

Wildlife Avoidance and Mitigation for ROW Maintenance Standard Operating Procedure

This Standard Operating Procedure (SOP) applies to all project personnel and contractors involved in Right-of-Way (ROW) Clearing activities. Its purpose is to provide measures to minimize impacts to wildlife and wildlife habitat in areas where Right-of-Way (ROW) Clearing activities may be occurring at Northwest Territories Power Corporation (NTPC) Hydroelectric Facilities. **This SOP provides wildlife management practices to be used in accordance with the following Federal and Territorial Acts and Regulations for wildlife avoidance and mitigation:**

- *Species at Risk Act* (Government of Canada 2002)
- *Species at Risk Act* (GNWT 2009)
- *Migratory Birds Convention Act, 1994* (Government of Canada 1994)
- *Northwest Territories Wildlife Act* (GNWT 2013)

In addition, this SOP may also be used in conjunction with the mitigation measures as outlined in the site-specific management plans for the NTPC Hydroelectric Facilities Land Use Permits and/or Water Licences. These include the waste management plans, spill contingency plans, erosion and sediment control plans, and wildlife management and reclamation plans

Affected Wildlife and Wildlife Habitat:

- Common wildlife that may be encountered within the ROW are provided in Table 1.

Table 1: Common wildlife that may be encountered within the ROW

Common Name	Scientific Name	NWT General Status ¹	Federal Species at Risk Act Listing ²	Committee on the Status of Endangered Wildlife in Canada (COSEWIC) ³
Black bear	<i>Ursus americanus</i>	-	-	Not At Risk
Barren-ground Caribou	<i>Rangifer tarandus groenlandicus</i>	At Risk	Threatened	Threatened
Fox	<i>Vulpes spp.</i>	-	Not At Risk	Not At Risk
Moose	<i>Alces americanus</i>	-	Not At Risk	Not At Risk
Snowshoe hare	<i>Lepus americanus</i>	-	Not At Risk	Not At Risk
Canadian lynx	<i>Lynx canadensis</i>	-	Not At Risk	Not At Risk
Grey wolf	<i>Canis lupus</i>	-	Not At Risk	Not At Risk
Little brown myotis	<i>Myotis lucifugus</i>	At Risk	Endangered	Endangered
Wolverine	<i>Gulo</i>	Sensitive	Special Concern	Special Concern
Wood bison	<i>Bos bison athabasca</i>	At Risk	Threatened	Special Concern

¹ <https://www.nwt-species-at-risk.ca/CMA/SarList>

² <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>

³ <https://www.cosewic.ca/index.php/en-ca/>

- Common birds and nesting habitat structures that may be encountered within the ROW include, but are not limited to:
 - Ground Nesting Birds: Killdeers, Common Nighthawk, Bank Swallows;
 - Aquatic Bird Nests including: Ducks, Geese, Loons, Cranes, Terns;
 - Raptor Nests: Osprey, Eagles, Falcons, Short-eared Owl; and,
 - Others including: Swallows (Bank, Barn and Harris's), Lesser Yellowlegs, Olive-sided Flycatcher, Yellow Rail, Rusty Blackbird

Examples of common nesting and denning structures:

Wildlife Avoidance and Mitigation for ROW Maintenance Standard Operating Procedure



Active Common Nighthawk Nest.



Active Killdeer Nest.



Active Loon Nest.



Active Osprey Nest.



Example of Wolverine Den.



Example of Bear Den.

