



## Directional Drilling

### Pollution Prevention - actionSHEET 4

*If your activities involve using drilling machinery, it is really important that you consider the effects these may have on the environment, before you begin.*

### What sort of things cause pollution?

Poor work practices during directional drilling operations are responsible for some common problems:

- Discharges of sediment into the stormwater system
- Discharges of drilling additives, leftover cement and bentonite grouts
- Copper drill lubricants discharging with drilling fluid
- The discolouration of natural water bodies
- The blockage of stormwater drains, causing flooding.

### How your waste can pollute the environment

Any material or substance 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.

Drill cuttings and slurry contain substances such as sediments and lubricants that can pollute the environment.

If discharged, these substances harm the environment by:

- Smothering small aquatic plants and animals and destroying where they live
- Preventing light from entering the water, making it difficult for animals to find food and for plants to get energy from the sun
- Irritating and clogging the gills of fish
- Increasing stream erosion.

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

#### Containment

- Contain all excess sediment and slurry from your drilling operations for appropriate disposal as a wastewater. Ensure that no sediment or slurry enters stormwater drains or waterways by:
  - Digging a containment pit of appropriate size at the site of your drilling operation. If there isn't enough room to dig a pit, use drums or barrels. Discharge all slurry from your operation into these pits or drums.
  - Allowing the slurry to settle.
  - Ensuring the settled slurry is disposed of in one of the following ways:
    - Recycled on site or at another drilling site.
    - Spread onto land at an approved location.
    - Taken to a landfill.
- Avoid stockpiling soil on site, but if stockpiling is required:
  - Identify an area for spoil or stockpiling of soil away from stormwater catchpits, kerb channels, surface water, swales on land with a gradient greater than 15 degrees.
  - Cover stockpiles with a tarpaulin, polythene sheet or geotextile fabric to prevent rain from causing sediment to run off the stockpile.
- Inspect site controls at least once a day to ensure they are working properly.



**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.

#### Spills

- Design a good Spill Response Procedure. Keep equipment handy and make sure your staff are well trained.
- Have drain mats, small drums and absorbent materials on site ready to contain and dispose of any spills.
- If a spill occurs and sediment enters a stormwater drain or a water body:
  - Stop ;
  - Implement your spill contingency plan;
  - Contact Environment Southland.



A directional drill at work.

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 Private Bag 90116  
 Invercargill 9840

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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](http://www.es.govt.nz).