



CORPORATE POLICY STATEMENT NO. 50

PLANNING FOR DEWATERING AFFECTING THE SWAN CANNING DEVELOPMENT CONTROL AREA

June 2026

1. OBJECTIVE

The objective of this policy is to ensure that dewatering associated with land use, development, and other permitted works, acts and activities within or affecting the Swan Canning development control area (DCA):

- prevent further water quality degradation within the DCA, and where possible, improve water quality; and
- protect and enhance the ecological health, community benefits and amenity of the DCA.

2. SCOPE

The Swan Canning river system has high ecological, social, cultural and economic values and is sensitive to contamination associated with land use and development. This policy addresses potential contamination and changes to water flows associated with dewatering. It applies to dewatering proposals within, abutting and affecting the DCA. Proposals that may affect the waters of the DCA include, but are not limited to, those that might mobilise sediment, nutrients and other contaminants to the DCA via tributaries, discharges from stormwater or shallow groundwater management infrastructure, or groundwater flows, or that might alter the hydrology of waterways and wetlands in the DCA.

This policy is developed and published pursuant to the *Swan and Canning Rivers Management Act 2006* (SCRM Act). It will be applied by the Department of Biodiversity, Conservation and Attractions (the department) and the Swan River Trust when assessing and determining applications involving dewatering management and providing advice to other statutory decision-makers, land managers and proponents in relation to proposals for land use changes, development, works, acts and activities within, abutting or affecting the DCA. This includes water management reports prepared in accordance with State Planning Policy 2.9 Water and its associated Planning for Water Guidelines (Western Australian Planning Commission) and dewatering management plans prepared as conditions of approval.

Pursuant to section 6 of the SCRM Act, Schedule 5 authorities should perform their functions with due regard to the objectives and principles under section 5 of the SCRM Act. This policy has been developed to achieve the objectives and principles of the SCRM Act and therefore should be regarded by Schedule 5 authorities to functions including strategic planning, decision-making, and management.

In this policy, the Swan Canning river system means the catchment area of the Swan, Canning, Helena, Southern and Avon (to Moondyne Brook) rivers ([map available](#)). The DCA is defined in Schedule 3 of the SCRM Act ([maps available](#)).

All policy and guidance documents identified in this policy should be taken to refer to the most current published version.

3. CONTEXT

Dewatering is the process of removing groundwater from an aquifer to lower the water table, particularly during construction and development. It is a widespread practice in areas with a shallow groundwater table, such as many areas of the Swan Coastal Plain part of the Swan Canning Catchment.

Construction dewatering usually involves the pumping or draining of groundwater from construction sites to lower the water table and enable subsurface excavation for installation of foundations, reticulated sewerage, elevator shafts, car parks, swimming pools or other below ground infrastructure. Dewatering can also involve pumping or draining surface water, such as ponded water from rainfall events.

In-river dewatering is undertaken to temporarily isolate active construction zones from surface water during in-river works. Such works may include the construction or maintenance of bridge piers and abutments, river walls, scour protection, and other structural and erosion control measures within the river channel. In-river dewatering typically involves the installation of temporary containment measures to exclude river flows from the work area. Surface water within the contained zone is often pumped back into the river within a silt curtain. The quality of the water pumped back into the river generally meets trigger values if sediment controls are put in place, however, if the excavated sediment is contaminated or dewatering involves extraction of water from below the riverbed, treatment may be required prior to discharge.

Post-development continuous dewatering of below ground structures (e.g. basements, car parks, traffic tunnels, etc.) may also occur. However, this is less common in new buildings due to advances in development design and construction methods.

Unless managed appropriately, dewatering and disposal of the extracted water (tailwater) can have harmful effects on the environment, wetlands and waterways. Depending on previous land uses and the soil and groundwater characteristics of a site, dewatering can lead to environmental issues such as:

- mobilisation of nutrients and contaminants from groundwater or surface water to receiving environments;
- mobilisation of acids, arsenic, heavy metals or nutrients from draining or disturbing acid sulphate soils;
- depletion of oxygen levels and alteration of salinity levels in receiving waters;
- excessive changes to water levels or flows in water-dependent ecosystems, such as interconnected groundwater-dependent ecosystems, wetlands and waterways; and
- odour, discolouration, turbidity and sedimentation in receiving waters.

