



McElhanney



Environmental Management Plan for Shallow Bay Road and Guest Road Intersection Improvements

October 2022 | Revision 0

Submitted to: Ministry of Transportation & Infrastructure
Prepared by McElhanney Ltd.

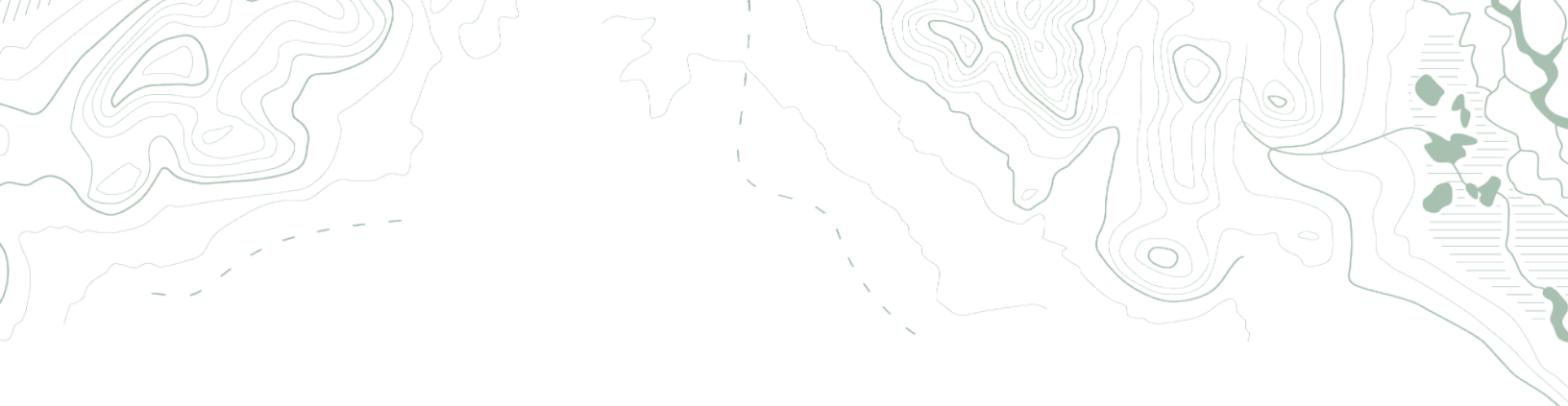
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Our file: 2341-02745-09



**Your Challenge.
Our Passion.**

Environmental Management Plan

For

Shallow Bay Road and Guest Road Intersection Improvements

Prepared by:



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October 2022

Document Reference No. 2341-02745-09

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Limitations of Report

This EMP was prepared for the exclusive use of the MoTI, its assignees and representatives. It is intended to outline performance-based environmental requirements, standard protocols and mitigation measures implemented during works occurring in 2023 for the Shallow Bay Road and Guest Road Intersection Improvements. In developing this report, McElhanney has relied in good faith on information provided by the MoTI.

McElhanney accepts no responsibility for any deficiency or inaccuracy contained in this report as a result of our reliance on the aforementioned information. The guidance and findings documented in this report have been prepared for the specific application to this project. This report has been developed in a manner consistent with the level of care normally exercised by environmental professionals currently practicing under similar conditions in BC. This report may be revised, at the request of the MoTI, should new information discovered in future work from other investigations, require amendments prior to any reliance upon the information presented herein.

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1. Introduction

McElhanney Ltd. (McElhanney) was retained by the Ministry of Transportation and Infrastructure (MoTI) to prepare this Environmental Management Plan (EMP) for proposed improvements of both the Shallow Bay Road and Guest Road intersections along Highway 16. Intersection improvements are designed to improve driver safety by including left turn bays, right turn deceleration lanes, and improving the size of the intersection to account for large vehicle turning movements. The intersections are located on Hwy 16 north of Cluculz Lake and are situated approximately 590 m apart (with Guest Road furthest west).

This EMP will be used in support of provincial and federal regulatory requirements as well as providing a basis for a Construction Environmental Management Plan (CEMP) for the works. It will specifically address the environmental values of the project area, construction considerations with potential impacts on the environment, and best management practices (BMPs) to apply prior to and during construction. *Figure 1* below shows the geographic location of the project area, approximately 60 km west of Prince George, BC. Refer to *Table 1* for a project site summary.



Figure 1. Overview of project site (approximate boundary in red).

