



Waste Management Plan for the Liard River Ferry Landing Maintenance

Government of the Northwest Territories – Department of Infrastructure



Table of Contents

| | |
|--|---|
| Introduction | 3 |
| Project / Site Description..... | 3 |
| Identification of Waste Types..... | 4 |
| <i>Non-Hazardous Non-Mineral Waste</i> | 4 |
| <i>Non-hazardous Mineral Wastes</i> | 4 |
| <i>Hazardous Wastes</i> | 5 |
| Management of Waste Types | 5 |
| <i>Non-Hazardous Non-Mineral Wastes</i> | 5 |
| <i>Non-Hazardous Mineral Wastes</i> | 5 |
| <i>Hazardous Wastes</i> | 6 |
| Infrastructure Required for Waste Management | 6 |
| References | 6 |

Introduction

The Government of the Northwest Territories (GNWT) Department of Infrastructure (INF) is applying for a Type B Water Licence to allow for the removal of in-stream boulders, cobbles, and other sediment from the navigational path of the Liard River Ferry, located at km 457 on Highway 1 near the Village of Fort Simpson, NWT.

This Waste Management Plan (WMP) has been developed by INF and will be implemented for all activities undertaken for the life of the Land use permit. The purpose of this WMP is to provide a guide to all site personnel on the waste management goals, objectives and procedures to be used during permitted operations and maintenance activities.

This WMP has been developed in accordance with the Guidelines for Developing a Waste Management Plan, prepared by the Mackenzie Valley Land and Water Board (2011). INF is cognizant of the need to ensure components of the environment, including air, water, land, vegetation, wildlife and fish are not negatively affected by permitted activities. INF has developed this WMP to ensure aesthetic and land use values of the permitted alignment remain intact following expiry of the permit and, ensure INF and its Contractors will comply with all applicable acts, regulations, and conditions outlined in the applicable land use permit and water license for this project.

Project / Site Description

Due to the predicted low water levels for this summer, GNWT-INF will need to undertake work to remove in-stream granular material from the ferry's navigational path, to prevent the ferry from running ashore during its operations. This work is vital to maintain ferry operations. The work will consist of the following:

- Removing 4,000 cubic meters of materials from both landing sites along the shores of the Liard River, for a combined total of 8,000 cubic meters of material to be removed.
- Operation of a long reach excavator from the ferry landing pads to remove material from the Liard River.
- Placing a long reach excavator in stream on the ferry landing pads.
- Stockpiling materials from the Liard River for reuse at the ferry landing pads or transport to a quarry.
- Dredged materials will initially placed near shore then moved onsite for further management.

Work is proposed to occur between August 15 and October 31, 2024 when water levels are at their lowest. This is to reduce the requirement to place equipment in the water on the ferry landing pads to reach the boulders and cobbles. Work is expected to take approximately 20 days.

Identification of Waste Types

Over the course of the project, a number of types of waste may be generated by equipment and crews working within the area. The primary type of waste will include dredged sediment and material; however, some hazardous wastes could be generated. All potential waste types are listed below with further descriptions provided:

Non-hazardous non-mineral wastes:

Domestic wastes

Non-hazardous mineral wastes:

Dredged sediment and materials (boulders, cobbles, sand, silt)

Hazardous wastes:

Used oil, fuel, lubricants, greases, oil, filters, and solvents

Contaminated soil and/or water

Non-Hazardous Non-Mineral Waste

Non-hazardous, non-mineral wastes generated will primarily include domestic and sanitary wastes. Domestic wastes will be brought to the site with project personnel in their lunches, crew vehicles, etc., while sanitary wastes will be generated on-site. There will be a minimal amount of domestic wastes.

The potential environmental effects arising from unmanaged non-hazardous, non-mineral wastes include increased wildlife attractants, potential for sanitary spills or leaks, and possible degradation of water quality, and wildlife and fish habitat quality.

Non-hazardous Mineral Wastes

Dredged material will be stockpiled on site for potential reuse at the ferry landing site or will be hauled to an existing quarry site. Material will be initially placed on the shore by the excavator, then relocated further onsite at the ferry landing.

Potential environmental effects arising from dredged material are re-introduction to nearby water bodies through sedimentation and erosion, affecting nearby wildlife and fish habitat quality.

Hazardous Wastes

Potential hazardous wastes generated on-site include waste oil, fuel, lubricants, oil filters, solvents, etc., from use and maintenance of heavy equipment. Other potential hazardous wastes may include contaminated soil or water should a spill occur during ongoing maintenance and construction activities.

The possible environmental effects arising from unmanaged hazardous wastes include degradation of soil quality, degradation of water quality, and wildlife and fish habitat quality, and harm to on-site personnel.

Management of Waste Types

Non-Hazardous Non-Mineral Wastes

Non-hazardous, non-mineral wastes will be temporarily stored at the ferry landing site as required. The following management and mitigation techniques may be implemented to reduce the potential for environmental effects associated with non-hazardous, non-mineral wastes:

Domestic wastes:

- On-site, domestic wastes will be stored in clearly marked containers with tight-fitting lids (i.e., garbage cans).
- All waste will be transported back with site personnel and disposed of at the local Solid Waste Facility.

Sanitary wastes:

- All waste will be transported back with site personnel and disposed of at an approved Waste Management Facility.

Non-Hazardous Mineral Wastes

Dredged material will be temporarily stockpiled on site during dredging activities and will be hauled to existing quarries for further management. Dredged material will be placed on shore by the excavator, then relocated further onsite 100m from the Liard River till it can be hauled away or reused. This Project has a corresponding Erosion and Sediment Control Plan that speaks to methods preventing erosion and sediment issues affecting nearby water bodies.

Hazardous Wastes

Hazardous wastes generated during the permitted operations and maintenance activities will be stored at the designated fueling and contaminant storage area, with secondary containment, within the project area. This area will be greater than 100 m from a water source; this will prevent potential spills or leaks from entering the creek.

Any hazardous wastes will be stored in clearly marked containers with lids (i.e., drums).

Any hazardous wastes will be removed from the designated storage area a minimum of every two weeks, if necessary. As the contaminated soil/snow wastes will be transported to an approved waste facility for treatment. If other contaminated materials require disposal (i.e., spill pads), these will be disposed of through a licensed facility. For this transport and disposal, the Contractor or INF will complete the appropriate waste manifest form.

Infrastructure Required for Waste Management

The following types of infrastructure are in place which is required for proper waste management of the operations and maintenance of the highway:

- Cleared temporary stockpile storage area on site;
- Waste storage or disposal facility – Approved Solid Waste Facility;
- Appropriate hazardous waste disposal facility – Approved hazardous waste disposal facility.

References

Indian and Northern Affairs Canada (INAC). 2010a. Northern Land Use Guidelines Volume 7 – Pits and Quarries. Natural Resources and Environment Branch, INAC, Ottawa, ON. Available online: <http://www.aadnc-aandc.gc.ca/eng/1100100023585/1100100023587> (13 November 2012).

Indian and Northern Affairs Canada (INAC). 2010b. Northern Land Use Guidelines Volume 5 – Access: Roads and Trails. Natural Resources and Environment Branch, INAC, Ottawa, ON. Available online: <http://www.aadnc-aandc.gc.ca/eng/1100100023568/1100100023583> (13 November 2012).

Mackenzie Valley Land and Water Board (MVLWB). 2011. Guidelines for Developing a Waste Management Plan. MVLWB, Yellowknife, NT. Available online: <http://mvlwb.com/resources/policy-and-guidelines> (19 November 2012)