

# *Accidents and Malfunctions Plan Annual Update: 2024*

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*Site C Clean Energy Project*

*March 24, 2025*

## Introduction

The purpose of this report is to provide an annual update on BC Hydro's Accidents and Malfunctions Plan covering the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2024. This report is being submitted in accordance with Condition 2.6 of the Site C Project Clean Energy Project's Decision Statement, issued to BC Hydro on November 25, 2014. Condition 2.6 states:

*"The Proponent shall implement the plan and provide to the Agency a review and summary of the implementation of the plan as well as any updates required to the plan on an annual basis commencing with construction. In the event of an occurrence of an accident or malfunction, the Proponent shall update the plan to incorporate new procedures and measures to avoid a reoccurrence, as necessary."*

In accordance with Decision Statement 2, the Accidents and Malfunctions Plan was developed by BC Hydro, in consultation with Environment Canada and the Environmental Assessment Agency, to prevent accidents and malfunctions and outline procedures in the case of occurrence of an accident or malfunction.

The draft Plan covering the construction period of the Site C Project was submitted to the CEA Agency (now the Impact Assessment Agency of Canada, or IAAC) and Environment Canada (now Environment and Climate Change Canada, or ECCC) on October 17, 2014. The final Plan was submitted on June 5, 2015 and is available at: [https://www.sitecproject.com/sites/default/files/Accidents\\_and\\_Malfunctions\\_Plan.pdf](https://www.sitecproject.com/sites/default/files/Accidents_and_Malfunctions_Plan.pdf)

The draft Plan covering the operations period of the Site C Project was submitted to IAAC and ECCC on August 18, 2023. The final Plan was submitted on July 26, 2024 is available at: [https://www.sitecproject.com/sites/default/files/Accidents-and-Malfunctions-Plan-Operations\\_0.pdf](https://www.sitecproject.com/sites/default/files/Accidents-and-Malfunctions-Plan-Operations_0.pdf)

This report will be the last report submitted under the construction phase Accidents and Malfunctions Plan. Future reports will be submitted under the operations phase Accidents and Malfunctions Plan.

## Background

Construction began at the Site C Project (the “Project”) on July 27, 2015 and is nearing completion. Reservoir filling began in August 2024 and was completed in November 2024, and the Project transitioned from the construction phase to operations in October 2024 when the first generating unit came online. As of March 2025, three of six generating units are online, and the Project remains on track to have all six units in service by late summer 2025.

Key activities during 2024 included

- Completion of the reservoir clearing program. Work to clear the reservoir of trees and vegetation began in 2016 to prepare for the realignment of Highway 29, river diversion, and other activities. The cleared reservoir areas take into account slope and terrain stability, riparian areas, vegetation heights in relation to reservoir levels, and boat use. The reservoir clearing program will support a safe boating environment and reduce the amount of methylmercury in the reservoir for the life of the Project.
- Completion of infrastructure demolition and removal activities within the future reservoir. The areas were confirmed to be safe to inundate prior to the start of reservoir filling.
- Completion of reservoir filling which took approximately 11 weeks to complete. To facilitate reservoir filling, one of the diversion tunnels was closed and water was restricted in the converted tunnel, causing the water level to rise. Filling the reservoir increased the water level at the dam site by approximately 43 metres to reach its upper operating range. The converted tunnel was closed when the water was high enough to flow through the spillway. Diversion tunnel and outlet channel decommissioning activities, including tunnel backfilling, are ongoing.
- Energization of the first of three 500-kilovolt transmission lines between the new Site C Powerhouse and the South Bank Substation.
- Substantial completion of reclamation activities at Portage Mountain Quarry and the Area E Gravel Pit and Laydown area, with final planting in these areas scheduled for the spring of 2025. Minor erosion and sediment repair works were also completed on the 5L5/5L6 Transmission Line. Reclamation activities at the dam site are ongoing.
- Completion of the Lock Block Wall in the Left Bank Drainage Channel, which is a permanent water management feature designed to control surface drainage from the Left Bank Excavation area to the terrace above by channeling water downstream of the Earthfill dam on the north bank of the Peace River.

