftwood River	Little Goose Creek
Gold Lake	Kraft Creek/Murphy Creek	

8.2.2 Environmental Impact Study

The definition of a wetland contains multiple components. Any activity that affects one or more components of the definition may be considered change or interference. In many circumstances the activity will also meet the definition of development activity and CA staff should consider reviewing the application using that definition.

As part of the review of a permit application, a CA may request a study(ies) that addresses all components of the wetland definition as well as the *CA Act* and Regulation requirements related to a change or interference with a wetland. Studies are a mechanism for assessing impacts and to determine the suitability of a proposal. The submission of a technical study does not guarantee approval of the works. The study 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 MRCA staff.

8.3 Legislative Authority

The current legislative structure embeds requirements for the administration of s. 28 in both the *CA Act* and O. Reg. 41/24. CA staff and their legal counsel must refer to both pieces of legislation to make decisions and develop policies and guidelines related to s. 28 permit applications.

Conservation Authorities Act

The *CA Act* contains the following sections dealing with wetlands.

Prohibited activities re watercourses, wetlands, etc.

28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority:

1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.

2. Development activities in areas that are within the authority's area of jurisdiction and are, …

ii. wetlands, …, or

v. other areas in which development should be prohibited or regulated, as may be determined by the regulations. 2017, c. 23, Sched. 4, s. 25; 2022, c. 21, Sched. 2, s. 7 (1).

Permits

28.1 (1) An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

(a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; ….

(4) Subject to subsection (5), an authority may issue a permit with or without conditions.

The tests in the clauses outlined above apply to change or interfere with a wetland and development activities in the wetland and 'other area' (s. 28 (1) 1 and 2)). The tests will be used by CA staff in the review of a permit for both of these regulated areas and types of activities.

Ontario Regulation 41/24

The Authority may grant a permit to change or interfere in any way with a wetland; or for a development activity, in or near the wetland i.e., in the 'other area' 30 metres from the wetland. O. Reg 41/24 defines wetlands for the purpose of administering the Regulations.

Prohibited activities, subparagraph 2 of ss. 28 (1) of the Act (development activity prohibited) O. Reg. 41/24 defines 'other areas' as:

2. (3) For the purposes of subparagraph 2 v of subsection 28 (1) of the Act, other areas in which development activities are prohibited are the areas within an authority's area of jurisdiction that are within 30 metres of a wetland.

The Authority's policy is generalized by a 'No Loss of Wetlands" statement.

Offsetting/compensation may be required to support any approved development in or around wetlands at the discretion of MRCA. Offsetting/compensation must be designed and undertaken by a qualified professional with recognized expertise in the appropriate discipline and must be prepared using established procedures and recognized methodologies to the satisfaction of MRCA.

8.4 General Policies for Wetlands

It is the policy of MRCA that:

8.4.1 In general, development activity and interference shall not be permitted within wetlands.

8.4.2 In general, ponds* shall not be permitted within wetlands unless it is specifically for habitat enhancement/diversification purposes and not for aesthetics only. Plans must demonstrate

that all excavated material must be removed from the wetland. Approval is subject to staff discretion.

8.4.3 In general, stormwater management facilities shall not be permitted within wetlands.

8.4.4 In general, redevelopment of derelict and abandoned buildings within wetlands shall not be permitted.

*Ponds for the purpose of watering livestock are not subject to Policy 8.4.2 as they are not subject to Ontario Regulation 41/24 in accordance with Section 28(10) of the *Conservation Authorities Act*.

Development Activity Setbacks

For Evaluated Wetland and Wetlands greater than 2 hectares the following shall apply:

8.4.5 In general, there shall be no development activity within 30 metre s of the wetland boundary.

8.4.6 A 30 metre vegetative buffer from the edge of the wetland boundary shall be encouraged to protect the wetland from nutrient loading and surface runoff which could impact area and/or function.

For Unevaluated Wetlands and Wetlands less than 2 hectares in size the following shall apply:

8.4.7 In general, there shall be no development activity within 30 metres of the wetland boundary

Proposed development activity within land 30 metre s adjacent to any wetlands, regardless of size or significance, may require an analysis of the hydrologic impact on the wetland.

8.5 Specific Policies for Wetlands

The policies in this section are to be applied in conjunction with the General Policies - Section 3.6. As per Policy 3.6.1, development or interference will not be permitted within the regulated area associated with a wetland, except in accordance with the policies contained in this section.

8.5.1 New Development

8.5.1.1 New development activity will not be permitted within a wetland, including on existing lots of record, regardless of previous approvals provided under the *Planning Act* or other regulatory process (e.g., *Building Code Act*), except as outlined below.)

8.5.2 Conservation Activities

8.5.2.1 Conservation activities or restoration projects will be permitted within a wetland where it can be demonstrated that the hydrophytic vegetation and hydrologic functions of the wetland will be maintained, restored, or enhanced. Submitted plans will be required to demonstrate the following:

a) the wetland is not a bog or fen, or part of a Provincially Significant Wetland;
b) a technical site-specific study demonstrates to the satisfaction of MRCA that all hazards/risks associated with flooding and/or unstable soils have been addressed;
c) based on documentation of existing wetland characteristics (e.g., wetland type, connectivity, size and dominant vegetation communities), there will be direct conservation benefits of the project (e.g., enhancement in wetland feature and/or function);
d) there will be no impact on the functionality of any watercourse;
e) best management practices including site and project design and appropriate remedial measures will be employed to mitigate disturbance; and

f) maintenance requirements will be minimized.

If the above noted requirements cannot be met, an Environmental Impact Study may be required that demonstrates no negative impact on the hydrologic function of the wetland.

8.5.3 Passive Low-Intensity Recreational Uses

8.5.3.1 Passive low-intensity recreational uses associated with public parks, outdoor recreation and education, trail systems or watercourse access points may be permitted within a wetland where it can be demonstrated that there will be no negative impact on the hydrophytic vegetation and hydrologic functions of the wetland. It must also be demonstrated that:

a) the wetland is not a bog or fen, or part of a Provincially Significant Wetland; and
b) a technical site-specific study demonstrates to the satisfaction of MRCA that all hazards/risks associated with flooding and/or unstable soils have been addressed.

8.5.3.2 Development activity associated with boardwalks (e.g., narrow, raised wooden planked trails) may be permitted within a wetland if it has been demonstrated to the satisfaction of MRCA that:

a) the control of flooding, erosion will not be affected;
b) the interference on the hydrophytic vegetation and hydrologic functions of the wetland has been deemed to be acceptable by MRCA through an EIS; and
c) the following are adhered to:
    i. the footprint of the development activity in the wetland is minimized and supported by an EIS (if requested);
    ii. the boardwalk must be raised above flood levels;
    iii. the boardwalk has a maximum width of 2 metres; and
    iv. the boardwalk is constructed with materials that will not affect the natural environment.

8.5.4 Infrastructure

8.5.4.1 Public infrastructure (e.g., roads, sewers, flood and/or erosion control works, water supply,) and various utilities (e.g., pipelines) will only be considered to be constructed, realigned and/or upgraded within a wetland subject to the following:

a) there are no other feasible alternatives to the project;
b) the wetlands shall not be used to provide storm water management (neither water quality nor water quantity control);
c) an approved Environmental Assessment, or other comprehensive plan (if requested) that is supported by MRCA, demonstrates that all feasible alternatives to avoid intrusions on wetland features have been considered and that changes or interference to natural features, including hydrophytic vegetation and hydrologic functions, are minimized to prevent wetland loss to the greatest extent possible; and
d) a more detailed site-specific study (i.e., a scoped Environmental Impact Study) consistent with the Environmental Assessment or comprehensive plan is prepared (if requested). This study shall determine a more precise area wetland boundary in accordance with the current Provincial Ontario Wetland Evaluation System (OWES), and demonstrate that appropriate

remedial measures will mitigate and/or offset for wetland loss or interference with hydrologic and ecological functions;

e) and where:
   i. the wetland is not a bog or fen, or part of a Provincially Significant Wetland;
   ii. a technical site-specific study demonstrates to the satisfaction of MRCA that all hazards/risks associated with flooding and/or unstable soils have been addressed; and
   iii. clean fill material will be used. The proponent may be required to provide proof of origin and quality of the fill material to ensure the control of pollution and the are not adversely affected.

Compensation for the interference with the wetland though enhancement of other wetland features within the watershed may be required.

8.5.4.2 New vehicular access routes (e.g., driveways, private access roads, and entrance ways) will not be permitted in a wetland.

8.5.4.3 Existing access routes (e.g., driveways, private access roads, and entrance ways) associated with an existing residential, agricultural, commercial, industrial or institutional use may be permitted to be maintained within a wetland where it can be demonstrated that:

a) there is no feasible alternative to locate the access route outside of the wetland;
b) the control of flooding, erosion will not be impacted;
c) the interference with the hydrophytic vegetation and hydrologic functions of the wetland have been deemed acceptable by MRCA; and
d) an Environmental Impact Study provides for remedial measures that will mitigate and / or compensate for wetland loss or interference with the hydrophytic vegetation and hydrologic functions;
e) and where:
   i. the wetland is not a bog or fen, or part of a Provincially Significant Wetland;
   ii. a technical site-specific study demonstrates to the satisfaction of MRCA that all hazards/risks associated with flooding and/or unstable soils have been addressed; and
   iii. clean fill material will be used. The proponent may be required to provide proof of the origin and quality of the fill material to ensure the control of pollution and the are not adversely affected.

Compensation for the interference with the wetland though enhancement of other wetland features within the watershed may be required.

8.5.5 Organic Soil (Peat) Extraction

8.5.5.1 In general, no new organic soil (peat and/or muck) extraction operations or expansion of existing organic soil (peat) extraction operations will be permitted within wetlands.

8.6 Development Activity within Areas Adjacent to a Wetland

The following policies are focused on the adjacent lands (area of interference) of all wetlands, no matter the significance. Adjacent lands extend from the wetland boundary out to a distance of 30 metre s for all wetlands.

A buffer width of 30 metres provides better protection from runoff (sediment and other contaminants), some aquatic habitat protection, good corridor width for some fur-bearers, habitat for edge bird species and some amphibians and reptiles. (How Much Habitat is Enough, 2nd Edition, Environment Canada, 2004 and Best Management Practices 15 – Buffer Strips, 2004).

The hydrologic function of the wetland cannot be impacted due to development in these areas. A minimum 30 metre vegetative buffer from the edge of the wetland boundary will be encouraged to protect the wetland from nutrient loading and surface runoff which could impact wetland area and/or function. Proposed development activity within 30 metres of any wetland may require an Environmental Impact Study (EIS) including a Hydrological Assessment.

The following policies apply to areas adjacent to all wetlands. Wetlands under 2 hectares require a setback of 30 metres. Wetlands that are 2 hectares or larger, as well as Provincially Significant Wetlands (PSWs), also have a 30 metre setback requirement.

It is the policy of MRCA that:

8.6.1 Development activity, greater than 15m^2, shall not be permitted within 30 metres of a wetland less than 2 hectares in size, and within 30 m of a wetland 2 hectares or larger and/or a PSW on vacant land.

8.6.2 Development activity, greater than 15m^2, associated with existing residential, agricultural, commercial, industrial or institutional use may be permitted within the adjacent land of a wetland where it has been demonstrated through a technical study* (EIS or similar), prepared by a qualified professional with recognized expertise in the appropriate discipline using established procedures and recognized methodologies to the satisfaction of MRCA, that:

a) there is no feasible alternative site outside of the setback for the proposed development activity and the proposed development activity is located in an area of least (and acceptable) impact;
b) the hydrologic function of the wetland will not be impacted;
c) the control of flooding, erosion, dynamic beaches, and unstable soil and bedrock will not be affected and further that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property;
d) the potential for surficial erosion and sedimentation processes has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
e) impervious areas are minimized;
f) the overall drainage patterns for the lot will be maintained;
g) disturbed area and soil compaction is minimized;
h) disturbances to hydrophytic vegetation is minimized;
i) all excavation will be located above the high-water table, with the exception of excavation required to install a geothermal system; and
j) best management practices will be used to:
    i. maintain water balance
    ii. control sediment and erosion
    iii. maintain or enhance as much of a wetland buffer as is feasibly possible.

8.6.3 The replacement of existing structures and/or sewage disposal systems within the same footprint may be permitted within the adjacent land of a wetland if it has been demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches, and unstable soil and bedrock will not be affected and further that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. Further it must be demonstrated that there is no feasible location outside of the adjacent land. The replacement structure/system should be located outside of the wetland and only permitted within the adjacent land subject to being located in the area of least impact to the ecological and hydrologic function of the wetland. All septic systems must be located a minimum of 0.9m above the water table.

8.6.4 Swimming pools, in-ground or above-ground, inclusive of all fencing and landscaping, and accessory structures including decks, sheds, gazebos and garages, greater than 15m2 and associated with new or existing development must meet a 30 m setback from the wetland boundary.

8.6.5 Creation of a laneway on vacant land to provide access to a building envelope, located beyond the adjacent land, may be permitted provided a minimum 6m setback can be maintained and it can be demonstrated to the satisfaction of MRCA that the control of flooding, erosion, dynamic beaches, and unstable soil and bedrock will not be affected and further that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. Further it must be demonstrated that there is no feasible location outside the setback. MRCA may additionally request that points a) through e) in Section 8.6.2 can be met.

8.6.6 Boathouses may be permitted along the boundary of a wetland provided alteration to the wetland to provide water access is not required (i.e.,: dredging). The application must demonstrate the control of flooding, erosion, dynamic beaches, and unstable soil and bedrock will not be affected and further that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. An EIS may be required to support the development of a boathouse.

8.6.7 Infilling within the within the adjacent land to a wetland on a small vacant lot of record may Pbe permitted within the established building line in situations where the setback seems unreasonable and due to a lack of space; and where site lines are restricted provided: safe access exists to the property; the dwelling does not encroach closer to the wetland than what exists within the established building line (i.e., neighbour's dwelling); and a minimum 6 metre setback from the wetland is maintained. The application must demonstrate that the control of flooding, erosion, dynamic beaches, and unstable soil and bedrock will not be affected and further that the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property. An Environmental Impact Study may be requested to support a reduction in the setback.

*Requests for technical documents are at the discretion of MRCA staff.

Mattagami Region Conservation Authority

WATERSHED REGULATION O.REG 41/24 POLICY MANUAL

APPENDIX A – Definitions

100 Year Flood: A flood event that has a 1% probability of occurring or being exceeded in any given year. This flood is likely to occur or be exceeded an average of once every one hundred years.

Accepted Engineering Principles: 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.

Accepted Scientific Principles: Those current principles, methods and procedures which are used and applied in disciplines including but not limited to geology, geomorphology, hydrology, botany, and zoology, and that would be judged by a peer group of qualified specialists and practitioners (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.

Accessory Building or Structure: 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.

Addition: Any construction occurring on an existing structure that serves to increase the total area of that structure.

Adjacent Lands: Those lands contiguous to a specific natural heritage feature or area where it is likely that development or site alteration would have a negative impact on the feature or area.

Adverse Hydraulic and/or Fluvial Impacts: 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.

Alteration to a waterway: The act whereby the channel of a watercourse is altered in some manner. Examples of an alteration include, but are not limited to the following: channelization, full or partial diversions, retaining walls, revetments, bridges, culverts, pipeline crossings, erosion protection measures and construction of storm outlets.

