

# Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023



New South Wales

## Status information

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New South Wales

# **Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023**

under the

Water Management Act 2000

I, the Minister for Water, make the following plan under the *Water Management Act 2000*, section 50.

ROSE JACKSON, MLC  
Minister for Water

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# Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023

under the  
Water Management Act 2000

## Part 1 Introduction

**Note**— Respect is paid to the traditional owners of this country, who are acknowledged as the first natural resource managers within the following water management areas—

- (a) Hawkesbury-Nepean Water Management Area,
- (b) Southern Sydney Water Management Area,
- (c) Southern Water Management Area,
- (d) Sydney Harbour Water Management Area.

### 1 Name of Instrument

This Plan is the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023.

### 2 Commencement

This Plan commences on 1 July 2023.

### 3 Groundwater sources to which Plan applies

- (1) This Plan applies to the following groundwater sources (the **groundwater sources**) identified on the Plan Map, being groundwater sources within the Hawkesbury-Nepean Water Management Area, the Southern Sydney Water Management Area, the Southern Water Management Area and the Sydney Harbour Water Management Area—
  - (a) the Botany Sands Groundwater Source,
  - (b) the Hawkesbury Alluvium Groundwater Source,
  - (c) the Lachlan Fold Belt Greater Metropolitan Groundwater Source,
  - (d) the Maroota Tertiary Sands Groundwater Source,
  - (e) the Metropolitan Coastal Sands Groundwater Source,
  - (f) the Sydney Basin Central Groundwater Source,
  - (g) the Sydney Basin Nepean Groundwater Source,
  - (h) the Sydney Basin North Groundwater Source,
  - (i) the Sydney Basin South Groundwater Source,
  - (j) the Sydney Basin West Groundwater Source.
- (2) The Botany Sands Groundwater Source, the Hawkesbury Alluvium Groundwater Source and the Metropolitan Coastal Sands Groundwater Source include all water contained in Cenozoic sediments below the surface of the ground within the boundaries shown on the Plan Map.
- (3) The Maroota Tertiary Sands Groundwater Source includes all water contained in the following within the boundary shown on the Plan Map—
  - (a) all rocks of Tertiary and Permian age below the surface of the ground,

- (b) Cenozoic sediments.
- (4) The Lachlan Fold Belt Greater Metropolitan Groundwater Source includes all water contained in the following within the boundary shown on the Plan Map—
  - (a) all rocks of Carboniferous age or older,
  - (b) Cenozoic sediments directly overlying rocks of Carboniferous age or older.
- (5) The Sydney Basin groundwater sources include all water contained in the following within the boundaries shown on the Plan Map—
  - (a) all rocks of Tertiary to Permian age,
  - (b) Cenozoic sediments except Cenozoic sediments within the following groundwater sources—
    - (i) the Botany Sands Groundwater Source,
    - (ii) the Hawkesbury Alluvium Groundwater Source,
    - (iii) the Metropolitan Coastal Sands Groundwater Source.
- (6) In this section—  
*Sydney Basin groundwater sources* means the following—
  - (a) the Sydney Basin Central Groundwater Source,
  - (b) the Sydney Basin Nepean Groundwater Source,
  - (c) the Sydney Basin North Groundwater Source,
  - (d) the Sydney Basin South Groundwater Source,
  - (e) the Sydney Basin West Groundwater Source.

#### **4 Management zones to which Plan applies**

- (1) The Botany Sands Groundwater Source is divided into the following management zones shown on the Plan Map—
  - (a) Botany Management Zone 1, and
  - (b) Botany Management Zone 2.
- (2) The Sydney Basin Nepean Groundwater Source is divided into the following management zones shown on the Plan Map—
  - (a) Nepean Management Zone 1, and
  - (b) Nepean Management Zone 2.

#### **5 Interpretation**

- (1) The Dictionary in Schedule 5 defines words used in this Plan.  
**Note—** The *Interpretation Act 1987* contains definitions and other provisions affecting the interpretation and application of this Plan.
- (2) Unless otherwise specified in this Plan, a category of an access licence includes a reference to a subcategory of the access licence.

#### **6 Maps**

- (1) A reference in this Plan to a named map adopted by this Plan is a reference to a map by that name kept and made available for public access in accordance with arrangements approved by the Minister.

**Note—** The following maps adopted by this Plan are available on the Department's website—

- (a) the Plan Map,
- (b) the High Priority Groundwater-Dependent Ecosystem Map.

(2) A map that amends or replaces a map adopted by this Plan has effect only if this Plan is amended to give effect to it.

## **Part 2 Vision, objectives, strategies and performance indicators**

### **7 Vision statement—the Act, s 35(1)(a)**

The vision for this Plan is to provide for the following—

- (a) the health and enhancement of the groundwater sources and their dependent ecosystems,
- (b) the continuing productive extraction of water for economic benefit,
- (c) the spiritual, social, customary and economic benefits of water to Aboriginal communities,
- (d) the social and cultural benefits to urban and rural communities resulting from water.

### **8 Objectives of Plan—the Act, s 35(1)(b)**

The objectives of this Plan are as follows—

- (a) to protect and, where possible, enhance and restore the condition of the groundwater sources and their groundwater-dependent ecosystems,
- (b) to maintain and, where possible, improve access to groundwater to optimise economic benefits for agriculture, groundwater-dependent industries and local economies,
- (c) to maintain and, where possible, improve the spiritual, social, customary and economic values and uses of groundwater by Aboriginal people,
- (d) to provide access to groundwater to support groundwater-dependent social and cultural values,
- (e) to help prevent structural damage to aquifers resulting from groundwater extraction.

### **9 Strategies for reaching objectives—the Act, s 35(1)(c)**

- (1) The strategies for reaching the objectives of this Plan include the following—
  - (a) reserve all water in excess of each long-term average annual extraction limit for the environment,
  - (b) manage the construction and use of water supply works to minimise impacts on high priority groundwater-dependent ecosystems and groundwater quality, groundwater-dependent culturally significant areas, basic landholder rights, town water supply, and other licence holders,
  - (c) provide for trade of water allocations and share components subject to environmental constraints and local impacts,
  - (d) provide a stable and predictable framework for sharing water among water users,
  - (e) provide for flexibility of access to groundwater,
  - (f) manage access to groundwater consistently with the exercise of native title

rights,

(g) provide for water associated with Aboriginal cultural values and uses, and community development.

(2) Each strategy may contribute to achieving one or more of the objectives of this Plan.

**10 Performance indicators—the Act, s 35(1)(d)**

(1) The performance indicators used to measure the success of the strategies for reaching the objectives of this Plan are the changes or trends, during the term of this Plan, in the following—

(a) the ecological condition of the groundwater sources,

(b) economic benefits,

(c) Aboriginal cultural benefits,

(d) social and cultural benefits.

(2) The performance indicators must be monitored and evaluated in the way approved by the Minister.

