

## MONTHLY FIELD STUDIES SUMMARY

### November 2014

BC Hydro is continuing to conduct environmental and engineering field studies on and around the Peace River between the Williston Reservoir and the Alberta border to inform detailed mitigation and monitoring planning.

The Site C project received environmental approval from the federal and provincial governments in October 2014. The project requires an investment decision by the Province and regulatory permits and authorizations before it can proceed to construction.

This notice provides a list of field work planned for November 2014. Helicopters may be required for some of this work. BC Hydro will obtain permits, and complete environmental management plans and archeological assessments as required.

Overview
<b>Environment Studies</b>
<ul style="list-style-type: none"> <li>• Jackfish Lake Moose and Elk Monitoring Program</li> <li>• Peace River Turbidity and Suspended Sediment Monitoring</li> <li>• Climate and Air Quality Monitoring</li> </ul>
<b>Engineering Investigations</b>
<ul style="list-style-type: none"> <li>• Traffic Counts</li> <li>• Distribution Line Site Inspections</li> <li>• Geotechnical Investigations and Soil Resistivity Testing Along Transmission Right of Way</li> <li>• Dam Site Investigations</li> <li>• Visual Inspections for Environmental and Archaeological Assessments</li> <li>• Instrumentation Monitoring</li> </ul>

Current and previous field study activities are available at [www.sitecproject.com/news-and-information/field-study-notice](http://www.sitecproject.com/news-and-information/field-study-notice) and in the Community Consultation offices in Fort St. John and in the Pearkes Centre in Hudson's Hope.

Regular and ongoing BC Hydro work may also be taking place on the Peace River and tributaries related to BC Hydro's Peace River water licence requirements or other operations work.

For further information, please contact:  
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Study Name	Description	Timing
<p><b>Environment Studies – Jackfish Lake Moose and Elk Monitoring Program</b></p>	<p>BC Hydro is conducting a moose and elk monitoring study on the south bank of the Peace River, around the Jackfish Lake Road area, between the Peace River and Chetwynd, and in the area of the transmission corridor right-of-way.</p> <p>The first phase of the study took place between winter 2012 and spring 2013, and involved the capture and outfitting of 32 moose and elk with GPS collars. An additional 12 animals were captured in the winter of 2014.</p> <p>Phase II involves tracking collared animals for up to two years, and phase III, the final phase, will involve removing the collars from the study animals following the monitoring period. Ground based track surveys will also be conducted to document road crossings.</p>	<p>December 2012 – April 2015</p> <p><i>Phase II, tracking collared animals, occurs between May 2013 and April 2015.</i></p>
<p><b>Environment Studies – Peace River Turbidity and Suspended Sediment Monitoring</b></p>	<p>BC Hydro is continuing the collection of baseline turbidity and suspended sediment data in the Peace River to inform the evaluation of potential effects of project construction on water quality as it relates to fish habitat and municipal/ industrial water supplies.</p> <p>In 2014, BC Hydro will continue maintenance and operation of six turbidity monitoring stations located on either river bank both upstream and downstream of the Site C dam site, as well as just upstream of the town of Taylor and at the Spectra water intake.</p> <p>A service trip was conducted prior to the spring freshet to clean the sensors, replace batteries, perform a calibration check, and collect sediment samples. Additional service and sampling trips will be conducted as required throughout the year.</p> <p>Field crew access will be by boat and foot.</p>	<p>April – December 2014</p>
<p><b>Environment Studies – Climate &amp; Air Quality Monitoring</b></p>	<p>BC Hydro is collecting climate and air quality data from monitoring stations on private and BC Hydro owned land between Hudson’s Hope and Old Fort, south of Fort St. John.</p> <p>Information on various climate parameters is being</p>	<p>Ongoing monitoring from February 2009.</p>

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	<p>gathered, including: air temperature, humidity, wind speed and direction, fog frequency and density, snow depth and precipitation. Monitoring of particulate matter (mixture of solid particles and liquid droplets in the air) is being conducted at Old Fort, Halfway River and 85<sup>th</sup> Avenue.</p> <p>These data were used to establish baseline conditions that informed the effects assessment of the Site C project on in-valley climate and air quality in the area. BC Hydro is continuing to collect the data to verify actual changes should the project be built and to forecast periods of high tributary inflows for construction planning.</p> <p>BC Hydro also monitors climate within the Peace River watershed in order to forecast periods of high tributary inflows for construction planning.</p> <p>Stations are visited regularly to retrieve data and for maintenance. Access to the monitoring stations is by vehicle, foot and helicopter.</p>	
<p><b>Engineering Investigations – Traffic Counts</b></p>	<p>During the months of October and November, BC Hydro is conducting traffic counts at key intersections in Fort St. John, Taylor, Hudson’s Hope and Chetwynd to establish current levels of traffic volume.</p> <p>Video recording equipment will be mounted on utility poles or signal poles at 19 locations to collect vehicle turning data.</p> <p>There will be no disruption to traffic or traffic operations during this activity.</p>	<p>October – December 2014</p>
<p><b>Engineering Investigations – Distribution Line Site Inspections</b></p>	<p>BC Hydro is continuing with site inspections along existing distribution lines that run from the Fort St. John substation on 81 Avenue to the location for the proposed Site C dam to obtain information for proposed distribution lines upgrades to meet the increased need for electricity in the area of the dam site.</p> <p>The inspections will occur on the distribution lines, which run along the following roads:</p>	<p>November 2014</p>

