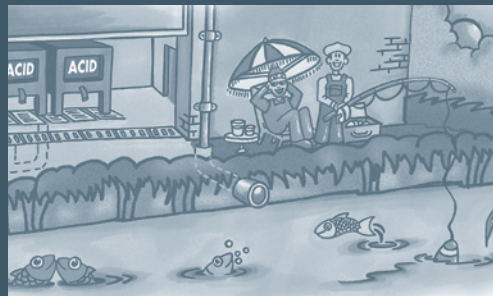


# POLLUTION PREVENTION GUIDE:

## Spills



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PPG: Spills module



**Environment  
Canterbury**  
Your regional council





## SPILLS

A spill outdoors may run straight into the storm water system and pollute the nearest stream, river, beach or groundwater - unless you and your staff know what to do and do it immediately.

Even apparently harmless things like sugar or milk are lethal to stream or sea life. Biodegradable substances like foodstuffs, cleaning agents, as well as many other everyday substances like petrol can harm our environment.

Every spill must be cleaned up to:

- Protect staff safety
- Prevent water pollution
- Allow safe, prompt disposal
- Prevent soil contamination
- Minimise your environmental liability.

If spills get into the storm water drain and into the environment:

- Contamination may affect a wide area
- Members of the public may be placed at risk
- Controlling the pollution is much more difficult
- Clean up costs are greatly increased
- Enforcement action more likely to be taken against you, your staff, and your company.

Accidents happen, even in the best workplaces, so you must be prepared. If you don't know what's on your site, how can you manage it?

To reduce your environmental and occupational liability from spills, you need to:

- Assess your risk
- Reduce your risk
- Think ahead: what equipment will you and your staff need in the event of a spill
- Write your spill procedure: what you need to do if you have a spill
- Train your staff.

The checklists will tell you how to do this.



### **ASSESS YOUR RISK**

- Make sure you know exactly what you keep on your site by using inventory sheets to keep track of your stock and products, including wastes, cleaners or fuels
- Clearly and accurately label all substances
- Obtain Safety Data Sheets (SDS) for all chemicals held in more than household quantities (These should be no more than five years old)
- Look at high risk areas on your site, where materials are handled and stored
- Find out the location and causes of previous spills
- Identify the most likely spill AND the most serious spill that could occur
- Identify water bodies that a spill from your site could affect.

### **REDUCE YOUR RISK**

- Ensure your activities are not located near or on sensitive areas of your site, i.e. Ensure your activities are not located near or on sensitive areas of your site, such as near streams or waterways
- Put in place good housekeeping, inspection and maintenance practices
- Minimise using or storing hazardous or environmentally harmful substances
- Avoid or reduce generating hazardous or environmentally harmful wastes
- Know any special handling requirements for materials on your site if spilled.

## **WHAT YOU NEED TO DO IN THE EVENT OF A SPILL**

### **Setting up a Spill Station**

All sites need to have equipment readily available to contain and clean up spills safely. This equipment should be located in designated places that are accessible and known to everyone on site. Depending on the size of your site and the type of materials used you may need one or several spill stations located near high risk areas.

Businesses that are visited and assessed by a Pollution Prevention Officer will receive a Spill Kit Discount Card. The card, valid for one year, provides a discount when buying spill kits or spill kit supplies from a participating supplier. Businesses continuing with the programme will get a new card when their Pollution Prevention Officer receives regular 6 month progress reports.

Each spill station should have a spill kit which should hold equipment for:

- Containing and cleaning up a spill such as a shovel, broom, drain covers, sandbags, booms and absorbent material. Some spills need to be handled with compatible materials
- Storing and disposing of used absorbant material such as safe containers, bags, and drum holders
- Protecting the health and safety of your staff. Consider the need for things like gloves, respirators, chemical protection suits, buddy systems, first aid and emergency treatment.

You could either:

- Buy a standard kit or kits, or
- Buy a wheelie bin and fill it with what you have identified you will need, or utilise suitable materials currently on site.