## **Part 3 Requirements for water**

### **Division 1 Requirements for water to satisfy basic landholder rights—the Act, s 20(1)(b)**

#### **11 Domestic and stock rights**

On the commencement of this Plan, the amount of water required to satisfy domestic and stock rights is estimated to be 19,973ML/year distributed as follows—

(a) 1,865ML/year in the Botany Sands Groundwater Source,

(b) 268ML/year in the Hawkesbury Alluvium Groundwater Source,

(c) 4,083ML/year in the Lachlan Fold Belt Greater Metropolitan Groundwater Source,

(d) 20ML/year in the Maroota Tertiary Sands Groundwater Source,

(e) 288ML/year in the Metropolitan Coastal Sands Groundwater Source,

(f) 1,972ML/year in the Sydney Basin Central Groundwater Source,

(g) 5,776ML/year in the Sydney Basin Nepean Groundwater Source,

(h) 860ML/year in the Sydney Basin North Groundwater Source,

(i) 2,263ML/year in the Sydney Basin South Groundwater Source,

(j) 2,578ML/year in the Sydney Basin West Groundwater Source.

#### **12 Native title rights**

On the commencement of this Plan, no determinations of native title had been made in relation to the water sources.

**Note—** A native title holder is entitled to take water in the exercise of native title rights without the need for an access licence —see the Act, section 55.

### **Division 2 Requirements for water for extraction under access licences**

#### **13 Share components of access licences in the groundwater sources—the Act, s20(1)(c)**

(1) On the commencement of this Plan, the share components of domestic and stock access licences are estimated to be a total of 42ML/year distributed as follows—

- (a) 13ML/year in the Sydney Basin Nepean Groundwater Source,
- (b) 29ML/year in the Sydney Basin West Groundwater Source,
- (c) 0ML/year in all other groundwater sources.

(2) On the commencement of this Plan, the share components of local water utility access licences are estimated to be a total of 0ML/year in all groundwater sources.

(3) On the commencement of this Plan, the share components of major utility access licences are estimated to be a total of 0ML/year in all groundwater sources.

(4) On the commencement of this Plan, the share components of aquifer access licences are estimated to be a total of 89,901 unit shares distributed as follows—

- (a) 10,676 unit shares in the Botany Sands Groundwater Source,
- (b) 1,172 unit shares in the Hawkesbury Alluvium Groundwater Source,
- (c) 8,039 unit shares in the Lachlan Fold Belt Greater Metropolitan Groundwater Source,
- (d) 179 unit shares in the Maroota Tertiary Sands Groundwater Source,
- (e) 1,229 unit shares in the Metropolitan Coastal Sands Groundwater Source,
- (f) 5,071 unit shares in the Sydney Basin Central Groundwater Source,
- (g) 31,356 unit shares in the Sydney Basin Nepean Groundwater Source,
- (h) 1,027 unit shares in the Sydney Basin North Groundwater Source,
- (i) 4,444 unit shares in the Sydney Basin South Groundwater Source,
- (j) 26,708 unit shares in the Sydney Basin West Groundwater Source.

**Note**—The total share components of access licences in the groundwater sources may change during the term of this Plan as a result of—

- (a) the grant, surrender or cancellation of access licences in the groundwater sources, or
- (b) the variation of local water utility licences under the Act, section 66, or
- (c) ongoing conversion of entitlements under the *Water Act 1912* to access licences under the Act, or
- (d) amendments to access licences under the Act, section 68A.

## Part 4 Limits to the availability of water

### Division 1 Available water determinations—the Act, s 20(2)(b)

#### 14 Available water determinations

- (1) The sum of available water determinations made for an access licence must not be more than the following in a water year—
  - (a) for an access licence specifying the share component in ML/year—100% of the access licence share component,
  - (b) for an access licence specifying the share component as a number of unit shares—1ML/unit share of the access licence share component.
- (2) At the start of each water year, available water determinations must be made as follows unless the Minister is of the opinion that a different available water determination should be made—
  - (a) for domestic and stock access licences—100%,

- (b) for local water utility access licences—100%,
- (c) for major utility access licences—100%,
- (d) for aquifer access licences—1ML/unit share.

(3) This section is subject to section 20.

**Note**— The Minister may, at any time, make available water determinations in relation to the availability of water for a category or subcategory of access licence—see the Act, section 59.

## Division 2 Extraction limits—the Act, s20(1)(e)

### Subdivision 1 Preliminary

#### 15 Operation of Division—the Act, s 8

For the Act, section 8(1A)(b) and (2), this Division—

- (a) sets out environmental water rules, and
- (b) commits water as planned environmental water by reference to the long-term average annual commitment of water resulting from compliance with the long-term average annual extraction limit.

#### 16 Definitions

In this Division—

**5-year average extraction** means the average of the annual extractions for 5 consecutive water years most recently calculated for a groundwater source.

**annual extraction** means the volume of water taken from a groundwater source—

- (a) under an access licence, or
- (b) in the exercise of basic landholder rights.

**Note**— The determination of the volume of water taken from each groundwater source excludes water committed as licensed environmental water—see the Act, section 8F(5).

**LTAEL** means a long-term average annual extraction limit established by section 17.

**reduced available water determination** means available water determinations that are less than the amount specified in section 14 for the category of licence in relation to which the determination is made.

### Subdivision 2 LTAELs

#### 17 Establishment of LTAELs

The LTAELs are as follows—

- (a) for the Botany Sands Groundwater Source—16,411ML/year,
- (b) for the Hawkesbury Alluvium Groundwater Source—5,103ML/year,
- (c) for the Lachlan Fold Belt Greater Metropolitan Groundwater Source—133,949ML/year,
- (d) for the Maroota Tertiary Sands Groundwater Source—1,364ML/year,
- (e) for the Metropolitan Coastal Sands Groundwater Source—11,407ML/year,
- (f) for the Sydney Basin Central Groundwater Source—31,859ML/year,
- (g) for the Sydney Basin Nepean Groundwater Source—64,785ML/year,
- (h) for the Sydney Basin North Groundwater Source—25,297ML/year,

- (i) for the Sydney Basin South Groundwater Source—30,584ML/year,
- (j) for the Sydney Basin West Groundwater Source—36,045ML/year.

**Note—** The LTAAELs are taken to be varied by a change to the amount of water committed as licensed environmental water—see the Act, section 8F(2).

## 18 Calculation of annual extraction

As soon as practicable after the end of a water year, the annual extraction of each groundwater source must be calculated for the water year.

## 19 Assessment of compliance with LTAAELs

- (1) As soon as practicable after the end of a water year, the 5-year average extraction for each groundwater source must be compared against the LTAAEL for the groundwater source for the water year.
- (2) There is noncompliance with the LTAAEL if the 5-year average extraction exceeds the LTAAEL for the water year by 5% or more.

