What is an Environmental Assessment?

Environmental Assessment

- Environmental Assessment is a process that is mandated by both Canadian and Manitoban law and is required before construction of large projects.
- It helps determine where, what, when and how a project may affect the environment, including people and human health.
- It provides a process for proponents to consider ways to **avoid** and **mitigate** (minimize) **environmental effects**.
- It also identifies monitoring programs to ensure that predictions made about environmental effects are accurate and that mitigation measures are working as intended.

Environmental Assessment Process

- Provincial and federal environmental assessment processes are similar but the review processes are unique.
- Environmental impact assessments undergo government review but are also available for public input.
- The final decision to authorize the project is based on government's review of the significance of predicted environmental effects.
- Even if approved, a project may be subject to short-term and/or long-term monitoring and reporting requirements.

Environmental Studies

- Environmental studies are often required before an environmental impact assessment can be performed.
- They identify species at risk, unique features and help us understand and identify potential effects of the project.
- They help document existing environmental conditions and provide a baseline for "before and after" comparison during and after the project.
- Once the existing environment is understood and potential effects have been identified environmental impact assessment can be performed

Environmental Approvals

Manitoba – Environmental Approvals

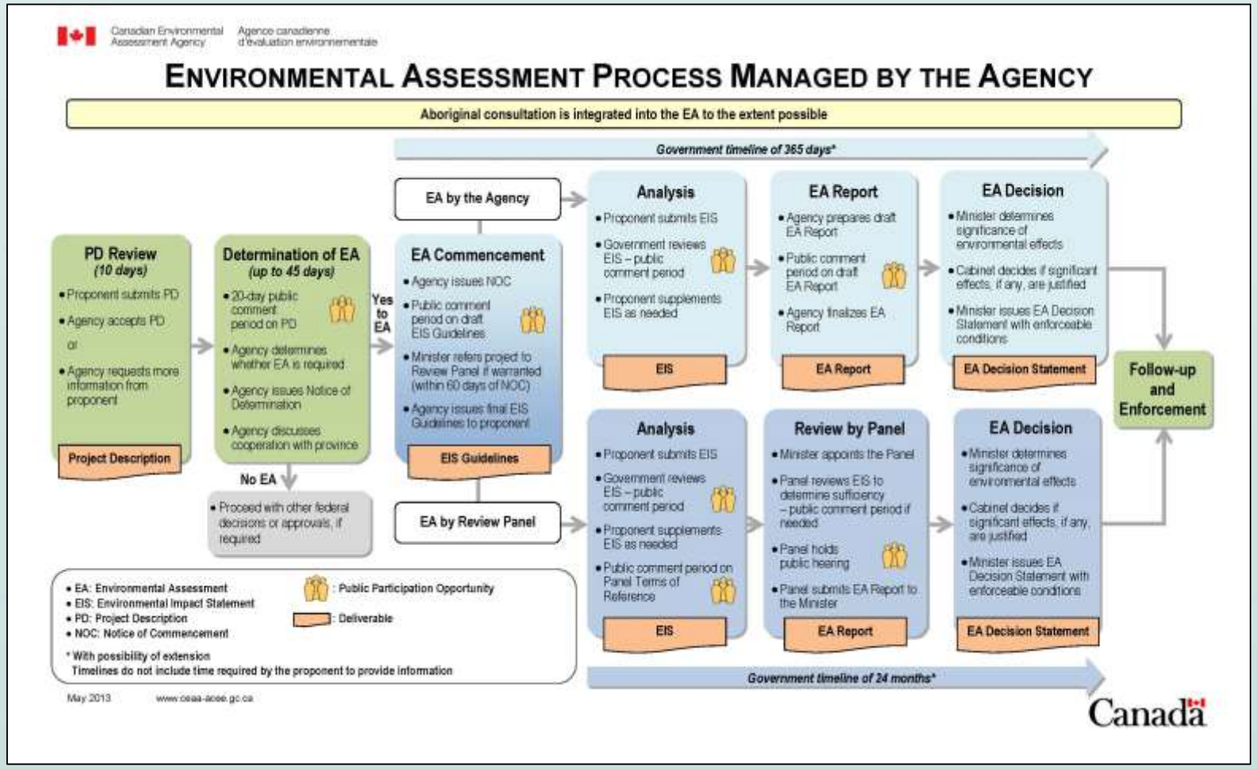
- Authorization is granted in the form of an Environment Act Licence

