

# **APPENDIX C**

## **Avifauna**



**Avifauna Baseline Study, Results  
of the 2021 Avifauna Surveys**  
Report

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## **AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS**

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## Executive Summary

Signal Gold Inc., (Signal) currently operates gold mining and milling operations in Newfoundland and Labrador (NL) under the Point Rousse Project. As part of the overall Point Rousse Project, Signal is planning to develop a new gold mine pit at Camp Pond (the Project), adjacent to its ongoing operations at the Stog'er Tight site. To support the enhanced Registration for this Project, avifauna surveys were designed to collect information on key aspects of the environment (e.g., Species at Risk [SAR] and Species of Conservation Concern [SOCC]) in the vicinity of the Project.

Surveys were conducted between June 18-20, 2021, and involved a combination of point count and atlas-style surveys for breeding forest songbirds, evening surveys for common nighthawk (*Chordeiles minor*), a SAR, and atlas style surveys to account for uncommon birds that have low detectability or are infrequently detected using point counts.

A total of 30 bird species were detected during the survey, comprised of two species of waterfowl, two waterbirds, three shorebirds, and 29 species of land birds. The majority of species recorded were passerines, with the top five species being ruby-crowned kinglet (*Regulus calendula*), American robin (*Turdus migratorius*), white-throated sparrow (*Zonotrichia albicollis*), yellow-bellied flycatcher (*Empidonax flaviventris*), and fox sparrow (*Passerella iliaca*). No common nighthawks or any other nocturnal bird species were detected during the survey, or incidentally, and no SAR/SOCC were encountered during the field program. Breeding potential for rare species with specialized niche or life history requirements is considered minimal for the area.

Incidental species detected or observed during the field program included moose (*Alces alces americana*), black bear (*Ursus americanus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), red squirrel (*Tamiasciurus hudsonicus*), snowshoe hare (*Lepus americanus*), southern red-backed vole (*Myodes gapperi*), brook trout (*Salvelinus fontinalis*), American eel (*Anguilla rostrata*) elvers, American toad (*Anaxyrus americanus*), and green frog (*Lithobates clamitans*).



## Abbreviations

AC CDC	Atlantic Canada Conservation Data Centre
Signal	Signal Gold Inc.
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
GPS	global positioning system
MBCA	<i>Migratory Birds Convention Act</i>
NL	Newfoundland and Labrador
NL ESA	Newfoundland and Labrador <i>Endangered Species Act</i>
PDA	Project Development Area
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>
S-rank	Sub-national (provincial) rarity ranking for a species
SOCC	Species of Conservation Concern

## Glossary

Avifauna	The birds of a particular region, habitat, or geological period.
S-rank	Sub-national (provincial) rarity ranking for a species.
Songbird	A bird belonging to the clade <i>Passeri</i> of the perching birds ( <i>Passeriformes</i> ) in which the vocal organ typically is developed in such a way as to produce a diverse and elaborate bird song.
Point Count	A method for estimating bird populations in which an observer records all the birds seen or heard from a point count site for a set period of time.



### 1.0 INTRODUCTION

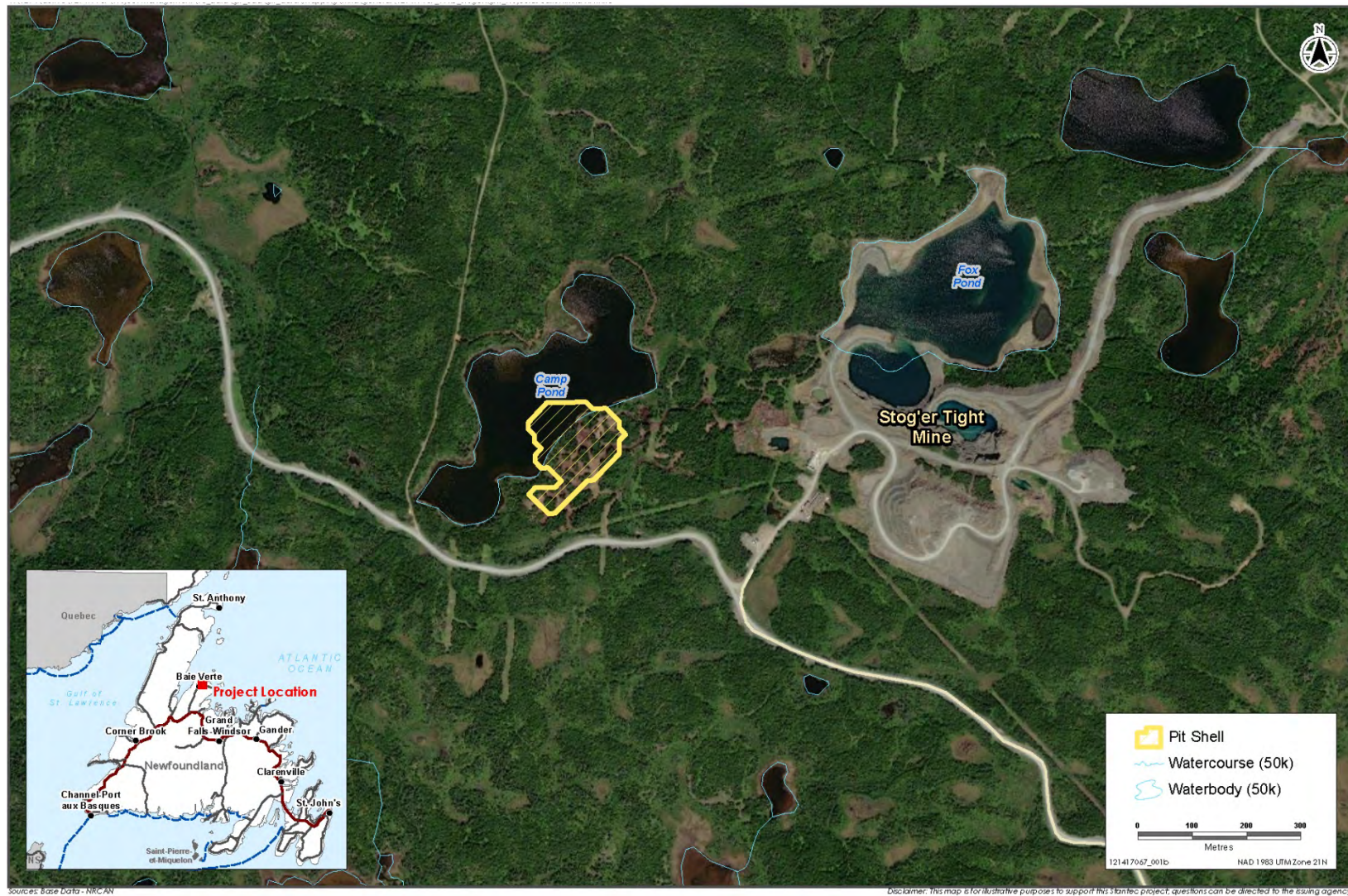
Signal Gold Inc., (Signal) currently operates gold mining and milling operations in Newfoundland and Labrador (NL) under the Point Rouse Project, located approximately 6 km northeast of the town of Baie Verte, NL. The area encompassing the Point Rouse Project includes 5 mining leases and 24 mineral licenses and covers an area of approximately 5,794.27 hectares (57.94 km<sup>2</sup>). Three prospective gold trends (Scrape Trend, Goldenville Trend and Deer Cove Trend) span approximately 20 linear km, with current activities at the Pine Cove, Stog'er Tight and Argyle deposits.

As part of the overall Point Rouse Project, Signal is planning to develop a new gold mine pit at Camp Pond (the Project), adjacent to its ongoing operations at the Stog'er Tight site (see Figure 1.1 for the proposed footprint at the time of baseline surveys). The Project will consist of a small open pit and associated infrastructure, with processing occurring at the nearby Pine Cove facility. To support the enhanced Registration for this Project, Stantec Consulting Ltd. (Stantec) was retained by Signal to conduct a series of environmental surveys at the Project Site, including avifauna, rare plants, and fish and fish habitat. This report presents the results of the 2021 avifauna (forest songbirds and common nighthawk [*Chordeiles minor*]) surveys in the Project area.





## AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS



**Figure 1.1 Project Development Area**



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## 2.0 AVIFAUNA BACKGROUND AND REGULATORY CONTEXT

### 2.1 PROJECT OBJECTIVES

The Avifauna surveys are intended to determine, quantify, and present information on key aspects of the environment (e.g., rare or sensitive bird taxa). The avifauna surveys consist of breeding bird surveys for songbirds and common nighthawk. Objectives of the avifauna survey program are to:

- Document the avifauna diversity and develop a list of bird species in the vicinity of the Project Development Area (PDA)
- Determine whether provincially rare species of birds, as determined by the Atlantic Canada Conservation Data Center (AC CDC), are present
- Provide information on the location (spatial distribution), and habitat of rare bird taxa
- Provide information to Signal for consideration in Project planning

### 2.2 OVERVIEW OF RARE OR SENSITIVE BIRDS

A species is rare because it has relatively few individuals, it is uncommon or scarce, or it occurs within a limited geographical range. The rarity of a species may also be a matter of scale, meaning that a species may not be rare in Canada, but may be considered “regionally rare” in a respective province or territory. The rarest species are those with small geographic ranges, few occurrences, and few individuals in each occurrence.

Although an understanding of rare or sensitive bird species and their protection is important for a variety of reasons, the protection of the rarest or most sensitive species is also a legal requirement for species listed under Schedule 1 of the federal *Species at Risk Act* (SARA) and the Newfoundland and Labrador *Endangered Species Act* (NL ESA). There are a variety of bird species designated or listed under the federal and provincial legislation in Newfoundland and Labrador.

