


Environmental Emergency Program:

2019/2020 REPORT TO LEGISLATURE





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.

Acronyms used in this report

BCEMS	B.C. Emergency Management System
CCG	Canadian Coast Guard
CCME	Canadian Council of Ministers of the Environment
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
IIMS	Integrated Incident Management System
JCP	National Joint Contingency Plan
MOC	Ministry Operations Centre
OGC	B.C. Oil and Gas Commission
SME	Subject Matter Expert
WCMRC	Western Canada Marine Response Corporation



2019/2020

Message from the Assistant Deputy Minister

British Columbia's Environmental Emergency Program leads in preparing for, responding to, and recovering from hazardous materials spills in British Columbia. With over 4,600 reports of spills and other environmental emergencies during this reporting period, our team has continued to protect the environment of British Columbia and the health and safety of all British Columbians.

I am very proud of the critical work led by this program, and pleased to share with you the B.C. Ministry of Environment and Climate Change Strategy – Environmental Emergency Program's second report, which describes the program's work for the period of April 1, 2019 to March 31, 2020.

As spills do not recognize borders, we continue to work collaboratively with our local, national and international partners. As such, B.C. joined the Washington State Department of Ecology in co-hosting the Salish Sea Shared Waters Forum in Bellingham during November 2019. The forum is an opportunity to convene and explore common issues in the cross-boundary waterways between Washington State and B.C. During the forum, Tribes, Indigenous Nations, government agencies and stakeholders engaged in meaningful dialogue around key issues, such as the projected increase in marine traffic and how it could impact the citizens and environments within our jurisdictions. Presenters from Canada and the U.S. provided a comprehensive overview of oil tanker traffic in the region; marine emergency response systems; and impacts of oil transportation. Of particular interest were the presentations and perspectives of our Tribal and Indigenous Nation partners.

During this reporting period the B.C. Environmental Emergency Program focused on improvements to the *Environmental Management Act* that came into effect on October 30, 2017, as well as our consideration of further regulatory requirements for better planning and prescribed timeframes to respond to spill incidents. This includes Geographic Response Plans that establish strategies to protect sensitive environmental areas along transportation routes. The program continues to engage with the federal government to seek ways to best align the proposed regulatory changes so they fill any jurisdictional gaps.

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 Director Pader Brach for their strong leadership on these important initiatives.

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



2019/2020 Message from the Director

Since the beginning of March 2020 the Environmental Emergency Program faced the unprecedented challenge of maintaining our standards of spill response, preparedness and recovery during shifting circumstances related to COVID-19. Our team rose to the challenge of developing forward-thinking strategies to reduce the spread of COVID-19 by equipping field personnel with personal protective equipment, transitioning to a remote workforce to support the health sensitivities involved with working in remote communities, and activating our Department Operations Centre.

The Environmental Emergency Program continues to implement technology-based tools and enhanced incident management systems to improve communication and incident response:

- ▶ Our team is leading the development of an emergency integrated incident management system to support enhanced communication, collaboration, and decision-making when managing environmental emergencies
- ▶ The Department Operations Centre is coordinating the program’s response to environmental emergencies during COVID-19 while supporting multiple significant spill incidents across the Province. We continue to incorporate new systems within the Department Operations Centre to support the program
- ▶ Our team met with response contractors to respond to concerns, questions and challenges facing spill response personnel throughout all phases of the COVID-19 pandemic
- ▶ Our training program has moved from in-person to online to adapt to changing conditions and continue to deliver critical training for our staff

As the Director of the Environmental Emergency Program, our success can not only be attributed to our knowledgeable and experienced staff, but also our partnerships with Indigenous, federal and municipal counterparts, members of the public and other stakeholders whom we have collaborated with on spills across the Province.

Pader Brach
Director
Environmental Emergency Program
Environmental Protection Division
BC 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, 2019 to March 31, 2020.

To extend and strengthen our ability to minimize the impacts of environmental emergencies and to 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, the organizations can share information, 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 strong regulatory oversight and ensuring the team is trained in best practices. The program will continue to prepare for, respond to and ensure recovery from environmental emergencies.

EEP received over 4,600 reports of spills and other environmental emergencies in the reporting period. Of these, 31 were high risk spills that either caused or had the potential to cause significant damage to human health or the environment.

- ▶ Almost 43 percent of spills involved flammable materials, mainly hydrocarbons such as diesel, gasoline and other fuels
- ▶ Over 46 percent of spills resulted from equipment failure. Nine percent resulted from human error and a further six percent resulted from motor vehicle incidents
- ▶ The number of reported spills was geographically dispersed relatively evenly across the province

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

When an environmental emergency such as the escape of hazardous materials occurs, quick, effective action can help prevent harm and protect the environment. In 1996, British Columbia's Legislative Assembly delegated responsibility for such emergency responses to the Ministry of Environment and Climate Change Strategy (ENV) requiring the ministry to create the Environmental Emergency Program (EEP) to act as the provincial lead for hazardous materials spills and to protect the welfare of the public 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 in an incident**
- ▶ **Oversee and regulate environmental recovery following a spill**
- ▶ **Work with partner agencies to effectively coordinate the roles and responsibilities of all responders in an incident**
- ▶ **Develop regulations, policies, procedures, plans, operational guidelines, cooperative agreements and technical documents to ensure effective coordinated action in an emergency**

EEP is the lead provincial regulator for spills, although it is the responsibility of each spiller to manage its own spill.

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 44 staff who carry out activities to protect the environment. There are 25 team members based in Victoria while 19 others are strategically located in 13 communities throughout B.C.



