Water Affecting Activity Control Policy



LANDSCAPE SOUTH AUSTRALIA EYRE PENINSULA

Water Affecting Activity Control Policy Statement

This policy sets out the principles for managing water infrastructure and water take. The policy is applicable to the Eyre Peninsula Landscape Board region, and has been developed under the provisions of Section 102 (3) (c) of the *Landscape South Australia Act 2019* (the Act). Definitions are included in section 3 of the policy to assist with the interpretation of the principles.

1. Introduction

Water affecting activities are activities that may impact the condition of a water resource, water dependent ecosystems or water users. Common examples of water affecting activities include: constructing a dam, road crossing over watercourse, draining water into a watercourse or lake, constructing a drainage channel, or drilling a well. A permit and compliance framework is in place to manage potential impacts associated with these activities.

Any person undertaking a water affecting activity should familiarise themselves with this policy. If you are uncertain whether an activity is considered a 'water affecting activity' under the Act, you should seek advice from an Officer from the Eyre Peninsula Landscape Board before undertaking the activity.

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www.landscape.sa.gov.au/ep/water/water-affecting-activities

To assist in achieving sustainable water resources management outcomes, specific principles have been developed to manage water take from infrastructure such as diversion structures and non-prescribed wells. These principles are under the auspices of section 104 of the Act.

It is important to note that the principles for the water take from a prescribed well are set out in the *Water Allocation Plan for the Southern Basins and Musgrave Prescribed Wells Areas*.

1.1 Objectives

The objectives of the water affecting activity policy include:

1. Achieve water resource management outcomes through effective management of water related infrastructure and activities.
2. Regulate activities that affect the quality or quantity of water resources.
3. Facilitate productive use of water resources while maintaining the water needs of water dependent ecosystems.
4. Support communities and properties to develop and maintain good water supplies.
5. Manage development impacts on water users and water dependent ecosystems.
6. Maintain or improve the hydraulic function of water resources, floodplains and catchments.
7. Maintain or improve riparian and floodplain habitats for the purpose of conserving aquatic biodiversity and supporting ecological functions and services.

1.2 Water resources of the Eyre Peninsula

The Eyre Peninsula's climate, geology and topography largely dictate the occurrence and character of water resources. The western, central and northern parts of the Eyre Peninsula have limited watercourses due to low rainfall, high evaporation, permeable soils and low topography (refer to map overleaf, figure 1). In comparison, the southern and eastern parts have a greater number of watercourses due to steeper topography, outcropping bedrock geology, areas of clay soils, and areas of higher rainfall. With the exception of the Tod River, watercourses are seasonal where peak flows are experienced during winter and often cease flowing by late spring or early summer. Water quality in the watercourses is generally brackish to saline in low flowing conditions, yet freshen after winter rainfall and storm events.

Most catchments have been extensively developed for agriculture, which has modified the hydrology and ecology.

This has led to the following:

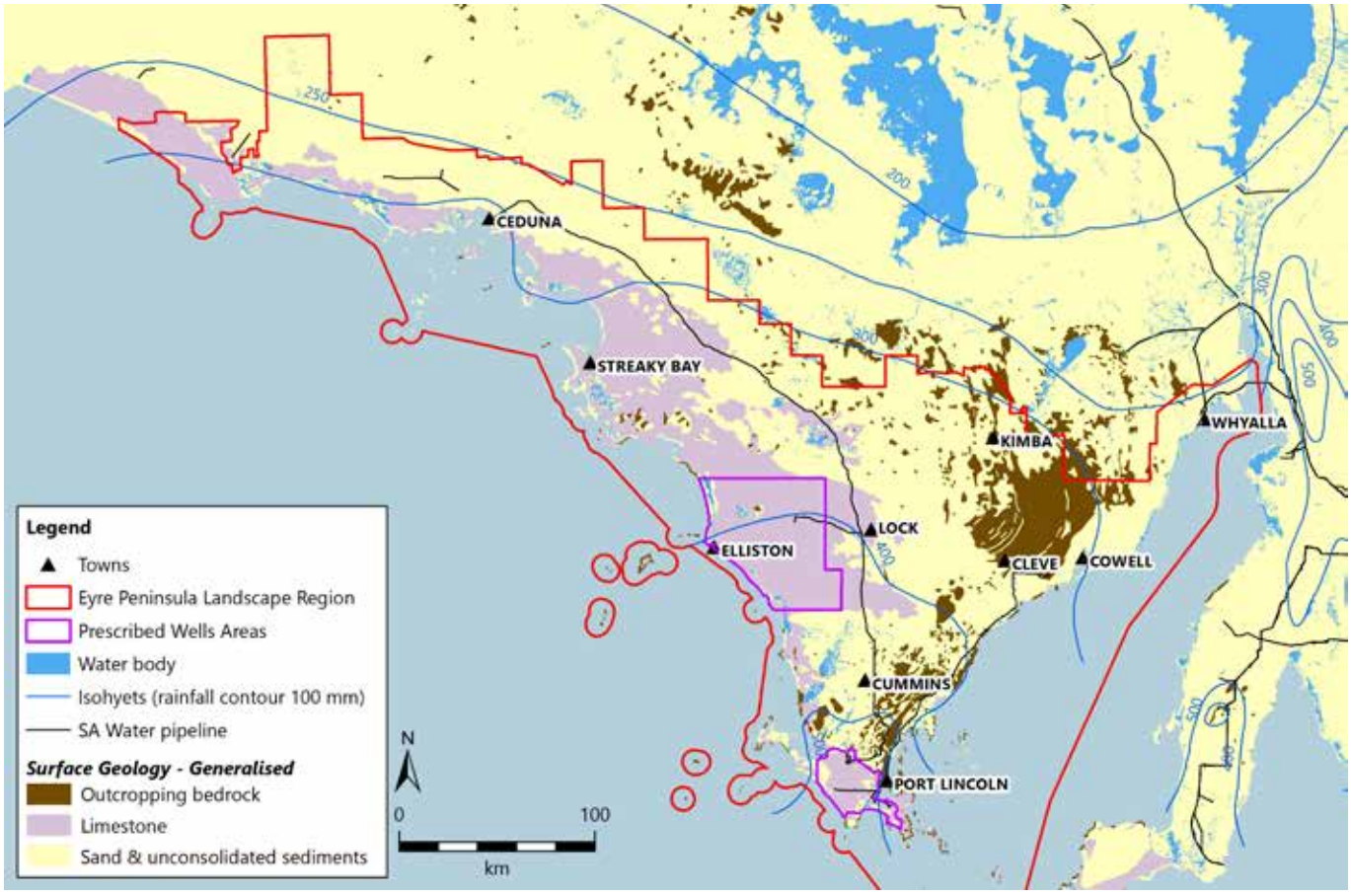
- Dryland salinity and waterlogging due to land clearance and catchment infrastructure. Land clearance has also increased saline discharge from groundwater. A common response to dryland salinity and groundwater discharge is saline drainage.
- Degraded riparian habitats that have ongoing competition for use between livestock, pest plants and native biodiversity.
- Altered flow regime of watercourses including quantity, timing and duration of flow events, which has altered condition of water dependent ecosystems.
- Increased quantity and velocity of run-off resulting in erosion. Erosion rates have reduced as a result of no-till cropping practices, contour banks, and streambed re-stabilisation.
- Increased competition for available water between water users and water dependent ecosystems as a result of dam development, particularly during periods of low rainfall.

Across the Eyre Peninsula there are more than 2,200 inland wetlands, with greater than 85% of the region's wetlands being dependent upon groundwater. Saline lakes are the most common followed by saline marshes, shrub swamps and freshwater sedge marshes. Wetlands are important refuge and breeding grounds for local and migratory birds.

Groundwater is an important water resource for towns, livestock and groundwater dependent ecosystems including Red Gum woodlands and wetlands. Major sources of groundwater are found within limestone aquifers located along the southern and western parts of the Eyre Peninsula (*refer to map below*). Water quality in the limestone aquifers varies from fresh to saline. Aquifers with fresh groundwater are referred to as a fresh water lens. The majority of the region's reticulated supply is sourced from fresh water lens within the Southern Basins and Musgrave Prescribed Wells Areas. A Water Allocation Plan is in place to manage extraction from the prescribed wells areas.

Groundwater is accessed via wells or groundwater access trenches. There are occurrences of groundwater quality deteriorating as a result of groundwater access trenches, particularly from evaporation, direct stock access or contaminated run-off.

