



Ministry of
Environment and
Climate Change Strategy



2021 - 2022
REPORT
TO LEGISLATURE

ENVIRONMENTAL **EMERGENCY** PROGRAM



ACRONYMS USED IN THIS REPORT

ARE	Atmospheric River Event
CANUSDIX	Canada-US Dixon Entrance
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	<i>Environmental Management Act</i>
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
JCP	National Joint Contingency Plan
NSB	Northern Shelf Bioregion
O&G	Oil and Gas
RFA	Reconciliation Framework Agreement
WCMRC	Western Canada Marine Response Corporation

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.



MESSAGE FROM THE ASSISTANT DEPUTY MINISTER

British Columbia's Environmental Emergency Program received over 5,306 dangerous goods incident reports during the 2021–2022 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 material spills in the province.

I am proud of the critical work led by this program and pleased to share the Environmental Emergency Program's fourth Report to Legislature, which describes the program's work for the period of April 1, 2021 to March 31, 2022.

As many British Columbians are aware, in November 2021, an atmospheric river event caused severe weather, flood, and landslides in southern and south-central areas of the province. One of the most significant impacts of the event was the massive amount of human-made and natural debris deposited in watercourses that posed an immediate risk to human health and safety and critical infrastructure. The magnitude and extent of the debris were beyond the capacity and capability of affected First Nations and local authorities. The Environmental Emergency Program led the ENV Department Operations Centre and, along with our partner agencies, took immediate action to develop a debris removal plan to protect the welfare of the public.

During the aftermath of the event, it was evident that several Indigenous communities were differentially or disproportionately impacted by the atmospheric flood event. Recognizing that these communities may have unique priorities and needs, we built our response objectives around engagement with Indigenous groups and the Province's commitment to the principles of the *Declaration on the Rights of Indigenous Peoples Act* (Declaration Act). We contracted environmental non-governmental organizations to work collaboratively with Indigenous communities to remove debris from impacted watercourses for which community members received specialized training. The program also funded six Indigenous Nations to conduct cultural and environmental monitoring and oversight of archaeological work during debris removal operations. This approach ensures a long-term investment in local Indigenous resources and knowledge that will enable a more informed and efficient response by the Province during future flood events.

The scope and scale of this event cannot be overlooked. It has been described by some experts as a once-in-a-lifetime event that may well become much more frequent as a result of our changing climate, and response activities will likely extend into 2024. I would like to thank the program for its dedication and commitment to this prolonged incident, and for ensuring that the impacted communities remain resilient and prepared to build back better.

Finally, I wish to thank our partners for their commitment to this important work, as well as Executive Director Kevin Butterworth and 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 second year in a row, the Environmental Emergency Program operated under restrictions brought about by the COVID-19 pandemic. Health concerns, travel limitations, and community-specific restrictions continued to alter the ways in which our team received specialized training and managed spill incidents. Our staff were committed to continuously improving our safe-work practices, hazard assessment techniques, and response strategies to ensure that we could provide a high level of service during environmental emergencies without jeopardizing personal safety.

Despite the persistent challenges of the pandemic, the Environmental Emergency Program remained motivated to improve upon its spill preparedness, response, and recovery framework, and to deliver on our mandate. Our major accomplishments and activities for the reporting period include:

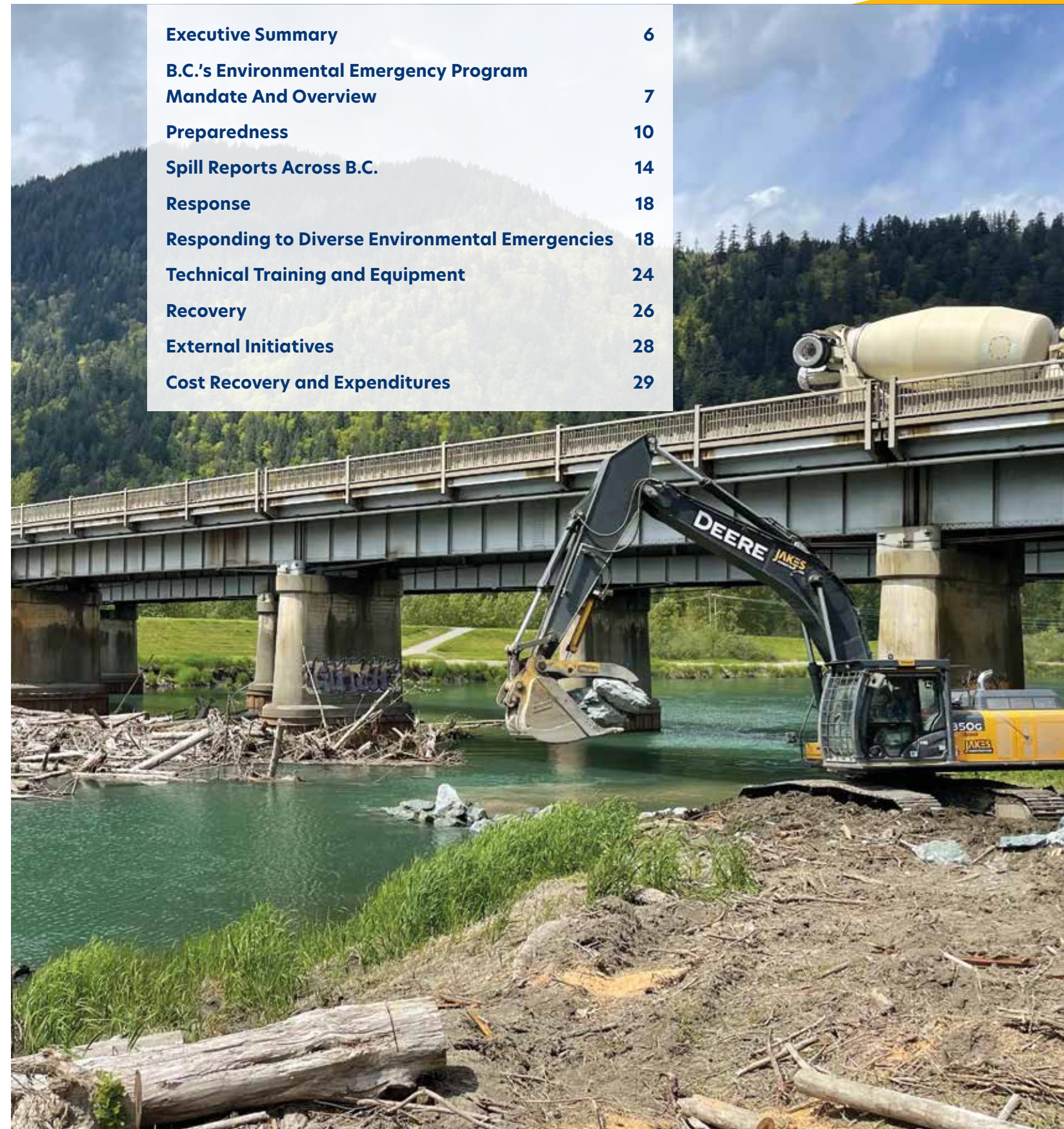
- ▶ The Department Operations Centre, which provides on-site support to spill incidents, was activated during four major, prolonged spill incidents, including the catastrophic atmospheric river event of fall 2021
- ▶ Our staff continued to work with partners to the Reconciliation Framework Agreement on the development of collaborative all-incident response plans, and the team is working directly with Indigenous communities on the sub-regional level
- ▶ We were a contributing partner on the 2021 Pacific States – British Columbia Oil Spill Task Force 2021 Annual Report
- ▶ Our regulatory development team reviewed spill management plans and project conditions for major pipeline and container-port expansion proposals to ensure that proponents are adhering to provincial spill requirements
- ▶ Our extensive training program expanded its catalogue of online courses to ensure critical training for our staff could be completed in a virtual environment
- ▶ Our program supported federal response partners in Unified Command and oversaw the cleanup and recovery of impacted beaches following the loss of shipping containers that went overboard from the M/V Zim Kingston in the Strait of Juan de Fuca

