



MANAGING STORMWATER

What you and your business need to know



Anything but rainwater down our stormwater drains pollutes our rivers and streams

MANAGING STORMWATER

Did you know that Nelson City Council's stormwater and flood protection system is made up of 27 km of rivers and streams, and 175 km of stormwater pipes which carry untreated water into rivers, streams, the Haven and Tasman Bay?

Although Nelson's waterways may seem healthy, environmental reports show that our streams and marine environment do suffer from pollution.

Contaminants enter our streams through the stormwater system and build up in stream beds and the sea floor where they get into organisms that live there such as mud worms and shellfish, and are then eaten by fish. Nobody wants to eat polluted fish so we all need to play a part in making sure only rain goes down drains.

If we want to improve our water quality so we can all swim, fish and enjoy our natural spaces, businesses and other property owners need to take measures to prevent contaminants from entering our streams.

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Everything entering your stormwater drains goes directly into the nearest stream and out into Tasman Bay.
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Whitebaiting in the Maitai River

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One spill event could kill an entire stream and take years to rehabilitate it.

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STORMWATER IN INDUSTRIAL ENVIRONMENTS

Stormwater management at industrial sites is critical for improving the quality of Nelson’s freshwater and marine environments. This is because the contaminants present in stormwater, discharged from industrial sites, is typically more damaging than any other land user.

Because of the types and quantities of chemicals that may be stored on an industrial site, one spill event could kill an entire stream and take years to rehabilitate it.

This site has a spill plan, so stormwater pollution from this spill was minimised



HOW DOES POLLUTED STORMWATER IMPACT ON OUR COMMUNITY?

- As stormwater enters directly into our fresh water, and on into Tasman Bay, pollutants contaminate the life that lives there: whitebait, eels, shellfish, and larger fish are all impacted. This affects the number of fish in our harbour, the opportunity for recreational fishing and diving, as well as commercial fishing operations.
- Swimming, surfing, waterskiing or just paddling around in your local stream, can become hazardous to the health of you and your children, because high levels of bacteria and poisons are released into our streams, lakes and rivers through contaminated stormwater.
- Litter can block drains and be carried downstream by stormwater making our waterways and beaches unsightly and healthy.



WHAT CAN YOU DO TO BETTER MANAGE YOUR STORMWATER?

The most effective way to prevent discharges to the stormwater system is to practice good housekeeping and site management. This will also help your business run more efficiently and demonstrate your level of corporate responsibility.

To do this, ensure that you:

- Maintain up-to-date drainage plans
- Have a procedure for spills
- Educate your staff about the obvious risks and good site management
- Keep stockpiles and waste storage areas covered so that rain doesn't wash residue away
- Install oil interceptors in refuelling areas, yards, and car parks
- Label stormwater grates "rain only" and paint stormwater manhole covers blue
- Paint trade waste sewer manhole covers red to show they carry contaminated flows
- Have spill kits and spill procedures available.

Spill pallets are an easily transportable spill solution



DRAINAGE PLANS

An up-to-date drainage plan will ensure that everyone on your site knows where the drains are and what can and can't go into them. If you don't have a drainage plan for your site, a drainage contractor or engineer should be able to investigate your site and draw a plan up for you. If your site is rented, contact the landlord or Nelson City Council.

Your site drainage plan should show:

- Stormwater pipes, grates and manholes
- Sanitary or trade waste sewers including inlets, traps, drains and manholes
- Site boundaries, outdoor spaces, and buildings
- Open drains and areas where runoff might pond
- What activities are carried out and where
- What materials are stored and where
- Neighbouring sites and sensitive areas, particularly nearby rivers, streams or beaches.

BUNDED AREAS

Bunds are recommended on industrial sites. The size of the bund depends on the volume of material and the size of containers stored in it. It may be designed to contain all liquids stored in containers inside them, or could





Construction of an outdoor storage bund. The grate inside the bund drains to trade waste

be low nibs to stop spills from indoor work spaces escaping into yards.

A bund lets you detect and control any small or slow leaks, and will contain spills from sudden ruptures of tanks and drums.