EEP Activities

Although emergency management is a fluid process, program activities are typically grouped into three main categories that focus on distinct phases of an incident:

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



Preparedness

Preparedness is the process of building capacity to respond effectively when an emergency occurs. The key to preparedness for EEP is building on best practices 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 creating a risk 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 activities
- ▶ 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 Force

In October 2017, the Government of B.C. brought Division 2.1, of EMA and three new regulations into force which set a foundation for strengthening spill preparedness, response and recovery in B.C. EEP team members continue to implement the new regulations and engage with various pipeline, railroad and trucking transporters to help them understand and comply with their new requirements.

Regulations in Development

On February 28, 2018, the province announced that it would develop additional regulations to Division 2.1 to further improve the province's spill management regime. The program is currently developing regulations aimed at ensuring timely responses from responsible persons following a spill and ensuring that transporters of hazardous materials develop plans to support an immediate spill response and consider the unique characteristics of specific sensitive areas.

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

Compliance and Enforcement

The partnership of EEP, ENV Regional Operations Branch and the ENV Strategic Policy Branch developed a compliance and enforcement strategy for the Division 2.1 amendment to EMA and the three new regulations in force. The project was completed in March 2020 and generated the following achievements:

- ▶ A revised EMA Orders Handbook to include eight spill related Orders
- ▶ Training of EEP team members on the revised EMA Orders Handbook
- ▶ An amended Authorization Management System to include measures to manage records for eight spill related Orders
- ▶ Developed and published compliance brochures for the Spill Contingency Planning Regulation, Spill Preparedness, Response and Recovery Regulation and the Spill Reporting Regulation
- ▶ Incorporated Division 2.1 sections of EMA and clauses of the three new regulations in force into the Natural Resource Inspection System to facilitate compliance inspections

As of August 2020, EEP added one full-time employee, the Senior Spills Specialist, to its organizational structure. The position is to undertake certain compliance and enforcement responsibilities that include the following:

- ▶ Outline a strategy to incorporate specific sections of Division 2.1 of EMA and the three new regulations in force into the Administrative Penalties Regulation and Violation Ticket Administration and Fines Regulation
- ▶ Prepare policy documents related to compliance and enforcement with Division 2.1 of EMA and the three new regulations in force
- ▶ Conduct operational training of relevant EEP team members regarding the selection, writing and issuing of spill related Orders
- ▶ Lead compliance inspections and enforcement actions against responsible and regulated persons
- ▶ Participate in stakeholder engagements to promote voluntary compliance with Division 2.1 of EMA and the new regulations in force

Similar compliance and enforcement initiatives will also be adopted and incorporated for the regulations that are currently being developed.

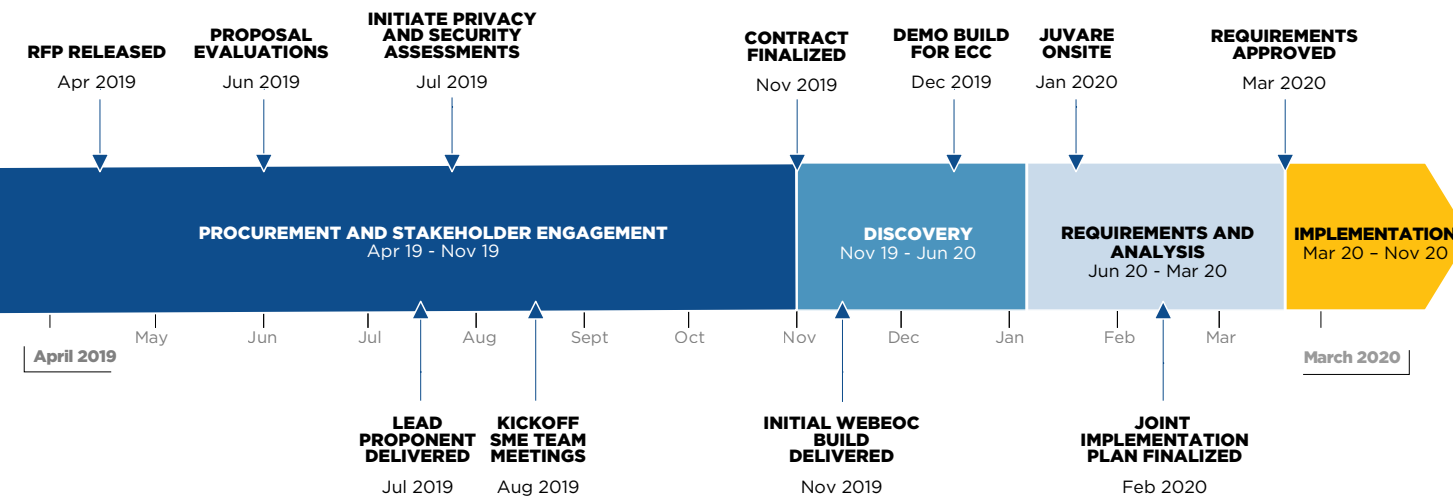


First Nations Leadership Gathering

In November 2019, EEP attended the B.C. Cabinet and First Nations Leadership Gathering on the traditional territories of the X^wməθk^wəyəm (Musqueam), Skwxwú7mesh (Squamish), and səliłwətaʔ/sełilwitulh (Tsleil-Waututh) First Nations. The gathering connected First Nations and provincial government leaders to meet and discuss issues that matter to First Nations communities and the province. The program staffed an information booth where team members answered questions and provided information on hazardous material spills and emergency management.

Major Milestones

The IIMS Project achieved key milestones in the period from April 2019 to March 2020, including:



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, 2020 to support the province-wide response to the novel coronavirus (COVID-19) pandemic.

In the week prior to the declarations, the EEP Preparedness Section initiated the EEP Business Continuity Plan. The purpose was to ensure program preparedness by identifying obstacles or issues that may arise while working from home during a pandemic. Issues related to staff safety, working from home and access to technology were identified and acted on.

