SITE C CLEAN ENERGY PROJECT

MONTHLY FIELD STUDIES SUMMARY

April 2011

The Site C Clean Energy Project (Site C) is now in Stage 3, the environmental and regulatory review phase, which will include an independent environmental assessment. Stage 3 work includes conducting environmental and engineering field studies on and around the Peace River between the Williston Reservoir and the Alberta border. BC Hydro anticipates formally entering the environmental assessment process in spring 2011 with the submission of a Project Description Report to the provincial and federal environmental assessment agencies.

An overview of studies that will be taking place in April 2011 is below. Additional study activities may occur; notice of these studies will be posted at www.bchydro.com/sitec.

Overview
Wildlife Studies
♦ Garter Snake Hibernacula Study
♦ Avian Study Program
♦ Fisher Study Program
♦ Bat Hibernacula Study
♦ Mule Deer, Moose and Elk Study Program
Physical Environment Studies
♦ Geomorphology and Sediment Transport Studies
♦ Noise Monitoring
♦ Climate and Air Quality Monitoring
Geotechnical Investigations
♦ Danger Tree Assessment on the South Bank of the Proposed Dam Site
♦ Danger Tree Clearing on the South Bank of the Proposed Dam Site
♦ Shoreline Surface Investigations
♦ Condition Assessment of Adit on the North Bank

Some field studies may require access to public and private land. BC Hydro will obtain permission before accessing private property.

Field study updates are available at **www.bchydro.com/sitec** and in the Community Consultation offices in Fort St. John and Hudson's Hope.

For further information, please contact:
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OTHER BC HYDRO ACTIVITIES

- Ongoing, regular BC Hydro work may also be taking place on the Peace River and tributaries.
- This work is in addition to the Site C field study activities outlined here and is related to BC Hydro's Peace River water license requirements program or other operations work.
- For more information, please visit: www.bchydro.com/planning_regulatory/water_use_planning/northern_interior.html.

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BC hydro FOR GENERATIONS

April 2011

Study Name	Description	Timing
Wildlife Studies – Garter Snake Hibernacula Study	BC Hydro is conducting a study to gain a better understanding of the winter hibernacula of garter snakes in the proposed Site C project area. Ground surveys will be conducted in an area that extends from the Peace Canyon Dam east to the Alberta border, encompassing the core Peace River corridor. Access will be primarily by road and foot, but a riverboat may be required to access some portions of the south bank of the river where there are no roads to the specific locations.	April – early May 2011
Wildlife Studies – Avian Study Program	BC Hydro will be continuing to conduct avian field studies, initiated in 2010, within and adjacent to the Peace River valley between Hudson's Hope and the Alberta border. The objectives of the studies are to gather data on the presence and habitat use of select bird species both within the proposed Site C project area and the region. Data will be collected for northern goshawk, broad-winged hawk, owls, grouse, marsh birds, songbirds and swallows through species-specific surveys. Helicopter based surveys for conspicuous raptor stick nests will also be conducted. Work will include ground based surveys (boat, foot and/or vehicle based) which will be completed using a combination of call playback surveys, point counts and nest searches.	March - September 2011

April 2011

Study Name	Description	Timing
Wildlife Studies – Fisher Study Program	BC Hydro is conducting a study to further the understanding of fisher habitat use and movement patterns in and adjacent to the Peace River Valley. The study area extends from the Peace Canyon Dam to the confluence of the Pine and Peace Rivers on both sides of the Peace River. Fishers are members of the weasel family. They are about 60 cm in length and weigh 3 to 5 kg (6 to 11 lbs). Animals that have been fitted with radio-transmitters will be located monthly, via fixed-wing aircraft flights. Weekly locations will be obtained during ground visits during the breeding season to identify den sites (April through June). Weekly locations will also be obtained all year in some areas.	December 2010 to April 2013 *Tracking of instrumented animals will take place between January 2011 and April 2013*
Wildlife Studies – Bat Hibernacula Study	BC Hydro is conducting a bat hibernacula study. The purpose of the study is to document the presence of bat hibernacula within and outside the proposed Site C reservoir area. The work will be conducted between the location of the proposed Site C project and the Alberta border, and other potential sites in the surrounding area. Acoustic monitoring at potential hibernacula will occur during periods of warm weather in the winter months of 2010 and 2011. Field crew access will be by vehicle and foot.	April 2011 *Ongoing studies.*

April 2011

Study Name	Description	Timing
Wildlife Studies – Mule Deer, Moose and Elk Study Program	BC Hydro is conducting a mule deer, moose and elk study in the Peace River area from Hudson's Hope to the B.C. – Alberta border. The purpose of the study is to further the understanding of mule deer, moose and elk habitat use and movement patterns in the Peace River region. Monitoring and habitat data collection began in mid-February 2010 and will continue for up to 24 months. Animals will be located using a combination of ground based telemetry and fixed wing telemetry flights. Flights are scheduled for the first and last week of the month (weather dependent). Ground-based locating of animals occurs during both the first and last week of the month. Between **February and April 2011**, BC Hydro, with the assistance of the Ministry of Natural Resource Operations, will be leading the redeployment of eight GPS collars on mule deer, moose and elk and 10 VHF collars on mule deer. Additional GPS collars that become available during these months will also be redeployed. Animals will be captured using either aerial net gunning or ground based drop net.	Phase 2 monitoring will occur from February 2010 to winter 2012. *Re-deployment of collars will occur between February and April 2011.*