Figure 1 – Water Resources of the Eyre Peninsula Landscape region



Springs are common in eastern and southern parts of the Eyre Peninsula. These springs are expressions of groundwater that is predominantly sourced from the bedrock geology. Flows from springs vary from permanent to seasonal; and water quality is highly variable. Flows from springs are often excavated or dammed and used for stock watering.

2. Water affecting activity permits

This water affecting activity policy sets out the matters that the Eyre Peninsula Landscape Board and the Minister will consider when granting or refusing a water affecting activity permit. The principles guide the implementation of Part 8, Division 2 of the Act.

Activities that require a water affecting activity permit are identified in Table 1 and Table 2.

The Minister is the relevant authority for all water affecting activities identified in Table 2. A permit is required to undertake any water affecting activity identified in column 1.

The Eyre Peninsula Landscape Board is the relevant authority for all water affecting activities identified in the below Table 2. Water affecting activities that require a permit are identified in column 1; and permit exemptions are identified in column 3.

Following receipt of a permit application, a Landscape Board Officer will follow the process outlined in Figure 2. The permit will be assessed against the policy's general principles and any activity specific principles. These principles are designed to provide clear direction for people wanting to undertake a water affecting activity, while also ensuring permit applications are assessed consistently and objectively.

There are a number of permit exemptions for water affecting activities which are outlined in section 2.2.4. Permit exemptions are for water affecting activities that have been authorised under corresponding legislations, or the Board has identified a permit exemption for a low risk water affecting activity. Permit exemptions may also apply where an applicant develops a Best Practice Operating Procedure (BPOP). Section 2.2.2 provides details on how to develop a BPOP.

When a water affecting activity is undertaken without a permit, or conditions on a permit are not adhered to, a notice to rectify the works may be issued by the relevant authority. In these instances, the relevant authority will initially seek voluntary compliance with the involved person. Should the requested works not be rectified voluntarily, it may become a compliance matter involving legal proceedings and penalties.

Table 1 – Water affecting activities for which the Minister is the relevant authority

Water affecting activities requiring a permit (Column 1)	**Section for activity specific principles Column 2)**	**Subsection of the Landscape South Australia Act, 2019 (Column 3)**
Drilling, plugging, backfilling or sealing of a well.	Section 2.3.9	104(3)(a)
Repairing, replacing or altering the casing, lining or screening of a well	Section 2.3.9	104(3)(b)
Draining or discharging water directly or indirectly into a well.	Section 2.3.10	104(3)(c)

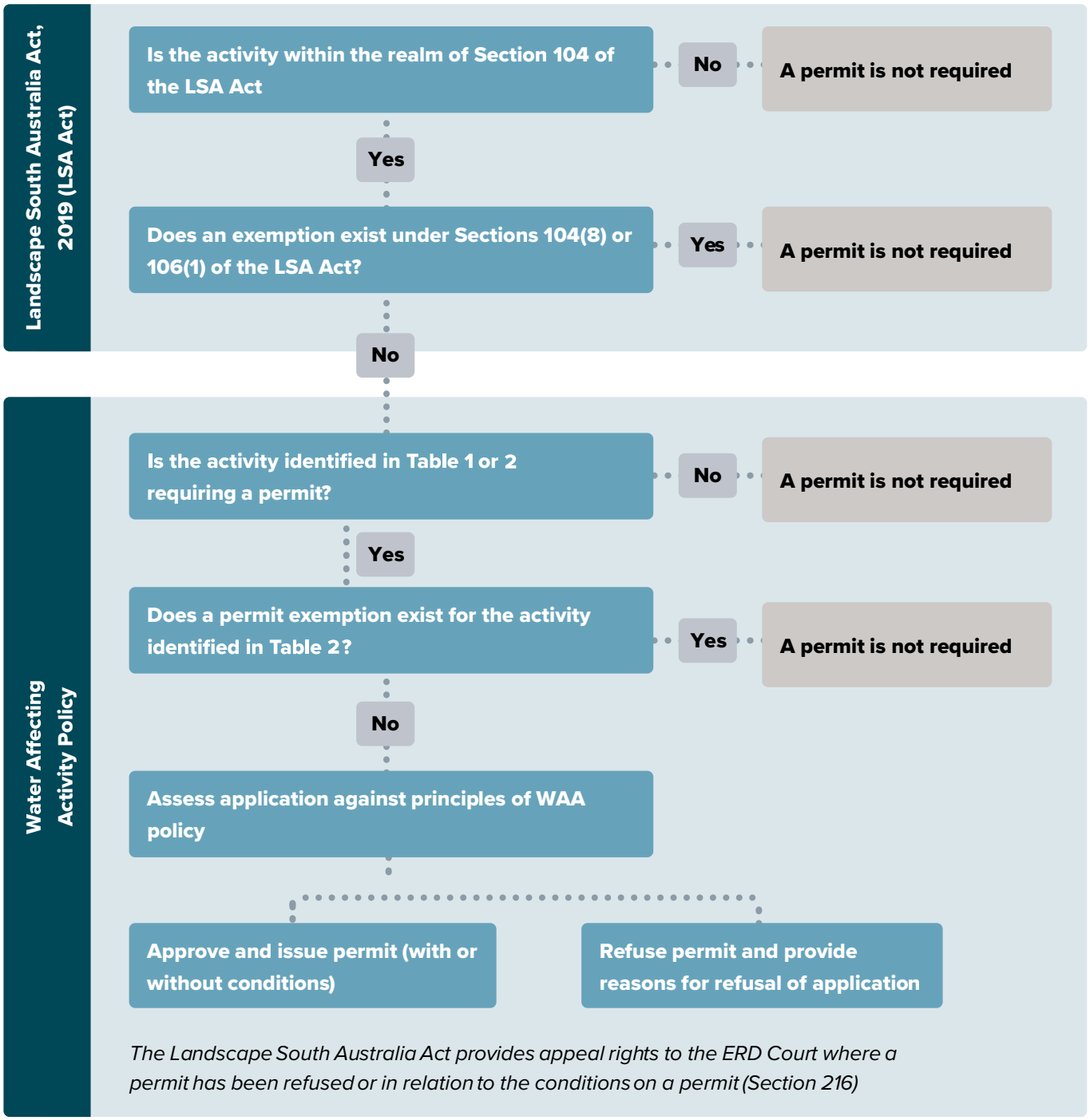
Table 2 - Water affecting activities for which the Board is the relevant authority

Water affecting activities requiring a permit **(Column 1)**	**Section for activity specific principles** **(Column 2)**	**Permit exemptions** **(Column 3)**	**Subsection of the *Landscape South Australia Act, 2019*** **(Column 4)**
The construction or modification of a dam or diversion structure that will collect or divert water flowing in a watercourse or flowing over land. Activities requiring a permit include, but are not limited to: • Construct or modify a dam within in a priority catchment as defined in Table 4; • Construct or modify a weir or diversion structure within in a priority catchment as defined in Table 4.	Section 2.3.1	• Desilt a dam provided the activity is in accordance with principle 21. • Remove an off-stream dam provided the activity is in accordance with principle 22. • Construct, modify or remove a contour bank provided the activity is in accordance with principle 23. • An activity in accordance with an endorsed Best Practice Operating Procedure (BPOP).	104(4)(a)
The construction or modification of a structure or building in a watercourse, lake or floodplain. Activities requiring a permit include, but are not limited to: • Construct or modify a culvert, causeway, ford, or bridge; • Construct or modify stormwater infrastructure; • Construct or modify an earthen embankment or concrete foundation; • Construct or modify a monitoring device; • Construct or modify a grade control structure.	Section 2.3.2	• Emergency repairs to culvert and causeway provided the activity is consistent with principle 24. • An activity in accordance with an endorsed BPOP • Maintaining an existing structure or building in accordance to original permit conditions and or specifications	104(4)(b)
Draining or discharging water into a watercourse or lake. Activities requiring a permit include, but are not limited to: • Stormwater disposal; • Saline drainage; • Disposal of fluid from drilling, exploration or mining; • Disposal of pump test water.	Section 2.3.3	• An activity in accordance with an endorsed BPOP	104(4)(c)