## 20 Compliance with LTAAELs

- (1) This section applies to a groundwater source if there is noncompliance with the LTAAEL for the groundwater source.
- (2) On 1 July in the water year occurring immediately after a noncompliance is assessed (the *next water year*), reduced available water determinations, which are likely to result in the extractions from the groundwater source complying with the LTAAEL, must be made for aquifer access licences.
- (3) In the next water year, the total sum of all available water determinations made for aquifer access licences for which a reduced available water determination is made under subsection (2) must be less than the amount specified for that category of access licence in section 14(1).

**Note—** The Minister may, at any time, make available water determinations in relation to the availability of water for a category or subcategory of access licence—see the Act, section 59.

## Part 5 Rules for granting and managing access licences—the Act, s 20(2)(b)

### 21 Specific purpose access licences

- (1) A person may apply for the following specific purpose access licences—
  - (a) an aquifer access licence of the following subcategories—
    - (i) Aboriginal community development,
    - (ii) environmental,
  - (b) a major utility access licence of the subcategory urban water.
- Note—** A person may also apply for a specific purpose access licence in circumstances where the regulations provide that an application for the licence may be made—see the Act, section 61(1)(a).
- (2) Subsection (1)(a)(i) does not apply to the following water sources—
  - (a) the Botany Sands Groundwater Source,
  - (b) the Sydney Basin Nepean Groundwater Source,
  - (c) the Sydney Basin West Groundwater Source.
- (3) An application for a specific purpose access licence must not be made unless the share

and extraction components of the access licence are the minimum amount required for the proposed use.

- (4) A person may apply for a specific purpose access licence of the subcategory Aboriginal cultural if—
  - (a) the share component of the licence is no more than 10ML/year,
  - (b) the licence is primarily for the taking of water by an Aboriginal person or Aboriginal community for personal, domestic or communal purposes, including the following—
    - (i) drinking and food preparation,
    - (ii) washing,
    - (iii) manufacturing traditional artefacts,
    - (iv) watering domestic gardens,
    - (v) cultural teaching,
    - (vi) hunting, fishing and gathering,
    - (vii) traditional food production,
    - (viii) purposes to achieve environmental outcomes,
    - (ix) recreational, cultural and ceremonial purposes, and
  - (c) any commercial benefit obtained by the taking or use of the water is only ancillary or incidental to the purpose for which the water was taken.
- (5) In this section—

**Aboriginal person** has the same meaning as in the *Aboriginal Land Rights Act 1983*.

## 22 Management of access licences

- (1) This section applies to an access licence affected by a change to the boundary of a water source or water management area to which this Plan applies, whether the change is made on the commencement of this Plan or as an amendment to this Plan.
- (2) The Minister may amend the share component or extraction component, or both, of an access licence to which this section applies to change the following—
  - (a) the water management area or groundwater source to which the share component of the licence relates,
  - (b) the management zones from which water may be taken in accordance with the extraction component of the licence.
- (3) If, immediately before the commencement of this Plan—
  - (a) the share component of an access licence specified—
    - (i) the Coxs River Fractured Rock Groundwater Source, or
    - (ii) the Goulburn Fractured Rock Groundwater Source,then, on the commencement of this Plan, the share component of that access licence is taken to specify the Lachlan Fold Belt Greater Metropolitan Groundwater Source,
  - (b) the share component of an access licence specified –
    - (i) the Sydney Basin Blue Mountains Groundwater Source,

- (ii) the Sydney Basin Coxs River Groundwater Source, or
- (iii) the Sydney Basin Richmond Groundwater Source,

then, on the commencement of this Plan, the share component of that access licence is taken to specify the Sydney Basin West Groundwater Source.

## **Part 6 Operation of water allocation accounts and managing access licences**

### **Division 1 Preliminary**

#### **23 Operation of Part—the Act, s 8**

For the Act, section 8(1A)(a) and (c) and (2), this Part—

- (a) sets out environmental water rules, and
- (b) commits water as planned environmental water by reference to the water that is not committed after the commitments to basic landholder rights and for sharing and extraction under any other rights have been met.

### **Division 2 Accounting for water allocation accounts—the Act, s 21(c)**

#### **24 Water allocation account debiting**

The Minister must debit from the water allocation account of an access licence the volume of water extracted by a water supply work nominated by the access licence.

#### **25 Carryover of water remaining in water allocation account**

- (1) For an aquifer access licence other than an aquifer access licence specified in subsection (2), water allocations remaining in the water allocation account must be carried over from one water year to the next water year up to an amount that is equal to 0.1ML/unit share.
- (2) Water allocations for the following access licences must not be carried over from one water year to the next water year—
  - (a) an access licence other than an aquifer access licence,
  - (b) an aquifer (town water supply) access licence,
  - (c) an aquifer access licence in the following groundwater sources—
    - (i) the Botany Sands Groundwater Source,
    - (ii) the Hawkesbury Alluvium Groundwater Source,
    - (iii) the Maroota Tertiary Sands Groundwater Source.

### **Division 3 Access rules for take of groundwater—the Act, s 21(a)**

#### **26 General**

- (1) Groundwater must not be taken under an aquifer access licence using a water supply work located on waterfront land in one or more of the following circumstances—
  - (a) there is no visible flow in the relevant river, unless the location of the relevant river is—
    - (i) an in-river pool at or above full capacity or,
    - (ii) an in-river dam pool at or above full capacity,
  - (b) for a relevant river in an unregulated water source or management zone— flows

in the water source or management zone are in the Very Low Flow Class under the Unregulated Plan,

- (c) for a relevant river in the unregulated water sources and management zones specified in section 36(2) of the Unregulated Plan—unless flows have exceeded the upper limit of the Very Low Flow Class under the Unregulated Plan for at least 24 consecutive hours,

**Note**— The Very Low Flow Class is set out in the Unregulated Plan, Schedule 1.

- (d) for a relevant river in the unregulated water sources and management zones specified in section 36(10)-(14) of the Unregulated Plan—while a cease-to-take notice is in effect under those subsections,
- (e) for a relevant river in the Upper Wollondilly River Water Source—when water is being transferred between Pejar Dam and Rossi Weir for Goulburn Mulwaree town water supply.

(2) Subsections (1)(b), (c), (d) and (e) do not apply to the Hawkesbury Alluvium Groundwater Source.

(3) In this section—

*cease-to-take notice* has the same meaning as in the Unregulated Plan.

*relevant river* means the river at the location closest to the water supply work being used to take groundwater.

*unregulated water source or management zone* means a water source or management zone to which the Unregulated Plan applies.

## 27 Specific access rules

- (1) This section applies to the Hawkesbury Alluvium Groundwater Source.
- (2) Groundwater must not be taken under an aquifer access licence that nominates a water supply work located—
  - (a) on waterfront land, while a cease-to-take notice is in effect that states the matters set out in section 36(11) of the Unregulated Plan, or
  - (b) on land other than waterfront land, while—
    - (i) a cease-to-take notice is in effect that states the matters set out in section 36(11) of the Unregulated Plan, and
    - (ii) that notice has been in effect for a consecutive period of at least 30 days.

(3) In this section, *cease-to-take notice* has the same meaning as in the Unregulated Plan.

