

Grand River Conservation Authority

Report number: GM-09-24-82

Date: September 27, 2024

To: Members of the Grand River Conservation Authority

Subject: Grand River Conservation Authority Reservoir Operations Policy

Recommendation:

THAT the Grand River Conservation Authority Reservoir Operations Policy be approved.

Summary:

Not Applicable

Report:

Under the *Conservation Authorities Act* and *Ontario Regulation 686/21*, the Grand River Conservation Authority (GRCA) is required to have a Reservoir Operation Policy. The GRCA manages seven medium to large multipurpose reservoirs, balancing flood management and attenuation throughout the year while also augmenting downstream watercourses during low-flow periods.

After the severe flooding of May 1974 there was a Royal Commission Inquiry into this event. Resulting from this Inquiry, a committee of representatives from the Ontario Ministry of Natural Resources, the Ontario Ministry of the Environment and the Grand River Conservation Authority developed the first set of rules and policies for reservoir operations, which were adopted and implemented by GRCA in 1978. Since 1978, the reservoir operations policy has been subject to several reviews and updates. A significant update to reservoir operating policies and procedures was completed and approved by the GRCA in February 2004. The 2004 operating policy was based on a comprehensive review of reservoir operating practices, previous operating policies, technical studies and assumptions. These technical studies included floodplain mapping, identification and inclusion of downstream constraints, and water supply requirements for communities downstream of the reservoirs.

The reservoir operational rule curves currently used are based on the revision completed as part of the policy (2004) update. As part of the 2024 review and to account for potential impacts of climate change on reservoir operations, an analysis has been conducted on the total precipitation recorded at climate stations at major dams as well as total inflow to major reservoirs. The results of this assessment indicate that no significant revisions to current reservoir operations are needed, and reservoir operational targets developed to provide a balance between flood management and water supply for downstream reaches can be sufficiently met based on observed total precipitation and reservoir inflows.

Financial Implications:

Not applicable

Other Department Considerations:

Not applicable

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