Water affecting activities requiring a permit **(Column 1)**	**Section for activity specific principles** **(Column 2)**	**Permit exemptions** **(Column 3)**	**Subsection of the *Landscape South Australia Act, 2019*** **(Column 4)**
Depositing an object or solid material into a watercourse or lake. Activities requiring a permit include, but are not limited to: • Construct or modify an erosion control structure; • Disposal of material within a watercourse or lake; • Raising the bed or bank heights of a watercourse or lake.	Section 2.3.4	• An activity in accordance with an endorsed BPOP	104(4)(d)
Obstructing a watercourse or lake in any other manner. Activities requiring a permit include, but are not limited to: • Planting vegetation in watercourse or lake.	n/a	• The Board, or delegate, has provided financial assistance or support for planting vegetation in a watercourse or lake. • An activity in accordance with an endorsed BPOP.	104(4)(e)
Depositing an object or solid material on a floodplain or shore of a lake to control flooding. Activities requiring a permit include, but are not limited to: • Levee bank; • Raising the bank heights of a lake.	Section 2.3.5	• Emergency repairs to a levee provided the activity is consistent with principle 25. • An activity in accordance with an endorsed BPOP.	104(4)(f)
Destroying vegetation in a watercourse, lake or floodplain requires a permit.	Section 2.3.6	• Vegetation is destroyed in accordance with Chapter 8 of the Act 2020 for the control of pest animals and plants. • Vegetation is destroyed with consent granted under the *Native Vegetation Act 1991*. • An activity in accordance with an endorsed BPOP.	104(4)(g)

Water affecting activities requiring a permit **(Column 1)**	**Section for activity specific principles** **(Column 2)**	**Permit exemptions** **(Column 3)**	**Subsection of the *Landscape South Australia Act, 2019*** **(Column 4)**
Excavating rock, sand or soil from a watercourse, lake or floodplain. Activities requiring a permit include, but are not limited to: • Altering a watercourse, drain or lake; • Excavating to construct a drain or channelise a watercourse; • Mining within a watercourse, lake, floodplain or within 100 metres of the shores of a lake;	Section 2.3.7	• Repair or maintain an existing drain provided the activity is in accordance with principle 27. • Desilt a spring, soak or water hole provided the activity is in accordance with principle 28. • An activity in accordance with an endorsed BPOP.	104(4)(h)
Undertaking commercial forestry (including carbon plantings) within a priority catchment requires a permit, as defined in Table 4.	Section 2.3.8	• An activity in accordance with an endorsed BPOP. • Planting of local native seed or tube stock to revegetate a local vegetation community with appropriate structural components (over-storey, mid-storey and understorey species) even if carbon credits will be derived from the planting provided the activity is in accordance with principle 29.	104(4)(k)

Figure 2 – Assessment Process for Water Affecting Activities Permits



2.1 General principles

1. Subject to 2, a water affecting activity including the design, construction maintenance of associated infrastructure shall not:

a. adversely affect the quantity or quality of water resources;
b. adversely affect a person's lawful take of water;
c. contribute to the over-extraction of a water resource;
d. contribute to water logging, dryland salinity or rising water tables;
e. expose or mobilise acid sulphate soils;
f. increase erosion or risk of erosion;
g. increase localised or catchment flooding risks;
h. adversely affect the frequency and duration of water flowing in a watercourse or floodplain;
i. adversely affect the standing water level in a lake or the integrity of an aquifer;
j. adversely interfere with surface water and groundwater interactions;
k. adversely affect water dependent ecosystems and their environmental water requirements;
l. adversely affect ecological functions, diversity or habitat, and adversely impact on the migration of aquatic biota;
m. compromise the productive capacity of the land;
n. damage property or existing infrastructure; or
o. compromise the integrity of authorised scientific monitoring and assessment of water resources.

2. Principle 1(a), 1(c), 1(i), 1(i), 1(j), and 1(m), may not be practical for an authorised mining activity under the Mining Act that involves open pit mining or dewatering an aquifer. For these instances, the applicant is required to develop a risk assessment and mitigation strategies to the satisfaction of the Minister, the Board or delegate.

2.2 Administrative matters

2.2.1 Permit principles

3. A water affecting activity permit is required for activities identified in in column 1 of Table 1, and column 1 of Table 2 as per section 104 of the Act.

4. A water affecting activity permit shall be assessed against the general principles in section 2.1 and any activity specific principles stated in the subsections of section 2.3.

5. A delegate of the Board or a delegate of the Minister may request an applicant to provide further information if in the opinion of the delegate, the applicant has provided insufficient information to assess the permit application.

6. The principles specified in the water affecting activity policy apply to the entire Eyre Peninsula Landscape Board region, unless a principle specifically defines an area for its application.

7. The water affecting activity principles set out in the Water Allocation Plan for Southern Basins and Musgrave Prescribed Wells Areas take precedence over the principles of this policy within the Regional Landscape Plan.

8. A water affecting activity permit may be varied or revoked by the relevant authority where the permit holder has failed to comply with conditions specified on the permit.

9. A water affecting activity permit is valid for a period of time as determined by the Board.

10. The Board or delegate may change or extend the expiry date of permit for an activity identified in Table 2 if the applicant requests in writing for a change or extension of the expiry date.

11. Public notification is not required for a water affecting activity permit application.

2.2.2 Best practice operating procedures

12. Best Practice Operating Procedures may be developed to outline an approach to undertake a water affecting activity without the need for a permit.

13. Best Practice Operating Procedures must be approved by the Board.

14. A person shall have prior written approval from the Board to undertake a water affecting activity in accordance with Best Practice Operating Procedures, and the following conditions apply:

a. A Best Practice Operating Procedure is valid for 12 months from the date of approval, or for such other period of time specified by the Board, and will apply to any activities to which the Best Practice Operating Procedures relate that may be undertaken in that period.
b. The Board may cancel a Best Practice Operating Procedures if in the Board's opinion, the person to whom the approval was granted has not complied with the Best Practice Operating Procedures, or in any other circumstances as the Board thinks fit.

15. The Board may refuse to grant an approval to a person to use Best Practice Operating Procedures if in the Board's opinion, the person has previously contravened or failed to comply with Best Practice Operating Procedures, or in any other circumstances as the Board thinks fit.

2.2.3 Planning and Design Code

16. Pursuant to section 75(3)(f) of the Act, it is the opinion of the Board that the Planning and Design Code (Code) should be amended to improve the relationship between the policies in the Code and the policies in the Regional Landscape Plan by:

a. Amending the Code to include the following Performance Outcome (from the Tumby Bay Development Plan, with "50 per cent" changed to "25 per cent") in the relevant zone, subzone or water overlay(s):

   Diversion or storage dams used for irrigation should be located off-stream, with the storage capacity of the dams not exceeding 25 per cent of the median annual runoff from the allotment.

17. Timing of this requested amendment shall be addressed when the State Planning Commission or relevant council next undertakes a general Code Amendment

2.2.4 Permit exemptions

18. A permit is not required in the following circumstances:

a. an authorisation or consent has been granted for the activity under any of the following legislations as per 106 of the Act:

   Planning, Development and Infrastructure Act 2016;

   Environment Protection Act 1993;

   Native Vegetation Act 1991; or

   Pastoral Land Management and Conservation Act 1989;

b. the Board has specified a permit exemption in Column 3 of Table 2; or
c. the water affecting activity is undertaken in accordance with an endorsed Best Practice Operating Procedure.

19. A permit is not required to construct or modify a dam with a volume greater than five megalitres or a wall height greater than three metres above ground level as development approval is required for such an activity from the relevant authority under the *Planning, Development and Infrastructure Act 2016*.

20. For the purposes of principle 19, the relevant authority shall refer the dam proposal to the Board for direction as per section 41, Schedule 9 part 12 of the *Planning, Development and Infrastructure Regulations 2017*; (or superseding regulations) and the Board shall provide direction in accordance with the water affecting activity policy.

21. A permit is not required for desilting a dam provided:

a. desilting only involves the removal of material deposited post dam construction or material deposited since the dam was previously desilted;
b. excavated material removed from desilting shall not be deposited within a watercourse, lake or floodplain of a watercourse; and
c. the capacity of the dam is not increased beyond its original size.

22. A permit is not required for removing an off-stream dam provided:

a. the dam is reinstated with clean fill to the same height of natural ground level; and
b. the reinstated area is stabilized with top soil and vegetation.

23. A permit is not required for the construction, modification or removal of a contour bank provided the contour bank does not intersect a watercourse.