Integrated Incident Management System

EEP is leading efforts to acquire and implement an emergency integrated incident management system (IIMS) Project for environmental emergencies. 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 vision of the 2020 implementation is to provide support to all pillars of emergency management within EEP, and to continue to support and contribute to a provincial solution for the management of all hazards.

Next Steps

In April 2020, the IIMS Project transitioned into the Configuration and Development Phase. The IIMS Project team will continue to work closely with the Subject Matter Expert team and Juvare to ensure the system reflects the current and future needs of the program. The project team will also continue to engage with emergency management stakeholders to increase collaboration and effectiveness in emergency incident management in B.C. Phase 1 of the system is planned to go-live in November 2020.

Spill Reports Across BC

The Environmental Emergency Program received over 4,600 reports of spills and other environmental emergencies in the April 1, 2019 to March 31, 2020 reporting period. Following a risk assessment of each reported spill, the program responded to nearly half of these reports, either by site visit or follow up phone call.

Risk Ranking

Each reported spill is assessed for public threats, environmental sensitivities, incident status, estimate 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

During the reporting period, 31 incidents were considered High Risk.

Within each of the four regions of the province, the number of reports ranges from 814 to 1,751 per region, reflecting the population and economic activity of the province:

Total spill reports by region

Row Labels	Spill Reports	Risk Ranking		
		Low	Intermediate	High
Lower Mainland Region	1,751	1,668	76	7
Vancouver Island Region	1,153	1,101	50	2
Northern Region	917	782	114	21
Southern Interior Region	814	783	30	1
Total	4,635	4,334	270	31



Analysis of Spill Reports

Spills are typically reported to Emergency Management BC's (EMBC'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, 2019 to March 31, 2020.

The EEP Spill Tracking Database

The EEP spill tracking database is for informational and statistical purposes. It contains all available information collected from the caller and any immediate follow-up by the response officer involved. Information may be updated as an incident is investigated further.

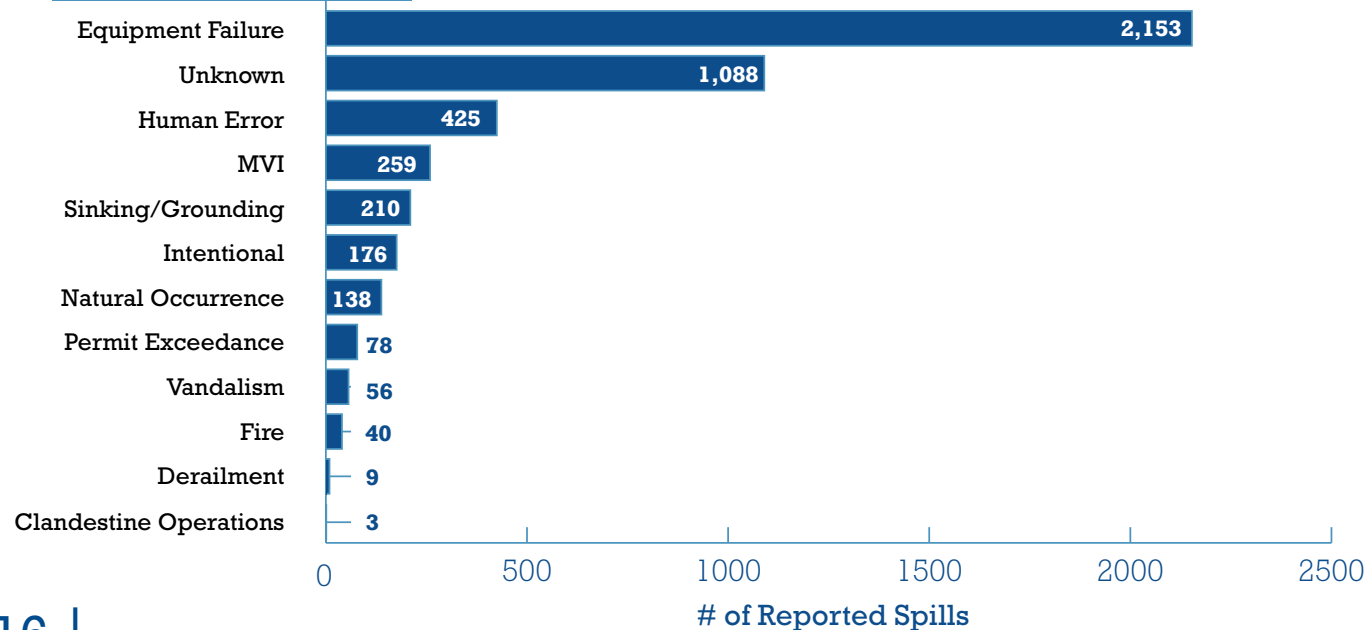
Causes of Spills

Equipment failure caused the highest number of spills — 46 percent of the total. These mainly resulted from ruptured equipment lines, radiators and similar equipment 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, occurred in the marine environment. It is difficult to confirm the cause of these spills, however, due to the vast area and rapid mixing action. On land, a common source of unknown spills are illegal dumping sites. Unknown sources represent 24 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.

