

LAKE MANITOBA LAKE ST. MARTIN

OUTLET CHANNELS PROJECT

AQUATIC ENVIRONMENT

Includes fish habitat, fish community, commercial, recreational and Aboriginal fisheries, aquatic invasive species, and aquatic species at risk

Environmental Impact Statement—Summary by Valued Component (VC)

Why is Fish and Fish Habitat a VC?

Fish and Fish Habitat are components of a healthy aquatic ecosystem because they:

- Provide valuable commercial and recreational fisheries in Lake Manitoba, Lake St. Martin, and Lake Winnipeg
- Are important for traditional and cultural purposes for local Indigenous groups
- Are affected by any potential changes in water quality or water quantity caused by the Project

What is the current state of Fish and Fish Habitat ?

Lake Manitoba and Lake Winnipeg are highly productive with shallow depths and large surface areas. Run-off from agricultural and other sources has degraded water quality of both lakes and increased blue-green algae and green algae concentrations.

Fish species in the region include those important to commercial, recreational and Indigenous harvest, such as lake whitefish, cisco, white sucker, northern pike, walleye, and sauger, as well as many small forage fish species. A total of 37

Valued components (VCs) are components of the natural and human environment that are considered by the proponent, public, Indigenous Peoples, scientists and other technical specialists and government agencies involved in the assessment process to have scientific, ecological, economic, social, cultural, archaeological, historical, or other importance.

fish species are known to occur in Lake Manitoba, more than 65 fish species are known to occur in or have been introduced to Lake Winnipeg, and 20 fish species are known to inhabit Lake St. Martin. There are also smaller lakes, creeks and wetlands in the area that are important to fish and fish habitat.

What effects might the Project have on Fish and Fish Habitat?

The Project has the potential to change fish habitat, fish migrations and movements, fish health and quality, and reduce the number of fish in the region.

During construction, fish habitat may be changed due to:

- Excavating lake bottom at the inlets and outlets
- Realigning, isolating, or dewatering small lakes and streams
- Changing groundwater inflows to lakes and streams adjacent to the channels
- Increasing sediment transport and deposition

During construction, changes in fish passage could occur during replacement or installation of new stream crossings along the PR 239, any necessary road realignments, and along the Lake St. Martin Outlet Channel access road.

During operations, fish will be able to move down the channels between Lake Manitoba, Lake St. Martin, and Lake Winnipeg, and will be carefully managed to minimize fish stranding. Flow diversion during operation may also affect patterns of fish movement.

Activities during construction and operation could potentially release polluting substances to streams and lakes, which could affect the health and mortality of fish. Impacts to fish could affect availability for harvesting.



How will Aquatic Environment effects be addressed?

Fish Habitat

- Isolate in-water work areas and conduct fish salvages prior to construction
- Provide year-round baseflow and sufficient depths in the Lake St. Martin Outlet Channel when not in use

Fish Migrations and Movements

- Avoiding in-stream work during sensitive timing windows such as fish spawning
- Channels are designed to allow fish to exit them during most times of the year
- Controlling the rate of flow change in the channels after operation to provide fish with enough time to leave

Fish Health, Quality, and Abundance

- Require all heavy machinery to be cleaned and disinfected prior to arriving on site and before moving between work areas at different lakes and drainages
- Develop a Water Management Plan, Debris Management Plan, and Sediment Management Plan to manage erosion and sediment
- Prohibit re-fuelling of machinery and storage of hydrocarbon products within 100 m from the high-water mark of waterbodies and watercourses
- Store hydrocarbon products in secondary containment and approved storage tanks and use biodegradable hydraulic fluids in all heavy equipment working in or near water
- Ensure equipment and vehicles are clean and free of leaks upon arrival to site and keep them in good working order
- Design channels to minimize stranding by allowing fish to leave the channels if conditions dictate and by providing fish habitat year round

FOLLOW-UP AND MONITORING

An Aquatic Effects Monitoring Plan will be developed to monitor the quantity and quality of fish and fish habitat, including water quality, the quality and quantity of fish habitat, and the numbers and movements of fish populations. Monitoring results will be used on an ongoing basis to assess the effectiveness of mitigation measures, and to confirm compliance with the regulatory requirements of the Project.

CONCLUSIONS

Fish Habitat

Effects on habitat from sediments, groundwater, and realignment of drains are expected to have little effect on local fish populations. The channels have been designed to remain permanently wetted and therefore, will provide permanent fish habitat (approximately 172 ha), but overall effects to fish productivity in the local and regional areas are not expected to be measurable.

Fish Migrations and Movements

The outlet channels will provide a new path for fish to move from Lake Manitoba to Lake St. Martin and from Lake St. Martin to Lake Winnipeg. While this will result in a small net increase in fish movement in a downstream direction between these waterbodies in the long-term, it is not expected to affect fish population sizes or productivity in any lake. The flow changes may also alter cues that attract fish, but it is expected that these changes will not be sufficiently large to affect fish migrations or cause a decrease in fish population sizes or productivity.

Fish Health, Quality, and Abundance

The Project has the potential to cause introductions of substances such as sediment, potential mortality from blasting in the borrow-pits and quarries, potential increases in fish pressure, and potential stranding of fish in the channels. However, it is expected the Project will sufficiently mitigate these potential effects such that there will not be a measurable effect on fish populations or fish productivity in the local or regional areas.

For more information or if you would like to share your concerns:

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