## 28 Exceptions

- (1) Sections 26 and 27 do not apply to the take of groundwater in the following circumstances—
  - (a) if the applicant submits a hydrogeological study that, in the Minister's opinion, adequately demonstrates that the water supply work will have no more than minimal impact on base flows in the river, or
  - (b) if the water supply work used to take the groundwater is drilled into the underlying parent material—the slotted intervals of the work commence deeper than 30m, or
  - (c) for the following purposes under an access licence specified in Schedule 1 if not more than 20kl/day or a lower amount specified by the Minister is taken—

- (i) fruit and vegetable washing,
- (ii) cleaning of dairy plant and equipment for the purpose of hygiene,
- (iii) poultry watering and misting,
- (iv) cleaning of enclosures used for intensive animal production for the purposes of hygiene, or
- (d) for the purposes of town water supply under access licence 24646 or 24659,
- (e) under an access licence in relation to an aquifer interference activity for which a planning approval is in force if—
  - (i) the licence holder complies with a water management plan, if any, required under the planning approval in relation to the aquifer interference activity, and
  - (ii) in the Minister's opinion, the licence holder is not reasonably capable of complying with the access rule concerned.

## **Part 7 Construction and use of water supply works—the Act, s 21(b)**

**Note**— An approval must not be granted in contravention of this Part—see the Act, section 95(3). An application to amend an approval relating to additional uses, works, activities or land must be assessed and determined in the same way as an application for a new approval, but only in relation to the additional uses, works, activities or land—see the Act, section 107(5).

### **29 Application of Part**

- (1) This Part applies to a water supply work used to take groundwater.
- (2) In this Part, a reference to a water supply work located within a specified distance includes a reference to a water supply work that is proposed to be located within a specified distance.

### **30 Replacement groundwater work**

- (1) In this Part, **replacement groundwater work** means a water supply work that—
  - (a) replaces a water supply work authorised by a water supply work approval (the **replaced water supply work**), and
  - (b) is constructed to extract water—
    - (i) from the same groundwater source as the replaced water supply work, and
    - (ii) from the same depth as the replaced water supply work, and
  - (c) is located—
    - (i) within 20m of the replaced water supply work, and
    - (ii) if the replaced water supply work is located on waterfront land—at the same or a greater distance from the river than the replaced water supply work, and
  - (d) has an internal diameter or excavation footprint the same as or less than the replaced water supply work unless—
    - (i) if the replaced water supply work is no longer manufactured—the internal diameter of the water supply work will not exceed 120% of the internal diameter of the replaced water supply work, or

- (ii) if the internal diameter of the replaced water supply work is less than 100mm—the internal diameter of the water supply work will not exceed 100mm.

(2) A water supply work that does not meet the requirements in subsection (1)(b)(ii) or (c)(i) is taken to be a replacement groundwater work if, in the Minister's opinion, the water supply work is not likely to—

- (a) result in a greater adverse impact than the replaced water supply work on the following—
  - (i) a water source,
  - (ii) a high priority groundwater-dependent ecosystem,
  - (iii) public health and safety,
  - (iv) a groundwater-dependent culturally significant area, and
- (b) adversely affect the ability of another person to take water using an existing water supply work.

(3) In this section—

***excavation footprint*** means the authorised dimensions of an unlined excavation constructed for the purposes of water supply only.

***internal diameter*** means the diameter of the inside of the casing of a water bore.

## **31 Interference between water supply works**

- (1) A water supply work in a groundwater source specified in Schedule 3 must not be constructed on land within the distances of the following specified in the Schedule—
  - (a) an approved water supply work nominated by another access licence, other than a local water utility access licence or a major utility access licence,
  - (b) an approved water supply work used only for the purposes of basic landholder rights,
  - (c) the boundary of the property on which the water supply work is located unless the owner of the landholding adjoining the boundary has provided written consent,
  - (d) an approved water supply work nominated by a local water utility or major utility access licence unless the holder of the licence has provided written consent,
  - (e) a Government monitoring or observation bore.
- (2) Subsection (1) does not apply if—
  - (a) the water supply work is used only for basic landholder rights, or
  - (b) the water supply work is a replacement groundwater work, or
  - (c) the water supply work is for the purpose of monitoring, environmental remediation activities or emergency services, or
  - (d) in the Minister's opinion, the location of the water supply work at a lesser distance than that specified in Schedule 3 would result in no more than a minimal detrimental effect on the ability of a person to take water using an existing water supply work.

## **32 Contamination sources**

(1) A water supply work must not be constructed on land within the following areas—

- (a) 500m of a contamination source,
- (b) 250m of the edge of a plume associated with a contamination source,
- (c) between 250m and 500m from the edge of a plume associated with a contamination source unless no change in groundwater level will occur within 250m of the plume.

(2) Subsection (1) does not apply if, in the Minister's opinion—

- (a) the location of the water supply work is adequate to protect the groundwater source, the environment, and public health and safety, or
- (b) the water supply work is for the purpose of monitoring, environmental remediation activities or emergency services.

(3) A water supply work must not be constructed on land within 250m of an on-site sewage disposal system unless the water supply work is—

- (a) constructed with cement grout in the borehole annulus to a minimum depth of 20m from the ground surface, and
- (b) located at a sufficient distance from the on-site sewage disposal system to prevent migration of septic contamination in the aquifer.

(4) The Minister may reduce the depth requirement in subsection (3)(a) if, in the Minister's opinion—

- (a) adequate arrangements are in place to protect the water source, the environment, and public health and safety, or
- (b) the water supply work is for the purpose of monitoring and environmental remediation activities.

(5) In this section—

***contamination source*** means a contamination source specified in Schedule 2.

### **33 High priority groundwater-dependent ecosystems**

(1) A water supply work must not be constructed on land within the following areas—

- (a) waterfront land for a lagoon, third order stream or higher order stream,
- (b) waterfront land for a first or second order stream, unless—
  - (i) the water supply work is drilled into the underlying parent material and the slotted intervals of the work commence deeper than 30m, or
  - (ii) the applicant submits a hydrogeological study that, in the Minister's opinion, adequately demonstrates that the water supply work will have no more than minimal impact on base flows in the stream,
- (c) 100m of the top of an escarpment,
- (d) 200m of a high priority groundwater-dependent ecosystem listed in Schedule 4, Part 1,
- (e) 200m of a high priority groundwater-dependent ecosystem identified on the High Priority Groundwater Dependent Ecosystem Map unless, in the Minister's opinion, there is not a high probability of groundwater dependence for the relevant ecosystem,
- (f) 200m of a coastal wetland,
- (g) 500m of a high priority groundwater-dependent ecosystem listed in Schedule 4, Part 2.

(2) Subsection (1) does not apply if—

- (a) the water supply work is used only for basic landholder rights, or
- (b) the water supply work is a replacement groundwater work, or
- (c) the water supply work is for the purpose of monitoring, environmental remediation activities or emergency services, or
- (d) in the Minister’s opinion, the location of the water supply work is likely to cause no more than minimal harm to the water source and its associated ecosystems and ecological processes, high priority groundwater dependent ecosystem, wetland, karst or spring concerned.

