

Concrete washings and concrete cutting waste water



Environmental Management

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If your day-to-day activities involve the handling of concrete and other cement based products, you should consider the effects your activity may have on the environment.

What causes pollution?

Poor work practices while handling fresh concrete or while undertaking concrete cutting can cause environmental problems. Most common is the discharge of waste water onto the ground and 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 your waste can pollute the environment

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

Cement wash water and cement based products can cause harm to the environment because:

- They are strongly alkaline, due to 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 same creatures that live in the bed of a water body. They also cause abrasion and clogging of the gills of fish
- The sediment prevents sunlight entering the water, making 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 a water body.

Even a very small quantity of pollutant, or just one accidental discharge can drastically alter the quality of a stream. Fish, insects and plant life can be killed and their habitats destroyed. The stream can take many years to recover.

You may think that your little bit of waste can't harm the environment but there are other people in the region carrying out activities similar to yours. Your waste when combined with that of others can amount to a significant amount of pollution occurring every day of the year. The cumulative effects of combined discharges can cause serious damage to our environment and must be prevented.



Photo: Cement based products are strongly alkaline due to the lime content

It is illegal to cause pollution

In New Zealand the Resource Management Act (1991) is the law that protects our environment. It clearly states that every person is responsible for ensuring that their activities and those of their employees do not contribute to pollution of 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 authorisation.

By making a few simple changes to your site and your daily practices you will be contributing to a pollution free environment for us all to enjoy both now and in the future.

Play it safe – stop pollution from your activities

Concrete trucks and equipment

- Use a specifically designed wash area which either discharges into the sewerage system or contains all waste water in a sealed pond or tank for re-use as concrete make-up water or for equipment washing. Discharge to a district council sewerage system may require a consent from the district council
- On any large construction sites requiring multiple deliveries, ensure there is a designated wash out area that allows water to soak into the ground and not run over land into the stormwater system or into streams.

Concrete cutting and the washing of fines

If cooling water is needed or washing needs to be carried out on site, ensure that there is no discharge to the environment by:

- Placing hay bales or sandbags to filter run-off, discharging the filtered wash water to the sewerage system with the approval of the district council
- Diverting run-off to a grassed area
- Blocking a receiving drain and pumping the wastewater to an area where it can evaporate or soak into the ground
- Washing the fines off freshly laid concrete to the side, not into the stormwater drainage system.

Above all, **never** wash concrete products in areas where wastes will drain to a stormwater drain or stream.

Clean up all spilt material immediately and dispose of wastes in a bin in such a way that they won't leak out.

Ensure all workers and/or contractors are aware of these requirements.

Always have a good spill contingency plan. Keep pollution control equipment handy and make sure your staff members are well trained.

**For further advice or information contact:
Taranaki Regional Council, Private Bag 713
Stratford
Ph: 06 765 7127 Fax: 06 765 5097
Pollution Hotline: 0800 736 222
www.trc.govt.nz**