Apparent (confined) river and stream valley: 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 discernible (i.e., valley walls are clearly definable) from the surrounding landscape by either field investigations, aerial photography and/or map interpretation. The location of the river or stream channel may be located at the base of the valley slope, in close proximity to the toe of the valley slope (i.e., within 15 metres), or removed from the toe of the valley slope (i.e., greater than 15 metres).

Area of interference: Those lands where development could interfere with the hydrologic function of a wetland.

Armour: Artificial surfacing of bed, banks, shores, or embankments to resist scour or erosion.

Authority: The Mattagami Region Conservation Authority, a corporate body established under the *Conservation Authorities Act* (RSO 1990).

Basement: One or more storeys of a building located below the first storey (Building Code).

Balanced Cut and Fill: The removal and replacement of suitable fill material at equal elevations to maintain the flood storage capacity of a property. Material must be removed and replaced either adjacent to or at opposite location of one another so as to achieve equality of stage-discharge within an approved watercourse reach. This must be illustrated on engineered plans.

Bankfull Width: 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): 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.

Breakwall/Breakwater: An object (especially a groyne or pier) resisting force of waves.

Boathouse: A detached one level accessory building or structure which is designed or used for the sheltering of a boat, watercraft, or other form of water transportation (not for non-motorized vessels) located on a lot with access and frontage on a water body. The structure must include an opening to the water of an appropriate size to accommodate a boat, watercraft, or other form of water transportation which cannot reasonably be removed from the water without mechanical means, AND have a means of directly accessing the water, either by a wet slip or by mechanical means (i.e., marine railway or boat lift). Storage structures, sheds, garages must meet the 15 metre setback from the hazard. Floating boathouses are addressed in the definition of Floating Structures.

Bog: Peat covered areas or peat-filled depressions which have a high-water table and a surface carpet of mosses (chiefly *Sphagnum spp.),* sedges, ericaceous shrubs, and tree cover which does not exceed 25% of the growing area. The mosses often form raised hummocks, separated by low, wet interstices. Because the bog surface is typically raised above the surface waters, it is typically isolated from mineral soil waters.

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 (e.g., allowing space for edge trees and limbs to fall without damaging personal property, area for roots of edge trees to persist). A buffer may also provide an area for recreational trails and a physical separation for new development that will discourage encroachment (adapted from Natural Heritage Reference Manual 2nd edition, 2010).

Building: A structure consisting of a wall, roof and floor or any of them or a structural system serving the function thereof including all plumbing, works, fixtures and service systems appurtenant thereto, plumbing not located in a structure, or a sewage system.

Building Envelope: Area of a lot outside of any municipal bylaw setbacks, Ontario Building Code setbacks or Mattagami Region Conservation Authority policy setbacks, which is intended to contain development and any associated infrastructure (sewage system, well, etc.)

Channel: The area of a watercourse carrying normal flows within the banks.

Channelization: The straightening, widening and/or deepening of a watercourse channel.

Comprehensive Plan: 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 Activities: Projects that are intended to maintain, enhance, or restore the functions of a wetland, or to create a wetland where one did not exist previously.

Conservation of Land (Conservation Ontario Interpretation)**:** The protection, management, or restoration of lands within the watershed ecosystem, including all aspects of the physical environment, be it terrestrial, aquatic, biological, botanic or air, for the purpose of maintaining or enhancing the natural features and hydrologic and ecological functions and to prevent exploitation, pollution, destruction or neglect and to ensure the future usability of the resource.

Crawl Space: A crawl space must be:

(a) less than 1500 millimetres high between the lowest part of the floor assembly and the ground or other surface below, and

(b) not used for any occupancy.

Dam: A structure or work holding back or diverting water and includes a dam, tailings dam, dyke, diversion, channel, artificial channel, culvert or causeway (*Lakes & Rivers Improvement Act*, R.S.O. 1990 c. L3, s.1).

Development:

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.

Diversion: The process whereby stream flow is directed from the original channel of the watercourse and returned to the original channel at another point on the watercourse. Diversions may be full or partial re-direction of flow from the channel of one watercourse to the channel of another watercourse.

Drainage Area means, for a point, the area that contributes runoff to that point.

Dredging Plan: A report prepared to address the potential impacts of dredging on natural features and ecological functions. At a minimum, dredging plans shall include the following:

- statement of purpose
- dimensions and volume calculations
- operational details (e.g., timing)
- sediment and erosion control plan
- edge/bank stabilization details
- assessment of potential impact on fish and fish habitat*
- dredgate quality confirmation and deposition plan*
- assessment of cultural heritage values*

*not required for routine maintenance projects (e.g., road side ditch or municipal drain maintenances, existing wet slip dredging, etc.)

Dug-out or Isolated Ponds: Anthropogenic waterbodies that are created by excavating basins with no inlet or outlet channels and in which surface and ground water collect.

Dyke (dike): An embankment or wall, usually along a watercourse or floodplain, to prevent overflow on to adjacent land.

Dynamic Beach: Sediments that accumulate along sea or lake shores, the configuration and contours of which depend upon the action of coastal processes including but not limited to wind, waves, currents, ice jamming/piling, the kinds of sediment involved, and the rate of delivery of this sediment.

Dynamic Beach Hazard: Areas of inherently unstable accumulations of shoreline sediments along the Great Lakes – St. Lawrence River System and large inland lakes, as identified by provincial standards, as amended from time to time. The dynamic beach hazard limit consists of the flooding hazard limit plus a dynamic beach allowance.

Dwelling unit: One or more habitable rooms, occupied or capable of being occupied as an independent and separate housekeeping establishment, in which separate kitchen and sanitary facilities are provided for the exclusive use of the occupants.

Ecological Function: 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.

Enhance: In the context of wetlands and wetland buffers means the altering of an existing functional wetland to increase or improve selected functions and benefits.

Environmental Assessment: 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 measures 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 Statement/Study: A study performed by a qualified professional who has been educated in, and has current knowledge of, biology, ecology, landscape ecology and any other relevant fields of study, as required. An environmental impact study should:

- Be consistent with the intent of the Provincial Planning Statement;
- For areas on and adjacent to the site, include descriptions and clearly legible scaled maps of the existing land uses, and the proposed development and site alteration, including all proposed buildings, structures, driveways and parking areas, and sources of human intrusion;
- Provide a thorough inventory of flora and fauna and related habitat features, as well as relevant information on soils and geology, slope, hydrology and hydrogeology;
- Review the ecological functions of the natural features identified above, including the habitat needs of species that utilize adjacent lands;

- Predict the impacts of the proposed development and site alteration on the various attributes of the environment on and adjacent to the site, such as habitat, vegetation, soil, surface and ground water, air and any other relevant attributes;
- Evaluate the significance of all predicted positive and negative impacts on the environment;
- Recommend extents of land where: disturbance must be avoided, or where disturbance must be limited in order to maintain the natural features and ecological functions of the area, supported by a detailed rationale;
- Review alternative development options and recommend measures that could be implemented to avoid or mitigate the predicted negative impacts;
- Identify any measures needed to monitor the mitigation measures and to assess the long-term impacts associated with the proposal; and
- Conclude with an independent professional opinion as to whether or not the development and site alteration is appropriate, and consistent with the intent of the Provincial Planning Statement.

Erosion: Continual loss of earth material (i.e., soil or sediment) over time as a result of the influence of water or wind.

Erosion Hazard: The loss of land, due to human or natural processes, that poses a threat to life and property. The erosion hazard limit is determined using considerations that include the 100-year erosion rate (the average annual rate of recession extended over a one hundred year time span), and an allowance for slope stability. The erosion hazard limit associated with unconfined river and stream systems is determined using considerations that include the flooding hazard limit or the meander belt width, whichever is greater, plus an allowance for access.

Evaluated Wetlands: Any wetland which has been evaluated using any version of the Ontario Ministry of Natural Resources Manual: Ontario Wetland Evaluation System.

Existing Use: The type of activity associated with an existing building or structure or site on the date of a permit application.

Fen: Peatlands which are characterized by surface layer of poorly to moderately decomposed peat, and a plant community which is dominated by sedges, with a lesser component of grasses, reeds, mosses, and sparse, medium height shrub and tree cover. Fens are often minerotrophic as they receive water through groundwater discharge from adjacent uplands, however restricted drainage creates conditions where oxygen saturation is low and mineral supply becomes restricted.

Fill: Earth, sand, gravel, building materials, storage, rubble, rubbish, garbage or any other material whether similar to or different from any of the aforementioned materials, whether originating on the site or elsewhere, used or capable of being used to raise, lower or in any way affect or alter the contours of the ground.

Floating Dwelling/Structure: A building or structure capable of being occupied as the permanent or temporary residence, recreational space or storage space that is constructed, erected, or placed on a floatation system regardless of how it is anchored (e.g., to the shoreline or to a dock/ramp). This includes floating dwellings, boathouses, gazebos, covered decks and other similar structures. This does not include floating docks.

Flooding Hazard: in Ontario, either storm-centred events, flood frequency based events, or an observed event may be used to determine the extent of the flooding hazard[1]. These events are:

a) A storm-centred event, either Hurricane Hazel storm (1954) or Timmins storm (1961). A storm-centred event refers to a major storm of record which is used for land use planning purposes. The rainfall actually experienced during a major storm event can be transposed over another watershed and when combined with the l8local conditions, Regulatory floodplains can be determined. This centering concept is considered acceptable where the evidence suggests that the storm event could have potentially occurred over other watershed in the general area;

b) 100-year flood event is a frequency based flood event that is determined through analysis of precipitation, snow melt, or a combination thereof, having a return period (or a probability of occurrence) of once every 100 years on average (or having a 1% chance of occurring or being exceeded in any given year). The 100-year flood event is the minimum acceptable standard for defining the Regulatory floodplain; and

c) An observed event, which is a flood that is greater that the storm-centred events or greater that the 100-year flood and which was actually experienced in a particular watershed, or portion thereof, for example as a result of ice jams[2] , and which has been approved as the standard for that specific area by the Minister of Natural Resources.

Flood: A temporary inundation of lands adjacent to the normal low flow channel of a watercourse.

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

Flood Plain: An area of land adjacent to a watercourse that has been or may be covered by water.

Floodproofing: A combination of structural changes and/or adjustments incorporated into the basic design and/or construction or alteration of individual buildings, structures or properties subject to flooding so as to reduce or eliminate flood damages.

[1] High points of land not subject to flooding but surrounded by floodplain or “flooded land” are considered to be within the flood hazard and part of the regulated floodplain.

[2] However, localized chronic conditions (e.g., ice or debris jams) related to flood prone areas may be used to extend the regulated area beyond the Regulatory Flood limit without the approval of the Minister of Natural Resources. It will be necessary to inform the property owner(s) as well as ensuring that the revised limits are reflected in the appropriate municipal documents at the first opportunity.

Floodway: The channel of a watercourse and the inner portion of the flood plain where flood depths and velocities are generally higher than those experienced in the flood fringe. The floodway represents that area required for the safe passage of flood flow and/or that velocities are considered to be such that they pose a potential threat to life and/or property damage.

Groyne: A structure extending from the shore to prevent erosion and arrest sand movement along a shoreline.

Habitable: suitable to live in or on (American Heritage Dictionary) OR means, that can be inhabited. Inhabit means to dwell in, occupy.

Habitable Floor Space: Any area that has the potential to be used as or converted to residential living space, including basements and attached garages.

Habitable Structure: Any building or structure used, or intended, or capable of being used for living and sleeping.

Hazardous Land: (updated definition) Property or lands that could be unsafe for development due to naturally occurring processes. Along the shorelines of the Great Lakes - St. Lawrence River System, this means the land, including that covered by water, between the international boundary, where applicable, and the furthest landward limit of the flooding hazard, erosion hazard or dynamic beach hazard limits. Along the shorelines of large inland lakes, this means the land, including that covered by water, between a defined offshore distance or depth and the furthest landward limit of the flooding hazard, erosion hazard or dynamic beach hazard limits. Along river, stream and small inland lake systems, this means the land, including that covered by water, to the furthest landward limit of the flooding hazard or erosion hazard limits.

Hydric Soil: Soil that, in its undrained condition, is saturated, flooded, or ponded long enough during the growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation.

Hydrologic Function: 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.

Hydrologic Study: A report prepared to address the potential impacts of development and interference on the hydrologic functions of a wetland or other natural feature.

Inert Fill: Earth or rock fill or material of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances.

Infilling: Development of an existing lot of record that lies between two previously developed lots. This only applies to filling in the setback to a hazard or environmental feature as filling within the hazard or environmental feature is not permitted.

Information/Education Program: The promotion of floodplain management principles to elected officials, members of the public, organizations and agencies in order to develop public understanding and acceptance of the Conservation Authority's water management program.

Infrastructure: As defined in the Provincial Policy Statement, physical structures (facilities and corridors) that form the foundation for development. Infrastructure includes: sewage and water systems, septic treatment systems, waste management systems, electric power generation and transmission, communication/telecommunications, transit and transportation corridors and facilities, oil and gas pipelines and associated facilities.

Ingress/egress: The ability to access a property or residence by land.

Institutional Use: Land uses where there is a threat to the safe evacuation of vulnerable populations' such as older persons, persons with disabilities and those who are sick and young, during an emergency as a result of flooding, failure of floodproofing measures or protection works, or erosion.

Interference in any way: Any anthropogenic act or instance which hinders, disrupts, degrades or impedes in any way the natural features or hydrologic and ecologic functions of a wetland or watercourse.

Jetty: A structure that projects from the land out into water.

Karst: An area of irregular limestone in which erosion has produced fissures, sinkholes, underground streams, and caverns.

Large Inland Lakes: Waterbody that has a surface area equal to or greater than 100 square kilometers where there is no measurable or predictable response to a single runoff event.

Marsh: Wet areas that are periodically inundated with standing or slowly moving water, with a vegetative community that generally consists of robust non-woody emergent plants (such as rushes, reeds, reed grasses, and sedges) and to a lesser extent, floating and submergent plants.

Material: Includes earth, sand, gravel, stone or woody debris (e.g., root wads, fascines).

Meander Belt: 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.

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: The line or "axis" that the meander belt is centred over which connects all the riffle sections of a stream.

Mitigate: To prevent, modify, or alleviate impacts (negative) on the natural environment. Mitigation also includes any action intended to enhance beneficial effects (modified from Natural Heritage Reference Manual, Second Edition, Ontario Ministry of Natural Resources and Forestry 2010).

Minor Development: Construction of a small addition to an existing building or an accessory building that does not exceed 10 square metres (108 square feet) and does not increase habitation in a hazard land.

Minor Fill: A volumetric amount of fill not exceeding 20 cubic metres.

Minor Site Alteration: The placement or removal of fill not exceeding 200 cubic metres.

Negative Impact means

a) in regards to fish habitat, any permanent alteration to, or destruction of fish habitat;
b) in regards to other natural heritage features and areas, degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities.

Negligible: 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).

Not Apparent (unconfined) river and stream valleys: Valleys in which a river or stream is present but there is no discernible valley slope or bank that can be detected from the surrounding landscape. For the most part, unconfined systems are found in fairly flat or gently rolling landscapes and may be located within the headwater areas of drainage basins. The river or stream channels contain either perennial (i.e., year-round) or ephemeral (i.e., seasonal or intermittent) flow and range in channel configuration from seepage and natural channels to detectable channels.

Offsetting: Measures that are undertaken to counterbalance unavoidable impacts to the ecosystem. Offsetting should be identified through an Environmental Impact Study and considered only when all other options have been deemed not feasible.