#### **34 Potential acid sulfate soils**

- (1) A water supply work must not be constructed on land within an area classed as having a high probability of occurrence of acid sulfate soils on the Acid Sulfate Soil Risk Map.
- (2) Subsection (1) does not apply if, in the Minister’s opinion, there is not likely to be a significant risk of acidification of the groundwater sources as a result of the construction and location of the water supply work.
- (3) In this section—

*Acid Sulfate Soil Risk Map* means an Acid Sulfate Soil Risk Map authorised by the Department and published on the Department’s website.

*acid sulfate soils* means naturally occurring sediments and soils containing iron sulphides, principally pyrite, or their precursors or oxidation products, whose exposure to oxygen leads to the generation of sulphuric acid, for example, by drainage or excavation.

#### **35 Groundwater-dependent culturally significant areas**

- (1) A water supply work must not be constructed on land within 200m of a groundwater-dependent culturally significant area.

**Note—** Groundwater-dependent culturally significant areas may be identified after the commencement of this Plan.

- (2) Subsection (1) does not apply if—

- (a) the water supply work is used only for basic landholder rights, or
- (b) the water supply work is a replacement groundwater work, or
- (c) the water supply work is for the purpose of monitoring, environmental remediation activities or emergency services, or
- (d) in the Minister’s opinion, the location of the water supply work at a lesser distance would likely result in no more than minimal harm to a groundwater-dependent culturally significant area.

#### **36 Water supply works used only for basic landholder rights**

- (1) A water supply work used only for basic landholder rights must not be constructed on land within the following areas—
  - (a) waterfront land for a river other than a first or second order stream,
  - (b) waterfront land for a first or second order stream, unless—
    - (i) the water supply work is drilled into the underlying parent material and the slotted intervals of the work commence deeper than 30m, or

- (ii) the applicant submits a hydrogeological study that, in the Minister's opinion, adequately demonstrates that the water supply work will have no more than minimal impact on base flows in the stream,
- (c) 100m of a Government monitoring or observation bore,
- (d) 100m of a high priority groundwater-dependent ecosystem listed in Schedule 4, Part 1,
- (e) 100m of a high priority groundwater-dependent ecosystem identified on the High Priority Groundwater-Dependent Ecosystem Map unless, in the Minister's opinion, there is not a high probability of groundwater dependence for the relevant ecosystem,
- (f) 100m of a groundwater-dependent culturally significant area,
- (g) 100m of a coastal wetland,
- (h) 100m of the top of an escarpment,
- (i) 500m of a high priority groundwater-dependent ecosystem listed in Schedule 4, Part 2.

(2) Subsection (1) does not apply if

- the water supply work is a replacement groundwater work.

(3) Subsection (1)(d)-(i) does not apply if, in the Minister's opinion, the location of the water supply work is likely to cause no more than minimal harm to an area described in the subsection.

## **Part 8 Access licence dealing rules—the Act, s 20(1)(d)**

**Note**— The access licence dealing principles established by the *Access Licence Dealing Principles Order 2004* prevail over the access licence dealing rules in this Part to the extent of an inconsistency.

### **37 Conversion of access licence to new category dealings**

A dealing under the Act, section 71O is prohibited.

**Note**— The *Access Licence Dealing Principles Order 2004*, clause 11(3) contains restrictions relating to dealings under the Act, section 71O.

### **38 Assignment of rights dealings**

- (1) The following assignments of rights under the Act, section 71Q in the same groundwater source are prohibited—
  - (a) an assignment of rights from an access licence in Botany Management Zone 2 to an access licence in Botany Management Zone 1,
  - (b) an assignment of rights—
    - (i) from an access licence in Nepean Management Zone 2 to an access licence in Nepean Management Zone 1, and
    - (ii) that would cause the total share components of access licences in Nepean Management Zone 1 to exceed 12,465 shares.
- (2) An assignment of rights under the Act, section 71Q between groundwater sources is prohibited.

### **39 Amendment of share component dealings—change of groundwater source**

Dealings under the Act, section 71R are prohibited.

### **40 Amendment of extraction component dealings**

The following dealings under the Act, section 71S are prohibited—

- (a) a dealing involving an access licence in Botany Management Zone 2 being varied so that it is an access licence in Botany Management Zone 1,
- (b) a dealing—
  - (i) involving an access licence in Nepean Management Zone 2 being varied so that it is an access licence in Nepean Management Zone 1, and
  - (ii) that would cause the total share components of access licences in Nepean Management Zone 1 to exceed 12,465 shares.

#### **41 Assignment of water allocations dealings**

- (1) The following assignments of water allocations under the Act, section 71T in the same groundwater source are prohibited—
  - (a) an assignment from an access licence in Botany Management Zone 2 to an access licence in Botany Management Zone 1,
  - (b) an assignment—
    - (i) from an access licence in Nepean Management Zone 2 to an access licence in Nepean Management Zone 1, and
    - (ii) that would cause the total water allocations of access licences in Nepean Management Zone 1 to exceed 12,465ML.
- (2) An assignment of rights under the Act, section 71T between groundwater sources is prohibited.

#### **42 Interstate access licence transfer and assignment of water allocations dealings prohibited**

Dealings under the Act, sections 71U and 71V are prohibited.

#### **43 Prohibited nominations of water supply works dealings**

The following dealings under the Act, section 71W are prohibited—

- (a) an access licence that nominates a water supply work in Botany Management Zone 2 being amended to nominate a water supply work in Botany Management Zone 1,
- (b) an access licence that nominates a water supply work in Nepean Management Zone 2 being amended to nominate a water supply work in Nepean Management Zone 1, but only if that would cause the total share components of access licences that nominate a water supply work in Nepean Management Zone 1 to exceed 12,465 shares.

**Note**—The *Access Licence Dealing Principles Order 2004*, clause 20, and the *Water Management (General) Regulation 2018*, clause 12, regulate dealings under section 71W of the Act, including with respect to amending an access licence to nominate works in another water source or location.

## **Part 9 Mandatory conditions—the Act, s 17(c)**

### **Division 1 General**

#### **44 Definitions**

In this Part—

**AS 4747** has the same meaning as in the *Water Management (General) Regulation 2018*, clause 228.

**Logbook**, in relation to an access licence or a water supply work approval, means a record in the form approved by the Minister and notified on the Department's website.

**Minimum Construction Requirements for Water Bores in Australia** means the document titled *Minimum Construction Requirements for Water Bores in Australia*, ISBN 978-0-646-81881-8, published by the National Uniform Drillers Licensing Committee, 2020.

**operational meter** means an operational meter that complies with AS 4747.

**relevant mandatory metering equipment condition** means the mandatory metering equipment condition for a work that takes or may be used to take water from a water source to which the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011 applied, as in force on 1 July 2019.