I would like to thank our team members for their contributions to our successes during this reporting 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 our environment.

Rod Allen
 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, 2021 to March 31, 2022.

A key tenet of the regulatory regime in B.C. is the polluter-pay principal. As defined in the *Environmental Management Act (EMA)* section 91.1, the person deemed responsible for a spill is the responsible person, and as such, must ensure all actions to address a threat or hazard caused by the spill are taken. Monitoring a responsible person's compliance with regulatory requirements is a key responsibility of EEP.

EEP received 5,306 reports of spills and other environmental emergencies in the reporting period. Of these, 12 were high-risk spills that either caused, or had the potential to cause, significant damage to human health or the environment.


- ▶ **1,885 spills**, the most of any region, were reported in the **Lower Mainland**
- ▶ Almost **33 percent** of spills involved **flammable liquids**, which were mainly hydrocarbons such as diesel, gasoline and other fuels
- ▶ Over **43 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 the B.C. Ministry of Environment and Climate Change Strategy (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 ENV's mandate, EEP 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 person 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.

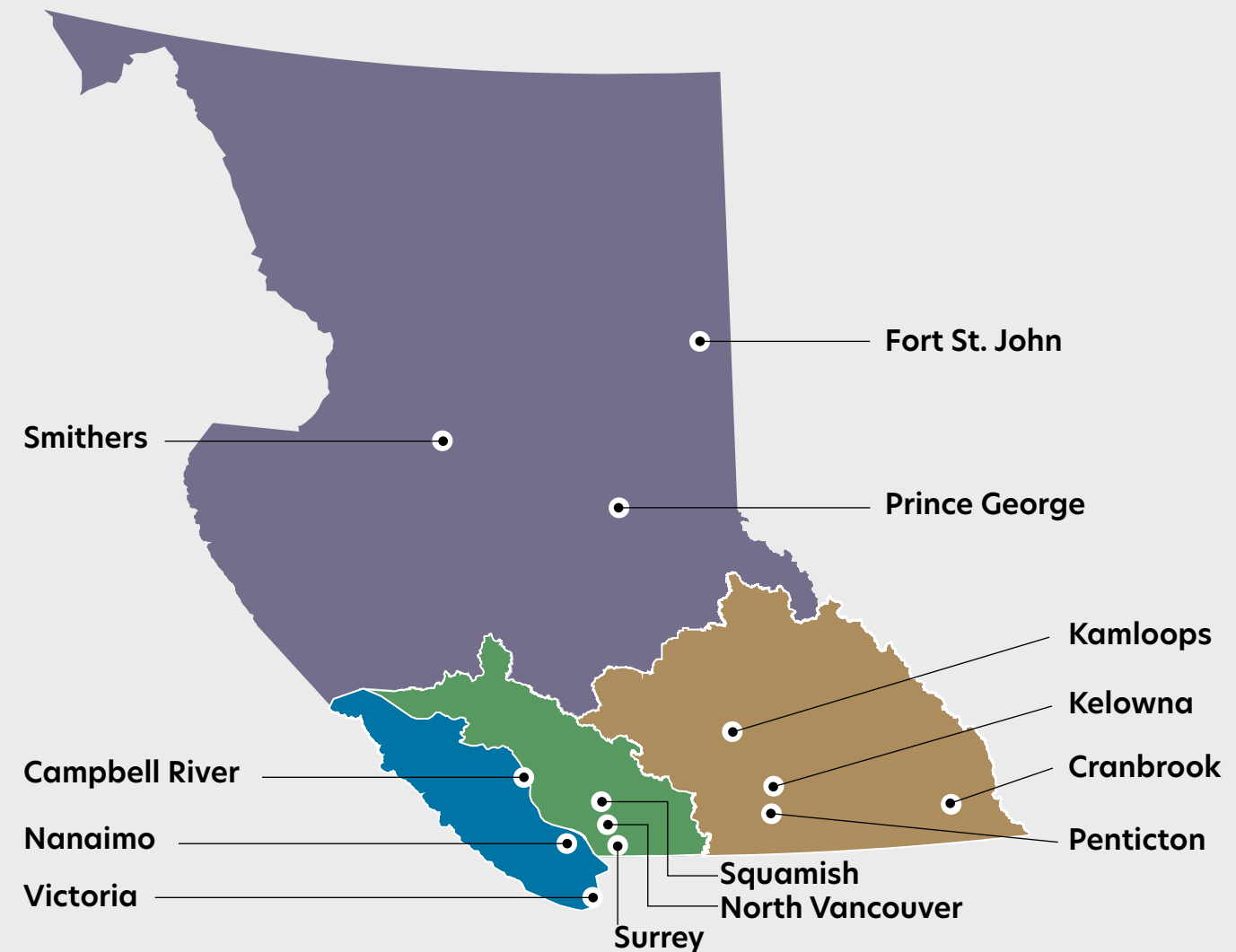
It sets out requirements for spill preparedness, response and recovery. EMA regulations include:

