

Category	Subcategory	Title
Landscape Assessment	Planning	FarNorth Landscape Pattern Analysis, Terrain Analysis and derived eskers and levees
Wildlife	Terrestrial	Between Rivers ARU Data
Wildlife	Terrestrial	Boreal Eskers Point Count Data
Wildlife	Terrestrial	Ontario Breeding Bird Atlas I, 1981-1985
Wildlife	Terrestrial	Ontario Breeding Bird Atlas II, - 2001-2005
Wildlife	Terrestrial	Ontario Breeding Bird Atlas III. 2021-2025
Wildlife	Terrestrial	2x2km Breeding Waterfowl Surveys

Wildlife	Terrestrial	Coarse resolution habitat availability maps for BCR 7&8 priority bird species
Wildlife	Terrestrial	Ring of Fire Waterfowl Survey
Wildlife	Terrestrial	Ontario Breeding Bird Atlas - 2021-2025
Wildlife	Terrestrial	Northern Ontario Caribou Fecal DNA Surveys
Wildlife	Terrestrial	Bat acoustic surveys in Ring of Fire region

Wildlife	Terrestrial	Wolf Acoustic Surveys in the Ring of Fire Region
Wildlife	Terrestrial	Remote camera trap deployments in Ontario's Far North

### Description

A large suite of map-based and tabular summaries were generated to quantify the composition and spatial patterns of upland features, habitat classes and the relationships between habitat and underlying landscape features (e.g. eskers, levees); Spatial and compositional patterns and trends were identified for the study area, providing a framework for further analysis of avian and other habitat relationships with upland features in the future

Acoustic recordings of breeding birds and other calling wildlife (e.g. amphibians) from 46 automated recording units (ARUs) located along a 220-km transect across the western side of the James Bay Lowlands EcoRegion, between the Attawapiskat and Albany Rivers.

Breeding bird survey data from 5 road-accessible eskers near the proposed southern end of the N-S transportation corridor.

A five-year province-wide project to document the distribution and abundance of all breeding bird species, repeated every 20 years. The first breeding bird atlas ran from 1981-1985. Data was collected primarily by volunteers. Provides breeding evidence recorded in 100kmx 100km squares in northern Ontario, and 10kmx10km squares in southern Ontario. Data in far northern Ontario, including the RoF region, is biased towards river corridors, as these provided access to the interior of the region.

A five-year province-wide project to document the distribution and abundance of all breeding bird species, repeated every 20 years. The second breeding bird atlas ran from 2001-2005. Data was collected primarily by volunteers, but CWS-ON and other partners supplemented volunteer data with targeted survey efforts in some areas including the Far North and the RoF region. Provides point count data to estimate relative abundance birds, as well as breeding evidence recorded in 100kmx 100km squares in northern Ontario, and 10kmx10km squares in southern Ontario. Data in far northern Ontario, including the RoF region, is biased towards river corridors, as these provided access to the interior of the region.

The third Ontario Breeding Bird Atlas is currently in the planning stages, and will commence in 2021. This is a five-year province-wide project to document the distribution and abundance of all breeding bird species, repeated every 20 years. The third breeding bird atlas is planned to run from 2021-2025. Data was collected primarily by volunteers, but CWS-ON and other partners will supplement volunteer data with targeted survey efforts in some areas including the Far North and the RoF region. Provides point count data to estimate relative abundance birds, as well as breeding evidence recorded in 100kmx 100km squares in northern Ontario, and 10kmx10km squares in southern Ontario.

Aerial waterfowl survey targeting early nesting ducks; includes Canada geese, some waterbirds and some shorebirds. Ontario-wide surveys were carried out between 1980 and 2007, but in the RoF region, no surveys have been conducted since 1990

coarse estimates of potential bird habitat using PLC 27 landcover classes BASED on Provincial Land Cover (PLC) mapping: PLC subject to update and change.