**water account debit** means a water allocation that is taken, assigned under the Act, section 71T or 71V, or otherwise debited or withdrawn from a water allocation account.

## Division 2 Access licences

### 45 General conditions

Each access licence must be subject to mandatory conditions required to implement the provisions of this Plan, including a condition requiring compliance with section 46(1).

### 46 Record-keeping conditions

- (1) Before water is taken under an access licence, the licence holder must—
  - (a) confirm a cease-to-take condition does not apply, and
  - (b) record the confirmation, including the way in which the confirmation was established, in a Logbook.
- (2) Each access licence must be subject to the following mandatory conditions—
  - (a) the licence holder must record the following information in a Logbook each time water is taken using a water supply work that does not have an operational meter or an operational data logger—
    - (i) the date, start-time and end-time during which water was taken under the licence,
    - (ii) the volume of water taken on that date,
    - (iii) the water supply work approval number of the water supply work used to take the water on that date,
    - (iv) the purposes for which the water was taken on that date,
  - (b) the licence holder must keep the information required to be recorded in the Logbook for 5 years from the date to which that information relates.
- (3) Subsections (1)(b) and (2)(a) are repealed on the day specified in the *Water Management (General) Regulation 2018*, clause 230(1) as the day on which the relevant mandatory metering equipment condition applies.

**Note—** See the Water Management (General) Regulation 2018, clause 230(1).

## Division 3 Water supply work approvals

## 47 General conditions

Each water supply work must be subject to the following mandatory conditions—

- (a) if the water supply work is approved for the purpose of monitoring, an environmental remediation activity or emergency services—the work must be used only for that purpose,
- (b) the relevant access rules for the taking of water specified in Part 6, Division 3,
- (c) other conditions required to implement the provisions of this Plan, including conditions requiring compliance with sections 48 and 49.

## 48 Record-keeping conditions

- (1) This section does not apply to a water supply work approval if the work is used only for the purpose of taking water under basic landholder rights.
- (2) Before a water supply work is used to take water, the approval holder must—
  - (a) confirm a cease-to-take condition does not apply, and
  - (b) record the confirmation, including the way in which the confirmation was established, in a Logbook.
- (3) The approval holder must—
  - (a) record the following information in a Logbook whenever the water supply work does not have an operational meter or an operational data logger—
    - (i) the date, start-time and end-time during which water was taken using the water supply work,
    - (ii) the volume of water taken on that date,
    - (iii) the access licence under which water was taken on that date or, if water was taken under some other authority, the authority under which water was taken,
    - (iv) the purposes for which the water was taken on that date,
    - (v) details of cropping carried out using the water taken through the water supply work including the type of crop, area cropped and dates of planting and harvesting,
    - (vi) if metering equipment has been installed for use in connection with the water supply work and is operational, the meter reading before each time water is taken,
    - (vii) if metering equipment has not been installed for use in connection with the water supply work, or has been installed but is not operational, details of all pumping activities for the water supply work including pump running times, pump power usage or pump fuel usage, pump start-times, pump stop-times and pump capacity per unit of time, and
  - (b) keep the information recorded in the Logbook for 5 years from the date to which that information relates.
- (4) If the holder of a water supply work approval is the same person as the holder of the access licence under which water is proposed to be taken, the holder may comply with the requirements of this Plan in 1 Logbook.
- (5) Subsections (2)(b), (3)(a) and (4) are repealed on the day specified in the *Water Management (General) Regulation 2018*, clause 230(1) as the day on which the

relevant mandatory metering equipment condition applies.

**Note**— See the Water Management (General) Regulation 2018, clause 230(1).

#### **49 Metering conditions**

- (1) This section applies to water supply works used to take water under an access licence.
- (2) The approval holder must, if directed by the Minister to install metering equipment that complies with AS 4747, install metering equipment that complies with AS 4747.
- (3) If directed to install metering equipment under subsection (2), the approval holder must ensure the following—
  - (a) the metering equipment accurately measures and records the flow of all water taken through each water supply work,
  - (b) the metering equipment is operated and maintained in a proper and efficient way at all times,
  - (c) other requirements relating to the type, standard or other criteria for metering equipment are complied with, as directed by the Minister.
- (4) This section is repealed on the day specified in the *Water Management (General) Regulation 2018*, clause 230(1) as the day on which the relevant mandatory metering equipment condition applies.

**Note**— See the Water Management (General) Regulation 2018, clause 230(1).

### **Division 4 Water supply work approvals for groundwater**

#### **50 Application of Division**

- (1) This Division, other than section 53, sets out the conditions required to be imposed on a water supply work approval for a work taking groundwater.
- (2) Section 53 sets out a condition required to be imposed on a water supply work approval for a water bore taking groundwater.

#### **51 Water supply work construction conditions**

- (1) The holder of a water supply work approval (the *approval holder*) must ensure the water supply work to which the approval relates is constructed as follows—
  - (a) the water supply work must be constructed in the location authorised in the approval,
  - (b) water must be taken through the water supply work only from the groundwater source specified in the share component of the access licence that nominates the water supply work,
  - (c) the water supply work must be sealed off from all other water sources,
  - (d) construction of the water supply work must comply with the construction standards for the type of bore, as prescribed in the *Minimum Construction Requirements for Water Bores in Australia*,
  - (e) construction and use of the water supply work must prevent contamination of the aquifer and between aquifers,
  - (f) construction and use of the water supply work must prevent the flow of saline water between aquifers.
- (2) If contaminated water is encountered during the construction of a water supply work, other than a water supply work constructed to monitor or remediate contaminated water, the approval holder must—

- (a) within 48 hours of becoming aware of the contaminated water, give the Minister written notice, and
- (b) take all reasonable steps to minimise contamination and environmental harm, and
- (c) ensure the contaminated water is sealed off by inserting casing to a depth sufficient to exclude the contaminated water from the water supply work, and
- (d) place an impermeable seal in the borehole annulus, when and as directed by the Minister, and
- (e) comply with other requirements, if any, specified by the Minister.

(3) The approval holder must provide details of the water supply work to the Minister in the approved form—

- (a) within 60 days of completion of the construction of the water supply work, or
- (b) if the approval is for the amendment of an existing water supply work—within 60 days after the issue of the amended water supply work approval.

(4) The approval holder must ensure—

- (a) the construction of the water supply work is completed within 3 years of the approval being granted (the *relevant period*), and
- (b) the water supply work is not used unless construction is completed within the relevant period.

(5) If a water supply work is not constructed within the relevant period, the approval for the water supply work expires at the end of the relevant period.

(6) A water supply work approval for a replacement groundwater work must impose conditions giving effect to section 30(1)(b)–(d).

**Note**— For the definition of replacement groundwater work—see section 30.

## 52 Water quality condition

The approval holder must, if directed by the Minister by written notice, provide a report in the form specified in the notice detailing the quality of water obtained using the water supply work within the time frame, if any, specified in the notice.