- 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 currently consists of 34 staff who carry out activities to protect the environment. There are 16 team members based in Victoria, while 18 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 and capability 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 to ensure that essential services continue
- ▶ Developing legislation and regulations to ensure 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 the EMA to strengthen spill preparedness, response, and recovery in B.C. The program is currently developing regulations aimed at ensuring a timely response from regulated persons following a spill and requiring that transporters of hazardous materials develop plans that consider the unique characteristics of specific sensitive areas.

EEP is currently awaiting the decision of a jurisdictional appeal process that will inform whether and how our proposed regulations may require amendment to align with court decisions regarding provincial and federal jurisdictions. If amendments are required we will want to ensure that any jurisdictional gaps are filled. The hearings are set for early 2023.

COMPLIANCE AND ENFORCEMENT

EEP continues to action its compliance and enforcement strategy, which was rolled out in 2020. During the reporting period our key actions included:

- ▶ Conducting 10 office-review inspections, resulting in nine advisories and one administrative penalty referral
- ▶ Finalizing EEP's Compliance & Enforcement Procedures for Response Officers and delivering operational training to EEROs
- ▶ Developing guidance for the coordination of spill response and compliance activities at locations with EMA authorization (e.g. waste discharge authorizations)



The Pacific States/British Columbia Oil Spill Task Force – ANNUAL MEETING

On November 17, 2021, ENV Assistant Deputy Minister Laurel Nash and key EEP staff, attended the 32nd Annual Meeting of the Pacific States/ British Columbia Oil Spill Task Force. The meeting was held virtually with 241 participants and provided the opportunity for Task Force members to share updates on current issues and topics of interest around spill prevention, preparedness, response, and recovery.

This year, presentations included case studies on recent incidents of the F/V Tiffany (vessel), F/V American Challenger (vessel) and Huntington Beach pipeline spill, and a profile on B.C. First Nations emerging role in marine incident preparedness and response. Task Force members also participated in a panel discussion on how climate change is adjusting our response to environmental emergencies. More information on the Task Force, including video recordings of the Annual Meeting, can be viewed at www.oilspilltaskforce.org.

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 DOC, or virtually, as was the case during the COVID-19 pandemic response.

DOC activities include:

- ▶ Assisting with notifications and leading 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

During this reporting period, the DOC was activated to support the following incident responses: overboard shipping containers from the vessel Zim Kingston (October to November 2021) and the Atmospheric River Event [ARE] (November 2021 to March 2022).

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.



SPILL REPORTS ACROSS B.C.

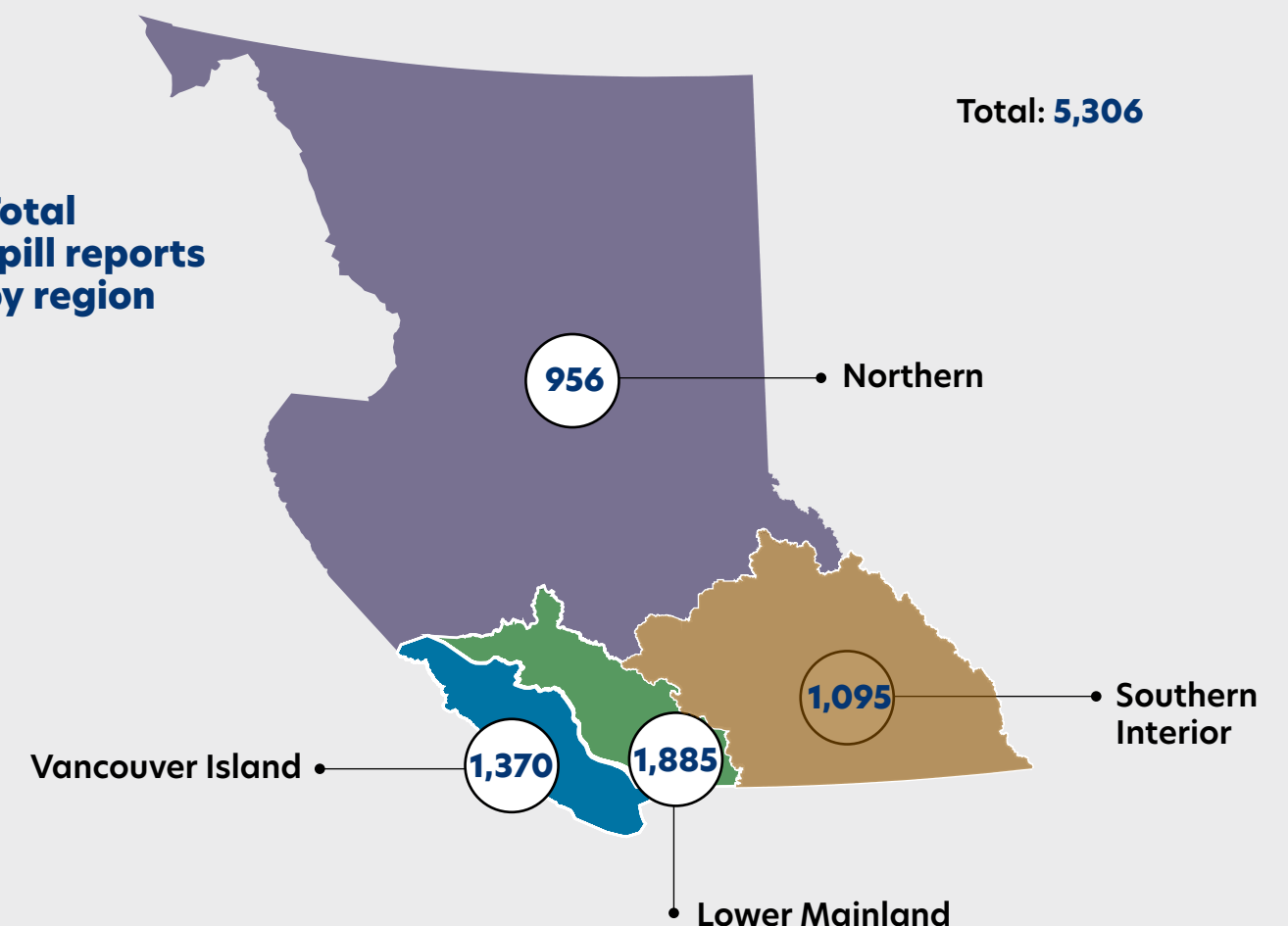
EEP received over 5,300 reports of spills and other environmental emergencies in the April 1, 2021 to March 31, 2022 reporting period. After a report is received, an EERO conducts initial risk assessments to determine whether a field response is required. Deployment is confirmed by using professional judgment, conversations with the EEP Duty Manager, 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 communications. 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 of the spiller. 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