Table 1 Project Site Summary.

PROJECT SITE SUMMARY	
Site Location Description	Unnamed stream between Shallow Bay Road and Guest Road intersections along Highway 16
Geographical Location	Latitude: 53.891121° Longitude: -123.532745° Elevation: 651 m
Proximity < 30 m from Water	Yes
Waterbody Name	Unnamed
Type of Waterbody	Stream
Stream Flows Into	Cluculz Lake
Watershed	Unnamed (Watershed code 180-191300-27600)
Instream Project Footprint (m ²)	164 m ²
Proposed Timing for Works	July – October 2023
Within the Regional Timing Window?	Yes
Legal Description of Property	North West ¼ of District Lot 1421, Cariboo District, No Plan, PID: 012-683-426
Landowner	Ministry of Transportation and Infrastructure
Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) Region	Omineca

2. Project Description

The MoTI has contracted a design that will widen the highway and accommodate the construction of left turn bays, right turn deceleration lanes and generally increase the size of the intersections to accommodate larger vehicles. Highway widening will impact one mapped, unnamed watercourse and a wetland. There is an existing 2400 mm steel pipe culvert on the unnamed stream crossing of Hwy 16, which was installed in 2015. The culvert is 70.2 m long and contains baffles. To accommodate increased highway width, the culvert will be extended six meters on the upstream side, and the inlet armoured with riprap. Highway widening will also require infilling a portion of the wetland, from the high-water mark out approximately 6 m (*Figure 2*). The extended highway embankment will be keyed into the substrate and constructed from Type A embankment material wrapped in geotextile material. Design drawings have been included in *Appendix A*; applicable sheets include: R3-375-303 R3-375-309, and R3-375-702.



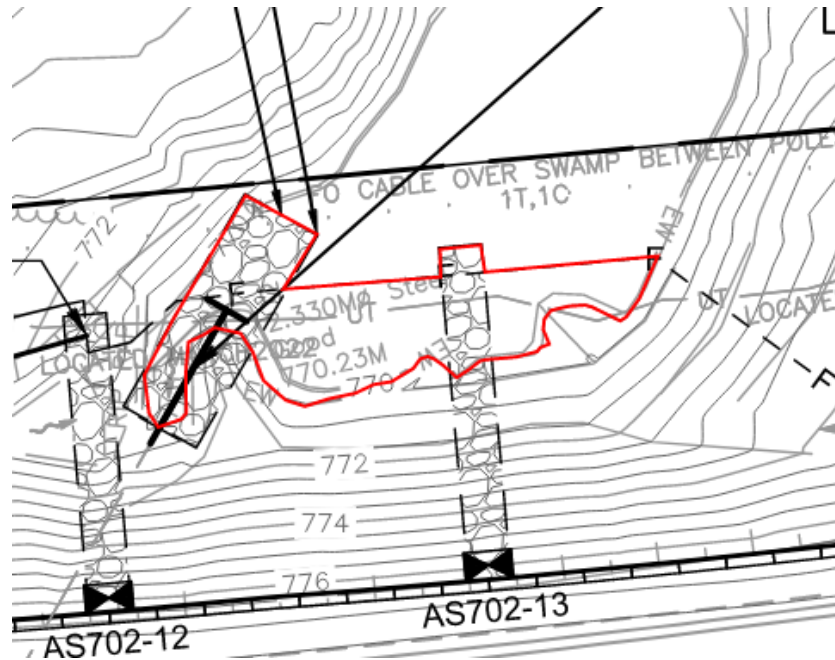


Figure 2. Snip taken from Drawing R3-375-702 showing the extent of wetland infill (shown in red).

2.1. PROJECT TIMING

Overall, the project is expected to occur between June – October 2023 with all instream work scheduled for the reduced risk window of July 15th to August 31st. This includes time required for site preparation prior to construction, and revegetation after the work is complete.

2.2. PRELIMINARY CONSTRUCTION SEQUENCE

The design drawings showing have been included in [Appendix A](#). Works will be undertaken by MoTI contractors. The following sequence is expected but may be changed based on discussions (order of events may change with no impact to overall project):

- Install stop-nets, site isolation, stream diversion and conduct fish salvage;
- Install culvert extension;
- Extend the highway fill slope into the wetland, as per design;
- Armour culvert inlet with rip rap as per design specifications;
- Remove site isolation; and
- Revegetate as per design.

