

Water quality and the South Australian planning system

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EPA1081/16: This position statement assists planning authorities and proponents of development understand the position of the Environment Protection Authority (EPA) on water quality in relation to the South Australian planning system.

Introduction

To ensure the requirements of the *Environment Protection Act 1993* (EP Act) and *Environment Protection (Water Quality) Policy 2015* (WQ Policy) are met, this position statement describes how water quality is to be addressed at each stage of the South Australian planning system.

It will also inform the EPA's responses to the assessment of water quality issues and risks at the various stages of the South Australian planning system.

This position statement is not legally binding and cannot be used to alter, broaden or narrow the exercise of the EPA's functions and powers.

Why is water important?

The state's water resources support a diverse range of ecosystems, including wetlands along the River Murray, creeks in the Mount Lofty Ranges and the groundwater resources of the South East. The state's marine ecosystems are unique and among the most biologically diverse in the world, with many endemic, and internationally and nationally important species.

When the EPA refers to *water quality* as it means the condition of a water body (either surface—fresh and marine or underground waters) and its related suitability for different purposes—also known as environmental values. The WQ Policy sets default environmental values (EVs) for all surface and underground waters in South Australia¹. Specific EVs are established for particular waters across the state and include:

- aquatic ecosystems
- recreational uses (eg swimming or boating) and aesthetics (visual appearance and enjoyment)
- drinking water for human consumption

¹ Clause 6 and Schedule 1 of the *Environment Protection (Water Quality) Policy 2015* designate protected environmental values applicable to all waters in South Australia.

- primary industries – irrigation and general water use
- primary industries – livestock drinking water
- primary industries – aquaculture and human consumption of aquatic foods
- cultural and spiritual values.

The environmental goal of the EPA in respect of water is ‘the quality of surface, ground, coastal and marine waters is protected from pollution’.

The South Australian planning system affords an important opportunity to address water quality issues and risks that may arise from a shift in planning strategy, development policy change or proposed development. The EPA works through the planning system to protect South Australian waters from the adverse impacts of pollution that might reduce their value to current and future generations. This includes our creeks, rivers, wetlands, lakes, coastal and underground waters.

Water quality may be regulated through legislative means including the EP Act and the WQ Policy. A key objective of the policy is to protect the EVs of a water body from pollution. In this context, water pollution refers to inputs of a chemical, waste or sediment into a water body that has the potential to cause an environmental impact and can be from a point source² or diffuse pollution³.

The EP Act also refers to [water protection areas](#) across South Australia, which are defined for the purpose of providing special environmental protection.

Focus areas

The EPA has an interest in the impact of proposed developments on water quality in all parts of South Australia, but focuses its concerns in the River Murray and the Lower Lakes, the Mount Lofty Ranges Watershed (Adelaide’s primary water supply catchment), the South East’s groundwater resources, Adelaide’s coastal waters, Lower Spencer Gulf and Upper Spencer Gulf.

Significant threats to water quality in these regions are:

- River Murray and Lower Lakes (incorporates the declared River Murray Water Protection Area under the EP Act) – pollution sources including contaminated stormwater runoff, cumulative impacts from onsite wastewater disposal systems, river vessel discharge and return of irrigation drainage from the Lower Murray Irrigated Reclaimed Areas
- Mount Lofty Ranges Watershed (declared as the Mount Lofty Ranges Water Protection Area under the EP Act) – pollution sources including cumulative impacts from onsite wastewater disposal systems, animal faeces, over application or poorly timed application of fertilisers and chemicals, soil erosion and degraded watercourses
- South East – pollution sources to groundwater including the historical disposal of wastes from varying industries and current diffuse pollution from agriculture and forestry; and the impact on the near shore environment from agricultural runoff
- Adelaide’s coastal waters – pollution sources including wastewater treatment plants and stormwater outlets discharging into Gulf St Vincent, and the cumulative effect of numerous discharges from heavy industry particularly around the Port River
- Lower Spencer Gulf – pollution sources including the cumulative effect of nutrients from uneaten feed and faeces and chemical use associated with land and sea-based aquaculture, the Port Lincoln wastewater treatment plant, discharge from fish processors and agricultural and stormwater runoff from Port Lincoln

² **Point source pollution:** refers to the entry of pollutants from readily identified locations, such as a pipe or sewer outflow. Industrial factories, sewage treatment plants, and stormwater outflow pipes are common point sources of water pollution.

³ **Diffuse pollution:** refers to non-point source pollutants that run off or seep into waterways from broad areas of land such as agriculture or urban settings, as well as dispersal from airborne pollutant sources. Major forms of diffuse pollution include seepage from septic tanks, sediment run-off from construction sites and pesticides and fertilisers from agricultural operations. Non-point sources are generally the largest contributors to water pollution at the catchment scale.

- Upper Spencer Gulf – pollution sources are primarily from the industrial discharge of metals and nutrients at Port Pirie and Whyalla.

Addressing water quality at each stage of the South Australian planning system

The major components of the South Australian planning system—Planning Strategy, Development Plans, development application, and major development or project—are interconnected and regulated through the *Development Act 1993* and the *Development Regulations 2008*.

Within this framework the EPA provides advice on proposed changes to the Planning Strategy and Development Plans, and assesses referred development applications and major development or project applications.