CWS will conduct aerial surveys to obtain baseline information / data on breeding season abundance and distribution of early- and late-nesting waterfowl (ducks, geese and swans) and waterbird (Sandhill Cranes, loons, gulls, herons, terns, etc) to support the Ring of Fire Regional Assessment. Information obtained from this work also will provide data for the 3rd Ontario Breeding Bird Atlas (2021 – 2025) that is undertaken every 20 years in Ontario. The surveys will entail flying a series of pre-selected, randomly chosen 5 km x 5 km plots containing appropriate habitats for these species throughout the spring breeding season (May – late-June / early-July) within the Ring of Fire Regional Assessment area.

Data collection for the Ontario Breeding Bird Atlas 3 (Atlas-3) began on January 1, 2021. Volunteer birders will count and record the presence of breeding birds across Ontario – from the south to the north – for five years. Atlas-3 is a partnership between the same five organizations as Atlas-2: Birds Canada, Canadian Wildlife Service (Environment and Climate Change Canada), Ministry of Northern Development, Mines, Natural Resources and Forestry – Government of Ontario, Ontario Field Ornithologists (OFO), and Ontario Nature. Volunteers are central to the success of the Atlas. This enormous project is achievable only through the mass participation of the province’s birders. It shows what the birding community can accomplish when we work together with a single purpose.

Aerial winter distribution surveys and collection of fecal pellets across the provincial boreal caribou Missisa Range in 2021 and Ozhiski Range in 2022, and James Bay Range in 2023 with further planned collections in 2024. Aerial winter (February and/or March) distribution surveys conducted by fixed-wing aircraft and targeted fecal pellet collection by helicopter.

Incidental deployment of bat ARUs in the RoF region to collect bat (Little Brown Myotis, Northern Myotis) observations. Data collected nightly during June to September survey window using SM4Bat recording units.

Dataset of wolf acoustic recordings collected from autonomous recording units (ARUs) deployed across Ontario's Far North. Sampling period is March - September

Remote camera trap deployment began in 2022 across Ontario's Far North, with the focus being for wolves, Boreal and Eastern Migratory Caribou.

Primary Contact Type (Dept, Branch, Ministry, FN, Other)	Ownership	Partners	Format
ECCC-CWS	ECCC-CWS, Other		Spatial (Shapefile)
ECCC-CWS	ECCC-CWS		Excel
ECCC-CWS	ECCC-CWS		Excel
ECCC-CWS	CWS-partnership	Birds Canada, ECCC-CWS, Ontario Ministry of Natural Resources and Forestry, Ontario Field Ornithologists, and Ontario Nature.	MS Access database
ECCC-CWS	CWS-partnership	Birds Canada, ECCC-CWS, Ontario Ministry of Natural Resources and Forestry, Ontario Field Ornithologists, and Ontario Nature.	MS Access database
ECCC-CWS	CWS-partnership	Birds Canada, ECCC-CWS, Ontario Ministry of Natural Resources and Forestry, Ontario Field Ornithologists, and Ontario Nature.	MS Access database (planned)
ECCC-CWS	ECCC-CWS		

ECCC-CWS	ECCC-CWS		Spatial (geodatabase)
ECCC-CWS	ECCC-CWS		Excel
ECCC-CWS	Partnership (Birds Canada, Canadian Wildlife Service (Environment and Climate Change Canada), Ministry of Northern Development, Mines, Natural Resources and Forestry – Government of Ontario, Ontario Field Ornithologists (OFO), and Ontario Nature)	Birds Canada, Canadian Wildlife Service (Environment and Climate Change Canada), Ministry of Northern Development, Mines, Natural Resources and Forestry – Government of Ontario, Ontario Field Ornithologists (OFO), and Ontario Nature	
ECCC-CWS	ECCC-CWS, Trent University	Trent University, ECCC-WLSD	Spatial (geodatabase)
ECCC-CWS	ECCC-CWS		Excel



ECCC-CWS	ECCC-CWS		Excel
ECCC-CWS	ECCC-CWS, Wilfred Laurier University	ECCC-WLSD, Wilfrid Laurier University	Excel;Spatial

