

## Appendix C | Defining the Limit of Regulated Areas

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The *Regulation Limit* is determined to be the greatest combined extent of all the *regulated area* and features described in Appendix A, plus the prescribed allowance as set out in TRCA's Regulation.

### C.1 Defining the River or Stream Flood Hazard

Within TRCA's jurisdiction, the River or Stream Flood Hazard is based on the greater of the Hurricane Hazel storm event (the *Regional Storm*) or the 100-Year return period flood. In accordance with *provincial standards*, the flood produced through these calculations is called the *Regulatory Flood*, the limits of which define the extent of the River or Stream Flood Hazard.

The *Regulated Area* includes the River or Stream Flood Hazard, (also referred to as the *Regulatory Flood Plain*), and an *allowance* of 15 metres.

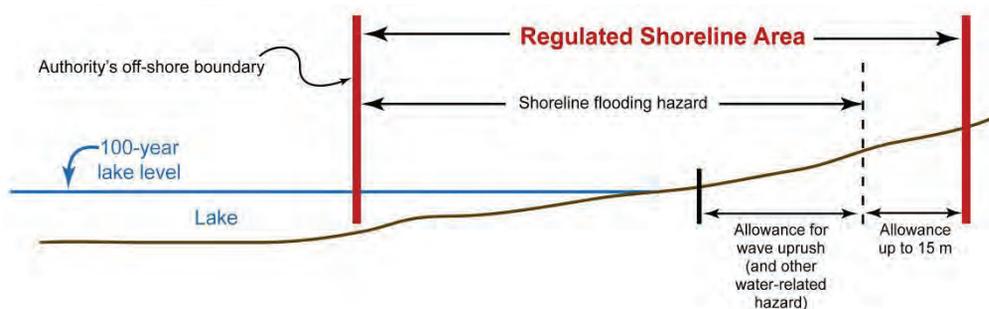


Figure C.1  
Regulatory Flood Plain

## C.2 Defining the River or Stream Erosion Hazard

Erosion hazards within River or Stream Valleys include both the erosion potential of the actual river or stream bank, as well as the potential for erosion or slope stability issues associated with the river valley walls. The risks associated with the River or Stream erosion hazards are managed by planning for the 100-year erosion rate. For the purpose of defining the Regulated Area, the extent of the erosion hazard is based on whether or not a valley is apparent (confined) or not apparent (unconfined) and whether or not the valley slopes are stable, unstable, and/or subject to toe erosion.

### Valley Corridors

Apparent River or Stream Valley where the valley slopes are stable

The Regulated Area associated with the erosion hazard consists of:

- the river or stream valley extending to the stable top of slope; and
- an allowance of 15 metres from the stable top of slope.

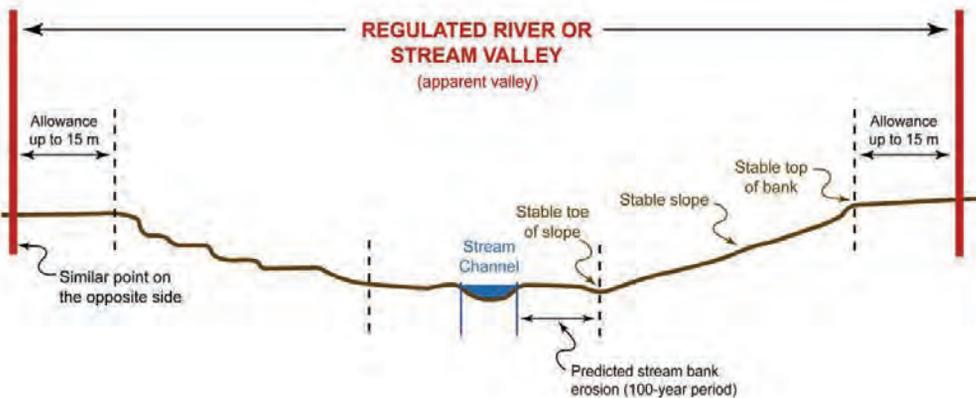


Figure C.2  
Apparent River or Stream Valley where the valley slopes are stable

Apparent River or Stream Valley associated with unstable slopes and stable toe

The Regulated Area associated with the erosion hazard consists of:

- the river or stream valley including the predicted long term stable slope projected from the existing stable toe of slope; and
- an allowance of 15 metres from the stable top of slope.