Total spill reports by region



ANALYSIS OF SPILL REPORTS

Spills are 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.



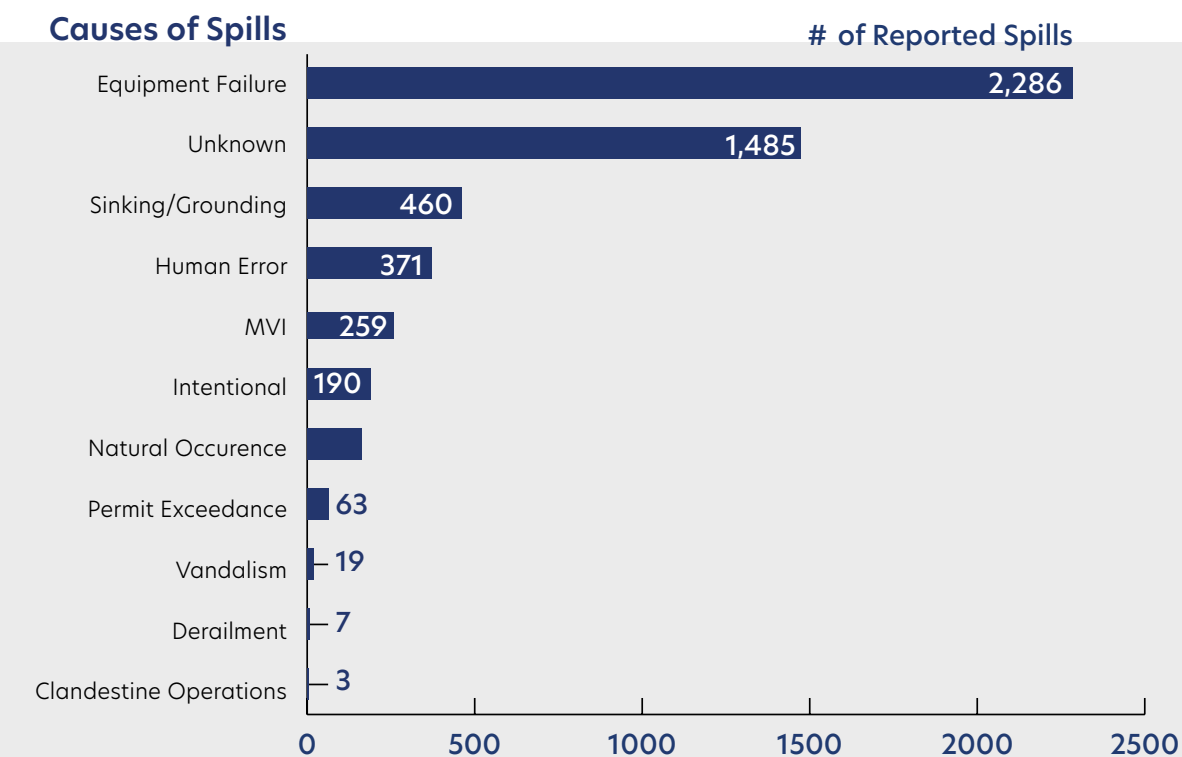
The following tables summarize key data for the period from April 1, 2021 to March 31, 2022.

Causes of Spills

Equipment failure caused the highest number of spills – 43 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 it is not possible to identify the source of the spill or the responsible person. Examples of unknown spills may include petrochemical and organic sheens, illegal dumping sites or releases of substances that cannot be identified. Petrochemical sheens that occur in the marine environment are difficult to identify. Similarly, it is difficult to identify the spiller for illegal dumping sites. Unknown sources represent 28 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.