24. A permit is not required for emergency repairs to a culvert or causeway as a result of a flood event, provided the following is adhered to:

a. emergency repairs are undertaken for the purposes of allowing safe access and preventing further flood damage;
b. culvert(s) and causeway are reinstated to a standard that is in accordance with principles 43 below and 44 where practical;
c. culvert(s) and causeway are reinstated within 12 months of the flood event occurring; and
d. the applicant notifies the Board or delegate once the works are undertaken.

25. A permit is not required for emergency repairs to a levee as a result of a flood event, provided the following is adhered to:

a. the levee is located within the catchments identified in Table 3 (*see Figure 4 for location*).
b. emergency repairs are undertaken for the purposes of preventing further flood damage;
c. the levee is reinstated to a standard that is in accordance with Principle 48;
d. the levee is reinstated within 12 months of the flood event occurring; and
e. the applicant notifies the Board or delegate once the works are undertaken.

26. A permit is not required to destroy vegetation growing in a watercourse, lake or floodplain if the activity is for the purpose of controlling pest animals or plants under an obligation of Part 9 of the Act, or an authorisation has been obtained under the *Native Vegetation Act 1991*.

27. A permit is not required for repairing or maintaining an existing drain within the catchments identified in Table 3, provided the activity is in accordance with principle 51.

28. A permit is not required for desilting a spring, soak or water hole provided:

a. Spring is currently accessed for stock purposes, and desilting only involves the removal of unconsolidated material;
b. desilting does not make the opening of the spring larger;
c. excavated material is not deposited within a watercourse, lake or floodplain of a watercourse; and
d. native vegetation is not removed unless authorisation is obtained under the *Native Vegetation Act 1991*.

29. A permit is not required for planting of local native seed or tube stock to revegetate a local vegetation community with appropriate structural components (over-storey, mid-storey and understorey species) even if carbon credits will be derived from the planting.

Table 3 – Exempt Catchments for emergency repairs or drain maintenance

Catchment	Hundreds for administration purposes
Lake Baird	Cummins, Stokes, Mortlock and Koppio
Lake Malata	Ulipa, Cummins, Stokes and Koppio
Lake Wangary	Warrow, Cummins, Mortlock, Koppio, Wanilla, Uley and Lake Wangary
Pillana Lagoon	Cummins and Mortlock

2.3 Activity specific principles

2.3.1 Dams, weirs and diversion structures

30. A permit is required to construct or modify a dam, weir or diversion structure located within a priority catchment as defined in Table 4 and displayed in Figure 4.

Table 4 – Priority catchments and associated Hundreds

Priority catchments	Hundreds for administration of priority catchments
Big Swamp	Wanilla, Uley and Lincoln
Boston Bay	Lincoln and Louth
Charlton Gully	Louth and Wanilla
Coffin Bay - Jussieu Peninsula	Lake Wangary, Lincoln, Uley, Sleaford, Flinders and Wanilla
Lake Baird	Cummins, Stokes, Mortlock and Koppio
Lake Greenly	Ulipa, Warrow, Cummins and Mortlock
Lake Malata	Ulipa, Cummins, Stokes and Koppio
Lake Wangary	Warrow, Cummins, Mortlock, Koppio, Wanilla, Uley and Lake Wangary
Little Swamp	Wanilla, Louth and Lincoln
Louth Bay	Louth, Koppio and Hutchinson
Lower Tod	Louth and Koppio
Meadows Creek	Louth
Rock Valley Creek	Koppio and Hutchinson
Peake Bay	Louth, Koppio and Hutchinson
Pillana Lagoon	Cummins and Mortlock
Pillowarta	Koppio and Hutchinson
Salt Creek	Stokes, Koppio, Hutchinson and Yaranyacka
Toolillie	Mortlock, Koppio, Wannila and Louth
Tumby Bay	Hutchinson, Stokes and Yaranyacka
Upper Tod	Koppio and Stokes
Woolshed Creek	Warrow and Lake Wangary

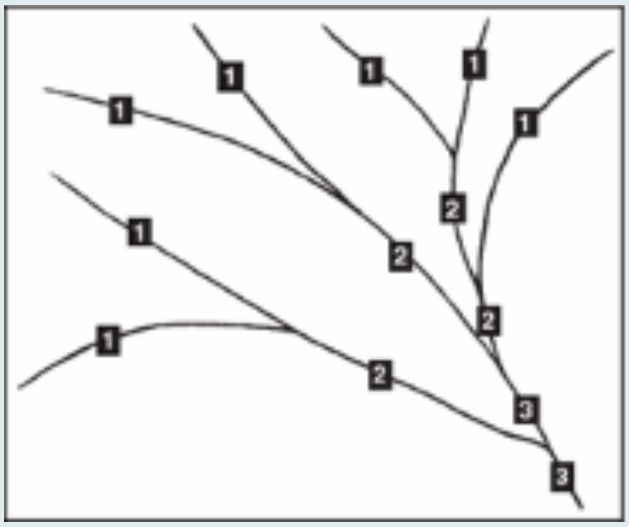
31. A dam, weir and diversion structure shall not be located:

a. in a third order watercourse or higher as defined by Figure 3;
b. in areas that may result in an increase in land affected by salinity or water logging;
c. in areas affected by acid sulphate soils;
d. in, immediately upstream, or immediately downstream of significant riparian vegetation.

32. A dam, weir or diversion structure shall be designed and constructed to:

a. limit seepage;
b. limit evaporation;
c. prevent excavated material being deposited within a watercourse or lake; and
d. prevent adverse impacts to downstream users or neighbouring properties.

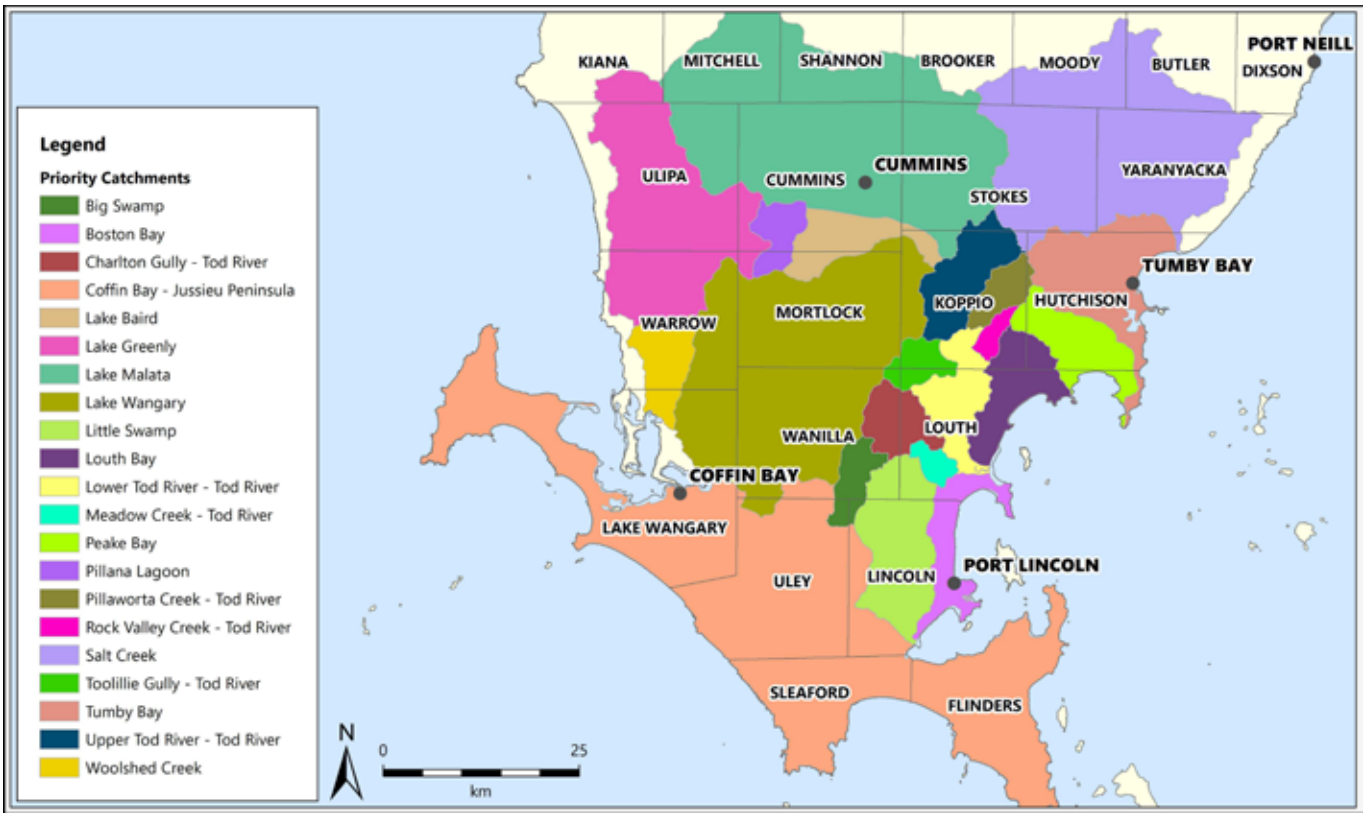
Figure 3 – Watercourse Ordering



Watercourses are ordered by the Strahler system, which is defined by:

- Any watercourse that has no watercourses flowing into it is a 1st order watercourse.
- Where two 1st order watercourses join, the watercourse becomes a 2nd order watercourse.
- Where two or more 2nd order watercourses join, they form a 3rd order watercourse.
- A 3rd order watercourse does not become a
- 4th order watercourse until it is joined by another 3rd order watercourse.