- Completion of blasting activities and riprap processing at West Pine Quarry and hauling riprap by train from the quarry to the dam site. West Pine Quarry served as a material source for the Project from 2016 to 2024.
- Operation of the Temporary Upstream Fish Passage Facility from April 1 to September 15, 2024. The facility was shut down on September 15th due to the commencement of the tunnel outlet cofferdam construction. Fish passage was provided at the permanent upstream fishway through 'contingent fish capture and transport' from September 15 to October 31, 2024. In general, the combination of operating the temporary and permanent facilities, along with contingent fish capture and transport was effective at providing for the upstream passage of fish. Commissioning of the permanent fishway facility is ongoing.
- Completion of fish habitat enhancements as part of a broader program to create 60 hectares of shoreline habitat in preparation for reservoir filling. The habitat areas provide nutrient rich, sheltered environments to support a variety of fish and vegetation. These habitats include P6 Island (an island in the Peace River across from the community of Old Fort), spawning shoals at Maurice Creek near the Peace Canyon Dam, two relocated surplus excavated material sites (RSEM area R5a and RSEM area L5) upstream of the dam site, Peaceview borrow area, and the Hudson's Hope shoreline protection berm.
- Continued "balance of plant" construction activities within the powerhouse, including installation of cable tray, electrical cables, equipment, and water and air piping. Installation and assembly of turbine and generator components including rotors are ongoing for Units 4 to 6. Commissioning of mechanical and electrical systems is ongoing.

## **2024 Accidents and Malfunctions**

BC Hydro reported 1,595 environmental incidents within the internal BC Hydro incident management system (IMS) from January 1<sup>st</sup> to December 31<sup>st</sup>, 2024. The incident type summary for all reported environmental issues is as follows:

- 1,520 Spill/Pollution
- 26 Fish/Water
- 3 Land/Vegetation
- 45 Bird/ Wildlife
- 1 Archeological

The vast majority of incidents on the Site C Project in 2024 were related to small volume spills of less than 5 litres. In these incidents, workers deployed spill response measures and contaminated soil was disposed of appropriately.

## Reporting

Through its Fish Hydro Management Committee (FHMC), which has representation of Fisheries and Oceans Canada (DFO) and the Province of B.C., BC Hydro has established an agency notification protocol that defines the nature of an accident/incident, its level/severity, who to notify and how (i.e., by phone, website, or e-mail). Although ECCC is not represented at FHMC, DFO did ensure that any notifications to them related to a deleterious substance spill to water would be conveyed to ECCC upon receipt of an applicable notification. This notification procedure was agreed upon by FHMC on July 23, 2015, within roughly one week of the start of Site C Construction. A detailed description of this notification procedure is provided in Appendix A.

## Plan Updates

Section 6 of the Accidents and Malfunctions Plan requires that the Plan is updated annually. In 2024, BC Hydro did not undertake any material modifications to procedures to avoid reoccurrence of incidents. An update to the Plan was not required for 2024.

## Closure

This report has been reviewed by:



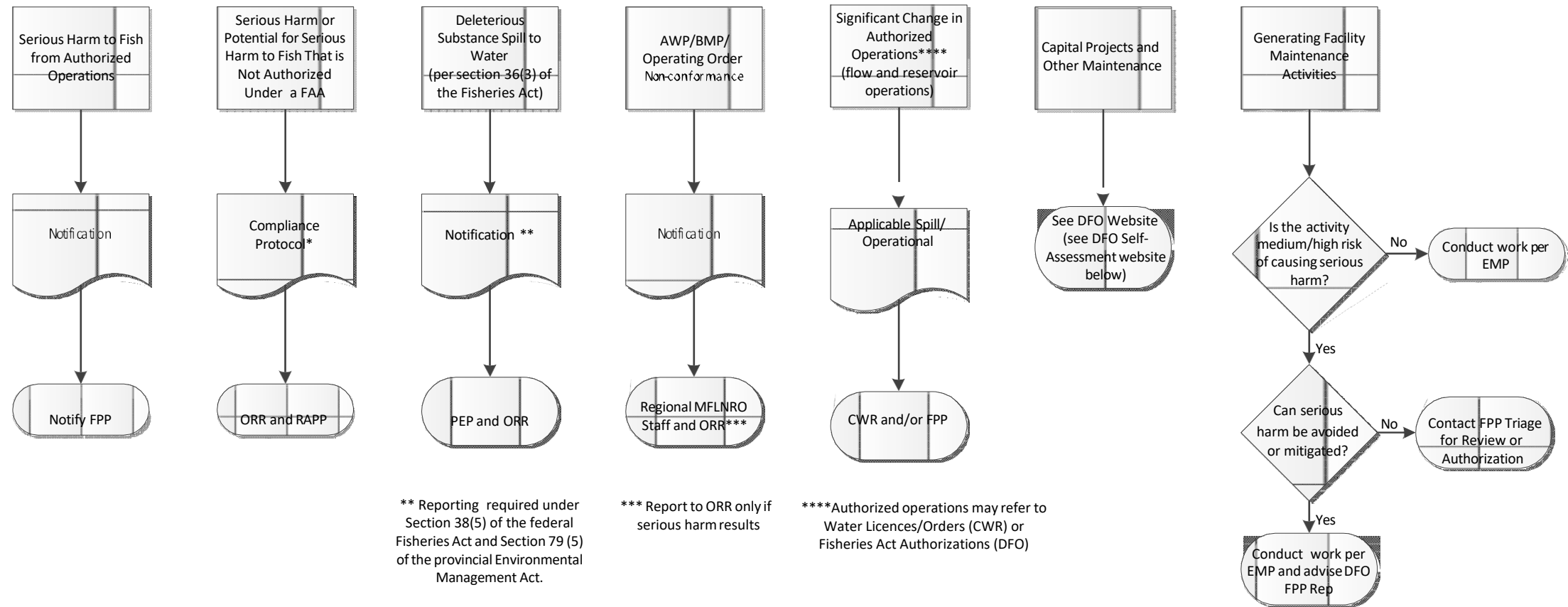
Greg Scarborough  
Manager, Environmental Mitigation, Monitoring and Compliance  
Site C Clean Energy Project

## Attachments

Appendix A – Agency Notification Process Chart

# Agency Notifications

Applicable to incidents, agreement non-compliance and generating plant maintenance. Does not include notifications in advance of projects related to request for review, permits or authorization.



**Note on notification:** ensure that any reports to regulatory agencies state whether the event being reported is authorized/licenced/permitted or not and which regulatory requirement (e.g. serious harm, deposit of a deleterious substance, etc.) has triggered the notification.

## \*Compliance Protocol timelines:

(notification of Serious Harm required per Section 38(4) of the Fisheries Act)

1. Report to local contacts as soon as possible.
2. Preliminary assessment within 24 hour or such time frame as otherwise agreed.
  - depending on nature of incident, assessment may include stranding and/or salvage.
3. Within 5 days or a time frame agreed to by all parties, review of the preliminary assessment and notify location contacts as to the status of compliance with all Acts, regulations, licenses, permits and authorizations.

See full Compliance Protocol for complete process.

## Types of Incidents

- Serious Harm: Stranding, entrainment, TDG, destruction of fish, habitat
- Protocols and procedures: deviation from ordered operational requirements and BMPs
- AWP Non-conformance: clearing exceedance, riparian area trespass
- Spills of Deleterious Substances to Water (administered by EC federally, MoE provincially)

Contacts:

## Department of Fisheries and Oceans

### Triage & Planning Unit (Authorizations & Reviews)

Telephone: Toll free 1-866-845-6776  
Email: ReferralsPacific@dfo-mpo.gc.ca  
Self-Assessment Website: <http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>

### Observe, Record & Report (ORR)

Telephone: Toll free 1-800-465-4336  
Email: PACRadioRoomRHQ@pac.dfo-mpo.gc.ca

## DFO Fisheries Protection Program – Large Hydro Unit

Brian Naito (Large Hydro Lead and Peace)  
Telephone: 604-790-4260  
Email: Brian.Naito@dfo-mpo.gc.ca

Dan Sneep (Lower Mainland and Coastal)  
Telephone: 604-209-5764  
Email: Daniel.Sneep@dfo-mpo.gc.ca

Dean Watts (Columbia)  
Telephone: 250-371-1286  
Email: Dean.Watts@dfo-mpo.gc.ca

Contacts:

## Province of BC

Report All Poachers and Polluters (RAPP)  
Telephone: 1-877-952-7277

Provincial Emergency Program (PEP)  
Telephone: Toll free 1-800-663-3456