



Quaile Creek within the City of Ottawa Floodplain Mapping

Frequently Asked Questions

1. Why is the City of Ottawa interested in undertaking this project?

- Floodplain mapping is included in the City of Ottawa's Comprehensive Zoning By-law – Floodplain Hazard Overlay. Updated mapping is needed to support designations and zoning by-laws, in accordance with the *Planning Act* and associated Provincial Policy Statement.
- This floodplain mapping project will strengthen the City's ability to effectively implement the floodplain provisions in the Zoning By-law.
- It is well understood that up-to-date natural hazard mapping for shoreline residents is needed to help protect people and property from the impacts of flooding.
- State-of-the-art technology is now available to improve the accuracy of these models (map products did not use LiDAR in the 1980's, complete bathymetry, etc).

2. Why did SNC decide to undertake this project in partnership with the City of Ottawa?

- CAs' responsibilities include the identification of lands that are subject to flood hazards to ensure people and their properties are protected.
- CA Regulations, made under Section 28 the *Conservation Authorities Act*, require natural hazard mapping to support informed property development decisions in and near natural hazards like floodplains, erosion, and landslides. Mapping is needed to understand what studies or investigations are required to support or restrict development in these areas.

3. How are watercourse considered for these types of projects?

- Watercourses are ranked in the same manner so that priorities for floodplain mapping are consistent.
- Watercourses are evaluated for the presence and intensity of existing development, the intensity of predicted future development, and the presence of other constraints to development.
- Usability of existing mapping is considered based on the experience of staff using the mapping when reviewing planning applications and permit approvals.
- Watercourses under no existing and future development pressure are often not considered.
- When prioritizing watercourses in the City of Ottawa, these values are often combined to create a score for each watercourse or reach of watercourses, and the resultant values (0 to 32) are used to rank each segment.



4. How are floodplain maps prepared?

4.1. Technical Work

- Step 1 – Estimation of design flows: different hydrologic methods are available for estimating flows to be used in floodplain mapping.
- Step 2 – Calculation of the water surface level corresponding to design floods: Hydraulic computation is necessary to calculate the water levels for design floods. Field survey of river cross sections and infrastructure might be required. Hydraulic tools as HEC-RAS model would be used to determine water elevations.
- Step 3 – Plotting flood lines: once the hydraulic computation is done, estimated flood lines corresponding to the regulatory flood elevation are plotted using available topography adjacent to rivers and lakes. Flood line plotting can be automated using computer programs and the Digital Elevation Model (DEM) or done manually by interpolating contour lines.

4.2. Section 28 Regulation Map Update

- Floodplain study is undertaken / maps created (Technical Work).
- Corresponding Regulation map(s) is (are) modified and noted as draft.
- Municipalities affected are circulated on the changes and asked for comments.
- Landowners affected should be notified and invited to open house (optional).
- Public consultation is held with a 20 day advanced notice in newspapers with circulation in the area affected.
- Stakeholders are notified of the public meeting opportunity.
- 30 day period for public to comment. (Optional)
- Draft map presented to Board for approval.
- Adopted map sent to the City of Ottawa and any others that request it.
- Updated mapping included in CA Regulations.

5. When and why are Conservation Authorities consulted?

Under the *Planning Act*, Conservation Authorities are consulted to provide comments on development applications. This could include home additions and renovation, lot severances, golf course construction, or subdivision development. This involves working at various stages of development, in partnership with many people including landowners, developers, and municipal and county governments.

These regulations also help close the gap. In cases where a *Planning Act* application is not required, the *Conservation Authorities Act* will provide for the management of natural hazards.



6. What activities fall under this regulation and must be approved by a Conservation Authority?

The regulation applies to the following development activities:

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

7. What types of lands in the watershed may be affected?

These types of lands are affected - if they are located in a regulated area:

- ravines, valleys, steep slopes
- wetlands including swamps, marshes, bogs, fens and ponds,
- any river, creek, flood plain or valley land,
- lake shorelines
- other areas approved by the Minister.

8. What does the CA Regulate?

Floodplains and unstable slopes have been under some form of regulation for many years. The updated regulation (2006) modifies the protection standard afforded to some of these areas, provides for the addition of additional regulated area where new hazard mapping has been completed in recent years as well as setting out regulations for types of land such as wetlands that were not governed by the old regulation.

Under this regulation Conservation Authorities have the ability in specified areas to:

a) Prohibit, regulate or require permission for straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse or changing or interfering with a wetland.

b) Prohibit or regulate or require permission for development if the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.

“Development” 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.



9. It's my property, why can't I do what I want?

When what you do affects other people, a broader perspective is required.

The Regulation protects watercourses, valley lands, hazard lands and wetlands and it will protect you and your neighbors throughout the watershed.

Unrestricted development within a floodplain has detrimental effects on the watershed and increases the risk of "loss of life, personal injury, and property damage."

10. What happens if a property is in a regulated area?

Under the regulation, development within regulated lands requires that permission be obtained from the Conservation Authority. Permission can be provided verbally if a permit is not required for the particular project or activity, or it may be provided in writing through a permit.

