

FACT SHEET 8K

DEWATERING OPERATIONS ON CONSTRUCTION SITES

Dewatering refers to the action of removing water from a hole, excavation or sediment trap. The dewatering process is normally done by pumping or evaporation.

This fact sheet focuses on the removal of sediment from water during the dewatering process on construction sites from excavations including basements, trenches, footings and piers, and sediment traps including large sediment basins.

A number of water quality characteristics, must be met before water can leave a construction site to prevent water pollution. The water must be properly treated and filtered to remove any contaminants including sediment, oil, grease, paint and acids. If the water contains contaminants other than sediment, seek professional advice prior to allowing the water to leave site.



Do not dewater from your site to the stormwater system without Council permission.

Fines for water pollution can be prevented. Contact Council before commencing any dewatering to gain correct approvals or find out what is permitted or needs authorisation/consent.



General requirements for water discharged offsite

Water leaving site shall comply with criteria as specified in your Development Consent, and/or the *ANZECC Water Quality Guidelines (2000)*. In their absence, your water should comply with the following characteristics:

- pH between 6.5-8.5;
- Total Suspended Solids (TSS) less than 50mg/L;
- Turbidity less than 60NTU; and
- Electrical Conductivity of 200 μ s/cm (0.2ms/cm) or less than or equal to background levels.

These figures may be influenced by the receiving environment. Water entering a more sensitive receiving environment will be required to be of a higher quality.

How to dewater from an excavation, hole or sediment trap

The most common method for dewatering is by direct pumping from the water source offsite and is outlined as follows:

1. Your excavation, hole or sediment trap has filled to a point where it is at capacity and requires dewatering.
2. Establish the release criteria for each of the water characteristics (stated above or on your permit or Development Consent).
3. Test your water to ascertain if treatment is required to achieve.
4. Seek professional advice on treatment options to achieve the water characteristics. It is better to do it right the first time and save time and money.
5. Treat your water to reach each of the characteristics, for example, flocculants to drop out sediment to reduce TSS (shown above), or additives to adjust pH.
6. Re-test your water for post-treatment values for each of the characteristics (stated above or on your permit or Development Consent).



7. Re-treat if needed.
8. Locate a suitable release point for the end of the hose or pipe. It is important to ensure that releasing the water at the chosen point will not result in soil erosion or cause flooding or nuisance.
9. Release the water. Water should not be taken from the bottom of any excavation or sediment trap as this will bring the sediment with it. Ensure compliance with noise and work hour conditions on your Development Consent or Council rules. A competent person should supervise the release of water at all times.
10. Check the water quality regularly during dewatering to ensure pollution or flooding does not occur.
11. Remove any sediment captured in the sediment trap to maintain trap capacity.

Alternatively, install a semi passive or fully passive flocculation system to treat the TSS of water on its entry to the sediment trap to save time and money treating water actively.

Dewatering of material stockpiles

Wet material removed from excavations is usually temporarily stockpiled onsite in a designated location with appropriate erosion and sediment controls in place where it can dewater and dry out without causing pollution. Alternatively, wet material may be placed in a truck to dewater. If this method is used:

- ensure the rear of the truck is facing downhill to allow water to flow out; and .
- install appropriate erosion and sediment controls to prevent pollution.

If the truck is driven offsite, line the truck's tray with plastic or similar to prevent spill and pollution offsite, and on roads. Wet material left on roads is water pollution and is often a traffic hazard.

Environmental legislation and Council Development Consents

Under the *Protection of the Environment Operations Act 1997* (POEO), allowing sediment or sediment laden water to enter any waterway including street gutters, stormwater drains, swales or creek lines (flowing or not) is considered to be water pollution. Penalties and notices can apply including fines of up to \$5 million.

Council will enforce the POEO where necessary, however we endeavour to provide information about erosion and sediment control and encourage you to help us protect the Lake by reducing water pollution.

Non-compliance with the conditions of a Development Consent is a breach of the *Environmental Planning and Assessment Act 1979* and may also attract fines.

Mulch or compost used or stockpiled on your site may produce leachates such as tannins. Appropriate control measures must be installed to prevent pollution offsite.

Further information

- **Council's website;**
- the "**Blue Book**" - Managing Urban Stormwater: Soils and Construction, Landcom (2004) 4th Ed.;
- International Erosion Control Association (Australasia)(IECA) (free downloads) www.austieca.com.au;
- Call Council's Erosion and Sediment Control Officer on **02 4921 0333**;
- *Builders Pocket Guide* www.bpg.co.nz (be aware that some practices outlined are not permitted in Lake Macquarie City Council area); or
- *Australian and New Zealand guidelines for fresh and marine water quality: Volume 1 - The guidelines* (ANZECC). Agriculture and Resource Management Council of Australia and New Zealand and the Australian and New Zealand Environment and Conservation Council, (2000).

Acknowledgements and disclaimer:

This fact sheet contains information from *No Dust, No Fuss – Guidelines for controlling dust from construction sites*. NSW EPA., and *Best Practice Erosion and Sediment Control*. IECA, November 2008.

This fact sheet is for general information only and is not intended to cover every situation. It is not a regulatory document. Obtain your own independent professional advice.

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