In the context of the Project, a rare or sensitive bird species is generally defined as a native species that, because of its biological characteristics, or because it occurs at the periphery of its range, or for some other reason, exists in low numbers or in very restricted areas, in Canada and / or Newfoundland and Labrador. The terms Species at Risk (SAR) and Species of Conservation Concern (SOCC) are used in this report when discussing rare or sensitive birds and are defined in the following sections.

#### 2.2.1 Species at Risk

In Canada and in Newfoundland and Labrador, SAR include those bird species listed as *extirpated*, *endangered*, *threatened*, *vulnerable*, or *special concern* under the NL ESA, the federal SARA, or by the Committee on the Status of Endangered Wildlife Species in Canada (COSEWIC).



### 2.2.2 Species of Conservation Concern

For this avifauna survey program, SOCC include those bird species:

- recommended for listing by the Species Status Advisory Committee as *endangered*, *threatened*, *vulnerable*, or *special concern* but not yet listed under NL ESA or SARA
- considered provincially rare, i.e., those species with provincial status ranks (S-ranks), of S1 (*critically imperiled*), S2 (*imperiled*)<sup>1</sup>, or combinations thereof (e.g., S1S2) upon review by the Atlantic Canada Conservation Data Centre (AC CDC 2021)

Unlike some SAR, SOCC are not protected by federal or provincial legislation. Rather, they are included as a precautionary measure, reflecting observations and trends in their provincial population status. SOCC may be important indicators of ecosystem health and regional biodiversity, thus their presence in an area may warrant mitigation, given their rarity or importance. They are also often indicators of the presence of unusual and / or sensitive habitat, and their protection as umbrella species could possibly result in protection on their associated unusual habitats and co-existing species.

A summary of the ranking systems outlined by SARA, COSEWIC, NL ESA, and AC CDC are provided in Appendix A.

## 2.3 REGULATION

### 2.3.1 Federal

The status of bird species is assessed and designated by COSEWIC, which then recommends a designation for legal protection by being officially listed under Schedule 1 of SARA. One of the key considerations under SARA for protection of listed SAR is protection of the species' habitat.

SARA is one part of a three-part Government of Canada strategy for the protection of bird SAR, and applies to *extirpated*, *endangered* or *threatened* species listed as being at risk and their critical habitat. SARA-listed species designated as *special concern* are not protected by the prohibitions of Sections 32-36 of SARA; however, it is required that provincial or regional management plans be developed to protect the species. The other two parts of this strategy include commitments under the Accord for the Protection of Species at Risk and activities under the Habitat Stewardship Program for SAR, which protect SAR on federal land.

There are three main prohibitions in SARA relevant to *extirpated*, *endangered* or *threatened* bird SAR and their critical habitat:

- Section 32, which prohibits killing, harming, or taking SAR
- Section 33, which prohibits damage or destruction of residences of SAR
- Subsection 58(1), which prohibits destruction of critical habitat of SAR

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<sup>1</sup> While S3 species may be of concern from a provincial biodiversity perspective, they are often not included, as their populations are considered less sensitive. This determination is typically at the discretion of the Newfoundland and Labrador Department of Fisheries and Land Resources (NL FLR) – Wildlife Division.





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Definitions of COSEWIC and SARA species status categories are summarized in Appendix A.

### 2.3.2 Provincial

In addition to SARA, each province and territory has a regulatory body that determines what species are rare in each of their respective jurisdictions. In Newfoundland and Labrador, bird SAR are protected under the NL ESA. Designation under the Act follows the recommendations of the Species Status Advisory Committee on the appropriate assessment of a species and referring concerns about the status of species to COSEWIC, where the species is of national importance.

The purpose of NL ESA is to:

- Prevent listed species from being extirpated from Newfoundland and Labrador
- Provide for the recovery of species listed as *extirpated*, *endangered*, or *threatened* as a result of human activity
- Conserve species listed as *special concern* to prevent them from becoming *endangered* or *threatened*

Prohibitions of NL ESA include Section 16, which states “a person shall not disturb, harass, injure, or kill an individual of a species designated as *threatened*, *endangered* or *extirpated*”. Species are listed under the *Endangered Species List Regulations*.

## 3.0 METHODS

### 3.1 STUDY TEAM

Experienced professionals were responsible for the design, logistical planning, and data collection of this avifauna program. Species identification, data analysis, and interpretation was performed by qualified professionals (i.e., biologists / ornithologists) with knowledge and experience in these areas. The members of the study team are provided in **Error! Reference source not found..**

**Table 3.1 Study Team – 2021 Avifauna Program**

Role	Personnel
Project Manager	Barry Wicks, B.Sc.
Project Scientist	Colin Jones, B.Sc. (LGL Limited)
Quality / Independent Review	Michael Crowell, M.Sc.
	Elizabeth Way, M.Sc.
Data Analysis and Report Preparation	Colin Jones, B.Sc.
Information Management / GIS	Colin Jones, B.Sc.
	Megan Blackwood, B.Sc., Dip. GIS



### 3.2 PRE-SURVEY PLANNING

Project planning and initial survey design included: defining the objectives and the purpose of the work; conducting a review of prior terrestrial and avifauna studies in the area; and developing a field sampling plan and appropriate survey intensity.

Distribution of point count survey stations was facilitated by a desktop ArcGIS exercise using a combination of satellite imagery (ESRI World Imagery; Scene date: July 18, 2020) and NRCan CanVec data (50k, Land Features). Potential survey stations were oriented in a loose grid arrangement and selected for representative land cover types within and adjacent to the Study Area (an approximate 2 km x 3 km area surrounding the PDA). Point counts were established with a distance of at least 300 m between points, and 100 m from edges of other habitat types, where possible.

### 3.3 SONGBIRDS SURVEY METHOD

#### 3.3.1 Point Counts

Songbird surveys were conducted on June 18-21, 2021 to provide an overview of breeding bird species present within the Study Area and adjacent to the PDA where proposed mine infrastructure and features will be located on the site. Surveys were conducted by a single field team composed of an ornithologist (C. Jones, LGL Limited) and field technician (T. Parr, Stantec). Navigation was aided by GPS and survey data collection was recorded on waterproof paper. Sites were accessed each morning by truck and on foot. While the focus of these surveys was on songbirds, other incidental observations of avifauna and other wildlife species were recorded.

A single, 10-minute morning point count was conducted at each site, following a protocol based on a modified fixed-radius point count sampling procedure (Bibby et al. 2000). Bird species detected during the point count surveys were recorded. Surveys began near dawn and continued until approximately 10:00 am each survey morning. Data collected included date and time of survey, environmental conditions, relative distance and bearing to bird species encountered during systematic point count surveys and notes to support evidence of breeding.

Point count surveys rely largely on auditory cues so surveys were conducted only during appropriate environmental conditions (light winds and little to no precipitation) when birds are most apt to sing and can be heard at a distance. Surveys were not conducted on mornings with high winds or during heavy precipitation. Bibby et al. (2000) recommend the restriction of point counts to wind conditions of Beaufort 3 and below, with a preference for 2 and below if possible, and to avoid conducting point counts in precipitation exceeding occasional light drizzle or brief showers.

Survey efficiency was enhanced by the pre-planning exercise, however final point count location was established in the field based on specific site conditions. Vegetation data were collected at each point count site including the dominant species of trees, shrubs and ground vegetation. Ground truthing of CanVec data assigned point count forest classification (50k 'wooded area' polygons) was performed while transiting within each point count plot. Four photographs of habitat (oriented in the cardinal directions) were taken at each point count center GPS waypoint.



### 3.3.2 Atlas-style Surveys

Select areas of the Survey Area were inventoried during the morning of June 21, 2021 in an attempt to account for uncommon birds that have low detectability, or are infrequently detected via point count methodology. These linear tracks focused on areas of predominantly riparian habitat and/or successional hardwood growth following disturbance (natural or anthropogenic). The average survey duration was ~35 minutes and distance sampling methods were not performed during these species' presence atlas inventories.

## 3.4 COMMON NIGHTHAWK SURVEY METHOD

Dedicated surveys to investigate the presence of common nighthawk were conducted on the evening of June 20, 2021. Two survey stations were established along the main road (to Pine Cove Mine) through the Study Area and located approximately 1 km either side of the two proposed pit shells of the PDA. These survey sites were established near areas with potential to provide nesting or foraging habitat for common nighthawk, including wide expanses of open forest, bog clearings, and large wetlands that doubly serve as optimal locations for optical scanning and passive listening. Linear distance between survey stations was 2.3 km.

The common nighthawk surveys were conducted starting approximately 30 minutes before sunset and continued until 30 minutes after sunset. Surveys included a 6-minute passive point count sampling procedure to align with standardized national protocol (Canadian Nightjar Survey Protocol 2021). Given that the location of the PDA is outside of the known range of common nighthawk, survey methodology was modified to increase probability of species detection. At both survey stations, the initial passive listening period was expanded to 15 minutes, followed by 5 minutes of common nighthawk recording (*peent* and dive 'booming') playback, and a final period of 10-minute passive listening. Data collected included date and time of survey, environmental conditions, and background noise level.

## 3.5 INCIDENTAL WILDLIFE OBSERVATIONS

The avifauna program was conducted concurrently with assessments of surface hydrology and electrofishing surveys associated with the PDA. Dedicated bird surveys were conducted each morning, followed by freshwater fieldwork late-morning/early-afternoon. Incidental observations of new bird species (and other wildlife sightings) not detected during point counts were recorded during the conduct of other duties.



### 4.0 RESULTS

#### 4.1 SURVEY EFFORT

The areas surveyed during the 2021 songbird and common nighthawk surveys are shown on Figure 4.1. Field coverage of hiking transits between point count stations and during select routes for bird atlas surveys are depicted on Figure 4.2.

