Unit	1079
Title	Describe Environmental Awareness, Protection, and Enhancement
Document type	Learning Resource

Canada

BRITISH COLUMBIA

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BC **Forest Safety**

In consultation with industry subject matter experts, the BC Forest Safety Council (BCFSC) facilitated the production of this material.

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Feedback is welcome and may be sent to training@bcforestsafe.org.

Cover Photo: Rainwater floods over the roadway where inadequately sized culverts were installed, Vancouver Island, BC.

Photo Credit: Chris Cole, RPF, P. Eng.

Table of Contents

Unit Introduction

What you will learn in this unit

By the end of this unit, you will be able to demonstrate knowledge of:

- Environmental considerations
- Spill control

Why it's important for you to learn this unit

Forest workers need to be aware of legal, political and public perceptions, requirements and best practices related to the environmental impact of forestry activities.

Are you ready to take this unit?

Prior to taking this unit, it is recommended to have completed the following unit:

- 1002 – Describe Forestry Industry

Does this unit apply to you?

This unit applies to All Road Building Equipment occupations.

Section 1079-01: Environmental

What you need to know about this section

By the end of this section, you will be able to demonstrate knowledge and ability of the following key points:

1.1 Legal, political, and public perception of environmental impact in Forestry

1.2 Impact on fish and wildlife

1.3 Impact of soil erosion and sedimentation on watercourses and the environment

1.4 Impact on water quality community watersheds

Key Point 1.1: Legal, Political, and Public Perception of Environmental Impact in Forestry

Forest management can impact the environment depending on what actions are implemented, and public perception of those actions are affected by how the various levels of government and companies holding harvesting tenure interact and communicate with the public.

Forest policy in BC involves engagement from stakeholders, including municipal, provincial, federal and First Nations governments and is influenced by international agreements and forest certification standards.

Forest management activities such as re-planting trees, sustainable harvest levels, and the use of sedimentation and erosion control techniques can be viewed as positive forest management.

However, forest management activities such as using herbicides to control vegetation or harvesting old growth may be viewed as negative forest management activities.

In the past, sediment and erosion were not properly controlled, forests were harvest levels were not regulated, and oil spills presented a threat to both fresh water and ocean shoreline environments.

Forest Laws and Impact

The following article from Natural Resources Canada (NRC) provides an overview of the current forest laws in Canada and BC. These laws ensure that forests are managed in a sustainable way that protects the natural environment.

Reference
Natural Resources Canada
Canada's forest laws
https://www.nrcan.gc.ca/our-natural-resources/forests-and-forestry/sustainable-forest-management/canadas-forest-laws/17497
When you are finished, continue in this section.

To summarize the Natural Resources Canada site:

- Canada’s forest laws are among strictest in the world and are based on sustainable forest management principles

- Provincial and territorial forest laws, regulations and policies govern a range of issues such as:
  - Land-use planning
  - Respect and consideration for Aboriginal interests
  - Wildlife habitat protection
  - Regulated timber harvesting
  - Forest regrowth practices
- There are also federal laws and international agreements such as the “species protection act” and other conventions that deal with biodiversity and endangered species.
- If a forest company fails to comply with approved forest management plans or with the conditions of a harvesting permit, it may face any of several stiff penalties – from fines or the suspension of harvesting rights to seizure of timber or even imprisonment

Illegal logging

Canada is recognized as a producer of legally and sustainably harvested forest products. Canada has put comprehensive laws and regulations in place to govern harvesting and trade in timber.

The following article discusses 5 ways in which Canada prevents illegal logging in its forests.

Reference

Natural Resources Canada
5 ways Canada prevents illegal logging
https://www.nrcan.gc.ca/forests/canada/laws/17479
When you are finished, continue in this section.

In British Columbia, forestry activities are regulated through several acts with the main one being the Forest and Range Practices Act.