## 53 Water bore decommissioning condition

- (1) An approval holder must, at least 60 days before decommissioning a water bore, give written notice to the Minister of the intention to decommission the water bore.
- (2) The written notice must include a work plan for the decommission.
- (3) The work plan must be prepared in accordance with the *Minimum Construction Requirements for Water Bores in Australia*.
- (4) The Minister may, within 60 days of receiving notice under this section, give a direction that the water bore—
  - (a) must not be decommissioned, or
  - (b) must be decommissioned in accordance with the requirements specified in the direction.
- (5) The approval holder must not decommission the water bore if the Minister has given a direction that the water bore must not be decommissioned.
- (6) In decommissioning the water bore, the approval holder must comply with—

- (a) the work plan, and
- (b) if the Minister has given a direction—the requirements specified in the direction.

(7) The approval holder must, no later than 60 days after decommissioning the water bore, give the Minister written notice of—

- (a) the decommissioning of the water bore, and
- (b) the name of the driller who decommissioned the water bore.

## **Part 10 Amendment of this Plan—the Act, s 17(d)**

### **54 Amendments**

- (1) This Plan may be amended as follows—
  - (a) to extend the application of this Plan to a groundwater source or water management area, or to modify or remove a groundwater source or water management area to which this Plan applies,
  - (b) to add, remove or modify a management zone, including the groundwater sources to which a management zone applies and the boundaries of the zone,
  - (c) to modify an extraction limit in Part 4, Division 2,
  - (d) to add or modify rules relating to specific purpose access licences,
  - (e) to add or modify provisions relating to the following—
    - (i) the management of waters in coastal sands,
    - (ii) managed aquifer recharge,
    - (iii) the interception of water before it reaches a stream or aquifer by plantations or other means,
    - (iv) the management of aquifer interference activities, including the granting of aquifer interference approvals,
    - (v) the protection of groundwater-dependent culturally significant areas,
    - (vi) if a major utility access licence is granted within a groundwater source—accounting for water allocation accounts,
  - (f) to protect water-dependent Aboriginal cultural assets, including as follows—
    - (i) identifying water-dependent Aboriginal cultural assets,
    - (ii) establishing new access rules,
    - (iii) restricting the construction and use of water supply works,
    - (iv) establishing new access licence dealing rules,
  - (g) to give effect to, or in connection with, a determination of native title under the *Native Title Act 1993* of the Commonwealth,
  - (h) to modify or remove a definition,
  - (i) to add or remove a contamination source by amending Schedule 2,
  - (j) to change the access rules for works on waterfront land and for all works within the Hawkesbury Alluvium Groundwater Source to reflect a change to the Unregulated Plan,
  - (k) to modify Schedule 1 to add or remove an access licence,

- (l) to update the High Priority Groundwater-dependent Ecosystem Map or Schedule 4 to reflect new information about an ecosystem,
- (m) amendments consequential on an amendment to the Act or regulations.

(2) This Plan may be amended to make consequential amendments necessary to give effect to an amendment authorised by subsection (1).

## **Schedule 1    Access licences permitted to take for specific purposes**

section 28(1)(c)

<b>Groundwater source</b>	<b>Access licence number</b>
Hawkesbury Alluvium	24129
Lachlan Fold Belt Greater Metropolitan	24121
	24653
	24639
	24719
	24716
	24689
	24629
Sydney Basin Central	24285
	24331
	24281
	24249
	24305
	24255
Sydney Basin Nepean	25026
	24910
	25028
	24994
	24952
	24772
	24824
	24913
	24744
	24748
	24876
	24967
	25006
	24781
	24756
	24928
	24878
	24891
	24730
	36571
	24949
	41682
	41684
	41677

<b>Groundwater source</b>	<b>Access licence number</b>
Sydney Basin North	24372
Sydney Basin South	24467
	24456
	24516
	24517
	24471
	41683
	41685
	41679
	41686
Sydney Basin Western	24400
	24403
	24394
	24427

**Note—** Entitlement 20BL158909 under the *Water Management Act 2000* is yet to be converted into an access licence under the Act but may be included on its conversion in the future.

## **Schedule 2      Contamination sources**

section 32(5)

Contamination sources are as follows—

- (a) a site declared to be significantly contaminated land within the meaning of the *Contaminated Land Management Act 1997*,
- (b) a site notified to the Environment Protection Authority under the *Contaminated Land Management Act 1997*, section 60.

## Schedule 3 Distance restrictions to minimise interference between water supply works

section 31

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
<b>Groundwater Source</b>	<b>Distance from an approved water supply work nominated by another access licence other than a local water utility or major utility access licence (metres)</b>	<b>Distance from an approved water supply work for basic landholder rights only (metres)</b>	<b>Distance from the property boundary (metres)</b>	<b>Distance from an approved water supply work nominated by a local water utility or major utility access licence (metres)</b>	<b>Distance from a Department observation bore (metres)</b>
Botany Sands Groundwater Source	200	50	50	300	200
Hawkesbury Alluvium Groundwater Source	200	200	100	500	100
Lachlan Fold Belt Greater Metropolitan Groundwater Source	400	200	100	500	400
Maroota Tertiary Sands Groundwater Source	100	50	50	500	200
Metropolitan Coastal Sands Groundwater Source	200	50	50	300	200
Sydney Basin Central Groundwater Source	400	100	50	1,000	200
Sydney Basin Nepean Groundwater Source	400	100	50	1,000	200
Sydney Basin North Groundwater Source	400	100	50	1,000	200

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
<b>Groundwater Source</b>	<b>Distance from an approved water supply work nominated by basic access licence other than a local water utility or major utility access licence (metres)</b>	<b>Distance from an approved water supply work for rights only (metres)</b>	<b>Distance from the property boundary (metres)</b>	<b>Distance from an approved water supply work nominated by a local water utility or major utility access licence (metres)</b>	<b>Distance from a Department observation bore (metres)</b>
Sydney Basin South Groundwater Source	400	100	50	1,000	200
Sydney Basin West Groundwater Source	400	100	50	1,000	200

## Schedule 4 High-priority groundwater-dependent ecosystems

sections 33(1)(d) and (g) and 36(1)(d) and (i)