In addition to the spill kit, your spill station should have on the walls or shelves close by:

- A copy of the Pollution Prevention 'Spill Procedure' and 'Spill Station' posters
- Copies of up to date SDS for substances stored on site
- A copy of the completed emergency telephone contact sheet
- Your spill procedure and drainage plan.

### **Write a Spill Procedure: What to do when you have a spill**

1. Be safe (ensure you wear safety equipment)
2. Stop the source
3. Protect storm water
4. Notify
5. Clean up
6. Dispose
7. Restock and review

Use our Spill Checklist to prepare your own spill procedure and make sure you know what to do when a spill happens on your site.

### **Train your Staff**

- Make sure your staff know what to do if a spill occurs
- Practise your procedures
- Repeat training regularly
- Make sure new staff are trained as soon as they start work (Environment Canterbury has developed a Small Spills Training program that can be downloaded for free at [www.ecan.govt.nz/ppg](http://www.ecan.govt.nz/ppg)).

Write an Incident Report after every spill. You can use your own reports or the summary form at the back of this module. Depending on the extent of the spill, your Incident Report need not be more than a few sentences. You may want to consider doing this for near misses as well. In many cases near misses are not reported and later turn into full-blown emergencies. By reporting all incidents or potential risks on site it is possible to take action to prevent further incidents.



# IN THIS MODULE

	Done	Date
Telephone list: fill out and post where needed	<input type="checkbox"/>	<input type="text"/>
Assess your risk	<input type="checkbox"/>	<input type="text"/>
Reduce your risk	<input type="checkbox"/>	<input type="text"/>
What you need to do in the event of a spill	<input type="checkbox"/>	<input type="text"/>
Write your spill procedure	<input type="checkbox"/>	<input type="text"/>
Putting together a spill station	<input type="checkbox"/>	<input type="text"/>
Train your staff	<input type="checkbox"/>	<input type="text"/>
Keep up to date Other (specify)	<input type="checkbox"/>	<input type="text"/>
<input type="text"/>	<input type="checkbox"/>	<input type="text"/>
Cross check	<input type="checkbox"/>	<input type="text"/>
Action list	<input type="checkbox"/>	<input type="text"/>

# **SPILLS!**

**Who must you call when you have a spill?**

## **SERIOUS SPILLS**

<b>111</b>	<b>Fire, Police, Ambulance</b>
	<b>Your Supervisor or Company</b>
	<b>Your council's hazardous substances officer or environmental health officer</b>
<b>03 474 7000</b>	<b>National Poisons and Hazardous Chemicals Information Centre, Dunedin - Urgent Line</b>
	<b>Your firm's waste disposal services contractor</b>

**ALL SPILLS THAT ENTER STORM WATER DRAINS  
OR FLOW OVER UNPAVED GROUND**

**Environment Canterbury's 24-Hour Pollution Hotline:**

**0800 76 55 88**

**Call us IMMEDIATELY - we can give you advice and help  
about containing and cleaning up your spill.**





## ASSESS YOUR RISK

1. Have you identified high-risk areas or activities? These could include:

- Places where large quantities of materials are stored or handled
- Storage areas without secondary containment (spills can easily escape into storm water systems)
- Unpaved areas (spills can soak into the ground and pollute soil and water)
- Places where you have had spills or near misses in the past
- Areas of high traffic flow
- Places that are very close to storm water drains, streams, wetlands or the coastline
- Delivery and dispatch areas.

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

2. Do you have an inventory of all substances you keep on site, so that you can assess any special hazards in the event of a spill?

You should have an inventory of each place where you store:

- Hazardous substances
- Raw materials
- Finished product
- Waste, by-products, materials for re-use or recycling, including out-of-date stock or material you no longer use
- Fuels, lubricants, cleaners, and other non-processed substances.

