

**In the matter of the
ENVIRONMENTAL ASSESSMENT ACT
S.B.C. 2002, c. 43
(Act)**

and

**in the matter of an
APPLICATION
for an
ENVIRONMENTAL ASSESSMENT CERTIFICATE
(Application)**

by

**The Ministry of Transportation
(Proponent)**

for the

***South Fraser Perimeter Road Project*
(Project)**

June 27, 2008

Recommendations of Executive Director

In accordance with the provisions of section 17(2)(b) and (c) of the *Environmental Assessment Act*, the Executive Director of the Environmental Assessment Office makes the recommendations contained in this submission, for the reasons indicated, in connection with the application by the Ministry of Transportation for an Environmental Assessment Certificate for the South Fraser Perimeter Road Project.

A. ISSUE

Decision by Ministers on the application for an Environmental Assessment Certificate by the Ministry of Transportation in connection with its proposal for the South Fraser Perimeter Road Project.

B. BACKGROUND

1. Proponent and Project Description

- The South Fraser Perimeter Road Project (Project) is a proposed new four-lane divided highway, with three intersections and five interchanges, on the south side of the Fraser River. The highway would begin at the existing Highway 17/ Deltaport Way intersection, and extend northeast along the south bank of the Fraser River through the municipalities of Delta and Surrey. It would connect with the existing Highways 99, 91, 1 and 15, and terminate just west of TransLink's Golden Ears Bridge crossing of the Fraser River.
- The proponent is the Ministry of Transportation and the Project is part of the Province's Gateway Program, a \$3 billion transportation strategy to revitalize the transportation networks and related infrastructure in the Lower Mainland.
- Estimated capital cost is \$1 billion consisting of \$300 million for property acquisition and \$700 million for construction costs. The Project will generate approximately 4,200 person years of employment, and contribute \$387M to the Provincial Gross Domestic Product. This estimate includes 200 person years of employment in program administration and oversight, and 4,000 of direct employment in construction and land acquisition.
- Construction would begin in the summer of 2008 and be completed by the end of 2012.
- The Proponent must also apply to the Agricultural Land Commission for permission for an exclusion to use Agricultural Land reserve land for the highway right-of-way. The application for an exclusion would be reviewed in accordance with the *Agricultural Land Commission Act* and the *Agricultural Land Reserve Use, Subdivision and Procedure Regulation*.
- The Project will also require approvals and authorizations under the *Land Act*, *Heritage Conservation Act*, and *Environmental Management Act*.
- The Project potentially impacts matters regulated by the federal government, including migratory birds and *Species at Risk Act* listed species.
- The Project constitutes a reviewable project pursuant to Part 8 of the *Reviewable Project Regulations* (B.C. Reg. 370/2002), as it involves the addition of greater than 2 lanes of paved highway over a continuous distance of greater than 20 km.
- The Project is subject to review under the *Canadian Environmental Assessment Act* because the Project requires permits under the *Navigable Waters Protection Act* and authorizations under the *Fisheries Act* and because Transport Canada proposes to commit \$365M in funding for the Project, subject to the outcome of the environmental assessment.

