EPA VICTORIA

Responding to harm caused by pollution

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VICTORIA State Government

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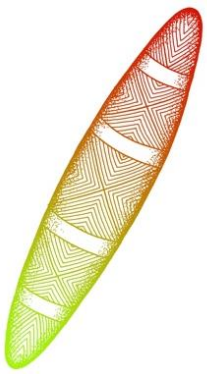

EPA acknowledges Aboriginal people as the first peoples and Traditional custodians of the land and water on which we live, work and depend. We pay respect to Aboriginal Elders, past and present.

As Victoria's environmental regulator, we pay respect to how Country has been protected and cared for by Aboriginal people over many tens of thousands of years.

We acknowledge the unique spiritual and cultural significance of land, water and all that is in the environment to Traditional Owners, and recognise their continuing connection to, and aspirations for Country.

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Introduction

Victoria's environment protection laws aim to prevent harm to human health and the environment from pollution and waste.

While the laws focus on *preventing* harm, they also recognise that pollution incidents still occur and require action when they do.

In most instances, taking quick action to respond to a pollution incident will limit the extent of damage and reduce the costs of restoring the affected areas. It may also prevent further incidents occurring.

Quickly cleaning up and restoring affected areas helps Victoria to have a healthy and liveable environment now and in the future.

Purpose of this guidance

This guidance is designed to help you understand what you need to do *after a* pollution incident occurs.

Who this guide is for

This guide is for businesses or persons in Victoria that:

- may have, or are putting in place, measures that prepare you to respond to pollution incidents; or
- are responding to a recent pollution incident that has (or is likely) to cause harm to human health or the environment.

It explains what a pollution incident is, why it is important to be prepared and what you may consider when restoring the areas affected by a pollution incident.

While this guidance focuses on what to do *after* an incident has occurred, it is important that you understand your duty to *prevent* harm from occurring. In particular, understanding the risks of harm your activities create, and implementing controls to eliminate or minimise those risks, so far as reasonably practicable.

The Environment Protection Authority (EPA) has guidance available to support you understand your duty to *prevent* harm from occurring. In addition to this guidance, it is recommended that you become familiar with our guidance on:

- the general environmental duty (publication 1741)
- assessing and controlling risk (publication 1695)
- the concept of 'reasonably practicable' (publication 1856).

This guidance does not provide information on the duty to manage contaminated land, or the duty to notify of contamination. If you are in control or management of contaminated land (or potentially contaminated land) visit epa.vic.gov.au for more information.

Duty to take action to respond to harm caused by pollution incident

*"If a **pollution incident** has occurred as a result of an activity (whether by act or omission) and the pollution incident causes or is likely to cause **harm** to human health or the environment, a person who is engaging in that activity must, **so far as reasonably practicable, restore** the affected area to the state it was in before the pollution incident occurred".*[1]

If a pollution incident occurs as a result of your activities, it's **your responsibility** to take action to respond. You're also responsible for paying the costs of any clean up and restoration.

Your responsibility to take action applies regardless of whether:

- you undertake activities at one workplace or worksite;
- you undertake activities at different locations (for example, waste removal); or
- the incident impacts others property or land.

Follow these steps when a pollution incident occurs. You can take some steps at the same time, for example, cleaning up and restoring the affected area as part of one action.

What is a pollution incident and how to prepare

A **pollution incident** is defined as "*an incident or set of circumstances that causes a leak, spill or other unintended or unauthorised deposit or escape of a substance and, as a result of which, pollution has occurred or is occurring*" (other than solely involving the emission of noise).[2]

This means, if a substance enters the land, air or water:

- unintentionally; or
- you weren't authorised to deposit the substance to the land, air or water

it is likely that a pollution incident has occurred.

[1] Section 31 of the *Environment Protection Act 2017* (as amended by the *Environment Protection Amendment Act 2018*)
[2] Section 29 of *Environment Protection Act 2017* (as amended by *Environment Protection Amendment Act 2018*)

Pollution is defined broadly, and includes any type of emission, discharge, deposit, disturbance or escape of solid, liquid or gas (or combination of these), including smoke, dust, fumes and odour.

A pollution incident can range in seriousness. For example, it may be a small leak or spill that is easily contained or a large-scale pollution incident that has significant impacts on human health and the environment.