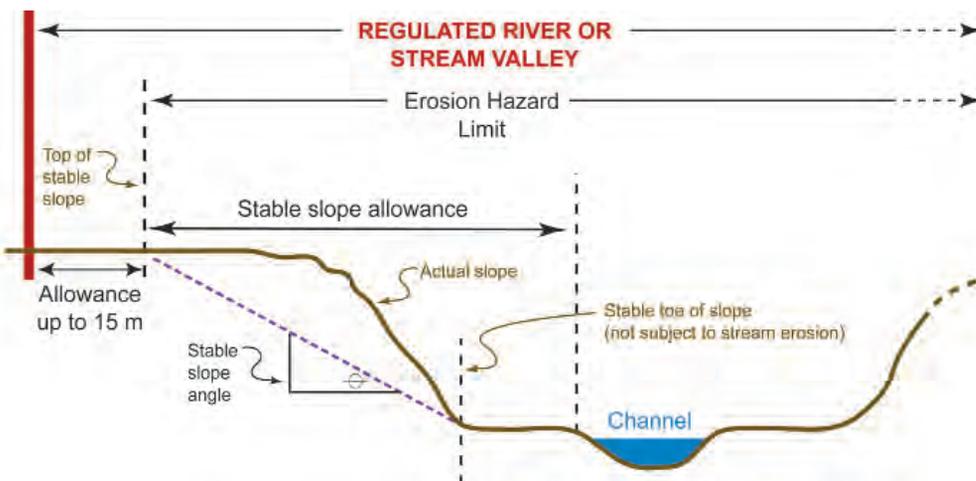
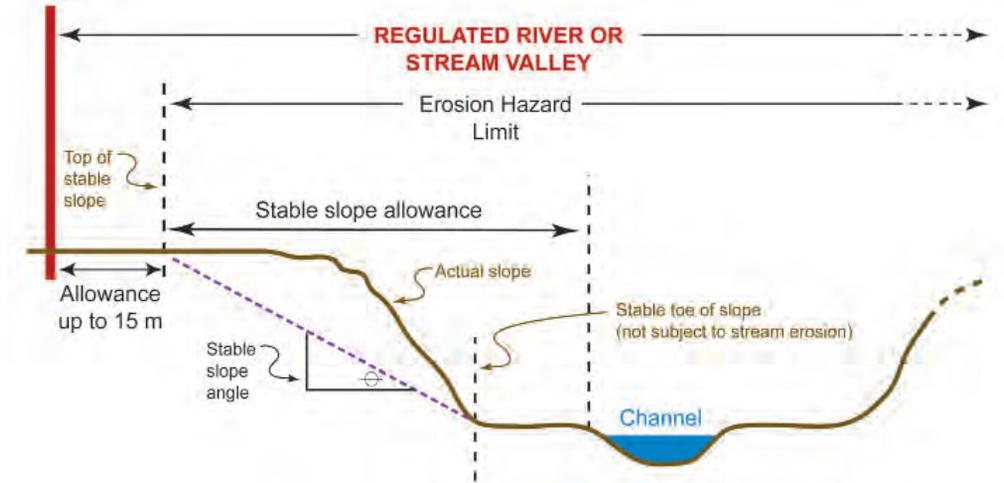


Figure C.3  
Apparent River or Stream Valley associated with unstable slopes

**Apparent River or Stream Valley with unstable slopes and active toe erosion:**

The *Regulated Area* associated with the *erosion hazard* consists of:

- the *river or stream valley* including the long term stable slope projected from the predicted stable toe of slope; and
- an *allowance* of 15 metres from the *stable top of slope*.