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 Zone Concept: An approach whereby the entire flood plain, as defined by the regulatory flood, is treated as one unit, and all development is prohibited or restricted.

Other Water Related Hazards: 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.

Pollution: The addition of any substance or form of energy (e.g., heat, sound, radioactivity) to the environment at a rate faster than the environment can accommodate it by dispersion, breakdown, recycling or storage in some harmless form.

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: Structural or non-structural works which are intended to appropriately address damages caused by flooding, erosion and/or other water-related hazards.

Qualified Professional: 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 MRCA.

Regulated Area: Those areas within the jurisdiction of MRCA defined in Ontario Regulation 41/24 within which development, interference with wetlands and alterations to shorelines and watercourses activities are regulated by the Authority.

Regulatory Flood: The standard used in a particular watershed to define the limit of the flood plain for regulatory purposes. For the purposes of the MRCA Watershed Regulation O. Reg. 41/24 Policy Manual, the regulatory flood shall mean the Timmins Flood Event Standard as defined in the O. Reg. 41/24: Prohibited Activities, Exemptions and Permits.

Replacement: 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.

Riffle: A section of shallow rapids where the water surface is broken by small waves.

River: 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.

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.

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

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

Retaining Wall: A vertical structure designed to resist the lateral pressure of soil and water behind it.

Revetment: A vertical or inclined facing of rip-rap or other material protecting a soil surface from erosion.

Rip-rap: A layer of stone to prevent the erosion of soil.

Rubble: Waste fragments of stone, brick etc. from old houses; pieces of undressed stone used especially as backfill for walls; loose angular stones; water worn stones.

Safe Access: The standards and procedures currently applied in engineering practice associated with providing safe passage for vehicles and people to and from a property during an emergency situation as a result of flooding, or other water related hazards (e.g., erosion), the failure of floodproofing and/or erosion protection works, that have been reviewed and approved by the Conservation Authority and/or the Ministry of Natural Resources. MRCA uses the criteria set out in the Ontario MNRF's Technical Guide – River & Stream Systems: Flooding Hazard Limit (2002) and Technical Guide – River and Stream Systems: Erosion Hazard Limit (2002) to determine safe access.

Scour: Local lowering of a streambed by the erosive action of flowing water.

Sedimentation: The deposition of detached soil particles.

Setback (Allowance): A physical separation. Setbacks form boundaries by establishing an exact distance from a fixed point, such as a property line, an adjacent structure, or a natural feature, within which development and/or site alteration is prohibited.

Sewage Disposal System: A system which contains the entire sewage envelope, including both primary and secondary beds, mantle, septic tanks, and reserve areas, as per the requirements of the *Ontario Building Code Act* or the Ministry of the Environment, Conservation and Parks.

Shoreline Alteration: A physical alteration to the lands within, adjacent or close to the shoreline of any lake, river, or watercourse.

Significant Wetland (Provincially Significant Wetland): An area identified as provincially significant by the Ontario Ministry of Natural Resources using evaluation procedures established by the province, as amended from time to time.

Site Alteration: Activities, such as development, filling, grading and excavation that would change the landform/waterbody and natural vegetative characteristics of a site.

Spill: Occurs when a portion of the flow in a watercourse leaves the main flood plain to create a separate flood plain. The spill flood plain may or may not outlet back into the main flood plain. Spills can occur due to topography, the presence of a structure such as a bridge/culvert/dam and naturally occurring blockages such as ice jams/log jams/beaver dams, etc., or a combination of these factors. MRCA regulates spill flood plain that result from the presence of a structure(s) and/or topography.

Stoop: A landing constructed outside of a structure that is a maximum size of 1.7 metres by 1.7 metres (5 ½ feet by 5 ½ feet).

Storey: The portion of a building;

a) that is situated between the top of any floor and the top of the floor next above it, or
b) that is situated between the top of the floor and the ceiling above the floor, if there is no floor above it.

Structure: Any material, object or works erected either as a unit or constructed or assembled of connected or dependent parts or elements, whether located under, on and/or above the surface of the ground.

Subsurface Sewage Disposal System: A system which contains the entire sewage envelope, including both primary and secondary beds, mantle, septic tanks and reserve areas, as per the requirements of Part 8 of the Ontario Building Code.

Surface Water Feature: Water related features on the earth's surface, including headwaters, rivers, stream channels, inland lakes, seepage areas, recharge/discharge areas, springs, wetlands and associated riparian lands that can be defines by their soil moisture, soil type, vegetation and topographic characteristics.

Surficial Erosion: The physical removal, detachment, and movement of soil at the ground surface due to water or wind.

Swamp: Mineral-rich wetlands characterized by a cover of deciduous or coniferous trees. Swamps are subjected to gently flowing waters that occur seasonally, or persist for long periods of time at the surface. Many swamps are characterized by spring flooding, with dry relict pools later in the season.

Toe of Slope: The lowest point on a slope, where the surface gradient changes from relatively shallow to relatively steep.

Top of Slope: 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.

Unconfined River or Stream System: Includes those where the watercourse is not located within a valley corridor with discernable slopes, but relatively flat to gently rolling plains and is not confined by valley walls. The watercourse can contain perennial, intermittent or ephemeral flows and may range in channel configuration, from seepage and natural springs to detectable channels.

Unstable Slopes: A slope that can be characterized as being unstable or hazardous due to factors such as toe or run-off erosion, lack of vegetative cover, soil type, and/or geological considerations.

Valley or Valleyland: Land that has depressional features associated with a river or stream, whether or not it contains a watercourse.

Watercourse: A watercourse is specifically defined within O. Reg. 41/24 as “a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs”. This definition includes but is not limited to lakes, rivers, creeks and streams.

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

Wave Uprush: An engineered allowance for wave surge beyond the extent of the flood plain which would occur during a regulatory flood event.

Wetland: Wetlands are defined in O. Reg. 41/24 as “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 have been caused by the presence of abundant water, and
d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which have been favoured by the presence of abundant water.”

Wetland Boundary: The point where 50% of the plant community consists of wetland plant species as listed in Appendix 5 of "The Ontario Wetland Evaluation System-Southern Manual", Ministry of Natural Resources, 1993. The wetland boundary must also meet the four points listed in the definition above.

Conservation Authorities Act

ONTARIO REGULATION 41/24

PROHIBITED ACTIVITIES, EXEMPTIONS AND PERMITS

CURRENT Consolidation period: April 1, 2024 - e-Laws currency date (December 31, 2024)

No amendments.

> **This is the English version of a bilingual regulation.**

Table of contents

Definitions

1. (1) In section 28 of the Act and in this Regulation,

“development activity” means,

(a) the construction, reconstruction, erection or placing of a building or structure of any kind,

(b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,

(c) site grading, or

(d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere; (“activité d’aménagement”)

“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; (“terrain dangereux”)

“watercourse” means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs; (“cours d’eau”)

“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 have been caused by the presence of abundant water, and

(d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which have been favoured by the presence of abundant water. (“terre marécageuse”)

(2) The definition of “wetland” in subsection (1) does not include periodically soaked or wet land used for agricultural purposes which no longer exhibits a wetland characteristic referred to in clause (c) or (d) of that definition.

Prohibited activities, subparagraph 2 iii of s. 28 (1) of the Act

2. (1) For the purposes of subparagraph 2 iii of subsection 28 (1) of the Act, river or stream valleys include 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 as follows:

1. Where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of the bank, plus 15 metres, to a similar point on the opposite side.

2. 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.

3. Where the river or stream valley is not apparent, the valley extends,

(i) to the furthest of the following distances:

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

B. the distance from the predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood event standard to a similar point on the opposite side, and

(ii) an additional 15-metre allowance on each side, except in areas within the jurisdiction of the Niagara Peninsula Conservation Authority.

(2) For the purposes of subparagraph 2 iv of subsection 28 (1) of the Act, areas 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 beach hazards include,

(a) the area starting from the furthest offshore extent of the authority's boundary to the furthest of the following distances:

(i) the 100-year flood level, plus the appropriate allowance for wave uprush, and, if necessary, for other water-related hazards, including ship-generated waves, ice piling and ice jamming, except in respect of Wanapitei Lake in the Nickel District Conservation Authority, the applicable flood event standard for that lake being the one set out in item 1 of Table 16 of Schedule 1,

(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, and

(iii) where a dynamic beach is associated with the waterfront lands, an allowance of 30 metres inland to accommodate dynamic beach movement, except in the areas within the jurisdictions of the Mattagami Region Conservation Authority, the Nickle District Conservation Authority and the North Bay-Mattawa Conservation Authority where the allowance is 15 metres inland; and

(b) the area that is an additional 15 metres allowance inland from the area described in clause (a).

(3) For the purposes of subparagraph 2 v of subsection 28 (1) of the Act, other areas in which development activities are prohibited are the areas within an authority's area of jurisdiction that are within 30 metres of a wetland.

Applicable Flood Event Standards

3. The applicable flood event standards with respect to an authority, for the purposes of paragraph 3 of subsection 2 (1) and to determine the maximum susceptibility to flooding of lands or areas in the area of jurisdiction of an authority are the standards specified in Schedule 1 as those standards are described in Schedule 2.

Maps of regulated areas

4. (1) An authority shall develop maps depicting the areas within the authority's area of jurisdiction where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act which shall be filed at the head office of the authority and made available to the public on the authority's website, and by any other means that the authority considers advisable.

(2) At least once annually, the authority shall,

(a) review the maps referred to in subsection (1) and determine if updates to the maps are required;

(b) make and file such updates to the maps at its head office if required; and

(c) make the updated maps available to the public on its website and by any other means it considers advisable.

(3) Where new information or analysis becomes available that may result in significant updates to the areas where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act, including enlargements or reductions to such areas, the authority shall ensure that stakeholders, municipalities and the public are notified of the proposed changes in any manner that the authority considers advisable, including making any relevant information or studies available online at least 30 days prior to an authority meeting during which the proposed changes are on the agenda.

(4) Where significant changes to the areas where development activities are prohibited have been made in accordance with subsection (3), the authority shall promptly update the maps described in subsection (1).

(5) For greater certainty, in case of a conflict regarding the boundaries of the areas where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act, the

description of those areas in that paragraph and in section 2 of this Regulation prevail over the depiction of the areas in the maps referred to in subsection (1) of this section.

Exceptions

5. Paragraph 2 of subsection 28 (1) of the Act does not apply to,

(a) the construction, reconstruction, erection or placement of,

(i) a seasonal or floating dock that,

(A) is 10 square metres or less,

(B) does not require permanent support structures, and

(C) can be removed in the event of flooding,

(ii) a rail, chain-link or panelled fence with a minimum of 75 millimetres of width between panels, that is not within a wetland or watercourse,

(iii) agricultural in-field erosion control structures that are not within and that do not have any outlet of water directed or connected to a watercourse, wetland or river or stream valley,

(iv) a non-habitable accessory building or structure that,

(A) is incidental or subordinate to the principal building or structure,

(B) is 15 square metres or less, and

(C) is not within a wetland or watercourse, or

(v) an unenclosed detached deck or patio that is 15 square metres or less, is not placed within a watercourse or wetland and does not utilize any method of cantilevering;

(b) the installation of new tile drains that are not within a wetland or watercourse, within 30 metres of a wetland or within 15 metres of a watercourse, and that have an outlet of water that is not directed or connected to a watercourse, wetland or river or stream valley, or the maintenance or repair of existing tile drains;

(c) the installation, maintenance or repair of a pond for watering livestock that is not connected to or within a watercourse or wetland, within 15 metres of a wetland or a watercourse, and where no excavated material is deposited within an area where subsection 28 (1) of the Act applies;

(d) the maintenance or repair of a driveway or private lane that is outside of a wetland or the maintenance or repair of a public road, provided that the driveway or road is not extended or widened and the elevation, bedding materials and existing culverts are not altered;

(e) the maintenance or repair of municipal drains as described in, and conducted in accordance with the mitigation requirements set out in the Drainage Act and the Conservation Authorities Act Protocol, approved by the Minister and available on a government of Ontario website, as it may be amended from time to time; and

(f) the reconstruction of a non-habitable garage with no basement, if the reconstruction does not exceed the existing footprint of the garage and does not allow for a change in the potential use of the garage to create a habitable space.

Pre-submission consultation

6. (1) Prior to submitting an application for a permit under section 28.1 of the Act, an authority and the applicant may engage in pre-submission consultation for the purposes of confirming the requirements of a complete application to obtain a permit for the activity in question, which may include,

(a) requests by the authority to the applicant for,

(i) initial information on the proposed activity such as a description of the project and any associated plans, or

(ii) details about the property upon which the activities are proposed to be carried out, including copies of plans, maps or surveys; or

(b) meetings between the authority and the applicant prior to the submission of an application, including any site visits to the property where the activities are proposed to be carried out.

(2) If the applicant requests a pre-submission consultation under subsection (1), the authority is required to engage in the pre-submission consultation.

Application for permit

7. (1) An application for a permit under section 28.1 of the Act shall be submitted to an authority and shall include,

(a) a plan of the area showing the type and location of the proposed development activity or a plan of the area showing plan view and cross-section details of an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;

(b) the proposed use of any buildings and structures following completion of the development activity or a statement of the purpose of an activity 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;

(c) the start and completion dates of the development activity or other activity;

(d) a description of the methods to be used in carrying out an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;

(e) the elevations of existing buildings, if any, and grades and the proposed elevations of any buildings and grades after the development activity or other activity;

(f) drainage details before and after the development activity or other activity;

(g) a complete description of any type of fill proposed to be placed or dumped;

(h) a confirmation of authorization for the proposed development activity or other activity given by the owner of the subject property, if the applicant is not the owner; and

(i) any other technical information, studies or plans that the authority requests including information requested during pre-submission consultations between the authority and the applicant.

(2) Upon receipt of the information required under subsection (1) and payment by the applicant of the fee charged by the authority under subsection 21.2 (4) of the Act, the authority shall notify the applicant in writing, within 21 days, whether or not the application complies with subsection 28.1 (3) of the Act and is deemed to be a complete application.

(3) If the authority notifies an applicant under subsection (2) that the application is complete, the authority shall not require new studies, technical information or plans under clause (1) (i) from the applicant to make a determination on the application, unless agreed to by the authority and the applicant. For greater certainty, the authority may ask the applicant for clarification or further details regarding any matter related to the application.

Request for review

8. (1) An applicant may request a review by the authority if,

(a) the applicant has not received a notice from the authority within 21 days in accordance with subsection 7 (2);

(b) the applicant disagrees with the authority's determination that the application for a permit is incomplete; or

(c) the applicant is of the view that a request by the authority for other information, studies or plans under clause 7 (1) (i) is not reasonable.

(2) A review requested by an applicant under subsection (1) shall be completed by the authority no later than 30 days after it is requested and the authority shall, as the case may be,

(a) confirm that the application meets the requirements of subsection 7 (1) and is complete or provide reasons why the application is incomplete; or

(b) provide reasons why a request for other information, studies or plans under clause 7 (1) (i) is reasonable or withdraw the request for all or some of the information, studies or plans.

Conditions of permits

9. (1) An authority may attach conditions on a permit issued under section 28.1 of the Act only if, in the opinion of the authority, the conditions,

(a) assist in preventing or mitigating any effects on the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) assist in preventing or mitigating any effects on human health or safety or any damage or destruction of property in the event of a natural hazard; or

(c) support the administration or implementation of the permit, including conditions related to reporting, notification, monitoring and compliance with the permit.