Causes of Spills



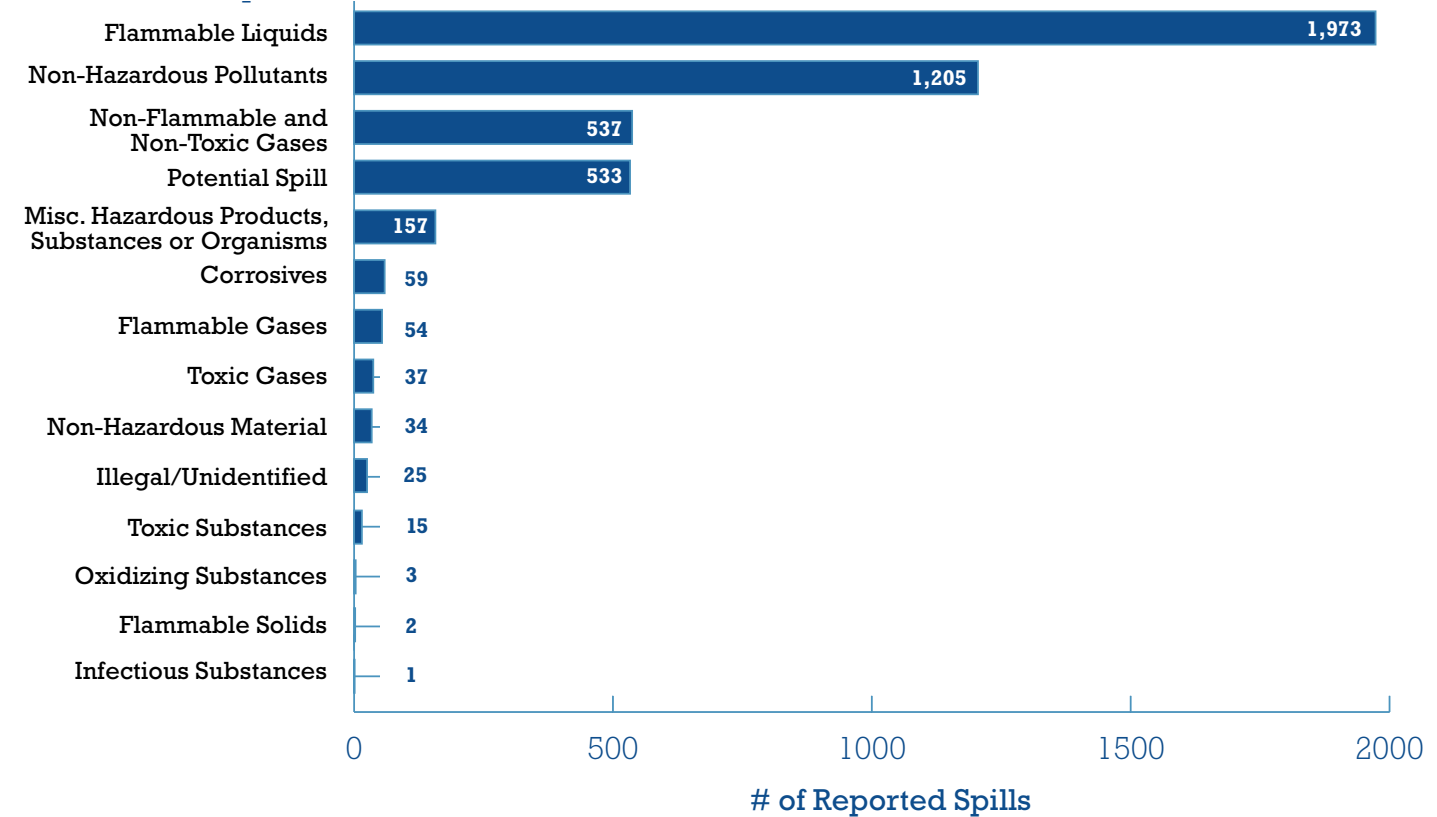
Materials Spilled

Flammable liquids such as gasoline, diesel and heating fuel are by far 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 the 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.

Materials Spilled

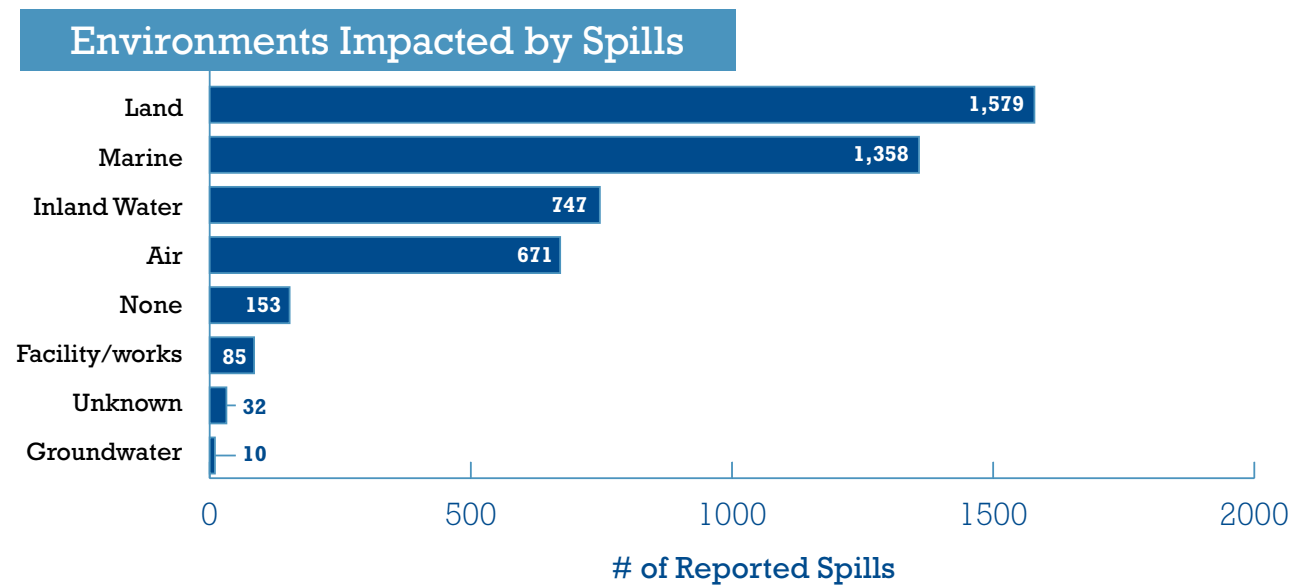


Environments Impacted by Spills

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 50 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 into the air.