2.3. SITE ACCESS

Site access is approximately 33 km east of Vanderhoof or 56 km west of Prince George. Machinery will access the site from the highway and access trail parallel to the highway.



2.4. APPLICABLE LEGISLATION

All work must comply with the conditions of regulatory agency approvals and permits obtained to proceed with construction activities, as well as MoTI Standard Specifications (2020). This section outlines the federal and provincial legislation applicable to the project, which includes:

- *Canadian Environmental Protection Act;*
- *Fisheries Act;*
- *Hazardous Products Act;*
- *Migratory Birds Convention Act;*
- *Species at Risk Act;* and
- *Transportation of Dangerous Goods Act.*

Applicable provincial environmental protection legislation include:

- *Heritage Conservation Act;*
- *Environmental Management Act;*
- *Spill Reporting Regulation;*
- *Water Sustainability Act;* and
- *Wildlife Act.*

Approvals are required from the provincial (*Water Sustainability Act*) and federal (*Fisheries Act*) regulatory agencies prior to starting work. Where work will be conducted within the wetted channel, a Scientific Fish Collection Permit will be required during isolation of the stream. The agencies may require that additional environmental provisions beyond those listed in the EMP be incorporated into project approvals as a result of their Changes In and About a Stream review process. Copies of the EMP and all approvals must be kept on-site for the duration of the project.

3. Roles and Responsibilities

3.1. PROJECT ORGANIZATION

The Ministry is the Project Owner and RF Binnie & Associates is the Engineer of Record. A Contractor will be selected through competitive tender to construct the project as per the design drawings supplied within the Tender Package. The Contractor will engage an Appropriately Qualified Professional (AQP) to provide oversight of project compliance with the environmental protection requirements of the project.

3.2. PROJECT OWNER

The Ministry owns and has the ultimate responsibility for the Project and safety for the users of the infrastructure.

Responsibilities include the following:

- Obtain Project Approvals, as required by regulatory agencies.
- Incorporate standard terms and conditions, and contract-specific environmental stewardship roles and responsibilities, in contract and subcontract agreements.



- Incorporate environmental protection requirements and information into contract agreements, and confirm that appropriate site-specific environmental permits, procedures, training, and records are reviewed and accepted before the Contractor's site activities begin.
- Confirm that the overall, job-specific environmental protection goals are fully and continuously implemented for full project compliance.
- Appoint a qualified Environmental Auditor to liaise with the Contractor's environmental monitor and audit project adherence to environmental requirements as per EMP, CEMP and environmental legislation and regulations.

3.3. ENVIRONMENTAL AUDITOR

The role of the Environmental Auditor is to verify that project work activities comply with environmental legislation and ensure that contractual obligations and the conditions set out in regulatory permitting are achieved.

Duties and responsibilities of the Environmental Auditor include the following:

- Attend project kickoff and construction meetings (in person or via phone) as needed.
- Verify that project environmental permits are obtained and are available onsite, and that project execution complies with these permits.
- Review the Contractor's completed CEMP, procedures, and site-specific plans for compliance with the EMP.
- Liaise with the Contractor's Environmental Monitor and audit project adherence to environmental requirements as per EMP, CEMP and environmental legislation and regulations.
- Coordinate and communicate with regulatory agencies, interested, and potentially affected general-public stakeholders.
- Facilitate environmental regulatory agency inspections should these occur; this includes accompanying the inspector, providing the inspector with the necessary documentation, and addressing issues identified during the inspection.
- Assist in emergency situations or incidents to minimize adverse environmental effects.

3.4. THE CONTRACTOR

The Contractor will be responsible for the following:

- Retain an AQP (as defined by SS165) to prepare a CEMP for the construction activities associated with the project.
- Understand and implement project activities without compromise to the environment.
- Update the CEMP as necessary during the implementation of the work to address changes in work plan or activities and submit revised drafts to the Ministry for approval.
- Comply with all regulatory authorizations, approvals, permits, acts, and bylaws associated with the project.
- Ensure that staff are adequately orientated and trained on CEMP contents and implementation of procedures and best management practices (BMP).



- Ensure that all wastes generated, hazardous and non-hazardous, are disposed of in accordance with the British Columbia Ministry of Environment Regulations.