(2) In addition to the conditions referred to in subsection (1), the Lake Simcoe Region Conservation Authority may attach conditions to a permit that relate to designated policies and other policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit.

Lake Simcoe Protection requirements

10. For the purpose of clause 28.1 (1) (c) of the Act, a decision to issue a permit within the area of jurisdiction of the Lake Simcoe Region Conservation Authority shall,

(a) conform with any designated policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit; and

(b) have regard to any other policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit.

Period of validity of permits and extensions

11. (1) The maximum period of validity of a permit issued under sections 28.1, 28.1.1 and 28.1.2 of the Act, including any extension, is 60 months.

(2) If a permit is issued for less than the maximum period of validity, the holder of a permit may, at least 60 days before the expiry of the permit, submit an application for an extension of the permit to,

(a) the authority that issued the permit, in the case of permits issued under section 28.1 or 28.1.2 of the Act; or

(b) the Minister, in the case of permits issued under section 28.1.1 of the Act.

(3) An authority or the Minister, as the case may be, may approve an extension of the period of validity of a permit that was issued for a period of less than 60 months but the total period of validity of the permit, including the extension, shall not exceed 60 months.

(4) If an authority intends to refuse a request for an extension, the authority shall give notice of intent to refuse to the holder of the permit, indicating that the extension will be refused unless the holder requests a hearing under subsection (5).

(5) Within 15 days of receiving a notice of intent to refuse a request for an extension, the holder of the permit may submit a written request for a hearing to the authority.

(6) If a request for hearing is submitted under subsection (5), the authority shall hold the hearing within a reasonable time, and shall give the holder at least five days notice of the date of the hearing.

(7) After holding a hearing under subsection (6), the authority may,

(a) confirm the refusal of 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 permit does not exceed the applicable maximum period specified in subsection (1).

Policy and procedure documents re permits

12. Each authority shall develop policy and procedure documents with respect to permit applications and reviews that, at a minimum, include the following:

1. Additional details regarding the pre-submission consultation process described in section 6 as well as additional details related to complete permit application requirements.

2. Procedures respecting the process for a review under section 8.

3. Standard timelines for the authority to make a decision on permit applications following a notification that an application is complete under subsection 7 (2), as the authority determines advisable.

4. Any other policies and procedures, as the authority considers advisable, for the purpose of administering the issuance of permits under Part VI of the Act.

5. A process for the periodic review and updating of the authority's policy and procedure documents, including procedures for consulting with stakeholders and the public during the review and update process, as the authority considers advisable.

13. Omitted (provides for coming into force of provisions of this Regulation).

SCHEDULE 1
FLOOD EVENT STANDARDS

1. For the following conservation authorities, the applicable flood event standards are those specified in Table 1 below:

1. Ausable Bayfield Conservation Authority.

2. Catfish Creek Conservation Authority.

3. Credit Valley Conservation Authority.

4. Ganaraska Region Conservation Authority.

5. Grand River Conservation Authority.

6. Halton Region Conservation Authority.

7. Kettle Creek Conservation Authority.

8. Maitland Valley Conservation Authority.

9. Saugeen Valley Conservation Authority.

10. Toronto and Region Conservation Authority.

TABLE 1

Item	Areas	Applicable Flood Event Standards
1.	All areas	The Hurricane Hazel Flood Event Standard, the 100 Year Flood Event Standard and the 100-year flood level plus wave uprush

2. For the following conservation authorities, the applicable flood event standards are those specified in Table 2 below:

1. Cataraqui Region Conservation Authority.

2. Long Point Region Conservation Authority.

3. Quinte Region Conservation Authority.

4. Raisin Region Conservation Authority.

5. South Nation River Conservation Authority.

TABLE 2

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard and the 100-year flood level plus wave uprush

3. For the following conservation authorities, the applicable flood event standards are those specified in Table 3 below:

1. Mississippi Valley Conservation Authority.

2. Rideau Valley Conservation Authority.

TABLE 3

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard

4. For the following conservation authorities, the applicable flood event standards are those specified in Table 4 below:

1. Mattagami Region Conservation Authority.

2. Nottawasaga Valley Conservation Authority.

3. Sault Ste. Marie Region Conservation Authority.

TABLE 4

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard, the Timmins Flood Event Standard, and the 100-year flood level plus wave uprush

5. For the Crowe Valley Conservation Authority, the applicable flood event standards are those specified in Table 5 below:

TABLE 5

Item	Areas	Applicable Flood Event Standards

1.	All areas	The 100 Year Flood Event Standard, the Timmins Flood Event Standard, the Hurricane Hazel Flood Event Standard and the 100-year flood level

6. For the Kawartha Region Conservation Authority, the applicable flood event standards are those specified in Table 6 below:

TABLE 6

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard and the Timmins Flood Event Standard

7. For the Central Lake Ontario Conservation Authority, the applicable flood event standards are those specified in Table 7 below:

TABLE 7

Item	Areas	Applicable Flood Event Standards
1.	Pringle Creek and Darlington	The 100 Year Flood Event Standard
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

8. For the Essex Region Conservation Authority, the applicable flood event standards are those specified in Table 8 below:

TABLE 8

Item	Areas	Applicable Flood Event Standards
1.	The main branch and the east branch (Silver Creek) of the Ruscom River, and its tributaries within the Town of Lakeshore and the Town of Kingsville and the main and north branch of Canard River in the Town of LaSalle, Concessions I and II, and on the main branch of the Canard River in the Town of Amherstburg, Concessions I, II, III and IV	The March 1985 Flood Event Standard
2.	All other areas	The 100 Year Flood Event Standard

9. For the Grey Sauble Conservation Authority, the applicable flood event standards are those specified in Table 9 below:

TABLE 9

Item	Areas	Applicable Flood Event Standards
1.	The Sauble River Watershed	The 100 Year Flood Event Standard
2.	Lake Huron and Georgian Bay in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other watersheds	The Timmins Flood Event Standard

10. For the Hamilton Region Conservation Authority, the applicable flood event standards are those specified in Table 10 below:

TABLE 10

Item	Areas	Applicable Flood Event Standards
1.	Watercourses WCO, WCI, WC2, 3, 4, 5.0, 5.1, 6.0, 6.1, 6.2, 6.3, 6.4, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, 10.1, 10.2, 11.0 and 12.0 as indicated on Map Figure 1 of Project 98040-A, Stoney Creek, Stormwater Management Assessment, prepared by Philips Engineering and located at the Hamilton Region Conservation Authority head office and Hamilton Harbour in the Great Lakes-St. Lawrence River System	The 100-year flood level
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

11. For the Lake Simcoe Region Conservation Authority, the applicable flood event standards are those specified in Table 11 below:

TABLE 11

Item	Areas	Applicable Flood Event Standards
1.	Bunker's Creek and Sophia Creek	The 100 Year Flood Event Standard

2.	Talbot River and the Trent-Severn waterway	The Timmins Flood Event Standard
3.	Lake Simcoe	The 100-year flood level plus wave uprush
4.	All other areas	The Hurricane Hazel Flood Event Standard

12. For the Lakehead Region Conservation Authority, the applicable flood event standards are those specified in Table 12 below:

TABLE 12

Item	Areas	Applicable Flood Event Standards
1.	The main channel of the Kaministiquia River	The 100 Year Flood Event
2.	Lake Superior in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	Timmins Flood Event Standard

13. For the Lower Thames Valley Conservation Authority, the applicable flood event standards are those specified in Table 13 below:

TABLE 13

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 1937 Regulatory Flood Event Standard and the 100-year flood level plus wave uprush

14. For the Lower Trent Region Conservation Authority, the applicable flood event standards are those specified in Table 14 below:

TABLE 14

Item	Areas	Applicable Flood Event Standards
1.	The main channels of Rice Lake and Trent River	The rainfall, snowmelt, or a combination of rainfall and snowmelt, that would produce the water surface elevations above Canadian Geodetic Datum described in Table 1 of Schedule 3
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Timmins Flood Event Standard

15. For the Niagara Peninsula Conservation Authority, the applicable flood event standards are those specified in Table 15 below:

TABLE 15

Item	Areas	Applicable Flood Event Standards
1.	The watersheds associated with Shriner's Creek, Ten Mile Creek and Beaverdam Creek (including Tributary W-6-5) in the City of Niagara Falls	The Hurricane Hazel Flood Event Standard
2.	Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The 100 Year Flood Event Standard

16. For the Nickel District Conservation Authority, the applicable flood event standards are those specified in Table 16 below:

TABLE 16

Item	Areas	Applicable Flood Event Standards
1.	Wanapitei Lake	The maximum flood allowance elevation of 267.95 metres Canadian Geodetic Datum (in accordance with Ontario Power Generation's Licence of Occupation Agreement #6168)
2.	All other areas	The Timmins Flood Event Standard and the 100 Year Flood Event Standard

17. For the North Bay-Mattawa Conservation Authority, the applicable flood event standards are those specified in Table 17 below:

TABLE 17

Item	Areas	Applicable Flood Event Standards
1.	Chippewa Creek and its tributaries below the North Bay Escarpment, Parks Creek, the Mattawa River in the Town of Mattawa and the La Vase River	The 100 Year Flood Event Standard
2.	Lake Nipissing	100-year flood level plus wave uprush
3.	All other areas	The Timmins Flood Event Standard

18. For the Otonabee Region Conservation Authority, the applicable flood event standards are those specified in Table 18 below:

TABLE 18

Item	Areas	Applicable Flood Event Standards
1.	Rice Lake, Stony Lake, Clear Lake, Lovesick Lake, Deer Bay, Buckhorn Lake, Chemong Lake, Pigeon Lake, Katchiwanooka Lake and Lower Buckhorn Lake	The rainfall, snowmelt, or a combination of rainfall and snowmelt, that would produce the water surface elevations above Canadian Geodetic Datum described in Table 2 of Schedule 3.
2.	All other areas	The Timmins Flood Event Standard

19. For the St. Clair Region Conservation Authority, the applicable flood event standards are those specified in Table 19 below:

TABLE 19

Item	Areas	Applicable Flood Event Standards
1.	Perch Creek	The 100 Year Flood Event Standard
2.	Lake Huron, Lake St. Clair and St. Clair River in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

20. For the Upper Thames Region Conservation Authority, the applicable flood event standards are those specified in Table 20 below:

TABLE 20

Item	Areas	Applicable Flood Event Standards

1.	All areas	The 1937 Flood Event Standard

SCHEDULE 2
DESCRIPTION OF STANDARDS

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 is modified by the percentage amount shown in Column 2 of Table 2 opposite the corresponding size of the drainage area set out 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 Drainage Area (square kilometres)	Column 2 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 Timmins Flood Event Standard means a storm that produces over a 12-hour period,

(a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 3; 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 3 is modified by the percentage amount shown in Column 2 of Table 4 opposite the corresponding size of the drainage area set out in Column 1 of Table 4.

TABLE 3

15 mm of rain in the 1st hour
20 mm of rain in the 2nd hour
10 mm of rain in the 3rd hour

3 mm of rain in the 4th hour
5 mm of rain in the 5th hour
20 mm of rain in the 6th hour
43 mm of rain in the 7th hour
20 mm of rain in the 8th hour
23 mm of rain in the 9th hour
13 mm of rain in the 10th hour
13 mm of rain in the 11th hour
8 mm of rain in the 12th hour

TABLE 4

Column 1 Drainage Area (km^2)	Column 2 Percentage
26 to 50 both inclusive	97
51 to 75 both inclusive	94
76 to 100 both inclusive	90
101 to 150 both inclusive	87
151 to 200 both inclusive	84
201 to 250 both inclusive	82
251 to 375 both inclusive	79
376 to 500 both inclusive	76
501 to 750 both inclusive	74

751 to 1000 both inclusive	70
1001 to 1250 both inclusive	68
1251 to 1500 both inclusive	66
1501 to 1800 both inclusive	65
1801 to 2100 both inclusive	64
2101 to 2300 both inclusive	63
2301 to 2600 both inclusive	62
2601 to 3900 both inclusive	58
3901 to 5200 both inclusive	56
5201 to 6500 both inclusive	53
6501 to 8000 both inclusive	50

3. The 100 Year Flood Event Standard means rainfall, 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.

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

5. The March 1985 Flood Event Standard means the flood levels observed, surveyed and mapped, and located at the Essex Region Conservation Authority head office, along portions of the relevant prescribed watercourses that exceeded the 100 Year Flood Event Standard.

6. The 1937 Flood Event Standard means the historical observed 1937 flood on the Thames River. This event is equivalent to the combination of events that caused the flood event on

the Thames River in April of 1937. The 1937 flood event is estimated to be equivalent to a 1 in 250-year return flood.

7. The 1937 Regulatory Flood Event Standard means the historical observed 1937 flood on the Thames River. This event is equivalent to a flow of 1,540 cubic metres per second (cms) commencing at Delaware and proportionately reducing until 1,160 cms at Thamesville and 1,125 cms at Chatham. The 1937 flood event is estimated to be equivalent to a 1 in 250-year return flood.

SCHEDULE 3
WATER SURFACE ELEVATIONS

1. The water surface elevations above Canadian Geodetic Datum applicable to Item 1 in Table 14 of Schedule 1 are shown in Table 1.

TABLE 1
LOWER TRENT REGION CONSERVATION AUTHORITY

Location	Water Surface Elevation
Rice Lake	187.9 metres
Trent River below Dam #1 (Trenton)	77.2 metres
Trent River below Dam #2 (Sidney)	81.3 metres
Trent River below Dam #3 (Glen Miller)	87.7 metres
Trent River below Dam #4 (Batawa)	95.7 metres
Trent River below Dam #5 (Trent)	101.7 metres
Trent River below Dam #6 (Frankford)	107.9 metres
Trent River below Dam #7 (Glen Ross)	113.5 metres
Trent River below Dam #8 (Meyers)	117.9 metres
Trent River below Dam #9 (Hagues Reach)	128.1 metres

Trent River below Dam # 10 (Ranney Falls)	143.4 metres
Trent River below Dam #11 (Campbellford)	148.3 metres
Trent River below Dam #12 (Crowe Bay)	154.3 metres
Trent River below Dam #13 (Healy Falls)	175.5 metres
Trent River below Dam #14 (Hastings)	186.7 metres

2. The water surface elevations above Canadian Geodetic Datum applicable to Item 1 in Table 18 of Schedule 1 are shown in Table 2.

TABLE 2
OTONABEE REGION CONSERVATION AUTHORITY

Water Body	Water Surface Elevation
Rice Lake	187.90 metres
Stony Lake	235.95 metres
Clear Lake	235.95 metres
Lovesick Lake	242.16 metres
Deer Bay	244.31 metres
Buckhorn Lake	247.12 metres
Chemong Lake	247.12 metres
Pigeon Lake	247.12 metres
Katchiwanooka Lake	233.68 metres
Lower Buckhorn Lake	244.31 metres

Mattagami Region Conservation Authority

WATERSHED REGULATION O.REG 41/24 POLICY MANUAL

APPENDIX C—Floodproofing Guidelines

The minimum standards for floodproofing are based on the Regulatory Flood elevation. The following table depicts the minimum elevations for various features and structures.