2. British Columbia Environmental Assessment Process

- The Proponent submitted the Application on September 25, 2006. Following an evaluation by the EAO, the Application was accepted for review on October 10, 2006 in compliance with the requirement in section 2 of the *Prescribed Time Limits Regulation* (B.C. Reg 372/2002) which requires that a decision be made within 30 days whether to accept an application as submitted.
- The formal assessment of the Application commenced on October 10, 2006. EAO conducted three public comment public periods during the Application review period consisting of:
 - a 60-day public comment period on the Application from October 19, 2006 to December 17, 2006;
 - a 30-day public comment period from April 20, 2007 to May 19, 2007 on five issue papers produced by EAO on air quality, noise, Burns Bog, agriculture and socio-community issues.
 - a 21-day public comment period from July 10, 2007 to July 31, 2007 on revised information from MoT regarding the assessment of air quality impacts and a revised assessment of cumulative environmental effects.
- During the first public comment period MoT held two open houses in Delta, two in Surrey and one in Ladner. Each open house was followed by a one-hour question-and-answer session with MoT staff, consultants and representatives from EAO.
- The Application was assessed by a Working Group, led by the EAO. Representatives of the following provincial and federal agencies, local governments and First Nations were invited to participate and/or were kept informed about the Project review throughout the assessment process:
 - Provincial Agencies
Agricultural Land Commission, Ministry of Agriculture and Lands, Integrated Land Management Bureau, Ministry of Community Services, Ministry of Economic Development, Ministry of Environment, Ministry of Tourism, Sports and the Arts, Ministry of Transportation and Vancouver Fraser Port Authority.
 - Federal Agencies
Canadian Environmental Assessment Agency, Transport Canada, Fisheries and Oceans Canada, Environment Canada (including Canadian Wildlife Service), Health Canada
 - Local Government
Metro Vancouver, Greater Vancouver Transportation Authority (TransLink), Fraser Health Authority, Corporation of Delta and City of Surrey.
 - First Nations
Katzie First Nation, Kwantlen First Nation, Kwikwetlem First Nation, Musqueam Indian Band, Semiahmoo First Nation, Tsawwassen First Nation, Qayqayt (New Westminster) Indian Band
- The assessment of the Application was completed on June 26, 2008 which was not within the 180-day time limit mandated under section 3 of the *Prescribed Time Limits Regulation*. Discussions between the Proponent and the working group, in particular on issues related to potential impacts to Burns Bog, continued beyond the 180 day time limit and eventually led to a request from the Proponent to suspend the time limits to enable the Proponent time to gather information and respond to Environment Canada and Transport Canada.
- Ministers have until August 11, 2008 to make a decision on the Application, unless an extension is ordered in accordance with section 24(4) of the Act.

3. Federal Process

- The Project is subject to review under the *BC Environmental Assessment Act* and the *Canadian Environmental Assessment Act*. In accordance with the *Canada – British Columbia Agreement*

on *Environmental Assessment Cooperation* (2004), a single harmonized review was completed to satisfy both the provincial and federal requirements with greater efficiency.

- The Project was subject to a screening level assessment under the *Canadian Environmental Assessment Act* and the Federal Notice of Commencement was posted on the Canadian Environmental Assessment Registry website on December 11, 2006.
- Transport Canada and Fisheries and Oceans Canada are the federal Responsible Authorities.
- The Responsible Authorities have completed their assessment and concluded that the Project is not likely to have significant adverse effects.

C. DISCUSSION

1. Potentially Significant Adverse Effects, Mitigation Measures and Proponent Commitments

The nature and scale of the proposed Project means that there are important implications for the region and the province in terms of not only environmental considerations but also economic, social, heritage and health considerations. As a result, the assessment process examined issues across a broad range of areas.

- Water Quality
- Hydrogeology
- Fish and Fish Habitat
- Wildlife and Vegetation
- Contaminated Sites
- Local and Regional Air Quality
- Noise and Vibration
- Burns Bog
- Agriculture
- Archaeology
- Socio-Community

Issues and concerns raised during the assessment by the public, First Nations, local governments and provincial and federal agencies were all considered. As a result of consultation and other facets of the assessment process, a number of core potential effects from the Project were identified. These effects are identified below, along with a description of the corresponding mitigation measures and proposed commitments which would be undertaken by the Proponent.

Issue / Effect	Resolution / Mitigation Measures	Assessment of Significance
Agriculture		
<u>Loss of agricultural land and agricultural productivity in the Agricultural Land Reserve</u>	Proponent commitments include: <ul style="list-style-type: none"> • Narrow the Project footprint where possible and optimize the use of existing rights-of-way to minimize the potential loss of agricultural land; • \$18 million in drainage and irrigation enhancements to increase the land area served and the variety of crops that can be grown; • \$10 million in new overpasses and installation of signals at four existing intersections to facilitate the movement and safety of farm traffic; • Policies and procedures developed under the <i>Transportation Act</i> and <i>Expropriation Act</i>, to ensure that each owner is treated fairly and reasonably in the property acquisition process and guide the determination of compensation. 	Effects to agricultural productivity from land loss can be mitigated by measures to enhance agricultural productivity. Effects to individual farmers can be mitigated and/or compensated. No significant adverse effects.

