



Concrete Washings and Concrete Cutting Waste Water – Pollution Prevention - actionSHEET 3

If your activities involve handling concrete and other cement-based products, it is really important that you consider the effects these activities may have on the environment, before you begin.

What sort of things cause pollution?

Poor work practices while handling fresh concrete or cutting concrete are responsible for some common problems, such as the discharge of waste water into the stormwater system from:

- Washing the chutes of concrete mixing trucks
- The use of cooling water in concrete cutting
- Rinsing freshly laid concrete to remove fines
- Washing concrete pumping gear and other concrete equipment.

How can my waste pollute the environment?

Any material or waste that is left uncovered or on the ground outside can flow or be washed by rain into a nearby stormwater drain. Stormwater drains discharge into local streams or to the coast. Any waste material that gets into the stormwater system will end up polluting these environments.

Cooling water used in concrete cutting and rinse water used to remove fines will pick up concrete particles and turn the receiving water strongly alkaline. Wash water from concrete trucks and equipment will also be very alkaline and contain high sediment loads.

Cement wash water and cement-based products harm the environment because:

- They are strongly alkaline, due to their high lime content. This alkalinity can kill or burn aquatic life in much the same way as acid would.
- High sediment loads can smother and kill the small creatures that live in the bed of a water body. It also scrapes and clogs fish gills.
- The sediment reduces sunlight penetration and makes it difficult for plants to get the energy they need to live and for animals to find food.
- Chemical additives can poison the creatures that live in water.

Even a very small quantity of a pollutant, or just one accidental discharge, can drastically alter the quality of a stream. Fish, insects and plants can be killed and habitats destroyed. A waterway can take years to recover.

You may think that your little bit of waste can't harm the environment, but combine it with the waste produced by others doing the same sorts of things and it adds up to a significant amount of pollution occurring in Southland, every day of the year.

The cumulative effects of combined discharges cause serious damage to our environment and must be prevented.

It is illegal to cause pollution

In New Zealand the Resource Management Act 1991 is the law that protects our environment. It makes every person responsible for ensuring that their activities and those of their employees do not pollute our environment.

Specifically, it is illegal to allow any substance to enter water either directly, through the stormwater system or via the contamination of land without prior authorisation from Environment Southland.

Environment Southland is committed to caring for our environment and is responsible for both helping the residents of our region to prevent pollution and enforcing the Resource Management Act if necessary.

By making a few simple changes to your site and daily practices, you can help contribute to a pollution-free environment that everyone can enjoy, both now and in the future.



Play it safe

You can stop your activities causing pollution

Concrete cutting and washing fines

- If cooling water is needed or washing must be done on site, ensure that there is no discharge to the environment by:
 - Diverting runoff to a grassed area where it can soak into the ground
 - Blocking a receiving drain and pumping the wastewater to an area where it can evaporate or soak into the ground
 - Discharging filtered wash water to the sewer with the approval of the local council
 - Washing the fines off freshly laid concrete to the side, not into the stormwater drainage system.
- **Above all**, never wash concrete products into areas where the wastes and associated wash water will drain to a stormwater drain or stream.
- Clean up all spilled material immediately and dispose of wastes in a bin in such a manner that they won't leak out.
- Ensure all workers and contractors are aware of these requirements.

Concrete trucks and equipment

- Use a specifically designed wash area that either discharges into the sewer or contains all wastewater in a sealed pond or tank for re-use as concrete make-up water or for washing equipment.
- On any large construction sites requiring multiple deliveries, ensure there is a designated wash out area which allows water to soak into the ground and not run overland into the stormwater system.



Pumping washwater into a tank for safe disposal
(Photo: Environment Canterbury)



ALWAYS have a good Spill Response Procedure. Keep spill equipment handy and make sure your staff are well trained.

Environment Southland can help your company develop a Spill Response Procedure and provide guidance on these matters. Call 0800 76 88 45 and ask to speak to a Pollution Prevention Officer.

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Further Information

For a copy of the **Pollution Prevention Guide** or more information on pollution prevention, contact Environment Southland, telephone 03 211 5115 or 0800 76 88 45 or visit our website at www.es.govt.nz.