

## SITE C FIELD WORK FOR 2017

*Throughout the construction period, BC Hydro will continue to conduct environmental and engineering field work on and around the Peace River between the Williston Reservoir and the Alberta border to inform construction plans as well as mitigation and monitoring programs.*

This notice provides a list of field work that is planned to occur during 2017. This notice will be updated as new work is confirmed and will be available online at: [www.sitecproject.com/news-and-information/field-study-notice](http://www.sitecproject.com/news-and-information/field-study-notice).

BC Hydro will obtain permits, and complete environmental management plans and archaeological assessments, as required. Helicopters may be required for some of this work.

Other non-Site C related 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.

To learn about Site C construction activities, the anticipated duration of work and potential impacts or to sign up for bi-weekly construction updates go to [www.sitecproject.com](http://www.sitecproject.com).

For further information, please contact **Kate O'Neil, Community Relations** at 250-785-3415.

The following pages include a summary of field study work currently underway or planned:

<b>Environment Work:</b>
<b>Climate and Air Quality Monitoring</b>
BC Hydro is continuing the collection of climate and air quality data in real time from monitoring stations between Hudson's Hope and the community of Old Fort, south of Fort St. John. This work includes monthly visits for maintenance.
<b>Water and Sediment Quality Monitoring</b>
BC Hydro is continuing to conduct Peace River surface water, groundwater, and sediment monitoring and sampling in the area of the Site C project. This work is to assess the effects on water quality as it relates to fish and fish habitat, and municipal/industrial water supplies.
<b>Peace River Turbidity and Suspended Sediment Monitoring</b>
BC Hydro is continuing the collection of baseline turbidity in real time 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.
<b>Peace River Bull Trout Spawning Assessment</b>
BC Hydro will assess the timing, duration, distribution, and intensity of Bull Trout spawning in known spawning locations in the Halfway River watershed through aerial and snorkel surveys. A tag detection system and resistivity fish counters will be used to ground-truth estimates of spawn timing,

duration, and intensity generated using the aerial and snorkel surveys. This work started in 2016 and will happen annually during the months of August, September and October.

### **Fish Population Indexing Survey**

BC Hydro will monitor tributary fish populations' responses to the project to provide measures of fish abundance and distribution in representative index sections of the Peace River and tributaries including Maurice and Lynx creeks as well as Moberly and Halfway rivers. This work started in 2016 and will occur annually during the months of July, August, and September.

### **Fish Stranding Monitoring Program**

BC Hydro will assess fish stranding risk in the diversion head pond and Peace River downstream of the dam site. This work started in 2016 and will occur annually during the months of May through October.

### **Fish Food Organisms Monitoring**

BC Hydro will assess the effects of Site C reservoir formation on the production of fish food organisms through collection of baseline information in the Peace River as well as Williston and Dinosaur reservoirs in 2017 and 2018.

### **Tributary Mitigation Opportunities Evaluation**

BC Hydro will identify fish habitat enhancement opportunities through habitat assessment in Peace River tributaries including Maurice and Cache creeks and the Halfway, Moberly, Beatton and Kiskatinaw rivers during the summer in 2017 and 2018.

### **Beatton River Arctic Grayling Status Assessment**

BC Hydro will monitor Arctic Grayling in the Beatton River to provide abundance and density estimates during the summer in 2017 and 2018.

### **Small Fish Translocation Monitoring**

BC Hydro will monitor small-fish species populations in the Peace River to determine the effects of the Project on genetic structure, movement, and genetic exchange of these species in 2018 and 2021.

### **Peace River Fish Habitat Enhancement Monitoring Program**

BC Hydro will monitor the effectiveness of Peace River fish habitat enhancement measures near the dam site construction area to confirm suitability of habitat for fish during the summer months in 2017 and 2018.

### Avian Surveys

BC Hydro will be conducting avian surveys along the Peace River between Hudson's Hope and the Alberta border and at natural wetlands in the project area between the transmission line right-of-way and the Peace River and areas adjacent to the Peace River between the dam site and the Alberta border. Surveys will be conducted from the ground and air. Trucks, all-terrain vehicles, helicopters, fixed-wing aircraft and boats may be used. Surveys will begin in late February/early March and will be conducted through October.

### Wetland Surveys

BC Hydro will continue to conduct wetland surveys along the transmission line and at potential mitigation sites. Surveys will be conducted using a combination of foot and all-terrain vehicle access. Surveys will be conducted May through August.

### Pre-Construction Rare Plant Surveys

BC Hydro will be conducting rare plant surveys along the Highway 29 realignments and the transmission line. Surveys will be conducted using a combination of foot and all-terrain vehicles. Surveys will be conducted July through September.

### Regional Rare Plant Surveys

BC Hydro will be conducting rare plant surveys in the Peace Region, outside of the project area. The surveys will begin in August and will target 20 rare plant species. Work will be conducted using a combination of foot, all-terrain vehicles and quads. Work will be conducted July through September.

### Rare Plant Translocation

BC Hydro will be initiating its rare plant translocation program. In 2017, surveys will be conducted along the Peace River between Hudson's Hope and the Alberta border. Material (e.g., seeds, cuttings) needed to grow plants targeted for translocation will be collected and rare plants may be translocated.