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

**If NO, work through the Storage and Handling module and use the Inventory Sheet at the end of that module to compile your lists for each place materials are stored. For example, your hazardous substances store, warehouse, outdoor compounds and so on.**

3. Are all substances you keep on site properly stored and clearly labelled as outlined in the Housekeeping and Storage and Handling modules?

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

4. Do you have SDS for all substances held in more than household quantities?

**If NO obtain any missing SDS from the product supplier or the New Zealand Chemical Industry Council 04-499-4311 and file them at the end of this module or in a separate folder. Someone on site should be given responsibility for making sure all SDS are held and no more than 5 years old.**

**Use the SDS to identify high risk substances on your site (large volumes, sensitive locations, particularly hazardous substances).**

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

## SPILLS

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### ■ REDUCE YOUR RISK

Working through the modules Storage and Handling and Housekeeping will help you to reduce the risk of a spill on your site.

NO YES

5. Have you looked at past accidents on your site (or similar sites)?

Evaluate your Inventory Sheets, high-risk areas and past spill history and identify:

- The most probable spill
- The most serious potential spill
- Any special handling needs for those substances if spilled.

**If NO, evaluate what happened with past spills or near misses and look at your high-risk areas. Are there any changes you could make to site design or operating practices to reduce the risk of having a spill?**

### ■ WHAT DO YOU NEED TO DO IN THE EVENT OF A SPILL

Think ahead about what you need to:

- Know
- Do and
- Have available

in the event of a spill so you will be able to cope.

### ■ SETTING UP A SPILL STATION

NO YES

6. Do you have a spill kit or spill control gear on site?

You should have supplies of materials and equipment for containing, cleaning up and disposing of:

- The most probable spills
- The most serious potential spill.

Consider the need for things like drain covers, sandbags, neutralisers, absorbents, booms, safe containers or drum holders.

NO YES

7. Do you have personal protective equipment to protect the health and safety of your staff?

Consider the need for things like gloves, respirators, chemical protection suits, buddy systems, first aid and emergency treatment.

NO YES

8. Have you filled out the emergency telephone contact sheet at the front of this section?

In your highest risk spots or by an accessible telephone, have you put on the wall copies of:

- The completed emergency telephone contact list
- ECan's spill and spill station posters
- A 1-page version of your spill procedure, or
- A copy of the brief spill procedure overleaf.

9. Do you have these things at your spill station:

- A copy of your drainage plan
- Your SDS.

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

## ■ WRITE YOUR SPILL PROCEDURE:

### What to do when you have a spill

You must have a written spill procedure. It could form part of your Emergency Response Plan or other Health and Safety procedures. A good spill procedure will have the steps outlined below.

10. Does your procedure instruct staff how to be safe?

**Such measures include:**

- Identify the spilt material
- Wear personal protective equipment.

*Refer to Step 1 on Spills - What to do.*

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

11. Does your procedure instruct staff to stop the source?

**Instructions could include:**

- Turn off the tap or valve, plug the leak
- Roll the drum so the hole is on top.

*Refer to Step 2 on Spills - What to do.*

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

12. Does your procedure provide for protection of storm water?

**Provisions could include:**

- Block off access to storm water drains or unpaved ground with drain covers, sandbags, booms or materials appropriate for the spill
- Liquid spills: contain with compatible materials, so they can't spread
- Powder type spills: cover with plastic to stop them blowing around.

*Refer to Step 3 on Spills - What to do.*

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

13. Does your procedure provide instruction on who to notify?

**Contacts should include:**

- The site supervisor
- Organisations such as the Fire Service or ECan's Pollution Hotline.