The *Forest & Range Practices Act* (FRPA) outlines how all forest and range practices and resource-based activities are to be conducted on Crown land in B.C., while ensuring protection of everything in and on them, such as plants, animals and ecosystems.

All forest and range licensees' activities are governed by FRPA and its regulations during all stages of planning, road building, logging, reforestation and/or grazing.

FRPA standards and requirements ensure high levels of protection for resource values while streamlining planning processes for both government and industry.

Within British Columbia, the management of public forests is the responsibility of Forest Professionals. The actions of Forest Professionals are regulated through the legislation to ensure that that high professional standards and ethical behaviour is maintained which allows for forests to be managed for multiple values and the public good.

Political Perception

The forests on Crown land are an important public resource and overall are managed by the BC government through the Minister of Forests, Lands, Natural Resource Development and Rural Development. For example, the Ministry sets Annual Allowable Cut (AAC) harvesting levels, approves forest management plans and enforces forest laws and regulations. The Minister is an elected official so the wishes of the public for the province's forests should be fulfilled through the Minister's actions.

View the following video to see how the Ministry and Association of BC Forest Professionals responded to the severe wildfire seasons in 2017 and 2018.

Video 2:11
YouTube—Global News
https://globalnews.ca/news/5074295/wildfire-officials-okanagan-fire-season/
When you are finished, continue in this section.

The forestry sector is also important to the Canadian economy, and federal Canadian politicians have voiced their support. The Honourable Jim Carr, Canada's Minister of Natural Resources said when speaking to the Sustainably Forestry Initiative:

"It would be hard to overstate the importance of the forest sector in reducing greenhouse gas emissions. In fact, I would even go so far as to say that there can be no global solution to climate change without the forest sector. It's that important. Why? Because as you know, forestry is unique among resource sectors in that it actually takes carbon out of the air."

Old growth forests

There is a political debate surrounding the logging of old growth forests on Vancouver Island and the BC mainland.

The BC Government through the Ministry of Forests, Lands and Natural Resource Operations and Rural Development requires forest companies to maintain Old Growth Management Areas so an appropriate level of old growth forest is left on the landscape.

Some scientists cited by environmentalists say that huge, old-growth trees store massive amounts of carbon and if they are cut down, all this carbon is released into the atmosphere and contributes to global warming. Other scientists state that old growth forests are occupying land that could be used to grow healthy new forests that sequester carbon from the atmosphere. As old forests die and decay, they release carbon into the atmosphere and prevent young healthy trees from growing. When old growth forests are harvested, the high value wood products made from old growth logs are stored in buildings for 100's of years, rather than being allowed to decay out in the forest.

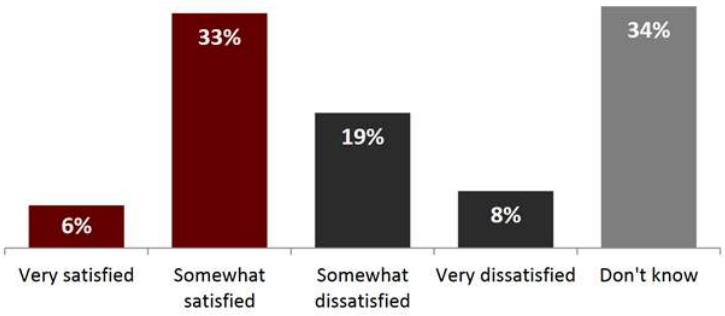
Public Perception

Issues that are tied to the Forestry sector are frequently in the news. Some of the issues that people are interested in including climate change, beetle infestations, wildfires/forest fires, old growth forests, clear cutting, and conservation.