Opening into structures	Regulatory flood elevation +0.3m or wave uprush elevation (whichever is greater)
Basement Floor	Regulatory flood elevation -1.0m
Fill places around buildings and structures	Regulatory flood elevation
Electrical and Heating circuits	Regulatory flood elevation +0.3m or wave uprush elevation (whichever is greater)
1st floor (main) on raised buildings and structures	Regulatory flood elevation +0.3m or wave uprush elevation (whichever is greater)
Access roads, parking areas	Regulatory flood elevation -0.3m
Pedestrian Access	Regulatory flood elevation -0.8m

INTRODUCTION

Floodproofing is defined as a combination of structural changes and/or adjustments incorporated into the basic design and/or construction or alteration of individual buildings, structures or properties subject to flooding so as to reduce or eliminate flood damages. It is acknowledged that this term is somewhat misleading, since total protection from flood damage cannot always be assured. However, if applied effectively, floodproofing can play a significant role in comprehensive flood plain management.

Floodproofing is generally most appropriate in situations where moderate flooding with low velocity and short duration is experienced and where traditional structural flood protection, such as dams and channels are not considered to be feasible. Although measures can be applied to both existing and new developments, it is usually impractical, expensive and extremely difficult to floodproof existing buildings.

Since floodproofing is best incorporated into the initial planning and design stages, new development has the greatest potential for permanent structural adjustment. In general, floodproofing can be applied most economically and effectively in the design of new buildings in developing areas. It can also be applied to infilling situations and proposed additions in developed areas. However, as well as providing adequate flood protection, new development within developed areas will have to take into account special considerations such as the aesthetic blend with neighbouring properties.

Floodproofing, whether wet or dry should be no lower than the 1:100-year flood level. The only exceptions are in cases where an addition is proposed to an existing structure or there is one remaining infilling lot in a neighbourhood. In these instances, the floodproofing level should be no lower than the first floor levels of the existing structure or the adjacent structures.

TYPES OF FLOODPROOFING

All floodproofing measures can be described as active or passive and providing wet or dry protection.

Active vs Passive

Active floodproofing requires some action, i.e., closing watertight doors or sandbagging for the measure to be effective. Advance flood warning is almost always required in order to make the flood protection operational.

Passive floodproofing measures are defined as those that are in place and do not require flood warning or any other action to put the flood protection into effect. These include construction of development at or above the flood standard, or the use of continuous berms or floodwalls.

Dry vs Wet Protection

The object of dry floodproofing is to keep a development and its contents completely dry. Such can be carried out by elevating the development above the level of the flood standard or by designing walls to be watertight and installing watertight doors and seals to withstand the forces of flood waters. The benefit of elevated floodproofing is that it is passive and advance warning of an impending flood is not required. Temporary watertight closures, on the other hand, are considered to be active floodproofing usually requiring advance warning for operation.

Wet floodproofing is undertaken in expectation of possible flooding. Its use is generally limited to certain specific non-residential/non-habitable structures (e.g., arena, stadium, parking garage), but many of the techniques of wet floodproofing can be used with certain dry floodproofing approaches. The intent of wet floodproofing is to maintain structural integrity by avoiding external unbalanced forces from acting on buildings during and after a flood, to reduce flood damage to contents, and to reduce the cost of post flood clean up. As such, wet floodproofing requires that the interior space below the level of the flood standard remain unfinished, be non-habitable, and be free of service units and panels, thereby ensuring minimal damage. Also, this space must not be used for storage of immovable or hazardous materials that are buoyant, flammable, explosive or toxic. Furthermore, access ways into and from a wet floodproofed building must allow for safe pedestrian movement.

For new development, dry floodproofing above the level of the flood standard can generally be economically and easily achieved in the design and early construction phase. However, dry floodproofing of structures which will have portions below the level of the flood standard will require additional special design attention so that the structure will resist all loads including hydrostatic pressures.

TECHNICAL CONSIDERATIONS

Once flood waters enter a development, the risk of loss of life and flood damage will be determined by the location of the habitable portion of the buildings. The habitable portion of a structure is defined as living space intended for use by the occupant with the key concern being overnight occupancy. This includes buildings used for residential, commercial, recreational, and institutional purposes. In considering appropriate floodproofing measures, the habitable portion of the building should be designed to eliminate or minimize the risk of flood damage and loss of life.

As a rule, damages increase rapidly with the depth of flooding. Major structural damage occurs when a structure is weakened, totally collapses or is displaced. Damage to contents, such as finishes, trimwork, furniture, appliances, equipment and storage materials, also represents a substantial portion of the total loss. In addition, it is difficult to assign a dollar value to compensate for human suffering caused by a flood.

Thus, protection to at least the level of the flood standard is significant in reducing human suffering and property damage. In selecting between wet or dry flood protection, consideration must be given to the type of development, need for floodproofing and cost effectiveness.

Further, selection of active or passive measures will depend on location of the habitable portion of the development below or above the level of the flood standard, local flood warning, and access ways.

As well, all mechanical and electrical systems should be designed and installed so that the heating, lighting, ventilation, air conditioning and other systems are not vulnerable to flood damage during the flood standard. Where flooding could interrupt key power supplies, it may be necessary to provide stand-by or backup systems, with power and controls located above the level of the flood standard.

In order to determine the most appropriate floodproofing measure, the full extent of the flood hazard must be evaluated. This section outlines technical considerations which can assist in determining the most suitable floodproofing measure.

1. Flooding as a Threat to Life

Hazard to life is linked to the frequency of flooding, and to depth of flood waters and the velocity of flow in the floodplain. Depth increases buoyancy and velocity increases instability, so that each of depth and velocity should be studied independently or as a combined function.

a) Depth

Any person in the midst of a flooded area will be acted upon by a buoyant force equal to the weight of water displaced by that person. The volume of displaced water and this force increases with depth until neutral equilibrium is reached and the person begins to float.

Average adults and teenage children remain stable when standing in flood depths up to about 1.37 m (4.5 ft). The average school child 6 – 10 years old would float at about 1.1 m (3.5 ft), although smaller, younger children in this range would float at a depth of about 0.98 m (3.2 ft).

- Hence, in terms of depth and individuals who could be present in the floodplain during a flood: depths in excess of about 0.98 m (3.2 ft) would be sufficient to float young school children;
- depth of about 1.37 m (4.5 ft) is the threshold of stability for teenage children and most adults.

b) Velocity

Moving water in the floodplain exerts a lateral force resulting from momentum thrust of the flood flow. This force acts to displace objects in a downstream direction. The shear force of friction of a person on the wet surface of the floodplain resists this force. However, even relatively low velocities of flow in the floodplain can pose possible flood hazards.

The force exerted by various flow velocities can be developed for different age and size groups, but because its effect is tied to depth, a better appreciation of velocity effects can be gained by looking at both depth and velocity in combination.

c) Combination of Depth and Velocity

As a guide for personnel involved in stream flow/depth monitoring, the simple "3 x 3 rule" was developed in the U.S. based on 3 ft depth and 3 ft/s velocity values. The rule suggests that people would be at risk if the product (multiple) of the velocity and the depth exceeded 0.8 m^2/s (9 ft^2/s). The Water Survey of Canada has the same rule of thumb and its Hydrometric Field Manual (1981) states, "a general rule of thumb which has been used in the past is arrived at through the product of the depth and velocity. Generally speaking, if the bed is firm and provides good footing, the product of these two factors should be slightly less than 1 m^2/s, or roughly 9 ft^2/s".

It should be noted that this rule of thumb applies to trained professionals whose regular work accustoms them to the dynamic forces of river flows, buoyant forces from partial submergence and recognition of potential hazards, e.g., rocks, depressions, etc. They also enter the stream with equipment which will assist them in maintaining stability, e.g., tag line, wading rod, strap-on cleats for greater stability.

It is considered highly unlikely that such equipment would be available to most occupants of floodproofed buildings in the flood plain. It seems equally unlikely that these occupants would have the same level of experience as water survey staff in dealing with high depths, current speeds, unsteady footing, or cold weather/water conditions.

As a result, it is likely that the simple rule of 3 x 3 product (1 m^2/s or 9 ft^2/s) represents an upper limit for adult male occupants in the flood plain and that it would be reasonable to consider something lower as being more representative of a safe upper limit for most flood plain occupants.

As noted earlier, any person on foot during a flood may be subject to a number of forces in the floodplain. Excluding impact by ice and/or other debris, these forces include:

- an upward buoyant force, equal to the weight of the fluid displaced;
- a lateral force exerted by the moving water (linear momentum); and,
- unbalanced hydrostatic forces.

Resisting these forces are:

- the shear force of friction acting through the weight of the person standing on a wet surface in the floodplain.

Adults of average size would fall into the range between 976 -1952 kg/m^2 (200 - 400 lb/ft^2) but young children would more appropriately fall into a range of 732 - 1464 kg/m^2 (150 - 300 lb/ft^2). Only 7% of Ontario's population is within the 6-10 year age range, i.e., young children (Statistics Canada, 1981).

The coefficient of friction between foot apparel and wet grass, gravel, bare soils, pavements or other wet surfaces under flood conditions is not well known. A standard table of friction coefficients suggests that friction factors in the order of 0.3 to 0.6 could be characteristics of the ratio of the force to body weight required to initiate movement over unlubricated, dry surfaces. It is assumed that a lower friction factor range would be representative of the same state for a person standing on wet grass or pavement under flood conditions.

Any flood plain situation giving velocity and depth conditions lower than the appropriate curve for that individual is one where that person would be in a stable condition in the flood plain. Conditions of velocity or depth exceeding the appropriate stability curve would be unstable conditions for the same individual.

It is also appropriate to note that this analysis is based on a person standing still in the flood plain. Once a person begins to move to install floodproofing measures or leave the flood-prone area, stability is reduced further.

At low velocity but depths greater than 0.9 - 1.2 m (3 - 4 ft), most individuals would become buoyant. Similarly, in areas where flood plain depths may be less than 0.3 m (1 ft) but where velocities exceed 1.5 - 1.8 m/s (5 - 6 ft/s) encountered on roadways or bridge crossings, for example, stability conditions would be exceeded and some individuals would be swept off their feet.

Although no product rule exactly defines this region, a reasonable approximation of the low-risk area can be made with a product rule that includes some constraints on the domain of depth and velocity. For example, a product depth and velocity less than or equal to 0.4 m^2/s (4 ft^2/s) defines the low-risk area providing that depth does not exceed 0.8 m (2.6 ft) and that the velocity does not exceed 1.7 m/s (5.5 ft/s). By contrast, in a situation where the depth and velocity are 1.1 m (3.5 ft) and 0.3 m/s (1 ft/s) respectively, the product is less than 0.4 m^2/s (4 ft^2/s) but the depth limit is exceeded. Hence, these conditions define a high-risk area for some individuals.

It is evident that this approximate classification is somewhat conservative; but until further research is undertaken, it provides a reasonable factor of safety for all individuals - young and old - who may be present in the floodplain.

2. Duration of Flood

The duration of a flood or the length of time a river overflows its banks, reaches its crest and recedes to within its banks depends on the efficiency of the river to transport the flood waters. Since the size of the watershed, time of concentration and duration of a flood affects the type of impact and pressure on the development, floodproofing measures must be designed to withstand these forces for the required period of time.

3. Rate of Rise and Fall

The rate of rise and fall of a flood to and from its crest can affect the type and extent of floodproofing. For example, where the rise and fall are very sudden, there may not be time to implement active floodproofing measures, such as watertight seals and doors and thus these approaches would be deemed unacceptable. The rate should also be considered in investigations of slope stability for certain types of soils where a quick drawdown of flood waters may pose problems.

4. Flood Warning System

The availability of advance warning can play an important role in determining the most appropriate measure. Where active floodproofing procedures are contemplated, lead time for implementation of appropriate protective measures and devices must be related to the amount of advance warning.

5. Structural Integrity

When buildings and structures are surrounded by flood waters, they cause unbalanced pressures and loadings on all wetted surfaces, which increase rapidly with depth. Unbalanced pressures can cause structural and sub-structural damages which can completely collapse or displace the development. In order to design the most appropriate floodproofing measures, it is important to determine the effect of stresses on the proposed building.

The stresses imposed on a building are due to hydrostatic, hydrodynamic and impact loadings, depending on its location. Hydrostatic loads are developed by water that is either still or moving at a low velocity. These loads may be defined as acting vertically downward (i.e., on floors), or vertically upward (i.e., uplift), or laterally when acting horizontally on walls. Hydrodynamic loads results from the flow of water against or around a structure at moderate or higher velocities. These loads are directly dependent on the velocity of flow, and can also adversely affect the floodproofing measures by causing erosion and scour. Impact loads are caused by water-borne objectives, debris and ice. Their effects become greater and more crucial as the velocity and weight of objects increase. Impact loads are difficult to predict and define accurately. However, a reasonable allowance can be made with the knowledge of the conditions of the site.

a) Superstructures (Above Ground)

Hydrostatic Loading Effects

Until the mid-1970s, it was assumed that standard design and construction practices - without modification - would be adequate to ensure that floodproofing by closures and seals could be conducted to moderate depth/ hydrostatic loading without threatening the structural integrity of the above ground/superstructure of most buildings. However, various research by the U.S. Corps of Engineers over the years, has suggested otherwise.

Studies on structures of conventional design have determined that:

- brick veneer, frame structures (such as a typical home) would resist hydrostatic loading up to about 0.8 m (2.5 ft) without damage;
- concrete block structures with limited or no reinforcement (such as the small warehouse building) displayed similar resistance characteristics and would not be damaged by hydrostatic loading up to 0.8 m (2.5 ft). Above this at 0.9 and 1.2 (3 and 4 ft) depths deflection and cracking became significant;
- solid brick structures responded in a similar manner. Tests with these also included end and side walls and walls with and without door openings. Walls with ceiling joists (with and without door openings) were found adequate to resist loadings to about 0.8 m (2.5 ft). Walls with ceiling joists provide much stronger, but failed explosively when 2 x 4 supports were snapped; and,
- poured concrete walls were not tested, but from experience with other structural designs it was presumed that conventional design techniques would prove adequate against hydrostatic loads to at least 0.9 (3 ft).

Therefore, 0.8 m (2.5 ft) would appear to be the upper limit of effective flood depth (static plus equivalent hydrodynamic head) which can be resisted by conventionally designed structures without affecting structural integrity.

Studies on structural integrity during flow conditions have also given an appreciation of the permeability of conventional structures, in that:

- brick structures of conventional design begin to leak almost immediately and badly, when in contact with flood waters; and,
- concrete block structures of conventional design also leak badly at a rate that exceeds that of brick structures.

Tests also conducted to determine if materials or surface coatings would enhance water tightness found:

- no clear sealants (e.g., epoxy) were completely effective;
- no asphaltic material was completely effective;
- embedded roofing felts with polyethylene sheeting laid between a second brick course were found effective - but exceptionally stringent quality control of workmanship was required (particularly at joints);
- flood shields/bulkheads also presented difficulties and were for the most part ineffective unless designed especially with gaskets, smooth surfaces and locking bolts; and,
- certain thick, non-tear materials can be used as external “wrappings” to effectively seal buildings against infiltration. These are very special materials and fall into the category of “active” measures vs “passive”, permanent measures.

In summary then:

- conventional designs are not water resistant/waterproof for even low depths of flooding;
- new structures should be designed from scratch for complete water tightness (or if not completely watertight must incorporate an internal system to collect and remove water seepage); and,
- new structures using conventional designs can be made watertight (without re-design) but the only proven approach so far uses external “wrapping”.