Dewatering also has the potential to affect nearby water supplies, such as groundwater bores or surface water, through lowering the water table and/or mobilisation of salinity, acidity and contaminants.

Dewatering can be difficult to manage. There is often a high degree of unpredictability regarding groundwater extraction rates and water quality. Treatment of dewatering tailwater can be difficult on sites with space constraints, especially when the rate of discharge is high and there are elevated levels of nutrients or contaminants in the water. Once dewatering starts, slowing or stopping the extraction to address issues

that may arise can sometimes be impractical, costly or unsafe. Dewatering requirements and contingency plans should therefore be considered early in the planning process.

High volumes and rates of dewatering tailwater discharged to receiving waters can change the natural flow regime and increase nutrient and other contaminant concentrations and loads. The waterways and wetlands of the Swan Canning river system are under pressure from high nutrient levels, which leads to algal blooms, low oxygen levels, and potentially to fish kills and a loss of biodiversity.

Mismanagement of dewatering discharge can lead to high costs for the community, including the financial, environmental and social costs of mitigating nutrient and other contaminants mobilisation to receiving environments, as well as reduce the community's use and enjoyment of these areas.

The Swan Canning river system is to be protected from the direct and indirect environmental impacts of dewatering activities, while recognising that best management practice for dewatering can be challenging and complex.

This policy should be used in conjunction with the State Planning Policies adopted under the *Planning and Development Act 2005* (PD Act) as they relate to planning and development within, abutting or affecting the DCA, and assists with implementing the [River Protection Strategy for Derbal Yirragan Djarlgarro \(Swan Canning river system\)](#). This policy is to be applied with the department's and Swan River Trust's other [Corporate Policies and Guidelines for the Swan Canning river system](#) and the Department of Water and Environmental Regulation's [Water Quality Protection Note 13: Dewatering of Soils at Construction Sites](#).

4. LEGISLATION

The SCRM Act establishes a governance, regulatory, and approvals framework for the Swan Canning river system. It promotes collaboration among State and local government organisations to achieve a unified and consistent approach to land use planning decision-making.

The SCRM Act places the care, control and management of the River reserve with the Swan River Trust. The SCRM Act also empowers the department and Swan River Trust to undertake statutory functions related to the river system and DCA.

The statutory responsibilities of the department and Swan River Trust in relation to the DCA under the SCRM Act, the Swan and Canning Rivers Management Regulations 2007, and proposals subject to control under the Metropolitan Region Scheme (MRS), PD Act, and other relevant State Government legislation are further detailed in the [Determination Processes](#) document.

5. POLICY

When undertaking its functions, the department, Swan River Trust and Schedule 5 authorities, as described in the SCRM Act, are to regard the following policy statements.

5.1 Apply a presumption against the discharge of dewatering tailwater to the DCA.

Justification and site context

- 5.2 Require applications to demonstrate the necessity for the dewatering and provide site-specific details, including:
- previous land uses, including listed contaminated sites, and potential for soil or groundwater contamination;
 - groundwater quality and levels, reflective of the conditions during the dewatering period (for example, considers seasonality and rainfall);
 - water-dependent ecosystems;
 - soil types and hydrogeology;
 - ecological, resource, recreational or amenity values near the dewatering site or any planned discharge point;
 - dewatering, treatment, and disposal methods and contingency plans, including the location and area required for any associated infrastructure;
 - dewatering commencement date, duration, frequency, flow rate and volume; and
 - profile and radial extent of the cone of depression (i.e. water table draw down area. See [Water Quality Protection Note 13: Dewatering of Soils at Construction Sites](#) (Department of Water and Environmental Regulation)).
- 5.3 The need for dewatering and management of the associated tailwater has the potential to affect development design and extent of below ground infrastructure and should be considered early in the planning process. Where relevant, preliminary information addressing dewatering should be incorporated into any water management report prepared in accordance with [State Planning Policy 2.9 Water](#) and its associated [Planning for Water Guidelines](#), commensurate with the scale and nature of the planning proposal. Where multiple sites within the same location are dewatering, consideration will be given to the cumulative impacts of the activity when assessing new proposals.