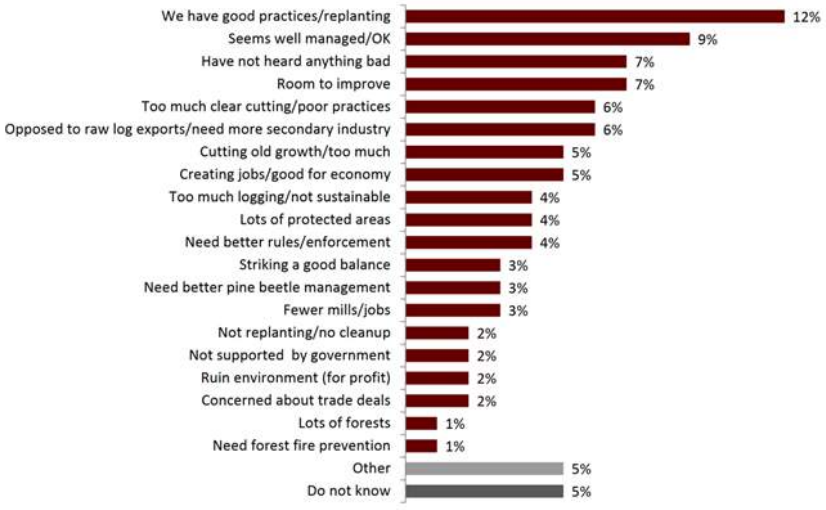
It is important for those people working directly in the forest industry to be proud of their work and engage with others to share accurate information about how forests are managed.

The following graphs show some of the results of a 2016 public opinion poll conducted by the Association of BC Forest Professionals. The results will give you a look at what the public thinks about how well the forests are managed and their reasons for thinking that.

Q: All things considered, would you say you are satisfied or dissatisfied with the quality of forest resources management in BC today?



Q: Coded - Why do you say that?



Forest fires

Forest management practices also have an impact on forest fires in BC which affects air quality and causes disruptions to people's lives. This impacts public perception as everyone in the province is affected by forest fires.

Climate change is contributing to forest fires that are becoming larger and harder to control. Additional contributing factors include:

- Large plantations of even aged coniferous forests
- Repeated historic wildfire suppression

Wildfire severity

There has been an increase in the number and severity of wildfires.

- The cause of a wildfire depends on the source of the heat that ignited a fuel source
- The vast majority are ignited by lightning strikes
- Climate change and the wide spread mountain pine beetle infestation have contributed to wildfire severity
- The severity of wildfires may be reduced through land management activities such as fuels management, prescribed burning and landscape fire management planning

Wildfire crew stops for a photo after extinguishing a small fire near Penticton, BC. Photo credit: Chris Cole RPF, P. Eng.

Learning Point
Forestry management practices that have suppressed wildfires in the past have led to an increase in larger, more intense fires.

Legal, Political, and Public Perception of Environmental Impact in Forestry—Self-Quiz

1. Canada's forest laws are among strictest in the world and are based on sustainable forest management principles.

   ☐ True

   ☐ False

2. The mountain pine beetle epidemic has contributed to forest fires due to a build-up of dead Lodgepole pine trees.

   ☐ True

   ☐ False

Now check your answers on the next page.

Legal, Political, and Public Perception of Environmental Impact in Forestry—Self-Quiz Answers

1. Canada's forest laws are among strictest in the world and are based on sustainable forest management principles?

   Answer: **True**

2. The mountain pine beetle epidemic has contributed to forest fires due to a build-up of dead Lodgepole pine trees.

   Answer: **True**

Key Point 1.2: Impact on Fish and Wildlife

Impact on Fish

The impact of soil erosion and sedimentation on fish is significant. Levels of sedimentation that is higher than the natural level can:

- Deplete food and nutrients sources and disrupt spawning
- Clog gills and block out light which affects the fish's ability to navigate and breathe
- Decreases fish egg survival
- Reduces spawning habitat
- Damages gills

More sediment in the water reduces visibility and causes suffocation. Runoff and loss of soil infiltration washes food and nutrients away at a higher rate than normal and leads to the increase in sediment in downslope water sources.