Issue / Effect	Resolution / Mitigation Measures	Assessment of Significance
Air Quality		
<p><u>Increased human exposure to particulate matter from dust during Project construction and operations</u></p> <p><u>Increased human exposure to contaminants from vehicle emissions during highway operations</u></p> <p><u>Increased GHG emissions due to Project operations</u></p>	<p>Proponent commitments include:</p> <ul style="list-style-type: none"> • Air Quality and Dust Control Plans for the construction phase of the Project. • Design and manage the Project to ensure optimum traffic flow. • Incorporate transportation demand management strategies, including transit routes, bicycle routes and integration with other transit systems; and manage road dust during operations. <p>• The Project will reduce traffic congestion</p> <ul style="list-style-type: none"> • Future conditions with the Project predict a general improvement in air quality over current conditions with a decrease in contaminant concentrations and fewer ambient objectives exceeded. • Future improvements in emission control technologies will lower individual vehicle emissions. <ul style="list-style-type: none"> • Increase in regional GHG emissions due to Gateway Program projects predicted to be less than 1%. • Future improvements in emission control technologies will lower individual vehicle emissions. • Design and manage the Project to ensure optimum traffic flow. 	<p>No significant adverse effects.</p>
Archaeology		
<p><u>Disturbance and/or loss of archaeological resources</u></p>	<ul style="list-style-type: none"> • Refined conceptual design to reduce footprint impacts on St. Mungo site. • Advance design, construction and operation of the Project in a way that avoids, or minimizes potential impacts to known archaeological sites, including Nottingham Farm, St. Mungo and Glenrose Cannery. • Site management plan to encourage preservation of surviving archaeological deposits at St. Mungo and Glenrose Cannery. • Archaeological mitigation program focused on intact archaeological deposits that includes systematic data recovery (excavation) and archaeological monitoring for the St. Mungo and Glenrose Cannery. • Comply with <i>Heritage Conservation Act</i> provisions. 	<p>No significant adverse effects.</p>
Burns Bog		
<p><u>Impacts to Bog hydrology and hydrochemistry from highway construction and operation</u></p>	<p>Proponent commitments include:</p> <ul style="list-style-type: none"> • Develop a water balance model and a drainage model to support the design, construction and operation of hydrology mitigation infrastructure. • Finalize an Air Quality Management Plan, in consultation with the appropriate agencies, prior to pre-loading activities around Burns Bog. 	<p>No significant adverse effects.</p>

Issue / Effect	Resolution / Mitigation Measures	Assessment of Significance
	<ul style="list-style-type: none"> Consult agencies to finalize construction and post-construction monitoring requirements related to Burns Bog. 	
Fish and Fish Habitat		
<u>Impacts to Fish and Fish Habitat</u>	<ul style="list-style-type: none"> Design refinements include alignment shifts and bridge crossings over the Delta ravines and Fraser Heights wetlands and alignment shifts. Fisheries Habitat Mitigation/Compensation Plan will achieve objectives of DFO's No-Net Loss Policy. Wildlife enhancement features will be incorporated in compensation designs where possible, to provide the maximum benefit to both fish and wildlife. 	No significant adverse effects.
Noise		
<u>Noise during Project construction</u> <u>Increased traffic noise during Project operations</u> <u>At one site near 136th Street in Bridgeview proposed standard mitigation may not completely reduce the impacts below the 'severe' threshold (ISO)</u>	<ul style="list-style-type: none"> Implement a Noise and Vibration Management Plan, including noise complaint protocol, for construction phase of Project. Specific measures to reduce noise <ul style="list-style-type: none"> Quiet pavement; Coordination of traffic control signals Tree planting and landscaping to offset visual/psychological effects Noise barriers Additional noise modelling and mitigation design during detailed design to minimize impacts in the area near 136th Street. Additional mitigation in Bridgeview area as Project moves to detailed design Apply the <i>Revised Noise Policy for Mitigating the Effects of Traffic Noise From freeways and Expressways</i> (MoT1993) 	No significant adverse effects.
Water Quality		
<u>Surface water quality and quantity impacts</u>	<ul style="list-style-type: none"> Surface Water Quality and Sediment Control Plan for the construction phase and Stormwater Management Plan for operations phase. Stormwater management infrastructure will help maintain or improve drainage and water quality conditions adjacent to the corridor. Proponent will monitor stormwater infrastructure to confirm that performance objectives are met. 	No significant adverse effects.

