BRITISH COLUMBIA

Ministry of Environment and Climate Change Strategy

2020–2021

REPORT TO LEGISLATURE

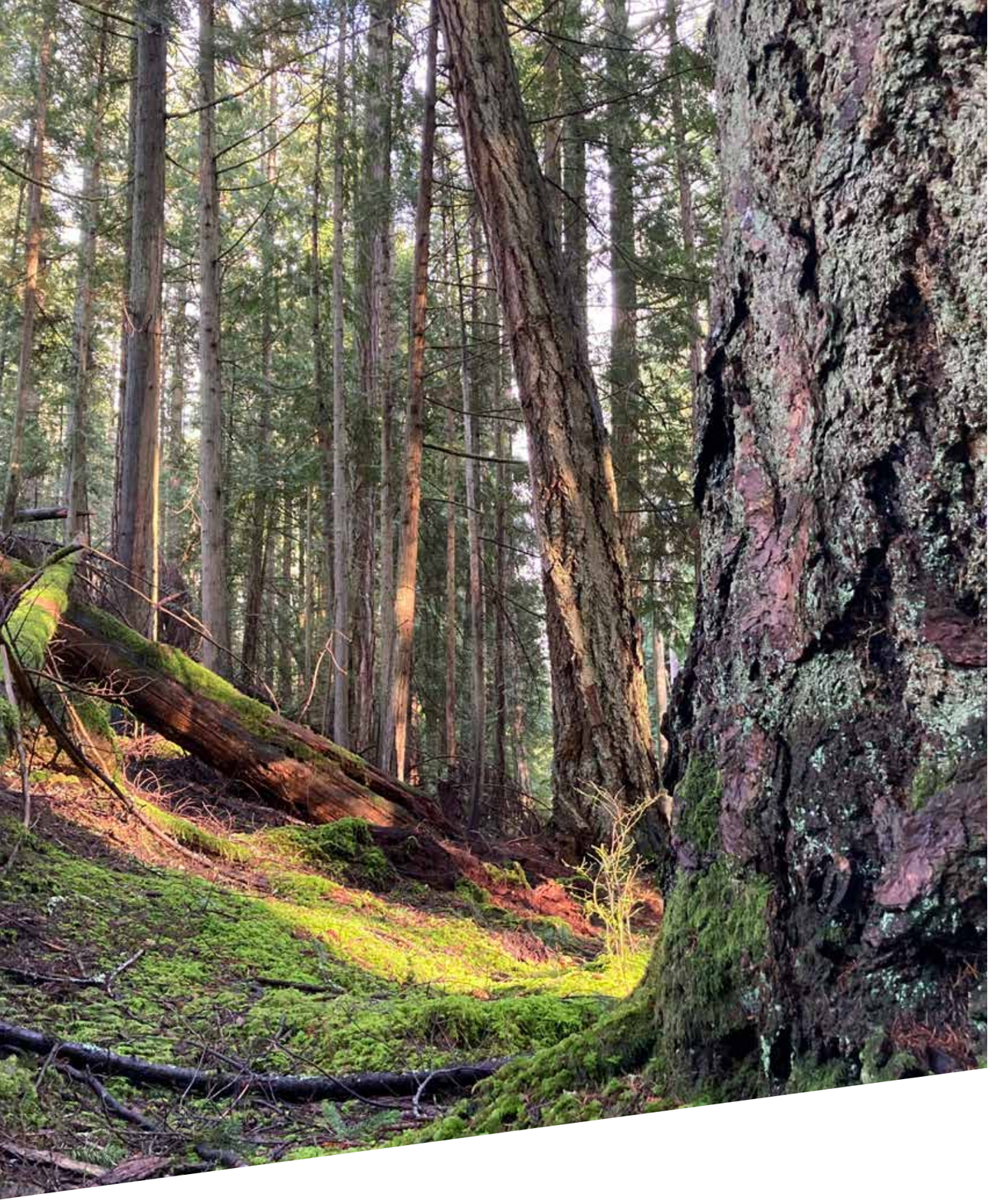
ENVIRONMENTAL EMERGENCY PROGRAM

The team members of the Environmental Emergency Program acknowledge with respect and gratitude the Indigenous communities and Nations on whose territories we conduct our work.

BRITISH COLUMBIA MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY

Acronyms used in this report

CCME	Canadian Council of Ministers of the Environment
CWL	City of Williams Lake
DGIR	Dangerous Goods Incident Report
DOC	Department Operations Centre
ECC	Emergency Coordination Centre
EEP	Environmental Emergency Program
EERO	Environmental Emergency Response Officer
EMA	Environmental Management Act
EMBC	Emergency Management BC
ENV	B.C. Ministry of Environment and Climate Change Strategy
GVIRP	Greater Vancouver Integrated Response Plan
ICP	Incident Command Post
ICS	Incident Command System
IIMS	Integrated Incident Management System
JCP	National Joint Contingency Plan
MOC	Ministry Operations Centre
MOU	Memorandum of Understanding
MVI	Motor Vehicle Incident
NSB	Northern Shelf Bioregion
OGC	B.C. Oil and Gas Commission
RFA	Reconciliation Framework Agreement
SME	Subject Matter Expert
WCMRC	Western Canada Marine Response Corporation
WLFN	Williams Lake First Nation



2020–2021
Message from the Assistant Deputy Minister

British Columbia's Environmental Emergency Program received over 4,700 dangerous goods incident reports during the 2020–2021 reporting period. Despite restrictions related to the COVID-19 pandemic, our team has continued to protect the environment of British Columbia and the health and safety of British Columbians by preparing for, responding to, and recovering from hazardous materials spills in British Columbia.

I am proud of the critical work led by this program and pleased to share the Environmental Emergency Program's third Report to Legislature, which describes the program's work for the period of April 1, 2020 to March 31, 2021.

The Environmental Emergency Program has taken meaningful steps on the path of reconciliation. In the past year, we have carried out our work to implement the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act) in the context of a global pandemic, wildfires, and residential school findings. We recognize this past year has been difficult for our Indigenous partners and we know that we have much more work to do collectively. We are pleased to report that the program has developed a Reconciliation with Indigenous Peoples' Strategy. This includes a commitment to ensure Indigenous peoples are brought to the table for decisions that affect them, their families, and their territories. Following a prolonged sewage spill into the Williams Lake River, our recovery team used these principals to develop a tripartite agreement between the province, the Williams Lake Indian Band, and the City of Williams Lake. This agreement outlines the expectations of environmental recovery and protection of First Nation's resources from long-lasting impacts. These progressive efforts are examples of the professional, innovative, and collaborative approach the program undertakes during response and recovery efforts and we will continue to build upon these important steps toward improved relationships and implementation of the *Declaration Act*.