Spawned salmon, Vancouver Island – died from natural causes. Photo credit: Chris Cole, RPF, P. Eng.

Very clean water in a river on Vancouver Island, resulting from very well managed forestry activities in the surrounding area. Photo credit: Chris Cole, RPF, P. Eng.

Fish habitat and life cycle

Salmon have a life cycle that includes returning to their natal rivers as adults in order to spawn. In this process they require adequate flow and access to return to their spawning areas to complete their life cycle.

Trout, char, and several other resident freshwater species, including Arctic grayling, kokanee, burbot, and several whitefish species, share habitats and have similar environmental requirements as salmon. Salmonids (six species of salmon, two of sea-run trout) require cool, well-oxygenated water, a clean gravel substrate, and abundant cover and shade for successful spawning.

This type of gravel is typically located in riffles or runs, depending on fish size and species. Stream water must be clear enough to permit the sunlight to reach the stream bottom and the algal community where most of the primary production of a stream occurs.

A relatively stable flow without extreme spring thaws and droughts creates conditions that make the best salmon and trout streams. For example, while too much water might be detrimental, too little is also damaging.

High concentrations of suspended solids may also directly damage invertebrates and fish, primarily their fragile gill structures. Additional impacts can occur if suspended sediments settle onto stream bottoms and suffocate salmonid eggs and alevins.

How forestry activities affect fish habitat

Forestry activities such as processes that increase runoff and the removal of streamside trees, can impact fish's food sources.

- Salmon migrate upstream but most organic matter migrates downstream (spiraling).
- The slower this material moves through any given stream section, the more likely it is that it can be used as a food source. An increased rate of runoff causes a problem with the salmon food source.
- Fine sediments limit oxygen availability to fish eggs
- Removal of streamside trees also has an impact on fish food sources, because that is where a lot of their food comes from such as insects.
- Too much soil sediment (nutrition) is a problem in streams because an increase in input of these nutrients can also mean less light which limits primary production. A proper balance must be maintained.
- Soil disturbance and compaction caused by heavy equipment can cause an increase in runoff and sedimentation.
- Poorly installed stream crossings may block fish passage. All crossings must allow efficient passage of water, as well as fish. Because fish disperse, move and migrate throughout watersheds, crossings need to facilitate movements, both upstream and downstream, by fry as well as adults.

Example of a poorly designed and managed water crossing. Photo credit: Chris Cole RPF, P. Eng.

Best Practices

The following best practices will protect fish habitat:

- Control soil disturbance and compaction by following the logging or road construction plan.
- Use erosion control measures on roads such as grass seeding, use of cross drains, construction of silt basins.
- Build stream crossings to maintain fish habitat and allow for fish passage.
- Protect riparian areas by following the prescription in the harvesting or road construction plan.

Impact on Wildlife

A young fawn crouches to “hide” on the side of a forestry road near Nanaimo, BC. Photo credit: Chris Cole, RPF, P.Eng.

Forestry activities such as logging and road building can affect wildlife by:

- Changing habitats which may have an effect on food sources and shelter requirements. For example, vegetation used for food may increase or decrease after an area has been harvested.
- Building resource roads creates new corridors in the forest which change wildlife travel patterns. For example, roads allow for predators such as wolves to move more efficiently and see prey from a farther distance.

Best Practices

The following best practices will protect wildlife habitat:

- Follow the harvesting or road building plan. It will have instructions on how to protect habitats and important wildlife features such as bird's nests or bear dens.
- Protect riparian areas which are important wildlife habitat area.
- Maintain coarse wood debris on the site where appropriate to provide habitat to small mammals.
- Wildlife tree patches and other trees may be retained to maintain habitat on a cut block.
- Identifying and retaining individual wildlife trees where safe to do so. Dangerous/wildlife tree assessors are trained to do this work.
- Control access and deactivate roads when all required forest activities (tree planting and stand tending) has been completed.

