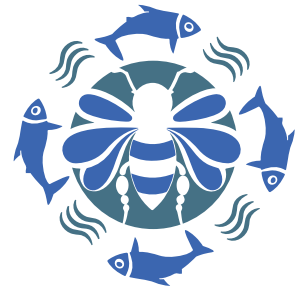


# LAND-BASED MONITORING

INFORMATION GUIDE



Métis Nation  
of Ontario 



# OUR RELATIONSHIP WITH THE LAND

***Métis people maintain a deep relationship with the land and its ecosystems. Métis communities depend on the land and its plants and animals for food, medicine, cultural and spiritual practices, and livelihoods. The health and well-being of native species will always be integral to that of the Métis people.***

The Métis Nation of Ontario (MNO) started developing land-based monitoring programs in 2023 to strengthen community involvement in environmental stewardship, increase knowledge of native plant and animal species, and foster intergenerational connection through time spent on the land. These programs monitor the effects of climate change and land use changes on important species in MNO communities, including the:

- Native Bee Monitoring Program;
- Acoustic Bat Monitoring Program; and
- Berry Monitoring Program.

The guiding values of these programs are rooted in work that is:

- Métis-led and community-based,
- Focused on intergenerational knowledge transfer
- Designed to increase time on the land and waters, strengthening connection, stewardship, and cultural relationship to place.
- Equip citizens with additional skills and resources to actively exercise guardianship of the lands and waters.
- Blending ways of seeing, knowing
- Committed to developing long-term datasets, to better understand change over time and support informed decision-making.

Our goal is to create a network of Métis monitors across the MNO who will have a vital role in protecting vulnerable species. The data collected from these programs will be used to advocate for greater protection and conservation efforts, help inform ecosystem management practices and guide future monitoring activities.

# NATIVE BEE MONITORING PROGRAM



Climate change, pesticide use and habitat loss have contributed to insect and, specifically, bee population decline in Canada. In 2023, the MNO launched a province-wide, community-based project focused on the conservation and monitoring of bee species native to Ontario. The Native Bee Monitoring Project encourages Métis households to support native bee species - including solitary species (like mason or leafcutter bees) and bumble bees (five of which are at risk in Ontario).

Households in Regions 1-9 monitor the use of bee hotels and report on bee and plant cycle data, as well as seasonal observations as they relate to climate change. Participants receive educational materials on bee species and planting supplies, including a variety of Ontario wildflowers with different bloom periods - so there are flowering plants providing a food source for bees all season long!

Bee monitors also submit data to PlantWatch, an online platform documenting when flowering plants (e.g. dandelions) bloom to watch how they are responding to climate change. This tracks where changes are taking place in Canada and at what rate (or collects *phenology data*).

# ACOUSTIC BAT MONITORING PROGRAM



The Acoustic Bat Monitoring Program is in partnership with the Toronto Zoo's Native Bat Conservation Program. It is a community science program for MNO Citizens in Regions 1-5 and 7 to help conservation efforts of Ontario's endangered bat species.

Bats play a vital role in healthy ecosystems and monitoring their populations helps us better understand habitat use, species presence and broader environmental changes. There are 8 species of bats in Ontario, 7 of which are species at risk, which means their population numbers are declining or at risk of declining.

This program encourages Métis households to support native bat conservation by increasing data collection on bat species across northern Ontario and surveying previously inaccessible areas to better understand bat populations. Monitoring takes place from May to September, when bats are most active. Bat monitoring participants set up an acoustic monitor outside on their property to record for a period of four-nights. After the four-night monitoring period, a preliminary analysis of the data collected from each session is conducted using the bat call analysis software, Sonobat, which displays ultrasonic recordings as sonograms to identify bat echolocation calls. After each session, bat monitoring participants receive an individual report that includes information about the data collected on their properties and the bat species detected. The collected data will be shared with other bat monitoring programs to help advance research and conservation efforts for bat species in Ontario.





# **BERRY** MONITORING PROGRAM

The goal of this program is to gain a clearer understanding of the health of traditionally harvested wild berries across the Traditional Territories and how harvests may be impacted by climate change. The program also aims to assess the potential impacts of herbicide use by industry on berry plants, which is a long-standing concern raised by MNO citizens and highlighted through the MNO resolution #25-AGA-OR-07 to stop all aerial glyphosate spraying on forests.

There are several established berry monitoring sites in Regions 1-5 and 7, consisting of a mix of reference and herbicide impacted sites. Reference sites are areas that have not been exposed to the herbicide glyphosate, used as a baseline for comparing plant health and berry productivity. Herbicide impacted sites are in areas that have been exposed to herbicide use, specifically glyphosate application within the last 5 years, where the potential effects on berries and plants can be studied.

Through programs like this, we can see the connection between land stewardship, food sovereignty, and food security, as well as how these efforts help strengthen reciprocal relationships with the land and waters. The data collected from this program will be used to advocate for greater protection and conservation efforts, help inform ecosystem management practices and guide future monitoring activities.



# **BERRY HARVESTING TRIP SURVEY**

The Berry Harvesting Trip Survey will provide even more insight into berry availability, harvesting patterns, community experiences and observations. Métis harvesters can complete the survey during berry harvesting outings to share their observations, experiences, and concerns. The data collected through lived experience and traditional knowledge will help inform conservation efforts, help inform ecosystem management practices and guide future monitoring activities.



[www.bit.ly/3ROjGdK8f2](http://www.bit.ly/3ROjGdK8f2)

# GET INVOLVED

The MNO is looking for Métis citizens across the province with an interest in spending time outside and in programs that protect and conserve Ontario's native plant or animal species. No previous experience is necessary to participate. These programs are open to Métis citizens, households or families (main contact must be age 18+).

Interested in becoming a monitor?

[Conservation@metisnation.org](mailto:Conservation@metisnation.org)

Thank You, Merci, Miigwetch, Maarsii

***“Protect and preserve the land and waters within our homelands for future generations.”***

– MNO's Statement of Prime Purpose

Métis Nation  
of Ontario 