

# **Concrete Wash and Wastewater**

## **Pollution Prevention Factsheet**

### 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 wastewater 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
- The use of acid wash on concrete surfaces

### 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 into the coastal marine area. 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 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 their energy they need to live and for animals to find food.
- Chemical additives can poison animals that live in the water.

Lime is a major component of cement and is found in concrete products. Water that comes into contact with cement, uncured concrete, concrete dust, etc., quickly becomes an alkaline solution with elevated pH that can burn and kill fish, insects and plants. Dilution only increases the size of the problem. It takes 10,000 litres of clean water to dilute one litre of concrete wash water to a safe pH level. You cannot dilute or filter this contaminated water to a level that is safe for discharge to the receiving environment.

#### "Dilution isn't the solution"

If even a small volume of concrete wastewater enters a stream, lake, wetland or harbour through the stormwater system it only spreads the contaminated water further; this can cause immense damage to the environment.

Even small discharges can have major impacts – the cumulative effects can significantly degrade the health and quality of a waterway and must be prevented.

#### It is illegal to cause pollution

In New Zealand, the Resource Management Act 1991 (RMA) 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.

It is illegal to discharge any substance into water, the stormwater system, land, or air, unless authorised by a resource consent or permitted under a district or regional plan.

Greater Wellington 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.



It is a Resource Management Act offence to discharge contaminants.

Email: info@gw.govt.nz

Visit: www.gw.govt.nz/environmental-incidents