Images above show a range of pollution incidents, from small leaks to larger scale chemical fires.

Some activities have a higher chance of causing pollution incidents and contaminating land and water.

Your duty to respond to a pollution incident, and to restore the affected areas applies regardless of the cause or seriousness of the incident.

Supporting you to take immediate action

Contacting emergency responders is one way you can take immediate action to control the incident. For example, Fire Rescue Victoria (FRV) or the Country Fire Authority (CFA) can support you to contain a fire or to limit the spread of fires or spilt substances.

If needed, water corporations may also support you by shutting down transmission pathways, like stormwater drains and water reserves used for drinking.

Always call **000** in an emergency.

If your pollution incident causes or threatens to cause material harm you are required to notify the Environment Protection Authority Victoria (EPA).[3] To learn more about which incidents you must report to EPA go to epa.vic.gov.au/for-business/new-laws-and-your-business/reporting-a-pollution-incident.

If you are notifying EPA of the incident, do this as soon as possible, when safe to do so. You can notify EPA by calling EPA's 24 hours pollution hotline on **1300 EPA VIC (1300 372 842)**.

EPA's role is to prevent harm from pollution and waste and to hold polluters to account.

EPA has powers to enforce action to respond to a pollution incident and restore the affected areas. EPA's *Compliance and enforcement policy* (publication 1798) explains EPA's role and outlines what remedial notices EPA's authorised officers can use to bring polluters into compliance with the law.

[3] Section 32 of *Environment Protection Act 2017* (as amended by *Environment Protection Amendment Act 2018*).

However, don't wait for EPA to become involved before you take action to respond to an incident.

Harm that might occur from a pollution incident

A **harm** is something that negatively affects human health and/or the environment.

When thinking about harm from a pollution incident, it is helpful to think about:

SOURCE	PATHWAY	RECEPTOR
Where does the pollution comes from?	How might humans and the environment come into contact with the pollution?	Who or what is harmed by the pollution incident? A receptor is something of value which can be harmed, including humans and the environment e.g. animals, vegetation and waterways.

Figure 2 shows possible pollution sources, pathways and receptors

Receptors (who or what could be harmed), might include any or all of the following:

- human health
- waters (surface waters, storm waters and/or groundwater)
- atmosphere
- land

- vegetation
- climate
- aesthetics (this means its visual appeal or how it looks)
- Infrastructure
- fish
- wildlife
- cultural landscapes and waterways that have cultural value (to Traditional Owners) or other special significance.

It is important to be prepared to respond to a pollution incident

Pollution incidents don't only occur as a result of negligence, wilful acts or illegal activity. They sometimes occur even if you have controls in place to eliminate or manage your risks of harm.

The general environmental duty (GED) requires you to understand the risks of harm to human health and the environment that your activities may create. You must put in place controls that manage those risks, so far as reasonably practicable.

Follow EPA's assessing and controlling risk guidance (publication 1695). It is one way to understand how you can be prepared to respond to a pollution incident.

The GED also requires you to have adequate systems to minimise any harmful effects when a pollution incident occurs.[4]

Systems you can put in place include, but are not limited to:

- implementing engineering solutions, such as automatic shutdown systems for machinery that limit the impact of any pollution incident.
- having spill kits readily available that can quickly clean up the pollution.

[4] Section 25(4)(c) of *Environment Protection Act 2017* (as amended by *Environment Protection Amendment Act 2018*).

- procedures, including written procedures that outline what to do when a pollution incident occurs.

Having procedures that outline who you should notify when an incident occurs may also support you to act quickly to notify the authorities of the incident (such as emergency services, EPA Victoria) or to notify persons who may be impacted by the incident (such as the local community).

If you have adequate systems and processes in place you will be able to quickly understand the types of harms that have or will occur as a result of the incident, and the ways you can respond.

Make sure that the processes and systems you put in place are regularly checked and maintained and staff are provided with adequate information and training[5]. These systems will play a key role in preventing continuing or reoccurring harm.

After an incident has occurred, it is useful to review your processes and systems in place for managing risks (when safe and suitable to do so) as an incident may be an indication that the controls have not fully managed the risks of harm.

