

Peace River Site C Hydro Project

Stage 2 - Environmental Studies

Study Outline: Peace River Wildlife Study (2008 – 2009)

Introduction

If the potential Site C project was to proceed, creation of the reservoir and additional transmission right-of-way clearing would impact wildlife and wildlife habitats. Habitat losses would occur predominantly due to the flooding of approximately 5,340 hectares of land to create the reservoir and increased clearing in the existing 76 kilometre transmission corridor. Downstream flows would not be appreciably different from current flows; therefore, substantive alteration to downstream habitat would not be expected. It is expected that downstream effects would be limited to localised biophysical changes related to timing of flow releases, temperature, sediment transport, and ice formation.

Study Objective

During Stage 2, Project Definition and Consultation, wildlife studies will continue to collect information on existing habitat type, distribution and value, and wildlife presence and use. This information will be compiled with information from wildlife and wildlife habitat studies conducted in 2005 and 2006. In 2008 and 2009 the program will gather baseline data to address species-specific information gaps with a focus on species at risk.

This information will be used during Stage 2 to identify key species (Valued Ecosystem Components) that could be used to assess potential wildlife effects, should the project proceed to Stage 3, Regulatory – Environmental Assessment.

Scope of Work

General Study Scope:

- Compile data from 2005 and 2006 field surveys to provide a single database
- Review habitat associations for existing species and identify data gaps
- Update species at risk information and note changes to the at-risk status of individual species
- Develop habitat suitability ratings for new species at risk (e.g. species designated at risk in 2007 and 2008) and confirm their reliability through habitat assessment and wildlife inventory surveys
- Develop an approach for assessing the potential effects of Site C on wildlife species presence, distribution and abundance and habitat use

- Implement the field program necessary to continue to gather baseline data that would be used to support an assessment of project effects in Stage 3, if the project was to proceed to the next stage
- Determine the presence and relative abundance, where possible, of target taxa within the project areas
- Confirm expected habitat relationships using additional wildlife habitat assessments and inventories
- Determine the presence of rare plants and rare plant communities within the project area
- Identify potential field program adjustments and additional data requirements at the end of the 2008/2009 field season. Develop field programs to fill the data gaps in 2009 or later
- Provide information as available on wildlife and vegetation resources (for example cultural, harvest, and consumptive uses) identified as important to First Nations and stakeholders
- Establish a preliminary list of focal species or Valued Ecosystem Components (VECs) including species designated as at-risk federally or provincially, Identified Wildlife, regionally important wildlife, wildlife important to First Nations and harvested species
- Update the focal species list by removing VECs that are unlikely to be in the study area, based on a lack of habitat and/or regional distribution
- Identify need for and begin to collect information related to the area outside of the potential project area, in order to establish a preliminary context for the regional importance and rarity of species and habitats

***Species-specific Field Program:
2008 Components***

- Complete breeding bird surveys within the area of the potential Site C project. Surveys will be focussed on riparian habitats and will document the presence of red/blue listed passerines
- Inventory the butterfly taxa of conservation concern (red and blue-listed species) and species noted as incidental records to address data gaps from the 2006 field season
- Conduct reconnaissance level surveys of dragonflies. These surveys will inform future survey design
- Re-survey the river corridor to update raptor nest location/activity status
- Conduct monthly waterfowl surveys between May and October 2008, to determine the waterfowl species present and numbers. Data will also be collected on use of the river by breeding waterfowl (species composition and number of breeding pair)
- Determine herptile/amphibian habitat characteristics and species presence/absence or relative abundance with focus on the Western toad (*Bufo Boreas*) breeding habitats

- Conduct surveys for nesting owls in the area of the potential Site C project
- Conduct winter ungulate surveys to update data on ungulate populations within the potential project area and winter range use
- Conduct review of garter snake life cycle requirements and develop a model to assess habits within the potential Site C project area.

2009 Components

- Conduct a follow-up furbearer study in order to adequately census the Peace corridor for fisher, and conduct a cavity-bearing tree survey to characterize fisher habitat trees.
- Conduct winter ungulate counts and assess use of the Moberly Winter Range
- Conduct winter and spring/summer stone sheep surveys along the south bank of the potential Site C reservoir
- Conduct bat surveys to estimate the relative abundance and habitat usage (roosting and breeding) in the potential project area (paying particular attention to northern long-eared myotis) and to identify alternate suitable habitats outside of the river corridor (2009 surveys)

Study Area

The study area extends from Hudson's Hope to the Alberta border, encompassing the core Peace River corridor (62,000 ha) and the transmission line corridor. The core river corridor refers to the entire river valley including the floodplain and the ascending slopes extending approximately 2 km on either side of the Peace River.

The transmission line study area follows the existing transmission lines between the Peace Canyon Dam switchyard and the location of the potential Site C dam on the south side of the river, along a linear corridor approximately 76 km long. The study area extends for 500m on either side of the existing transmission line corridor.

Wildlife habitat will be mapped, quantified and qualified using the following provincial standard methodologies: Terrestrial Ecosystem Mapping (TEM) and Wildlife Habitat Ratings (WHR). Assessment of potential project effects would be conducted in Stage 3, should the project proceed, using a map-based – Geographic Information System (GIS) environment. GIS allows the effects of various scenarios to be easily compared and visually displayed.

All survey methodologies will be based on appropriate Provincial Resources and Information and Standards Committee (RISC) standards. Where survey methodologies do not exist, methodologies used will be derived from current literature and existing best practices documents.

Reporting

Wildlife study reports will be available at the end of Stage 2.