



Avon River Tidal Gate Structure

Ministerial Order



Background

- DFO issued letters on the operation of the existing tidal gates in 2003 and 2014 to Nova Scotia Department of Agriculture (NSDA).
- The purpose was to improve fish passage at the existing structure.
- In the spring of 2020 DFO took additional measures to further improve fish passage and provide clarity on gate operations.

Ministerial Order

- DFO determined that a Ministerial Order was required to clarify our regulatory position and regulate operations and reporting.
- The Ministerial Order covered gate openings and lake levels.
- Initial events such as the fish mortality incident required the Department to modify the Order to protect fish which had moved into the river. Since then the Order has remained unchanged.

Draft Ministerial Order Conditions

DFO has required NSDA to:

- i. Set Lake Pesikitk (Pesaquid) to natural state (Drain Dry).
- ii. Fully open both gates throughout each of the outgoing tides; and
- iii. Fully opening both gates throughout each of the incoming tides to allow a minimum of 10 minutes of saltwater entry upstream of the gates.

Ministerial Order Conditions

DFO will also continue the reporting requirements which would include:

Provide in writing, weekly gate operation details listed below to the Department of Fisheries and Oceans each Friday between January 1 and December 31 of each year.

- The date and time of opening for both gates
- The length of time for daily openings of both gates
- Daily water level measured at the Highway 1 bridge

Ministerial Order Outcomes

- The MO has resulted in observed improvements in fish passage. CMM continues to collect information that supports this observation.
- Potential fish mortality events
- Erosion of the upstream banks/streambed may cause sedimentation events that could cause riffle/run/pool sequences to change.
- Riffle/run/pool changes could cause infilling/clearing/creation of spawning/nursery/rearing habitat for various fish species (e.g., trout, salmon, alewife, eel, etc.)

Possible Fish and Fish Habitat Concerns

- By making modifications to the lake levels there have been observed hydrological and morphological changes to the Avon system that may include:
 - changes to fish population dynamics such as a possible change (positive or negative) in gaspereau populations due to the loss of the lake habitat. This may be offset with the potential increase/reintroduction in Rainbow Smelt and other fish populations.

System Approach

Nova Scotia Power Incorporated (NSPI)

- The NSPI Avon River structures are in the process of re-licencing and have received short term extensions to collect additional information.
- In 2022 DFO began issuing Ministerial Orders to outline requirements for ecological maintenance flow, based on the seasonal changes in water levels on the system

Next Steps

- Incremental improvements continue to be observed and information collected by CMM has documented these improvements.
- DFO intends to continue to issue Ministerial Orders until a new structure is constructed and the old structure is decommissioned and removed
- DFO continues to commit that any changes to the Ministerial Order that may be required, outside of potential changes to address immediate public safety issues, will be consulted on prior to their implementation.

Questions?