Make sure all oils and hazardous substances are banded and stored away from any open waterways or stormwater drains.

ACCIDENTAL SPILLS

It is important to have an emergency spill plan in the event of an accident. A simple plan should provide essential emergency contact information for the emergency response service, and a contact person for the company. The spill plan should be posted on notice boards around the site wherever there is a product capable of spilling and entering the stormwater system.

- Make sure you know exactly what materials are on site at any time, and any handling requirements
- Ensure you have easily accessible Material Safety Data Sheets for all chemicals stored on site

- Identify high-risk areas and spills that could occur
- Know what to do if a spill occurs
- Set up a spill station, write a spill procedure, and train your staff.

A small bund on an industrial site to prevent spills entering a stormwater gully trap



The most effective bunds are able to contain large volume spills, and are under cover to prevent them filling with rainwater





Pollution in the Maitai River

SPILL PROCEDURES

Have a spill kit on site and make sure all staff are trained on your spill procedure. A basic procedure for spills on industrial sites is:

- Ensure staff and others are safe before proceeding.
- If safe to do so, stop the source – turn off the tap, plug the leak or right the drum.
- Protect stormwater grates by containing the spill with sandbags or booms.
- Notify the site supervisor and inform Nelson City Council on 546 0200 of any spills that may enter stormwater.
- Clean up.
- Dispose responsibly.
- Review and remedy what went wrong.

PROTECT YOUR BUSINESS

Did you know that legally, nothing but clean rainwater can be released onto the ground, into stormwater drains, or into our streams, rivers or harbour?

The site occupier is responsible for making sure stormwater leaving a site is clean. Enforcement action may be taken against your company if stormwater is polluted – either deliberately, by accident spills that aren't properly cleaned up, or if reasonable steps were not taken to avoid the entry of spilt material into the stormwater system.

LEGISLATIVE REQUIREMENTS

Under the Resource Management Act 1991, it is illegal to discharge contaminants on the land and water without council authorisation. Anyone found guilty of causing pollution by contravening this can face a number of penalties ranging from an infringement fee to substantial penalties, or even a term of imprisonment.

Industrial pollution in stormwater



HOW DOES INDUSTRIAL POLLUTION DAMAGE OUR ENVIRONMENT?

Everything that goes into the stormwater system goes untreated into our streams, rivers and seas.

Sediment: Clay, silt and sand washed down from industrial sites smother stream beds, destroy habitats and kill creatures that live there.

Fuels and solvents: These chemicals contain cancer causing chemicals which build up in the systems of marine animals, can damage fish gills, poison animals, and kill plants. Petrol is also a fire hazard when in small spaces such as stormwater pipes.

Oil: Waste from car repairs and oil changes contain toxic chemicals poisonous to aquatic life. One litre of oil can cover 100 square metres of water, meaning oxygen cannot enter the water, and will smother birds and animals it is in contact with.

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Paint, ink and dye: Dyes block light from entering the water and will kill plants and animals that feed from it.

Concrete, cement and lime: When dissolved in water, these products produce an alkaline solution that burns and kills life that comes into contact with it.

Nutrients: Fertilisers contain nutrients that can lead to uncontrolled growth of weeds and micro-organisms, choking waterways and depleting oxygen supplies to aquatic creatures.

Corrosive liquids: Battery acid and cleaning compounds can damage gills, kill fish, and burn other creatures living around waterways.

Cleaning products: Detergents, disinfectants and carpet cleaning chemicals poison and burn aquatic life. This includes those products labelled as “biodegradable” or “environmentally friendly”. It will take the oxygen of 70 litres of water in a stream to break down just one litre of wash water!

Heavy metals: Zinc, copper and lead do not break down in water and will inhibit plant growth and poison aquatic life. The heavy metals then accumulate in the food chain eventually ending up in fish caught and eaten from Tasman Bay.

Cigarette butts: These are one of the most common forms of litter that end up in the stormwater system, take a long time to break down, and pollute aquatic ecosystems.

CONTACT US

Please contact Nelson City Council on 546 0200 to report a pollution incident at any time. This line is open 24 hours a day, every day. You can also contact us for advice on how to improve stormwater management at your site.

