

30 FOLLOW-UP PROGRAM AND COMPLIANCE REPORTING

Follow-up programs will be designed for the Project to verify the accuracy of the environmental assessment and the effectiveness of mitigation measures. PNW LNG will also comply with commitments, including monitoring, if required for all permits, authorizations, and licences. This section outlines follow-up programs, compliance monitoring, and reporting based on the valued components (VCs) identified within this EIS/Application.

In addition to the VC-specific programs, a qualified professional will oversee general construction activities and will facilitate compliance with environmental requirements. As project development progresses, compliance reporting procedures can be amended as needed for updates to protocols and management plans.

The proposed follow-up programs address key concerns raised by Aboriginal groups prior to submission of the EIS/Application. If additional mitigation measures or follow-up programs are identified through Aboriginal consultation during review of the EIS/Application a follow-up program will be designed to monitor mitigation measures.

The follow-up program would include the following elements:

- Verifying predictions of environmental effects with respect to Aboriginal peoples, as well as residual impacts that could not be addressed within the context of the EA
- Determining the effectiveness of mitigation measures as they relate to environmental effects with respect to Aboriginal peoples in order to modify or implement new measures where required
- Supporting the implementation of adaptive management measures to address previously unanticipated adverse environmental effects with respect to Aboriginal peoples or unanticipated adverse impacts to Aboriginal rights
- Verifying measures identified to prevent and mitigate potential adverse effects of the Project on potential or established Aboriginal rights
- Providing information that can be used to improve and support future environmental assessments and Aboriginal consultation processes.

30.1 Roles and Responsibilities

An environmental management team will be assembled for each phase of the Project and may consist of project engineers, environmental compliance monitors, and other environmental professionals. The role of the environmental management team is to ensure that each phase of the Project is constructed, operated, and decommissioned according to the environmental management plans (see Section 24) and in compliance with the required regulatory permits and licences.

30.2 Follow-up Program

Under the *Canadian Environmental Assessment Act, 2012*, a follow-up program is defined as a program for “verifying the accuracy of the environmental assessment of a designated project” and “determining the effectiveness of any mitigation measures.” Table 30-1 lists each follow-up program.

Table 30-1: Follow-up Programs

No.	Follow-up Programs	Valued Component	Project Phase	Application Section or Supporting Document
1	Acidification and Eutrophication: <ul style="list-style-type: none"> ▪ A follow-up program would be implemented to determine whether a measurable effect to vegetation communities and freshwater bodies occurs due to deposition of acidifying and eutrophying compounds. 	Vegetation and Wetland Resources Terrestrial Wildlife and Marine Birds Freshwater Aquatic Resources	Operations	10.7
2	Sediment Quality: <ul style="list-style-type: none"> ▪ Physical and chemical characterization of marine sediment will be completed for the marine terminal dredge area. This will be completed as part of the disposal at sea permit application, and will include modelling of sediment plumes and sedimentation rates during dredging and disposal of sediment to confirm predictions of the assessment. 	Marine Resources	Permitting	13.7
3	Fish and Fish Habitat: <ul style="list-style-type: none"> ▪ Monitoring as part of the Fish Habitat Offsetting Strategy. ▪ Monitoring of the Flora Bank eelgrass bed for change in extent and density to confirm predictions of the assessment. ▪ Monitor underwater noise during pile driving to confirm effectiveness of mitigation and effects on marine mammals. 	Freshwater Aquatic Resources Marine Resources	Construction Operations	12.7 13.7

30.2.1 Eutrophication and Acidification

The purpose of the follow-up program for eutrophication and acidification is to determine whether a measurable effect to vegetation communities and freshwater bodies will occur due to deposition of acidifying and eutrophying compounds.

The results of the air dispersion modelling completed for the environmental assessment indicate there is a potential for the Project to contribute to cumulative effects of emissions and deposition of acidifying compounds in combination with emissions from reasonably foreseeable future projects. The air dispersion modelling completed for the environmental assessment is conservative, in part, because it is based on preliminary engineering information.

