

On September 10th, 2025, a visual bat survey was conducted at the North East Arm Camp (NEAC) to assess potential roosting sites and evidence of bats in the abandoned structures scheduled for demolition in fall 2025. Within the NEAC study area, six bat species are of potential conservation concern: three currently listed under the Species at Risk Act (SARA) and three under consideration for addition to the SARA. These species are as follows:

- **Little Brown Myotis (*Myotis lucifugus*)** – SARA-listed.
- **Northern Myotis (*Myotis septentrionalis*)** – SARA-listed.
- **Tri-colored Bat (*Perimyotis subflavus*)** – SARA-listed.
- **Eastern Red Bat (*Lasiurus borealis*)** – Under consideration for SARA.
- **Silver-haired Bat (*Lasionycteris noctivagans*)** – Under consideration for SARA.
- **Hoary Bat (*Lasiurus cinereus*)** – Under consideration for SARA.

Only Little Brown Myotis were considered further in the assessment because they are the only listed species in Newfoundland known to frequently use buildings and other anthropogenic structures as maternity or day roosts (ECCC 2018; Kunz & Lumsden 2003). The structures assessed included: buildings 1001 (pump house), 1028, 1027, 1002, 1004, lodge, gas storage shed, 1017, 1011, 1012, 1013, 1014, caretaker's building, and 1024 (officer's cabin). Photographs documenting exterior, interior, and attic spaces (where accessible) are attached to this report.

During the visual surveys, no evidence of bat use was observed. Specifically, no guano deposits beneath entry points or roosting areas, no staining or wear around openings, no audible bat vocalizations, and no carcasses or skeletal remains were detected. The assessed structures are in a state of advanced deterioration, with multiple light access points and exposure to wind and weather. These conditions are generally unsuitable for maternity or day roosting, which require stable, dark, warm environments that offer safety from predators (Kunz & Lumsden 2003; Barclay & Kurta 2007). Although abandoned buildings can provide high-quality roosting habitat when intact, the NEAC structures lack the thermal stability and security typically selected by reproductive females (Lausen & Barclay 2006; Willis & Brigham 2007).

Although the NEAC structures are not expected to support active bat roosting, the absence of acoustic monitoring and emergence surveys during the active bat season in Newfoundland and Labrador (May 1 to September 30; ECCC 2018) means the survey cannot be considered fully conclusive. Based on the visual inspection, the NEAC structures lack the physical features commonly associated with day roosts or maternity colonies (e.g., tight crevices, stable attic spaces, or exfoliating bark; Fenton & Barclay 1980; Caceres & Barclay 2000), and are therefore unlikely to be used by bats.

The federal *Recovery Strategy for the Little Brown Myotis, Northern Myotis and Tri-colored Bat* (ECCC 2018) identifies only hibernacula as critical habitat for Little Brown Myotis, defined as underground environments such as caves or abandoned mines where bats hibernate communally during winter. The NEAC site do not provide conditions suitable for hibernation, and therefore cannot be considered critical habitat under SARA.

The planned demolition of the NEAC structures is scheduled for fall 2025, outside the active bat season, when roosting activity in aboveground structures is not expected in Newfoundland (ECCC

2018; Lausen & Barclay 2006). As such, pre-demolition bat exclusion measures are not required for this site.

References

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Caceres, M. C., & Barclay, R. M. R. 2000. *Myotis septentrionalis*. Mammalian Species, (634), 1–4.

Environment and Climate Change Canada (ECCC). 2018. *Recovery Strategy for the Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis), and Tri-colored Bat (Perimyotis subflavus) in Canada*. Species at Risk Act Recovery Strategy Series. Ottawa.

Fenton, M. B., & Barclay, R. M. R. 1980. *Myotis lucifugus*. Mammalian Species, (142), 1–8. Kunz, T. H., & Lumsden, L. F. 2003. Ecology of cavity and foliage roosting bats. In *Bat Ecology* (pp. 3–89). University of Chicago Press.

Lausen, C. L., & Barclay, R. M. R. 2006. Winter bat activity in the Canadian prairies. *Canadian Journal of Zoology*, 84(8), 1079–1086.

Willis, C. K. R., & Brigham, R. M. 2007. Social thermoregulation exerts more influence than microclimate on forest roost preferences by a cavity-dwelling bat. *Behavioral Ecology and Sociobiology*, 62(1), 97–108.

Structure 1001 (Pump House):



Structure 1028 (Cabin):



Structure 2027 (Cabin):



Structure 1002:



Structure 1004 (Cabin):



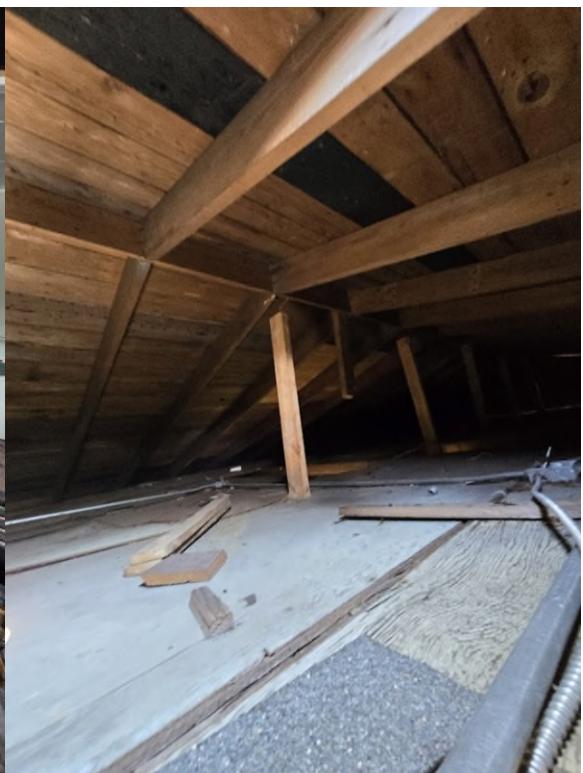
Lodge:



Gas Storage:



Structure 1017 (Maintenance Building):



Structure 1011:



Structure 1012 (Cabin):



Structure 1013 (Cabin):



Structure 1014 (Cabin):



Caretakers House:



Structure 1024 (Officers Cabin):