Impact on Fish and Wildlife—Self-Quiz

1. What is a best practice to protect wildlife habitat?
   - ☐ Leave wildlife tree patches
   - ☐ Remove as much coarse wood debris as possible
   - ☐ Treat riparian areas the same as the rest of the logging block
   - ☐ Do not deactivate roads
2. Sediment causes which of the following problems for fish?
   - ☐ Clogs their gills
   - ☐ Affects their ability to navigate and find food
   - ☐ Affects ability to place eggs in gravel of appropriate sizes
   - ☐ Blocks out sunlight
   - ☐ All of these answers

Now check your answers on the next page.

Impact on Fish and Wildlife—Self-Quiz Answers

1. What is a best practice to protect wildlife habitat?

   Answer: **Leave wildlife tree patches**

2. Sediment causes which of the following problems for fish?

   Answer: **All of these answers**

Key Point 1.3: Impact of Soil Erosion and Sedimentation on Watercourses and the Environment

It is helpful to be familiar with the following terms to understand the environmental impact on fish and wildlife.

Infiltration vs. Runoff

- **Infiltration** – when some of the water is held by the soil because the soil has adequate pore sizes
- **Runoff** – when water flows over the soil layer without being held in some capacity by the soil

Sedimentation vs. Erosion

- **Sedimentation** – when soil loosens and is carried down slope to river estuaries and lakes by runoff processes
- **Erosion** – when the top layer of soil is lost due to wind or other processes

If not well managed, forestry activities can contribute to soil erosion and sedimentation through:

- soil disturbance and compaction from heavy equipment
- increased erosion if water is not controlled on forest roads
- increase soil exposure through road and landing construction
- removing trees and their root systems and not reforesting a site right away can lead to a decrease in the soil's strength and to more potential for erosion

An example of poor forestry planning and practices showing sediment from a road being washed down over the edge of a forestry bridge during a rainy day at a site on Vancouver Island. Photo credit: Chris Cole, RPF, P. Eng.

Increased erosion and sedimentation has the following negative effects:

- as mentioned earlier, fish and their habitat are negatively affected
- negatively affecting people's water supplies. For example, lots of sediment in the water may lead to a boil water advisory
- major erosion or landslides are a safety concern and may damage infrastructure

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Learning Point
Soil erosion happens at a greater extent when no roots and plant matter are present.

Best Practices

The following best practices will prevent erosion:

- Reforest harvesting sites as soon as possible to establish root systems that will strengthen the soils.
- Use erosion control measures on roads such as grass seeding, use of cross drains, construction of silt basins.
- Use rock to armor exposed soils at watercourse crossings to prevent erosion and strengthen the slope.
- Protect riparian areas by following the prescription in the harvesting or road construction plan.
- Regularly inspect and maintain forest roads to make sure that erosion control measures are effective.

Impact of Soil Erosion and Sedimentation on Watercourses and the Environment—Self-Quiz

1. If not done correctly, forest road building can contribute to soil erosion and sedimentation in watercourses.

   ☐ True

   ☐ False

2. Plant roots can increase soil strength and reduce erosion.

   ☐ True

   ☐ False

Now check your answers on the next page.

Impact of Soil Erosion and Sedimentation on Watercourses and the Environment—Self-Quiz Answers

1. If not done correctly, forest road building can contribute to soil erosion and sedimentation in watercourses.

   Answer: **True**

2. Plant roots can increase soil strength and reduce erosion.

   Answer: **True**

Key Point 1.4: Impact on Water Quality Community Watersheds

Forestry activities such as logging and road building can have an impact on water quality and community watersheds.

Community watersheds

There are 466 community watersheds in BC. Most were established in the 1980s and 1990s. They are regulated by the Forest & Range Practices Act (FRPA).

Watershed is defined by the FRPA as all or part of the drainage area that is upslope of the lowest point from which water is diverted for human consumption by a licensed waterworks. A Riparian zone is the area immediately adjacent to a river or stream.