Dispersion modelling will be completed based on final engineering design as part of an application for a waste discharge permit. If the modelling predictions using final engineering design are consistent with the predictions of the EA (that predict a potential cumulative effect of deposition of acidifying compounds) a detailed follow-up program will be developed. The plan will include the following elements:

- Monitoring objectives and relevant regulatory standards and guidelines.
- Detailed study design to describe data collection methods and statistical analyses.
- A monitoring schedule (including collection data prior to and during operations)
- Reporting requirements.

The plan will be shared with Aboriginal groups prior to submission to the CEA Agency, Environment Canada, and BC Ministry of Environment.

30.2.2 Sediment Quality

The purpose of the follow-up program for sediment quality is to characterize the physical and chemical attributes of marine sediment will be completed for the marine terminal dredge area.

The follow-up program will be completed according to the Marine Sediment Surveying Workplan submitted to Environment Canada (January 2014). The workplan describes the methods for baseline data collection, applicable regulatory standards and guidelines, analytical methods, and reporting requirements. The follow-up program will be completed prior to submission of the disposal at sea permit application, and will include modelling of sediment plumes and sedimentation rates during dredging and disposal of sediment to confirm predictions of the assessment.

The results of this follow-up program will be shared with Aboriginal groups as part of the disposal at sea permit application.

30.2.3 Fish and Fish Habitat

The purpose of the follow-up program for fish and fish habitat is to monitor the effectiveness of mitigation measures and to confirm the predictions of the assessment. A follow-up program is proposed to monitor:

- The effectiveness of Fish Habitat Offsetting.
- Change in extent and density of eelgrass on Flora Bank to confirm predictions of the assessment.
- Underwater noise during pile driving to confirm effectiveness of mitigation and effects on marine mammals.

The details of the follow-up program will be determined as part of the *Fisheries Act* authorization required for the Project. PNW LNG will work with DFO to develop a detailed plan that includes the following elements:

- Monitoring objectives and relevant regulatory standards and guidelines.
- Detailed study design to describe data collection methods and statistical analyses.
- A monitoring schedule (including collection data prior to and during operations)
- Reporting requirements.

The plan will be shared with Aboriginal groups prior to submission of the *Fisheries Act* authorization for the Project.

30.3 Compliance Monitoring and Reporting

Pacific NorthWest LNG will undertake all required compliance monitoring and reporting. This will include conditions of various permits, authorizations, and conditions included as part of the EIS/Application. Table 30-2 lists compliance monitoring and reporting for the Project.

Table 30-2: Compliance Monitoring and Reporting

Compliance Monitoring and Reporting	Project Phase	Application Section
<p>Air Quality:</p> <ul style="list-style-type: none"> Project-specific compliance monitoring and reporting requirements will be defined by BC Ministry of Environment and BC Oil and Gas Commission as a permit condition. 	Operations	6
<p>Greenhouse Gas Management:</p> <ul style="list-style-type: none"> Annual greenhouse gas emissions will be reported to the BC Ministry of Environment and Environment Canada, including third-party verification of emissions accounting, as required. 	Operations	7
<p>Ambient Light:</p> <ul style="list-style-type: none"> A qualified professional will monitor the implementation of ambient light mitigation measures outlined in the Noise, Vibration, and Ambient Light Management Plan. Follow-up monitoring during all phases of the Project will be on a complaint-driven basis so specific light spill issues can be addressed. 	Construction Operations	9
<p>Vegetation and Wetland Resources:</p> <ul style="list-style-type: none"> A weed control program will be implemented and will include ongoing monitoring and control of weeds in the project development area. 	Construction Operations	10
<p>Marine Resources</p> <ul style="list-style-type: none"> TSS and turbidity will be monitored during dredging and disposal of marine sediment and during operations to monitor compliance with water quality guidelines. 	Construction Operations	13
<p>Navigation and Marine Resource Use</p> <ul style="list-style-type: none"> Compliance audits or inspections will be required to ensure compliance with the requirements of Transport Canada, the Canadian Coast Guard, and Prince Rupert Port Authority. 	Construction Operations	15
<p>Archaeological and Heritage Resources:</p> <ul style="list-style-type: none"> A chance find protocol will be developed for any new CMTs or archaeological and heritage resources. In the unlikely event that a new CMT or archaeological site is identified, archaeological monitoring or systematic data recovery studies will be completed. 	Construction	20

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