Figure 4 – Priority Catchments of the Eyre Peninsula Landscape Board region



Principles for dam construction and modification

33. Subject to principles 34 and 35, the allowable dam volume for a new or modified dam for an allotment within a priority catchment shall be calculated by Equation 1.

Equation 1: V = Y x A

Where:

V = allowable dam volume in megalitres (ML)

Y = allowable yield expressed in megalitres per hectare (ML/ ha), as defined in Column D of Table 5.

A = area in hectares (ha) of an allotment.

34. Subject to principle 35, the total volume of any existing dam(s) and a proposed dam(s) for an allotment within a priority catchment shall be equal to or less than the allowable dam volume as defined by Equation 1.

35. An additional volume may be collected in a dam if runoff can be collected from an artificial catchment provided:

a. the volume to be collected is calculated by Equation 2.
b. can be efficiently collected from any of the following surfaces:
    i. roof of a building;
    ii. secured sheet of polyethylene or equivalent;
    iii. bitumen, asphalt or concrete road;
    iv. brick or concrete pavement; or
    v. compacted earth that has been graded for runoff collection.
c. permission(s) in writing is obtained from the property owner if the applicant intends to collect runoff from a building, road or pavement that is not their property.

Equation 2: $$\mathbf{Va} = \frac{\mathbf{R} \times \mathbf{Aa} \times \mathbf{e}}{\mathbf{1{,}000{,}000}}$$

Where:

Va = volume in megalitres (ML) to be collected from an artificial catchment

R = mean annual rainfall in millimetres (mm per year), as defined in Column B of Table 5

Aa = area in metres squared (m2) of the artificial surface to be collected from.

e = efficiency factor to account water collection loses, and factors include:

0.8 for impervious surfaces including concrete, polyethylene, metal and bitumen;

0.4 for compacted earthen surfaces such as an unsealed road; or

the Board or delegate may specify a different efficiency factor for different surfaces or artificial catchments with reduced efficiencies.

Table 5 – Design values for priority catchments

A Priority catchments	B Mean rainfall** (mm)	C Catchment Yield# (ML/ha)	D Allowable Yield* (ML/ha)	E Unit flow rate^ (L/d/ha)
Big Swamp	547	0.50	0.12	43.0
Boston Bay	507	0.23	0.06	33.5
Charlton Gully	548	0.50	0.12	43.0
Coffin Bay - Jussieu Peninsula	504	0.40	0.10	39.9
Lake Baird	438	0.10	0.03	27.8
Lake Greenly	457	0.27	0.07	35.2
Lake Malata	431	0.10	0.03	27.8
Lake Wangary	475	0.25	0.06	34.3
Little Swamp	519	0.50	0.12	43.0
Louth Bay	384	0.22	0.05	33.1
Lower Tod River	465	0.22	0.05	33.1
Meadows Creek	454	0.10	0.03	27.8
Peake Bay	376	0.09	0.02	26.7
Pillana Lagoon	454	0.10	0.03	27.8
Pillowarta	498	0.27	0.07	35.2
Rock Valley Creek	473	0.27	0.07	35.2
Salt Creek	387	0.10	0.02	27.4
Toolillie Gully	510	0.27	0.07	35.2
Tumby Bay	382	0.09	0.02	26.7
Upper Tod River	508	0.27	0.07	35.2
Woolshed Creek	503	0.27	0.07	35.2

** Mean annual rainfall for the 20 year period 1 January 2001 to 31 December 2020. SILO grid point rainfall data was used.

Catchment yield is equivalent to runoff, and has been determined from a regional rainfall and runoff relationship using the Tanh hyperbolic function. This relationship was derived from the Toolillie gauging stations (AW 12503), and long term median annual rainfall data from the Bureau of Meteorology.

* Allowable yield is 25% of the catchment yield.

^ The unit threshold flow rate represents the 25th percentile for non-zero flows. It has been determined from a regional curve of annual rainfall from the Bureau of Meteorology stations 18181 and 18043, and streamflow data from the Toolillie gauging stations (AW 12503).

Principles for construction and operation of weirs and diversion structures

36. The Board or delegate should consider the following factors in deciding whether or not to grant a permit for the construction of a weir or diversion structure that diverts water from one catchment to another:

a. Water access for an adjoining landholder;
b. The quality of water in the receiving catchment
c. Water dependent ecosystems in the catchment of origin or the receiving catchment; or
d. Recharge or groundwater flow to the Southern Basins Prescribed Wells Area.

37. A weir or diversion structure should be designed and constructed in such a manner so that it can be operated without the taking water occurring once the watercourse being equal or below the threshold flow rate as defined by Equation 3.

Equation 3: T = U x Au

Where:

T = threshold flow rate in litres per day (L/d)

U = unit flow rate in litres per day per hectare (L/d/ha), and defined by Column E in Table 5

Au = Area in hectares (ha) of the upstream catchment area

38. A weir or diversion structure on a watercourse or lake within a priority catchment, should be constructed and/or operated in a manner that, in the opinion of the Board or delegate, does not pose an unacceptable risk to:

a. water access for an adjoining landholder;
b. the quality of the water resource;
c. water dependent ecosystems that depend on that water; or
d. recharge or groundwater flow to Southern Basins Prescribed Wells Area.

39. The Board or delegate may consider the construction and/or operation of a weir or diversion structure to pose an unacceptable risk in the following circumstances:

a. the amount of diversion exceeds or proposes to take more than 10 megalitres per year from a priority catchment;
b. the diversion occurs, or is proposed to occur, upstream of a water dependent ecosystem defined in Figure 5 or Table 5, and the diversion activity has potential to impact the environmental water requirements of the water dependent ecosystem; or
c. the diversion occurs or is proposed to occur in the Little Swamp or Big Swamp catchments as defined in Figure 4 and Table 3, and the diversion activity has potential to impact recharge to the Southern Basins Prescribed Wells Area.

40. The Board or delegate may impose conditions in relation to the construction or operation of a weir or diversion structure on a watercourse or lake within a priority catchment to manage an unacceptable risk, including the following conditions:

a. the diversion must be controlled so that it only takes place in accordance with the specified parameters relating to:
    i. minimum water level or minimum flow rate of the watercourse or lake
    ii. and/or water salinity.
b. the applicant must install and maintain a meter in accordance with the South Australian Water Use Meter Specification, and provide regular meter readings; and/or
c. any other matter deemed relevant by the Board or delegate.