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 agriculture users.

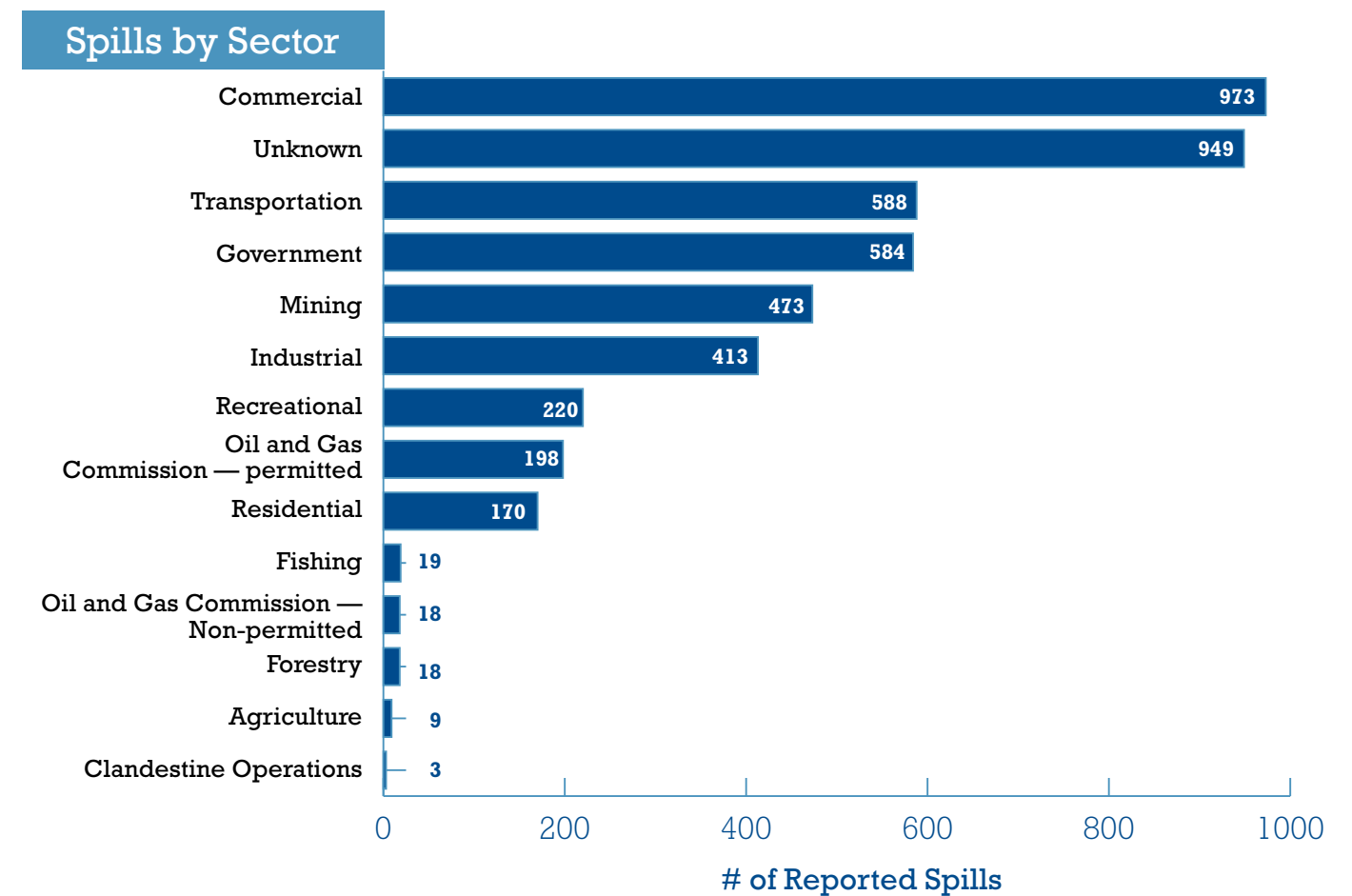


Spills by Sector

Reported spills were categorized into 14 business sectors. The commercial, transportation, mining 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 them to refineries.

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

The unknown sector, 20 percent of the total, indicates spills in which the origin is not known. A large proportion of total reportable spills, such as petrochemical sheens, occurred in the marine environment where it is difficult to confirm the cause of a spill. If the cause of spill is not known it can not be attributed to a specific business sector.



Response

The Response Section is made up of environmental emergency response officers (EEROs), senior EEROs, section heads, a training officer, a logistics officer and an information officer. This section is responsible for overseeing response actions during hazardous material incidents. EEROs strategically deploy to hazardous material incidents across B.C. to assess, give guidance and monitor response actions. They ensure the responsible person is taking the appropriate actions to clean up the spill. The common EEP Response 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 of Environment and Climate Change Strategy's Ministry Operations Centre (MOC) and EMBC's Provincial Regional Emergency Operations Centres (PREOCs)

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

Department Operations Centre

EEP's Department Operations Centre's (DOC's) primary role is to support and assist EEP's field response staff during a complex spill incident, or responses to multiple incidents. The DOC may also support the MOC, provide policy direction and assist with executive, Government Communications & Public Engagement and partner agency requests during catastrophic or major public health incidents such as earthquakes, tsunamis or pandemics. The DOC is located in Victoria and has the necessary resources for immediate activation. During the reporting period, the DOC was activated for a fuel spill to the Salmo River (April 2019) and virtually activated for the COVID-19 pandemic response (March 2020).