Canada – Canadian Environmental Assessment Agency (CEAA)

- Authorization is granted in the form of an Environmental Assessment Decision

Department of Fisheries and Oceans - Fisheries Authorizations

- Are specific to activities which may impact fish or fish habitat
- Required for work conducted in fish bearing waterways, including:
  - Bridges
  - Culverts
  - Breakwaters
  - Causeways



Opportunities for Public Participation

Participate in Public Engagement Activities, including:

- Public Information Sessions

Review and provide comment or feedback on project documents posted to public registries, including:

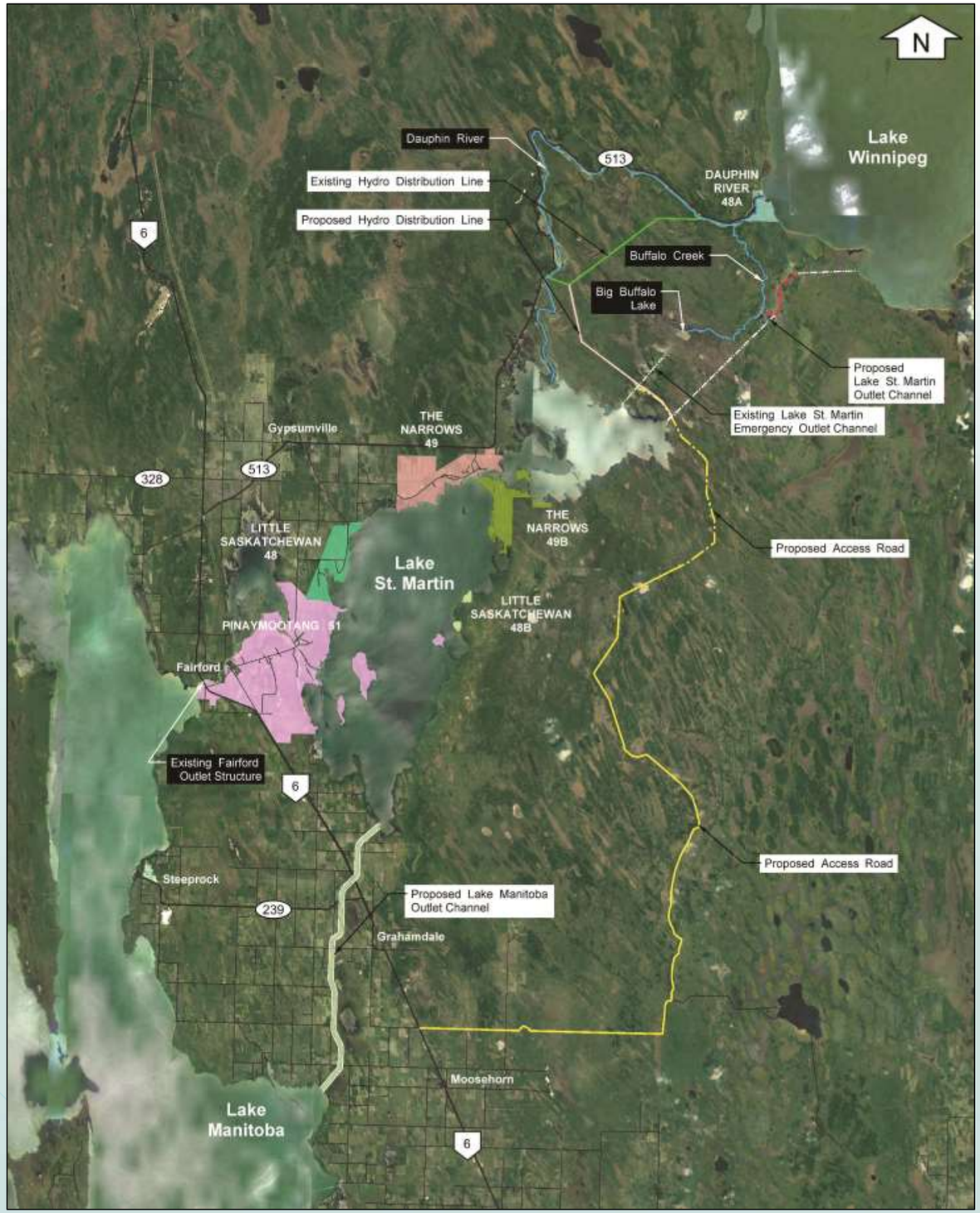
- Project Description
- Project EIS Guidelines
- Project Environmental Assessment Report
- CEAA Environmental Assessment Report