Figure 5 – Principles for allowing low flows to bypass dams, weirs and diversion structures

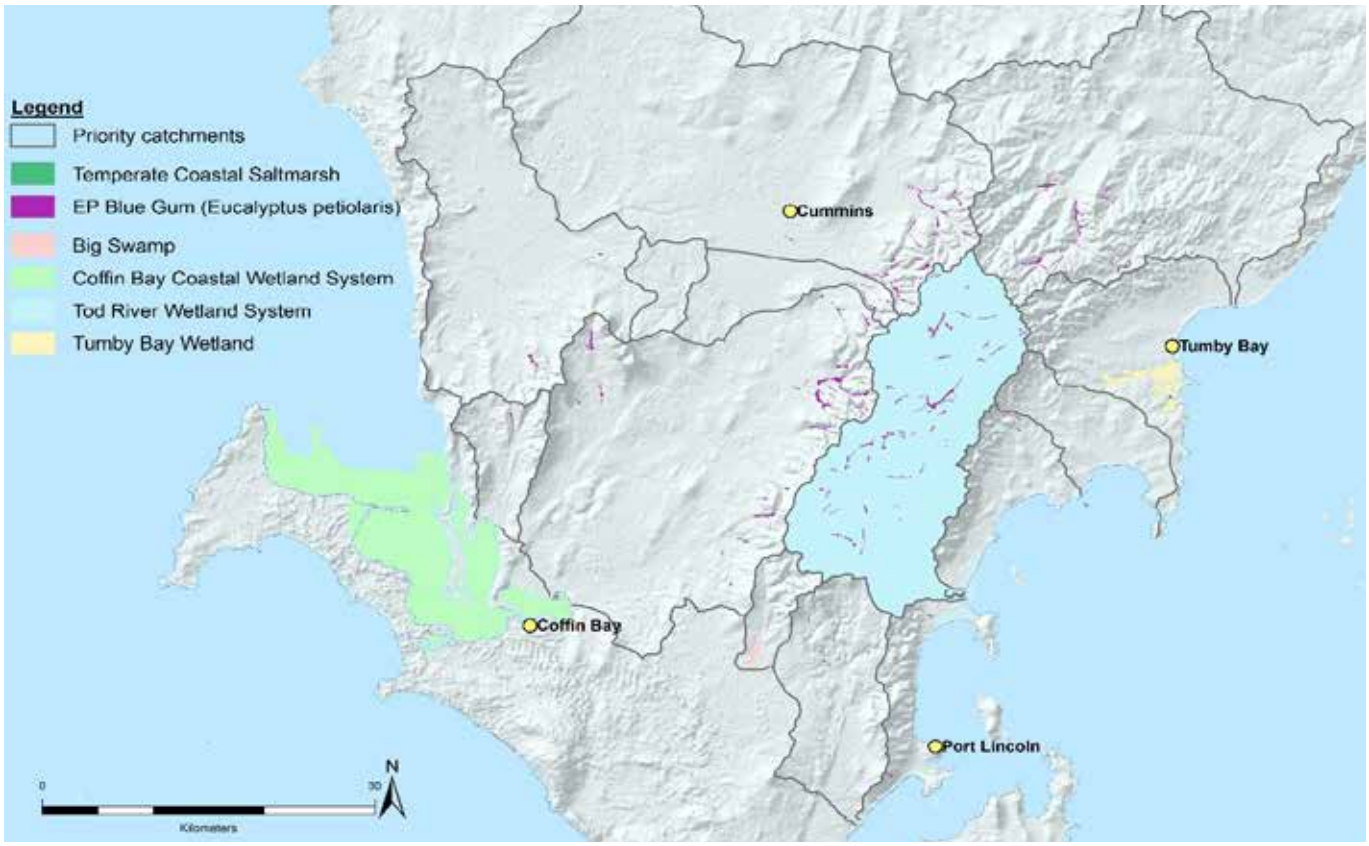


Table 6 - Water dependent ecosystems of concern for water take

Name of water dependent ecosystem	Significance
Eyre Peninsula Blue Gum (*Eucalyptus Petiolaris)*	Threatened ecological community under the *Environmental Protection and Biodiversity Act 1999*
Temperate Coastal Saltmarsh	Threatened ecological community under the *Environmental Protection and Biodiversity Act 1999*
Big Swamp	Wetland of National Significance
Coffin Bay coastal wetland system	Wetland of National Significance
Tod River wetland system	Wetland of National Significance
Tumby Bay wetland	Wetland of National Significance

Principles for allowing low flows to bypass dams, weirs and diversion structures

41. For priority catchments, a mechanism must be installed and maintained to allow low flows to bypass a dam, weir or diversion structure for the following circumstances:

a. construction or modification of a diversion structure located within a watercourse; or

b. construction or modification of an on-stream dam with a storage capacity greater than five megalitres, and located on a first or second order watercourse as defined by Figure 3.

42. The low-flow bypass mechanism shall:

a. allow water to pass downstream of the infrastructure at a rate to equal or greater than the threshold flow rate as defined by Equation 3;

b. be a design approved by the Board and remain operational; and

c. not recapture or divert water passing through the low flow bypass mechanism.

2.3.2 Structures in a watercourse, lake or floodplain

43. The design and construction of any building, structure, embankment or foundation in a watercourse, lake or floodplain shall:

a. maintain the natural flow of the watercourse or lake;
b. have provisions to minimise erosion;
c. not result in the collection of debris in such a way that increases the flood risks to human safety or property damage; and
d. not interfere with subsurface flow in such a way as to lead to waterlogging, salinisation of land or increase likelihood of acid sulphate soils developing;

44. The design and construction of a culvert(s) and causeway in a watercourse or lake shall allow for the migration of native fish and aquatic biota by:

a. sizing the culvert appropriately to avoid significant increases in the velocity of water flowing through the culvert; and
b. submerging the invert of the culvert below the mean water level of a lake or below the water level of a watercourse's base flow.

2.3.3 Draining or discharging water into a watercourse or lake

45. Prior to draining or discharging water into a watercourse or lake the applicant shall:

a. ensure water that is to be drained or discharged into a watercourse complies with the *Environment Protection Act 1993* and any associated policy;
b. ensure the quality of water to be drained or discharged is equivalent or better than the quality of the receiving water, with the exception of saline drainage activities; and
c. install protective measures to prevent erosion from the discharging or draining water.

46. The rate of discharge or drainage activities shall not significantly increase the flow rate of a watercourse or lake.

2.3.4 Depositing materials in a watercourse or lake

47. Disposing of materials in a watercourse or lake shall be free of rubbish, construction rubble and any pollutant identified in *Environment Protection (Water Quality) Policy 2015*.

2.3.5 Flood control structures

48. Depositing or placing an object or solid material on a floodplain or shore of a lake to control flooding shall not:

a. adversely impact the natural flow paths of a watercourse or lake;
b. increase the risk of flooding to life or property;
c. increase the area or mobilise the areas affected by waterlogging, dryland salinity or acid sulphate soils; or
d. degrade the habitat or condition of water dependent ecosystems.

2.3.6 Destroying vegetation in a watercourse, lake or floodplain

49. Subject to Principle 26, the destruction of vegetation shall only occur where it is for the protection of existing infrastructure, or for the rehabilitation of a watercourse, lake or floodplain, and does not result in:

a. bed and bank instability; or
b. destruction of significant habitat by altering or removing woody debris or removing dead trees.

Note a separate permit is required to clear native vegetation under the *Native Vegetation Act 1991*.

2.3.7 Excavating a watercourse, lake or floodplain

50. The removal of rock, sand or soil from a watercourse, lake or floodplain shall not:

a. risk the stability of a bank of a watercourse or lake; or
b. alter the natural flow of a watercourse, lake or floodplain.

51. Altering the profile of a watercourse or lake shall:

a. maintain the hydraulic capacity of the watercourse, channel or lake;
b. maintain the hydraulic connection of the watercourse to a floodplain provided no flood risks or dryland salinity risks exist; or
c. not attempt to alter the natural flow path or straighten meandering nature of the watercourse.

2.3.8 Commercial forestry

52. A permit is required for all new commercial forest or expansion of an existing forest that are located within a priority catchment as defined in Table 4 and displayed in Figure 3.

53. A new commercial forest or expansion of an existing forest shall be a minimum of 20 metres from a watercourse, lake or water-dependent ecosystem.

54. Any natural regeneration of commercial forest species shall be removed from the set- back distance specified in principle 53.

55. The expansion of a commercial forest will be taken to include:

a. for commercial forests in existence at the date of commencement of the Act, an increase in the area for which development approval for commercial forestry has been granted as at commencement date; or
b. for commercial forests established after the date of commencement of the Act, (1 July 2019) an increase in the net planted area as approved through a WAA permit.

56. The allowable net planted area of a commercial forest in hectares, within a priority catchment as defined in Table 4, shall be determined by volume expected to be taken by the commercial forest along with the following considerations:

a. Total take of water by the commercial forest and any existing or new dam shall not exceed the allowable volume for the allotment as defined by Equation 1; and
b. The volume of water taken by a commercial forest shall be determined by:
    i. Equation 4 provided the groundwater level is greater than six metres from the surface of the area to be planted with commercial forest; or
    ii. A hydrogeological investigation is required to undertaken to the satisfaction of the Board when groundwater is less than 6 metres from the surface of the area to be planted with commercial forest.

