



Environment and Heritage Expertise

Technical Guideline

TG 0875.35 – Dewatering, dredging and earthworks drainage

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**Government of
South Australia**

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Significant/major changes incorporated in this edition

Not applicable - this is the first edition of the Technical Guideline.



Document controls

Version history

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Approvers

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Reviewers

Name	Role	Version	Review Date
Environment and Heritage Expertise Team	Team review of guidelines.	1.0	28-08-2025

1 Introduction

This guideline relates to the assessment and management of dewatering, dredging and earthworks drainage activities which may be encountered during a project's planning, construction, operations or maintenance activities.

It forms part of the TG 0875 Environment and Heritage Technical Guidelines and is designed to provide insight into regulatory obligations associated dewatering, dredging and earthworks drainage, as well as suggested approaches to manage risk.

Note the guideline is not exhaustive, and additional requirements may be necessary based on project- or site-specific activities, geographical location, or approval conditions.

1.1 Environment and Heritage Technical Guidelines Suite

The SAWG-ENV-0875 Environment and Heritage Technical Guidelines suite includes:

- TG 0875.00: General requirements
- TG 0875.11: Aboriginal heritage and Native Title
- TG 0875.12: Non-Aboriginal heritage
- TG 0875.21: Vegetation
- TG 0875.22: Fauna
- TG 0875.23: Weed hygiene
- TG 0875.24: Phytophthora
- TG 0875.31: Surface water
- TG 0875.32: Groundwater
- TG 0875.33: Recycled water
- TG 0875.34: Sediment, erosion and stormwater
- **TG 0875.35: Dewatering, dredging and earthworks drainage (this guideline)**
- TG 0875.41: Site contamination
- TG 0875.42: Acid sulfate soils
- TG 0875.43: Hazardous substances
- TG 0875.51: Dust
- TG 0875.52: Odour
- TG 0875.53: Noise and vibration
- TG 0875.61: Spoil management
- TG 0875.62: Recycling
- TG 0875.63: Waste management

This guideline must be read in conjunction with TG 0875.00: General requirements

1.2 General requirements

TG 0875.00: General requirements apply to all aspects of the work:

1. Purpose
2. Application
3. Scope
4. Statutory obligations
5. Strategic alignment
6. Terms and abbreviations

2 Dewatering, dredging and earthworks drainage

2.1 Overview

MANAGEMENT	
Commitment	Dewatering, dredging and earthworks drainage activities can emit pollutants including sediments, metals and toxic substances, organic matter, plastics and noise. We will seek to protect and preserve terrestrial and aquatic environments through appropriate planning and controls, in line with state-based legislation which prescribes dewatering, dredging and drainage activities
Strategic objective	<ul style="list-style-type: none"> Environment Corporate Strategy: <ul style="list-style-type: none"> Our culture creates empowerment, increased accountability for environmental decisions and demonstrates proactive leadership. Asset Management Corporate Strategy: <ul style="list-style-type: none"> An integrated approach enables the sustainability outcomes our customers, community and owner expect.
Key Performance Indicator	<ul style="list-style-type: none"> KPI 1: Zero breaches of regulatory requirements related to dewatering, dredging, and earthworks drainage across all project activities. KPI 2: Drawdowns, dredging and earthworks drainage activities do not cause adverse impacts to sensitive surface and groundwater receptors within or in close proximity to the site.
Legislation	<ul style="list-style-type: none"> Environment Protection Act 1993 (SA) – EP Act Environment Protection Regulations 2023 (SA) Environment Protection (Water Quality) Policy 2015 (SA) Landscape South Australia Act 2019 (SA)
Regulatory approvals	<ul style="list-style-type: none"> EPA Dredging licence EPA Earthworks and Drainage licence Water Affecting Activity permit Water licence
Statutory obligations	<ul style="list-style-type: none"> <i>Environment Protection Act 1993 (SA)</i>, Section 25: A person must not undertake an activity that pollutes, or might pollute, the environment unless the person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm. <i>Landscape South Australia Act 2019 (SA)</i>, Section 8: A person must act reasonably in relation to the management of natural resources within the State. <i>Environment Protection (Water Quality) Policy 2015 (SA)</i>, Clause 10 & 11: A person must not discharge pollutants listed in Schedules 2 and 3 of the Policy into any waters. Furthermore, those pollutants known as Class 1 and listed in Schedule 2 must not be deposited onto land where they are likely to enter waters.
Reference material	<ul style="list-style-type: none"> EPA (SA): Dredge Guideline EPA (SA): Water quality guideline 1093/21: Environmental management of dewatering during construction activities

MANAGEMENT**Related guidelines**

- TG 0875.31: Surface water
- TG 0875.32: Groundwater
- TG 0875.34: Sediment, erosion and stormwater
- TG 0875.41: Site contamination
- TG 0875.42: Acid sulfate soils
- TG 0875.61: Spoil management

2.2 Planning and design

MITIGATION MEASURES**STAKEHOLDERS**

Determine whether the proposed works fall within the definition of:

- Dredging (capital or maintenance) or earthworks drainage, as per the EPA's Dredge Guideline.
- Dewatering, as per the EPA's Environmental management of dewatering during construction activities guideline.