##### 4.1.1 Point Counts

A total of 30 point count stations were proposed for this work from the desktop GIS survey planning exercise. During June 18-20, 2021, 26 stations were surveyed; 12 of which were fully or partially within the Study Area and 14 within ~300 m of the Study Area boundary (Figure 4.1). Four proposed locations were omitted due to inaccessibility and/or inefficiency with respect to the daily survey timing window, (D1, E1, and W1) and excessive background noise (S1) associated within mining operations. As a result, there were no point count stations within the footprint of the proposed pit; however, select areas were inventoried on the morning of June 21 (see Section 4.1.2 and Figure 4.2).

Of the 26 surveyed point counts, 19 were located in predominantly sparse conifer stands, four had extensive wetlands, and three were in mixedwood stands. Point counts were extended beyond the Study Area to increase sample size while adhering to the minimum distance of 300 m separation between adjacent survey locations. Landcover characteristics of selected plots (e.g., dominant tree species, presence of open bog, open water, and/or bisecting road), survey conditions, number of recorded bird species (species richness) and total birds detected during systematic point counts is presented summarized in Table B.1 in Appendix B.

Forest stands within the region are conifer-dominated and exhibit a low degree of heterogeneity and complexity. The majority of forest within the Study Area has been harvested over the past 30-40 years and is in various stages of post-cut recovery. Remnant patches of older growth boreal forest were limited to inaccessible areas associated with steep, shadowed slopes and/or adjacent to water that restricted historical commercial harvest. More recent forest stand alteration has occurred as a result of clearing due to exploration activities and mining infrastructure.

Primary composition included balsam fir (*Abies balsamea*), black spruce (*Picea mariana*), and tamarack/larch (*Larix laricina*), with drainage being the main determinant of species dominance. Most productive (relative) sites were associated with well-drained soils characteristic of balsam fir-*hylocomium* stands, with occasional patches of trembling aspen (*Populus tremuloides*), heartleaf paper birch (*Betula cordifolia*), or mountain maple (*Acer spicatum*). Deciduous species favored south-facing slopes and areas with forest floor light penetration as a result of disturbance (natural or anthropogenic). Upland, dryer areas were associated with black spruce-*pleurozium* type-stands (Meades and Moores 1989). Wetlands were typical of Newfoundland peatlands, typified by open- and treed-bogs. Overall, groundcover was typical of boreal forest composition and included dwarf dogwood (*Cornus canadensis*), twinflower (*Linnaea borealis*), creeping snowberry (*Galtheria hispida*), Clinton's lily (*Clintonia borealis*), and occasional wood



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ferns (*Dryopteris spp.*). Trees and shrubs associated with previously disturbed areas and roadside vegetation included trembling aspen, heartleaf paper birch, mountain ash (*Sorbus spp.*), and speckled alder (*Alnus incana*).

In general, the 50k CanVec data layer approximated the point count survey plot landcover well. There were only four instances where field assessment of the dominant forest stand(s) and landcover within 100m radius plots warranted reassignment (Table 4.1.). Although this is likely a result of scale when considering wetland classifications (e.g., point counts J and Y), historical landscape alteration associated with forest harvest and mining activity has resulted in shrubs and successional hardwood species along linear developments (e.g., mixedwood; point counts B and H).

### 4.1.2 Atlas-style Survey

Four separate areas of the Survey Area, including the proposed eastern pit shell of the PDA, were inventoried for species presence during the morning of June 21, 2021. The western pit shell area (adjacent to Camp Pond) received only marginal survey coverage during the field program due to excessive background noise in the localized area during the June 18-21, 2021 period (although an attempt was made to detect/flush potential species of interest).





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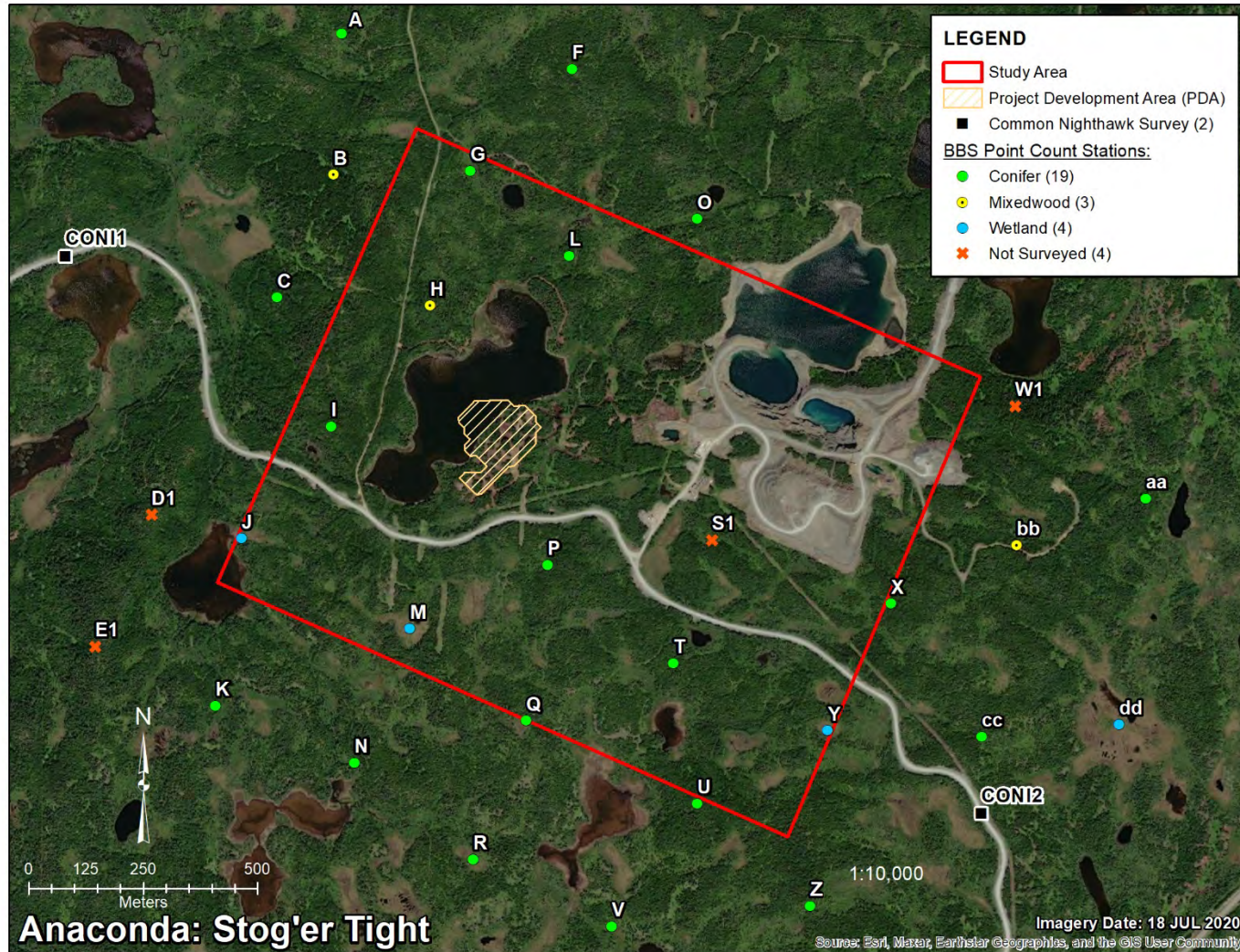


Figure 4.1 Point Count Stations (by Landcover Class) and Common Nighthawk Survey Locations





## AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

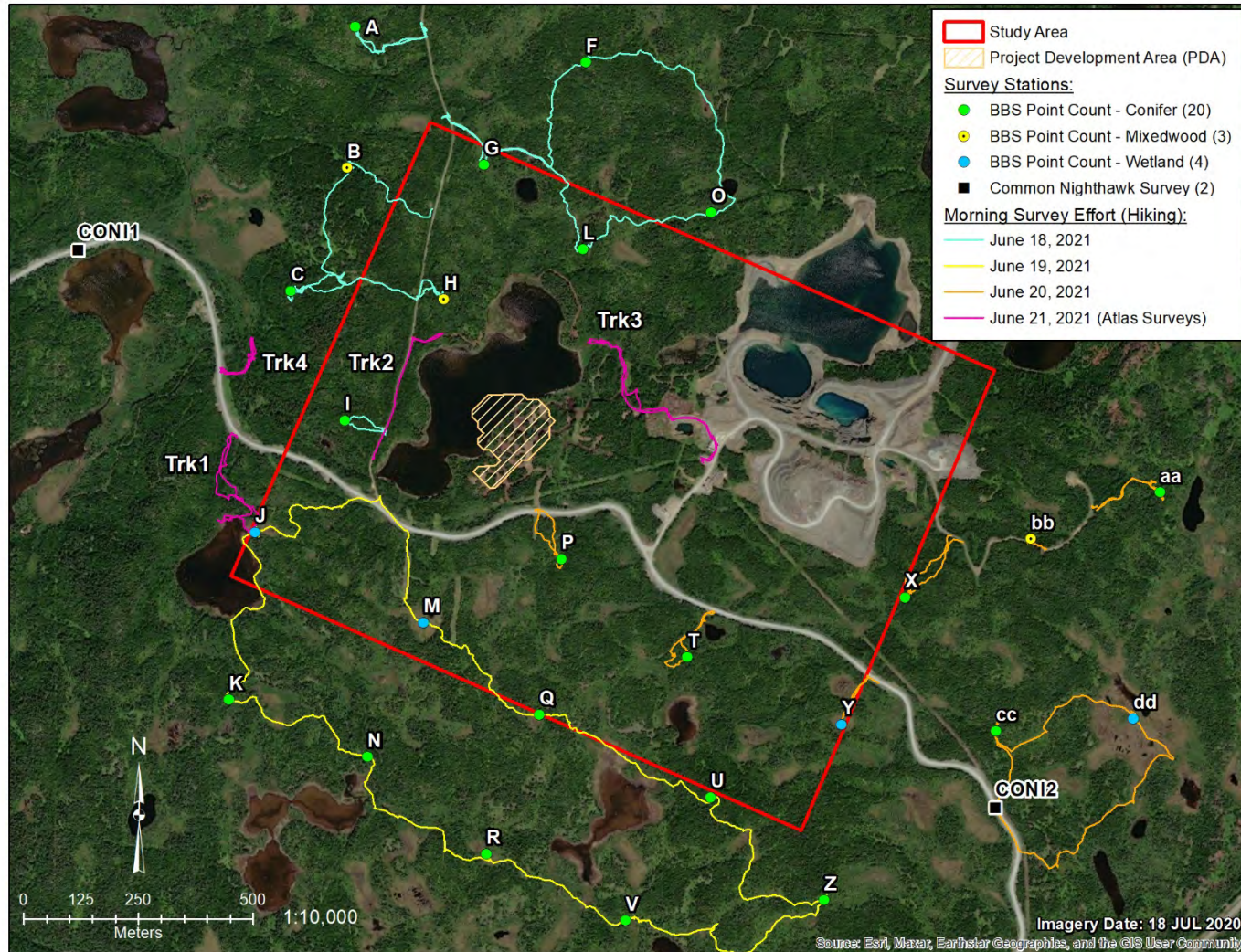


Figure 4.2 2021 Avifauna Program Survey Effort



## 4.2 FOREST SONGBIRD SURVEY RESULTS

A total of 30 bird species were detected during the breeding bird surveys. Survey data, including distance interval composition and total individuals within 100m radius of point count center is provided in Appendix B. Given the objective of this field investigation was to document avifauna diversity and develop a bird list for the Study Area rather than species-specific density estimates, bird species and abundance were not filtered by the 100 m distance. A summary of environmental conditions along with survey date/time, number of detected species (i.e., species richness) and total bird abundance for each point count is presented in Table 4.1. Total number of birds recorded during point count surveys was 260 (including species and individuals detected beyond 100 m from point count center).

Total abundance was highest for survey plots G, H, and I, with 16, 16, and 13 birds, respectively. Similarly, the highest value for species richness (10 species) was associated with plots H and I. These three plots are associated with Camp Pond Road and each include a roadside fringe of deciduous trees (i.e. trembling aspen and birch). Overall, mean species richness was 7.6 and average total abundance was 10 individuals. At the stand level, immature balsam fir forests comprised of densely stocked, low diameter at breast height (dbh  $\leq 2.5$  cm) saplings tended to have the lowest values for bird richness and abundance. As expected with a confined study area, there was no statistical difference between landcover class when considering individual point count results.

Table 4.1 (A) summarizes the list of species detected within the Study Area over the course of the avifauna program. Highest breeding evidence, S-Rank (AC CDC), landcover occurrence, and total birds enumerated from point count surveys in addition to species presence on common nighthawk and atlas surveys are also presented. The majority of species recorded were passerines with the top five species being ruby-crowned kinglet (*Regulus calendula*;  $n=55$ ), American robin (*Turdus migratorius*;  $n=23$ ), white-throated sparrow (*Zonotrichia albicollis*;  $n=23$ ), yellow-bellied flycatcher (*Empidonax flaviventris*;  $n=23$ ), and fox sparrow (*Passerella iliaca*;  $n=17$ ). Evidence of confirmed breeding was determined for four species: Canada jay (*Perisoreus canadensis*), common raven (*Corvus corax*), magnolia warbler (*Setophaga magnolia*), and white-throated sparrow (*Zonotrichia albicollis*).

Grouping species by landcover type resulted in highest species richness for 'conifer' (28 of 30 species detected), as expected, given that they represent the majority (73%) of survey plots. Plots classified as 'wetland' had a combined total of 16 species, whereas species composition was 14 species for the 'mixedwood' survey plots.

Incidental bird observations for species not captured during breeding bird survey point counts are presented in Table 4.1 (B). General comments and location of survey effort for novel sightings is provided. There were six additional species (or their sign) observed and all had S-Ranks of S4 or higher. No SAR and no raptors or their nests were observed during the avifauna program.



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**Table 4.1 Species Observed During (A) Breeding Bird Surveys and (B) Incidental Observations of Note**

Group	Species	Scientific Name	Highest Breeding Evidence	AC CDC S-Ranks for NFLD	Landcover Occurrence	Total Birds (All Point Counts)	Species Presence – Atlas Surveys					
							CONI 1	CONI 2	Trk1	Trk2	Trk3	Trk4
A. BREEDING BIRD SURVEYS (including >100 m survey observations)												
Waterbird	Common Loon	<i>Gavia immer</i>	Observed	S5B,S4N	C	5					X	
Shorebird	Greater Yellowlegs	<i>Tringa melanoleuca</i>	Probable	S3B,S4M	W	1						
Shorebird	Spotted Sandpiper	<i>Actitis macularius</i>	Observed	S4B,SUM	C	1			X			
Shorebird	Wilson’s Snipe	<i>Gallinago delicata</i>	Observed	S5B,S5M	C	4		X				
Landbird	Northern Flicker	<i>Colaptes auratus</i>	Possible	S4	C	1						
Landbird	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Possible	S5B,S5M	C, M, W	23	X		X	X	X	
Landbird	Canada Jay	<i>Perisoreus canadensis</i>	Confirmed	S5	C, W	7	X		X			
Landbird	Common Raven	<i>Corvus corax</i>	Confirmed	S5	C, W	5			X		X	
Landbird	Boreal Chickadee	<i>Poecile hudsonicus</i>	Possible	S4	C	3			X			
Landbird	Ruby-crowned Kinglet	<i>Regulus calendula</i>	Possible	S5B,S5M	C, M, W	55	X	X	X	X	X	X
Landbird	Swainson’s Thrush	<i>Catharus ustulatus</i>	Possible	S5B,S5M	C, M	6	X	X	X			
Landbird	Hermit Thrush	<i>Catharus guttatus</i>	Possible	S5B,S5M	C, M	3		X	X			
Landbird	American Robin	<i>Turdus migratorius</i>	Possible	S5B,S5M	C, M, W	23	X	X	X	X	X	X
Landbird	Cedar Waxwing	<i>Bombycilla cedrorum</i>	Possible	S4B,SUM	C	1						
Landbird	Northern Waterthrush	<i>Parkesia noveboracensis</i>	Probable	S5B,S5M	C, M, W	10	X		X	X	X	X
Landbird	Tennessee Warbler	<i>Leiothlypis peregrina</i>	Possible	S4B,SUM	M, W	2						
Landbird	Black-and-white Warbler	<i>Mniotilta varia</i>	Possible	S5B,S5M	C, M, W	8	X		X	X		X
Landbird	Common Yellowthroat	<i>Geothlypis trichas</i>	Possible	S5B,S5M	C, W	3						
Landbird	American Redstart	<i>Setophaga ruticilla</i>	Possible	S5B,S5M	M	1			X	X	X	X
Landbird	Magnolia Warbler	<i>Setophaga magnolia</i>	Confirmed	S4B,SUM	C, W	8	X		X		X	X
Landbird	Blackpoll Warbler	<i>Setophaga striata</i>	Possible	S5B,S5M	C, M	13				X		



# AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

**Table 4.1 Species Observed During (A) Breeding Bird Surveys and (B) Incidental Observations of Note**

Group	Species	Scientific Name	Highest Breeding Evidence	AC CDC S-Ranks for NFLD	Landcover Occurrence	Total Birds (All Point Counts)	Species Presence – Atlas Surveys					
							CONI 1	CONI 2	Trk1	Trk2	Trk3	Trk4
Landbird	Palm Warbler	<i>Setophaga palmarum</i>	Possible	S5B,S5M	C	1						
Landbird	Yellow-rumped Warbler	<i>Setophaga coronata</i>	Probable	S5B,S5M	C, W	16	X	X	X	X	X	X
Landbird	Wilson's Warbler	<i>Cardellina pusilla</i>	Possible	S5B,S5M C,M,	C	1				X	X	
Landbird	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	Possible	S5B,S5M	C, M, W	4						
Landbird	Fox Sparrow	<i>Passerella iliaca</i>	Possible	S5B,S5M	C, M, W	17	X	X	X	X	X	X
Landbird	Dark-eyed junco	<i>Junco hyemalis</i>	Possible	S5	C, M, W	7			X	X		
Landbird	White-throated Sparrow	<i>Zonotrichia albicollis</i>	Confirmed	S5B,S5M	C, M, W	23	X	X	X	X	X	X
Landbird	Pine Grosbeak	<i>Pinicola enucleator</i>	Possible	S5	C	5			X		X	X
Landbird	Common Redpoll	<i>Acanthis flammea</i>	Observed	S2S3B, S4N,SUM	C	3						
ALL BIRDS (Point Count Detections) =						260						



# AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

**Table 4.1 Species Observed During (A) Breeding Bird Surveys and (B) Incidental Observations of Note**

Group	Species	Scientific Name	Highest Breeding Evidence	AC CDC S-Ranks for NFLD	Landcover Occurrence	Total Birds (All Point Counts)	Species Presence – Atlas Surveys					
							CONI 1	CONI 2	Trk1	Trk2	Trk3	Trk4
B. INCIDENTAL OBSERVATIONS			Comments									
Waterfowl	American Black Duck	Anas rubripes	1 individual flushed on transit out of point count plot N									
Waterfowl	Common Goldeneye	Bucephala clangula	1 individual observed on wing over southern PDA									
Landbird	Spruce Grouse	Falcipennis canadensis	Scats observed at point count station I									
Waterbird	Herring Gull	Larus argentatus	1 individual observed after point count station B survey									
Landbird	Alder Flycatcher	Empidonax alnorum	Single breeding call heard during CONI 1 dusk survey			X						
Landbird	Yellow Warbler	Setophaga petechia	1 individual observed between Fox and Camp Ponds						X			
Notes: AC CDC Ranks: S1 = critically imperiled S2 = imperiled S3 = vulnerable S4 = apparently secure S5 = secure SNA = not applicable (typically exotic species) SU = Unrankable / Currently unrankable due to lack of information or due to substantially conflicting information about status or trends,					B = breeding population N = nonbreeding population M = migrant population S#S# = a numeric range rank indicates any range of uncertainty about the status of the species. (AC CDC 2021) Landcover Codes: C = (sparse) conifer M = mixedwood W = wetland							



### 4.3 COMMON NIGHTHAWK SURVEY RESULTS

No common nighthawks (or any nocturnal bird species) were detected during these surveys, or incidentally, in the PDA.