Manitoba

Canada Warbler

Red-headed Woodpecker

Bobolink



Golden-winged Warbler

Least Bittern

What's There Now?

Ecological Classification

- Four prominent land cover types were identified within the Regional Study Area (RSA) for the proposed LMOC: modified grassland, tilled cropland, marsh wetlands and aspen dominant hardwood stands.
- The RSA for the proposed LSMOC is largely rich fen with 'islands' of treed and shrubby sphagnum bogs and some upland mixedwood and coniferous forests on sandy moraine ridges
- Waterbodies in the RSA for LMOC include: Lake Manitoba, Watchorn Creek, Mercer Creek, Birch Creek, Lake St. Martin, Reed Lake, Clear Lake, Goodison Lake, Fairford River, Pineimuta Lake
- Waterbodies in the RSA for LSMOC include: Lake St. Martin, Bear Creek, Big Buffalo Lake, Little Buffalo Lake, Buffalo Creek, Dauphin River, Lake Manitoba



Traditional Use

- Six registered archeological sites are located within the RSA. Four are from the historic period and include fur trade and homestead influence. Two are from 350 to 2000 years ago and had stone tools and/or Native ceramics
- Area has low potential for archeological sites
- Historic record shows human occupation over the past 8000-7000 years
- Historic and ongoing resource harvesting in the RSA

KEY WILDLIFE SPECIES OBSERVED IN PROJECT AREA	
Group	**Key Species**
Ungulates	Moose
	Elk
Furbearers	American Marten
	Beaver
Ecologically Sensitive Wildlife Sites	Bat and snake hibernacula
	Terrestrial mammal dens (e.g. bears, wolves) rookeries
	Large stick nests, Nesting Colony
	Mineral licks
Migratory Birds	Forest/Grassland Bird SAR Species* (including barn swallow, bank swallow, bobolink, Canada warbler, common nighthawk, eastern whip-poor-will, eastern wood-pewee, golden-winged warbler, olive-sided flycatcher, peregrine falcon, red-headed woodpecker, short-eared owl, Sprague's pipit, rusty blackbird)
	Water Bird SAR* (including American white pelican, horned grebe, least bittern, piping plover, trumpeter swan, yellow rail, ducks and geese)
Herptiles	Northern Leopard Frog