*Refer to Step 4 on Spills - What to do.*

NO	YES
<input type="checkbox"/>	<input type="checkbox"/>

NO YES

14. Does your procedure cover the clean up of the spill?

**Clean-up instructions could include the following:**

- Liquid spills: pump into a safe container, absorb them with appropriate materials or mix them with a compatible solid so you can sweep them up for disposal. Don't use dispersants or emulsifiers
- Powder spills: sweep or vacuum up and put them in a safe container
- If the spill needs to be neutralised, get a properly qualified staff member to supervise, or phone the Fire Service, a reputable waste disposal contractor or Environment Canterbury and tell them what the material is
- Keep the contaminated area as small as possible: if it can be avoided don't walk through the spill
- Clean up the area and any contaminated equipment or clothing after removing the spill - keep within the contained area, stop wash water or sweepings getting into storm water or soil.

*Refer to Step 5 on Spills - What to do.*

NO YES

15. Does your procedure instruct staff to dispose responsibly?

**Instructions could cover:**

- Re-use of uncontaminated materials
- Dispose of contaminated materials and clean up gear or clothing as a hazardous waste or ask your waste disposal contractor to dispose of it for you
- Do not hose spill, or tip wastes down storm water drain.

*Refer to Step 6 on Spills - What to do.*

NO YES

16. Does your procedure provide for the restock and review of spill station equipment?

**Provisions should include:**

- Replace any containment equipment or protective gear immediately
- Do a spill report immediately to find out how and why the spill happened, also review route causes and ensure that actions are taken to ensure you don't have a recurrence (preventative action)
- Check your spill procedure: do you need to update it to be better prepared?

*Refer to Step 7 on Spills - What to do.*

**Write down a step-by-step procedure of how you would deal with a spill on your site covering all the above points. Sites that store large quantities of different hazardous substances may need several different spill procedures covering the risks associated with all materials on site.**

## **A BASIC PROCEDURE FOR YOUR SPILL STATION**

Photocopy, laminate and put this near your spill kit for staff to read when they use it.

### **SPILLS - WHAT TO DO**

#### **1 BE SAFE**

- What is it?
- Do you need safety gear?

#### **2 STOP THE SOURCE**

- Turn off the tap, plug the leak or roll the drum over  
- if it is safe to do so

#### **3 PROTECT STORM WATER**

- Confine the spill with sandbags or booms
- Block off access to storm water drains with drain covers

#### **4 NOTIFY**

- Tell your supervisor
- Inform other organisations if needed

#### **5 CLEAN UP**

- Neutralise hazardous substances
- Pump or sweep into a safe container
- Clean up within the contained area
- Stop wash water or sweepings getting into storm water drains or soil

#### **6 DISPOSE RESPONSIBLY**

- Call your waste disposal contractor to take away contaminated materials and clean up gear or clothing

#### **7 RESTOCK AND REVIEW**

- Replace materials and equipment
- Review the incident – what can be learnt and how can you stop it happening again?



## ■ TRAIN YOUR STAFF

**Train your staff what to do when there is a spill and repeat the training regularly. In the same way that new staff are trained in fire procedures, they should be trained in your Spill Procedure as soon as they start work. Include spill training in any existing staff handbooks or training manuals you have on site.**

NO YES

17. Have you set aside work time for your training?

**If NO, you might want to stage a dummy spill to get your staff fully involved. Make sure, if you do, that you use harmless materials and that no material enters storm water or gets onto bare land.**

NO YES

18. Does your staff training programme:

- Use your own spill procedure
- Relate to the most probable spill
- Relate to the most serious potential spills
- Enable your staff to act quickly in an emergency?

NO YES

19. Evaluate the effectiveness of your training. Can your staff answer the following questions:

- Where do you find the SDS in a hurry
- Who do you notify that a spill has occurred
- How do you identify what the spilt material is
- How do you find out if it needs special handling
- Is anyone hurt? What do you do if they are
- How do you contain the source
- Where is the spill most likely to go
- How do you prevent the spill escaping off site
- Where are the spill stations
- Where is a copy of the spill procedure kept
- How do you clean up the spill and dispose of the spill and clean-up material without causing pollution
- What happens after the spill has been dealt with?