External Link (if applicable)	Parameters	Spatial Coverage	Time Period - Start	Time Period - End
NA		transition between Boreal Shield and Hudson Plains	n/a	n/a
NA	estimated counts of individuals by bird species	Between Attawapiskat and Albany Rivers	2019	2019
NA	estimated counts of individuals by bird species	road-accessible eskers along Ogoki Rd corridor, north/west from Nakina	2014	2014
<a href="http://www.birdsontario.org/atlas/index.jsp">http://www.birdsontario.org/atlas/index.jsp</a>	Breeding evidence and occurrence of breeding birds across the province	Ontario	1981	1985
<a href="http://www.birdsontario.org/atlas/index.jsp">http://www.birdsontario.org/atlas/index.jsp</a>	Point counts of all species observed, habitat characteristics at each survey location. Square level data, rare species data (images of forms are available which contain information not found in the database) are available from CWS	Ontario	2001	2005
NA	Point counts of all species observed, habitat characteristics at each survey location	Ontario	2021	2025
NA	counts of waterfowl by species	Ontario	1980	2007

NA	habitat availability as represented by PLC 27 landcover types	all of BCR7 and 8	n/a	n/a
NA	Counts or visual estimates of individuals in flocks.	Northcentral Ontario, Boreal forest and Hudson Bay Lowlands. Specially, data collected within 50 km buffer of N/S proposed road corridor and 100 km buffer of the core RoF mining crescent.	2022	2024
<a href="http://birdsontario.org">birdsontario.org</a>		Deployments from this project for the RoF RA will be included in Atlas database and some Atlas river trips will be in the RoF region. Most effort is in Southern Ontario, with less relevance. However the Atlas dataset will be a critical piece for both the RA and future IA decisions.	2021	2025
NA		Sites located in and around Ring of Fire mining crescent.	2021	2024
<a href="https://www.nabatmonitoring.org/">https://www.nabatmonitoring.org/</a>		Sites located near Ring of Fire mining crescent.	2021	2026

NA		Sites located in and around Ring of Fire mining crescent.	2019	
NA		Sites located in and around Ring of Fire mining crescent.	2022	

Status	Study Objectives	Method
complete		
complete	characterize breeding bird community of James Bay Lowlands	ARUs deployed in late May; retrieved in mid-October. Recording schedule June 1 through mid-July, with daily dawn and dusk periods, plus nocturnal periods.
complete	characterize breeding bird community of eskers along Ogoki Rd	Point Counts conducted in mid-June.
complete	Understand the distribution, range, and population numbers of breeding bird species in Ontario to create a database that forms the basis of management decisions.	Observations of breeding birds in 10 x 10km across Ontario, primarily collected by skilled volunteers.
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in planning	Understand the distribution, range, and population numbers of breeding bird species in Ontario to create a database that forms the basis of management decisions.	Point counts and observations of breeding birds in 10 x 10km across Ontario, primarily collected by skilled volunteers.
complete	Estimate density of early nesting duck species	Helicopter survey; 2km x 2km square plots; all wetlands, waterbodies, rivers surveyed

complete	to be used to help locate future studies and to inform of potential bird habitat related to development and resource projects: Not intended as definitive data source: finer scale studies required on a project basis	Bird habitats related to PLC 27 landcover derived from remote sensing and mapped.
Ongoing	Estimate density of early nesting and late nesting duck species and distribution within the defined study area. Incidental observations also recorded of other bird and mammal species outside of survey plots.	Helicopter survey; 5km x 5km square plots; all wetlands, waterbodies, rivers surveyed
ongoing	The goal of the Atlas is to map the distribution and relative abundance of Ontario's approximately 300 species of breeding birds – from as far south as Middle Island in Lake Erie, to Hudson Bay in the north.	Point counts, checklists, Recorded point counts, long term ARU deployments. Primary volunteers, but partner organizations also submit their data for inclusion.
Ongoing	Estimate caribou abundance in the region as well as collect samples for subsequent analysis of pregnancy rates and stress levels through hormonal analysis.	Aerial distribution surveys and collection of fecal pellets.
Ongoing	Gain a baseline understanding of existing bat populations, species' habitat requirements, and anticipated threats to bats in the region.	Deployment of bat ARUs

Ongoing	Collection of baseline predator data in Ring of Fire Region that can be used to assess caribou's predation risk in the region.	Visual scanning of acoustic spectrograms
Ongoing	Collect data on caribou, and caribou predators for the purpose of evaluating predation risk for boreal caribou.	Deployment, retrieval and/or refreshment of remote recorders (trail cameras)