The DOC operates according to the [B.C. Emergency Management System \(BCEMS\)](#).

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 deployments of staff 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 continually 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 deployments to incident sites is ongoing and will continue to be enhanced over the coming years.

Responding to Diverse Environmental Emergencies

Every year, EEP receives thousands of calls regarding 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.

Spills have the potential to cause significant impacts to human health and the environment. The selected incidents that follow illustrate the diversity and complexity of incidents B.C. faces each year: a train derailment involving multiple hazardous materials; a motor vehicle incident where frozen conditions influenced response actions; and a substantial release of fuel into the marine environment. These three incidents show the potential for significant impacts and risks to human health and the environment spills can cause. Without EEP's involvement, these incidents could have resulted in additional impacts to human health and the environment.

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 also posts educational tweets to improve public awareness of what the program does and how we prepare for, respond to and recover from spills in B.C. 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.

November 16, 2019 - A semi B-train tanker truck carrying petroleum crude oil (UN 1267) was involved in a motor vehicle incident on Highway 49 while crossing the Pouce Coupe bridge approximately 5 km east of Dawson Creek.

Dawson Creek Fire Department, the RCMP and EEROs attended the scene. Upon arrival the truck and trailer were mostly consumed by the fire which resulted in closure of the highway and bridge. Oil was observed on the bridge and in the Pouce Coupe River which was partially frozen at the time.

The attending EEROs augmented the response by taking the lead provincial role to ensure a coordinated response between the responsible person and various government agencies. EEROs assessed the spill site and situation, provided expert guidance, and led the boom deployment to contain the product and reduce impacts to the Pouce Coupe River. An EERO participated in an overflight of the river to determine downstream impacts and any possible containment and collection points for the spilled oil. In addition, EEROs ensured water quality sampling and potential oiled wildlife mitigation measures were undertaken and potential downstream water users were notified. The response had additional complexity because



Tanker fire



Tanker fire aftermath



Flight overview – collection boom in water



Effective use of boom in moving water and ice to contain oil



Oil collection skimmer

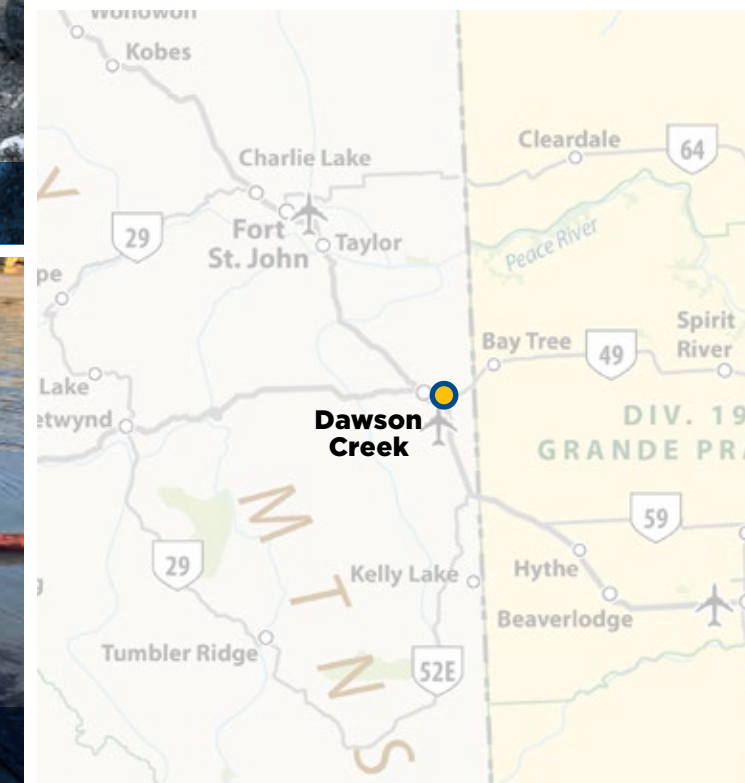


Response Officers – monitoring oil recovery operations

of the winter conditions with a mix of ice and open water on the river.

It was determined that an estimated 40,000 litres of crude oil was spilled. Based upon observations, it was likely that a substantial amount of product was consumed in the fire.

Over the course of the following week, an EERO maintained a site presence to provide regulatory oversight of the cleanup and worked with the B.C. Ministry of Transportation & Infrastructure to address impacts to bridge infrastructure, including placement of protective rip-rap along the river. An EEP spill recovery specialist also assisted in the review of a recovery actions plan for the incident.





Overflight photo of shoreline impacts from spill



Bivalve sampling crew

preliminary incident support, stakeholder notifications, monitoring functions and deployed technical specialists to the field and formally entered into Unified Command to help coordinate the response.

EEP participated in Unified Command and took an active role in the Environmental Unit and field operations. EEP spill recovery specialists played a key role in the development and implementation of the sampling plan to assess potential impacts to the environment and human health, specifically in relation to shellfish harvesting.