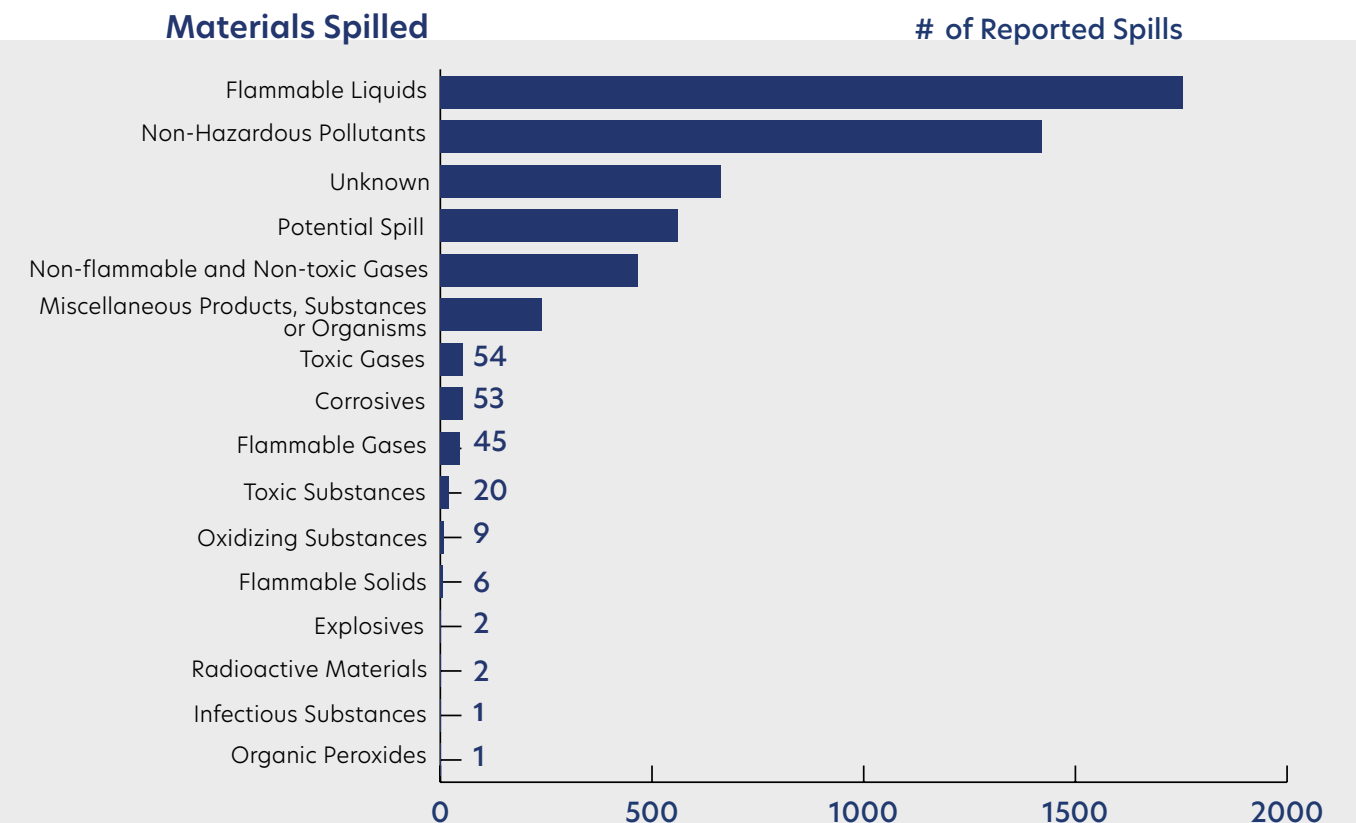
Materials Spilled

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

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 is 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.



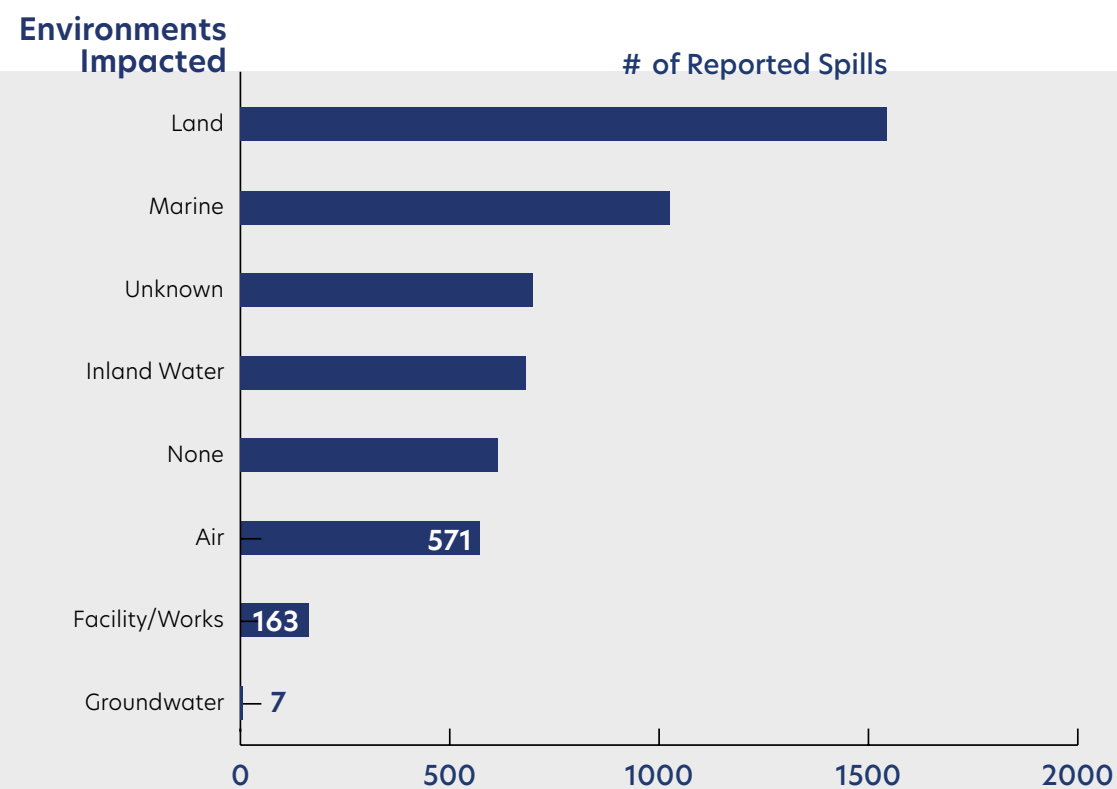


Environments Impacted by Spills

Reported spills occurred in many different environments, reflecting B.C.'s diverse geography and extensive transportation corridors.