During this reporting period, the Environmental Emergency Program focused on improvements to spill response and compliance activities associated with prescribed industries, trades, and businesses. This included signing a Memorandum of Understanding in December 2020 with the Regional Operations Branch to define roles and responsibilities and establish an efficient communication process to request support between the two programs. As a result, EEP finalized the compliance and enforcement policy and procedure measures related to three spill regulations under the *Environmental Management Act*. This work will foster compliance and promote adherence amongst transporters of hazardous materials in B.C.

To conclude, I wish to thank the Environmental Emergency Program team and our partners for their commitment to this important work, as well as Executive Director Kevin Butterworth and Acting Director Rod Allen for their strong leadership.

Laurel Nash
Assistant Deputy Minister
Environmental Protection Division
B.C. Ministry of Environment & Climate Change Strategy

Message from the Director

For the entire 2020/21 fiscal year, the Environmental Emergency Program operated under restrictions brought about by the COVID-19 pandemic. Health concerns, travel limitations and community-specific restrictions significantly altered the ways in which our team received specialized training and managed spill incidents; however, our staff embraced the change. We adapted our safe-work practices and hazard assessment techniques and implemented new strategies to ensure the program would continue to deliver on our mandate and provide a high level of service during spill responses.

Due to the challenges of the pandemic, the Environmental Emergency Program was able to improve upon its spill preparedness, response and recovery framework to meet target milestones:

- Our team moved into the implementation phase of a cloud-based, emergency integrated incident management system to support communication, collaboration, and decision-making when managing environmental emergencies.
- We were a contributing partner on the 2020 Pacific States – British Columbia Oil Spill Task Force 2020 Annual Report.
- The Department Operations Centre, which provides on-site support to spill incidents, was activated during four major, prolonged spill incidents two of which are highlighted in more detail later in this report.
- Our regulatory development team engaged with our partners in the federal government to ensure the Province's proposed regulatory changes align with existing federal regulations and fill jurisdictional gaps.
- Our extensive training program transitioned from in-person to online delivery to adapt to changing conditions and continue to deliver critical training for our staff.

As the Acting Director of the Environmental Emergency Program, I would like to thank our team members who have contributed to our success during this period. I would also like to acknowledge our Indigenous, federal and municipal partners, members of the public and other stakeholders who have provided invaluable knowledge on various initiatives and spills across the Province. Although it would be ideal if no environmental emergencies or disasters occur in the upcoming reporting period, our team will be prepared to plan for, coordinate, implement and manage incidents to protect the welfare of the public and environment.

Rod Allen
Acting Director
Environmental Emergency Program
Environmental Protection Division
B.C. Ministry of Environment & Climate Change Strategy

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Executive Summary

B.C.'s Environmental Emergency Program (EEP) leads the province's response to hazardous material spills and other environmental emergencies. This report describes the program's activities for the period from April 1, 2020 to March 31, 2021.

To minimize the impacts of environmental emergencies and respond when incidents occur, EEP builds relationships with other organizations in federal, provincial, municipal and Indigenous governments, the private sector, and neighbouring jurisdictions. Through these relationships, we are able to share information, as well as plan and coordinate actions when needed.

Over the past year, EEP has minimized adverse impacts to human health and the environment caused by spills through regulatory oversight and training in best practices. The program will continue to prepare for, respond to, and ensure recovery from environmental emergencies.

EEP received over 4,700 reports of spills and other environmental emergencies in the reporting period. Of these, 27 were high-risk spills that either caused, or had the potential to cause significant damage to human health or the environment.

- 1634 spills, the most of any region, were reported in the Lower Mainland
- Almost 32 percent of spills involved flammable materials, these were mainly hydrocarbons such as diesel, gasoline and other fuels
- Over 37 percent of spills resulted from equipment failure

B.C.'s Environmental Emergency Program Mandate and Overview

Quick, effective action helps to prevent harm and protect the environment when an emergency occurs. The *Ministry of Environment Act* delegates authority to ENV to act as the provincial lead in planning for, coordinating, implementing and managing a program to protect the welfare of the public and environment in the event of an environmental emergency or disaster.

To deliver on EEP's mandate, the program carries out a wide range of activities:

- Prepare for and respond to oil spills, chemical spills, and spills of any substance that could affect or harm the natural environment
- Provide environmental emergency response officers (EEROs) to assess conditions and oversee the response when an incident occurs
- Provide scientific advice and site support during an incident
- Oversee and regulate environmental recovery following a spill
- Work with partner agencies to effectively coordinate the roles and responsibilities of all responders during an incident
- Develop regulations, policies, procedures, plans, operational guidelines, cooperative agreements, and technical documents to ensure effective coordinated action during an emergency

EEP is the lead provincial regulator for spills; however, it is up to the responsible party to take reasonable steps to contain the spill, and to address damage done to the environment.

The Legislation

The *Ministry of Environment Act* says:
4. (2) … the purposes and functions of the ministry include the following:
(i) to plan for, coordinate, implement and manage **a program to protect the welfare of the public in the event of an environmental emergency or disaster.**

Emergency Program Act
2. (2) The Provincial Emergency Program is responsible for carrying out the powers and duties vested in it under this Act or by the minister.

The Act defines a **"disaster"** as a calamity that:
(a) is caused by accident, fire, explosion or technical failure or by the forces of nature, and
(b) has resulted in serious harm to the health, safety or welfare of people, or in widespread damage to property.

It defines an **"emergency"** as a present or imminent event or circumstance that:
(a) is caused by accident, fire, explosion, technical failure or the forces of nature, and
(b) requires prompt coordination of action or special regulation of persons or property to protect the health, safety or welfare of a person or to limit damage to property.

ENV is delegated under the **Emergency Program Management Regulation** as the lead provincial agency for hazardous material spills and harmful substances.

The *Environmental Management Act* (EMA) says **"environment"** means air, land, water and all other external conditions or influences under which humans, animals and plants live or are developed.

It sets out requirements for spill preparedness, response and recovery. EMA regulations include:

- Spill Preparedness, Response and Recovery Regulation
- Spill Contingency Planning Regulation
- Spill Reporting Regulation

EMA also ensures the proper disposal of hazardous wastes and pollutants and supports the **polluter-pay principle** – those who create pollution should bear the costs for the damage done to the natural environment. In this respect, the province can recover expenses for spill response actions taken by the province during a spill response.