Sensitive Periods for Wildlife:

- **Nesting season for migratory birds is from May 1 to August 15.** Some species may fall outside the general nesting period, therefore it is important to consult nesting calendars and determine risk to encounter nests on a case-by-case basis. Regional nesting periods for Migratory Birds can be found here: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/>
- Known periods of sensitivity for caribou, moose, bison and black bear:
 - Boreal and Barren Ground Caribou calving period: April 05 to July 15
 - Moose calving period: May 15 to July 15
 - Bison calving period: March 1 to July 15

Wildlife Avoidance and Mitigation for ROW Maintenance Standard Operating Procedure

- Black bear denning season: September 30 to March 30
- These sensitive periods will be used to inform types of pre-construction surveys required as well as additional mitigation measures required during these periods to minimize adverse effects to wildlife, such as sensory disturbance and/or risk of wildlife injury or mortality. Further information on sensitive periods for wildlife can be found here:
https://www.enr.gov.nt.ca/sites/enr/files/resources/wildlife_act_plain_language_summary_january_2018.pdf

Nesting and Roosting Areas - Avoidance and Mitigation:

- Damage and/or destruction of nests or eggs prohibited under the Federal *Migratory Birds Convention Act* (MBCA), and the NWT *Wildlife Act*. ROW maintenance activities such as clearing, vegetation removal, use of heavy equipment should be planned outside of nesting season (May 1 to August 15) when migratory birds are not present.
- If vegetation clearing, brushing or grubbing are required within the sensitive migratory bird nesting period, activities will be managed to comply with the Species at Risk Act and the Migratory Birds Convention Act. Non-intrusive nest survey methods shall be completed by an experienced Qualified Environmental Professional (QEP) prior to clearing. Environment and Climate Change Canada (ECCC) may be consulted to confirm the appropriate site-specific survey method, but a typical method involves:
 - Conducting surveys both within the clearing limits and up to 30 m beyond the limits
 - For crews of two or more, individuals should be spaced within visual distance and walk parallel to one another along the transect
 - Documenting all nests that are encountered, including location (UTM coordinates), species (if possible), general habitat characteristics (e.g., tree species, nest height, dominant vegetation cover), nest contents (e.g., presence of eggs, young, or empty, or under construction), and adult behavior (e.g., nest building, incubating or brooding), and the nest status (e.g., active or inactive).
- **If an active bird nest or a large stick nest is encountered during any construction activities, STOP WORK IMMEDIATELY** in the vicinity of the nest and report it to the Site Supervisor and Environmental Monitor. The Environmental Monitor will provide additional guidance or direction consistent with the applicable licence, permit, Federal and Territorial Acts and Regulations
- **Establish a NO WORK ZONE** around all confirmed active nests and suspected nest areas to ensure no further disturbance to the nest. Nests are to be protected with a buffer zone (NO WORK ZONE) until the birds have permanently left the vicinity of the nest.
- The size and shape of the buffer will depend on various factors, including: site topography, proximity of the nest to naturally open areas, type and amount of surrounding vegetation cover, nesting period, a particular species' sensitivity to disturbance, rareness of the species in the local/regional area, and the type and extent of clearing activities that will be occurring next to the buffer.
- Environment and Climate Change Canada (ECCC) recommended buffer distances are provided in Table 2.

Wildlife Avoidance and Mitigation for ROW Maintenance Standard Operating Procedure

Table 2: The ECCC recommended buffer distances for nests of migratory bird species includes:

Species Group	Buffer Distance for Pedestrian/All-Terrain Vehicles (m)	Buffer Distance for Clearing and Construction Activities (m)
Songbirds	30	100
Shorebirds	50	100
Terms/gulls	200	300
Ducks	100	150
Geese	300	500
Swans/loons/cranes	500	750
Rusty Blackbird	300	300
Short-eared owl	1,500	1,500
Red-necked phalarope	100	100

- Active bird nest locations will be flagged using assigned coloured flagging tape. Fallers, foremen and inspectors will be made aware of what colour of flagging is used to delineate nest buffers. Flagging tape should be hung approximately 5 m from the nest to show generally where the nest is located.
- No clearing activities within the established buffer areas should occur until after the QEP has determined that nesting and fledging are complete, or if the status of the nest has been changed from active to inactive.
- Destruction of bat roosts must be avoided through gradual clearing of vegetation outside of active maternity roosting season (spring through fall).
- **Destruction or removal of nests or roosts that are posing a risk to NTPC infrastructure may be authorized where required by obtaining a Wildlife General Permit, which can be obtained from GNWT- Environment and Natural Resources (ENR). Nest removal shall be carried out in accordance with GNWT-ENR and federal guidelines. Contact HSE Department to obtain a Wildlife Permit when required.**