Wildlife and Vegetation		
<u>Impacts to Wildlife and Vegetation</u>	<ul style="list-style-type: none"> • Shift of the alignment to the west of the Crescent Slough avoids sensitive bog forest habitat and bridges over the Delta ravines and Fraser Heights wetlands reduce footprint impacts. • Wildlife and Habitat Management Plan for the construction phase and Habitat Compensation Plan for residual impacts. • Long term Wildlife and Vegetation Mitigation and Monitoring Plan to evaluate the effectiveness of mitigation measures. • Proponent will develop appropriate compensation measures where required. • Measures to avoid or lessen effects of the Project on species at risk and their critical habitat. • Mitigation and monitoring will be consistent with applicable recovery strategy and action plans. 	No significant adverse effects.

Based on the analysis in the Report and having regard to the mitigation measures, compensation and other commitments made by the Proponent (as listed in the Compendium of Commitments which are consolidated in Schedule [B] of the Certificate), the Report has concluded that there would be no significant adverse effects of an environmental, economic, social, heritage or health nature.

2. First Nations' Interests

- The Project is situated within the asserted traditional territories of the Katzie First Nation, Kwantlen First Nation, Kwikwetlem First Nation, Musqueam Indian Band, Semiahmoo First Nation, Tsawwassen First Nation, Qayqayt (New Westminster) Indian Band
- Much of the environment in which the Project alignment is proposed is agricultural or industrial in nature, with the exception of some adjacent upland communities in Delta (Ladner and portions of north Delta where the route parallels the shoreline of the Fraser River).
- MoT initiated consultations with First Nations at pre-Application and continued to consult with First Nations during the Application review stage to further identify potential Project-related impacts on the First Nations identified interests, and to attempt to design appropriate mitigation measures to address any such interests.
- EAO invited First Nations to participate in the screening of the Application and also invited First Nations' comment on MoT's proposed consultation activities as described in the Application. No comments were received.
- Throughout the environmental assessment process, EAO provided to the First Nations a copy of all relevant documents, including notification of the environmental assessment of the Project, draft Preliminary Design and Planning Reports (volumes 1 and 2), draft workplans for impact studies, draft public consultation work plan, draft Application Terms of Reference, MoT responses to draft impact studies, approved Application Terms of Reference, the Application and supporting documents and minutes from working group meetings.
- The Katzie, Kwikwetlem and the Musqueam submitted written comments on the Application and participated in working group discussions during application review and expressed interest in the fisheries and archaeological components of the Project.
- With respect to fisheries concerns, MoT will purchase sand and gravel to pre-load sections of the proposed alignment from commercially available sources and will not dredge the Fraser River. MoT

will also obtain input from First Nations on measures to mitigate impacts to fisheries and will work with First Nations to identify mutually agreeable opportunities to help advance the fisheries interests of the First Nations.

- Various archaeological activities were undertaken with the assistance and guidance of archaeologists chosen by Kwikwetlem, Musqueam and the Katzie.
- MoT will work cooperatively with the Musqueam Indian Band and other interested First Nations in developing a mutually acceptable site management plan to encourage the preservation of surviving archaeological deposits at St. Mungo and Glenrose Cannery through the ongoing protection and management of archaeological and related heritage resources during the planning, design, construction and operation phases of the Project.
- MoT will also involve First Nations in field programs for construction monitoring and systematic data recovery at St. Mungo and Glenrose Cannery.
- The Kwantlen First Nation has expressed the view that MoT must provide an economic accommodation to the Kwantlen, as part of the Gateway Program, for impacts from the existing Highway 1 and the Port Mann Bridge.
- EAO advised that while economic accommodation with the Kwantlen is not required in relation to the impacts of the Project, this does not preclude negotiation of economic impact agreements between MoT and First Nations.
- The Tsawwassen First Nation have indicated that there are important hunting, plant and material harvesting sites within Burns Bog. The Project does not directly impact Tsawwassen First Nation treaty lands and MoT has committed to work co-operatively with the Tsawwassen First Nation to maintain appropriate access to Burns Bog to facilitate the Tsawwassen First Nation's harvesting rights pursuant to the Tsawwassen Final Agreement.
- The natural conditions that produce the habitat, plants and berries important to First Nations exist in areas in the vicinity of the proposed Project and do provide locations for traditional gathering activities. There are adequate safeguards and commitments by the Proponent to prevent contamination of animals, plants and water. It is EAO's assessment that the proposed Project will not further significantly interfere with the practice of these activities.
- While there may be minor and temporary potential impacts from the proposed Project on the asserted or assumed Aboriginal rights of the identified First Nations, these impacts will be appropriately mitigated and managed through the commitments of the Proponent, as set out in the *Table of Commitments and Assurances*, such that they will not result in significant adverse effects on the current use of land and resources that First Nations have indicate are used for traditional purposes.

