



The Rideau Valley Conservation Authority (RVCA) conserves natural resources and manages natural hazards in the Rideau River valley for everyone's benefit. In cooperation with local municipalities and the province, the RVCA identifies, studies and maps natural hazard areas along local rivers, lakes, streams and wetlands. Natural hazard areas include floodplains and unstable slopes.

The RVCA is conducting several hazard mapping studies on watercourses within the City of Ottawa. These studies are being completed through a collaboration involving the City of Ottawa and the Mississippi Valley, Rideau Valley and South Nation Conservation Authorities. To learn more, visit www.rvca.ca/ottawa-mapping-project.

Currently a mapping project is underway in your community along Stevens Creek from Malakoff Road to Rideau River.

RVCA staff followed the provincial Flooding Hazard Limit Technical Guide (MNR, 2002) for floodplain mapping throughout the project's development. The guidance dictates that best-available-data be used and where multiple scenarios can be explored, the scenario that generates the greatest

potential for flooding should be selected. In the Stevens Creek Flood Risk Mapping draft report (available online at www.rvca.ca/stevens-creek) one will find that estimated flood levels have increased, on average, by 30 cm compared to the currently regulated flood levels produced in 1995. There are two primary reasons for this difference:

- hydrological parameters in the 1995 study were calculated using rather limited data, while the present computation is very detailed and accurate;
- the 1995 study could only estimate spring snowmelt flows, while the current study was also able to estimate flows generated by a summer rainstorm event. The modeling confirms that the summer rainfall generates higher flows than a spring snow melt, and in accordance with the Provincial technical guidance, the higher summer flow was used for the floodplain mapping.

A supplementary investigation (Effect of Land Use Change on Stevens Creek Flood Risk Mapping, November 12, 2021, also available online at www.rvca.ca/stevens-creek) confirmed that the land use over the last 50 years have changed very little, with the urban areas increasing from 4% to 7% of the catchment . This change in landcover (urban, forest, wetland, agricultural) has no significant impact on the flood risk.

What is being identified?

Hazard maps for Stevens Creek identify:

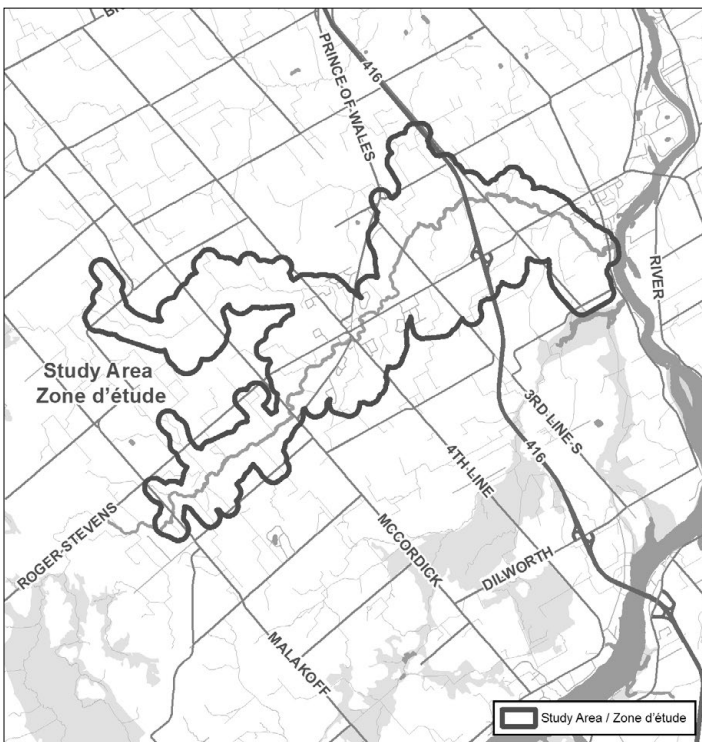
- 1) Flood risk hazards
- 2) Slope stability hazards (unstable slopes)
- 3) Wetland

1) Flood risk hazards

A flood risk study for the Stevens Creek catchment is now available for public review.

This study includes hydrologic and hydraulic analysis, historical rainfall records, soil classification, land use and topographical data to produce estimates of the 1:100 year flood discharge. This information is then used to identify the corresponding water surface elevations and flood elevations for the watercourses under consideration.