Potential Environmental Impacts

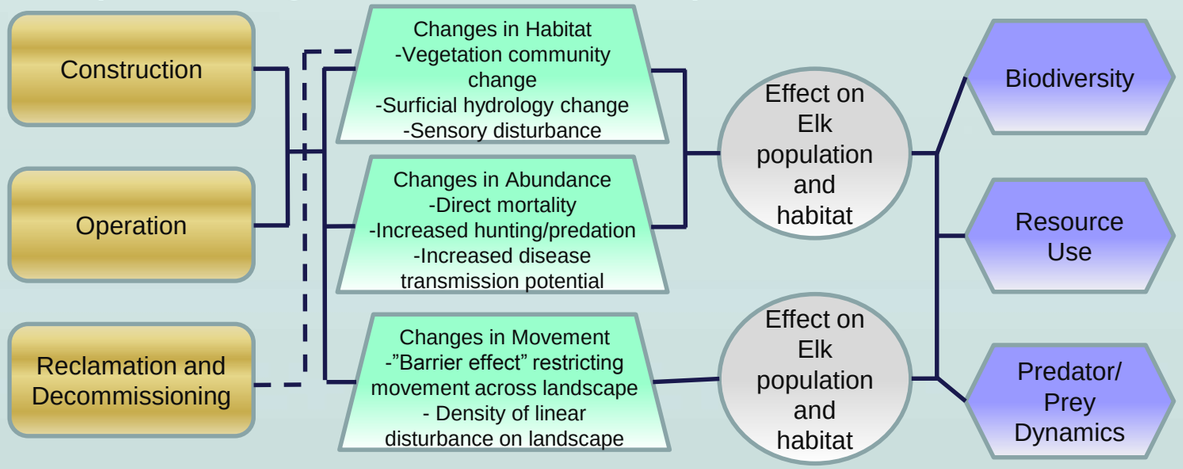
Example of Environmental Impacts

Environmental Component	Environmental Impacts	Example of Indicator
Air Quality, Noise and Climate	• Temporary emissions and dust from machinery • Temporary increases in noise from construction activities	• Exceedance of air quality guidelines • Exceedance of noise guidelines
Terrain, Topography, Geology and Soils	• Channel excavation will contribute to erosion and sedimentation • Soil compaction from heavy machinery • Spills from equipment	• Exceedance of air quality guidelines • Exceedance of noise guidelines
Vegetation	• Loss of native vegetation • Loss of rare plant habitat • Riparian flooding resulting in loss of vegetation and woody debris	• Habitat for plant species at risk
Surface Water	• Reduction in water quality (elevation in suspended solids in water) • Seepage between groundwater and surface water • Altered flows, greater mixing of waters in lakes	• Water volume withdrawals • Exceedance of water quality guidelines • Fish harvest statistics
Groundwater	• Blowout/Basal heave • Aquifer/well drawdown and associated wetland drainage • Contamination by surface water	• Well supply and drinking water quality • Wetland function
Fish and Fish Habitat	• Altered flows and reduced water quality could affect spawning • Fish may be attracted to outlet channels, rather than natural rivers • Loss of riparian areas for spawning	• White Sucker
Mammals	• Habitat loss/fragmentation/change • Mortality from vehicle collision or increased predation • Constraints to movement along the landscape, i.e. Barrier effect	• Moose • Elk
Birds	• Habitat loss/fragmentation/change • Mortality from vehicle collision or increased predation • Nest destruction	• Bobolink • Canada Warbler
Herptiles	• Habitat loss/fragmentation/change • Egg/larva loss from sedimentation	• Northern Leopard Frog
Resource Use	• Reduced opportunities for resource harvesting (fish, traditional plants, hunting, timber, trapping) • Visual impacts	• Fish harvest statistics • Fish spawning success

Example Mitigation Measures

- Environmental considerations at all stages of design
- Use of construction Best Management Practices (BMP)
- Pre-construction and construction monitoring to ensure effectiveness of BMPs
- Using timing windows for sensitive periods for wildlife, during which certain construction activities are prohibited/limited
- Using setback distances from wildlife habitat features
- Compensation/offsetting plan to replace some habitat lost to project

Example of Linkages for Environmental Impacts



What Wildlife have you seen in the Area?

Please circle locations on the maps

Manitoba

Elk

Elk - Notes

Moose

Moose - Notes

Wolf

Wolf – Notes

Red-headed Woodpecker

RHWO – Notes

Bobolink

Bobolink – Notes

Other Wildlife

Other Wildlife – Notes

What Wildlife have you seen in the Area?