3.5. ENVIRONMENTAL MONITOR

Qualified Environmental Monitors (EMs) will be retained by the Contractor to oversee that project construction activities comply with environmental provisions as defined in applicable legislation, regulations, guidelines, contract documents and specifications, the EMP, the CEMP, industry, and agency BMPs. All EMs for the Project must be AQPs with relevant experience in environmental monitoring of similar types of projects.

The EM will observe, record, and report on all activities and document any changes made to the CEMP prior to, during, and following construction, as necessary. An example daily environmental monitoring log can be found in [Appendix B](#). EM tasks, in part, are to:

- Monitor and report on a regular basis, (daily, weekly, or as needed), to ensure project adherence to environmental requirements as per EMP, CEMP and environmental legislation and regulations.
- Monitor, evaluate, and report on the effectiveness of work practices, procedures, and mitigation measures implemented.
- Review all erosion and sediment control measures/structures and monitor and report on effectiveness.
- Review of fuel handling and storage practices, and spill response provisions.
- Monitor and report on work in or around environmentally sensitive areas, special erosion protection zones, and fish or riparian habitat.
- Monitor and report on compliance with environmental legislation and regulations (provincial and federal).
- Monitor and report on the performance of the Contractor with respect to environmental protection and compliance.
- Inform the contractor on upcoming environmental concerns, as weather changes and work activities progress.
- Attend (in person or via phone) construction meetings as necessary to discuss environmental issues, concerns, suggested solutions and up-coming measures that are needed to allow for Project execution.
- The EM must be available throughout the duration of the work to represent the Contractor in all matters related to the protection of the environment and, in particular, be available to attend all key meetings at which environmental protection measures are to be discussed.

Other tasks may include providing active bird nest surveys prior to vegetation removal, monitoring impacts of construction activity on species at risk in the area and addressing any wildlife issues that may arise.

Higher risk activities associated with the project where the EM should be on-site includes, but is not limited to:

- Inspection of equipment and vehicles for leaks or spills;



- Work undertaken within the wetted perimeter of the stream or wetland;
- Any work with the potential to cause major adverse impacts to the stream or wetland;
- Clearing and grubbing activities within 30m of the stream or wetland; and
- Regular inspection of erosion and sediment control measures, particularly during heavy or prolonged precipitation.

In the event of an environmental incident, the EM must immediately report the incident to the appropriate authority (when required by statute), the Contractor Project Manager, and MoTI Project Manager. For incidents related to spills, actions are outlined in [Appendix C](#) will also be followed.

4. Environmental Setting

The nearest waterbody is an unnamed tributary (Watershed code 180-191300-27600) to Cluculz Lake located approximately 150 m east of Guest Road between the two intersections. Cluculz Lake is approximately 415 m south of the Guest Road intersection and 430 m south of the Shallow Bay Road intersection. The unnamed tributary connects to a pond directly upstream of the existing 2400 mm steel pipe culvert. The majority of the site falls within the existing Highway 16 right-of-way and contains limited environmental resources.

4.1. FISH & INSTREAM WORK WINDOWS

No existing fish information is available for the unnamed tributary to Cluculz Lake, however, during a site visit in 2021, four Rainbow Trout (*Oncorhynchus mykiss*) were observed from the outlet in the pools of water within the existing culvert. Recorded fish species present in Cluculz Lake include Burbot (*Lota lota*), Dolly Varden (*Salvelinus malma*), Kokanee (*Oncorhynchus nerka*), Lake Chub (*Couesius plumbeus*), Lake Trout (*Salvelinus namaycush*), Lake Whitefish, Largescale Sucker (*Catostomus macrocheilus*), Longnose sucker (*Catostomus Catostomus*), Mountain Whitefish (*Prosopium williamsoni*), Northern pikeminnow (*Ptychocheilus oregonensis*), Peamouth Chub (*Mylocheilus caurinus*), Pygmy Whitefish (*Prosopium coulterii*), Rainbow Trout, Redside Shiner (*Richardsonius balteatus*), and White Sucker (*Catostomus commersonii*). As shown in [Table 2](#), the least-risk timing window for Cluculz Lake is from July 15th to August 31st.

Table 2. Instream work window (Reduced Risk Windows) for Cluculz Lake.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainbow trout				15			15					
Dolly Varden							15	31				
Mountain Whitefish						1		31				
Kokanee						1			15			

NOTE: White (non-shaded) areas indicate the reduced risk work windows.