Tailwater discharge

- 5.4 Discharge of dewatering tailwater to the DCA, either directly or indirectly (e.g. via a stormwater drain), will only be supported where it has been demonstrated that:
- dewatering has been minimised through development design and/or construction method, such as by limiting subsurface excavations or using impermeable membranes around below ground structures;
 - on-site and alternative tailwater disposal options have been utilised individually or together to the greatest extent possible, including, but not limited to:
 - a) groundwater recharge (e.g. infiltration, re-injection);
 - b) re-use (e.g. irrigation, dust control, wash-down);
 - c) storage and evaporation;
 - d) sewer; and
 - e) off-site transport, storage and disposal;
- provided that the water quality is suitable for its intended use (on-site treatment may be required) and proposed in consultation with the relevant regulatory agencies, including but not limited to the Department of Health, Department of Water and Environmental Regulation (DWER), local government or sewerage service provider;

- water quality of the groundwater and tailwater (pre- and post-treatment) are monitored and the tailwater that is discharged to the DCA (either directly, or indirectly for example via a stormwater drain) meets the relevant indicative discharge criteria provided in Appendix 1; and
 - surface water mixing zones have not been used due to their impact on ecological health and community benefits.
- 5.5 Require a dewatering trial to verify the treatment system performance and obtain pre- and post-treatment tailwater quality data, prior to the commencement of dewatering. Post-treatment tailwater quality results should reflect actual measurements rather than modelled or expected values.
- Consider discharge criteria that deviates from the indicative discharge criteria provided at Appendix 1 only when supported by a detailed site-specific management framework and baseline data, in accordance with the [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#) (ANZG 2018). Proposed variation from the discharge criteria in Appendix 1 must be assessed against the water quality at the point of discharge to the receiving waters and may be proposed by the proponent or the department. Where the quality of the receiving waters is already degraded or fails to meet the ecological condition expected of a slightly disturbed or near-reference system, as defined by ANZG 2018, variation from default guideline values may not be supported to protect and enhance the ecological health of the DCA.
- 5.6 Require baseline assessments of the water quality at the point of discharge to the receiving waters to be representative of the conditions (for example, considers seasonality and rainfall) during the dewatering period.
- 5.7 Require tailwater discharge points to be managed to mitigate erosion and damage to infrastructure.

Management and monitoring

- 5.8 Require the preparation and implementation of a management and monitoring plan that addresses how the dewatering is to be managed to ensure protection of the ecological health, community benefits and amenity of the DCA. The plan should address the provisions of this policy and include contingency measures in the event that the discharge criteria are not met or there are deleterious impacts on water-dependent ecosystems.
- 5.9 Compare the median of the tailwater quality test data with the discharge criteria for physical and chemical stressors (except if the concentration is high enough to cause acute toxicity). For toxicants, the 95th percentile of the tailwater quality test data should be compared with the discharge criteria (except if the concentration is high enough to cause acute toxicity).
- 5.10 If tailwater quality test values are less than the trigger values or meet the discharge criteria presented in Appendix 1, there is a low risk of adverse ecological effects and no further action is required, except for regular monitoring.
- 5.11 If tailwater quality test values are higher than the trigger values or do not meet the discharge criteria, there is an increased risk that adverse ecological effects will occur, and management/remedial action or further ecosystem or site-specific investigation is required.
- 5.12 Consider requiring dewatering discharge to cease immediately if the trigger values of the parameters as defined in Appendix 1 are met or exceeded, indicating water quality deterioration, or there are deleterious impacts on water-dependent ecosystems.

- 5.13 Require water quality monitoring to be undertaken in accordance with [ANZG 2018](#) and the [Field Sampling Guidelines: A Guideline for Field Sampling for Surface Water Quality Monitoring Programs](#) (DWER).

