



Waste Management Plan for NWT Highway 4 Km 7.94 to Km 10.18 Water Licence

Government of the Northwest Territories – Department of Infrastructure



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Introduction

The Government of the Northwest Territories, Department of Infrastructure (INF) is applying for a Water Licence to place fill within the high-water mark at Km 7.94 to 10.18 for reconstruction as part of the ongoing maintenance activities of NWT Highway 4. To undertake maintenance and to improve safety of the highway, the proposed works will be completed under Land Use Permit MV2017X0008. Works will occur entirely within the highway right of way, which will include granular infill within the high-water mark.

This Waste Management Plan (WMP) has been developed by INF and will be implemented for all activities undertaken for the life of the Water Licence. The Land Use Permit MV2017X0008 has its own associated WMP which is mirrored by this proposed plan and all construction and maintenance work on Highway 4 will be guided by these WMP. 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

The Department of Infrastructure (INF) is planning to place approximately 2868.75 m³ of rock between Km 7.94 to 10.18 on NWT Highway 4. This work is needed to reconstruct the area for safety improvements. Work is anticipated to start by April 01, 2024, and end by October 15, 2027.

Identification of Waste Types

Over the course of the project, several types of waste may be generated by equipment and crews working within the area. The primary type of waste will include non-hazardous, non-mineral wastes; 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

Construction material

Hazardous wastes:

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

Contaminated soil, snow/ice 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. Construction material will be disposed of at approved facilities under the Land Use Permit MV2017X0008 waste management plan.

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.

Hazardous Wastes

Potentially hazardous wastes generated on-site include waste oil, fuel, lubricants, oil filters, solvents, etc., from use and maintenance of heavy equipment. Other potentially hazardous wastes may include contaminated soil, snow 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

The non-hazardous, non-mineral wastes will be temporarily stored as described in the MV2017X0008 waste management plan. 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 domestic waste will be transported back with site personnel and disposed of at a Solid Waste Facility, approved under MV2017X0008.

Cleared vegetation (from INAC 2010b):

- Vegetation clearing for the water licence work is not expected, but in the event that some clearing is required the following practices will be employed:
 - Trees will be felled away from water sources to minimize the amount of vegetation material that could enter the aquatic environment.
 - If clearing trees or packing snow with a dozer blade, mushroom or smear blades will be used and the uprooting of the trees will be avoided. Small trees and shrubs will be cleared by hand, or with the dozer blade to “walk down” the vegetation, with the blade set at a fixed height. The blade will push small trees and shrubs down and the weight of the machine will compress felled vegetation. The ground cover and surface organic layer will be left in place.
 - Burning of brush may be required. If determined necessary, brush piles will be burned away from other vegetation to minimize the risk of fire spreading.

Construction materials:

- On-site, waste construction materials will be stored in clearly marked containers with lids. These waste materials will be transported back to a community, if/when necessary, and disposed of at an approved Solid Waste Facility under the Land Use Permit MV2017X0008. These containers will be inspected daily to ensure no domestic waste is disposed of here.

Hazardous Wastes

Hazardous wastes generated during the permitted operations and maintenance activities will be stored at the designated fueling and contaminant storage area 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 waste will be stored in clearly marked containers with lids (i.e., drums).

Any hazardous waste will be removed from the designated storage area a minimum of bi-weekly, 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 through the MV2017X0008 permit, which is required for proper waste management of the project:

- Cleared vegetation storage area – this area for windrowing or burning will be selected within an appropriate location along the highway alignment by the Contractor and INF site representative;
- Waste storage or disposal facility – Approved Solid Waste Facility;
- Sewage disposal facility – Approved Sewage 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>