<u>Erosion</u>

Flow velocities which will cause erosion of grass covered slopes or erosion around foundations are difficult to determine. Factors such as type of cover, slope and soil conditions must be taken into account. For most common situations, the range lies between 0.8 m/s and 1.2 m/s (2.5 ft/s and 4 ft/s) for easily eroded soils and 1.1 m/s to 1.5 m/s (3.5 ft/s to 5 ft/s) for more erosion resistant soils.

<u>Impact Loading and Debris Accumulation</u>

This aspect of structural integrity has not been studied in the field because it is practically impossible to establish velocity/depth limits associated with loadings caused by debris accumulation and the impact of floating objects on the flood plain. The nature of debris accumulations and size and shape of floatables simply varies too significantly.

Ice, debris and other floating materials can result in significant impact loading on buildings within the flood plain or increase the loads on buildings as a result of blockage. Although these loads are difficult to estimate a reasonable allowance must be made in design. Sites where the potential for such loading is high should simply be avoided or buildings should be designed/ landscaped to intercept/deflect materials before the building is affected.

In cases where floodproofing is achieved by elevation on columns or piles, the clearing space between the columns or piles should measure perpendicular to the general direction of flood flow and should be adequately designed to minimize possible debris blockage. The open space created below the level of the flood standard should remain essentially free of more buoyant or hazardous materials.

b) Substructures/Basements (Below Ground)

Based on normal (conventional) construction methods, any hydrostatic head in excess of 0.2 m (0.7 ft) may result in damage to basement floors (i.e., the upward force of groundwater on the basement floor).

Even where the basement of a single storey brick or masonry structure has been structurally reinforced and/or made watertight, structural integrity or buoyancy may pose problems when groundwater (saturated soil) levels are 1.2 - 1.5 m (4 - 5 ft) above the level of the basement floor. Much depends on the duration of the flooding, type of soil and the presence/effectiveness of the drainage system.

6. Vehicular Access

Little or no information exists in the literature regarding ingress/egress criteria for vehicles.

The question of safety for the passage of vehicles can be subdivided into:

- flood depth and velocity considerations affecting egress of private vehicles from floodproofed areas; and,
- flood depth and velocity affecting access of private and emergency vehicles to floodproofed areas.

a) Private Vehicles

In general, water contact is one critical issue in terms of its effect on the ignition/electrical system and the exhaust system. In the former, the distributor and/or spark plugs are the main items of concerns and those which are typical problem areas for most motorists.

Private vehicles come in all shapes and sizes and it is practically impossible to identify “typical” vehicles for assessing the elevation of key electrical components from the road surface. It appears likely that a depth of about 0.4 m - 0.6 m (1.5 - 2 ft) would be sufficient to reach the distributor or plugs of most private vehicles. They would fail to start at this depth and hence vehicular egress will be halted. Cars may start at lower depths but then “splash” from driving on wet pavement or from the radiator fan would become a concern.

The issue of the exhaust system and the effect that flooding can play on engine back pressures/expulsion of exhaust gases appears to be the controlling factor. Difficulty would probably be experienced in starting most vehicles if the vehicle is standing in water at a depth that

covers the muffler. The vehicle may start and continue to run if it is quickly removed from the water but if remains at that depth, there is a strong possibility that it will fail soon after.
Again, it is practically impossible to generalize this depth but for most family automobiles something in the range of about 0.3 m - 0.4 m (1 - 1.5 ft) would be the maximum depth of flooding before potential egress problems would result.
A "typical" North American car would not be significantly affected by velocities up to about 4.5 m/s (15 ft/s) or more at flood depths at less than 0.3 m (1 ft). At running board depth or slightly above 0.3 m (1 ft) the maximum velocity for stability drops to about 3 m/s (10 ft/s) and at about 0.4 m (1.5 ft) depth an average vehicle may be displaced by velocities as low as 0.3 - 0.6 m/s (1 - 2 ft/s), with smaller vehicles becoming buoyant.

b) Emergency Vehicles

Emergency vehicles operate under the same constraints relating to the electrical/exhaust system. Most police vehicles and ambulances would be limited by exhaust considerations, although emergency vans are better equipped to avoid splash problems since the key electrical components are higher above the road surface.
Diesel fire vehicles with top exhausts appear best suited for flood conditions. Their road clearance is high and it is suggested that 0.9 m -1.2 m (3 - 4 ft) of flood depth would not present a problem. These vehicles are about 10 times heavier than most automobiles and hence are resistant to displacement by higher velocity flood flows. Operations at velocities in excess of 4.5 m (15 ft/s) would probably not pose a problem when these vehicles are moving over a good/non-eroding base.

7. Portable or Mobile Buildings and Structures

A portable or mobile building is one that is not permanently tied or anchored to a foundation and can be transported by means of a hauler. Portable or mobile buildings can be located on individual sites or in a park or subdivision. They can be used for temporary purposes, such as for construction crews or as full-time residences/seasonal homes with overnight occupancy.
When located in flood plains, portable or mobile buildings are highly susceptible to flood damage. Since they are not affixed to a permanent foundation, flood waters may easily sweep such buildings off their sites. Without advance warning, residents can be entrapped in the building. In addition, portable or mobile buildings can increase the flood hazard as they collide with other structures or block bridge openings or culverts. Despite this, portable or mobile buildings often are located in flood plains because:

- flood plain land acquisition costs may be lower;
- swamp conditions and higher water table which prevail in flood plain areas may preclude construction of permanent homes with basements; and/or,

potential recreational access by locating close to the water's edge.
Ideally, portable or mobile buildings should not be located in the flood plain. However, when located in the flood fringe, they should be properly floodproofed to the flood standard, in order to prevent flotation, collapse and lateral movement. Due to the inherent hazard of remaining in a mobile building

during a flood, contingency plans indicating escape routes and alternative vehicular access ways should be prepared.

Where the portable or mobile building is on site temporarily, it may not be feasible to meet all the requirements for floodproofing. In such cases, temporary location of portable and mobile buildings in the flood fringe may be considered where the time frame is very short and sufficient flood warning would allow the structure to be hauled away in advance of the flood.

8. Floodproofing Complexity

The complexity of floodproofing techniques (and to a degree the cost) is best related to depth and type of floodproofing considered.

a) Closures and Seals

It appears that external walls can be floodproofed by closures and seals to a flood depth of about 0.8 m (2.5 ft). Beyond this depth, structural integrity is threatened and special reinforcing or revised designs (with poured concrete walls for example) are required.

Dry floodproofing to this depth can be completed with the use of impervious external "wrappings". These contingency wrappings are anchored beneath the ground surface along the foundation and rolled upward and hung into place along the walls of building prior to flooding.

Equivalent dry floodproofing using internal sealants, doubled walls, etc. with flood shields at openings is more complex, expensive and uncertain as to effectiveness.

Basements can be closed and sealed to levels of about 1.2 - 1.5 m (4 - 5 ft) above the floor slab with poured concrete designs employing additional reinforcement and special attention to monolithic construction. Beyond this level, the procedure becomes complicated as buoyancy/uplift must be addressed through anchors and/or added wall and slab thickness.

Overall, closures and seals are fraught with possible problems and are considerably more complicated than other floodproofing approaches.

b) Elevated structures

<u>Structures on Fill</u>

Floodproofing on fill is generally considered for slab on grade construction. It is not a complex procedure and conventional building techniques are employed once the pad is down. The principal concern is fill compaction which must usually be done in 0.2 - 0.3 m (0.5 - 1 ft) lifts. Beyond 0.6-0.9 m (2 - 3 ft). however, pad sizes increase, compaction requirements become more important and an engineer or soils consultant should be employed for design review and inspection. Increased elevation may also lead to requirements for pad sizes in excess of lot size and, hence, additional requirements for erosion protection, etc.

Houses with conventional basements can also be placed in fill to elevate the first floor to a level about 2.1 - 2.4 m (7 - 8 ft) above grade (i.e., the basement is founded on grade and the basement walls are surrounded by fill). At 1.2 - 1.5 m (4 - 5 ft) above grade, the procedure is complicated by the need for wall and slab reinforcement, and anchors to prevent buoyancy.

Elevation on Columns, Piles, Piers and Extended Foundation Walls

Elevated structures using these techniques must be designed with consideration for debris loading, orientation of supports, effective submergence on foundation soil conditions and anchorage, bracing and connection details, availability of mechanical equipment, etc. In most instances, an engineer should be consulted to ensure that the possible effects of flooding are considered in the design. There are more factors to consider than conventional house construction on fill and, hence, these approaches could be considered more complex.

The majority of elevated buildings use posts for support (steel or timber). Installation becomes more complex at lengths in the range of 3.6 - 4.8 m (12 - 16 ft) since machinery is needed for installation. A range of 3 - 3.6 m (10 - 12 ft) seems typical for most homes which use extended posts.

Mechanically-driven piles are reported to be the best solution if severe erosion is anticipated. Pile driving equipment and skilled operators are at a premium and, because of the initial expense, this technique may be too complex/unnecessary for flood depths less than 1.5 - 1.8 m (5 - 6 ft).

Piers/columns are generally constructed with brick, concrete block or poured concrete. The common elevation range for each of these approaches is as follows, beyond which increasing complexity is assumed:

- 0.4 - 1.8 m (1.5 - 6 ft) for brick piers;
- 0.4 - 2.4 m 91.5 - 8 ft) for reinforced concrete masonry piers; and,
- 0.4 - 3.6 m (1.5 - 12 ft) (or more) for poured in place, reinforced concrete piers.

Extended foundation walls make a relatively simple and effective foundation for elevated structures but again must be designed with consideration for loads and pressures anticipated in the flood plain.

Berms and Floodwalls

Berms (or levees) and floodwalls used for floodproofing are low structures built around single homes or individual industrial complexes. Property design is more complex since material and construction practices must be closely monitored, they must be regularly maintained (in the case of berms), and they usually require adequate pumping facilities to handle interior drainage and seepage. Both berms and floodwalls usually have some opening for access and consideration must be given to closure.

In many instances, berms and floodwalls should be designed by qualified professional engineers.

Intentionally Flooding a Building (Wet Floodproofing)

Intentionally flooding a building for the purpose of balancing internal and external pressures so as to maintain structural integrity is in itself not complex. To ensure minimal damage and quick clean up, a number of conditions have been placed on the use of wet floodproofing by agencies such as Canada Mortgage and Housing Corporation. Requirements include:

- at least two open able windows located on opposite sides of the building;
- tops of window sills to be not less than 150 mm below grade (to allow flood water into the basement);
- basements to remain unfurnished and contain non-habitable space only;

- mechanical and electrical equipment, heating units and duct work to be located above the flood standard; and,
- sump pump required.
  While wet floodproofing may be designed and provided for in a building, there is no guarantee over time that the requirements will be maintained. In particular, it is difficult to control the "finishing off" of basements which would then result in damages when wet floodproofing measures were put into effect. Therefore, while wet floodproofing may appear desirable initially, the ability to ensure the principles and requirements of wet floodproofing are maintained in the future must also be considered.

Above taken from Appendix 6: Floodproofing of Technical Guide – River & Stream Systems: Flooding Hazard Limit (MNRF, 2002).

Mattagami Region Conservation Authority

WATERSHED REGULATION O.REG 41/24 POLICY MANUAL

APPENDIX D—Erosion and Sediment Control

GENERAL GUIDELINES

Erosion and sediment control measures are to be utilized on sites where there is the potential for sediment to leave a property during or after site development, and to affect natural heritage features and areas, hazardous lands, and/or water quality.

Sediment control measures (such as sediment fencing or straw bales) are to be installed in accordance with the applicable Ontario Provincial Standards Drawings (OPSDs) around all areas that will be disturbed prior to the commencement of site disturbance, inspected for proper function on a continual (daily) basis by the site contractor, and remain in place until after the area has been stabilized.

a) Sediment fencing is to be keyed into the existing ground and be supported by stakes at regular intervals, in a manner that is consistent with the manufacturer's guidelines and/or recognized design standards.
b) Sediment fencing is not to be used to create check dams in swales.
c) Straw bales, whether used as an upland barrier or to form a swale check dam, are to be butted against one another, and fitted to the existing ground, so as to capture sediment, in a manner that is consistent with recognized design standards.
d) Sediment capture devices should be used in existing catch basins.

Erosion control measures (such as rip-rap stone underlain by geotextile fabric, erosion blankets, or hydroseeding) are to be installed in accordance with applicable Ontario Provincial Standards Drawings (OPSDs) on an interim or permanent basis, as appropriate, where there is a potential for erosion, such as on a disturbed slope, or in a constructed swale.

FOR MORE INFORMATION

Please contact the Mattagami Region Conservation Authority at 705-360-2660 or info@mattagamiregion.ca or visit our website at www.mattagamiregion.ca

Mattagami Region Conservation Authority

APPENDIX E—Hearing Guidelines

Amended 2020 re: Electronic Hearings
Amended 2021 re: 28.0.1(7) Hearings
Adopted 2025 by MRCA Board of Directors

January 27, 2025

Conservation ONTARIO
Natural Champions

ONTARIO

Ministry of Northern Development, Mines, Natural Resources and Forestry
Ministère du Développement du Nord, des Mines, des Richesses naturelles et des Forets

SECTION 28
CONSERVATION AUTHORITIES ACT
MODEL HEARING GUIDELINES

October 2005, Amended 2018, 2020, 2021

Summary of Revisions

Revision No.	Date	Comments	Approval Authority
0	October, 2005	Guidelines prepared as an update to the October 1992 hearing guidelines.	Ministry of Natural Resources and Forestry Conservation Ontario Council
1	May, 2018	Housekeeping amendments made reflecting changes to appeal process as a result of the *Building Better Communities and Conserving Watersheds Act*, 2017 and subsequent Order in Council. Note: changes to appeal process are no longer valid.	Conservation Ontario Staff
2	September, 2020	Amendments made to incorporate the use of electronic hearings.	Conservation Ontario Council
3	September, 2021	Amendments made to incorporate hearings under 28.0.1 and update references to Ontario Land Tribunal (OLT).	Conservation Ontario Council
4	February 5, 2025	Guidelines updated	MRCA Board Resolution #

August 23, 2021

Re: Interim Update to the CONSERVATION AUTHORITIES ACT HEARING GUIDELINES

With the passage of Bill 229, *Protect, Support and Recover from COVID-19 Act* (Budget Measures), 2020, a new section of the *Conservation Authorities Act* came into force. Section 28.0.1 (Permission for development, zoning order) applies to applications for permission submitted to an Authority where a zoning order has been made by the Minister of Municipal Affairs and Housing authorizing the proposed development project. While the Act outlines that the Authority must issue these permissions, an Authority has the ability to attach conditions to the permission. In the case of these applications for permission, applicants must be given the opportunity for a hearing before the Authority, prior to conditions being attached. As such, hearings under section 28.0.1 of the Act differ from those under section 28, in that the intent of the hearing is not to determine whether or not to issue a permission, but rather, to finalize the conditions of a permission. The purpose of the interim update to the Hearing Guidelines is to incorporate direction for hearings under section 28.0.1 of the *Conservation Authorities Act* through a new Attachment.

Further, with the passage of Bill 245, *Accelerating Access to Justice Act*, 2021, on June 1st, 2021 the Local Planning Appeal Tribunal, Environmental Review Tribunal, Board of Negotiation, Conservation Review Board and Mining and Lands Tribunal were merged into a new single tribunal called the Ontario Land Tribunal (OLT). Amendments have been throughout the Hearing Guidelines to update references to the Mining and Lands Tribunal to now reference the Ontario Land Tribunal.