The EEP Team

EEP consists of 39 staff who carry out activities to protect the environment. There are 19 team members based in Victoria, while 20 others are strategically located in 13 communities throughout B.C.

EEP Activities

Program activities are grouped into three categories that focus on distinct phases of emergency management:

- Preparedness – before an incident
- Response – during an incident
- Recovery – during and following an incident

Preparedness

Preparedness is the process of developing capacity to respond effectively when an emergency occurs. The key to preparedness is building on capacity and capability and lessons learned from previous incidents, both in B.C. and in other parts of the world.

This preparation encompasses a range of high-level and on-the-ground activities, including:

- Planning for catastrophic events and ensuring that essential services continue
- Developing legislation and regulations to ensure that those transporting hazardous materials are better prepared to respond to a spill and to hold responsible persons more accountable when spills occur
- Advising other agencies about existing and anticipated legislation, regulations, and EEP's mandate
- Collaborating on external, inter-governmental, and Indigenous initiatives
- Developing systems to manage information effectively and share it with other emergency responders in critical situations
- Developing internal policy to direct our actions
- Preparing guidance materials for spillers and regulated persons
- Conducting team member training and participating in exercises, internally and externally with partners

Regulations in Development

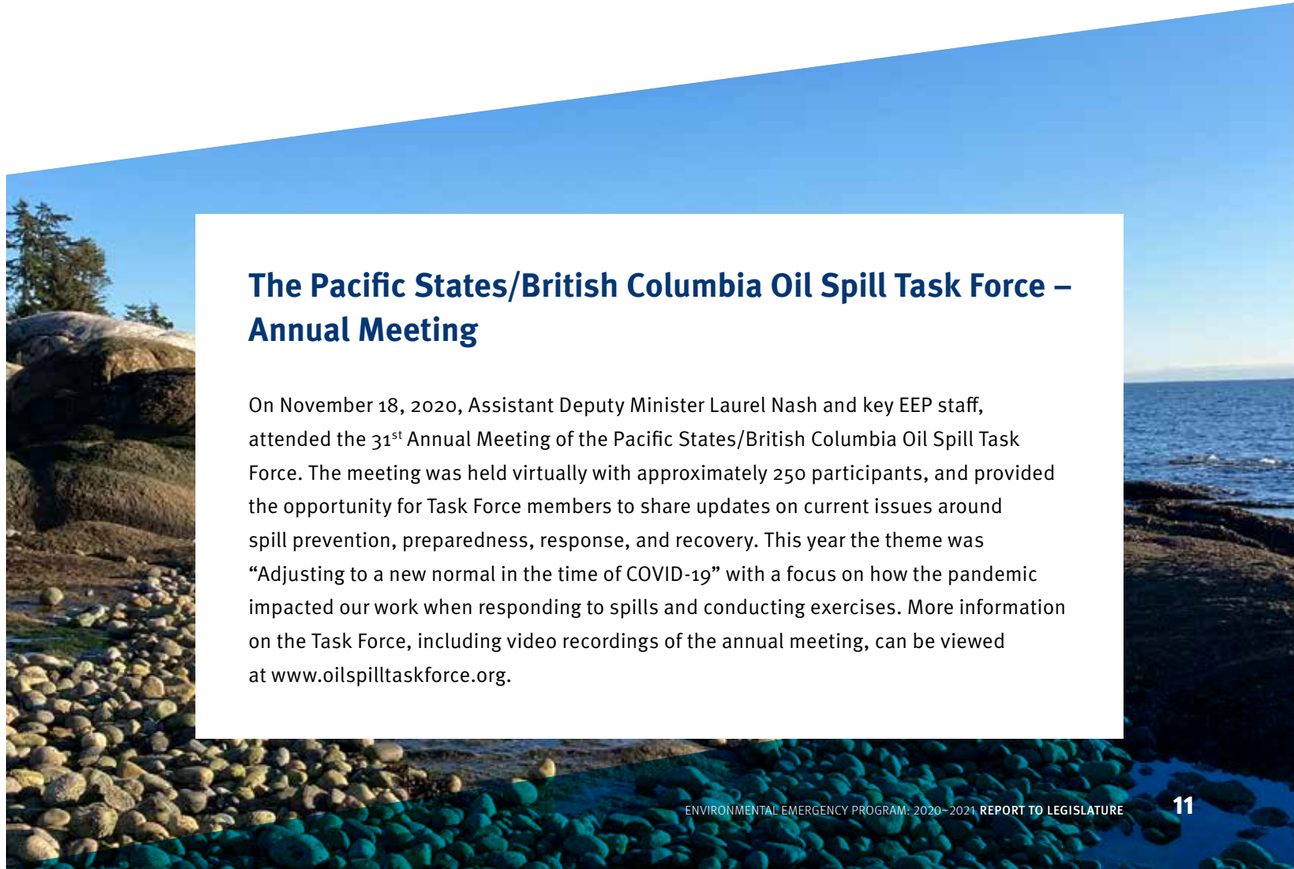
In 2018, the province announced that it would develop additional regulations to support Division 2.1 of EMA to further strengthen spill preparedness, response, and recovery in B.C. The program is currently developing regulations aimed at ensuring a timely response from responsible persons following a spill and requiring that transporters of hazardous materials develop plans that consider the unique characteristics of specific sensitive areas.

EEP team members are currently holding discussions with the federal government to seek ways to align the proposed regulatory changes and fill jurisdictional gaps.

Compliance and Enforcement

The Environmental Emergency Program's compliance and enforcement strategy, originally developed with the Regional Operations Branch (ROB) in the previous fiscal year, was implemented during the 2020 reporting period. In addition:

- On Feb 1, 2021, the Administrative Penalties Regulation and the Violation Ticket Administration and Fines Regulation were amended to include specific sections of Division 2.1 of the *Environmental Management Act* and associated spill-related regulations.
- EEP's Compliance & Enforcement Policy was approved.
- A memorandum of understanding between EEP and ROB was developed to identify the roles and responsibilities for spill response and compliance activities at locations with authorizations under the *Environmental Management Act*.
- Seven office-review inspections were conducted, resulting in six advisories and one warning.
- Operational training related to EEP-ROB roles and responsibilities for spill response and compliance activities, and the delegated powers and authorities under EMA were conducted.