The review process ensures that in considering the granting of approval for the development the proponent will not:

- create a risk to public safety from flooding or erosion hazards,
- result in pollution or erosion and
- adversely affect principles associated with the 'conservation of land' related to natural features within the watershed.

11. What CAN I do on my property?

To answer it needs to be determined if any part of the property is subject to the regulation. Many activities such as construction in or near flood or erosion prone areas and alterations to watercourses or the shoreline can damage the environment or pose a threat to public safety. Before staff can make that determination, the exact location and the full property description is required. With this information staff can refer to maps and advise if a CA review is required.

12. Why are CA's administering such regulations?

This regulation is a long-standing regulatory tool essential to enabling Conservation Authorities to manage the resources of the watershed as well as to prevent loss of life and property due to flooding and erosion, to prevent pollution and to conserve and enhance natural resources.

This regulation prevents or restricts development in areas where, in the opinion of the Authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development.



13. Is the Conservation Authority the final word on regulated areas? What if I am told my application cannot be approved?

Staff review applications with a view to whether they meet the Authority's statutory obligations under the legislation namely how, in the opinion of the Authority, they affect the control of flooding, erosion, pollution or the conservation of land in the South Nation watershed.

To assist staff and expedite approvals, the Conservation Authority's Board of Directors has approved policies that further define the types of projects for which staff may grant approval.

In the event that an application is considered not to meet the legislative tests (control of flooding, erosion, dynamic beaches or pollution or the conservation of land) and does not meet the approved Authority policy, applicants have an option of requesting a hearing before the Conservation Authority's Executive Committee which is a sub-committee of the Board of Directors; like the Board of Directors it consists of representatives of local municipalities appointed by the municipality to represent their interests on the Authority. A hearing date is set (usually the second Thursday of every month) and applicants are given an opportunity to state their case to the Committee (prior to this hearing the Committee has no prior knowledge of the application, so decisions are made on the merits of the case based only on the information presented to the Committee during the hearing).

Failing approval, a proponent has a third opportunity to present their case by appealing a denial to Ontario's Minister of Natural Resources and Forestry who in turn appoints the Mining and Lands Commissioner to hear the matter on his / her behalf. These decisions are final.

14. How does this affect the planning approvals required from municipalities?

Conservation Authorities are required circulation agencies; unless other arrangements have been agreed to the secretary-treasurer of every conservation authority must be given notice of the filing of almost any application received by a municipality under the *Planning Act*. As such it is simply good business practice to check with your local conservation authority prior to any undertaking near water or a wetland.

In addition, the *Conservation Authorities Act* is "other applicable law" with respect to the Ontario Building Code. As such, the municipality, where applicable, will want to ensure that any required CA approvals have been issued before a building permit is released. A permit from the Conservation Authority does not replace building permits or any other permits issued through municipal offices.

15. How will the regulation affect farmland?

Nothing in the regulation is intended to limit existing agricultural practices. Where a wetland is currently used for agriculture and a change of use is proposed, Conservation Authorities will consider it to be a wetland subject to the policy.



16. What is a “Hazard Land”?

According to the regulation, 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 such as lands where sensitive marine clays, organic soils and karst formations are present.”

Because of these site limitations new buildings are generally not allowed.

17. How do I confirm that my property is regulated?

Construction of buildings or structures is regulated if they are located within a mapped regional storm (1:100 year) floodplain or adjacent to a steep slope or a wetland. All watercourses are regulated whether they are inside the “regulation limit” or not.

SNC’s online geoportal includes a layer for it’s regulations limit, which includes the greatest of any hazard present plus a 30-meter buffer. Permission from the Conservation Authority may be required for development in the regulations area.

18. I am planning to work, build, or develop near or on a lake, river or stream, or wetland so how will the regulation affect me?

Development in a location that is prone to flooding, slope instability or erosion can have serious repercussions for landowners or their neighbours. The regulation is designed to control or prevent potential problems caused by inappropriate land development. Conservation Authorities enforce regulations governing filling and/or construction in regulated areas or the alteration of any waterway or interference with a wetland within their jurisdiction.

Failure to obtain the appropriate permits can result in prosecution or, more importantly, a hazard to people or property. Landowners with property on or near the shoreline of a lake, river or stream or near a wetland may require a permit if they wish to develop their lots. These activities include but are not limited to filling (adding, removing or grading), construction, retaining walls, docks and boathouses. The first thing to do when planning work around a watercourse is to contact your local Conservation Authority to discuss your project and determine whether or not a permit is required.

A permit is required if you plan to:

- a.** construct or externally renovate any building or structure in or on a pond or swamp or in any area susceptible to flooding during a Regional Storm; (residences, sheds, bridges, culverts)
- b.** place or dump fill in a regulated area whether such fill is already located in the area or brought to the area from some other place; (grading site for house construction, fill placement for septic, fill placement for road construction, excavating for footings, fill placement behind retaining walls)
- c.** straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse (culvert works, channel naturalization, coffer damming, any water works).