A water affecting activity, as defined in the Water Affecting Activity Control Policy of the relevant Landscape Board.

Environmental Officer
Asset Planner
Design Manager

Capital projects related to dewatering activities for a reservoir, dam or weir will require an SA Water Reservoir Dewatering Management Plan when the dewatering activity lowers the reservoir, dam or weir below the lowest annual operating level based on the previous 10 years of water level data.

Environmental Officer
Project Manager
Asset Manager

Determine whether proposed works may include risks associated with contaminated soil, groundwater, surface water etc. Any site contamination issues may require further regulator engagement, and consideration into construction methodology and onsite handling.

Environmental Officer
Project Manager

Determine whether the proposed works may need to comply with any existing water allocation plan including prescribed water resources (which may require a water licence).

Environmental Officer
Project Manager

Determine whether sediment sampling may be required, depending on likelihood of contamination, particle size or dredge / drainage volume, and any conditions on relevant approvals.

Environmental Officer
Project Manager
Sub-consultant

If sampling is required, a suitable qualified person must prepare a sampling and analysis plan in accordance with EPA requirements, and appropriate reuse or disposal options

Determine whether baseline water quality data is available or if baseline water quality sampling is required for the receiving environment, in addition to any ongoing water quality monitoring requirements.

Environmental Officer
Project Manager

MITIGATION MEASURES	STAKEHOLDERS
<p>For any dewatering dredging or earthworks drainage activities, identify potential impacts from, and implement mitigation measures, for:</p> <ul style="list-style-type: none"> • Deployment, installation, and decommissioning of equipment and infrastructure. • Construction of bunds, coffer dams, dewatering ponds, etcetera. • Operation of dredge and other associated vessels and equipment. • Refuelling, washdown and maintenance of equipment. • Storage of chemicals and fuels. • Spoil management, including dewatering, reuse, stockpile and/or disposal options. • Exposure to contaminated soil, groundwater or surface water. 	<p>Environmental Officer Project Manager Design Manager</p>
<p>Ensure the proposed contractor holds the relevant approvals and EPA licences in place and consults any pre-existing Water Affecting Activity permits, prior to dredging, dewatering or earthworks drainage activities occurring. This may include stipulating the relevant requirements in contract documentation.</p>	<p>Environmental Officer Project Manager</p>

2.3 Construction

MITIGATION MEASURES	STAKEHOLDERS
<p>Any Dredge Management Plan (DMP) must use an EPA approved template, be prepared by a suitably qualified person, be approved by the EPA prior to the commencement of any dredging works:</p> <ul style="list-style-type: none"> • A water quality monitoring program (WQMP) must also be approved by the EPA and can be provided as part of the DMP • All water quality testing must be undertaken by a NATA accredited laboratory 	<p>Contractor</p>

MITIGATION MEASURES	STAKEHOLDERS
<p>Dewatering Management Plans (DWMP) or Earthworks Drainage Management Plans (EDMP) must specify how dewatering will be managed during the works, including:</p> <ul style="list-style-type: none"> Compliance with conditions of approvals (such as protecting water quality; minimising aquifer extraction volumes, monitoring extraction with flow meters and recording volumes). How regard has been given to applying the waste management hierarchy e.g. reducing volumes, reusing dewatered effluent. Treatment options to ensure any dewatered effluent does not result in a risk to the receiving environment. <p>A DWMP is not required to be submitted to the EPA unless a significant risk to the environment has been identified.</p> <ul style="list-style-type: none"> The EPA may however request that a DWMP be provided for review or SA Water may choose to request a review by the EPA. <p>The conditions of the Earthworks Drainage licence require an EDMP is submitted to the satisfaction of the EPA prior to any works commencing.</p>	Contractor
Contaminated material must be subject to management arrangements that have been approved by the EPA. Verification of the end fate of this material will also be required to be submitted to the EPA.	Contractor
Implement WQMP during dewatering / earthworks drainage activities, where all dewatering effluent is monitored prior to discharge offsite.	Contractor
Dewatering of potentially contaminated surface water runoff within the site is to be managed accordingly and associated risks to be identified.	Contractor
Once management plans have been approved by the EPA, the EPA must be notified at least five business days prior to commencing the dredging or earthworks drainage activity using their online Environment Licencing Form system.	Contractor
Ensure the dredging equipment being used is maintained appropriately, and the operator is suitably skilled to reduce the risk of environmental impacts.	Contractor
Ensure dredging and any spoil material relocation is undertaken within the approved disturbance footprint. Refer to the Spoil Management Guideline.	Contractor
Provide all water quality results, and/or completion works report and quarterly dredging register, to the EPA upon request at the completion of the earthworks drainage and dredging activities, with raw data documented using an EPA approved excel spreadsheet.	Contractor

2.4 Monitoring requirements

DESCRIPTION	METRIC	FREQUENCY	ACCOUNTABILITY

DESCRIPTION	METRIC	FREQUENCY	ACCOUNTABILITY
Water quality monitoring before and during dewatering and dredging activities, in accordance with management plans.	Water quality measurements	Continuous or as per agreed schedule	Contractor