Most releases to the air result from equipment failure in refrigerant systems. Refrigerant gases tend to be non-toxic, non-flammable and dissipate quickly; however, many refrigerant gases are ozone depleting substances.

Though spills impacting groundwater are not common, groundwater is one of B.C.'s most valuable and vulnerable resources. Impacts to groundwater can have far-reaching and prolonged impacts to drinking water supplies and agricultural users.

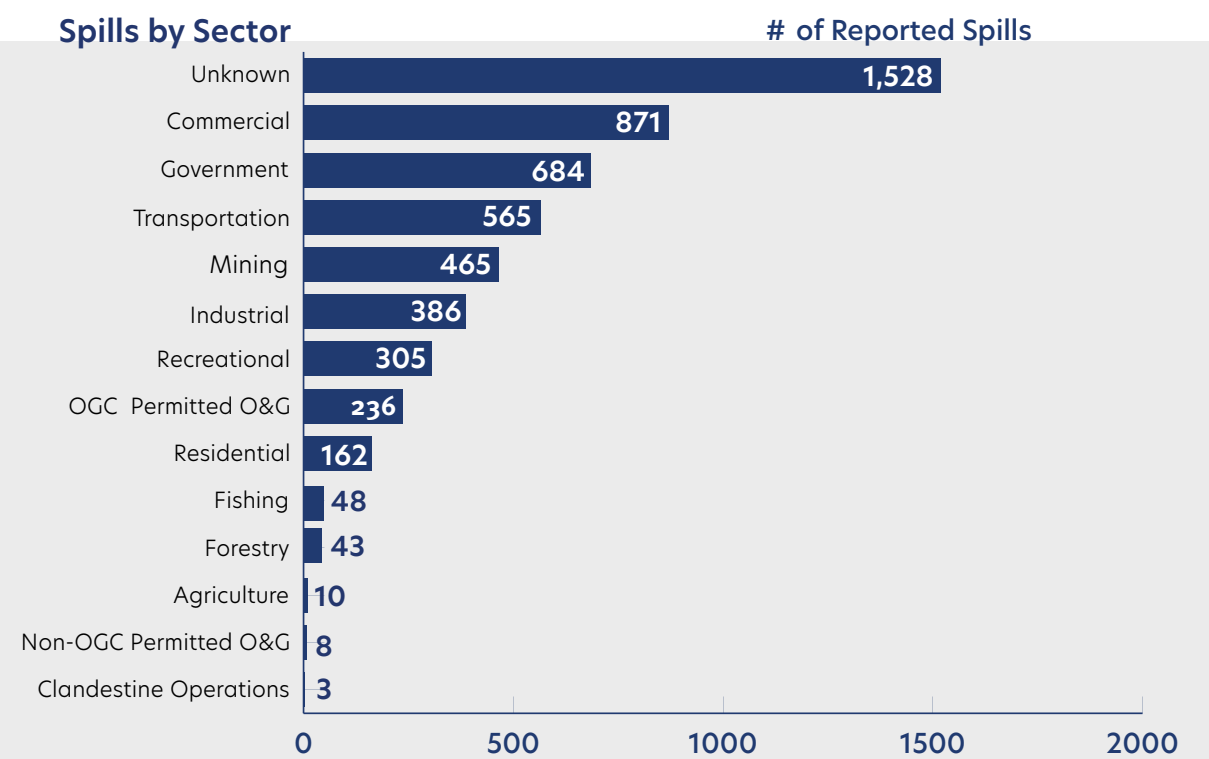


Spills by Sector

Reported spills are categorized into one of 14 sectors. The commercial, 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.

If the cause of a spill is not known, it cannot be attributed to a specific sector. Unknown spills represent 28 percent of the total.



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 and environment emergencies responses. This is achieved through the administration and enforcement of the EMA and supporting regulations including the Spill Reporting Regulation, the Spill Preparedness, Response and Recovery Regulation and the Spill Contingency Planning 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 DOC 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 the EMA.

Atmospheric River Event (ARE) – Southern Interior and Lower Mainland Regions



Natural debris deposited following the ARE

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 pages illustrate the diversity and complexity of environmental emergencies across B.C.

In **November 2021**, an ARE caused severe weather, flooding, and landslides in southern and south-central B.C. Rivers overtopped their banks and dikes, and flooded roadways and properties. The flow picked up loose materials along riverbanks such as forest fire waste, logs, woody debris, and human-made articles (construction machinery, bridges, vehicles, houses, culverts, sea cans, steel tanks etc.). The flow also caused extreme erosion, which undermined highways and roads, structures (bridges, residences etc.), and steep slopes along waterways.

ENV is the lead agency for flood debris management. As such, EEP provided immediate support to the Provincial Emergency Coordination Centre in the Environmental Sector Branch. The debris management component of the provincial response was later transferred to the ENV DOC where EEP assumed the role as the primary coordinator of this work.

Vessel in Distress, Strait of Juan de Fuca – VANCOUVER ISLAND REGION

Once water levels receded, EEP started assessing the flood-impacted area – helicopter overflights were conducted, ground crews were deployed, a community outreach program was implemented, and a public reporting tool where individuals could submit photos and location of debris was developed. In total, eight major river systems were impacted; approximately 320 individual debris sites were identified which were deemed high-risk to human health and critical infrastructure; and 20 houses and buildings were threatened by watercourses.

The atmospheric river event work is in alignment with the ENV Climate Preparedness and Adaptation Strategy. ENV is working to ensure our communities' economy and infrastructure, are ready for climate change while safeguarding the ecosystems that support us.