**Figure C.4**  
Apparent River or Stream Valley with unstable slopes and active toe erosion

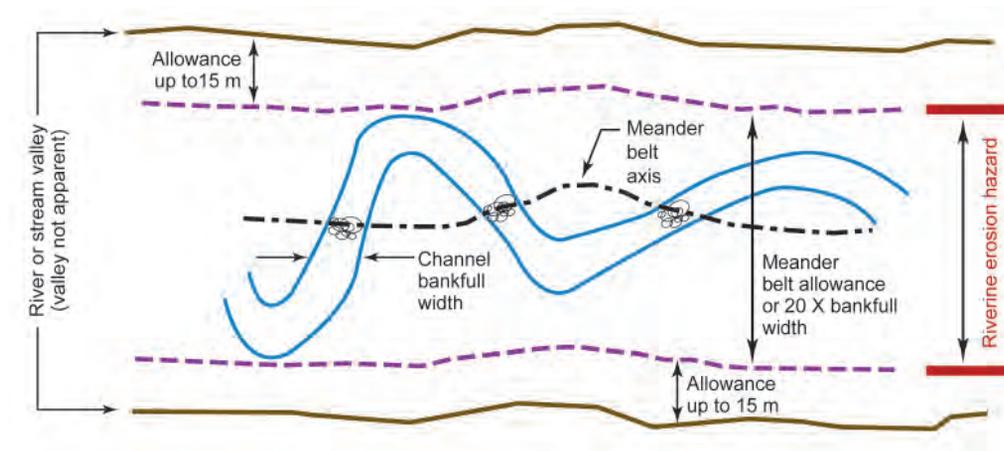
**Stream Corridors**

**Not Apparent River or Stream Valley:**

The *Regulated Area* associated with the *erosion hazard* consists of:

- the maximum extent of the predicted *meander belt allowance* of the river or stream; and
- an *allowance* not to exceed 15 metres from the edge of the predicted *meander belt*.
- In *river or stream valleys* that are not apparent (unconfined), the regulated area is the greater of the maximum extent of the Regulatory flood plain or the maximum extent of the predicted *meander belt* plus an *allowance* of 15 metres.

Non apparent river



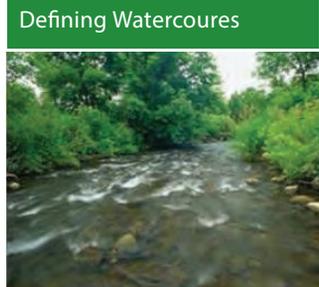
**Figure C.5**  
Non Apparent River or Stream Valley

### C.3 Defining Watercourses

Watercourses are defined in Section 28(5) of the *Conservation Authorities Act* as:

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

Watercourses may need to be confirmed by TRCA through field investigation. Within the *headwaters* of TRCA's *watersheds*, watercourses shall be determined in accordance with TRCA's "Evaluation, Classification, and Management of Headwater Drainage Features: Interim Guidelines."



### C.4 Defining the Lake Ontario Shoreline Flood, Erosion and Dynamic Beach Hazards

The shoreline of the Lake Ontario is continuously being reshaped through natural processes. The *Regulated Area* along the shoreline is defined by delineating the farthest landward extent of the flood hazard, *erosion hazard* and *dynamic beach hazard* and adding a 15 metre *allowance*.

#### Lake Ontario Shoreline Flood Hazard

The shoreline flood hazard limit is the extent of the combined effect of the *100-year flood level* including an *allowance* for wave uprush and other water related hazards.

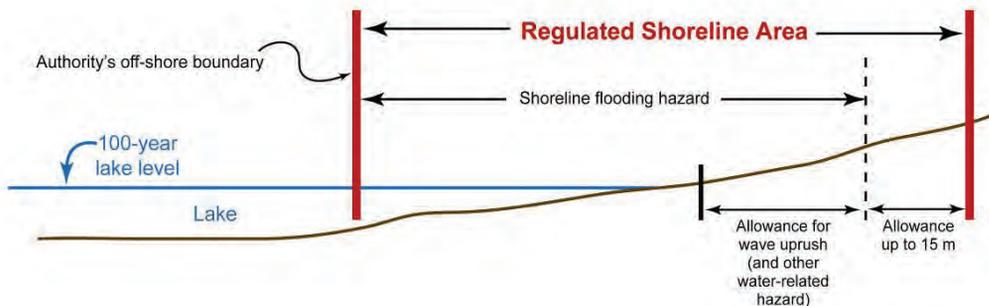


Figure C.6  
Lake Ontario Shoreline Flood Hazard

#### Lake Ontario Shoreline Erosion Hazard

The shoreline *erosion hazard limit* includes the following:

- *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 30 metres on the Great Lakes.

