VEGETATION AND ECOLOGICAL COMMUNITIES

VOLUME 2, SECTION 13

The Environmental Impact Statement (EIS) details the environmental assessment undertaken for the Site C Clean Energy project. The EIS includes the project rationale, identifies potential effects and proposes measures to avoid or mitigate these effects. The EIS also describes the benefits Site C would provide for customers, Aboriginal groups, northern communities and the province as a whole.

ABOUT THE ASSESSMENT

Vegetation and ecological communities include terrestrial ecosystems, rare and sensitive ecological communities, and rare vascular and non-vascular plants. The assessment analyses the temporary and permanent loss and fragmentation of vegetation and ecological communities, including wetlands.

ASSESSMENT AREA

The local assessment area for vegetation and ecological communities is:

- the Site C project activity zone, buffered by an additional 1,000 metres
- downstream from the dam to the Alberta border, buffered by 1,000 metres on both the south and north banks of the Peace River

The regional assessment area includes most of the Peace lowlands and all project components.

SUMMARY OF POTENTIAL EFFECTS AND MITIGATION MEASURES

POTENTIAL EFFECTS	KEY MITIGATION MEASURES
Habitat alteration and fragmentation	• Place transmission towers and temporary roads away from wetlands and known rare plant occurrences, where feasible • Establish zones to protect known rare plant occurrences located adjacent to construction areas, where feasible • Implement construction activities in a manner that seeks to maintain the hydrology of adjacent wetlands, particularly where known rare plant occurrences are present • Implement measures to maintain existing hydrological patterns as much as possible if roads cannot avoid wetlands • Install culverts under access roads to maintain hydrological balance • Install sedimentation barriers as needed • Retain vegetation on steep, unstable slopes that would be highly susceptible to landslides if the vegetation was removed • Retain non-merchantable trees and vegetation in riparian areas within a 15 metre buffer zone from the high water mark, where feasible • Develop a wetland mitigation and compensation plan • Employ a hydrologist to assist with developing site-specific measures to the

Potential Effects	Key Mitigation Measures

	existing hydrological balance and wetland function during construction
	• Consider an experimental rare plant translocation program for suitable rare plant species found within reservoir and other areas where project components are certain to remove populations
	• Fund a compensation program that includes:
	  ○ A survey of habitat enhancement projects in the regional assessment area that might provide compensation for rare and sensitive habitats and protect occurrences of rare plants (e.g., wetlands). If suitable habitat enhancement projects can be found, BC Hydro will provide assistance (financial or in-kind) to the appropriate managing organization.
	  ○ Identification of areas that are under threat from development or in need of habitat enhancement. Where opportunities exist, BC Hydro will consider direct purchase – if offered for sale – and/or management of these lands to enhance or retain rare plant values. BC Hydro will also consider contributing to other protection options where direct purchase is not feasible.
	• Implement the following Environmental Management Plans:
	  ○ Air Quality Management
	  ○ Erosion Prevention and Sediment Control
	  ○ Fisheries and Aquatic Habitat Management
	  ○ Fuel Handling and Storage Management
	  ○ Soil Management Site Restoration and Re-Vegetation
	  ○ Vegetation and Invasive Plant Management

Key Findings

- The creation of the reservoir and other Site C project activities would alter and fragment some unique terrestrial ecosystems that include marl fen, tufa seeps, and old and mature riparian and floodplain forests. Occurrences of rare vascular and non-vascular plants would be lost.
- As a result of potential alteration and fragmentation of unique terrestrial ecosystems and loss of occurrences of vascular and non-vascular plant species at risk, a determination of significance has been made.

ABOUT THE SITE C CLEAN ENERGY PROJECT

Site C is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. Site C would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year – enough energy to power the equivalent of about 450,000 homes per year in B.C.

Site C is undergoing a cooperative environmental assessment by the Canadian Environmental Assessment Agency (CEA Agency) and the British Columbia Environmental Assessment Office (EAO). The environmental assessment process commenced in August 2011 and is anticipated to take approximately three years to complete.

FOR MORE INFORMATION visit bchydro.com/sitec

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