

Grand River Conservation Authority

Report number: GM-08-25-77

Date: August 22, 2025

To: Members of the Grand River Conservation Authority

Subject: Lower Conestogo River Floodplain Mapping Update

Recommendation:

THAT Report Number GM-08-25-77 – Lower Conestogo River Floodplain Mapping Update be received as information.

Summary:

Not applicable.

Report:

In 2017 and 2020, as outlined in reports [GM-08-17-92](#) and [GM-12-20-91](#), the Grand River Conservation Authority submitted applications for funding for various projects under the National Disaster Mitigation Program (NDMP), which is a federal initiative geared at defining, understanding, and minimizing the risks associated with flooding. Amongst other projects, funding was received to complete work necessary to update the floodplain mapping for the lower Conestogo River, between the Conestogo Dam and the Grand River. The study area is shown on Figure 1 and includes the Townships of Mapleton, Wellesley and Woolwich.

The work completed to support the floodplain mapping updates included the collection of detailed measurements of bridge/culvert crossings in the study area and a bathymetric survey that captured the shape of the river channel below the water surface. This information was used by staff to create a new hydraulic model, which simulates how flood waters will move through the river and over land to determine what areas will flood based on a given flow. An existing hydrologic model generates the amount of water (flow) anticipated during a storm event.

Development of updated floodplain mapping is underway, which uses topographic base mapping and the outputs of the hydraulic and hydrologic models to visually show the floodplain, which is the area that is anticipated to flood during a Regulatory storm event. This work will result in amendments to GRCA's Ontario Regulation 41/24 mapping under the *Conservation Authorities Act* to incorporate the revisions to the floodplain and its associated 15 metres regulated allowance.

Affected municipalities have been provided the draft mapping revisions. Public notice will be provided through GRCA's website, a media release, an advertisement in local newspapers, social media posts and two Public Information meetings (in-person, virtual) planned to be held in the fall. Following public consultation, the proposed amendments to the regulatory mapping will be brought forward to the General Membership for approval.

Financial Implications:

Current scope of work for the development of the updated floodplain mapping is being done in-house. Minimal cost is expected for public consultation (newspaper advertisement, room rental, etc.).

Other Department Considerations:

Flood Operations, Planning and Regulations Services, Information and Systems Technology and Strategic Communications staff will be involved in the floodplain mapping update and associated public consultation.

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Figure 1: Extent of Lower Conestogo River Floodplain Mapping Update Project