Watersheds and riparian zones require special management practices to:

- Protect the quality and quantity of water flows from watersheds
- Prevent cumulative hydrological effects from having a negative effect on water supply

The following article explains about community watersheds in BC and how they are regulated by the FRPA.

Reference
Province of BC
Community Watersheds
https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/community-watersheds
When you are finished, continue in this section.

Riparian buffer left along a stream entering Comox Lake on Vancouver Island. Photo credit: Chris Cole, RPF, P. Eng.

Forest activities that an impact water quality

According the Forest Practices Board, the forest activities that impact water quality most easily are road construction, bridge building, and stream crossings. “Where you expose mineral soil, you've got to do that in a manner that minimizes and mitigates the risk of erosion or of putting sedimentation into the streams.”

Harvesting trees in a community watershed on Vancouver Island. Photo credit: Chris Cole, RPF, P. Eng.

Impact of harvesting on snowpack melt rates

Removing the forest canopy exposes the snowpack surface to a greater amount of sunlight. Forest harvesting generally increases snowpack melt rates due to exposure to sunlight and warm spring winds. Snowpack melt rates in open sites are 30 to 50% higher than under a forest canopy.

Impact on Water Quality Community Watersheds—Self-Quiz

1. Snowpack melt rates are affected by forestry in which ways?

   - ☐ More snow falls at sites that have been logged
   - ☐ Mountain caribou prefer snowpack on the open roads
   - ☐ Snowpack melt rate is increased in clear-cut areas
   - ☐ Snowpack melting only occurs when it's sunny

Now check your answers on the next page.

Impact on Water Quality Community Watersheds—Self-Quiz Answers

1. Snowpack melt rates are affected by forestry in which ways?

   Answer: **Snowpack melt rate is increased in clear-cut areas**

Section 1079-02: Spill Control

What you need to know about this section

By the end of this section, you will be able to demonstrate knowledge of the following key points:

2.1 Legal, environmental implications of a spill including documentation requirements

2.2 Types and potential sources of spills

2.3 Measures used to reduce risk of petroleum spills

2.4 Spill control techniques

Key Point 2.1: Legal, Environmental Implications of a Spill including Documentation Requirements

Spill Response Plans

According to the Province of BC, industry facilities that store, manufacture, transport, recycle, or handle dangerous goods, hazardous wastes, or hazardous chemicals should prepare a contingency response plan in the case of an accidental release of these substances into the environment. The contingency response plan is a plan of action that is communicated to all employees in the event of a spill.

For forestry operations, this plan is usually part of the Emergency Response Plan or ERP which contains information on other emergencies such as fire and first aid incidents. The ERP will contain the steps that need to be followed if there is a spill.

Soil contaminated with used oil (hydrocarbons) at an old forestry shop site on Vancouver Island. Photo credit: Chris Cole, RPF, P. Eng.

Environmental Implications

Environmental implications from spills can include:

- Contamination water. One liter of spilled oil will contaminate one million liters of water if not cleaned up.
- Contamination of soils which will reduce the chance of successful reforestation.
- Negative effect on plants and wildlife, especially aquatic animals and fish.

Legal, Environmental Implications of a Spill—Self-Quiz

1. Where is the best place to find the steps to follow when there is a spill on your worksite?

   - ☐ Ministry of Environment website
   - ☐ BC Forest Safety Council toll free number
   - ☐ Company's Emergency Response Plan
   - ☐ Call 911

2. One liter of spilled oil will contaminate how many liters of water?

   - ☐ 1
   - ☐ 30
   - ☐ 100,000
   - ☐ 1,000,000

Now check your answers on the next page.