4.2. FISH HABITAT

At time of assessment, water from the pond upstream was restricted by low flow conditions, potentially due to beaver activity upstream of the pond. Small pools of water were present behind each baffle within the culvert, but downstream of the culvert, the channel was dry. The dry channel downstream from the highway contained cobble and gravel substrate and had abundant overhanging vegetation indicating potential for good fish habitat if sufficient water levels were maintained.

4.3. AMPHIBIANS

An amphibian salvage permit will be obtained prior to construction as there is potential for Western Toads (*Anaxyrus boreas*) in the area. Western toadlets emerge on mass from small ponds and pools, usually in early July, and disperse overland (E-fauna BC, 2021a). The construction area will be regularly scanned for migrating amphibians by the EM. If amphibians are observed within the work area, all nearby work will cease, and the EM will capture and remove all individuals thereby preventing harm or mortality. If any amphibians are found during the project construction, the MoTI must be contacted, and the BMPs will be followed for Amphibian and Reptile Salvages in British Columbia ver 1.0 (FLNRO 2016b), and any permit conditions.

4.4. BIRD NESTING WINDOWS

Any clearing activities should avoid the bird nesting window of May 1 to July 31. All trees will be felled away from the stream to avoid impacting the channel during construction. Any tree that falls into the channel will be lifted out (not dragged) to protect remaining vegetation and the stream channel. If clearing cannot be avoided outside of the least risk window, a breeding bird nest survey should be conducted by an AQP to identify active nests and apply appropriate site- and species-specific No Work Zone buffers, as required.

5. Potential Environmental Impacts

A review of the project was undertaken to identify potential environmental impacts and mitigation measures associated with the proposed erosion and scour protection works. The construction activities that are likely to impact environmental values are:

- Extension of the culvert;
- Placement of rip rap;
- Site access for machinery use; and
- Spills/leaks from machinery.

These works were then compared to DFO's Pathways of Effects for determination of impacts to habitat ([Table 3](#)). We determined the risk for all pathways to be low and mitigable.



Table 3 Potential Environmental Impacts

Impact	Risk Assessment	Mitigation
Fish Mortality	Low	Work will be performed, to the fullest extent possible, in the dry. Fish in the project area will be removed from site prior to construction and relocated outside of the isolated instream work area.
Riparian Habitat	Low	Minimize amount of vegetation clearing required to access the site; revegetate as soon as possible after construction is complete. Avoid damaging or removing mature trees.
Change in sediment concentrations	Low	Work will be performed, to the fullest extent possible, in the dry. Erosion and sediment control measures will be implemented, and the site monitored by an AQP.
Change in access to habitat/migration	Low	No change expected to habitat/migration access.

6. Mitigation Measures

BMPs and procedures for the protection of the environment will be carried out in accordance with the MoTI Vol. 1 2020 Standard Specifications for Highway Construction Section 165 'Protection of the Environment' (SS 165), specifications within this EMP and all applicable provincial and federal standards. SS 165 will apply in its entirety unless otherwise specified by the MoTI.

Guidance documents that may be applicable to the project are listed below. This list should not be considered exhaustive. The contractor is responsible for ensuring that all appropriate BMPs and guidance documents are evaluated whether listed herein or not, and that appropriate measures are employed.

- MoTI SS 165 – Protection of the Environment (MoTI 2020);
- Region 7 Omineca - Reduced Risk Timing Windows for Fish and Wildlife (Ministry of Water, Land and Air Protection 2004);
- Requirements and Best Management Practices for Making Changes In and About A Stream in British Columbia (Government of British Columbia 2022);
- Approved Water Quality Guidelines; Ministry of Environment (Ministry of Environment 2014a);
- Environmental Quality Guidelines for the Protection of Aquatic Life (Canadian Council of Ministers of the Environment 1999);
- Environmental Guidelines for Urban and Rural Land Development in British Columbia (Ministry of Environment 2014b);
- Land Development Guidelines for the Protection of Aquatic Habitat (Fisheries and Oceans Canada 1993);
- National Guide to Erosion and Sediment Control on Roadway Projects (Transportation Association of Canada 2005);
- A Field Guide to Fuel Handling, Transportation and Storage (Ministry of Water, Land and Air Protection 2002);
- Environmental Best Practices for Highway Maintenance Activities (MoTI 2018).



