

**Highway 101 Twinning Three
Mile Plains to Falmouth
Environmental Assessment**

Environmental Assessment
Registration



Prepared for:
Nova Scotia Department of
Transportation and Infrastructure
Renewal
Johnston Building, 4th Floor
1672 Granville Street, PO Box 186
Halifax NS B3J 2N2

and

Nova Scotia Department of
Agriculture, Land Protection
PO Box 890
Truro, NS B2N 5G6

Prepared by:
Stantec Consulting Ltd.
102 – 40 Highfield Park Drive
Dartmouth NS B3A 0A3

File: 121414236

May 2017

This document includes only the Executive Summary of the EA Document.
The entire document can be found at [https://novascotia.ca/nse/ea/
highway-101-twinning-three-mile-plains-to-falmouth.asp](https://novascotia.ca/nse/ea/highway-101-twinning-three-mile-plains-to-falmouth.asp)

Executive Summary

Nova Scotia Transportation and Infrastructure Renewal (NSTIR) proposes the twinning and upgrading of the existing two-lane section of Highway 101 from Trunk 14 (Exit 5) at Three Mile Plains to an area 2.5 km west of the Falmouth Connector (Exit 7) in Hants County, Nova Scotia (the Project). As part of the twinning Project, NSTIR is partnering with Nova Scotia Department of Agriculture (NSDA) to upgrade an existing tidal gate structure (aboteau) on the Avon River at the Avon River causeway. The Project therefore involves the construction, operation and maintenance of approximately 9.5 km of two-lane controlled access highway to twin the existing Highway 101 and aboteau upgrade at the Avon River. The Project will be jointly funded by the provincial and federal governments. Construction is expected to take place over five years and could be initiated in the fall of 2017. It is anticipated that the system will be maintained and remain in operation indefinitely.

Highway 101 is part of the National Highway Core System, and stretches approximately 300 km from the Highway 102 interchange in Bedford to Starrs Road in Yarmouth. It provides a vital link serving the Annapolis Valley area and provides connections to provincial entry points at ferry terminals in both Digby and Yarmouth. Due to safety and performance concerns during the past twenty years, NSTIR has been preparing plans to complete a four-lane controlled access highway from Bedford to the Coldbrook interchange west of Kentville, a distance of about 91 km. By separating eastbound and westbound travel lanes, the potential for head-on collisions is decreased significantly, thereby decreasing risk of injuries and fatalities associated with these types of accidents. Highway 101 has been twinned from Highway 102 in Bedford to Three Mile Plains, as well as an approximately 11 km section from west of Falmouth to meet the 3 km pre-existing section of divided highway at the Avonport Exit 9 interchange. This currently proposed twinning Project will represent completion of about 67 km of continuous four-lane divided highway between Bedford and Hortonville, increasing safety and comfort for motorists travelling on Highway 101.

This Project is subject to provincial regulatory approval under the Nova Scotia *Environment Act*. This Environmental Assessment (EA) has been prepared to satisfy requirements for registration of a Class I Undertaking under the Environmental Assessment Regulations (undertaking disrupts more than two hectares of any wetland).

NSTIR has met with provincial and federal regulatory agencies, local municipal governments and community representatives, and the general public about this current Project, dating back to 2001. Since this time, NSTIR has also engaged with the Kwiilmu'kw Maw'klusuaqn Negotiation Office (KMNO), Millbrook First Nation, and Sipekne'katik First Nation to gain an understanding of Aboriginal issues and concerns and provide Project updates. In the fall of 2016, NSTIR initiated a community liaison committee (CLC) to facilitate ongoing Project communications with local stakeholders. The first meeting was convened on January 30, 2017.

HIGHWAY 101 TWINNING THREE MILE PLAINS TO FALMOUTH ENVIRONMENTAL ASSESSMENT

The EA focuses on Valued Components (VCs) which are components of the biophysical and socio-economic environments that, if altered by the Project, may be of concern to regulatory agencies, the Mi'kmaq of Nova Scotia, scientists, and/or the general public. Eight VCs have been selected for this assessment to focus the EA on the most important Project-environment interactions, including:

- Atmospheric Environment
- Groundwater Resources
- Aquatic Environment
- Vegetation
- Wetlands
- Wildlife and Wildlife Habitat
- Land Use
- Archaeological and Heritage Resources

The assessment includes an evaluation of the potential Project-related environmental effects for construction, operation and maintenance, and accidents and malfunctions. Potential Project-related effects from Project construction include direct and indirect effects to the terrestrial and aquatic environments through loss or alteration of habitat and/or mortality of wildlife species including species of conservation concern. Construction activities may also restrict or change access to lands and resources used by the community members and the general public. Adverse effects related to Project operations and maintenance activities are less prominent due to the ongoing operation and maintenance of the current Highway 101.

In general, potential adverse effects on these VCs will be short term and/or highly localized and can be effectively mitigated through technically and economically feasible methods recommended in this report. Mitigation, including best management practices, site-specific measures, and habitat compensation have been proposed to reduce or eliminate potentially adverse effects for each VC. With respect to the mitigation of effects on fish and fish habitat and wetlands, compensation to offset predicted losses is proposed in accordance with the *Fisheries Act* and Nova Scotia Wetland Conservation Policy, respectively. A significant component of aboiteau design will include mitigation efforts to meet fish passage requirements.

Follow-up and monitoring programs have been proposed to collect additional baseline information prior to construction, observe and measure changes in the environment and/or confirm effectiveness of mitigation and compensatory habitat restoration.

With the implementation of the proposed mitigation (including compensation) and monitoring, no significant adverse residual environmental effects are predicted for most VCs due to routine Project construction or operation and maintenance activities. However, residual environmental effects of the construction of the Project on wetlands are predicted to be significant. Although compensation will be provided by NSTIR to achieve no net loss, the direct and indirect alterations to salt marsh habitat, which is recognized as a Wetland of Special Significance (WSS) under the provincial Wetland Conservation Policy, represents a significant effect. However, NSE is expected to authorize this alteration of a WSS because the construction of the highway and

HIGHWAY 101 TWINNING THREE MILE PLAINS TO FALMOUTH ENVIRONMENTAL ASSESSMENT

aboiteau will provide necessary public function and the proposed compensation restores more WSS at several nearby locations than affected by the Project (2:1 compensation).

The main purpose of a 100 series highway network in Nova Scotia is the safe, convenient and efficient movement of large volumes of people and goods over long distances at high speeds while reducing negative economic, social and environmental impacts. This Project will provide benefit to the local region as well as the Province of Nova Scotia as it will (1) improve the current safety performance and level of service along this stretch of Highway 101; (2) sustain other public and private links (rail, active transport, telecommunications, and power) that have developed on the Avon River causeway over the past 50 years; and (3) protect communities, infrastructure, and agricultural land from anticipated climate-related changes in sea level, precipitation and storm surge.