To ensure the debris sites did not result in future risks to public safety and infrastructure, EEP developed a comprehensive debris action plan with input from various other ministries to ensure removal activities did not impact fisheries and that removed debris would be reused, recycled, energy recovered, or disposed of appropriately. Debris removal activities commenced in March 2022 and are estimated to be completed in spring 2024 if no additional significant flood events occur.



Landslide following the ARE



Human made debris being removed from a river

In addition to the debris management activities, EEP staff were members of the Flood Water Quality Monitoring Task Force which developed models that inform the risk of contamination of drinking water, traditional foods of Indigenous Peoples, aquatic life, wildlife, domestic livestock, and agricultural crops. The models also informed recommendations for ongoing sampling and monitoring requirements to ensure the welfare of the public is protected.

Although EEP's fiscal expenditures on the ARE total in the tens of millions of dollars, a significant percentage of these costs are eligible for cost-sharing through the federal Disaster Financial Assistance Arrangement program. EEP's financial team is actively working with our partners at EMBC to submit a joint application and to ensure that these reimbursements are maximized.



Aerial view of the burning shipping containers aboard the M/V Zim Kingston

October 22, 2021 – The Motor Vessel Zim Kingston, a 260m container ship, reported a loss of containers overboard due to heavy seas, approximately 38 nautical miles west of the Strait of Juan de Fuca. The final tally on containers overboard was 109.

The vessel made it to a mooring location near Victoria under its own power; however the situation escalated the next day – two onboard containers ignited, and fire spread to surrounding containers. As a result, Unified Command was stood up which included the Canadian Coast Guard (CCG), EEP, representatives of the vessel's owner, and representatives from the Beecher Bay First Nation and five First Nations from the Saanich Peninsula and WSÁNEĆ First Nations: Tsartlip, Tseycum, Tsawout. An Incident Command Post (ICP) was established at the Victoria CCG base which was within visual range for the burning vessel.

Days later, storage containers and their contents washed up along the north coast of Vancouver Island. The ship's owner retained an environmental response contractor to assess and address impacts to the shoreline and environment. An Environmental Unit was established to closely monitor ecological impacts of the incident and recommend strategies for preventing harm to the environment.

EEP performed work that was a vital part of the response. Program staff operated within the ICP both in person and virtually, holding positions of Unified Commander, Deputy Unified Commander, Environmental Unit Deputy Leader, Wildlife Specialists, Joint Information Centre Information Officer, and subject matter experts. Numerous EEP staff also supported the incident from the DOC, which was activated to support this incident for approximately two months.

Tanker Truck Incident on Highway 24 — SOUTHERN INTERIOR REGION



Overturned truck carrying epoxy resin

January 11, 2022 – A semi transport truck was involved in a single motor vehicle incident on Highway 24 between the communities of 100 Mile House and Little Fort. The incident resulted in a spill of a highly corrosive epoxy resin product used in plywood manufacturing. The release of this material resulted in the driver being taken to hospital with chemical burns, impacts to several properties, temporary evacuation of residents and the temporary closure of the highway.

Due to the chemical hazard, weather fluctuations, and difficulty finding an authorised disposal facility that would receive the waste product, EEP deployed EEROs from the Southern Interior and Lower Mainland to ensure government oversight and cleanup requirements were being met. EEP maintained a presence for several months which included a site visit from EEP’s Recovery Section. The incident received considerable media attention, including interest from a federal Member of Parliament and the local Member of Legislative Assembly.

AWARENESS THROUGH SOCIAL MEDIA



EEP keeps the public informed of provincially significant spill incidents via the Spill Incidents page <https://www2.gov.bc.ca/gov/content/environment/air-land-water/spills-environmental-emergencies/spill-incidents> and its Twitter account (@SpillsInfoBC).

Providing real-time information on evolving incidents through these channels helps build public trust and reduces the spread of misinformation. This is vital, particularly with incidents that have resulted in casualties and/or have attracted a high degree of media attention. The Spills Incident page and Twitter account also provide information on how to report a spill, ensuing timely response and recovery.



TECHNICAL TRAINING AND EQUIPMENT

EEP's EROs 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 Section members need an extensive level of training for their personal safety, to protect the public, and to mitigate environmental impacts. All EEP team members receive technical training and EROs receive a minimum of 95 hours of hazardous materials training before taking field calls.

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

Modernized Training

To support COVID-19 physical distancing requirements and the health of our staff, EEP's Senior Environmental Emergency Training Officer shifted training development and delivery to a virtual environment where possible for the second consecutive fiscal year; however, unlike the previous reporting period, some critical in-person training was completed during the spring and fall.

Despite our continuous adaptations, the ARE in November 2021 and its long-lasting effects forced the cancellation of environmental sampling training and emergency driving courses which will be rescheduled for 2023. Nevertheless, our focus remains on staff safety and on ensuring the program can deliver on our mandate.

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 key 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 communities, response organizations, local government 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.

Exercises are also integral for clarifying agency 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.

During the reporting period, EEP took part in nine external exercises:

- ▶ Trans Mountain (Kamloops and Westridge Marine Terminal)
- ▶ Canadian National Railway
- ▶ BNSF Railway
- ▶ CCG and the United States Coast Guard joint CANUSDIX exercise
- ▶ CCG and Western Canada Marine Response Corporation (WCMRC)
- ▶ CCG and Kwikwetlem First Nation
- ▶ Multilateral Multi-Mission Exercise (North Coast Guard Forum)
- ▶ WCMRC

EEP also conducted an internal exercise involving the activation of the program's DOC. DOC exercises allow EEP to test and validate plans, policies, procedures, training, and equipment.



RECOVERY

Spillers are required to carry out response actions as specified in the EMA. The EMA requires the responsible person 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 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 ICPs, 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.

Expanded role

The Recovery Section has recently expanded our role to support recovery of areas affected by wildfires and floods.

The 2021 wildfire season highlighted the need for a provincial coordinated approach to support impacted communities. The Recovery Manager led the Environment Sector under the Interim Disaster Recovery Framework for Community Recovery, participating in the Standing Committee for Community Recovery chaired by EMBC. The committee provided coordination, and executive and cabinet updates at a senior level. At the operational level, the Recovery Section supported the community recovery around pollution and contamination within the Village of Lytton.