Acid sulphate soils and contaminated sites

- 5.14 Recommend that dewatering is managed to avoid environmental impacts from the disturbance of acid sulphate soils. The [Acid Sulfate Soils Planning Guidelines](#) (Western Australian Planning Commission) identify matters that need to be addressed at various stages of the planning process to ensure that the subdivision and development of land containing acid sulphate soils is planned and managed to avoid potential adverse effects on the natural and built environment. To assist with the identification, investigation and management of soil and water in acid sulphate soil landscapes, see the [Identification and Investigation of Acid Sulfate Soils and Acidic Landscapes](#) (DWER) and [Treatment and Management of Soil and Water in Acid Sulfate Soil Landscapes](#) (DWER) guidelines.
- 5.15 Recommend that land use constraints, such as elevated nutrient or contaminant levels, are addressed in dewatering proposals regardless of the site's classification under the *Contaminated Sites Act 2003*.
- 5.16 Adequate site investigations are to be undertaken before dewatering commences to determine the appropriate water quality management measures for the site and to establish if previous land use practices resulted in soil, groundwater or surface water contamination. Sites that are suspected to be contaminated or are found to be contaminated should be reported to DWER in accordance with the requirements of the *Contaminated Sites Act 2003*. Subsequent remediation of the site may be required prior to land use changes or development being considered.

Continuous post-development dewatering

- 5.17 Avoid or minimise continuous post-development dewatering through development design and construction methods, where possible.
- 5.18 Require applications that include continuous post-development dewatering to provide a management and monitoring plan addressing the provisions of this policy proportionate to the level of risk associated with the proposal.
- 5.19 Require continuous dewatering systems to incorporate tailwater treatment (either at the inflow or at the outlet) prior to discharge to the receiving environment. The proposed treatment is to be suitable for the contaminants and/or nutrients present in the tailwater. Sufficient land within the development boundary should be set aside to treat tailwater prior to discharge. The management and monitoring plan is to include ongoing reporting of tailwater quality and periodic review of the treatment system performance.
- 5.20 Recommend any discharge of treated tailwater to the environment follows existing natural drainage lines, provided that the outlet is not located within waterways, waterway foreshore areas, wetlands, or wetland buffers.

6. POLICY IMPLEMENTATION STRATEGIES

To implement this policy, the department will:

Swan River Trust

- 6.1 Consult with the Swan River Trust when assessing proposals under Part 5 of the SCRM Act and preparing strategic documents and corporate policies and guidelines.

- 6.2 Provide advice on behalf of the Swan River Trust in accordance with delegated powers.
- 6.3 Keep the Swan River Trust informed of development and permitted works, acts and activities within the River reserve.

Schedule 5 authorities

- 6.4 Provide advice to relevant Schedule 5 authorities when consulted on planning instruments, and the assessment of land use and development proposals and other works, acts and activities within or affecting the DCA.

Referral agencies

- 6.5 Ensure there is a clear understanding of the role of referral agencies, how their advice will be considered in assessing proposals and when clearing conditions of approval.

Assessment of proposals

- 6.6 Seek appropriate advice when assessing proposals. Advice may be sought from planning authorities, referral agencies, service providers (e.g. Water Corporation), contractors, consultants, or other stakeholders and from the department's specialist branches and regional locations. Where expertise is available from within the department, it will be utilised prior to seeking advice from external parties.
- 6.7 Ensure relevant staff, contractors and consultants have the necessary qualifications, skills and expertise when assessing planning and development proposals.
- 6.8 Maintain records of discussions, advice and decisions when undertaking the department's and Swan River Trust's statutory roles in accordance with the *State Records Act 2000*.

7. CUSTODIAN

Executive Director Conservation and Ecosystem Management.

8. PUBLICATION

This policy will be made available on the department's website and intranet.

9. KEY WORDS

Swan, Canning, river, development control area, dewatering, construction dewatering, continuous dewatering, tailwater, water quality, discharge criteria, dewatering management plan, trigger value, acid sulphate soil, contaminated site, water-dependent ecosystems.