The Pacific States/British Columbia Oil Spill Task Force – Annual Meeting

On November 18, 2020, Assistant Deputy Minister Laurel Nash and key EEP staff, attended the 31st Annual Meeting of the Pacific States/British Columbia Oil Spill Task Force. The meeting was held virtually with approximately 250 participants, and provided the opportunity for Task Force members to share updates on current issues around spill prevention, preparedness, response, and recovery. This year the theme was "Adjusting to a new normal in the time of COVID-19" with a focus on how the pandemic impacted our work when responding to spills and conducting exercises. More information on the Task Force, including video recordings of the annual meeting, can be viewed at www.oilspilltaskforce.org.

Business Continuity Management Program and COVID-19

B.C.'s Provincial Health Officer declared a public health emergency on March 17, 2020. A declaration of provincial state of emergency followed on March 18, to support the province-wide response to the coronavirus (COVID-19) pandemic.

Everyone in B.C. must follow the requirements and directives issued by the Provincial Health Officer to protect public health. It is recognized these requirements could impact the day-to-day operations of regulated activities under the *Environmental Management Act*. Requirements placed on Regulated and Responsible Persons were in effect for the reporting period, and it was expected that all reasonable measures continued to be taken to ensure compliance with EMA.

Throughout the pandemic, EEP faced unique circumstances when responding to spills. The EEP Department Operations Centre was activated to support the response to COVID-19 and to maintain business continuity from March 2020 to June 2020.

EEP staff also provided support to the ENV Ministry Operations Centre (MOC) from March to June 2020 to provide policy direction and assist ministry executives, Government Communications and Public Engagement, and partner agency requests. Three of EEP's team members were activated in the MOC during the COVID-19 response as ENV MOC Director, ENV Planning Section Resource Unit Lead, and the ENV Planning Section Situation Lead.

Staff modified business practices by applying BC Centre for Disease Control protective measures to office environments and field responses.

The program continues to coordinate with response contractors and waste management facilities across the province to assess their capability and capacity to respond to environmental emergencies despite the pandemic.

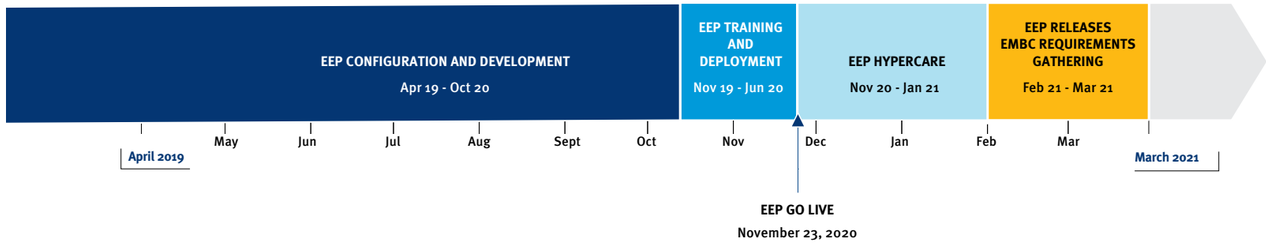
Due to these adaptations, EEP was able to maintain core business functions throughout the reporting period.

Integrated Incident Management System

EEP is leading efforts to acquire and implement an emergency integrated incident management system (IIMS) capable of supporting all-hazards in emergency management. This system will support improved communication and collaboration among emergency management agencies and will enable fast, effective decision-making and coordination to improve environmental protection and public safety. The system went operational in November 2020, providing support to all pillars of emergency management within EEP and supporting the information capture and notification triaging through Emergency Management BC's (EMBC) Emergency Coordination Centre. Post implementation, the IIMS project team delivered additional critical functionality identified by program subject matter experts.

Major Milestones

The IIMS Project achieved key milestones in the period from April 2020 to March 2021, including:



Next Steps

The IIMS team continues to support and contribute to a provincial solution for the management of all hazards. Over the next year, the program will continue to deploy critical EEP functionality while transitioning into the requirements gathering and validation phase for EMBC. The project team will continue to work closely with the EEP and EMBC to ensure functional requirements are aligned and deliver capabilities that serve the wider emergency management community.

Spill Reports Across B.C.

The Environmental Emergency Program received over 4,700 reports of spills and other environmental emergencies in the April 1, 2020 to March 31, 2021 reporting period. After a report is received, Environmental Emergency Response Officers (EERO) conduct initial risk assessments to determine whether a field response is required. Deployment is confirmed by using professional judgment, conversations with EEP Duty Managers, and other information obtained in the early hours of a spill. The program responded to nearly half of these reports, either by site visit or follow-up phone call.

Some reports involved multiple substances. In the statistics below, each substance is counted as a separate spill.

Risk Ranking

Each reported spill is assessed for public threats, environmental sensitivities, incident status, estimated response times, and response capability. Based on these factors, a reported spill is given one of the following risk rankings:

- Low Risk – no field response is required
- Intermediate Risk – field response is considered
- High Risk – field response is generally required

The number of reports range from 897 – 1,634 within the four regions of the province. The most spills were reported in the Lower Mainland. The most high risk spills occurred in the Northern region of B.C.

Total spill reports by region

Region	Spill Reports
Lower Mainland Region	1,634
Vancouver Island Region	1,283
Northern Region	920
Southern Interior Region	897
TOTAL	**4,734**

Analysis of Spill Reports

Spills are typically reported to Emergency Management BC's Emergency Coordination Centre (ECC) via a 24-hour spill reporting number. The ECC generates a Dangerous Goods Incident Report (DGIR) and passes the DGIR on to an EERO. B.C. averaged approximately 13 spill reports a day in the reporting period.