RVCA flood risk mapping studies follow technical guidelines established under the Canada-Ontario Flood Damage



Reduction Program (MNR, 1986) and the technical guide for flood hazard delineation in Ontario (MNR, 2002) as laid out by the Ministry of Natural Resources and Forestry.

The resulting flood risk maps identify areas along watercourses that are vulnerable to flooding and where new development is to be restricted or prohibited in accordance with provincial and municipal planning policies.

2) Slope Stability Hazards (Unstable Slopes)

Slope stability mapping for the Stevens Creek catchment is also available for public review. Slope stability analysis makes use of new, highly detailed topographic data to identify toe and top of slope. This information is used to create an allowance area that serves to flag any potentially unstable slope areas due to height and steep slopes. RVCA slope stability mapping follows the technical guide for slope hazard delineation in Ontario (MNR, 2002) as laid out by the Ministry of Natural Resources and Forestry.

3) Wetlands

Wetlands are also identified natural features in Conservation Authority hazard mapping. The wetland mapping is provided by the Ministry of North Development, Mines, Natural Resources and Forestry which has developed a systematic process for the classification and evaluation of wetlands.

How are natural hazard maps used?

When completed, natural hazard mapping will be used by the City of Ottawa when updating their Official Plans and Zoning Schedules and in the review of development applications under the Planning Act.

The RVCA will use the same mapping in the administration of regulations made under the Ontario Regulation 174/06 — Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation.

The role of the RVCA's Planning and Regulation Program is to review and regulate development proposals with the purpose of reducing impacts on the control of flooding, pollution, erosion and conservation of land.

RVCA's work is important as it protects watercourses, floodplains, wetlands, shorelines and valley lands — and it protects you and your neighbours from flooding, erosion and loss of natural features and functions.

My property is now identified as being in the floodplain/flood risk area. How will this impact my property?

As part of its mandate, the RVCA regulates development in environmentally sensitive areas such as floodplains, wetlands, shorelines and waterways (Ontario Regulation 174/06 — Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation). If already developed, properties in the regulated area would require project review and approval prior to any construction projects

such as new buildings (garages, sheds), additions, swimming pools, etc.

The RVCA also reviews planning applications (Planning Act) as they relate to natural hazards and natural heritage features and provide comments to municipalities. Development applications under the Planning Act can include severances and subdivisions for new lot creation, minor variances for new construction, reconstruction or additions, rezoning and site plan submissions.

With hazard mapping in place, the RVCA will have regulation limits that clearly outline where development, interference and alterations require approval from the RVCA. Regulation limits include buffer areas around the hazard as prescribed in provincial regulations.

What can or can't I do on my property?

It depends on the location of your property. We can help. Once we know the exact location of your property, an RVCA Resource Specialist can help determine if your property falls within the flood risk area. Call 613-692-3571 extension 1193 or 1132 to connect with a Resource Specialist, email development@rvca.ca or submit a property inquiry form available online at www.rvca.ca/regulations-planning. You can also see the maps online at www.rvca.ca/stevens-creek.

Do you have information to share?

The RVCA welcomes every bit of information that we can obtain about the historical behaviour of local watercourses. Residents and landowners along these features may have anecdotal or documented information such as photographs or journal entries of their observations during past high water events. That kind of information can be very useful for evaluating the "reasonableness" of the flood lines shown on the maps and the study team is happy to review any past flood information that people wish to share.

Public Consultation / Call for Comments

Members of the public are invited to share information and review the draft regulation and hazard maps (available online at www.rvca.ca/stevens-creek) during the public consultation period which will now run until **April 29, 2022**. You can also book individual or small group meetings on-line or in person to review mapping and discuss potential impacts and concerns.

Please contact an RVCA Resource Specialist at 613-692-3571 or 1-800-267-3504 extension 1193 or 1132 or development@rvca.ca. With the easing of COVID-19 restrictions, a public meeting will also be held on **April 21** at the Alfred Taylor Recreation Centre (2300 Community Way in North Gower), doors will open at 6:00 p.m. and the presentation will begin at 6:15 p.m.