Equation 4: $Vf=0.85\times Yc \times Ap$

Where:

Vf = annual volume in megalitres (ML) of water take by a commercial forest

Yc = catchment yield expressed in megalitres per hectare (ML/ ha), as defined in Column C of Table 5 for priority catchments

Ap = the net planted area in hectares (ha) of the commercial forest

57. An existing dam(s) may be removed to increase the volume available for take by the commercial forestry.

58. The applicant of a commercial forest shall at all times ensure that the relevant forestry activity has approvals for the use of the relevant land under the *Planning, Development and Infrastructure Act 2016*.

59. A water affecting activity permit will continue to authorise a commercial forestry activity as specified in the permit, for future felling and replanting rotation(s), in accordance with the conditions set out in the permit.

2.3.9 Drilling and repairing a well

60. A new well for the taking of groundwater shall not be located within 300 metres from an existing well that is operational and accesses the same aquifer for groundwater take, except where:

a. the existing well is the property of the applicant proposing to drill the new well; or
b. the new and existing well are both for the purpose of managed aquifer recharge, and are operated under the same scheme; or
c. the applicant has undertaken a hydrogeological investigation that demonstrates to the satisfaction of the Minister, that there will be no adverse impact on the existing well; or
d. an alternative water supply has been provided by the applicant to the impacted water users for the duration that the well is to be impacted.

61. The construction, modification or decommissioning of a well shall be in accordance with the *Minimum Construction Requirements for Water Bores in Australia (fourth edition*) by National Uniform Drillers Licensing Committee (see link for document - http://aditc.com.au/wp-content/uploads/2014/06/Minimum-Construction-Req-Ed-3-2.8MB.pdf)

62. It is a condition of a permit to drill, plug, backfill or seal a well or to repair, replace or alter the casing, lining or screen of a well that the work be undertaken by a person who is a licensed well driller or is supervised in carrying out the work by a licensed well driller.

63. The headworks of a new well or repaired well shall be:

a. constructed so that the recovery and draining or discharge operations can be metered without interference;
b. constructed so water cannot leak if the well becomes clogged;
c. pressure cemented along the full length of the well casing, if the well is to be artificially recharged by a pump.

64. The equipment, materials and methods used for the activity associated with an authorised permit shall not adversely affect the quality of groundwater or the aquifer's integrity.

65. Where a well passes or will pass, through two or more aquifers, an impervious seal shall be made and maintained between all aquifers.

66. A well should be constructed and/or operated in a manner that, in the opinion of the Minister or delegate, does not pose an unacceptable risk to:

a. water access for adjoining landholder;
b. the quality of a water resource;
c. water dependent ecosystems that depend on that water; or
d. recharge or groundwater flow to Southern Basins Prescribed Wells Area or Musgrave Prescribed Wells Area.

67. The Minister or delegate may consider that the construction and/or operation of a well has the potential to pose an unacceptable risk in the following circumstances:

a. the new or modified well is proposed to take greater than 10 megalitres per year;
b. the new or modified well is hydraulically connected to a water dependent ecosystem defined in Figure 5 or Table 6, and the extraction has potential to impact the environmental water requirements of the water dependent ecosystem; or
c. the new or modified well is located is less than five kilometres from the boundary of the Southern Basins Prescribed Wells Area or Musgrave Prescribed Wells Area.

68. The Minister or delegate may impose conditions in relation to the construction or operation of a well to manage an unacceptable risk, including the following conditions:

a. The extraction must be controlled so that it only takes place in accordance with the specified parameter(s) relating to:
    i. minimum water level in the well
    ii. and/or water salinity.
b. The applicant to install and maintain a meter in accordance with the South Australian Water Use Meter Specification, and provide regular meter readings;
c. c) any other matter deemed relevant by the Minster or delegate.

2.3.10 Draining or discharging water into a well

The following matters should be taken into account by the Minister when determining whether to grant or refuse a permit for an activity under the Landscape Act.

69. The draining or discharging of water directly or indirectly into an aquifer shall not:

a. detrimentally affect the ability of other persons to lawfully take from that aquifer;
b. degrade groundwater dependent ecosystems; or
c. degrade the environmental value as per Clause 6 of the *Environment Protection (Water Quality) Policy 2015*.

70. Prior to draining or discharging water into an aquifer the applicant shall:

a. pressure cement along the full length of the well casing where the draining or discharging of water into the well is by means other than gravity;
b. ensure water that is to be drained or discharged into a well complies with the *Environment Protection Act 1993* and any associated policy;
c. ensure the quality of water to be drained or discharged is equivalent or better than the quality of the receiving aquifer;
d. undertake a risk assessment in accordance with the Australian Guidelines for Water Recycling: Managed Aquifer Recharge and to the satisfaction of the Minister; and
e. obtain the necessary authorisations and requirements from the following authorities:
    i. the Environmental Protection Authority
    ii. and SA Health.

71. Draining or discharging water sourced from a different aquifer to the receiving aquifer can only occur where the applicant can prove to the satisfaction of the Minister that such draining or discharging will have no negative consequence on:

a. the environmental value as per Clause 6 of the *Environment Protection (Water Quality) Policy 2015*, of the receiving aquifer;
b. the integrity of the receiving aquifer;
c. groundwater dependent ecosystems;
d. existing water users;
e. surface and near-surface drainage including, but not limited to, waterlogging of soils, creating perched water table or excessive increase in the height of water table; or
f. direct or indirect damage to buildings, roads and infrastructure.

Managed aquifer recharge into a prescribed well of the Southern Basins or Musgrave Prescribed Wells Areas is subject to the provisions in the *Water Allocation Plan for Southern Basins and Musgrave Prescribed Wells Area*s.

3. Definitions

Allotment: the section, lots, or allotment identified on a certificate of title under the *Real Property Act 1886*; and includes two or more contiguous allotments owned or occupied by the same person and operated as a single unit for the purpose of primary production.

Applicant: a person who puts forward a water affecting activity permit application.

Aquifer: an underground layer of rock or sediment that holds water and allows water to percolate through.

Aquatic biota: all organisms that live in water at a particular locality

ARI: average recurrence interval is the return period of a defined storm event with a defined magnitude of total rainfall.

Artificial catchment: a manmade surface that allows runoff to be collected, and includes:

a. Roof of a building;
b. Secured sheet of polyethylene or equivalent;
c. Bitumen or concrete road;
d. Brick or concrete pavement;
e. Compacted earth that has been graded for runoff collection.

Base flow: water that flows in a watercourse during seasonal dry periods that is sourced from groundwater discharge.

Bedrock: the solid and consolidated rock or geological material.

Best Practice Operating Procedures: an endorsed procedure that is developed to guide minimum standards of operations for a water affecting activity.

Biodiversity: the number and variety of organisms and species found within a specified geographic region.

Board: the Eyre Peninsula Landscape Board

BPOP: see definition for Best Practice Operating Procedures

Bund: a wall built for the purpose of preventing water from entering or leaving a place of interest

Catchment: the land area draining to a point of interest

Channel: includes a drain, gutter or pipe; or part of a channel.

Commercial forest: means a forest plantation where the forest vegetation is grown or maintained so that it can be harvested or used for commercial purposes (including through the commercial exploitation of the carbon absorption capacity of the forest vegetation). In the EP Landscape region commercial forest is further defined as a forest not aiming to revegetate a local vegetation community with appropriate structural components (over-storey, mid-storey and understorey species), but all monoculture plantings regardless of species origin, local native species, non-local Australian native species or non-Australian introduced species.

Construct: includes erect, alter, reduce, enlarge, repair or excavate.

Desilting: is the activity of removing material that has deposited post construction of a dam, channel or drain.

Dewatering: taking water from of an aquifer or lake for the purpose of lowering the water level of the aquifer or lake in order to obtain dry access to an underground area that would otherwise be saturated or partially with saturated with water.

Diversion: see 'take' definition

Diversion structure: is a structure that redirects the flow of a watercourse or lake to a point of interest. The structure includes the headwall used to control water flow in the watercourse or lake, and the connecting infrastructure to transport the water to the point of interest such as a channel, or pump and pipe.