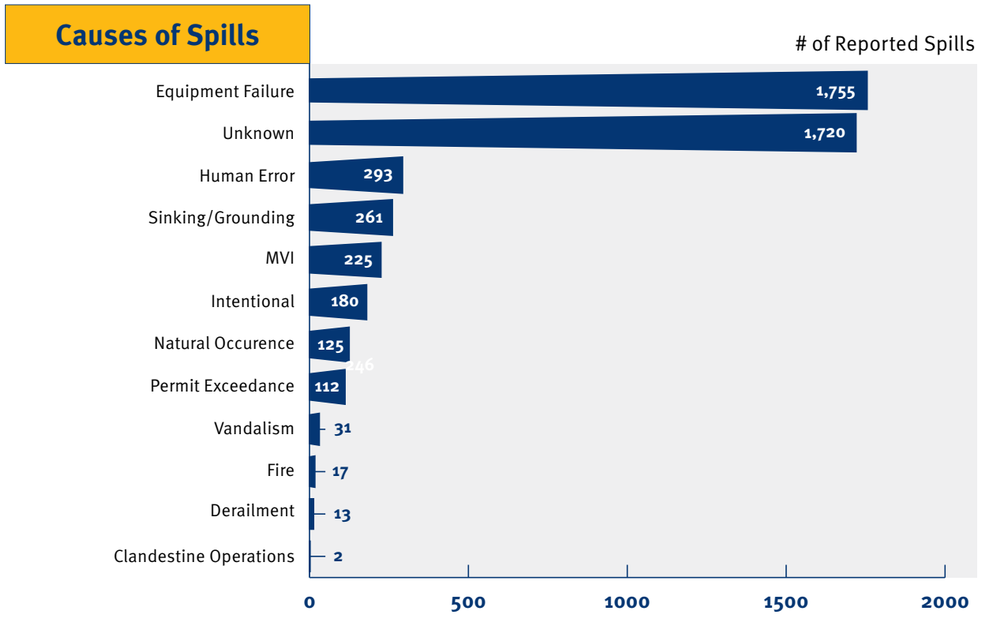
The following figures summarize key data for the period from April 1, 2020 to March 31, 2021.

Causes of Spills

Equipment failure caused the highest number of spills — 37 percent of the total. An example of equipment failure is the rupturing of lines or radiators on the property of the responsible person.

Spills are listed as unknown when the responsible person or source is unknown, or when it is not possible to identify the cause of the spill. A large proportion of total reportable spills, such as petrochemical sheens, occur in the marine environment and it is difficult to confirm the cause due to the vast area and rapid mixing action. On land, a common source of unknown spills are illegal dumping sites. Unknown sources represent 36 percent of reported spills.

Spills resulting from a natural occurrence account for three percent of the total; these reports usually follow heavy rainfall, which can overwhelm holding tanks and settlement ponds.



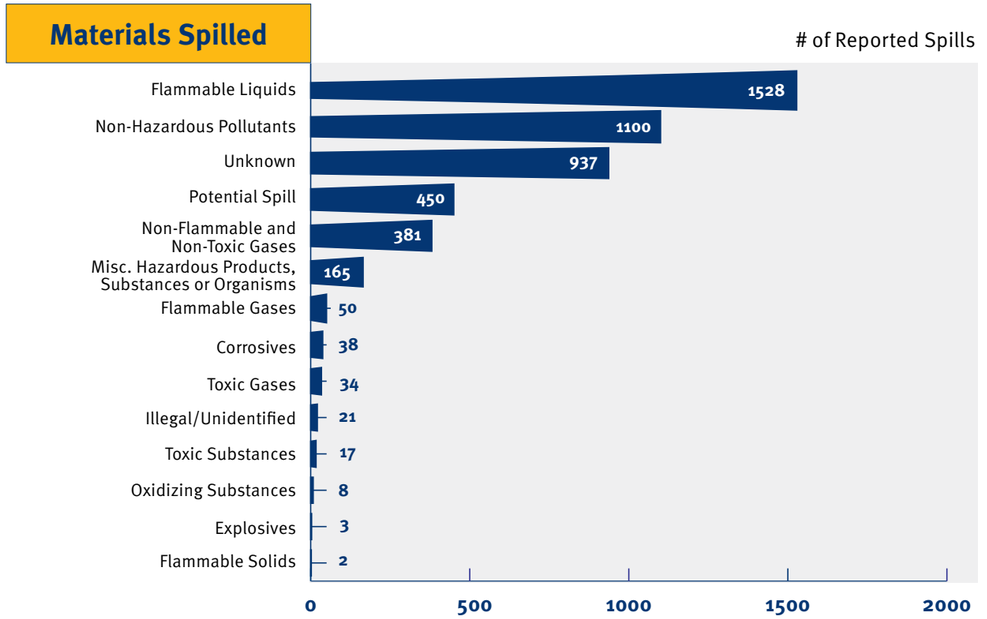
Materials Spilled

Flammable liquids such as gasoline, diesel, and heating fuel are the most common substances spilled, as they are widely used for transportation, heating, and other purposes.

Non-hazardous pollutants are materials that are not immediately dangerous to health or life but can still have an impact on the public and environment. For example, a large release of chlorinated drinking water to a stream can cause harm to sensitive aquatic invertebrates and fish species.

Materials are listed as miscellaneous when they cannot be easily categorized into one hazard or another, often because they are a combination of products.

Potential spills represent situations where there's a known pollution threat, such as a vehicle rollover, and it was reported via a DGIR. However, once the site was assessed, it was determined no substances were spilled.

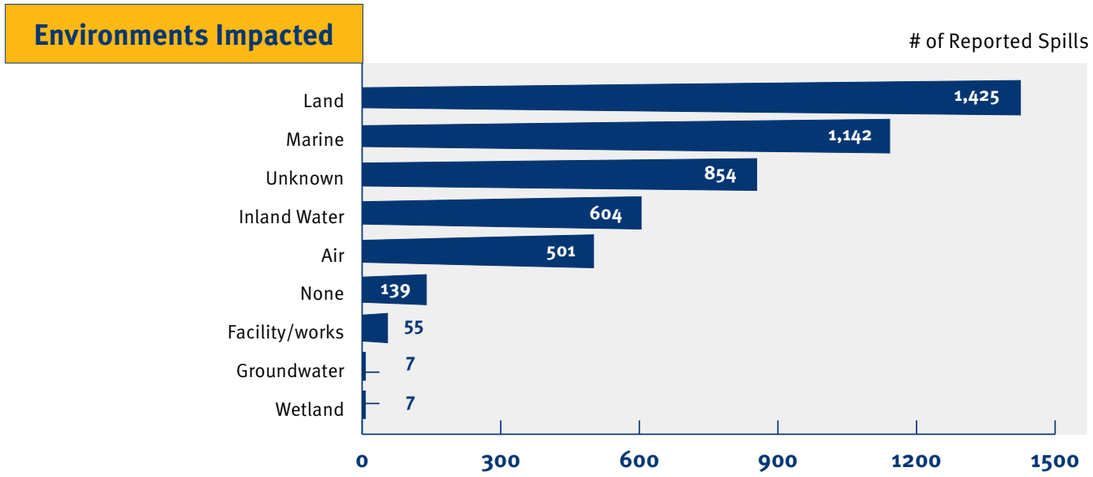


Environments Impacted by Spills

Reported spills occurred in many different environments, reflecting B.C.'s diverse geography and extensive transportation corridors. Together, land and inland water incidents account for 44 percent of reported spills.