**If you don't want to run the training yourself, look in the Yellow Pages under SAFETY CONSULTANTS and SAFETY EQUIPMENT. Ask if they are able to provide this service for you, tailored to the needs of your site and your staff. Environment Canterbury has developed a generic Small Spills Training Programme which is available to download from our website [www.ecan.govt.nz/ppg](http://www.ecan.govt.nz/ppg).**

NO YES

20. Do you keep a list of all staff who have done spill control training and operate a reminder system for re-training staff? This is good for reducing your legal liability.

If you have a quality system set up you will already have training records in place. Incorporate any environmental training into existing records.

## ■ MORE DETAIL FOR YOUR SITE

As you walk around your site and make new observations, there may be things you see that you may want to add. If so, add them here.

ITEM: \_\_\_\_\_

**ACTION:** \_\_\_\_\_

\_\_\_\_\_

ITEM: \_\_\_\_\_

**ACTION:** \_\_\_\_\_

\_\_\_\_\_

ITEM: \_\_\_\_\_

**ACTION:** \_\_\_\_\_

\_\_\_\_\_

## ■ CROSS CHECK

If as a result of your spill planning, you do any works that affect your drainage system, are they shown on your drainage plan?

## ■ ACTION LISTS

If you ticked a  (highlighted box) then this is an action you need to take.

Put all actions on a copy of the ACTION LIST at the back of this module.

## ■ SIGNS OF SUCCESS

By the time you have gone through the SPILLS checklists you should have achieved these key successes:

You have a written spill procedure that makes sure you can contain and clean up spills and prevent a repeat spill

Your staff all know what to do and who to call in the event of a spill

You have set up a spill station/s and your staff all know where to find the gear they need to cope with a spill immediately

You regularly practice and review your spill procedure.

# Incident Report Form

## SUMMARY FORM: SPILLS AND AIR EMISSIONS

From: \_\_\_\_\_

To: \_\_\_\_\_

Date: \_\_\_\_\_

Subject: \_\_\_\_\_

### REPORT

Date of event \_\_\_\_\_

Location of discharge \_\_\_\_\_

\_\_\_\_\_

Material/s discharged \_\_\_\_\_

\_\_\_\_\_

Amount/s discharged \_\_\_\_\_

\_\_\_\_\_

Cause of discharge \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Did any material escape off site? If yes, where to?

\_\_\_\_\_

\_\_\_\_\_

What environmental or other effects resulted?

\_\_\_\_\_





**ACTION TAKEN**

Who detected the spill and what did they do?

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Who else on the staff was notified and what did they do?

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**OTHER AGENCY RESPONSE**

Were there any other agencies involved in the event? If yes, please list and describe their role.

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**INJURY REPORT**

Were there any injuries: Yes / No (please circle one)

Cross reference to: \_\_\_\_\_

**COSTS REPORT**

Estimate costs of staff down time for clean up and other response.

External clean up costs \_\_\_\_\_

Disposal costs \_\_\_\_\_

Any other costs (e.g. value of lost product)

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**INCIDENT REVIEW**

What was done well? \_\_\_\_\_

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What was done that shouldn't have been done? \_\_\_\_\_

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What was done wrong or could have been done better?

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**PREVENTION**

Discuss any changes needed to prevent similar accidents in the future:

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Spill/air emission procedures \_\_\_\_\_

Equipment \_\_\_\_\_

Staff training \_\_\_\_\_

Drains or structures \_\_\_\_\_

Housekeeping practices \_\_\_\_\_

Site management systems \_\_\_\_\_

Standard operating procedures \_\_\_\_\_

Other things to prevent a similar event \_\_\_\_\_

**FUTURE RESPONSE**

Have spill control and safety supplies been topped up? \_\_\_\_\_

Have staff been de-briefed, and if necessary, retrained? \_\_\_\_\_

**OTHER RECOMMENDATIONS** \_\_\_\_\_

**FURTHER ACTION**

Actions, timing, responsibility, budget, completion, review \_\_\_\_\_