

Project Dashboard

Assessing contaminants in seabird habitats in Eclipse Sound (149735)

Proposal Status: Conformity Determination Issued

- **Overview**
- Documents
- Questionnaire

Project Overview

Type of application: **New**

Proponent name:	Jennifer Provencher
Company:	Environment and Climate Change Canada

Schedule:

Start Date:	2022-07-01
End Date:	2025-10-01
Operation Type:	Seasonal

Project Description:

Many contaminants are toxic and can accumulate in foodwebs, affecting the health of wildlife and humans. They can be carried by wind and water from sources to the Arctic. Birds are also thought to carry some contaminant to the Arctic as well. This project will focus on several contaminants in seabirds and their habitats in relation to another transmission route of contaminants, shipping and vessel traffic. We will focus on two groups of contaminants known to be associated with vessels - oil related contaminants (polycyclic aromatic hydrocarbons (PAHs) and metals) and plastic pollution. We propose to install passive air samplers (PAS) for organic contaminants in the Pond Inlet area. Passive sampling refers to collecting contaminants from air on a trap that sits out in the open without any pumps pulling in the air. Passive samplers are a low-cost, low-maintenance way to monitor contaminants because they do not require power for pumps or a shed to house the instruments. They are unobtrusive and they make no noise, do not produce any emissions and they simply sit outside and trap contaminants from the air. This sampling method is ideally suited to the Arctic environment. It is also suitable for involving students or other interested persons in sample collection, enhancing communication with local communities and creating training opportunities. We will also use a high volume air sampler in the Pond Inlet area to specifically target sampling when vessel are moored in the area near town. We would also like to collect air, water, and sediment from different distances away from the colony to determine if the regions around the colonies have higher levels of microplastics. The water, sediments, and passive air samples will be collected with local hunters, and examined with ECCC partners. Water will be collected by boat using a manta trawl, sediments will be collected from shorelines and will be approximately 100 g per sample, and air samplers are glass collection dishes placed on the shoreline. Shoreline surveys will also be carried out in Eclipse Sound to assess the routes and deposition of macrolitter in the region. All plastic pollution methods will follow the harmonized methods proposed by the Arctic Council's Litter and Microplastics Expert group. This work is part of a collaboratively developed project with ECCC and Pond Inlet. All collections will be done by local partners and samples will be sent to ECCC partners in Ottawa for the analytical processing.

Personnel:

Persons:	4
Days:	20

Project Map

List of all project geometries:

ID	Geometry	Location Name
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8617	polygon	New project geometry
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Planning Regions:

Kivalliq

Affected Areas and Land Types

Inuit Owned Surface Lands

Municipal

Established National or Territorial Park

Settlement Area

North Baffin Planning Region

Project Land Use and Authorizations

Project Land Use

Scientific Research

Scientific Research

Licensing AgenciesNRI: [Scientific Research Licence](#)**Other Licensing Requirements**

No data found.

Material Use

Equipment

Type	Quantity	Size	Use
Manta trawl	1	30cmx40cm	The manta trawl is pulled behind a small boat for approximately 20 min to filter the water. All pieces collected in the net are then collected and sent for analysis.
Passive air samplers	6	30cmx30cm	Passive sampling refers to collecting contaminants from air on a trap that sits out in the open without any pumps pulling in the air. Passive samplers are a low-cost, low-maintenance way to monitor contaminants because they do not require power for pumps

			or a shed to house the instruments. They are unobtrusive and they make no noise, do not produce any emissions and they simply sit outside and trap contaminants from the air. Glass sampling jars will be used to collect sediments at the shoreline Transect tape and materials will be used to mark beaches and shorelines to count plastic pollution, and will be removed when the transects are completed (about 1 hour)
Sampling jars	10	10cmx10cm	
Shoreline transects	10	10m	

Fuel Use

Type	Container(s)	Capacity	UOM	Use
Diesel	3	5	Liters	Use of a small boat to collect samples

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Water Consumption

Daily Amount (m³)	Retrieval Method	Retrieval Location
0		

Waste and Impacts

Environmental Impacts

The work proposed here is based on day trips from town. All the sampling gear will collect contaminants in the region, and will be collected by the team for analysis. Therefore, there is no waste that is expected from this work.

Waste Management

Waste Type	Quantity Generated	Treatment Method	Disposal Method
No data found.			