Sincerely,

Leslie Rich
Policy and Planning Liaison
Conservation Ontario

September 14, 2020

Re: Interim Update to the SECTION 28 (3) CONSERVATION AUTHORITIES ACT HEARING GUIDELINES

The corona virus disease (COVID-19) was declared a pandemic by the World Health Organization on March 11, 2020. During the Provincial state of emergency as a result of the COVID-19 virus, the Provincial government enacted Order in Council 73/20 under s. 7.1 of the *Emergency Management and Civil Protection Act.* While that order was enacted, Provincial limitation periods and procedural time periods were under suspension between March 16, 2020 and September 14th.

With the suspension on limitation periods being revoked as of September 14th and the need for continued social distancing, conservation authorities require alternate means to provide hearings under Section 28 of the *Conservation Authorities Act.* The purpose of this interim update to the Section 28 Hearing Guidelines is to incorporate the use of electronic hearings. The update to the Hearing Guidelines is complementary to an update to the "Conservation Authority Best Management Practices (BMPs) and Administrative By-Law Model" to incorporate electronic Board meetings.

As a reminder, the decision by the Provincial government to enact Order in Council 73/20 under s. 7.1 of the *Emergency Management and Civil Protection Act* will impact the scheduling of CA Hearings under Section 28 as well as the requirement for an applicant to file an appeal with the Mining and Lands Tribunal within 30 days. For any hearings that took place between March 16th and September 14th, 2020 the person who has been refused permission or who objects to conditions imposed on a permission will have 30 days after September 14th to file an appeal to the Mining and Lands Tribunal. For those CAs who have postponed hearings during the emergency period, they should be scheduled as soon as practical, keeping in mind that Administrative By-Laws and Hearing Guidelines may need to be amended to incorporate electronic meetings.

Amendments have been made throughout this document to incorporate electronic hearings. Conservation authorities are advised to review their internal Hearing Procedures to incorporate this update.

Sincerely,

Leslie Rich
Policy and Planning Liaison
Conservation Ontario

May, 2018

Re: Interim Update to the SECTION 28 (3) CONSERVATION AUTHORITIES ACT HEARING GUIDELINES

Note: with the passage of Bill 245 (see memo dated September, 2021) this memo is out of date.

Subsection 28(15) of the *Conservation Authorities Act* provides that a person who has been refused permission or who objects to conditions imposed on a permission may, within 30 days of receiving the reasons may appeal to the Minister of Natural Resources and Forestry. Further to the passage of the *Building Better Communities and Conserving Watersheds Act*, 2017 effective April 3, 2018 this appeal has been assigned to the Mining and Lands Tribunal through Order in Council 332/2018. The Mining and Lands Tribunal is now a part of the Environment and Land Tribunal Cluster (ELTO) of the Ministry of the Attorney General.

By law, the appeal made under subsection 28(15) should be filed directly with the Mining and Lands Tribunal. A copy of the appeal letter to the Minister of Natural Resources and Forestry is unnecessary and can be treated as optional. Conservation authorities should notify appellants that they must file their appeals with the Tribunal within 30 days of their receipt of notice. An appeal may be invalidated if it is not filed with the proper office within that time period. The appellants should also be instructed to copy the conservation authority in their appeal letter.

Further to this updated information, an amendment has been made to **Appendix D "Notice of Decision – Model"** to incorporate the revised contact information for the appeal. Conservation authorities are advised to review their internal Hearing Procedures to incorporate this update. It is anticipated that this "Interim Update to the Section 28(3) Conservation Authorities Act Hearing Guidelines" will provide guidance to conservation authorities related to Section 28 hearings until such time as a new Section 28 regulation is created by the province.

Sincerely,

Leslie Rich
Policy and Planning Liaison
Conservation Ontario

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1.0 Purpose

The purpose of the Hearing Guidelines is to provide model hearing guidelines to be adopted by conservation authorities in respect to hearings under the *Conservation Authorities Act.*

The *Conservation Authorities Act* requires that the applicant be provided with an opportunity for a hearing by the Hearing Committee, for an application to be refused or approved with contentious conditions. Further, a permit may be refused if in the opinion of the Committee the proposal adversely affects the control of flooding, erosion, dynamic beaches, pollution or the conservation of land. Development is further prohibited in or on areas within the jurisdiction of the Authority as outlined in Ontario Regulation 41/24. The Hearing Committee is empowered by law to make a decision, governed by the *Statutory Powers Procedures Act*.

The Hearing Rules are adopted under the authority of Section 25.1 of the *Statutory Powers Procedures Act* (SPPA). The SPPA applies to the exercise of a statutory power of decision where there is a requirement to hold or to afford the parties to the proceeding an opportunity for a hearing before making a decision. The SPPA sets out minimum procedural requirements governing such hearings and provides rule-making authority for to establish rules to govern such proceedings.

The Hearing Committee shall hear and decide whether the application will be approved with or without conditions or refused. In the case of hearings related to applications submitted purposed to Section 28.0.1, the Hearing Committee shall determine what conditions, if any, will be attached to the permission. See Attachment 1 for further details.

These guidelines have been prepared as an update to the October 1992 hearing guidelines and are intended to provide a step-by-step process to conducting hearings required under Section 28 (12), (13), (14) of the *Conservation Authorities Act*. Similar to the 1992 guidelines, it is hoped that the guidelines will promote the necessary consistency across the Province and ensure that hearings meet the legal requirements of the *Statutory Powers Procedures Act* without being unduly legalistic or intimidating to the participants. Additional considerations have been included related to hearings under Section 28.0.1 (7) in Attachment 1.

2.0 Pre-Hearing Procedures

2.1 Role of the Hearing Committee

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

a) No member of the Authority taking part in the hearing should have prior involvement with the application that could lead to a reasonable apprehension of bias on the part of that member. Where a member has a personal interest, the test is whether a reasonably well-informed person would consider that the interest might have an influence on the exercise of the official's public duty. Where a member is a municipal councilor, the *Municipal Conflict of Interest Act* applies. In the case of a previously expressed opinion, the test is that of an open mind, i.e. is the member capable of persuasion in participating in the decision making.
b) If material relating to the merits of an application that is the subject of a hearing is distributed to Committee members before the hearing, the material shall be distributed to the applicant at the same time. The applicant may be afforded an opportunity to distribute similar pre-hearing material.

These materials can be distributed electronically.

c) The applicant will be given an opportunity to attend the hearing before a decision is made; however, the applicant does not have to be present for a decision to be made.

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

2.2 Liability

Each Hearing Committee Member must uphold his/her responsibilities with regard to legislation and established policies. Members have a responsibility under Section 28 of the *Conservation Authorities Act* to provide hearings regarding applications for development. Members must be aware if they choose not to uphold the *Conservation Authorities Act*, Ontario Regulation 319/09, and/or the established Authority Policies that there are potential liabilities, both personal & corporate.

2.3 Application

The right to a hearing arises where staff is recommending refusal of an application or is recommending conditions to the approval of an application. The applicant is entitled to reasonable notice of the hearing pursuant to the *Statutory Powers Procedures Act*.

2.4 Notice of Hearing

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

The Notice of Hearing must contain or append the following:

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

2. The time, place and the purpose of the hearing, OR for Electronic Hearings: the time, purpose of the hearing, and details about the manner in which the hearing will be held.

Note: for electronic hearings the Notice must also contain a statement that the applicant should notify the Authority if they believe holding the hearing electronically is likely to cause them significant prejudice. The Authority shall assume the applicant has no objection to the electronic hearing if no such notification is received.

3. Particulars to identify the applicant, property and the nature of the application which are the subject of the hearing;

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

4. The reasons for the proposed refusal or conditions of approval shall be specifically stated. This should contain sufficient detail to enable the applicant to understand the issues so he or she can be adequately prepared for the hearing. It is sufficient to reference in the Notice of Hearing that the recommendation for refusal is based on the reasons outlined in previous correspondence or a hearing report that will follow;

5. A statement notifying the applicant that the hearing may proceed in the applicant's absence and that the applicant will not be entitled to any further notice of the proceedings. Except in extreme circumstances, it is recommended that the hearing not proceed in the absence of the applicant;

6. Reminder that the applicant is entitled to be represented at the hearing by a representative such as legal counsel, if desired. The conservation authority may be represented at the hearing by counsel or staff.

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

2.5 Pre-submission of Reports

There is to be full disclosure from both parties prior to the hearing.

The applicant shall be given two weeks to prepare a report once the reasons for the staff recommendation have been received. Conservation authority staff and the applicant/agent shall exchange written reports no later than two weeks prior to the hearing. Subsequently, this may affect the timing and scheduling of the hearing. If such information is not received two weeks prior to the meeting date, the hearing will be rescheduled to occur at the next scheduled meeting date.

2.6 Hearing Information

The 'Hearing Guidelines' Policy must be distributed to the applicant/agent with the 'Notice/Request for Hearing'.

3.0 General Hearing Information

3.1 Public Hearing

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

3.2 Hearing Participants

The *Conservation Authorities Act* does not provide for third party status at the hearing. The hearing however is open to the public. Any information provided by third parties should be incorporated within the presentation of information by, or on behalf of, the applicant or the Authority staff as appropriate.

3.3 Attendance of Hearing Committee Members

In accordance with case law relating to the conduct of hearings, those members of the Authority who will decide whether to grant or refuse the application must be present during the full course of the hearing. If it is necessary for a member to leave, the remaining members can continue with the hearing and render a decision.

3.4 Adjournments

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

3.5 Orders and Directions

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

3.6 Information Presented at Hearings

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

2) The Committee must only deal with the development proposal as submitted. It is not the place of the Committee to suggest alternative development methods or possible compromises;

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

4) The Committee may authorize receiving a copy rather than the original document. However, the Committee can request certified copies of the document if required;

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

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

4.0 Conduct of Hearing

4.1 Record of Attending Hearing Committee Members

A record shall be made of the members of the Committee.

4.2 Opening Remarks

The Chairperson shall convene the hearing with opening remarks which generally identify the applicant, the nature of the application, the property location, outline the hearing procedures, and advise on requirements of the *Canada Evidence Act*. Please reference Appendix F for the Opening Remarks model. In an electronic hearing, all the parties and members of the Hearing Committee must be able to clearly hear one another and any witnesses throughout the hearing.

4.3 Presentation of the Regulations Officer's Information

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

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

The Staff member presenting may call on additional staff members to speak to specific concerns (i.e., ecology, hydrology).

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

4.4 Presentation of Applicant Information

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

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

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

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

4.5 Questions

Members of the Hearing Committee may direct questions to each speaker as the information is being

heard. The applicant and /or agent can make any comments or questions on the Regulations Officer's report.

Pursuant to the *Statutory Powers Procedure Act*, the Committee can limit questioning where it is satisfied that there has been full and fair disclosure of the facts presented. Please note that the courts have been particularly sensitive to the issue of limiting questions and there is a tendency to allow limiting of questions only where it has clearly gone beyond reasonable or proper bounds.

4.6 Deliberation

After all the information is presented, the Committee may adjourn the hearing and retire in private to confer. The Committee may reconvene on the same date or at some later date to advise of their decision. The Committee members shall not discuss the hearing with others prior to the decision of the Committee being finalized.

5.0 Decision

The applicant must receive written notice of the decision. The applicant shall be informed of the right to appeal the decision within 30 days upon receipt of the written decision to the Ontario Land Tribunal.

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

5.1 Notice of Decision

The decision notice should include the following information:

1. The identification of the applicant, property and the nature of the application that was the subject of the hearing;

2. The decision to refuse or approve the application. A copy of the Hearing Committee resolution should be attached.

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

5.2 Adoption

A resolution advising of the Committee's decision and particulars of the decision should be adopted and a motion recorded.

6.0 Record

The Authority shall compile a written record of the hearing. In the event of an appeal, a copy of the record should be forwarded to the Ontario Land Tribunal. The record must include the following:

1. The application for the permit;

2. The Notice of Hearing;

3. Any orders made by the Committee (i.e., for adjournments);

4. All information received by the Committee;

5. Attendance of hearing Committee members;

6. The decision and reasons for decision of the Committee;

7. The Notice of Decision sent to the applicant.

Attachment 1:
Hearings under Section 28.0.1 of the *Conservation Authorities Act*
(Permission for Development, Zoning Order)

Section 28.0.1 of the *Conservation Authorities Act* came into force with the Royal Assent of Bill 229, *Protect, Support and Recover from COVID-19 Act* (Budget Measures), 2020. This section applies to any application submitted to an authority under a regulation made under Section 28 of the Act for permission to carry out all or part of a development project associated with an approved Minister's Zoning Order (MZO). For such applications, an Authority **must** grant permission to the applicant to carry out the activity, provided an MZO has been made by the Minister of Municipal Affairs and Housing, and provided that the authority's regulated area in which the development activity is proposed to take place is not located in the Greenbelt Area designated under section 2 of the *Greenbelt Act*. A permission which is granted under s.28.0.1 may be subject to conditions as prescribed by the issuing Authority.

Understanding that an Authority **must** grant permission for applications submitted pursuant to an approved MZO (pending the above-noted conditions are met), hearings for these applications differ from those under Section 28(12) of the Act, in that a hearing **cannot** be held to determine if a permission should be refused. The Authority may refuse to grant a permit only if i) a zoning order has not been made to authorize the development project, ii) the project is proposed to be carried out in the Greenbelt Area, and iii) if all other prescribed requirements have not been satisfied. Per s.28.0.1 (7) of the Act, the applicant for a permission will be given the opportunity to be heard by the Authority prior to any conditions being attached to the granted permission.

The following table is intended to provide a step-by-step process to conducting hearings required under Section 28.0.1 (7) of the *Conservation Authorities Act*. It is recognized that much of the guidance provided in the body of the Section 28 Hearing Guidelines will be applicable to the s. 28.0.1 (7) hearing process. Where processes differ, the table outlines the necessary considerations for the s. 28.0.1 (7) processes. Where the processes are the same, the table refers to the appropriate sections of the Section 28(3) hearing guidelines.

Sections of the Section 28 *Conservation Authorities Act* Hearing Guidelines	Specific Guidance and/or Processes for 28.0.1 (7)
1.0 Purpose of Hearing Guidelines	The purpose of the Hearing Guidelines is to provide model hearing guidelines to be adopted by conservation authorities in respect to hearings under the *Conservation Authorities Act.* The *Conservation Authorities Act* requires that the applicant be provided with an opportunity for a hearing by the local Conservation Authority Board, or Executive Committee (sitting as a Hearing Committee) as the case may be, for an application to be refused or approved with contentious conditions. In the case of hearings related to applications submitted pursuant to s. 28.0.1 of the *Conservation Authorities Act*, the Authority must grant permission to the applicant, provided the requirements set out under this section are met. In this scenario, a hearing will only be held to determine conditions which will be attached to a permission. Further, a permit may be refused if in the opinion of the Authority the proposal adversely affects the control of flooding, pollution or conservation of land, and additional erosion and dynamic beaches. In the case of applications submitted pursuant to s. 28.0.1 of the *Conservation Authorities Act*, the Authority may refuse to grant a permit only if i) a zoning order has not been made to authorize the development project, ii) the project is proposed to be carried out in the Greenbelt Area, and iii) if all other prescribed requirements have not been satisfied. The Hearing Committee is empowered by law to make a decision, governed by the *Statutory Powers Procedures Act*.