The Recovery Section participated in a multi-agency provincial task force focusing on concerns about water quality and potential risks from contaminants on flood-impacted areas as a result of the ARE.

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 ENV Land Remediation during the recovery phase
- ▶ Engaging Indigenous communities and incorporating traditional 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 NSB 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 Network, established to enhance the response to environmental emergencies, ensure that environmental factors receive consideration in response actions, build a collective understanding of roles, and 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. The plan has recently been extended to also cover Howe Sound and the lower portion of the Fraser River. 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 developed area plans for spills in the Strait of Juan de Fuca.

COST RECOVERY 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 below summarizes the expenditures and cost recovery for the past three fiscal years.

	Fiscal Year 2021-22	Fiscal Year 2020 21	Fiscal Year 2019 20
Expenditures			
Salaries and benefits	\$4,281,112	\$4,519,070	\$4,701,967
Staff training, exercises and travel	\$143,738	\$61,770	\$279,039
Professional services/contracts	\$188,384	\$1,115,832	\$135,101
All other expenditures	\$847,097	\$314,432	\$361,650
TOTAL	\$5,460,331	\$6,011,104	\$5,477,757

COST RECOVERY

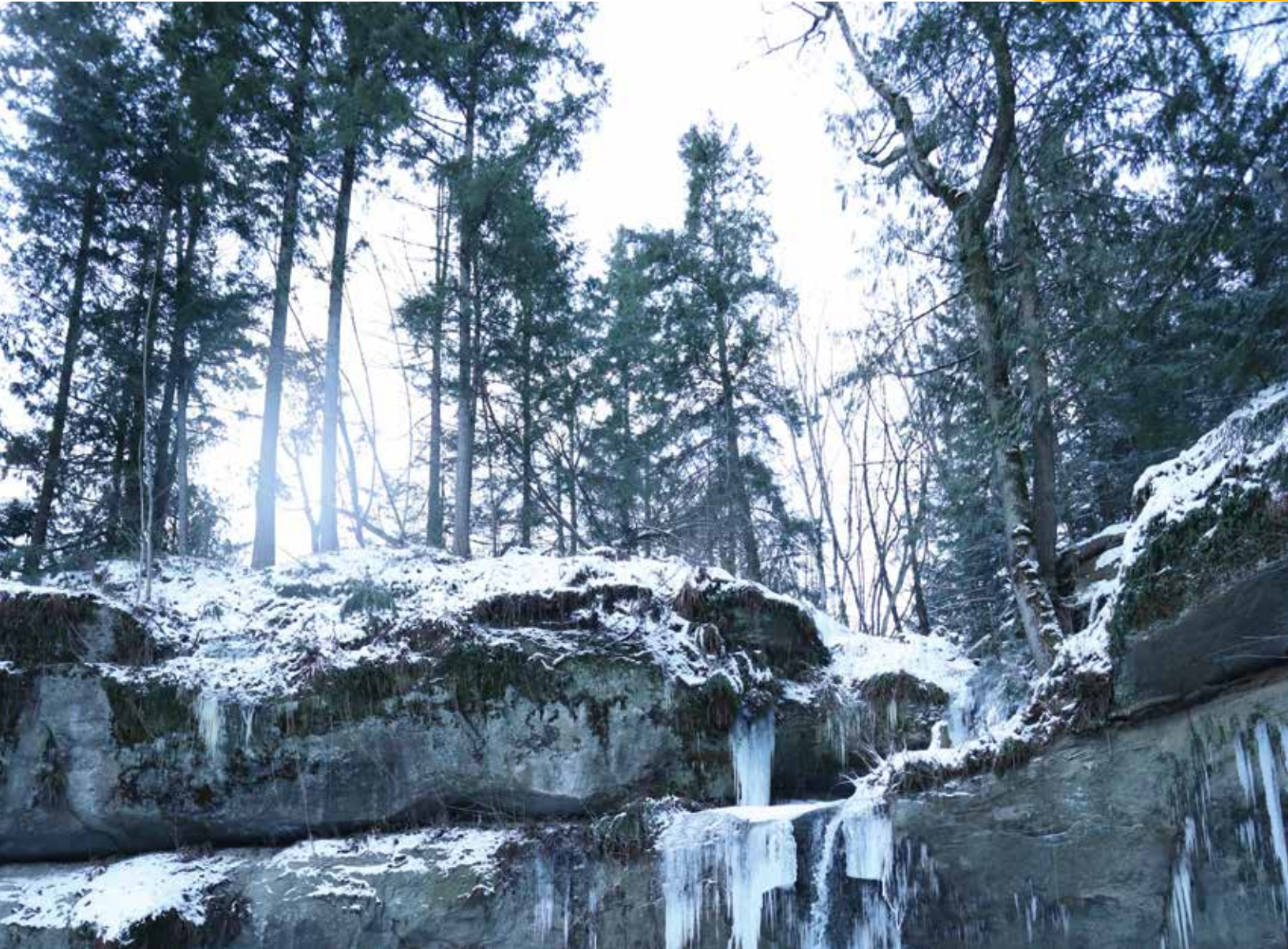
EEP, in accordance with the polluter-pay principle, seeks cost recovery for government expenditures related to spill response actions as outlined in section 91.4 of the EMA. In cases where a polluter is unwilling or unable to undertake spill response actions, EEP may step in to take those actions and seek to recover costs from the responsible person for responder time, deployment expenditures, and contracts related to the response. EEP cost-recovered \$13,198 from responsible persons during the fiscal year.





Ministry of
Environment and
Climate Change Strategy

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

Report to Legislature Task Team:

Sara Bacic, Greg Bauch, Jody Fisher, Stacy Githinji,
Thyren Jacobs, Kelli Kryzanowski, Dave Pridham and
Roshelle Williams.

All photographs were taken by the B.C. Ministry of
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