

# Wildlife Species

Woodfibre LNG Limited is committed to building a project that is right for Squamish and the region, and that includes environmental stewardship.

## TERRESTRIAL (LAND) BIRDS

The Application considers the effects of the Project on terrestrial (land) birds in **Section 5.12 Avifauna**. Birds provide important ecological functions, including seed dispersal, pollination, decomposition, and nutrient deposition. They also provide wildlife viewing opportunities for local tourism.

Six representative species were chosen for assessing the effects of the Project on terrestrial birds: bald eagle, osprey, western screech-owl, barn swallow, band-tailed pigeon, and olive-sided flycatcher.

The Project has potential to affect birds through changes in habitat availability, light, and noise conditions, and in mortality rates due to interactions with Project infrastructure. After Project design considerations and mitigation measures are applied, the Project is not likely to result in a significant adverse residual effect to any of the representative species.

## MARINE BIRDS

The Application considers the effects of the Project on marine birds in **Section 5.17 Marine Birds**. Marine birds are species that depend on marine and coastal habitat for one or more of their life requisites. The coast of BC is an important migratory corridor for millions of marine birds, and many colonial breeding marine birds that occur in BC do not breed anywhere else in Canada.

The Project has potential to affect marine birds through changes to water quality, habitat and food availability, light and noise conditions, and through collisions with onshore infrastructure and marine vessels. After Project design considerations and mitigation measures are applied, the potential for Project-related effects to marine birds is expected to be reduced to a level that is not likely to be significant.

## AT-RISK BATS

The Application assesses the potential effects of the Project on at-risk bats, including little brown myotis and Keen's myotis, in **Section 5.13 At-Risk Bat Species**. Bats may roost in existing buildings within the Project area and forage over the terrestrial and marine environments. Increases in ambient sound levels and artificial light at night due to the Project may alter bat foraging behaviour and habitat use. Project design and mitigation measures will reduce the potential effects of the Project on at-risk bat species. After mitigation, there are not likely to be significant adverse Project-related effects to at-risk bats.

## AMPHIBIANS

The Application assesses the potential effects of the Project on amphibians in **Section 5.14 Amphibians**. These species include coastal tailed frog, western toad, and northern red-legged frog.

The Project has the potential to affect these amphibians through changes in habitat availability, changes in water quality within breeding habitat, and through direct mortality. The Project design and mitigation measures are expected to be effective in reducing the potential effects of the Project on amphibians, and there are not likely to be significant adverse Project-related effects to amphibians.



## GRIZZLY BEAR AND ROOSEVELT ELK

Grizzly bear was initially included as a valued component for the Project, not because adverse effects from the Project were expected, but because of the regulatory importance of grizzly bear, and as a result of other environmental assessments of projects on Howe Sound. However, based on discussions with the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) and the EAO, grizzly bear was excluded as a valued component. Mitigation measures for black bear (perimeter fencing and management of wildlife-human conflict), combined with the low anticipated potential for grizzly bear to occur in the Project area, provided sufficient rationale for not including grizzly bear as a valued component for the Project. The potential for grizzly bear populations to experience long-term Project-related effects is considered negligible.

Ungulates, including Roosevelt Elk, are not included as a valued component for the Project. The potential for ungulate populations to experience long-term Project-related effects is considered negligible. Black-tailed deer are a common species in the Squamish Forest District and may occur within adjacent habitats. Roosevelt elk have been introduced into the Clowhom drainage by MFLNRO. Elk also occur in the nearby McNab Creek drainage and have been sighted in the vicinity of the Project area. However, because the Project would be on a brownfield site, and current site conditions offer low habitat value, it is expected that ungulates will not be affected by Project development. Mitigation measures such as perimeter fencing will further reduce the potential for ungulate populations to be adversely affected by the Project.

## MITIGATION MEASURES

Woodfibre LNG Limited is incorporating measures into the Project design, and will also implement measures during the Project construction and operation phases to minimize the potential Project-related adverse effects on terrestrial wildlife. These measures are described below.

**Design Mitigation:** To reduce the potential interaction with birds, bats, and amphibians, Woodfibre LNG Limited is:

- Incorporating the Green Zone into the site layout to protect, restore, and enhance the riparian area, and re-establishing vegetation along the lower segment of Mill Creek (outside of the Green Zone).
- Designing the site layout to avoid the riparian area along Mill Creek, outside of the Green Zone, and the mature forest adjacent to it.
- Minimizing the area of glass used on buildings to reduce bird strikes.
- Installing blue or green lighting rather than red or white lighting (subject to safety requirements) to reduce attractiveness to birds.
- Installing directional lighting to minimize offsite spill and glare. Lighting will be controlled from the control room, and only the amount of lighting required for tasks being performed will be used. Safety lights will be permanently lit while non-essential lights will be illuminated as needed.

**Develop a Wildlife Management Plan:** Woodfibre LNG Limited will develop and implement this plan prior to starting the construction phase. The Wildlife Management Plan will include pre-construction surveys and wildlife monitoring protocols.

**Retain Snags and Wildlife Trees:** Woodfibre LNG Limited will retain wildlife habitat features, including features that are important for birds and bats, such as snags and wildlife trees, wherever it is possible and safe to do so. Before site clearing, the wildlife habitat features to be retained will be demarcated with no-go fencing and signage.

**Avoid Clearing during Nesting and Maternity Roosting Season:** Where possible, Woodfibre LNG Limited will avoid clearing vegetation during nesting seasons. Pre-clearing surveys will be undertaken if windows of least risk cannot be maintained. Appropriate, species-specific setback buffers will be established and maintained around any confirmed or suspected active nests and maternity roosts.

**Install Nesting Structures:** Woodfibre LNG Limited will install western screech-owl and barn swallow nesting structures, and bat boxes at suitable locations, once Project construction is complete.

**Salvage and Replace Coarse Woody Debris:** Woodfibre LNG Limited will salvage coarse woody debris that has been removed from upland areas to facilitate Project construction, and will relocate it along linear features (transmission line and pipeline corridors) and within the Green Zone, when Project construction is finished.