### Bald Eagle Nest Surveys

BC Hydro will conduct Bald Eagle nest surveys along the Peace River and large lakes adjacent to the Project area. The surveys will be conducted using a low-flying helicopter over the Peace River and its major tributaries from Hudson's Hope to the B.C./Alberta border. The surveys will take place between February and August.

### Bald Eagle Nest Platforms Installation

BC Hydro will install nesting platforms to mitigate the removal of Bald Eagle nests within project construction areas. Platform sites will be adjacent to the tree line or at the edge of openings near to the Peace River and future reservoir outside the erosion impact line. Platforms will be placed to avoid

interference with agricultural land use. During project construction approximately 38 platforms will be installed.

### **Bat Roost Boxes Installation**

BC Hydro will install bat roost boxes to mitigate the removal of summer roosting habitat within the project footprint. Roost boxes will be installed around the reservoir outside of the erosion impact line. Boxes will be placed to avoid interference with agricultural land use. During project construction approximately 120 bat roost boxes will be installed.

### **Artificial Snake Hibernacula Installation**

BC Hydro will install artificial snake hibernacula to mitigate the loss of hibernating habitat within the project footprint. Hibernacula will be installed around the reservoir outside of the erosion impact line. During project construction up to 30 artificial snake hibernacula boxes will be installed.

### **Fisher Den Boxes and Coarse Woody Debris Piles Installation**

BC Hydro will install fisher den boxes and coarse woody debris piles on the south bank adjacent to areas affected by project construction.

### **Nest Boxes Installation**

BC Hydro will install nest boxes for a range of cavity-nesting species to mitigate the removal of trees with cavities within the project footprint. Boxes will be installed around the reservoir outside of the erosion impact line. Boxes will be placed to avoid interference with agricultural land use.

### **Wildlife and Vegetation Mitigation Surveys**

BC Hydro will be conducting various wildlife and vegetation surveys throughout the Site C project area to inform detailed mitigation planning.

Surveys will be conducted on Crown, BC Hydro-owned and private lands, once permissions to access have been received. During the surveys, the field crew will walk throughout the property recording the physical attributes of the site, observations of target species and taking photographs. The field crew will access properties by vehicle, all-terrain vehicles and foot; boats will be used to access locations along the Peace River.

### **Heritage Assessments**

Throughout the project area, BC Hydro will be continuing to complete archaeological impact assessments, systematic data recovery and other mitigation as required. As construction work continues, surface inspections or concurrent monitoring post ground disturbance of protected archaeology sites will be performed as required. This would also include responding to any unexpected discoveries (Chance Finds) during construction.

### Engineering Work:

#### Transmission Line Corridor

BC Hydro will continue geotechnical investigations on the transmission line corridor. Work will include both sub-surface investigations and the use of instrumentation and monitoring equipment. Contractors will be using Cone Penetration Testing (CPT) equipment to insert an approximately 2.5 inch steel shaft equipped with instrumentation as well as auger drills. Test pitting is also planned along the transmission line corridor. Material removed by test pitting is anticipated to be used to back fill the pits upon completion. This work is anticipated to be completed between January and March 2017. Instrumentation may be required and left in place. Some helicopter work will be required.

Transmission tower staking will also be carried out in the summer and/or fall of 2017.

#### Highway 29 Investigations

BC Hydro is conducting geotechnical investigations on the Highway 29 re-alignments at Halfway River, Farrell Creek East, Farrell Creek, Dry Creek, Lynx Creek and Bear Flat/Cache Creek. Work will include surveys as well as sub-surface investigations, and may include minor brushing of necessary access routes. As this work can be completed during both winter and summer, this work will be ongoing throughout 2017.

Investigations for potential construction materials may be conducted at Halfway River and Bear Flat/Cache Creek, along the proposed highway alignment as well as other potential sources in the vicinity. This work will include using a backhoe or excavator to dig exploratory test pits.

Subsurface investigations will include using a truck-mounted rotary drill and an excavator to dig exploratory test pits along the alignment.

#### Telecommunications

BC Hydro will be installing at least one temporary VHF radio transmitter on the transmission right-of-way. One transmitter will be installed near Del Rio Pit Road, which may include the installation of a wood pole. A second transmitter may be installed further west, at a location to be determined. This work will be completed between January and March 2017.

#### Instrumentation Installation and Monitoring

BC Hydro will be installing new instruments, further automating key instruments, and monitoring all existing instruments along the reservoir shoreline. There are approximately 80 sites throughout the reservoir area where geotechnical instruments are installed. Sites will be accessed in the spring, summer and fall for reading and maintenance. Three new instruments will be drilled in 2017 to further enhance monitoring capability. Two will be accessed by helicopter and one will be accessed by a rubber-tire drill rig. To maximize safety and efficiency, a helicopter will be used to access all sites on the south bank and some sites on the north bank.

### Portage Mountain

Engineering investigations will be carried out at Portage Mountain. Work will include the development of a new access road, test blasting for construction material and sorting and stockpiling. Work will occur throughout 2017, commencing in spring.

### Site Inspections

BC Hydro will be continuing with site inspections and visual surveys on the north and south banks of the Peace River at the dam site, the Moberly River area, along the transmission line right-of-way, Portage Mountain, Wuthrich and West Pine quarries and the 85th avenue industrial lands. These site inspections will be conducted periodically. Engineers will be confirming topography, reading instrumentation and taking photographs. Data collected will assist with planning and permit preparations.

*Note: Access to public and private land may be required in order to complete field work. BC Hydro will request 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.*