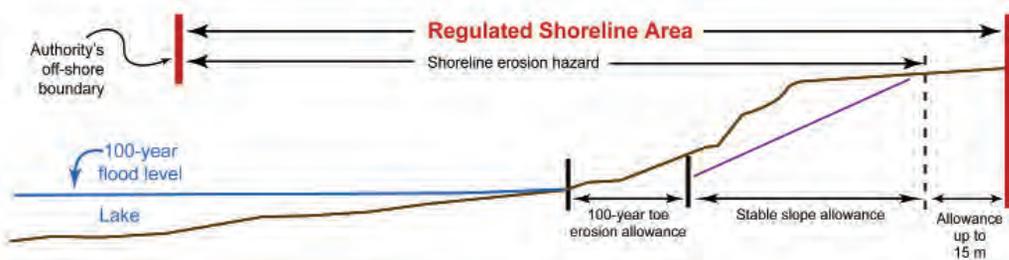


Figure C.7  
Lake Ontario Shoreline Erosion Hazard

### Lake Ontario Shoreline Dynamic Beach Hazard

The Lake Ontario *dynamic beach hazard* is that portion of the shoreline where accumulated unconsolidated *sediment* continuously moves as a result of naturally occurring processes associated with wind and water and changes in the rate of *sediment* supply. The extent of the *dynamic beach hazard* is defined as the extent of the flood hazard, plus a dynamic beach *allowance* of 30 metres.

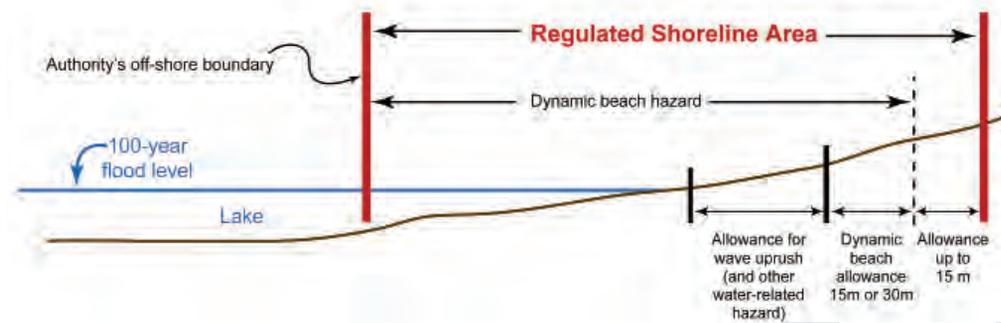


Figure C.8  
Lake Ontario Shoreline  
Dynamic Beach Hazard

## C.5 Defining Wetlands

Wetlands are defined in Section 28(5) of the *Conservation Authorities Act* as:

*Wetland* means:

- is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
- directly contributes to the hydrological function of a *watershed* through connection with a surface *watercourse*,
- has hydric soils, the formation of which has been caused by the presence of abundant water, and
- has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water, but does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a *wetland* characteristic referred to in clause (c) or (d).

Defining Wetland



*Wetlands* that meet this definition are subject to the Regulation.

## C.6 Defining Other Areas - Areas of Interference

The areas surrounding *wetlands* are regulated under the other areas provision of Section 28 (5)(e) of the *Conservation Authorities Act*. The areas surrounding *wetlands* where development (1) could interfere with the *hydrologic function* of the *wetland* are referred to as areas of interference. In accordance with TRCA's Regulation, these areas include 120 metres within all provincially *significant wetlands* and *wetlands* on the Oak Ridges Moraine, and within 30 metres of all *other wetlands*. These areas may be adjusted where detailed hydrologic studies define a more accurate *area of interference*.