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	<ul style="list-style-type: none"> <li>• In the area of 86 Street and 87 Streets, between the Alaska Hwy and 81 Avenue</li> <li>• In the area of 81 Avenue, between 86 Street and 89a Street</li> <li>• 81 Avenue, between 89a Street and 100 Street (265 Rd)</li> <li>• 98 Street, between 81 Avenue and 85 Avenue</li> <li>• 100 Street (265 Rd), between 81 and 85 Avenue</li> <li>• 85 Avenue, between 98 Street and Old Fort Road</li> <li>• Old Fort Road, between 85 Avenue and 240 Road</li> <li>• 240 Road, between Old Fort Road and 269 Road</li> <li>• 269 Road, south of 240 Road to the end of the existing road</li> </ul> <p>Engineers will walk the routes of the distribution lines to take photographs of existing overhead distribution lines, assess ground conditions, and gather measurements for determining spacing for poles.</p>	
<p><b>Engineering Investigations - Geotechnical Investigations and Soil Resistivity Testing Along Transmission Right of Way</b></p>	<p>BC Hydro is conducting geotechnical investigations and soil resistivity testing on the south bank of the Peace River starting at Peace Canyon dam, following the existing BC Hydro 138 kV transmission line right-of-way, for approximately 77 km to the north-east.</p> <p>The work is to investigate the proposed 500 kV transmission tower foundation locations for the design of the 500 kV transmission lines, which would run from Peace Canyon dam to the substation on the south bank of the Site C dam site.</p> <p>Contractors will be using an auger to drill holes up to 250 mm in diameter. Cuttings generated from the auger will be used to backfill the holes upon completion.</p> <p>To maximize safety and efficiency, it is anticipated that a low and slow flying helicopter will be used for</p>	<p>July – December 2014</p>

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	<p>aerial soil resistivity testing along the transmission line.</p> <p>At select locations, soil resistivity testing will also be carried out to provide information for design of the transmission line grounding system. Resistivity testing measures how much the soil resists the flow of electricity. Work includes inserting a series of 1" diameter metallic test probes into the ground and applying a test current.</p> <p>Visual inspections along the existing transmission line right-of-way will also be conducted to obtain information for proposed VHF installations.</p> <p>BC Hydro will obtain the necessary permissions before assessment work is performed.</p>	
<p><b>Engineering Investigations – Dam Site Investigations</b></p>	<p>BC Hydro is continuing the following engineering investigations at the proposed dam site area during the winter months:</p> <ul style="list-style-type: none"> <li>• Site inspections</li> <li>• Knapweed remediation</li> </ul> <p><b>Site inspections</b> or visual surveys will be completed on the north and south banks at the proposed dam site, the Moberly River area, along the transmission line right of way, and the Wuthrich and West Pine quarries. These surveys will be conducted periodically over the winter months. Engineers will be confirming topography and terrain, and taking measurements and photographs. Data collected will assist with planning and permit preparations.</p> <p>A <b>knapweed remediation</b> program will be conducted on the north bank in areas with infestations. The program will include using equipment to remove vegetation and relocating contaminated soil to an area on the north bank where it will be covered with clean fill to stop the knapweed from germinating.</p> <p><b>Other investigations</b> such as water sampling, remediation work, potential contaminated site investigations and road maintenance work may be conducted as required.</p>	<p>November – December 2014</p>

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	<p>Engineering investigations will be occurring on both private and Crown land.</p> <p>Access to the site will be through existing roads on the north and south bank of the Peace River; and boats will be used to transport crews and supplies across the river.</p> <p>Helicopters will also be used periodically to access the dam site during the winter months.</p>	
<p><b>Engineering Investigations – Visual Inspections for Environmental and Archaeological Assessments</b></p>	<p>BC Hydro is conducting visual inspections of the dam site area, including the right bank terrace and Septimus Siding, and the proposed location of the temporary and permanent substations, to assist with planning and permit preparations to support future field investigations.</p> <p>Work will include archaeological and environmental investigations and assessments of proposed work areas. Field crews will also be traversing the areas on foot. Work may include taking measurements and photographs.</p>	<p>May - November 2014</p>
<p><b>Engineering Investigations – Instrumentation Monitoring</b></p>	<p>BC Hydro is continuing instrumentation monitoring at the proposed dam site and along the reservoir shoreline.</p> <p>There are approximately 80 sites throughout the reservoir area where geotechnical instruments are installed.</p> <p>These sites are visited approximately every three to six months throughout the year for reading and maintenance.</p> <p>Access to the sites will be by vehicle, foot and helicopter.</p>	<p>February – November 2014</p>

*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. BC Hydro will adhere to seasonal road restrictions.*