6.1. SITE ISOLATION AND FISH SALVAGE

Prior to any instream works, the site will be isolated and a fish salvage will be conducted. Due to the nature of the project area a sheet pile or megabag cofferdam (or similar) would likely be an appropriate method for site isolation. All instream works must have an AQP on-site and should be staged within the shortest time possible to avoid 24 hr pumping. The CEMP will detail the contractor's site-specific plan for site isolation and fish salvage.

6.2. EROSION AND SEDIMENT CONTROL

Implement erosion and sediment control (ESC) measures prior to construction and as soon as needed to reduce sediment transport and the potential for negative impacts to the surrounding environment. Minimizing the area of disturbance/retaining vegetation or applying temporary or permanent soil covers to areas of concern is the easiest way to do this. The following is a list of general ESC BMPs that will be implemented during construction works:

- Contingency ESC supplies must always be available at/near the site. This includes but is not limited to sediment fencing, filter fabric, sand-bags, water pumps, heavy duty plastic or tarps, and straw bales.
- Any sediment-laden water will be directed to a suitable location where it can be retained for infiltration prior to water re-entering the watercourse.
- Stockpiled erodible material located near water or drainage will be located on flat ground with appropriate erosion control to prevent sediment being transported to the stream.

6.3. VEGETATION MANAGEMENT

Retain existing vegetation wherever possible. All areas of disturbed areas will be seeded using a MoTI approved, weed-free seed mix and mulched with straw as soon as practical, once construction is complete. If the area is not revegetated immediately after construction, adequate ESC measures will be put in place and the site will be monitored throughout the winter for erosion and revegetated in the spring.

Disturbed, non-riprap areas within 2m of the wetland's high-water mark will be planted with live stakes. Live stakes will be harvested locally (if possible) and planted at a density of 1 stake per square meter.

6.4. RAINFALL SHUTDOWN PROCEDURES

In cases of heavy or prolonged precipitation, construction activities should be stopped, particularly instream works (see [Table 4](#) for guidelines). Activities can resume once conditions dry-out or the site is stabilized with suitable ESC measures such as sediment fencing, mulching, or covering exposed soils with plastic tarping or geotextile. Additional conditions that should be monitored for and may lead to immediate work shutdown include:

- Sudden muddy water in watercourse;
- Sudden lack of flow in streams during wet weather indicating water has gone subsurface;
- Cracks appearing in soils adjacent to roadway; and/or
- Small sloughs of soil.



Table 4. Rainfall Shutdown Guidelines

	12 hour	24 hour	48 hour	72 hour
Rainfall (mm)	40 mm	75 mm	100 mm	125 mm

7. Equipment, Fuel Handling, and Spill Contingency

The following is a list of BMPs associated with refueling and the storage of fuel for construction works to minimize the risk of spills.

- Equipment working on this project will be clean and free of leaks. It is preferable that machines working within the wetted area of the streams use biodegradable hydraulic fluids.
- Refueling and fuel storage will be located a minimum of 30 m from the edge of the watercourse on flat ground or ground that slopes away from the stream.
- Spill kits should be available at all refuelling areas, and on all heavy equipment to allow immediate response to spills. All onsite staff should be trained in refuelling practices, handling requirements, and spill kit location and deployment.
- Fuel must be properly stored within tidy-tanks or in approved secondary containment facilities. Small fuel tanks must be stored within containment areas or spill trays capable of containing 125% of the volume of the liquid.
- Pumps, generators or other small equipment will be placed on a spill tray when working near water.

7.1. SPILL RESPONSE AND REPORTING

A spill response and reporting procedure should be implemented prior to the commencement of work. An example is provided in [Appendix C](#). Spills should be reported to the Construction Supervisor and EM as soon as possible. Any spill entering a waterbody must be reported to Emergency Management BC (EMBC) at 1-800-663-3456. Spills of fuels onto land greater than 100 L in volume must also be reported to EMBC.

Small fuel or oil leaks are the most common spills encountered on construction sites of this nature. The EM can help direct any clean-ups. Any contaminated material and surrounding soil as well as any sorbent material used will be removed and placed in a designated container for proper disposal. For larger spills, the Construction Supervisor and/or EM will work with the appropriate government agencies for response and clean-up.