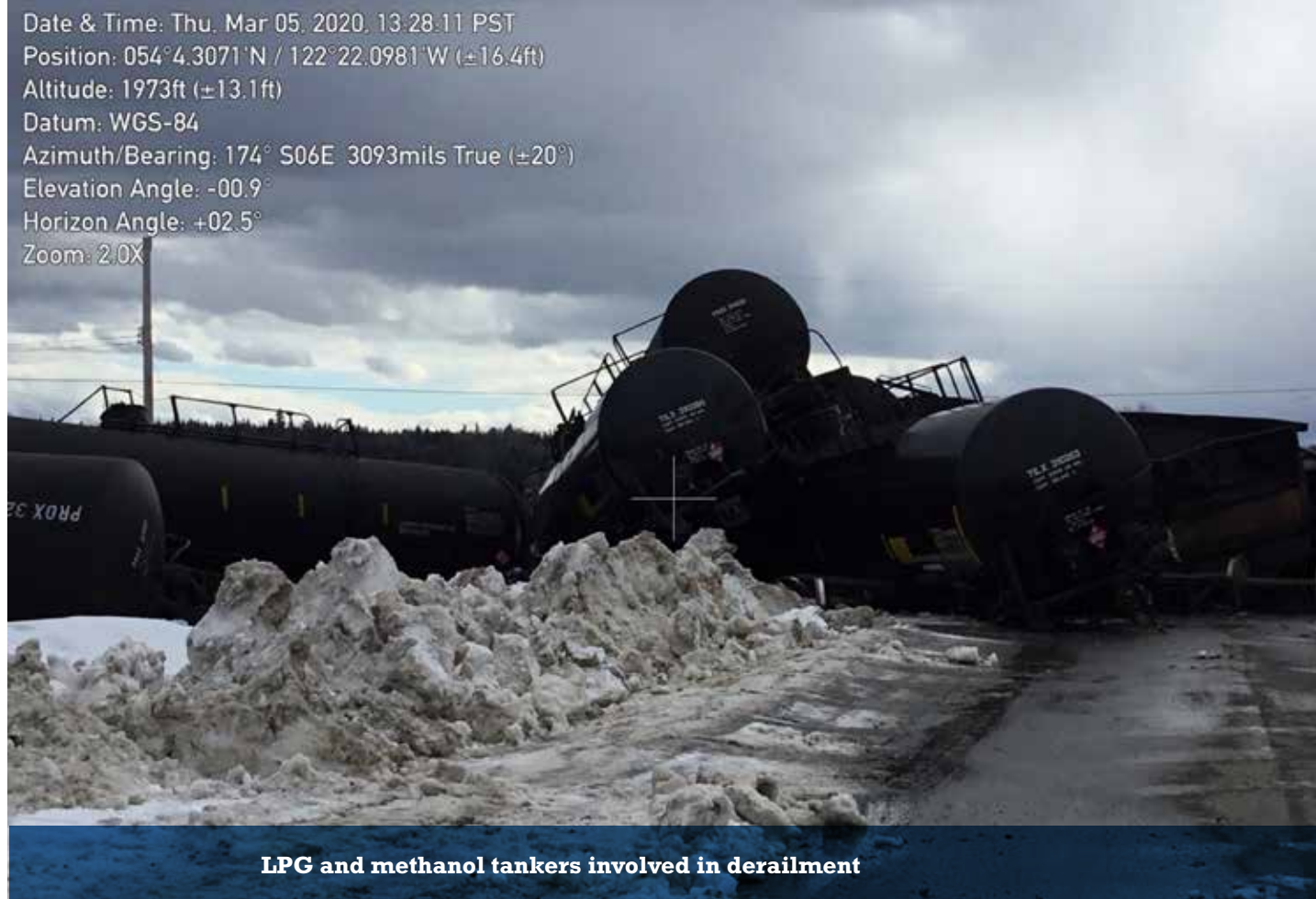
EEP was involved in the incident for approximately four months, starting with the initial spill report until the rescinding of a *Chemical Contamination Emergency Closure for Bivalves* that was issued for the spill area.

December 15, 2019 – A 25-foot tug *DD Catherwood*, with a barge in tow, struck Browning Rock while traveling southbound in Chatham Channel, approximately 30 km from the Village of Sayward. The tug’s fuel tank was compromised resulting in a release of fuel to the marine environment. Initial reported fuel volumes for the compromised fuel tank were 30,000 litres with a total on-board fuel volume of 92,000 litres.

Initial actions by the boat crew involved transferring fuel from the vessel’s compromised fuel tank to the barge in tow which reduced the total volume of fuel being released to the marine environment. Containment booms were deployed around the tug and barge with reports of fuel sheening both inside and outside of the containment boom.

The initial response to this incident was carried out by the Canadian Coast Guard (CCG), as lead federal agency, in cooperation with Transport Canada, the responsible person and Western Canada Marine Response Corporation (WCMRC). EEP provided





During the response, the EERO undertook an environmental impacts monitoring role during the offloading and salvaging process, installation of mitigative measures (boom) on Hay Creek and water sampling operations to ensure appropriate response actions were being implemented.

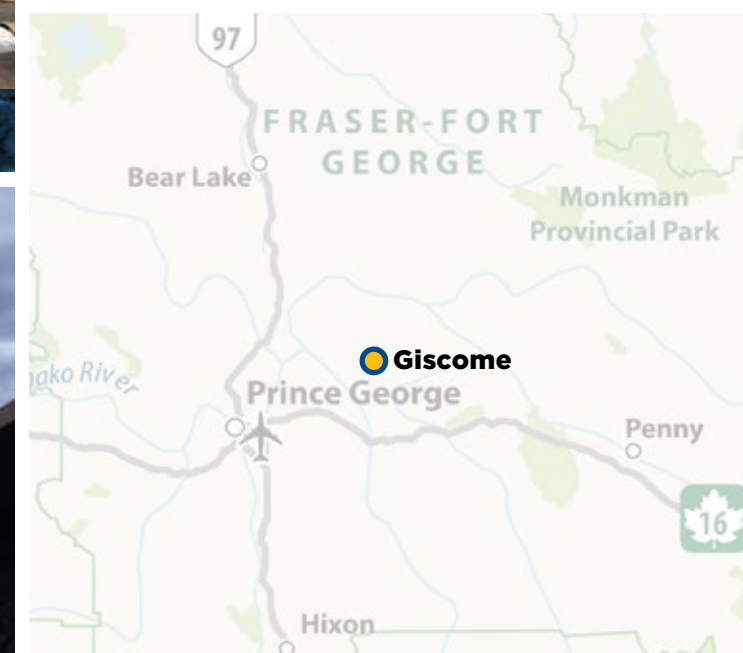
EEP Recovery staff also reviewed CN Rail's Recovery Plan and EEROs conducted multiple site inspections to ensure cleanup and recovery operations were not impacting adjacent properties.