Most releases to the air result from equipment failure in refrigerant systems. Refrigerant gases tend to be non-toxic and non-flammable and dissipate quickly.

Though groundwater has the smallest number of spills reported, it is one of B.C.'s most vulnerable resources. Impacts to groundwater can have far-reaching and prolonged impacts to drinking water supplies and agricultural users.



Spills by Sector

Reported spills are categorized into 15 business sectors. The commercial mining, transportation and industrial sectors are significant, generally because they are the largest users of petroleum products. The oil and gas sector includes only companies that extract raw petroleum products or transport petroleum to refineries.

The government sector involves drinking water and wastewater treatment facilities, fire-fighting water runoff, and other government-controlled processes.

The unknown sector, 18 percent of the total, indicates spills in which the origin is not known. If the cause is not known, it cannot be attributed to a specific business sector.

Response

EEP's Response Section is made up of EEROs, senior EEROs, section heads, a training officer, and a logistics officer. The section's main focus is to protect the environment and the public by effectively managing hazardous material spill responses, hazardous wastes, and industrial/municipal discharges. This is achieved through the administration and enforcement of the *Environmental Management Act* and supporting regulations including the Spill Reporting Regulation, the Spill Cost Recovery Regulation, the Hazardous Waste Regulation, and the Contaminated Sites Regulation. Additional section activities and actions include:

- Developing provincial response policy and procedures
- Ensuring response readiness, conducting day-to-day response operations, and spill response
- Conducting community outreach and public information related to spills
- Providing leadership in spill response training and participating in spill exercises
- Managing EEP logistics and training
- Providing support to the Ministry Operations Centre and EMBC's Provincial Regional Emergency Operations Centres

The provincial government is prepared to take over an incident should the responsible person, the spiller, be unknown or unable to fulfill the response obligations as set out in section 91.2 of EMA.

Department Operations Centre

EEP's Department Operations Centre's (DOC) primary roles are to support site-level response actions and provide situational awareness and information to support ministry executive decision making. EEP has the opportunity to activate face-to-face in the Victoria Operation Centre, or virtually, as was the case this reporting period due to the Covid-19 pandemic response.

During this reporting period, the DOC was activated virtually to support the program's COVID-19 pandemic response and in response to the following spill incidents: sewage spill in Williams Lake (April 2020 to December 2020), diesel spill in Dinan Bay (April to May 2020), crude oil release at a Sumas pump station (June to August 2020), sunken vessel off Bligh Island (December 2020 to March 2021), and a diesel spill in Rivers Inlet (February 2021).

DOC activities include:

- Assisting with notifications and chairing coordination calls
- Providing logistical support to EEP team members at the incident site
- Providing incident updates to program management and ministry executive
- Liaising and coordinating information with other programs, agencies, and the media
- Coordinating staff deployments, including travel and accommodation
- Activating and deploying natural resource sector subject matter experts
- Providing technical advice, research, and policy guidance during a spill
- Recovering costs and managing documents

EEP reviews past incidents, after-action reports, policies, and training plans to ensure the DOC is prepared to provide effective support to on-site operations. Training for DOC roles and site deployment is ongoing and will continue to be enhanced over the coming years.

Responding to Diverse Environmental Emergencies

Every year, EEP receives thousands of calls about spills in B.C. and every spill is unique. The type of product spilled, the receiving environment, and the communities impacted all influence the way EEP responds to a spill.

The selected incidents on the next page illustrate the diversity and complexity of environmental emergencies supported through the program.

Awareness Through Social Media

EEP keeps the public informed of spill incidents via its Twitter account (@SpillsInfoBC).

Providing real-time information on evolving incidents through social media helps reduce the spread of misinformation and build public trust.

EEP posts educational tweets to improve public awareness about the program and how we prepare and respond to spills. Anyone can engage with these posts by liking, sharing, and commenting on them. This engagement builds relationships and increases knowledge about environmental emergency preparedness and response.

Sewage Release in Williams Lake

Spill Incident — Southern Interior Region

Flood Damage at a bridge

Aerial shot of oil seeping

Response officers on scene

Williams Lake River Valley

Sewage lagoons

Flooding in the area

APRIL 23, 2020 – A significant flood event damaged the sewage treatment infrastructure in the City of Williams Lake. The damage covered an 8-kilometre area and impacted bridges, roads and sewage lagoons. Multiple breaks in the sewage pipe resulted in partially treated and raw sewage spilling into the Williams Lake River for 2 months until the pipeline could be fully accessed and repaired. The flood and pollution impacted the traditional territory of the Williams Lake First Nation and cut-off land access to the Tillion Reserve (Indian Reserve #4).

EEP deployed response officers and technical specialists to Williams Lake and established Unified Command with the City of Williams Lake and Williams Lake First Nation. EEROs remained on site until the emergency phase stabilized and continued to support virtually until the spill resolved. EEP also activated its Department Operations Centre to support the response.

It was recognized in the response phase, that significant time and effort would be required for environmental sampling and monitoring. EEP proposed a collaborative approach with one work-plan and one consultant accountable to the City of Williams Lake, Williams Lake First Nation, and EEP. The group agreed upon the following guiding principles: 1) meet all parties' monitoring and sample needs, 2) share decision making, 3) keep information transparent, 4) keep the scope of work and costs reasonable, and 5) meet the requirements of the Williams Lake First Nation's pollution abatement order. The principles were formalized in a tri-partite memorandum of understanding signed by all three parties.

The response and spill recovery lasted 11 months. Short-term sampling and monitoring objectives were met during the response phase and ongoing work to assess impacts continued until end of March 2021.

Historic Shipwreck near Bligh Island

Spill Incident — Vancouver Island Region

Archival photo of M/V Schiedyk shipwreck in 1968

Boom at work

CCG at marina implementing treatment recommendations

Surveying shorelines on Bligh Island

DECEMBER 3, 2020 – After numerous sightings of sheening and oiling around the Bligh Island/Zuciarte Channel, the Canadian Coast Guard (CCG) confirmed a remote operated vehicle showed the vessel was resting hull-up in 100-120 metres of water, with product seeping from more than one location.

The situation escalated between December 4th-6th, 2020. Heavy oil was observed on the water and staining seen on rocks on the shoreline. As a result, CCG requested the establishment of the ICS and the formation of Unified Command with the CCG, ENV, and the Mowachaht/Muchalaht First Nation. Due to the COVID-19 pandemic, Unified Command was established virtually. A site response was initiated with the deployment of containment and protection booming in the area of the wreck.