	The Hearing Rules are adopted under the authority of Section 25.1 of the *Statutory Powers Procedures Act* (SPPA). The SPPA applies to the exercise of a statutory power of decision where there is a requirement to hold or to afford the parties to the proceeding an opportunity for a hearing before making a decision. The SPPA sets out minimum procedural requirements governing such hearings and provides rule-making authority for to establish rules to govern such proceedings. The Hearing Committee shall hear and decide whether the application will be approved with or without conditions or refused. In the case of hearings related to applications submitted purposed to Section 28.0.1, the Hearing Committee shall determine what conditions, if any, will be attached to the permission. See Attachment 1 for further details. These guidelines have been prepared as an update to the October 1992 hearing guidelines and are intended to provide a step-by-step process to conducting hearings required under Section 28 (12), (13), (14) of the *Conservation Authorities Act*. Similar to the 1992 guidelines, it is hoped that the guidelines will promote the necessary consistency across the Province and ensure that hearings meet the legal requirements of the *Statutory Powers Procedures Act* without being unduly legalistic or intimidating to the participants. Additional considerations have been included related to hearings under Section 28.0.1 (7) in Attachment 1.
2.0 Prehearing Procedures	Not applicable to S.28.0.1(7) hearings
2.1 Apprehension of Bias	In considering the application, the Hearing Committee is acting as a decision-making tribunal. The tribunal is to act fairly. Under general principles of administrative law relating to the duty of fairness, the tribunal is obliged not only to avoid any bias but also to avoid the appearance or reasonable apprehension of bias. The following are three examples of steps to be taken to avoid apprehension of bias where it is likely to arise. (a) No member of the Authority taking part in the hearing should have prior involvement with the application that could lead to a reasonable apprehension of bias on the part of that member. Where a member has a personal interest, the test is whether a reasonably well-informed person would consider that the interest might have an influence on the exercise of the official's public duty. Where a member is a municipal councillor, the *Municipal Conflict of Interest Act* applies. In the case of a previously expressed opinion, the test is that of an open mind, i.e., is the member capable of persuasion in participating in the decision making. (b) If material relating to the merits of an application that is the subject of a hearing is distributed to Committee members before the hearing, the material shall be distributed to the applicant at the same time. The applicant may be afforded an opportunity to distribute similar pre-hearing material. These materials can be distributed electronically. (c) The applicant will be given an opportunity to attend the hearing before a decision is made; however, the applicant does not have to be present for a decision to be made.

	(d) Where a hearing is required for applications submitted pursuant to s. 28.0.1 of the *Conservation Authorities Act* (e.g., to determine the conditions of the permission), final decisions on the conditions shall not be made until such a time as the applicant has been given the opportunity to attend a hearing. Individual Conservation Authorities shall develop a document outlining their own practices and procedures relating to the review and reporting of Section 28 applications, including the role of staff, the applicant and the Authority or Executive Committee as well as, the procedures for the hearing itself. Such policy and procedures manual shall be available to the members of the public upon request and on the Authority's website. These procedures shall have regard for the above information and should be approved by the Conservation Authority Board of Directors.
2.2 Application	The right to a hearing arises where staff is recommending refusal of an application or is recommending conditions to the approval of an application. Additionally, in the case of applications submitted pursuant to s. 28.0.1 of the *CA Act*, the authority shall not attach conditions to a permission unless the applicant has been given an opportunity to be heard by the authority. The applicant is entitled to reasonable notice of the hearing pursuant to the *Statutory Powers Procedures Act*.
2.4 Notice of Hearing	*Refer to Section 2.4*
2.5 Pre-submission of Reports	*Refer to Section 2.5*
3.0 Hearing	Not applicable to S.28.0.1(7) hearings
3.1 Public Hearing	*Refer to Section 3.1*
3.2 Hearing participants	*Refer to Section 3.2*
3.3 Attendance of Hearing Committee Members	*Refer to Section 3.3*
3.4 Adjournments	*Refer to Section 3.4*
3.5 Orders and Directions	*Refer to Section 3.5*
3.6 Information Presented at Hearings	*Refer to Section 3.6*
3.7 Conduct of Hearing	N/A
4.1 Record of Attending Hearing Committee Members	*Refer to Section 4.1*
4.2 Opening Remarks	*Refer to Section 4.2*
4.3 Presentation of Authority Staff Information	*Refer to Section 4.3*
4.4 Presentation of Applicant Information	*Refer to Section 4.4*

4.5 Questions	*Refer to Section 4.5*
4.6 Deliberation	*Refer to Section 4.6*
5.0 Decision	*Refer to Section 5.0*
5.0 Notice of Decision	The decision notice should include the following information: (a) The identification of the applicant, property and the nature of the application that was the subject of the hearing. (b) The decision to refuse or approve the application, and in the case of applications under s. 28.0.1 of the *CA Act*, the decision to approve the application with or without conditions. A copy of the Hearing Committee resolution should be attached. It is recommended that the written Notice of Decision be forwarded to the applicant by registered mail. A sample Notice of Decision and cover letter has been included as **Appendix E**.
5.2 Adoption	*Refer to section 5.2*
6.0 Record	*Refer to Section 6.0*
Appendix D	A new Appendix D has been prepared which provides an example "Notice of Hearing" for hearings under Section 28.0.1 (7) of the *Conservation Authorities Act.*
Appendix F	A new Appendix F has been prepared which provides an example "Chairpersons Remarks" for hearings under Section 28.0.1 (7) of the *Conservation Authorities Act.*

APPENDIX A - HEARING PROCEDURES

1. Motion to sit as a Hearing Committee.

2. Roll call followed by the Chairperson's opening remarks. For electronic hearings, the Chairperson shall ensure that all parties and the Hearing Committee are able to clearly hear one another and any witnesses throughout the hearing.

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

4. Staff will ask each Committee Member if there is any potential conflict of interest, which includes corresponding with the proponent prior to the hearing. If so, that member must declare a conflict as per Section 2.1 of the Hearing Guidelines.

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

6. Staff will present their report included in the agenda.

7. The applicant and/or their agent will present their material.

8. Staff and/or the conservation authority's agent may question the applicant and/or their agent if reasonably required for a full and fair disclosure of matters presented at the hearing[1].

9. The applicant and/or their agent may question the conservation authority staff and/or their agent if reasonably required for a full and fair disclosure of matters presented at the hearing[2].

10. The Hearing is open to the public; however, the Committee will only allow those directly involved to participate.

11. The Committee will question, if necessary, both the staff the applicant/agent.

12. The Committee will move into deliberation. For electronic hearings, the Committee will separate from the other participants.

13. Members of the Committee will move and second a motion.

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

15. The Committee will move out of deliberation. For electronic meetings, the Hearing Committee will reconvene with other participants.

16. The Chairperson or Acting Chairperson of the Committee will advise the staff and the applicant/agent of the Committee's decision.

17. If decision is "to refuse" or "approve with conditions", the Chairperson or Acting Chairperson shall notify the owner/applicant of his/her right to appeal the decision within 30 days to the Ontario Land Tribunals.

18. Motion to move out of Hearing Committee.

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[1] As per the *Statutory Powers Procedures Act* a tribunal may reasonably limit further examination or cross-examination of a witness where it is satisfied that the examination or cross-examination has been sufficient to disclose fully and fairly all matters relevant to the issues in the proceeding.
[2] See footnote #1.

APPENDIX B - REQUEST FOR HEARING

Request for a Hearing under Ontario Regulation 41/24 Prohibited Activities, Exemptions and Permits in Accordance of Section 28(12) of the *Conservation Authorities Act*

Date: *T.B.D.*

Time: *T.B.D.*

Location: Mattagami Region Conservation Authority, 100 Lakeshore Road, Timmins, ON P4N 8R5

Purpose: To hold a hearing concerning the granting or refusal of a Permit Application *REGXX-XXXX* for *the XX* within *the XX.*

I, _____ request a hearing as described above.
Property Owner, Counsel or Agent

I, _____ will be present at the hearing.
Property Owner, Counsel or Agent

I, _____ request a hearing as described above,
Property Owner, Counsel or Agent
but wish it to proceed in my absence.

Enclosed you find a copy of the Mattagami Region Conservation Authority “Hearings Guidelines” which will outline for you the hearing process and your duties & timeline for providing your written report prior to the hearing. In order to complete a fair & structured hearing, please make yourself familiar with this document and the process.

Please complete this form and return it to this office by *XX.* A formal Notice of Hearing will not be issued until your fee has been processed.

Dated the *XX.*

APPENDIX C - NOTICE OF HEARING

NOTICE OF HEARING

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

AND IN THE MATTER OF an application by *XX*

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

TAKE NOTICE THAT a Hearing before the Hearing Committee of the Conservation Authority will be held under Section 28, Subsection 12 of the *Conservation Authorities Act* at the offices of the Mattagami Region Conservation Authority, 100 Lakeshore Road, Timmins, ON P4N 8R5, at the hour of *T.B.D. , on the day of , XXXX*, *[for electronic hearings, include details about the manner in which the hearing will be held]* with respect to the application by *XX* to permit development within an area regulated by the Authority in order to ensure no adverse effect on *(the control of flooding, erosion, dynamic beaches or pollution or conservation of land/alter or interfere with a watercourse, shoreline or wetland) on Lot, Plan/Lot, Concession, (Street) in the City of , Regional Municipality of, River Watershed.*

TAKE NOTICE THAT you are invited to make a delegation and submit supporting written material to the Executive Committee for the meeting of *(meeting number*). If you intend to appear, *[for electronic hearings: of if you believe holding the hearing electronically is likely to cause significant prejudice],* please contact *(name)*. Written material will be required by *(date),* to enable the Committee members to review the material prior to the meeting.

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

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

DATED *the ___ day of, _____202X*

Staff Member
Position

Per:
General Manager

APPENDIX D - NOTICE OF HEARING

NOTICE OF HEARING
(Subsection 28.0.1(7) of the *Conservation Authorities Act*)

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

AND IN THE MATTER OF an application by *XX*

FOR THE PERMISSION OF THE CONSERVATION AUTHORITY
Pursuant to Regulations made under Section 28.0.1, Subsection 7 of the said Act

TAKE NOTICE THAT a Hearing before the Hearing Committee of the Conservation Authority will be held under Section 28.0.1, Subsection 7 of the *Conservation Authorities Act* at the offices of the Mattagami Region Conservation Authority, 100 Lakeshore Road, Timmins, ON P4N 8R5, at the hour of *T.B.D. , on the day of , XXXX*, *[for electronic hearings, include details about the manner in which the hearing will be held]* with respect to the application by *XX* to permit development within an area regulated by the Authority in association with a Minister's Zoning Order (REGULATION NUMBER) on *Lot, Plan/Lot, Concession, (Street) in the City of , Regional Municipality of, River Watershed.*

TAKE NOTICE THAT you are invited to make a delegation and submit supporting written material to the Executive Committee for the meeting of *(meeting number*). If you intend to appear, *[for electronic hearings: of if you believe holding the hearing electronically is likely to cause significant prejudice],* please contact *(name)*. Written material will be required by *(date),* to enable the Committee members to review the material prior to the meeting.

TAKE NOTICE THAT pursuant to Section 28.0.1 of the *Conservation Authorities Act*, a conservation authority is required to grant the permission applied for and may only impose conditions to the permission. The Hearing will therefore focus on the conditions to be imposed to the granting of the permission.

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

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

DATED *the ___ day of, _____202X*

Staff Member
Position

Per:
General Manager

APPENDIX E – CHAIRPERSONS REMARKS WHEN DEALING WITH HEARINGS (SECTION 28, SUBSECTION 12 OF THE CONSERVATION AUTHORITIES ACT) WITH RESPECT TO ONTARIO REGULATION 41/24 - OPENING REMARKS

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

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

The Authority Staff has reviewed this proposed work and prepared a staff report, a copy of which has been given to the applicant and the Committee. The applicant was invited to file material in response to the staff report, a copy of which has also been provided to the Committee.

Under Section 28(12) of the Conservation Authorities Act, the person requesting permission has the right to a hearing before the Authority Hearing Committee.

In holding this hearing, the Committee is to determine whether or not a permit is to be issued, with or without conditions. In doing so, we can only consider the application in the form that is before us, the staff report, such evidence as may be given, and the submissions to be made on behalf of the applicant. Only information disclosed prior to the hearing is to be presented at the hearing. It is not our place to suggest alternative development methods or possible compromises.

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

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

If the applicant has any questions to ask of the Committee or of the Authority representative, they must be directed to the Chairperson of the Committee.

APPENDIX F – CHAIRPERSONS REMARKS WHEN DEALING WITH HEARINGS (SECTION 28.0.1, SUBSECTION 7 OF THE CONSERVATION AUTHORITIES ACT) WITH RESPECT TO ONTARIO REGULATION 41/24- OPENING REMARKS

We are now going to conduct a hearing under section 28.0.1 of the *Conservation Authorities Act* in respect of an application by _____ , for permission to _____.

Under Section 28.0.1 of the Conservation Authorities Act, an Authority is required to grant permission for any application submitted under a regulation made under subsection 28(1) for permission to carry out all or part of a development project, in an area regulated by the Authority, associated with a Minister's Zoning Order, provided the criteria listed under subsection 28.0.1 (1) are met. A permission is subject to any conditions as may be prescribed by the Authority.

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

The Authority Staff has reviewed this proposed work and prepared a staff report, including the proposed conditions approved for this work, which has been given to the applicant and the Committee. The applicant was invited to file material in response to the staff report, a copy of which has also been provided to the Committee.

Under Section 28.0.1(7) of the Conservation Authorities Act, the person requesting permission has the right to a hearing before the Authority Hearing Committee.

In holding this hearing, the Committee is to determine the prescribed conditions to be attached to the approved permission. In doing so, we can only consider the application in the form that is before us, the staff report, such evidence as may be given, and the submissions to be made on behalf of the applicant. Only information disclosed prior to the hearing is to be presented at the hearing. It is not our place to suggest alternative development methods or possible compromises.

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

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

If the applicant has any questions to ask of the Committee or of the Authority representative, they must be directed to the Chairperson of the Committee.

APPENDIX G - NOTICE OF DECISION

Date
BY REGISTERED MAIL
Name
Address
Address
Postal Code

Dear *Mr./Mrs.:*

Re: NOTICE OF DECISION
Hearing Pursuant to Section 28(12) of the *Conservation Authorities Act*
Proposed Residential Development
Lot XX, Conc. XX, Ward, Municipality
Permit Application REGXX-XXXX

In accordance with the requirements of the *Conservation Authorities Act*, Mattagami Region Conservation Authority provides the following Notice of Decision:

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

Motion: *XX-XXXX*
Moved by:
Seconded by:

In accordance with Section 28 (15) of the *Conservation Authorities Act*, an applicant who has been refused permission or who objects to conditions imposed on a permission may, within 30 days of receiving the reasons under subsection (14), appeal to the Minister who may refuse the permission; or grant permission, with or without conditions. Through Order in Council 332/1018 the responsibility for hearing the appeal has been transferred to the Ontario Land Tribunal. For your information, should you wish to exercise your right to appeal the decision, a letter by you or your agent/counsel setting out your appeal must be sent within 30 days of receiving this decision addressed to:

Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario M5G 1E5

A carbon copy of this letter should also be sent to this conservation authority. Should you require any further information, please do not hesitate to contact the undersigned.

Yours truly,
Staff Member
Position

Per:
General Manager

Enclosure