Potential water quality impacts need to be assessed and addressed in any proposed changes to the major components of the South Australian planning system to ensure the state's water resources are protected from pollution.

The South Australian planning system provides the opportunity to ensure that the protection of the state's water resources is a fundamental consideration in establishing the pattern of land use and the identification of key growth areas, such as urban and township expansion areas identified within *The 30-Year Plan for Greater Adelaide* (2010). Incorporating water sensitive urban design techniques within developments will also contribute to achieving water quality improvements, and is supported by policies and strategies within *The 30-Year Plan for Greater Adelaide*.

South Australian Planning Strategy

At the Planning Strategy stage the EPA will have an interest in the location of land identified for future development and its proximity to, and likelihood of impacting on the water quality of, the region's water resources.

When an amendment to the South Australian Planning Strategy is prepared it is the EPA's position that:

- the environmental values of the region's water resources are given early and appropriate consideration, and that any shift in planning strategy for a key development area or region will not lead to a greater risk of pollution to water resources having regard to the environmental values of that resource
- water sensitive urban design⁴ forms an integral part of development planning in cities, towns and regions (including residential, retail, commercial, institutional, industrial and transport developments)
- principles and policies that reference water quality are included to enable further consideration and expansion of those principles and policies in other levels of the planning system.

Development Plan Amendment (DPA)

At this stage the EPA will have an interest in proposed changes to planning policy or rezoning of land, such as rezoning land within a known floodplain (which could result in an increase to flood related water quality risks), or a rezoning adjacent to the River Murray (which could lead to the intensification of land use and the increased risk of point source or diffuse pollution entering the river).

When a DPA is prepared it is the EPA's position that:

- within the River Murray and Mount Lofty Ranges Water Protection Areas development policy changes would result in a neutral or beneficial impact on the quality of water draining downstream or into water supply reservoirs
- the cumulative impact of point source and/or diffuse pollution arising from potential development in the area are considered and minimised (such as an expanded or new industrial zone adjacent to Spencer Gulf or Port River)
- the Statement of Intent proposes to investigate water quality risks associated with the proposed development, including within flood prone areas; if not the EPA will recommend additional investigations are undertaken

⁴ Water sensitive urban design provides for the sustainable use and reuse of water within developments from various sources, such as rainwater, stormwater, groundwater, mains water and wastewater (including greywater and blackwater).

- the Statement of Intent proposes to investigate opportunities for water sensitive urban design; if not the EPA will recommend additional investigations are undertaken
- the DPA proposes policy for inclusion in the development plan, or there is existing policy in the development plan, that avoids or mitigates potential impacts on water quality. The inclusion of such policy enables the proper assessment of water quality at the development application stage.

Development application and major development or project

Water quality issues may arise in four primary categories of development referred to the EPA, namely, activities of environmental or major environmental significance (detailed in schedules 21 and 22 of the *Development Act 1993*), non-complying development within the River Murray Water Protection Area and non-complying development within the Mount Lofty Ranges Water Protection Area.

At the development application, or major development or project stage, the interest of the EPA is to protect the environmental values of a water body from pollution.

In instances where water quality may be an issue – such as the industrial discharge of a pollutant to a water body, or the potential impact of stormwater from a residential land division - there needs to be an assessment of the water quality impact. The EPA will examine whether the proposal would meet the requirements of the EP Act, WQ Policy, and relevant codes of practice, standards and guidelines.

In accordance with 'Division 2 – Major developments or projects' of the *Development Act 1993* the environmental impact statement, public environmental report, or development report for a proposed major development or project must include a statement of the extent to which the expected effects of the development or project are consistent with the general environmental duty and objects of the EP Act and the requirements of the WQ Policy if it involves, or is for the purpose of, a prescribed activity of environmental significance as defined by the EP Act.

When a development application and any major development or project is prepared it is the EPA's position that:

- the waste management hierarchy⁵ will be used to guide decisions on proposed development to avoid discharge of pollutants to surface (fresh and marine) or underground waters
- wastewater management systems (either solely or associated with a proposed activity) comply with the obligations in the WQ Policy to prevent the discharge of pollutants into any surface (fresh and marine) or underground waters, or onto land where it may enter waters
- water sensitive urban design features are incorporated within the construction phase and ongoing occupation of residential land divisions and other referable developments to achieve water quality improvements for stormwater
- where development is proposed within or likely to impact upon surface (fresh and marine) waters, such as dredging or a new port facility, the environmental values of the water body are given careful consideration to avoid and minimise pollution impacts
- development within the River Murray and the Mount Lofty Ranges Water Protection Areas has a neutral or beneficial effect on water quality.

Further information

Legislation

[Online legislation](#) is freely available. Copies of legislation are available for purchase from:

Service SA Government Legislation Outlet
Adelaide Service SA Centre

⁵ In preferred order with respect to waste: avoid, minimise, reuse, recycle, recover, treat and dispose.

108 North Terrace
Adelaide SA 5000

Telephone: 13 23 24
Facsimile: (08) 8204 1909
Website: <shop.service.sa.gov.au>
Email: <ServiceSAcustomerservice@sa.gov.au>

General information

Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

Telephone: (08) 8204 2004
Facsimile: (08) 8124 4670
Freecall: 1800 623 445 (country)
Website: <www.epa.sa.gov.au>
Email: <epainfo@epa.sa.gov.au>