Please circle locations on the maps

Manitoba

Elk

Elk - Notes

Moose

Moose - Notes

Wolf

Wolf – Notes

Marten

Marten – Notes

Other Wildlife

Other Wildlife – Notes

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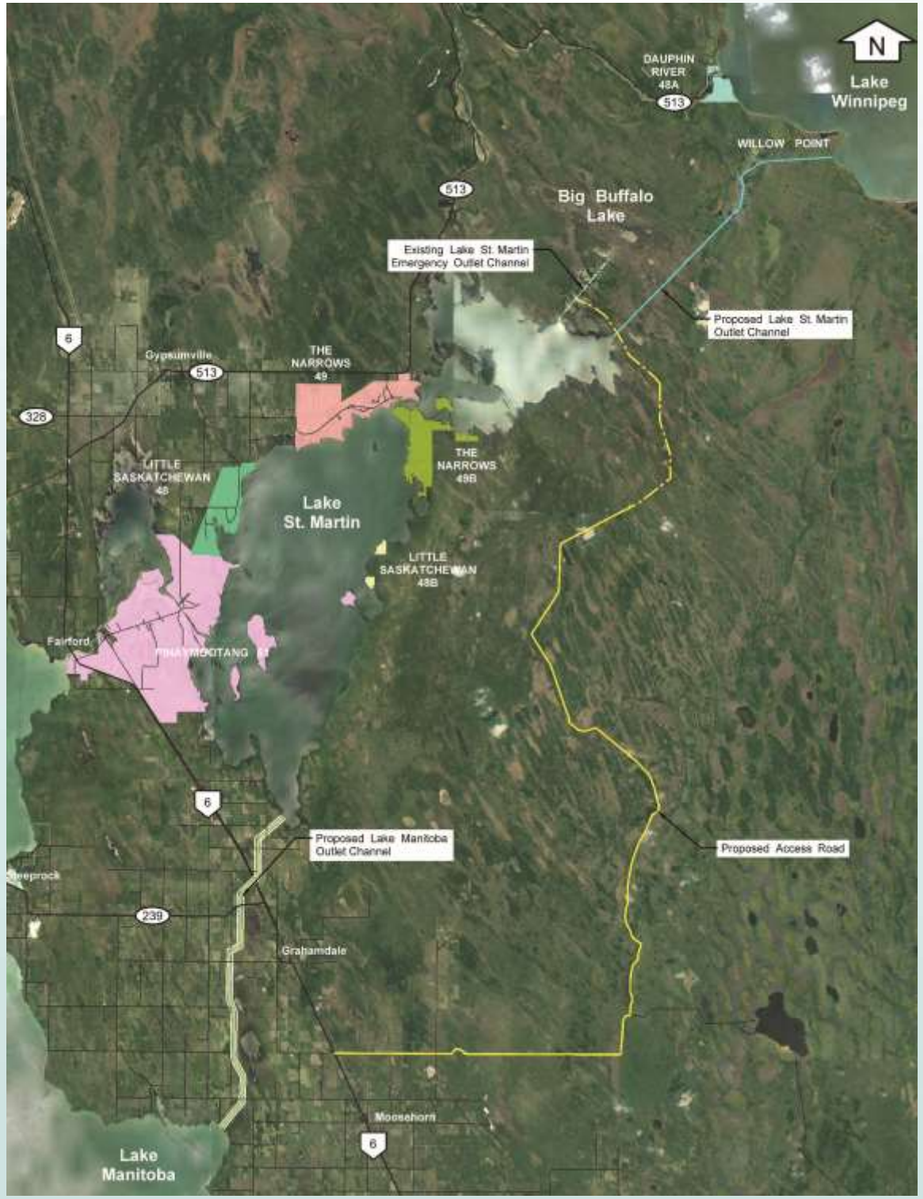

Other Wildlife – Notes