Legal, Environmental Implications of a Spill—Self-Quiz Answers

1. Where is the best place to find the steps to follow when there is a spill on your worksite?

   Answer: **Company's Emergency Response Plan**

2. One liter of spilled oil will contaminate how many liters of water?

   Answer: **1,000,000**

Key Point 2.2: Types and Potential Sources of Spills

In forestry operations, the most common types of spills are of diesel fuel and hydraulic oil. Sources can be from overfilling tanks, slow leaks in hoses or fittings or more significant events like a hydraulic hose rupture or equipment rollover. Motor oil, waste oil and herbicides are also materials that may be spilled.

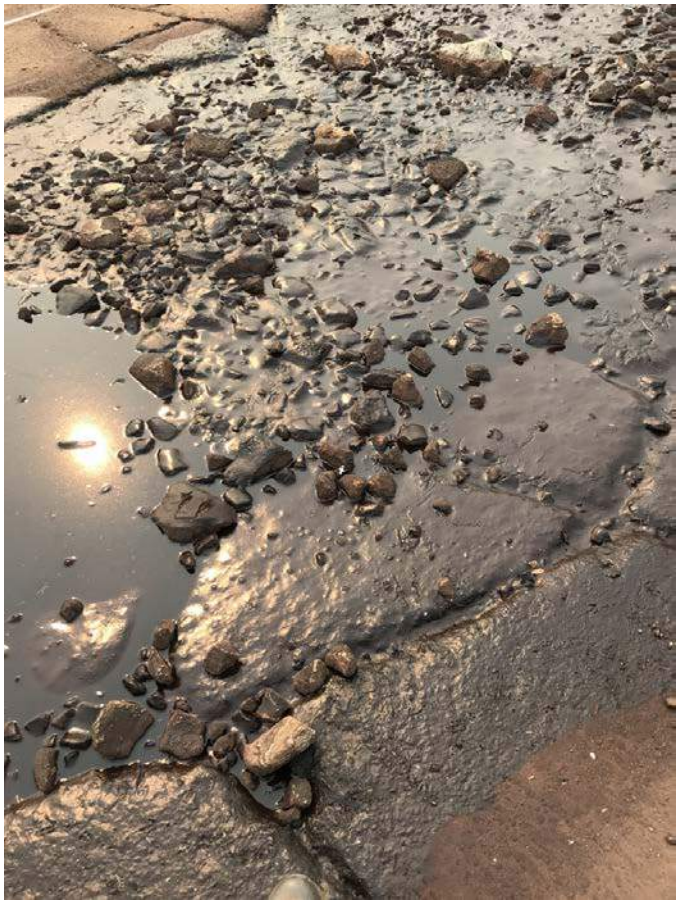
The following reference from the Province of BC provides additional information on how and when to report a spill. For example, diesel is in the flammable liquid class which means that spills over 100 liters must be reported. However, spills of any size must be cleaned up using the spill kit supplies that are usually on every piece of heavy equipment.

Reference

Ministry of Environment and Climate Change Strategy
Spill Reporting Facts Sheet
https://www2.gov.bc.ca/assets/gov/environment/air-land-water/spills-and-environmental-emergencies/docs/materials/fact_sheet_spill_reporting.pdf
When you are finished, continue in this section.

Learning Point

It is important to remember that any spill that occurs in a watercourse is reportable.



A collection point of many small oil leaks from heavy equipment operating at a log sorting facility. Photo credit: Chris Cole, RPF, P. Eng.

Hydrocarbons seep from a log sorting facility. Most sites are designed and built to contain these types of seepages, but some are not. Photo credit: Chris Cole, RPF, P. Eng.

Types and Potential Sources of Spills—Self-Quiz

1. What is the reportable level for diesel fuel spilled into a steam?
   - ☐ 100 liters
   - ☐ 50 liters
   - ☐ 200 liters
   - ☐ Any amount
2. Spills below the reportable levels do not need to be cleaned up.
   - ☐ True
   - ☐ False

Now check your answers on the next page.