As the response continued, a marine salvage company was awarded a contract to conduct a technical assessment of the wreck. The company also located leaks, applied temporary patches to the hull to prevent and reduce upwelling of product, and surveyed the hull for fuel tank locations. The technical assessment provided Unified Command with a more fulsome picture of the MV Schiedyk's condition and risk to the environment.

EEP operated within Unified Command and had dedicated employees working in the Environmental Unit as Deputy Environmental Unit Leader, Wildlife Specialists, Sampling Specialists, Shoreline Assessment, Waste Management, and other support roles in EEP's Department Operations Centre.

Technical Training and Equipment

EEP's environmental emergency response officers must respond safely 24 hours a day, in all weather conditions and geographical locations, including marine, river, lake and mountain environments. High-risk spills are often associated with motor vehicle or vessel incidents, pipeline leaks, train derailments, and industrial operations where there is a potential to be exposed to hazardous materials.

Response team members need a high level of training for their personal safety, to protect the public, and to mitigate environmental impacts. All EEP team members receive technical training and EEROs receive a minimum of 95 hours of hazardous materials training before taking field calls.

EEROs represent the province during multi-jurisdictional spill responses and receive specialized training in the Incident Command System.

Modernized Training

EEP's training program underwent modernization during the reporting period. Over 650 hours of technical and safety training has been delivered over a two-and-a-half-year period. In support of COVID-19 physical distancing requirements and the health of our staff, EEP's Senior Environmental Emergency Training Officer undertook shifting critical training development and delivery to a virtual environment where possible..

The response to the COVID-19 pandemic has once again had a direct impact on training for EEP members this year; however, in-person critical training is being planned for this fall to support the delivery of our mandate. The first B.C. Environmental Response Hazardous Materials Technician training was organized for delivery when restrictions on travel are eased. Staff safety continues to be prioritized in response to the COVID-19 pandemic and EEP continues to focus on virtual training opportunities for the time being.

In-house training currently being developed

- Hazardous Materials Technician
- Leadership for High-Risk Situations
- Personal Protective Equipment and Flammable Atmosphere Safety
- Sampling, Compliance & Enforcement
- Cultural Safety and Reconciliation

Collaborative Exercises

As a critical partner in hazardous spill response and recovery, EEP staff are regularly invited to attend a variety of spill exercises across the province and in other jurisdictions. Exercises are hosted by industry, Indigenous Nations, response organizations, and other provincial and federal agencies. Participation provides an opportunity to train with entities that commonly interact during an incident and allows for the testing of crucial response components like notification processes and the validation of response plans.

During the reporting period, EEP took part in five exercises:

- Crowley Petroleum Services
- Pembina
- Council of Haida Nation
- Canadian Coast Guard and the United States Coast Guard joint CANUSPAC exercise
- Canadian Coast Guard

During the reporting period, EEP conducted three internal exercises involving activation of the program's DOC. Internal exercises allow EEP to test and validate plans, policies, procedures, training, and equipment. Exercises are also integral for clarifying roles and responsibilities, identifying gaps in resources and training, identifying areas for improvement, testing business continuity plans, and improving individual and organizational performance through practice.

Recovery

People who are responsible for spills are required to carry out response actions as specified in the *Environmental Management Act*. EMA requires the spiller to evaluate immediate risks and impacts to the environment, human health, and infrastructure. In addition to immediate spill response actions, the spiller is also required to recover contaminants, protect the environment from further harm, and restore the environment. The EEP Recovery Section provides advice to spillers during the response and recovery phases to ensure they are addressing their legislative and regulatory responsibilities.

Three full-time team members make up the Recovery Section. The team members are scientists trained in environmental impact assessments, wildlife biology, toxicology, and environmental restoration.

The Recovery Section of EEP:

- Oversees and regulates environmental recovery after a spill
- Provides scientific advice and support to incident response teams
- Orders spillers to develop and submit Recovery Plans where appropriate
- Develops policies and procedures for spill recovery
- Ensures the participation of impacted Indigenous communities in spill recovery
- Leads the administration of program cost recovery

The recovery phase of a spill may include restoration, remediation, and monitoring. The spill recovery phase often begins at the same time as the response phase, but may continue past the conclusion of the response phase. The goal of the recovery phase is to restore the environment to as close to pre-spill conditions as possible. If a spiller's actions are not sufficient to comply with the regulation, EEP can order those responsible to take further steps. In addition, the spiller may be required to submit a Recovery Plan in accordance with the Spill Preparedness, Response and Recovery Regulation.

A key function of the Recovery Section is supporting incident response through scientific support during sampling and monitoring activities. Review from the recovery team ensures the scientific integrity of sampling and monitoring of spill-impacted water, sediment, soil, habitat and wildlife. Recovery team members deploy into the field to lead or participate in the Environmental Unit at the Incident Command Post, where they oversee sampling and monitoring activities, and review sampling and monitoring, remediation and habitat restoration plans prior to implementation. The recovery team engages with other specialists within and outside of government when specific expertise and local knowledge are needed.

Future Priorities

The Recovery Section will continue developing procedures to guide future activities, including:

- Creating guidance for the transition from the response to recovery phase.
- Defining roles and responsibilities of Land Remediation during the recovery phase.
- Engaging First Nations communities and incorporating traditional Indigenous knowledge in the spill recovery phase.
- Developing policies and procedures to further implement the cost recovery regulations.

External Initiatives

EEP works with numerous external agencies in areas related to spill coordination, response and emergency planning. Through discussions with other agencies, EEP ensures that roles and responsibilities are clearly defined.

Key initiatives include:

- **The Northern Shelf Bioregion Marine Incident Framework (NSB Framework)** – This framework is being jointly developed by Pacific North Coast First Nations, Canada and B.C. through a Government-to-Government initiative under the Reconciliation Framework Agreement (RFA). This framework will be endorsed by RFA signatories as the foundation for collaborative marine incident preparedness, response, and recovery in the Northern Shelf Bioregion which is one of four ecological regions off the coast of B.C extending from Quadra Island to Alaska.
- **Pacific States and British Columbia Oil Spill Task Force (OSTF)** — Under the OSTF, representatives from state and provincial environmental agencies in the Pacific coastal area collect and share data on oil spills, coordinate oil spill prevention projects and promote regulatory safeguards.
- **Canada – US Joint Contingency Plan (JCP)** — The JCP is a cooperative international agreement between Canada and the United States providing for a coordinated mechanism to plan, prepare for and respond to spills in contiguous waters. EEP acts as the provincial representative for the Juan de Fuca region, the Dixon Entrance and the inland boundaries between B.C. and the states of Montana, Washington and Idaho.
- **Canadian Council of Ministers of the Environment (CCME)** — EEP is a member of the CCME Environmental Emergencies Working Group, established to enhance the response to environmental emergencies, to ensure that environmental factors receive consideration in response actions, to build a common understanding of roles, and to share lessons learned from incidents.
- **Greater Vancouver Integrated Response Plan (GVIRP)** — The GVIRP is an operational plan initiated by the CCG to guide multi-agency, on-water response to serious oil pollution incidents within the waters of Burrard Inlet including English Bay and Indian Arm. EEP has two team members on the Environmental Response Sub-Committee, who provide expert advice relating to changes to the plan.
- **Juan de Fuca Integrated Response Plan** — As with the GVIRP, CCG is developing area plans for spills in the Strait of Juan de Fuca.