Disturbance to Caribou, Moose, Bison and Furbearers - Avoidance and Mitigation:

- Prior to any clearing activities occurring within the denning season period, den surveys shall be completed. If an active mammal den is identified during surveys or during clearing or maintenance activities, **STOP WORK IMMEDIATELY**, inform the Site Supervisor, Environmental Monitor and contact GNWT-ENR to determine subsequent steps. This may include the establishment of a buffer zone around the den (ie. 300-800 m for bears: <https://www.enr.gov.nt.ca>), where work inside the buffer zone may not be permitted until after den emergence.
- When travelling to and from work areas, limit vehicle-wildlife collisions by reducing speed limit and giving animals the right-of-way. Vehicles encountering wildlife on roads are required to stop and radio communicate the presence of wildlife on the road(s) to the NTPC Environment Department and others in the area.
- If large mammals (caribou, moose or bison) are observed, clearing activities will be temporarily suspended to allow wildlife to move away from the area on their own accord. If they do not move away within 15 minutes, they must be gently encouraged to move away via a slow approach, or make your presence known by calling out and waving your arms. This must be accomplished from behind a vehicle so as not to get too close. Females may be reluctant to move if there is a calf nearby, in which case all activities and operations must be suspended, to allow the animals to move away independently, until the area is clear. An Incident Report must subsequently be completed, and any human-wildlife interactions are to be reported as soon as possible to ENR by the Environmental Monitor.
- Personnel are to communicate wildlife sightings via radio to the NTPC Environmental Monitor, who will relay observations to Site Supervisors and equipment operators working in the area. Record all wildlife observations in the Wildlife Monitoring Form. The Wildlife Monitoring forms can be found in the site-specific Vegetation and Wildlife management Plans for the NTPC Hydroelectric Facilities, located on NTPC Powerline.

Wildlife Avoidance and Mitigation for ROW Maintenance Standard Operating Procedure

- Boreal caribou collar locations can be used to notify construction crews of their proximity to active construction areas during the late-winter and calving season, and increased mitigation measures will be triggered as determined by GNWT-ENR.
- Limit vehicle traffic and construction footprint are to be minimized in known furbearer habitats (ie. wolverine habitats). This will reduce disturbance at suitable denning sites, mortality risk (e.g., roadkill, trapping), displacement associated with development and will help facilitate normal movement throughout the landscape.
- As is standard NTPC policy all hunting and trapping by all project staff and contractors is prohibited.
- Apply the practices outlined in the Waste Management Plans, located on NTPC Poweline, to minimize the probability of attracting wildlife, this includes:
 - Do not litter
 - Do not feed or interact with wildlife.
 - Collect and store all food and food waste in a manner inaccessible to furbearers.
 - Incinerate waste locally or take off site to an approved facility
- Buffer zones around riparian areas or waterways shall be established prior to clearing, grubbing or stripping activities, and marked using fencing, stakes or flagging to ensure wildlife and vegetation in riparian areas are not disturbed. The watercourse & riparian buffer is 100 m of the ordinary high water mark of any watercourse, with the exception of locations where authorization has been granted to work within the 100 m setback (ie. 30 m). The watercourse setback requirements for vegetation removal and operation of equipment are defined in Land Use Permit.
- The ROW clearing of vegetation may create travel corridors for predators and provide human access, which may increase predator prey interactions.
 - **The primary mitigation measure will be to leave uncleared vegetated strips (5-6ft in height) across the ROW to block lines of sight down the corridor every 30 – 50 meters.**