Types and Potential Sources of Spills —Self-Quiz Answers

1. What is the reportable level for diesel fuel spilled into a steam?

   Answer: **Any amount**

2. Spills below the reportable levels do not need to be cleaned up.

   Answer: **False**

Key Point 2.3: Measures Used to Reduce Risk of Petroleum Spills

The following measures will help reduce the risk of spills:

- Follow Transportation of Dangerous Good (TDG) requirements for transporting fuel and other hazardous materials. This includes have fuel containers like slip tanks (Tidy Tanks) and small jerry cans be built to the appropriate standard.
- Secure tanks, drums, and containers during transportation to avoid upsets and spills. Use straps and tie downs that have an adequate strength rating. Get others to help when loading and unloading containers so they are not dropped or damaged.
- Have a system of secondary containment to prevent any leaks from spreading. For example, most tanks have a double wall construction to contain leaks. Another example is a berm constructed around a tank that is located on the ground.
- Label all materials appropriately so if there is a spill, it is clear what the product is.
- Regularly inspect heavy equipment and fuel tanks, watching for leaks. Repair minor leaks right away before they grow and become major problems.
- Follow fueling procedures that include the requirement to stay at the nozzle when fueling and to not overfill tanks or containers.
- Spill kits should be available on each piece of equipment and with each fuel tank. Maintain spill kits to make sure all the required equipment is present and the materials are still usable (not water logged).
- Everyone on the worksite should be trained on spill response and drills should be conducted regularly to practice.

Look at the reference below if more information is required. The BC Fuel Guideline document summarizes the requirements for different types of tanks used to transport fuel.

Reference
Northwest Response Ltd.
BC Fuel Guidelines
http://www.northwestresponse.ca/resources/2018%20BC%20Fuel%20Guidelines.pdf

Measures Used to Reduce Risk of Petroleum Spills — Self-Quiz

1. What is the main advantage of a double-walled fuel tank?

   - ☐ Holds more fuel
   - ☐ Easier to secure on a truck
   - ☐ Lighter weight
   - ☐ Second wall contains leaks from tank

Now check your answers on the next page.

Measures Used to Reduce Risk of Petroleum Spills — Self-Quiz

1. What is the main advantage of a double-walled fuel tank?

   Answer: **Second wall contains leaks from tank**

Key Point 2.4: Spill Control Techniques

Most spill response plans have the following steps after a spill occurs:

1. Identify hazards and the product spilled
2. Stop product spill at the source. For example: plug leak or turn off valve.
3. Initiate spill response. This includes following the steps in the Emergency Response Plan and contacting the appropriate authorities.
4. Contain the spill. This could include using constructed berms or absorbent booms for containment. Some spill response products are designed specifically for petroleum products and will not absorb water. These should be used when containing or absorbing a spill in the water. These products float on the water's surface, absorbing the oil or fuel. Regular spill booms and pads will become water logged and will not be useful.
5. Clean up spilled materials. Other products such as spill pads or a granular absorbent material is used to clean up spills within the containment. Contaminated soils may have to be removed to another site for rehabilitation.
6. Complete appropriate documentation including incident report.

Spill response plans should be practiced regularly to make sure everyone knows their roles and how to use the equipment.

Example of the contents of a spill kit

Soil contaminated with hydrocarbons may be contained in cells, or impermeable barrier lined pits, and treated over time with fertilizers and other catalysts to enhance the breakdown of the hydrocarbons. Photo credit: Chris Cole, RPF, P. Eng.

Spill Control Techniques—Self-Quiz

1. All-purpose spill pads absorb all liquids including water.

   ☐ True

   ☐ False

2. Try to stop the spill at the source before cleaning it up.

   ☐ True

   ☐ False

Now check your answers on the next page.

Spill Control Techniques—Self-Quiz Answers

1. All-purpose spill pads absorb all liquids including water.

   Answer: **True**

2. Try to stop the spill at the source before cleaning it up.

   Answer: **True**