**PS DEWATERING**

**PURPOSE AND SCOPE**

The purpose of this primary standard is to eliminate or minimise significant environmental harm as a result of dewatering activities. Dewatering activities comprise removing water from surface and sub-surface (groundwater) lowering of an aquifer to facilitate construction activities. Sediment basin discharge is addressed in PS Erosion and Sedimentation.

**PLANNING FOR DEWATERING**

The dewatering methodology must be documented and training provided to the work crew on the process and control measures. Developing the methodology should include:

- Reviewing environmental constraints mapping and assessing the potential for dewatering activities
- Establishing dewatering criteria from environmental licenses, environmental impact assessment studies, local legislation and the ANZECC water quality guidelines
- Completing an acid sulphate soil or MBO assessment/investigation prior to the commencement of dewatering. If acid sulphate soils or MBO are exposed by the works contact the Site Environmental Coordinator immediately to undertake testing of the soil.
- Establishing and implementing a dewatering permit system in accordance with the Construction Environmental Management Plan
- Requesting groundwater dewatering licenses and permits and ensuring that they are approved by the regulating authority prior to commencement
- Consulting with an aquatic ecologist and/or hydrogeologist prior to the development of the dewatering methodology for sensitive environments

**DEWATERING**

The following controls must be implemented when dewatering:

- Carrying out all conditions required by the regulating authority in the license/permit
- Treating water as necessary to meet water quality criteria including pH correction, reduction of total suspended solids, metals, oil and grease or other contaminants of concern
- Undertaking water testing using approved methods prior to discharging water off site
- Undertaking in situ water quality testing for the area to be dewatered and the receiving environment to confirm compatibility and compliance with water quality discharge obligations.
- Monitoring the pump outlet at all times during pumping and ceasing pumping immediately should the water quality change at the outlet
- Engaging an aquatic ecologist to compete defishing or aquatic fauna salvage activities prior to dewatering in sensitive fish habitat areas
- Identifying appropriate location to relocate fish
- Providing erosion protection for the pump system outlet
- Taking photographs of downstream waters of aquatic plant life
- Undertaking water quality monitoring of receiving waters
- Documenting dewatering activities including time, water quality testing and quantity of water discharged

**Surface Water Dewatering**

The following are requirements for surface water dewatering:

- Installing the pump inlet above the bed of the area to be dewatered to prevent the ingress of sediment
- Pump inlet to have an inlet screen with apertures not greater than 5mm
- Creating a deep low point for fish to migrate to whilst dewatering is taking place

**Groundwater Dewatering**

The following are requirements for groundwater dewatering:

- Preparing a site specific Dewatering Management Plan for local regulatory approval. If required, engage hydrogeologist to conduct an assessment.
- Implementing all controls committed to within the Dewatering Management Plan and any additional conditions imposed by the regulator
- Installation of groundwater monitoring well network up and down hydraulic gradient. A minimum of three wells are required.
- Conducting at least three baseline groundwater monitoring events to establish site specific background conditions
- Comparing data from baseline monitoring with relevant guidelines to establish site specific action criteria
- Conducting daily quality testing at discharge point or, if liming, at pre and post treatment sample points
- Conducting post dewatering groundwater monitoring to assess long term impact to the aquifer
- Preparing a post dewatering close out report to be submitted to the regulating authority to relinquish license

*Let's all get home safely, every day.*