April 2011

Study Name	Description	Timing
Physical Environment Studies – Geomorphology and Sediment Transport Studies	BC Hydro is continuing geomorphology and sediment transport studies started in 2010. These studies will characterize baseline river geomorphology, or shape of the river channels, and sediment transport rates at sites along the Peace River and its tributaries. They will be used to assess the potential effects of the Site C project on river geomorphology, and specifically, potential changes in water turbidity, fish habitat and areas of erosion or deposition. Suspended sediment gauging stations, including turbidity sensors anchored to the river bed with a cable running up the river bank to data loggers housed in a metal cases, will be re-installed at four of the locations established in 2010 (Peace River, Pine River, Halfway River and Farrell Creek). At the same time, similar equipment and housing will be installed at two additional sites, one on the Peace River, above the Moberly River, and one on the Moberly River. Installation of equipment at the six sites is planned for April 2011. Once installed, there will be regular site visits between April and October 2011 to collect data, check equipment and perform maintenance. Field crew access will be by boat and foot.	April – October 2011 *Installation of equipment at the six sites will take place in April 2011.*
Physical Environment Studies – Noise Monitoring	BC Hydro is initiating a noise monitoring study. The purpose of the study is to provide baseline measurements of noise levels, which are representative of noise levels near the proposed Site C dam and will be used to assess the potential effects of the project on noise levels in the area.	April 2011

April 2011

Study Name	Description	Timing
	BC Hydro will set-up temporary noise monitoring equipment at approximately 10 to 15 locations in the Peace River Valley near the proposed Site C dam location, between Fort St. John and Hudson's Hope, to monitor daytime and night time noise levels over a 24 hour period. This work is anticipated to occur over a 10 day period. Field crew access will be by vehicle and foot.	
Physical Environment Studies - Climate & Air Quality Monitoring in the Peace River Valley	BC Hydro is collecting climate and air quality data from eight monitoring stations on private and BC Hydro owned land between Hudson's Hope and Old Fort, south of Fort St. John. Information on various climate parameters will be gathered, including: air temperature, humidity, wind speed and direction, fog frequency and density, and precipitation. Monitoring of particulate matter (mixture of solid particles and liquid droplets in the air) will be conducted at Old Fort and Halfway River. This data will be used to establish baseline conditions and to inform the effects assessment of the Site C project on in-valley climate and air quality in the area. Stations are visited regularly to retrieve data. Access to the monitoring stations is by vehicle and foot.	April 2011 *Ongoing monitoring from February 2009.*
Geotechnical Investigations – Danger Tree Assessment on the South Bank of the Proposed Dam Site	BC Hydro is conducting a danger tree assessment for trees located on the south bank at the proposed dam site. In accordance with WorkSafeBC regulations, trees that may pose a hazard to workers accessing the area must be identified and made safe by limbing, topping or cutting the tree down.	April 2011

April 2011

Study Name	Description	Timing
	The assessment will take approximately two – four weeks and is part of 2011 geotechnical field work planning. Field crew access for assessment work is expected to be by vehicle.	
Danger Tree Clearing on the South Bank of the Proposed Dam Site	BC Hydro is required to remove some trees in order to clear access routes and work areas to allow safe access for geotechnical investigations. In addition to the clearing of trees and in accordance with WorkSafeBC regulations, any identified danger trees (trees identified as prone to falling) will also be removed to ensure a safe work zone. The trees are being removed now to ensure that birds are able to select other nearby trees as nesting sites to avoid the three-month bird nesting window that begins on May 1, 2011. A tree assessment, archaeological overview and an environmental impact assessment have been completed for the access routes and work areas being cleared. Equipment and personnel will be mobilized by road and boat.	

April 2011

Study Name	Description	Timing
Geotechnical Investigations – Shoreline Surface Investigations	BC Hydro is initiating geotechnical investigations along the proposed reservoir slopes to gather more information about shoreline conditions. This program consists of surface inspections, subsurface investigations and the installation and monitoring of geotechnical instruments on both private and Crown land. Surface investigations will include: • Recording any signs of settlement or downslope movement on the ground surface; • Taking photographs, showing existing site conditions for project records; • Inspecting river banks to confirm geology and topography through surface observations and collection of small samples of rock and soil; • Inspecting steep rock bluffs, where present; • Recording any signs of seepage and groundwater conditions; and • Determining if additional drilling or testing is warranted based on surface inspection. The study area for these geotechnical investigations includes the north bank of the proposed reservoir from several kilometres upstream of Hudson's Hope to between Wilder and Tea Creek, and sites on the south bank opposite the area between Lynx Creek and Bear Flat. Personnel, supplies and equipment will be mobilized by helicopter and truck.	April – June 2011

April 2011

Study Name	Description	Timing
Condition Assessment of Adit on North Bank	BC Hydro will be conducting drilling investigations into an existing adit in order to perform water quality testing. The drilling will take place for 10 hours per day and the work will occur for approximately 10 days. Downhole cameras and sampling equipment will be used to obtain information and collect water samples. A track mounted drill rig, track mounted support vehicle and snow clearing equipment will be used during the course of the investigations. Access to the site will be through existing roads on the north bank of the Peace River.	April 2011

Note: Access to public and private land may be required in order to complete study work. BC Hydro will obtain permission from land owners and provide notification to BC Hydro leaseholders before entry onto private or leased lands.