3. Position of Federal Agencies

- The Federal Government considers that the issues examined by its agencies have been or will be addressed through Project design changes, commitments and mitigation measures agreed to by the Proponent. Federal conclusions are included as Appendix 5 to the Environmental Assessment Report. Transport Canada and Fisheries and Oceans Canada have concluded that the Project is not likely to have significant adverse environmental effects.

4. Local Government

- Metro Vancouver and the City of Surrey have raised no objections to the Project.
- The Corporation of Delta prefers that MoT upgrade Highway 17 as an alternative to the current Project and has stated that the "tug of war" between agriculture and environment in the Burns Bog area could have been avoided if the upgrade to Highway 17 had been selected. The Corporation of Delta is not fully satisfied with the commitments made by MoT and wishes to see expanded commitments for tree planting, stormwater management, compliance with municipal

noise bylaws, mitigation for heritage effects and role for Delta in the review and approval of Project environmental management plans.

- The Corporation of Delta will participate in the Inter-Agency Environmental Review Committee to be established by MoT to facilitate environmental agency communication and review during post-certification stages of project development and implementation.
- MoT has committed to ongoing consultation with the Corporation of Delta.

5. Public Consultation

- The Proponent carried out a program of public consultation during both the pre-Application and Application review stages in local communities that met the requirements of the EAO.
- The Proponent held five open houses during the first public comment period. The most frequently expressed concerns at open houses related to local air quality, noise, local road access and/or egress, potential impacts to Burns Bog, wildlife habitats, property values and viewsapes.
- Some members of the public expressed concern that the 60-day public comment period was insufficient time to review and comment on an Application of over 3000 pages. EAO is satisfied that the comment period was a reasonable length of time and was supplemented by two additional comments periods, one on issues papers developed by EAO, and one on updated air quality modelling and a revised cumulative effects assessment submitted by MoT.
- MoT consulted with the agricultural community prior to and subsequent to the decision to shift a section of the alignment to the west of Crescent Slough.
- The Delta Farmer's Institute does not support the alignment shift because of the increased impact to agricultural land, but is satisfied with the agricultural enhancements proposed by MoT to drainage and irrigation and farm traffic access.
- MoT has committed to consult with the Delta Farmers' Institute and individual farm owners through all future stages of Project development, construction and operation, to ensure impacts to agricultural lands and operations are minimized where possible and appropriately addressed where impacts are unavoidable.
- Community associations in Bridgeview, Sunbury/Annieville and Fraser Heights are concerned about the potential for increased noise and decreased air quality in their respective communities and are not satisfied with the quality of the modelling done by MoT to assess the potential for noise and air quality effects.
- MoT will consult with local governments, stakeholders and the public during all stages of Project development.

D. CONCLUSIONS

The Environmental Assessment Office is satisfied that:

- the Assessment process has adequately identified and addressed the potential adverse environmental, economic, social, heritage and health effects of the Project, having regard to the conditions, the mitigation measures, and the compensation provisions set out in the Schedule to the draft Environmental Assessment Certificate;
- public consultation, and the distribution of information about the Project, has been adequately carried out by the Proponent; and
- the Crown has fulfilled its obligations for consultation and accommodation to First Nations relating to the issuance of an Environmental Assessment Certificate for the Project.

RECOMMENDATION:

The Executive Director recommends that an Environmental Assessment Certificate be issued to the Ministry of Transportation in connection with its proposal for South Fraser Perimeter Road Project. The recommendation to issue a Certificate is contingent on inclusion of the Proponent's written commitment to comply with all design and mitigation commitments set out in the attachments to the proposed Certificate.

Submitted by:

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Executive Director
Environmental Assessment Office