### 4.4 SPECIES AT RISK

No SAR were encountered during conduct of the avifauna survey program.

### 4.5 SPECIES OF CONSERVATION CONCERN

No SOCC (including bird species previously assessed by the NL Species Status Advisory Committee) were encountered in the PDA during this field program.

### 4.6 UNCOMMON BIRD SPECIES

Based on S-Rank, there were two uncommon species detected during conduct of work. A lone greater yellowlegs (*Tringa melanoleuca*; S3B,S4M) was recorded as a probable nester at survey plot Y (agitated, alarm calls heard during point count).

A group of three common redpolls (*Acanthis flammea*; S2S3B, S4N,SUM) was observed as a flyover event during the point count at station F. This record is not being considered a SOCC given that the group was flying north and could potentially have been on migration to Labrador (or northward). However, common redpolls year-round occurrence does include the Baie Verte peninsula, although their distribution is known to be variable from year to year which is the basis for the degree of uncertainty for their S-Rank.

### 4.7 OTHER WILDLIFE

No direct encounters or observations of large mammals occurred during fieldwork (i.e., avian or freshwater program) in the Study Area. Mammalian sightings were limited to red fox (*Vulpes vulpes*), red squirrel (*Tamiasciurus hudsonicus*), snowshoe hare (*Lepus americanus*) and southern red-backed vole (*Myodes gapperi*). Indirect evidence of wildlife use via sign (e.g., scat and tracks) was made for moose (*Alces alces americana*), black bear (*Ursus americanus*), and coyote (*Canis latrans*). Moose scat and browsing was common in most areas investigated in the Study Area. Moose, black bear, and snowshoe hare were observed utilizing the roadside of Route 414 (within 10 km of the Study Area) during daily early morning commutes to the Signal Gold site from Baie Verte.

In addition to juvenile brook trout (*Salvelinus fontinalis*), numerous American toads (*Anaxyrus americanus*), and two American eel (*Anguilla rostrata*) elvers were observed during freshwater sampling. A lone green frog (*Lithobates clamitans*) was sighted in survey plot J during breeding bird surveys.



## 5.0 SUMMARY

Surveys focused on examining the avifauna diversity within the Study Area resulted in documentation of a total of 36 bird species between 18-21 June, 2021. During this breeding bird period, two species of waterfowl, two waterbirds, three shorebirds, and 29 species of land birds were recorded. The majority of species were observed in sparse conifer forest (28), followed by wetland (16). Only 10 species were observed in mixedwood survey plots, although sample size for this landcover classification was lowest (n=3).

The species assemblage was typical of coastal Newfoundland boreal forests that exhibit a regime of successional disturbance following historical forest harvesting. Breeding potential for rare species with specialized niche or life history requirements is considered minimal for the area. A low degree of forest heterogeneity (complexity) and landcover types within the Study Area, coupled with an already active mining site, with attendant background noise (e.g., drilling, heavy equipment, etc.), support this conclusion. Uncommon to rare species may be discovered in future at the Stog'er Tight mining area, however any presence will likely be related to migration or vagrant species rather than confirmed breeding records.

Overall, documented use included common, ubiquitous species and no SAC or SOCC were observed within or adjacent to the Study Area. There are no specific areas of note within the Study Area for consideration in Project planning with respect to birds and the PDA. Standard practices such as adherence to the *Migratory Bird Convention Act* and its *Regulations*, in addition to maintaining forested/riparian buffer(s) around any watercourse(s) and nest searches prior to clearing activities will suffice.





## 6.0 REFERENCES

AC CDC. 2021. Understanding Ranks. Available online: <http://accdc.com/en/rank-definitions.html> Last accessed: September 3, 2021.

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## **APPENDIX A**

### **EXPLANATION OF NATIONAL AND PROVINCIAL SPECIES AT RISK AND GENERAL STATUS RANKING**

## A.1 COMMITTEE ON THE STATUS OF ENDANGERED WILDLIFE IN CANADA AND SPECIES AT RISK ACT WILDLIFE SPECIES STATUS CATEGORIES

COSEWIC and SARA wildlife species status categories are described in **Error! Reference source not found.**

**Table A.1 Committee on the Status of Endangered Wildlife in Canada and Species at Risk Act Species Status Category Descriptions**

Status Category	Description*
Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
Special Concern (SC)	A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.
Data Deficient (DD)	A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.
Not At Risk (NAR)	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

COSEWIC 2021. Excerpt from <https://cosewic.ca/index.php/en-ca/assessment-process/wildlife-species-assessment-process-categories-guidelines/status-categories.html>



## A.2 DESIGNATIONS UNDER THE NEWFOUNDLAND AND LABRADOR ENDANGERED SPECIES ACT

Species assessment and listings under the Newfoundland and Labrador *Endangered Species Act* (NL *ESA*) are coordinated by the Wildlife Division of the Newfoundland and Labrador Fisheries and Land Resources Department. Designations under the NL *ESA* are described in **Error! Reference source not found.**

**Table A.2 Newfoundland and Labrador *Endangered Species Act* Designations and Descriptions**

Designation	Description*
Extinct	A wildlife species that no longer exists.
Extirpate	A wildlife species that no longer exists in the wild but exists elsewhere.
Endangered	A wildlife species facing imminent extirpation or extinction.
Threatened	A wildlife species that is likely to become endangered if nothing is done to reverse the factors limiting its survival.
Vulnerable	A wildlife species that has characteristics which make it particularly sensitive to human activities or natural events, or restricted habitat or food requirements that are themselves under threat.
Data Deficient (DD)	A category that applies when all sources of available information have been investigated but the information in the status report is insufficient to determine risk of extinction based on distribution and/or population status.
Not at Risk (NAR)	Generally applied to widespread and abundant taxa.

NL FLR 2021. Excerpt from <https://www.flr.gov.nl.ca/wildlife/endangeredspecies/Designations.pdf>



### A.3 ATLANTIC CANADA CONSERVATION DATA CENTRE RANKINGS

The AC CDC status ranks (S-rank) for the Island of Newfoundland were used to assess the rankings for bird species. Definitions of the AC CDC rankings are provided in **Error! Reference source not found..**

**Table A.3 Definitions of the Atlantic Canada Conservation Data Centre S-Ranks**

Provincial Ranking (S-rank)	Definition
SX	Presumed Extirpated - Species or community is believed to be extirpated from the province. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
S1	Critically Imperiled - Critically imperiled in the province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the province.
S2	Imperiled - Imperiled in the province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or province.
S3	Vulnerable - Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
S4	Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
S5	Secure - Common, widespread, and abundant in the province.
SNR	Unranked - Provincial conservation status not yet assessed.
SU	Unrankable - Possibly in peril, but status is uncertain - more information is needed
SNA	Not Applicable - A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
S#/S#	Range Rank - A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4)
SH	Possibly Extirpated (Historical)—Species or community occurred historically in the province, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become SH without such a 20-40 year delay if the only known occurrences in a province were destroyed or if it had been extensively and unsuccessfully looked for. The SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences.
Not Provided	Species is not known to occur in the province.

AC CDC 2021. Excerpt from <http://accdc.com/en/rank-definitions.html>



# **APPENDIX B**

## **Breeding Bird Survey Results**

# AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

**Table B.1 Summary of Landcover Classification, Survey Conditions, Species Richness and Bird Abundance at Point Count Surveys**

Point Count ID	Landcover Class <sup>1</sup>	Survey Date	Start Time (NDT)	Survey Conditions <sup>2</sup> (°C; BF; CC; P)	Field Survey Plot Features (100 m radius of Center)				Landcover Class (Grouped)	Species Richness (Total species)	Abundance (Total Birds)
					Dominant Forest Stand	Bog	Waterbody	Road			
A	Coniferous - Sparse	18-Jun	05:28	10°; BF1; 5%; none	Balsam Fir (Regeneration)				Conifer	7	10
B	Coniferous - Sparse	18-Jun	06:36	12°; BF1-2; 1%; none	Mixedwood				Mixedwood	5	6
C	Coniferous - Sparse	18-Jun	06:00	11°; BF2; 5%; none	Balsam Fir (Regeneration)				Conifer	9	12
F	Coniferous - Sparse	18-Jun	10:01	18°; BF2; 1%; none	Balsam Fir				Conifer	6	11
G	Coniferous - Sparse	18-Jun	08:26	14°; BF2; 0%; none	Black Spruce	X	X	X	Conifer	7	16
H	Coniferous - Sparse	18-Jun	07:55	12°; BF2; 0%; none	Mixedwood (Succession)			X	Mixedwood	10	16
I	Coniferous - Sparse	18-Jun	07:19	12°; BF2; 0%; none	Balsam Fir			X	Conifer	10	13
J	Coniferous - Sparse	19-Jun	05:29	14°; BF0; 10%; none	Black Spruce (Wetland)	X	X		Wetland	8	11
K	Coniferous - Sparse	19-Jun	06:04	14°; BF0; 10%; none	Balsam Fir	X			Conifer	8	11
L	Coniferous - Sparse	18-Jun	09:01	14°; BF2-3; 0%; none	Balsam Fir (Immature)				Conifer	5	6
M	Wetland - Dense	19-Jun	09:56	20°; BF2; 15%; none	Black Spruce / Larch (Wetland)	X			Wetland	5	6



# AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

**Table B.1 Summary of Landcover Classification, Survey Conditions, Species Richness and Bird Abundance at Point Count Surveys**

Point Count ID	Landcover Class <sup>1</sup>	Survey Date	Start Time (NDT)	Survey Conditions <sup>2</sup> (°C; BF; CC; P)	Field Survey Plot Features (100 m radius of Center)				Landcover Class (Grouped)	Species Richness (Total species)	Abundance (Total Birds)
					Dominant Forest Stand	Bog	Waterbody	Road			
N	Coniferous - Open	19-Jun	06:34	15°; BF1; 10%; none	Balsam Fir		X		Conifer	9	11
O	Coniferous - Sparse	18-Jun	09:28	15°; BF2; 0%; none	Balsam Fir (Regeneration)		X		Conifer	7	8
P	Coniferous - Sparse	20-Jun	05:25	10°; BF1; 10%; none	Balsam Fir (Regeneration)				Conifer	9	12
Q	Coniferous - Sparse	19-Jun	09:29	18°; BF2; 10%; none	Black Spruce	X			Conifer	5	5
R	Coniferous - Sparse	19-Jun	07:08	14°; BF1; 20%; none	Black Spruce	X			Conifer	9	12
T	Coniferous - Sparse	20-Jun	06:03	12°; BF1; 10%; none	Balsam Fir (Immature)				Conifer	8	10
U	Coniferous - Sparse	19-Jun	08:58	16°; BF2; 10%; none	Balsam Fir (Immature)				Conifer	5	5
V	Coniferous - Sparse	19-Jun	07:41	14°; BF2; 15%; none	Black Spruce				Conifer	8	11
X	Coniferous - Open	20-Jun	08:17	16°; BF0-3; 75%; none	Balsam Fir				Conifer	9	11
Y	Coniferous - Sparse	20-Jun	08:56	20°; BF2; 90%; none	Black Spruce / Larch (Wetland)	X			Wetland	9	12
Z	Coniferous - Sparse	19-Jun	08:25	16°; BF1; 5%; none	Black Spruce				Conifer	7	8





# AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

**Table B.1 Summary of Landcover Classification, Survey Conditions, Species Richness and Bird Abundance at Point Count Surveys**

Point Count ID	Landcover Class <sup>1</sup>	Survey Date	Start Time (NDT)	Survey Conditions <sup>2</sup> (°C; BF; CC; P)	Field Survey Plot Features (100 m radius of Center)				Landcover Class (Grouped)	Species Richness (Total species)	Abundance (Total Birds)
					Dominant Forest Stand	Bog	Waterbody	Road			
Aa	Coniferous - Sparse	20-Jun	07:05	14°; BF0; 5%; none	Balsam Fir		X		Conifer	9	9
Bb	Mixedwood - Dense	20-Jun	07:41	14°; BF1; 20%; none	Mixedwood			X	Mixedwood	8	9
Cc	Coniferous - Sparse	20-Jun	09:30	22°; BF2; 99%; none	Black Spruce				Conifer	7	7
Dd	Wetland - Dense	20-Jun	09:57	22°; BF3; 99%; none	Shrub Fen/Shrub Bog	X	X		Wetland	9	12
Notes: 1. GIS Exercise, 50k CanVec Data 2. BF= Beaufort Scale, CC = Cloud Cover, P = precipitation											



AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

Table B.2 2021 Breeding Bird Survey Results

Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
A	18-Jun	05:28	10; 1; 5; no	blackpoll warbler	<i>Setophaga striata</i>		1		1			2		S	Possible	S5B,S5M
A	18-Jun	05:28	10; 1; 5; no	fox sparrow	<i>Passerella iliaca</i>	1						1		S	Possible	S5B,S5M
A	18-Jun	05:28	10; 1; 5; no	Lincoln's sparrow	<i>Melospiza lincolnii</i>				1			1		H	Possible	S5B,S5M
A	18-Jun	05:28	10; 1; 5; no	pine grosbeak	<i>Pinicola enucleator</i>		1					1		S	Possible	S5
A	18-Jun	05:28	10; 1; 5; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2					2		S	Possible	S5B,S5M
A	18-Jun	05:28	10; 1; 5; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1	1					2		S	Possible	S5B,S5M
A	18-Jun	05:28	10; 1; 5; no	yellow-rumped warbler	<i>Setophaga coronata</i>				1			1		S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	American robin	<i>Turdus migratorius</i>					1		1		S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	blackpoll warbler	<i>Setophaga striata</i>					1		1		S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	common raven	<i>Corvus corax</i>			2					2	P	Probable	S5
C	18-Jun	06:00	11; 2; 5; no	magnolia warbler	<i>Setophaga magnolia</i>		1					1		S	Possible	S4B,SUM
C	18-Jun	06:00	11; 2; 5; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2					2		S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	Swainson's thrush	<i>Catharus ustulatus</i>		1					1		S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	white-throated sparrow	<i>Zonotrichia albicollis</i>			1					1	S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>		1		1			2		S	Possible	S5B,S5M
C	18-Jun	06:00	11; 2; 5; no	yellow-rumped warbler	<i>Setophaga coronata</i>	1						1		A	Probable	S5B,S5M
B	18-Jun	06:36	12; 1-2; 1; no	dark-eyed junco	<i>Junco hyemalis</i>	1						1		S	Possible	S5
B	18-Jun	06:36	12; 1-2; 1; no	fox sparrow	<i>Passerella iliaca</i>		1					1		S	Possible	S5B,S5M
B	18-Jun	06:36	12; 1-2; 1; no	hermit thrush	<i>Catharus guttatus</i>		1					1		S	Possible	S5B,S5M
B	18-Jun	06:36	12; 1-2; 1; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1	1				1	1	S	Possible	S5B,S5M
B	18-Jun	06:36	12; 1-2; 1; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>		1					1		S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	American robin	<i>Turdus migratorius</i>		1					1		S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	black-and-white warbler	<i>Mniotilta varia</i>	1						1		S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	blackpoll warbler	<i>Setophaga striata</i>				1			1		S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	common loon	<i>Gavia immer</i>			1			1		2	X	Observed	S5B,S4N
I	18-Jun	07:19	12; 2; 0; no	common raven	<i>Corvus corax</i>			1					1	X	Observed	S5
I	18-Jun	07:19	12; 2; 0; no	fox sparrow	<i>Passerella iliaca</i>					1		1		S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1					1	1	1	S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	Wilson's snipe	<i>Gallinago delicata</i>	1						1		FO	Observed	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	white-throated sparrow	<i>Zonotrichia albicollis</i>			1					1	S	Possible	S5B,S5M
I	18-Jun	07:19	12; 2; 0; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>		2					2		S	Possible	S5B,S5M



Table B.2 2021 Breeding Bird Survey Results

Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
H	18-Jun	07:55	12; 2; 0; no	American redstart	<i>Setophaga ruticilla</i>					1		1		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	American robin	<i>Turdus migratorius</i>					1		1		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	black-and-white warbler	<i>Mniotilta varia</i>	1			1			2		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	blackpoll warbler	<i>Setophaga striata</i>		1					1		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	fox sparrow	<i>Passerella iliaca</i>	1						1		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	northern waterthrush	<i>Parkesia noveboracensis</i>		1					1		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2	1	1		1	3	2	S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	Swainson's thrush	<i>Catharus ustulatus</i>	1						1		H	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
H	18-Jun	07:55	12; 2; 0; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>			1		1		1	1	S	Possible	S5B,S5M
G	18-Jun	08:26	14; 2; 0; no	black-and-white warbler	<i>Mniotilta varia</i>		1					1		S	Possible	S5B,S5M
G	18-Jun	08:26	14; 2; 0; no	Canada jay	<i>Perisoreus canadensis</i>					4		4		FY	Confirmed	S5
G	18-Jun	08:26	14; 2; 0; no	northern waterthrush	<i>Parkesia noveboracensis</i>		1		1			2		A	Probable	S5B,S5M
G	18-Jun	08:26	14; 2; 0; no	ruby-crowned kinglet	<i>Regulus calendula</i>		3	1				3	1	S	Possible	S5B,S5M
G	18-Jun	08:26	14; 2; 0; no	white-throated sparrow	<i>Zonotrichia albicollis</i>	2						2		CF	Confirmed	S5B,S5M
G	18-Jun	08:26	14; 2; 0; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1	1					2		S	Possible	S5B,S5M
G	18-Jun	08:26	14; 2; 0; no	yellow-rumped warbler	<i>Setophaga coronata</i>	1						1		S	Possible	S5B,S5M
L	18-Jun	09:01	14; 2-3; 0; no	fox sparrow	<i>Passerella iliaca</i>						1		1	S	Possible	S5B,S5M
L	18-Jun	09:01	14; 2-3; 0; no	northern waterthrush	<i>Parkesia noveboracensis</i>		1					1		S	Possible	S5B,S5M
L	18-Jun	09:01	14; 2-3; 0; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1	1					2		S	Possible	S5B,S5M
L	18-Jun	09:01	14; 2-3; 0; no	white-throated sparrow	<i>Zonotrichia albicollis</i>					1		1		S	Possible	S5B,S5M
L	18-Jun	09:01	14; 2-3; 0; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>		1					1		S	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	American robin	<i>Turdus migratorius</i>	1						1		H	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	fox sparrow	<i>Passerella iliaca</i>		1					1		S	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1			1		2		S	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	white-throated sparrow	<i>Zonotrichia albicollis</i>				1			1		H	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	Wilson's warbler	<i>Cardellina pusilla</i>		1					1		S	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>					1		1		S	Possible	S5B,S5M
O	18-Jun	09:28	15; 2; 0; no	yellow-rumped warbler	<i>Setophaga coronata</i>		1					1		S	Possible	S5B,S5M



AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

Table B.2 2021 Breeding Bird Survey Results

Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
F	18-Jun	10:01	18; 2; 1; no	black-and-white warbler	<i>Mniotilta varia</i>	1						1		S	Possible	S5B,S5M
F	18-Jun	10:01	18; 2; 1; no	blackpoll warbler	<i>Setophaga striata</i>	1						1		S	Possible	S5B,S5M
F	18-Jun	10:01	18; 2; 1; no	common redpoll	<i>Acanthis flammea</i>	3						3		FO	Observed	S2S3B, S4N,SUM
F	18-Jun	10:01	18; 2; 1; no	fox sparrow	<i>Passerella iliaca</i>		1		1			2		S	Possible	S5B,S5M
F	18-Jun	10:01	18; 2; 1; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1	2					3		S	Possible	S5B,S5M
F	18-Jun	10:01	18; 2; 1; no	white-throated sparrow	<i>Zonotrichia albicollis</i>						1		1	S	Possible	S5B,S5M
J	19-Jun	05:29	14; 0; 10; no	common raven	<i>Corvus corax</i>	1		1				1	1	FY	Confirmed	S5
J	19-Jun	05:29	14; 0; 10; no	Lincoln's sparrow	<i>Melospiza lincolni</i>	1						1		S	Possible	S5B,S5M
J	19-Jun	05:29	14; 0; 10; no	northern waterthrush	<i>Parkesia noveboracensis</i>		1					1		S	Possible	S5B,S5M
J	19-Jun	05:29	14; 0; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1	1	1			2	1	S	Possible	S5B,S5M
J	19-Jun	05:29	14; 0; 10; no	Tennessee warbler	<i>Leiothlypis peregrina</i>				1			1		S	Possible	S4B,SUM
J	19-Jun	05:29	14; 0; 10; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
J	19-Jun	05:29	14; 0; 10; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1						1		S	Possible	S5B,S5M
J	19-Jun	05:29	14; 0; 10; no	yellow-rumped warbler	<i>Setophaga coronata</i>		1					1		S	Possible	S5B,S5M
K	19-Jun	06:04	14; 0; 10; no	American robin	<i>Turdus migratorius</i>			1					1	S	Possible	S5B,S5M
K	19-Jun	06:04	14; 0; 10; no	common loon	<i>Gavia immer</i>						1		1	X	Observed	S5B,S4N
K	19-Jun	06:04	14; 0; 10; no	common yellowthroat	<i>Geothlypis trichas</i>	1						1		S	Possible	S5B,S5M
K	19-Jun	06:04	14; 0; 10; no	magnolia warbler	<i>Setophaga magnolia</i>	1				1		2		S	Possible	S4B,SUM
K	19-Jun	06:04	14; 0; 10; no	northern flicker	<i>Colaptes auratus</i>					1		1		H	Possible	S4
K	19-Jun	06:04	14; 0; 10; no	palm warbler	<i>Setophaga palmarum</i>	1						1		S	Possible	S5B,S5M
K	19-Jun	06:04	14; 0; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>		3					3		S	Possible	S5B,S5M
K	19-Jun	06:04	14; 0; 10; no	yellow-rumped warbler	<i>Setophaga coronata</i>					1		1		S	Possible	S5B,S5M
N	19-Jun	06:34	15; 1; 10; no	American robin	<i>Turdus migratorius</i>	1				1		2		X	Observed	S5B,S5M
N	19-Jun	06:34	15; 1; 10; no	Canada jay	<i>Perisoreus canadensis</i>				1			1		S	Possible	S5
N	19-Jun	06:34	15; 1; 10; no	fox sparrow	<i>Passerella iliaca</i>				1			1		S	Possible	S5B,S5M
N	19-Jun	06:34	15; 1; 10; no	magnolia warbler	<i>Setophaga magnolia</i>	1						1		S	Possible	S4B,SUM
N	19-Jun	06:34	15; 1; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1			1		2		S	Possible	S5B,S5M
N	19-Jun	06:34	15; 1; 10; no	spotted sandpiper	<i>Actitis macularius</i>			1					1	X	Observed	S4B,SUM
N	19-Jun	06:34	15; 1; 10; no	Swainson's thrush	<i>Catharus ustulatus</i>					1		1		S	Possible	S5B,S5M
N	19-Jun	06:34	15; 1; 10; no	Wilson's snipe	<i>Gallinago delicata</i>		1					1		FO	Observed	S5B,S5M
N	19-Jun	06:34	15; 1; 10; no	white-throated sparrow	<i>Zonotrichia albicollis</i>			1					1	S	Possible	S5B,S5M

AVIFAUNA BASELINE STUDY, RESULTS OF THE 2021 AVIFAUNA SURVEYS

Table B.2 2021 Breeding Bird Survey Results

Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
R	19-Jun	07:08	14; 1; 20; no	American robin	<i>Turdus migratorius</i>	1	1			1		3		S	Possible	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	blackpoll warbler	<i>Setophaga striata</i>	1						1		S	Possible	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	magnolia warbler	<i>Setophaga magnolia</i>	1						1		S	Possible	S4B,SUM
R	19-Jun	07:08	14; 1; 20; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1					1		S	Possible	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	Swainson's thrush	<i>Catharus ustulatus</i>		1					1		S	Possible	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	Wilson's snipe	<i>Gallinago delicata</i>			1					1	X	Observed	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	white-throated sparrow	<i>Zonotrichia albicollis</i>	1						1		S	Possible	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1				1		2		S	Possible	S5B,S5M
R	19-Jun	07:08	14; 1; 20; no	yellow-rumped warbler	<i>Setophaga coronata</i>					1		1		S	Possible	S5B,S5M
V	19-Jun	07:41	14; 2; 15; no	American robin	<i>Turdus migratorius</i>		1					1		S	Possible	S5B,S5M
V	19-Jun	07:41	14; 2; 15; no	blackpoll warbler	<i>Setophaga striata</i>	1			1			2		S	Possible	S5B,S5M
V	19-Jun	07:41	14; 2; 15; no	cedar waxwing	<i>Bombycilla cedrorum</i>		1					1		H	Possible	S4B,SUM
V	19-Jun	07:41	14; 2; 15; no	common loon	<i>Gavia immer</i>			1					1	X	Observed	S5B,S4N
V	19-Jun	07:41	14; 2; 15; no	magnolia warbler	<i>Setophaga magnolia</i>	2						2		CF	Confirmed	S4B,SUM
V	19-Jun	07:41	14; 2; 15; no	northern waterthrush	<i>Parkesia noveboracensis</i>	1						1		S	Possible	S5B,S5M
V	19-Jun	07:41	14; 2; 15; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2					2		S	Possible	S5B,S5M
V	19-Jun	07:41	14; 2; 15; no	white-throated sparrow	<i>Zonotrichia albicollis</i>					1		1		S	Possible	S5B,S5M
Z	19-Jun	08:25	16; 1; 5; no	American robin	<i>Turdus migratorius</i>		1					1		S	Possible	S5B,S5M
Z	19-Jun	08:25	16; 1; 5; no	dark-eyed junco	<i>Junco hyemalis</i>				1			1		S	Possible	S5
Z	19-Jun	08:25	16; 1; 5; no	fox sparrow	<i>Passerella iliaca</i>		1					1		S	Possible	S5B,S5M
Z	19-Jun	08:25	16; 1; 5; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1					1		S	Possible	S5B,S5M
Z	19-Jun	08:25	16; 1; 5; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1			1		2		S	Possible	S5B,S5M
Z	19-Jun	08:25	16; 1; 5; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>			1					1	S	Possible	S5B,S5M
Z	19-Jun	08:25	16; 1; 5; no	yellow-rumped warbler	<i>Setophaga coronata</i>	1						1		S	Possible	S5B,S5M
U	19-Jun	08:58	16; 2; 10; no	American robin	<i>Turdus migratorius</i>				1			1		S	Possible	S5B,S5M
U	19-Jun	08:58	16; 2; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1					1		S	Possible	S5B,S5M
U	19-Jun	08:58	16; 2; 10; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
U	19-Jun	08:58	16; 2; 10; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1						1		S	Possible	S5B,S5M
U	19-Jun	08:58	16; 2; 10; no	yellow-rumped warbler	<i>Setophaga coronata</i>					1		1		S	Possible	S5B,S5M