This incident coincided with the early days of the COVID-19 pandemic and there was initial uncertainty about how EEROs should alter their response actions. This resulted in various operational challenges including implementing evolving safety information and virus protection protocols while managing the response actions.

March 5, 2020 - At 09:30am CN Rail reported a train derailment in the community of Giscome, approximately 40 km northeast of Prince George. Twenty-seven cars were reported to have derailed carrying a mixed cargo including liquid petroleum gas (LPG), methanol and petroleum coke (coal). Due to unconfirmed reports of damages to the dangerous good cars, Giscome Elementary School made a precautionary decision to evacuate the building.

EEP mobilized an EERO to the incident and CN Rail mobilized spill responders to site. Notifications went out to Lheidli T'enneh First Nation and Fraser/Fort George Regional District.

Following a site assessment, it was determined rail cars containing LPG were off the tracks. These cars suffered varying levels of damage but were still intact; however, the contents had to be offloaded. In addition, an estimated 42 tonnes of petroleum coke spilled in the vicinity of Hay Creek.



Technical Training and Equipment

Program environmental emergency response officers (EEROs) must respond safely 24 hours a day in all weather and geographical conditions, including marine, river, lake, marine and mountain environments. High risk spills are often associated with motor vehicle or vessel incidents, pipeline leaks, train derailments, industrial operations or clandestine drug labs 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 leading a spill response and have the highest level of training in the Incident Command System (ICS).

Modernized Training

During the reporting period from April 1, 2019 to March 31, 2020 program training was modernized. Over 650 hours of technical and safety training for EEROs will be spread over a two-and-a-half-year period. EEP's Senior Environmental Emergency Training Officer undertook the development and delivery of critical training.

The provincial response to the COVID-19 pandemic had a direct impact on the training for EEP team members. The safety of all staff was prioritized in response to the COVID-19 pandemic and EEP shifted its focus to online training. Although EEP recognizes e-learning will never replace hands-on learning, EEP has adapted to the new environment and will undertake field-based drills and exercises in the future when it is once again safe and appropriate.

In-house training currently being developed

- ▶ Hazardous Materials Incident Commander
- ▶ Leadership for High-Risk Situations
- ▶ Working Alone and in Isolation
- ▶ Incident Support in a Virtual World

Collaborative Exercises

EEP team members regularly attend external exercises run by industry and by other agencies such as Emergency Management BC, Western Canada Marine Response Corporation (WCMRC) and Canadian Coast Guard (CCG). In addition to helping EEP develop its skills and remain current with training, these exercises also strengthen EEP's connections with other emergency responders EEP commonly interacts with during an incident response.

During the reporting period, EEP took part in 15 exercises with the following:

- ▶ CCG and United States Coast Guard
- ▶ CN Rail and CP Rail
- ▶ Trans Mountain Pipeline
- ▶ Oil and gas industry
- ▶ WCMRC
- ▶ Western Canadian Spill Services
- ▶ District of Squamish
- ▶ Parkland Refining Ltd. (Burnaby)
- ▶ Canada Fuel Operations (Imperial)
- ▶ Stó:lō Tribal Council, in partnership with the Indigenous Advisory and Monitoring Committee

EEP conducted internal exercises involving the activation and operation of the program's DOC to ensure team members are trained in their roles and responsibilities.



Recovery

Following a spill that causes environmental harm, EMA requires the spiller identify and evaluate the immediate risks to and impacts on the environment, human health or infrastructure. The spiller is also required to recover contaminants, protect the environment from further harm and to 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, aquatic ecology, marine biology, 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 a pre-spill condition 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 (ICP), 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.

Cost Recovery

Under the “polluter-pay principle,” those who pose a risk to the environment and public safety must cover the cost of preventing further harm and repairing the impacts of a spill. EEP has developed guidelines on allocating and collecting costs incurred by the Province of British Columbia. In the 2019/20 fiscal year, EEP recovered a total of \$268,670 of spill-related costs from spillers.

Future Priorities

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

- ▶ Building capacity to deploy to incidents and participate in the Environmental Unit at the ICP
- ▶ Providing guidance to spillers to clarify responsibilities during the conclusion of recovery phase
- ▶ Creating guidance for spillers on developing recovery targets that promote post-spill restoration of the environment
- ▶ Developing templates and guidance to support the development of recovery plans
- ▶ Improving Geographic Information System capacity and integration of provincial environmental data layers for enhanced incident support

External Initiatives

EEP works with numerous external agencies in areas related to spill coordination, response and emergency planning. Through discussions with other agencies, EEP ensure that roles and responsibilities are clearly defined and strengthens its overall spill preparedness, response and recovery framework.

Key initiatives include:

- ▶ **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 responses 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 has begun 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 tables and notes below summarize the expenditures and cost recovery revenue for the past three fiscal years.

	Fiscal Year 2019/20	Fiscal Year 2018/19	Fiscal Year 2017/18
Expenditures			
Salaries and benefits	\$4,701,967	\$4,676,665	\$4,050,111
Staff training, exercises and travel	\$279,039	\$390,973	\$292,594
Professional services/contracts	\$135,101	\$1,277,810	\$113,262
All other expenditures	\$361,650	\$840,382	\$672,668
Total	\$5,477,757	\$7,185,830	\$5,128,634

Expenditures

Staff travel, training and exercises includes:

- ▶ 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, ENV 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 \$268,670 during the fiscal year.



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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