

Site C Project Wildlife Program

October 2019

Wildlife mitigation and monitoring

BC Hydro has established a number of aquatic and land-based wildlife programs aimed at avoiding, reducing or off-setting the potential impacts of the Site C project on fish and their habitat, land-based species and their habitat, and rare vegetation.

BC Hydro's extensive range of environmental programs integrate feedback from Indigenous groups, the public and over 200 requirements from the provincial and federal approvals.

Most environmental programs span the entire project construction phase and well beyond into dam operations. They involve both mitigation measures during construction to avoid or reduce impacts, as well as species-specific monitoring programs. These monitoring programs will provide valuable insight into how the area was used by wildlife prior to dam construction and operation compared to post-construction, in order to inform future programs.

This information sheet outlines just some of the environmental programs specific to land-based wildlife programs. More details on these programs and others are available at siteproject.com.



Example of the 120 bat box habitats being installed

Mitigations

BC Hydro has a number of mitigation measures to avoid, reduce, or compensate for the potential effects that could result from the project. These include:

- Avoiding environmentally sensitive areas through work scheduling, redesign or modifications to approach where possible;
- Creating new wetlands and restoring historically impacted wetlands;
- Rebuilding areas impacted by the project that do not need to be permanently disturbed;
- Building wildlife habitat structures, like nest boxes for cavity nesting birds, denning boxes for fishers, roosting boxes for bats, nesting platforms for eagles, and dens for gartersnakes;
- Protecting and enhancing habitat for migratory birds;
- Planting and working to spread rare plant species of conservation concern.



Monitoring 60 eagle nests



Installing 38 eagle nest platforms

Monitoring programs

- Wetland monitoring
- Waterbird monitoring
- Songbird monitoring
- Woodpecker monitoring
- Common nighthawk monitoring
- Snake and amphibian downstream monitoring
- Monitoring bat habitat use near Portage Mountain Quarry
- Bald eagle nest productivity monitoring
- Ground nesting raptor monitoring
- Migratory bird nest monitoring
- Use of wildlife habitat structures

Wildlife and habitat monitoring





Canada Warbler
Photo: William H Majoros



American Widgeon
Photo: Donna Dewhurst



Transmission line

Downstream

Legend

- Dam Site Area
- Bat Habitat Monitoring near Portage Mountain Quarry
- Bald Eagle Nest Productivity and Ground Nesting Raptor Monitoring
- Road
- Snake and Toad Downstream Monitoring
- Songbird Study Area
- Highway
- Songbird Study Area and Waterbird Monitoring
- Railway
- Waterbird Monitoring



Myotis lucifugus



Western Toad
Photo: Floyd Bertrand



- 20,000 bat calls are recorded each year
- Detectors are recording up to 350 bat calls per night

- 60 bald eagle nests are being monitored
- 3,953 breeding bird surveys completed since 2006
- 39,460 birds observed during breeding bird surveys

- 1,617 km of waterbird surveys along the Peace River
- 25,147 individual waterbirds from 42 species were observed in 2017

- 292 rare plant sites located
- Rare plant surveys have occurred over nine years
- 1,825 km have been walked as part of the surveys

Completed

- 96 nest boxes for cavity nesting birds installed
- Three bald eagle nest platforms installed
- 56 woody debris piles for fishers' foraging and winter rest areas
- 120 bat boxes
- 10 fisher den boxes

Upcoming

- 164 additional nest boxes
- 35 additional eagle nest platforms
- Seven snake dens
- Woody debris piles for fishers along south bank of Peace River
- 78 fisher den boxes



2019 field work season—planned studies

Waterbird monitoring

Waterbird monitoring takes place every year in the spring and fall to see if there are any changes in the numbers of different species of shorebirds, marsh birds and waterfowl during migration in the Peace River Valley. Water-based surveys are conducted along the Peace River between Hudson's Hope and the Alberta border, and ground-based surveys are conducted along the transmission line right-of-way.

Songbird and woodpecker monitoring

Songbirds and woodpeckers are monitored each breeding season (May to July) to see if there are changes in their numbers and locations due to the project, and to better understand their habitat. Surveys are done through counts by human observers. Songbird and woodpecker monitoring focuses on areas that will be impacted by the project, such as along the transmission line, and in the Peace River Valley.

Common nighthawk monitoring

The common nighthawk is a migratory bird of national conservation concern, due to their declining numbers. Monitoring takes place every summer to see if the project is affecting the species' numbers and locations. Surveys are done mainly by recording units because the bird is most active during dawn and dusk. Common nighthawk surveys take place in areas that will be impacted by the reservoir.

Ground nesting raptor monitoring

Northern harrier and short-eared owl are the two ground nesting raptor species that may be affected by the project. Ground nesting raptors are monitored in cleared areas of the future reservoir to see if reservoir filling is likely to affect them. Monitoring takes place with ground-based surveys three times a year.

Snake and amphibian downstream monitoring

Snake and amphibian monitoring is taking place along islands and the banks of the Peace River between the Site C dam and the Beatton River. The goal is to see if there are changes to the numbers and locations of these two groups downstream of the dam. Monitoring involves visual surveys and environmental sampling for amphibians at wetlands, and the inspection of nearby artificial cover objects placed for gartersnakes. During construction, snake and amphibian downstream monitoring will be conducted until 2020.

Monitoring bat habitat use near Portage Mountain Quarry

Bat activity monitoring is taking place near identified hibernacula (habitat) and potential roost sites near Portage Mountain Quarry. This is being done to see if there are changes in how the bats use these areas due to quarry operations. Monitoring uses detectors and visual observations near potential roost sites.

Bald eagle nest productivity monitoring

Bald eagle nests near the future reservoir are being monitored to identify the number of nests, and to see how the nests are functioning based on the number of chicks hatched. This information will help BC Hydro to understand if there are changes in bald eagle nest productivity due to the project, once new nests are set up on around the reservoir. Monitoring is done by helicopter three times a year.