Regardless of *why* a pollution incident occurs, you have a duty to take action and respond to the pollution incident.

[5] Section 25(4)(e) of *Environment Protection Act 2017* (as amended by *Environment Protection Amendment Act 2018*).

Restoring the areas affected by the pollution incident

The duty requires you to "*so far as reasonably practicable, **restore** the affected area to the state it was in before the pollution incident occurred*".

This means bringing back or making reasonable attempts to **bring back** or **re-establish** the area(s) affected by the pollution incident to their previous state immediately before the incident occurred.

Each pollution incident is different. Affected areas, environments and communities have different characteristics and qualities. This means you assess and determine what restoration is required based on the particular circumstances.

Before a pollution incident, having knowledge of the condition and uses of the area where you conduct your activities can help you to understand what you may do to bring back the affected areas to their previous state.

You may consider:

- what was the condition of the affected areas **before** the pollution incident
- what animal life and plant life were located on the affected areas **before** the incident, and their importance to the area (for example, the affected area may have a rare endemic species that needs to be protected from the pollution, perhaps by temporarily locating it elsewhere or by establishing a protective barrier against the pollution until it is cleared)
- what is the conservation, cultural, aesthetics or special value of the affected area(s). This includes the value to Traditional Owners and community
- what expectations Traditional Owners or the surrounding community have for restoration from the pollution incident and how might they have been harmed.

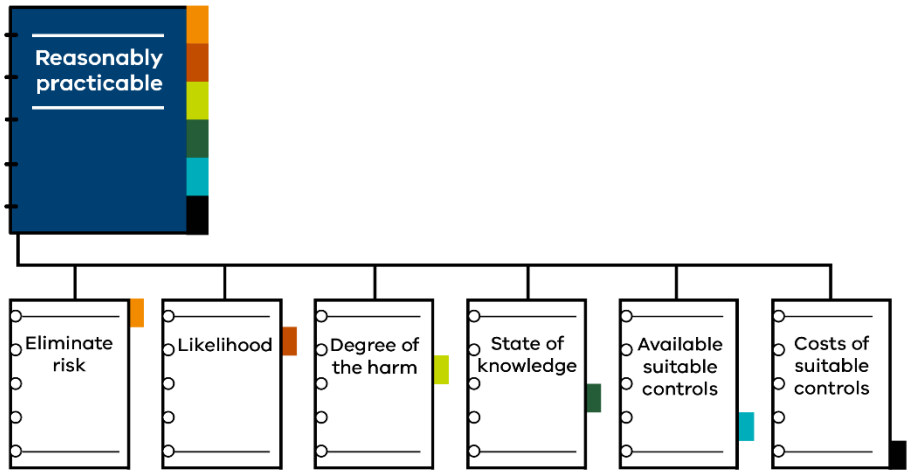
For smaller scale pollution incidents, for example, small leaks or spills, you may not need to consider all these factors.

If the pollution incident has resulted in harm that will require longer-term solutions to restore the affected area also consider:

- what immediate actions you can take to partially restore the affect area(s)
- what actions can you take over time to fully restore the affected areas.

The systems and process you put in place, and maintain, in preparation for any pollution incident may address some or all these considerations.

How to work out what is "reasonably practicable"



Doing what is reasonably practicable to restore areas affected by a pollution incident means considering what steps can and must be taken to:

- clean up the pollution
- eliminate or minimise potential immediate harm, and
- eliminate or minimise potential future harm.

The approach you take to determine what is reasonably practicable (publication 1856) to mitigate or minimise risks of harm **before** they occur is similar to considerations you give to determine what is reasonably practicable when responding to a pollution incident. Specifically, you may consider the following factors:

1. **Eliminate first:** Can you eliminate the harm and restore the affected areas to their previous state?
   Specifically, are you able to return the affected area(s) to its previous state so that it may continue to be used for its existing and potential uses and values?

   If you are unable to clean up the affected area(s) to its previous state, you then consider what action you can take to clean up the pollution incident and restore the affected areas to the extent reasonable that, with appropriate ongoing management, further clean up of the affected area(s) won't be required.