10. REVIEW

Further reviews will be at the discretion of the Director General, with a review undertaken after five years from the date it is signed.

11. APPROVAL

Approved by



Stuart Smith
DIRECTOR GENERAL /
CHIEF EXECUTIVE OFFICER

Date: 16 June 2026



David McFerran
CHAIR
SWAN RIVER TRUST

Date: 4 June 2026

Effective date: 16 June 2026

GLOSSARY

For the purpose of this policy:

Receiving environment is the existing social, cultural and biophysical environment of the areas that receive tailwater.

Receiving waters are water bodies (e.g. estuaries, rivers, streams and wetlands).

Tailwater is the extracted water (groundwater or surface water) from a dewatering system.

Water-dependent ecosystem are parts of the environment in which the composition of species and natural ecological processes are determined by the permanent or temporary presence of flowing or standing surface water or groundwater.

INDICATIVE DISCHARGE CRITERIA

The following discharge criteria are to be used to assess water quality for dewatering involving the discharge of tailwater to the DCA, either directly or indirectly. The indicative discharge criteria can provide a generic starting point for assessing water quality. Locally derived discharge criteria should be used in the first instance where adequate baseline assessments have been undertaken in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018) and the proposed discharge criteria meets the requirements of section 5.5 of this policy.

Parameter	Trigger Value
Nutrients	Default guideline values for physical and chemical stressors for south-west Australia for slightly disturbed ecosystems identified in ANZG (2018) ¹ (Table 3.3.6).
Total iron	>1.0 mg/L ¹
Total aluminium	>0.15 mg/L ¹
All other toxicants	Default guideline values for toxicants at 95% level of protection identified in ANZG (2018) ¹ . Default guideline values for PFAS at 99% level of protection identified in either ANZG (2018) ¹ or PFAS NEMP ² , whichever is the lowest. In the absence of estuarine guidelines, the lowest of either the freshwater or marine guideline levels should be applied.
pH	Should remain within the range 6.5 to 8.5 and within 1 pH unit of the receiving environment ³ .
Odours and colours	No objectionable odours or visible colour changes in the receiving environment ³ .
Floatable matter	No visible floating oil, grease, scum, litter or other objectionable material. No discharge of flocculent or floc formation in the receiving environment ³ .
Settleable matter	No deposits that adversely affect the recreation or ecological values of the receiving waters.
Turbidity	Not to vary more than 10% from the background levels (in the receiving waters) or cause a visible reduction in light penetration of receiving waters.
Temperature	Not to vary more than 2°C from the background level (in the receiving waters) ^{3,4} .
Salinity	Not to vary more than 10% from the background levels in the receiving environment (concentrations less than the receiving environment are generally acceptable if unlikely to cause detrimental impacts) ^{3,4} .
Dissolved Oxygen	Default trigger values for physical and chemical stressors for south-west Australia for slightly disturbed ecosystems identified in ANZG (2018) ¹ (Table 3.3.6).
Chlorophyll-a	Default trigger values for physical and chemical stressors for south-west Australia for slightly disturbed ecosystems identified in ANZG (2018) ¹ (Table 3.3.6).
Phytoplankton	Interim phytoplankton trigger values for microalgae ⁵ .
Pathogens	As per NHMRC 2008 ⁶ .

1. [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#) (ANZG 2018).
2. [PFAS National Environmental Management Plan Version 3.0](#) (HEPA 2025).
3. [Treatment and Management of Soil and Water in Acid Sulfate Soil Landscapes](#) (DWER 2015).
4. The weekly physical-chemical profiles of the Swan and Canning rivers are available from the website <https://www.dbca.wa.gov.au/management/swan-canning-riverpark/monitoring-and-reporting-swam-canning-riverpark> and can be used (on the advice of the department) to establish the 'background levels' referred to for temperature and salinity.
5. Set by the department in consultation with DWER and the Department of Health and reviewed annually. Available upon request.
6. [Guidelines for Managing Risks in Recreational Water](#) (NHMRC 2008).