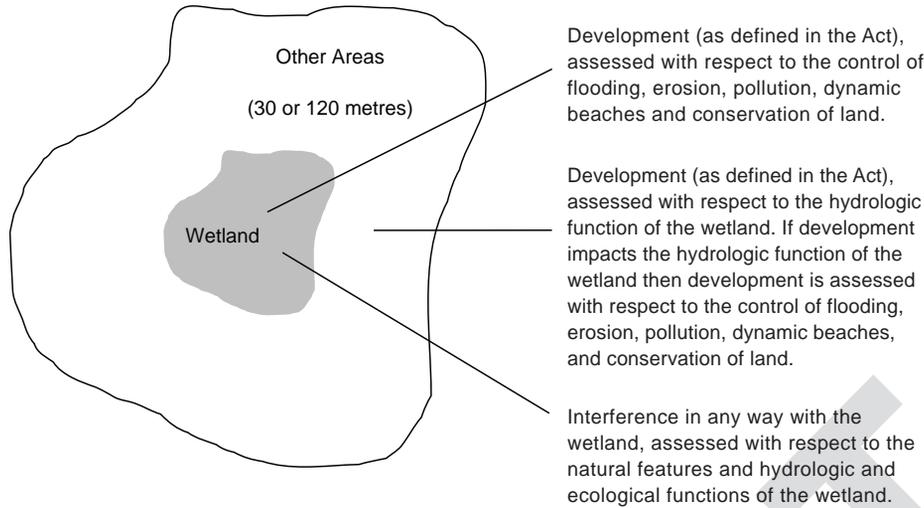


Figure C.9

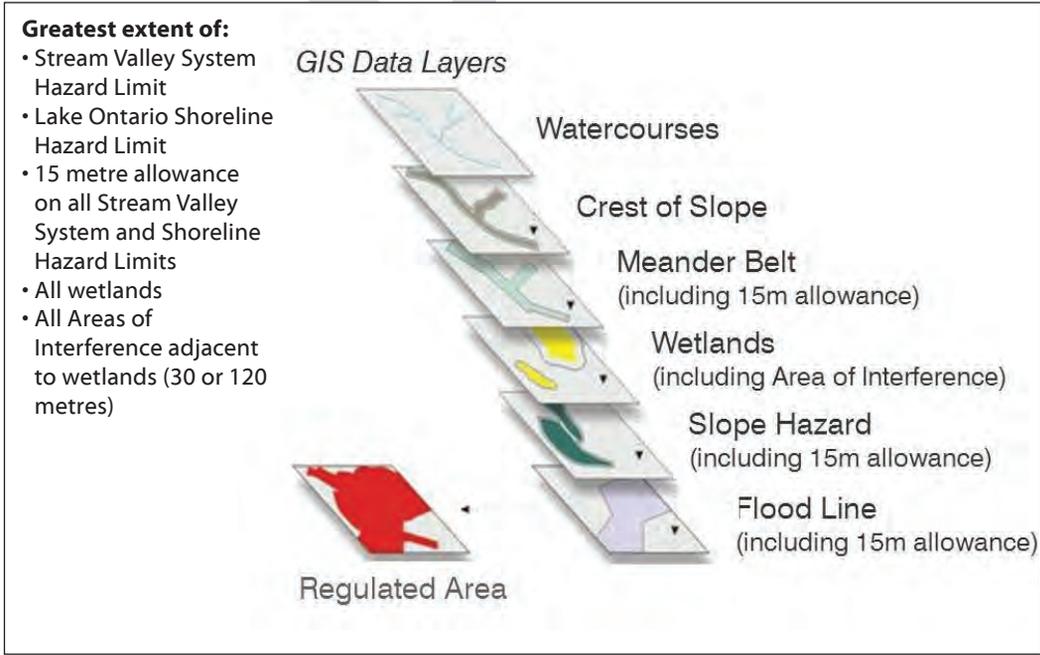


Figure C.10  
Regulation Limit (area of interest)