8. References

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APPENDIX A – ENGINEERED DESIGN

SEE IFC DRAWING SET



APPENDIX B – SAMPLE ENVIRONMENTAL MONITORING REPORT

Environmental Monitor Report

Report No.:

PROJECT NAME		PROJECT NUMBER		
OWNER		LOCATION		
CONTRACTOR	TIME	MM	DD	YY
WEATHER/SITE CONDITIONS	TEMPERATURE: HIGH	LOW	PRECIPITATION	

ENVIRONMENTAL MONITOR:

SUMMARY OF DAILY ACTIVITIES

EROSION AND SEDIMENT CONTROL FEATURES AND MEASURES

SITE INSTRUCTIONS ISSUED

ADDITIONAL COMMENTS

PICTURES

Picture #	Comment



APPENDIX C – SAMPLE SPILL RESPONSE PROCEDURES AND REPORTING

Spill Response Procedures

Note: All spills to water are reportable. If in doubt as to whether to report a spill, err on the side of caution and report the spill. Agency notification will be initiated by the Project Supervisor or the Environmental Monitor.

If a spill of fuel, oils, uncured cement, lubricants, or other harmful substances occurs, the following procedures will be implemented:

Spill Response Steps

1. **Ensure Safety**
2. **Stop the Flow** (When possible)
3. **Secure the Area**
4. **Contain the Spill**
5. **Notify/Report** (Report environmental emergencies to 1-800-663-3456)
6. **Clean-Up**
(Circumstances may dictate another sequence of events)

1. ENSURE SAFETY

- Ensure personal/public, and environmental safety
- Wear appropriate Personal Protective Equipment (**PPE**)
- Never rush in, determine the product spilled before acting (review **Material Safety Data Sheet**)
- Warn people in immediate vicinity
- Ensure **no ignition sources** if spill is of a flammable material

2. STOP THE FLOW (WHEN POSSIBLE)

- Act quickly to reduce the risk of environmental impacts
- Close valves, shut off pumps or plug holes/leaks, set containers upright
- Stop the flow of the spill at its source

3. SECURE THE AREA

- Limit access to spill area
- Prevent unauthorized entry onto site

4. CONTAIN THE SPILL

- Block off and protect drains and culverts
- Prevent spilled material from entering drainage structures (ditches, culverts, drains)
- Use spill-sorbent material to contain spill
- If necessary, use a dike or any other method to prevent any discharge off site
- Make every effort to minimize contamination
- Contain as close to the source as possible

5. NOTIFY / REPORT

- Notify appropriate Project Supervisor or alternate of incident (provide spill details)
- Project Supervisor or designate calls the provincial Report a spill line 1-800-663-3456 (24 hour)
- Provide necessary spill details to other external agencies
- Complete a Spill Response Form

6. CLEAN-UP

- Technical assistance is available from the Environmental Monitor on clean-up procedures and residue sampling.



- All equipment and/or material used in clean-up (e.g. used sorbents, oil containment materials etc.) must be disposed of in accordance with BC Ministry of Environment requirements. The Environmental Monitor will assist in compliance with federal and provincial legislation.
- Accidental spills may produce special wastes (e.g., material with > 3% oil) and contaminated soil. All waste disposals must comply with the BC Hazardous Waste Regulations and the BC *Environmental Management Act*.
- Waste-contaminated sorbent material may not be disposed of in a landfill without prior approval from MOE and the landfill operator.
- Contaminated soil must be treated and dealt with as required on a site-specific basis and must comply with the requirements of the BC Contaminated Sites Regulations.

List of Externally Reportable Quantities for Commonly Used Substances and Product Quantity

Class 2.1 – flammable gas (e.g., propane) 10 kg or 10 min.

Class 2.2 - non flammable gas (e.g., SF6, CO2) 10 kg or 10 min.

Class 3 - flammable liquids 100 litres

Class 8 - corrosive liquid acids and caustics (e.g., battery acid) 5 kg or litres

Class 9 – environmentally hazardous (e.g., PCB's, used ethylene glycol) 1 kg or litre

Oil & Waste Oil 100 litres

Other Substances (e.g., new antifreeze, power-wash water) 200 kg or litres

Pesticides & Herbicides 1 kg or litre



Spill Response Form

Date of Spill: _____ E.M.: _____

Contractor: _____ Contractor Rep: _____

Contact	Phone	Called (Y/N)	Comment
Emergency Management BC (EMBC)	1-800-663-3456		
Other			

Spill Description and Cause of Spill:

Mitigation Measures Taken:

Scene Attendants (Agency Representative, Contractor Representative, etc.):

Photographs:

#	Comments

Additional Reporting Requirements:



Contact

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