2. **Likelihood:** What is the likelihood of harm from the pollution incident continuing to occur or changing?
3. **Degree (consequence):** How severe is the harm(s) from the pollution incident to human health or the environment?
4. **Your knowledge about the harm:** What do you know, or what can you find out, about harms arising as a consequence of the pollution incident?
5. **Availability and suitability:** What technology, processes or equipment are available to mitigate or eliminate the harm? What controls are suitable for use in your circumstances?

EPA, your industry association or consultants (such as environmental specialists) can support you to understand what technology, processes or equipment may be available and most suitable for the clean up and/or the restoration.

6. **Cost:** How much does the control and/or action cost to put in place compared to how effective it would be in reducing the impacts and restoring the affected areas?

   The costs of clean up and restoration will be different for each circumstance.

   When considering the costs of options for clean up and restoration, the most effective solution won't always be the most expensive. Likewise, a cheaper solution may not be effective enough to respond to the pollution incident and to restore the affected areas.

   Costs of clean up and restoration can be significant. Some businesses may have insurance against the cost of pollution incidents. Regardless of whether or not you have insurance to cover the costs, you are required to take action to respond to the pollution incident and to cover the costs of the clean up and restoration.

   For more complex clean up and restoration responses, you may engage a consultant who can help you understand suitable solutions and their costs. EPA's *Engaging consultants* factsheet (publication 1702) provides advice on engaging consultants.

This guidance provides two examples (see page 15) to help you to understand how each of these factors might be considered and applied when a pollution incident occurs.

What activities might clean up and restoration include

There are many different actions you may take to clean up the pollution incident and restore the affected areas to their previous state.

They may include simple actions such as using spill kits, and digging up and removing soil layers or wastes (shown in images below).

Clean up and restoration may sometimes need more complex operations that may require you to treat the pollution or research the history, geology, plants and animals of the affected areas.

EPA guidance about complex treatments used to clean up and restore groundwater and soil, can help you understand what steps you can take to clean up the pollution. This includes *Contaminated soil – treatment and disposal* (publication 1589) or *The clean up and management of polluted groundwater* (publication 840.2). You may also discuss more complex design solutions with a suitably qualified consultant.

Consider the different ways a pollution incident impacts others nearby or who use the impacted environment. Clean up and restoration activities should take account of Traditional Owners and the local community.

Keep a record of the actions you've taken to respond to the pollution incident and to restore the affected areas. If you document your response processes and systems before any incident occurs, you can check off when you complete the actions. Refer to EPA's assessing and controlling risk guidance (publication 1695) for information on how to keep a record via a hazard and risk register.

Communications and engagement

Early planning and engagement with your community will help you to:

- identify necessary steps to take to respond to the pollution incident, and
- refine your approach to restoring the affected areas.

Knowing your community and their connection to the environment **before** an incident occurs helps you to understand the importance of the restoration.

Importantly, quickly alert anyone (local residents, businesses, friends' groups or others involved in caring for the environment) who may be affected by the pollution incident.

Early communication will help to establish, re-build and repair relationships with those impacted by the pollution incident. They may also work with you to co-design how to restore the affected areas.

Traditional Owners
Landscapes and waterways have special cultural significance to Traditional Owners.

When planning your engagement, consider and include both Traditional Owners and the community.

Engaging with Traditional Owners may help you understand the significance and value of landscapes and waterways and the impact on areas affected by a pollution incident.

Use this map from Aboriginal Victoria to find the Traditional Owners or Registered Aboriginal Parties of the land you are on: https://achris.vic.gov.au/weave/wca.html

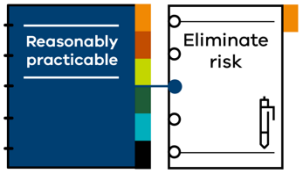
Available resources

For more information on preparing your business for the environment protection laws from 1 July 2021, you can use the following resources to help you:

- *Industry guidance: supporting you to comply with the general environmental duty* (publication 1741)
- *Assessing and controlling risk: A guide for business* (publication 1695)
- *Reasonably practicable* (publication 1856)
- *Engaging consultants* (publication 1702)
- *Compliance and enforcement – draft policy (publication 1798)*
- *The clean up and management of polluted groundwater* (publication 840)
- *Contaminated soil – treatment and disposal* (publication 1589)