Revenue and Expenditures

EEP receives funding from the Consolidated Revenue Fund of the Province of British Columbia. The program also recovers certain costs that are charged to those responsible for spills.

The table and notes below summarize the expenditures and cost recovery revenue for the past three fiscal years.

	Fiscal Year 2020–21	Fiscal Year 2019–20	Fiscal Year 2018–19
Expenditures			
Salaries and benefits	$4,519,070	$4,701,967	$4,676,665
Staff training, exercises and travel	$61,770	$279,039	$390,973
Professional services/contracts	$1,115,832	$135,101	$1,277,810
All other expenditures	$314,432	$361,650	$840,382
Total	**$6,011,104**	**$5,477,757**	**$7,185,830**

Expenditures

Staff travel, training and exercises include:

- Staff travel to and from spill incident sites.
- Meeting with consultants, Indigenous and local governments, the public, stakeholders, and other ministry staff regarding spill preparedness, response and recovery.
- Technical and safety training to maintain technical competence.
- Emergency management exercises.

Revenue

EEP, in accordance with the polluter-pay principle, seeks cost recovery for government expenditures related to spill response actions as outlined in section 91.4 of EMA. In cases where a polluter is unwilling or unable to undertake spill responses actions, EEP may step in to take those actions and bill the responsible person for responder time, deployment expenditures, and contracts related to the response. EEP cost-recovered $38,158 from responsible parties during the fiscal year.

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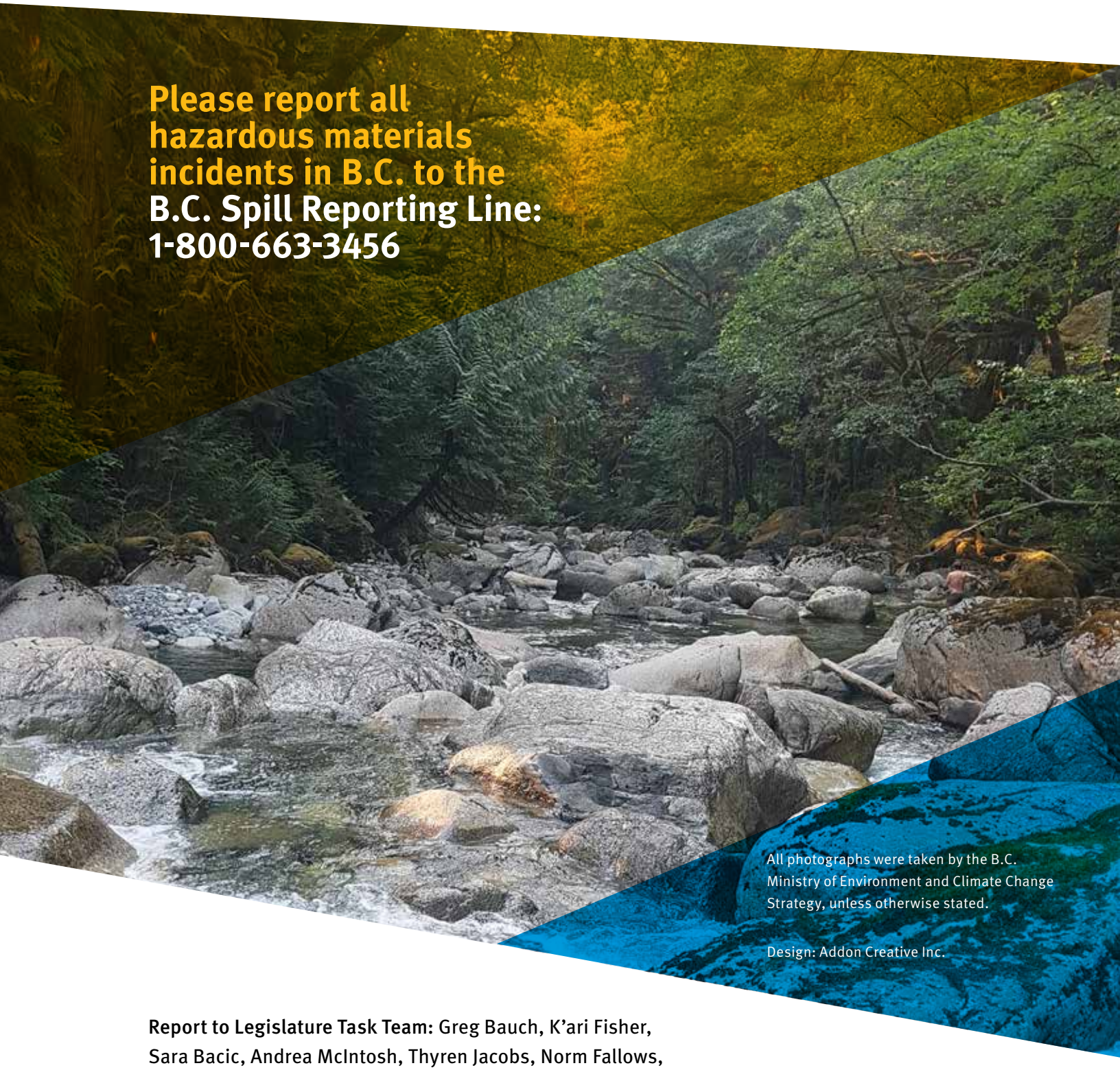
For further information, please visit our website:
www.gov.bc.ca/environmental-spill-response

Follow us on Twitter! @SpillsInfoBC



Please report all hazardous materials incidents in B.C. to the B.C. Spill Reporting Line: 1-800-663-3456

All photographs were taken by the B.C. Ministry of Environment and Climate Change Strategy, unless otherwise stated.

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