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Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
Q	19-Jun	09:29	18; 2; 10; no	American robin	<i>Turdus migratorius</i>		1					1		H	Possible	S5B,S5M
Q	19-Jun	09:29	18; 2; 10; no	dark-eyed junco	<i>Junco hyemalis</i>	1						1		S	Possible	S5
Q	19-Jun	09:29	18; 2; 10; no	hermit thrush	<i>Catharus guttatus</i>		1					1		S	Possible	S5B,S5M
Q	19-Jun	09:29	18; 2; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1						1		S	Possible	S5B,S5M
Q	19-Jun	09:29	18; 2; 10; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
M	19-Jun	09:56	20; 2; 15; no	American robin	<i>Turdus migratorius</i>					1		1		H	Possible	S5B,S5M
M	19-Jun	09:56	20; 2; 15; no	dark-eyed junco	<i>Junco hyemalis</i>	1						1		S	Possible	S5
M	19-Jun	09:56	20; 2; 15; no	fox sparrow	<i>Passerella iliaca</i>					1		1		S	Possible	S5B,S5M
M	19-Jun	09:56	20; 2; 15; no	magnolia warbler	<i>Setophaga magnolia</i>				1			1		S	Possible	S4B,SUM
M	19-Jun	09:56	20; 2; 15; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2					2		S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	American robin	<i>Turdus migratorius</i>			1		1		1	1	S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	black-and-white warbler	<i>Mniotilta varia</i>				1			1		S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	boreal chickadee	<i>Poecile hudsonicus</i>	1						1		S	Possible	S4
P	20-Jun	05:25	10; 1; 10; no	fox sparrow	<i>Passerella iliaca</i>		1			1		2		S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	pine grosbeak	<i>Pinicola enucleator</i>		1					1		FO	Observed	S5
P	20-Jun	05:25	10; 1; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>					1		1		S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1				1		2		S	Possible	S5B,S5M
P	20-Jun	05:25	10; 1; 10; no	yellow-rumped warbler	<i>Setophaga coronata</i>	1						1		A	Probable	S5B,S5M
T	20-Jun	06:03	12; 1; 10; no	American robin	<i>Turdus migratorius</i>		1					1		S	Possible	S5B,S5M
T	20-Jun	06:03	12; 1; 10; no	blackpoll warbler	<i>Setophaga striata</i>	1						1		S	Possible	S5B,S5M
T	20-Jun	06:03	12; 1; 10; no	boreal chickadee	<i>Poecile hudsonicus</i>				1			1		S	Possible	S4
T	20-Jun	06:03	12; 1; 10; no	hermit thrush	<i>Catharus guttatus</i>		1					1		S	Possible	S5B,S5M
T	20-Jun	06:03	12; 1; 10; no	pine grosbeak	<i>Pinicola enucleator</i>				1			1		S	Possible	S5
T	20-Jun	06:03	12; 1; 10; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2			1		3		S	Possible	S5B,S5M
T	20-Jun	06:03	12; 1; 10; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
T	20-Jun	06:03	12; 1; 10; no	yellow-rumped warbler	<i>Setophaga coronata</i>	1						1		S	Possible	S5B,S5M



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Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
aa	20-Jun	07:05	14; 0; 5; no	American robin	<i>Turdus migratorius</i>		1					1		S	Possible	S5B,S5M
aa	20-Jun	07:05	14; 0; 5; no	blackpoll warbler	<i>Setophaga striata</i>				1			1		S	Possible	S5B,S5M
aa	20-Jun	07:05	14; 0; 5; no	boreal chickadee	<i>Poecile hudsonicus</i>	1						1		S	Possible	S4
aa	20-Jun	07:05	14; 0; 5; no	Canada jay	<i>Perisoreus canadensis</i>	1						1		X	Observed	S5
aa	20-Jun	07:05	14; 0; 5; no	fox sparrow	<i>Passerella iliaca</i>		1					1		S	Possible	S5B,S5M
aa	20-Jun	07:05	14; 0; 5; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1						1		S	Possible	S5B,S5M
aa	20-Jun	07:05	14; 0; 5; no	Swainson's thrush	<i>Catharus ustulatus</i>					1		1		S	Possible	S5B,S5M
aa	20-Jun	07:05	14; 0; 5; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>		1					1		S	Possible	S5B,S5M
aa	20-Jun	07:05	14; 0; 5; no	yellow-rumped warbler	<i>Setophaga coronata</i>		1					1		S	Possible	S5B,S5M
bb	20-Jun	07:41	14; 1; 20; no	American robin	<i>Turdus migratorius</i>		1					1		S	Possible	S5B,S5M
bb	20-Jun	07:41	14; 1; 20; no	dark-eyed junco	<i>Junco hyemalis</i>				1			1		S	Possible	S5
bb	20-Jun	07:41	14; 1; 20; no	fox sparrow	<i>Passerella iliaca</i>		1					1		S	Possible	S5B,S5M
bb	20-Jun	07:41	14; 1; 20; no	Lincoln's sparrow	<i>Melospiza lincolnii</i>	1						1		S	Possible	S5B,S5M
bb	20-Jun	07:41	14; 1; 20; no	ruby-crowned kinglet	<i>Regulus calendula</i>		1	1				1	1	S	Possible	S5B,S5M
bb	20-Jun	07:41	14; 1; 20; no	Tennessee warbler	<i>Leiothlypis peregrina</i>		1					1		S	Possible	S4B,SUM
bb	20-Jun	07:41	14; 1; 20; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
bb	20-Jun	07:41	14; 1; 20; no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1						1		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	black-and-white warbler	<i>Mniotilta varia</i>	1						1		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	blackpoll warbler	<i>Setophaga striata</i>	1	1					2		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	fox sparrow	<i>Passerella iliaca</i>					1		1		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	northern waterthrush	<i>Parkesia noveboracensis</i>					1		1		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	pine grosbeak	<i>Pinicola enucleator</i>		1					1		S	Possible	S5
X	20-Jun	08:17	16; 0-3; 75;no	ruby-crowned kinglet	<i>Regulus calendula</i>		2					2		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	white-throated sparrow	<i>Zonotrichia albicollis</i>			1					1	S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	yellow-bellied flycatcher	<i>Empidonax flaviventris</i>	1						1		S	Possible	S5B,S5M
X	20-Jun	08:17	16; 0-3; 75;no	yellow-rumped warbler	<i>Setophaga coronata</i>				1			1		S	Possible	S5B,S5M



Table B.2 2021 Breeding Bird Survey Results

Point Count ID	Survey Date	Time (NDT)	Survey Conditions <sup>1</sup> (°C;BF;CC;P)	Common Name	Scientific Name	0-50 m 1 <sup>st</sup> 5 min.	50-100 1 <sup>st</sup> 5 min.	100 m+ 1 <sup>st</sup> 5 min.	0-50 m 2 <sup>nd</sup> 5 min.	50-100 2 <sup>nd</sup> 5 min.	100 m+ 2 <sup>nd</sup> 5 min.	Total Observed (0-100 m)	Total Observed Incidentally (+100 m)	Breeding Evidence <sup>2</sup>	Species Highest Breeding Status	AC CDC (2015)
Y	20-Jun	08:56	20; 2; 90; no	American robin	<i>Turdus migratorius</i>		2					2		S	Possible	S5B,S5M
Y	20-Jun	08:56	20; 2; 90; no	Canada jay	<i>Perisoreus canadensis</i>						1		1	S	Possible	S5
Y	20-Jun	08:56	20; 2; 90; no	common yellowthroat	<i>Geothlypis trichas</i>				1			1		S	Possible	S5B,S5M
Y	20-Jun	08:56	20; 2; 90; no	dark-eyed junco	<i>Junco hyemalis</i>		1					1		S	Possible	S5
Y	20-Jun	08:56	20; 2; 90; no	greater yellowlegs	<i>Tringa melanoleuca</i>			1					1	A	Probable	S3B,S4M
Y	20-Jun	08:56	20; 2; 90; no	Lincoln's sparrow	<i>Melospiza lincolni</i>	1						1		S	Possible	S5B,S5M
Y	20-Jun	08:56	20; 2; 90; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1		1				1	1	S	Possible	S5B,S5M
Y	20-Jun	08:56	20; 2; 90; no	white-throated sparrow	<i>Zonotrichia albicollis</i>	2						2		A	Probable	S5B,S5M
Y	20-Jun	08:56	20; 2; 90; no	yellow-rumped warbler	<i>Setophaga coronata</i>	1						1		S	Possible	S5B,S5M
cc	20-Jun	09:30	22; 2; 99; no	common loon	<i>Gavia immer</i>			1					1	X	Observed	S5B,S4N
cc	20-Jun	09:30	22; 2; 99; no	northern waterthrush	<i>Parkesia noveboracensis</i>	1						1		S	Possible	S5B,S5M
cc	20-Jun	09:30	22; 2; 99; no	pine grosbeak	<i>Pinicola enucleator</i>					1		1		S	Possible	S5
cc	20-Jun	09:30	22; 2; 99; no	ruby-crowned kinglet	<i>Regulus calendula</i>	1						1		S	Possible	S5B,S5M
cc	20-Jun	09:30	22; 2; 99; no	Swainson's thrush	<i>Catharus ustulatus</i>		1					1		S	Possible	S5B,S5M
cc	20-Jun	09:30	22; 2; 99; no	Wilson's snipe	<i>Gallinago delicata</i>					1		1		FO	Observed	S5B,S5M
cc	20-Jun	09:30	22; 2; 99; no	yellow-rumped warbler	<i>Setophaga coronata</i>				1			1		H	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	American robin	<i>Turdus migratorius</i>	1						1		H	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	black-and-white warbler	<i>Mniotilta varia</i>		1					1		S	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	common yellowthroat	<i>Geothlypis trichas</i>	1						1		S	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	dark-eyed junco	<i>Junco hyemalis</i>	1						1		S	Possible	S5
dd	20-Jun	09:57	22; 3; 99; no	fox sparrow	<i>Passerella iliaca</i>		1					1		S	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	northern waterthrush	<i>Parkesia noveboracensis</i>			1		1		1	1	S	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	ruby-crowned kinglet	<i>Regulus calendula</i>		2				1	2	1	S	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	white-throated sparrow	<i>Zonotrichia albicollis</i>		1					1		S	Possible	S5B,S5M
dd	20-Jun	09:57	22; 3; 99; no	yellow-rumped warbler	<i>Setophaga coronata</i>					1		1		S	Possible	S5B,S5M
Notes:																
1. BF= Beaufort Scale, CC = Cloud Cover, P = precipitation																
2. S = Singing bird present or breeding calls heard in breeding season in suitable nesting habitat; H = Individual(s) of species (male or female) observed in suitable breeding habitat during the breeding season; P = Pair observed together in suitable nesting habitat during the breeding season; A = Agitated behavior or anxiety calls of an adult, indicating a nest site or recently-fledged young in the vicinity; X = Species (male or female) observed in the block during its breeding season, but not in suitable nesting habitat; FY = Adult feeding young (out of the nest); CF = Adult carrying food for the young; FO = Flyover.																