Domestic purpose: in relation to the taking of water does not include:

(a) taking water for the purpose of watering or irrigating land, other than land used solely in connection with a dwelling; or

(ab) without limiting paragraph (a)—taking water for the purpose of watering or irrigating more than 0.4 of a hectare of land; or

(b) taking water to be used in carrying on a business (except for the personal use of persons employed in the business).

Drain: see channel definition

Drill: in relation to a well means to drill the well or to excavate the well in any other manner and includes to deepen or widen an existing well

Ecology: the study of the relationships between living organisms and their environment.

Ecosystem: a dynamic complex of plant, animal, fungal and microorganism communities and the associated non-living environment interacting as an ecological unit.

Ecosystem services: those processes and attributes of an ecosystem (or part of an ecosystem) that benefit humans.

Effluent: means domestic wastewater or industrial wastewater;

Environmental Water Requirements: those water requirements that shall be met in order to sustain the environmental values of ecosystems that depend on the water resource, including their processes and biodiversity, at a low level of risk.

Estuary: means a partially enclosed coastal body of water that is permanently, periodically, intermittently or occasionally open to the sea within which there is a measurable variation in salinity due to the mixture of seawater with water derived from or under the land;

Floodplain: means any area of land adjacent to a watercourse, lake or estuary that is periodically inundated with water. Floodplain is spatially defined by the Department of Environment and, Water' Geographic Information System data of "land subject to inundation" or "land subject to flooding" from the "topo.waterbodies" shapefile see https://data.environment.sa.gov.au/NatureMaps

Freeboard: the vertical distance between the full supply level of a dam and the crest of the dam.

Groundwater: means (a) water occurring naturally below ground level; and (b) water pumped, diverted or released into a well for storage underground.

Groundwater access trench: is an excavated opening in the ground that allows access to groundwater.

Groundwater Dependent Ecosystem (GDE): an ecosystem that require access to groundwater, on a permanent or intermittent basis, to meet all or some of its water requirements to maintain the community of plants and animals, and the ecological processes and ecosystem services they provide.

Groundwater extraction: the process of taking water from an underground source, either temporarily or permanently.

Habitat: the natural place or type of site in which an animal or plant, or communities of animals and plants, live.

Headworks: means any assembly on top of a well and located between the well casing and the water delivery system.

Hydrology: the branch of science especially concerned with the movement and quality of water in relation to land

Infrastructure: includes—

a. artificial lakes;
b. dams or reservoirs;
c. embankments, walls, channels or other works or earthworks;
d. bridges and culverts;
e. buildings or structures;
f. roads;
g. pipes, machinery or other plant or equipment;
h. any device;
i. any item or thing used in connection with—
    i. testing, monitoring, protecting, enhancing or re-establishing any natural resource, or any aspect of a natural resource;
    ii. any other program or initiative associated with the management of a natural resource;
j. other items brought within the ambit of this definition by the regulations;

Intensive farming: a method of keeping animals in the course of carrying on the business of primary production in which the animals are usually confined to a small space or area and are usually fed by hand or mechanical means.

Land: according to the context, (a) land as a physical entity, including land under water; or (b) any legal estate or interest in, or right in respect of, land; and includes any building or structure fixed to the land.

Lake: means a natural lake, pond, lagoon, wetland or spring (whether modified or not) and includes

a. part of a lake; or
b. a body of water designated as a lake by a Landscape plan or by a Development Plan under the *Development Act 1993*.
c. This regional Landscape plan includes a soak and water hole within a lake definition.

Managed aquifer recharge: The intentional draining and discharging of water to aquifers for subsequent recovery or environmental benefit.

Megalitre (ML): one million litres.

Metered water use: Water volume measured through a water flow meter.

Mining Act: means any of the following: the *Mining Act 1971*, the *Opal Mining Act 1995*, the *Petroleum Act 2000* or the *Petroleum (Submerged Lands) Act 1982*; or any other Act relating to the production, recovery, management, conveyance or delivery of minerals brought within the ambit of this definition by the regulations;

Minister: the Minister responsible for the administration of the *Landscape Act 2020*.

Modify: includes any activity that replace, add, remove or make any other adjustment to the configuration of water related infrastructure so that its intended function is changed.

Native title holder: means the person or persons who hold, or claim to hold, the native title in relation to the lands and waters according to their traditional laws and customs.

Off stream dam: a dam not within a watercourse that is a purpose built barrier for collecting runoff from a catchment.

On stream dam: a dam located directly on or in a watercourse that is a purpose built barrier for impounding or diverting the flow of a watercourse.

Prescribed well: a well declared to be a prescribed well under section 125 of the *Landscape Act* 2020.

Prescribed Wells Area (PWA): an area of land within which wells are prescribed.

Recharge: recharge is the process whereby groundwater is replenished by water draining into the aquifer from rainfall, irrigation infiltration or leakage from a surface water body.

Riparian: the area adjacent to a watercourse or lake that influences and is influenced by hydrological processes, and includes bed, bank and floodplain of watercourse and lake.

Runoff: water flowing over land after a rain event.

Soak: a permanent or temporary expression of groundwater that occurs where the groundwater intersects with the ground surface, and the pressure of the groundwater is sufficient to move water to the surface.

Spring: see definition for lake

Stock water use: the taking of water to provide drinking water for stock other than stock subject to intensive farming.

Surface water: water flowing over land (except in a watercourse), (i) after having fallen as rain or hail or having precipitated in any another manner or, (ii) after rising to the surface naturally from underground; (b) water of the kind referred to in paragraph (a) that has been collected in a dam or reservoir.

Take from a water resource includes:

a. to take water by pumping or syphoning the water;
b. to stop, impede or divert the flow of water over land (whether in a watercourse or not) for the purpose of collecting the water;
c. to stop, impede or direct the flow of water in any stormwater infrastructure for the purpose of collecting the water, or to extract any water from stormwater infrastructure;
d. to divert the flow of water in a watercourse from the watercourse;
e. to release water from a lake;
f. to permit water to flow under natural pressure from a well;
g. to permit stock to drink from a watercourse, a natural or artificial lake, a dam or reservoir;
h. to cause, permit or suffer any activity referred to in a preceding paragraph;

Watercourse: means a river, creek or other natural watercourse (whether modified or not) in which water is contained or flows whether permanently or from time to time and includes—

a. a dam or reservoir that collects water flowing in a watercourse;
b. a lake through which water flows;
c. a channel (but not a channel declared by regulation to be excluded from the ambit of this definition) into which the water of a watercourse has been diverted;
d. part of a watercourse;
e. an estuary through which water flows;
f. any other natural resource, or class of natural resource, designated as a watercourse for the purposes of this Act by a Landscape plan;

This regional Landscape plan identifies a watercourse shall have a defined channel with both bed and banks, as distinguished from a mere fold or depression or contour in land along which surface water flows.

Water allocation plan: a plan prepared by a natural resources management board and adopted by the Minister in accordance with the Act.

Water dependent ecosystem an ecosystem that require access to water resources on a permanent or intermittent basis to meet all or some of its water requirements to maintain the community of plants and animals, and the ecological processes and ecosystem services they provide.

Water hole: see definition for 'lake'

Water licence: a licence granted by the Minister under section 146 of the *LSA Act 2004*.

Water quality: the physical, chemical and biological characteristics of water.

Water table: the groundwater surface in an unconfined aquifer or confining bed at which the pore pressure is atmospheric.

Weir: see definition for 'diversion structure'

Well: means an opening in the ground excavated for the purpose of obtaining access to groundwater; or an opening in the ground excavated for some other purpose but that gives access to groundwater; or a natural opening in the ground that gives access to groundwater.

Wetland: means an area that comprises land that is permanently or periodically inundated with water (whether through a natural or artificial process) where the water may be static or flowing and may range from fresh water to saline water and where the inundation with water influences the biota or ecological processes (whether permanently or from time to time) and includes any other area designated as a wetland—

a. by a Regional Landscape Board plan; or
b. by a Development Plan under the *Development Act 1993*,

but does not include—

c. a dam or reservoir that has been constructed by a person wholly or predominantly for the provision of water for primary production or human consumption; or
d. an area within an estuary or within any part of the sea; or
e. an area excluded from the ambit of this definition by the regulations

References

[1] Wainwright P. 2008, *2007 Wetland Inventory for the Eyre Peninsula, South Australia*, Department for Environment and Heritage, South Australia

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