Worked Examples

Example 1: Taking quick action to clean up overflow



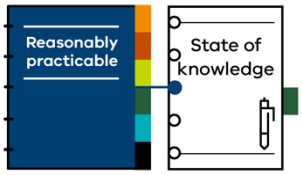
A water corporation in Victoria was alerted to a sewer spill coming from a manhole in a suburban street. The spill was moving towards the stormwater drain. The water corporation immediately attended the site and inspected the manhole. A blockage was causing the spill. The spill was quickly stopped, and the blockage cleared. The spill was then cleared from the stormwater drain. Inspections and water monitoring confirmed that the spill had not entered any nearby waterways, however the local council was notified for completeness. The areas affected by the spill were restored to their previous state, ensuring any harms were **eliminated**.

Example 2: Restoring a public reserve after a spill

Taylor manages a small business that distributes chemicals across Victoria. The business borders a public reserve which the local council manages. People regularly exercise and walk pets there.

Unfortunately, some of the chemicals stored onsite spilt outside their dedicated storage space. As well as spilling onto the business grounds, the chemicals went onto the nearby public reserve. Fortunately, the spill didn't enter any stormwater drains or waterways.

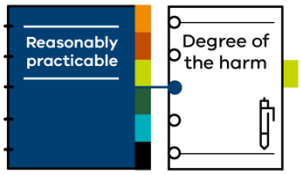
Some of the spilt chemicals could be harmful to the environment and human health, especially if action was not taken to clean them up.



The company's comprehensive risk assessment ensured Taylor had **knowledge** of the risks of harm to human health and the environment from the stored chemicals. They understood the likely pathways and receptors impacted by the spill.

Taylor also had knowledge of the possible health effects from the chemicals as he had current safety data sheets (SDS), as required, for products that are classified as hazardous substances.

Taylor knew the **likelihood** of harm was high, as the chemicals had spilt onto the ground meaning harm to the soil, trees, animals and other organisms. Also, due to the size of the spill, the odour from the chemicals may affect people using the reserve.



Given the quantity of the chemicals spilt, the **degree of harm** to the soil, trees, animals and other organisms was likely to be medium.

Taylor also understood that the **degree of harm** to human health, especially to those near or in the reserve, could be significant. This is because the fumes can cause headaches and possible vision and breathing problems.

To avoid further harm, Taylor and the staff quickly took action to stop the spill. They called the council to let them know the spill had entered the reserve.

In consultation with the council that manages the reserve, Taylor:

- taped off the affected area to stop people and pets walking over the spill, and
- hired a contractor to clean up the impacts from the pollution incident.

The contractor removed the top layer of soil in all areas affected by the spill, including in the reserve. New soil was added, and the grass cover restored using native grasses.

Taylor also made a plan to replace and improve the secondary containment system (bunding) previously installed to minimise the risk of harm from any spill. Improving the site practices and the capacity of the containment system will:

- reduce the risks of an incident like this happening again and
- minimise the degree of harm if another spill were to occur.

When considering the **suitable and available** options to restore the affected areas, Taylor took into account options that would immediately restore part of the affected area (such as replacing the soil and grass), and also the longer-term actions that may fully restore the affected areas (such as re-planting trees).

Taylor sought advice from the contractor, local council, and some local community members, to identify any other suitable technology, processes and equipment to restore the affected areas in the reserve.

In particular, as some trees and shrubs needed to be removed after the spill, Taylor sought advice from Traditional Owners[6] about the types of native trees or shrubs to replant into the reserve.

Taylor identified the most suitable and available technology, processes and equipment to clean up the reserve and restore the affected area.

Implementing some of the available and suitable options will **cost** more and may be more resource intensive, such as replanting mature trees.

[6] *Taylor confirmed the Traditional Owners in his area by visiting* https://achris.vic.gov.au/weave/wca.html

Taylor considered whether the possible benefit of those more expensive clean up and restoration options are proportionate to the costs.

Taylor responded quickly to the spill, limiting the loss by using the on-site spill kit, and removing the polluted soil, grasses and trees. Because of this quick response, costs to restore the affected area of the reserve were small compared with the impact that would have resulted had response actions been inadequate or taken too slowly.