### Part 1 Springs and wetlands

Column 1 High priority groundwater dependent ecosystem	Column 2 Latitude (GDA 94)	Column 3 Longitude (GDA 94)	Column 4 Location	Column 5 Area (ha)
Black Springs	-34.6650	149.5344	North-west of Goulburn on the Wollondilly River	Not applicable
Botany Wetlands <b>Note</b> — Botany Wetlands include Lachlan Swamps, Mill Pond, Mill Stream and Engine Pond.	-33.9333	151.2167	Estuarine wetland located on the northern shore of Botany Bay, from Gardeners Road Mascot to the Bay. Elevation: 0–12m ASL.	64
Boyd Plateau Bogs <b>Note</b> — Boyd Plateau Bogs include Little Dingo Swamp, Wheengee Whungee Swamps, Little Morong Bog and Roly Whalans Swamp.	-33.965263	150.054873	Shallow headwater valleys on the Boyd Plateau	Not applicable
Budderoo National Park and Barren Grounds Nature Reserve heath swamps	-34.6667	150.6667	Approximately 15km south-east of Robertson	1,150
Coomonderry Swamp	-34.8150	150.7344	Large semi-permanent freshwater swamp located north-east of Nowra	428.896
Ferny Spring	-33.938588	150.057876	Perennial spring on the head of Little Morong Creek, about 1.2km north-west of Queen Pin Hill	0.01
Kiaramba Spring	-34.027979	150.197048	Kiaramba Creek, approximately 1.2km from where the creek rises on the northern	0.1

			slopes of Mount Feld	
Lake Bathurst <b>Note—</b> Lake Bathurst includes The Morass	-35.042121	149.705982	Large, shallow permanent freshwater lake located in the southern tablelands at the southernmost extremity of the Nepean- Hawkesbury catchment, approximately 1km east of the Mulwaree River	490.764
Lanes Yards Spring	-33.9150	149.9844	Near Hollanders River, about 3.2km north-east of Grave Hill	0.1
Long Swamp	-34.612813	150.178599	Long Swamp Creek, approximately 2km south of Canyonleigh Road, Canyonleigh and approximately 20km west of Moss Vale	Not applicable
Longneck Lagoon	-33.5752	150.8912	Freshwater lagoon with channels and pools about 2–3 metres deep with gently sloping margins. Located on the Hawkesbury River floodplain, approximately 8km north-east of Windsor	2.930
Macquarie Rivulet Estuary	-34.551951	150.800432	Next to Lake Illawarra. Macquarie Rivulet rises near Robertson, drains the eastern edge of the Southern Highlands plateau and part of the	1.077

			Illawarra escarpment, and flows into Lake Illawarra	
Minnamurra River Estuary— <b>Note</b> — Minnamurra River Estuary includes the Minnamurra River and its adjacent wetland areas	-34.626888	150.848534	Between the towns of Shellharbour to the north and Kiama to the south	52.729
O’Hares Creek <b>Note</b> — O’Hares Creek includes the catchment of O’Hares, Stokes and Four Mile Creeks, downstream to the junction of O’Hares and Stokes Creeks.	-34.2233	150.8833	Floodplain wetland.  Located between Appin and Bulli on the Woronora Plateau. Elevation: 100-450m above sea level	9,000
Pitt Town Lagoon	-33.5900	150.8511	Wetlands located on the Hawkesbury River floodplain immediately adjacent to the southern edge of Pitt Town, 4km north-east of Windsor	41
Salt Pan Creek	-33.9483	151.0428	Estuarine wetland that flows to Georges River, located in the suburbs of Riverwood and Peakhurst	1.077
Temperate Highland Peat Swamps on Sandstone (as listed under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)) <b>Note</b> — Temperate Highland Peat Swamps on Sandstone includes Blue Mountains Sedge Swamps, Butler’s Swamp, Newnes Plateau			Numerous small wetlands located in the Blue Mountains and Newnes Plateau regions	

Swamps, Paddy's River  
Swamps and  
Wingecarribee Swamp.

Thirlmere Lakes	-34.223411	150.539005	Edge of the Southern tablelands, approximately 10km south-west of Picton	Not applicable
<b>Note</b> — Thirlmere Lakes include Gandangarra, Werri-Berri, Couridjah, Baraba and Nerrigorang Lakes				
Towra Point Estuarine Wetlands	-34.013153	151.158793	Approximately 16km south of Sydney centre. Towra Point adjoins Kurnell Peninsula, forming the southern and eastern boundaries of Botany Bay	638.309

## Part 2 Karst environments

<b>Column 1</b> <b>High priority karst environment</b> <b>groundwater dependent ecosystem</b>	<b>Column 2</b> <b>Location</b>
Bendethera	50km south-west of Bateman's Bay
Billys Creek Caves	50km south-east of Oberon
Bungonia	35km east of Goulbourn
Canyonleigh	30km east of Taralga
Capertee Valley	14km south-east of Capertee
Church Creek Caves	50km south-east of Oberon
Cleatmore (Cheitmore)	45km west south-west of Bateman's Bay
Colong Caves	50km south-east of Oberon
Ettrema & Jones Creek	40km south-west of Nowra
Hollanders River	25km south-east of Oberon
Jaunter Caves	North-west and west of Tuglow
Jenolan Caves	23km south-east of Oberon
Jerrara	Bungonia
Limeburners Flat	10km east of Colong Caves
Little Wombeyan Creek	14km north of Wombeyan Caves
Mt Fairy	7km east north-east of Bungendore
Murruin Creek	4.5km west of Colong Caves
Portland	Portland
Tuglow Caves	30km south-east of Oberon
Wombeyan Caves	16km north-east of Taralga
Wyanbene	45km west south-west of Bateman's Bay

## Schedule 5      Dictionary

**5-year annual extraction**—see section 16.

**annual extraction**—see section 16.

**AS 4747**—see section 44.

**base flows** means the discharge of groundwater into a surface water system.

**borehole annulus** means the space between the bore casing and the wall of the borehole.

**cease-to-take condition** means a term or condition of an access licence or a water supply work approval that prohibits the take of water in a particular circumstance.

**coastal wetland** means land identified as coastal wetlands on the Coastal Wetlands and Littoral Rainforests Area Map.

**Coastal Wetlands and Littoral Rainforests Area Map** has the same meaning as in *State Environmental Planning Policy (Resilience and Hazards) 2021*, Chapter 2.

**Note**— The Coastal Wetlands and Littoral Rainforests Area Map is available on the NSW Planning Portal at [www.planningportal.nsw.gov.au](http://www.planningportal.nsw.gov.au).

**debited** means taken, assigned under the Act, section 71T or otherwise debited or withdrawn from a water allocation account.

**declared Ramsar wetland** has the same meaning as in the *Environment and Biodiversity Conservation Act 1999* of the Commonwealth.

**Department** means the NSW Department of Planning and Environment.

**drawdown** means a lowering of the level to which water will rise in cased bores. Natural drawdown may occur due to seasonal climatic changes. Groundwater pumping may also result in seasonal and long-term drawdown.

**entitlement** has the same meaning as in the Act, Schedule 10, clause 2.

**escarpment** means steep to precipitous landform pattern forming a linearly extensive, straight or sinuous inclined surface, which separates terrains at different altitudes, that above the escarpment commonly being a plateau. Relief within the landform pattern may be high (hilly) or low (planar). The upper margin is often marked by an included cliff or scarp.

**excavation footprint** means the authorised dimensions of an unlined excavation constructed for the purposes of water supply only.

**full capacity** means the volume of water impounded in a pool, lagoon or lake when the pool, lagoon or lake is at the level when a visible flow out of the pool, lagoon or lake would stop.

**Government monitoring or observation bore** means a bore owned or operated by or on behalf of the Minister, the Ministerial Corporation, the Department or WaterNSW and used for observation or monitoring purposes.

**groundwater** means water occurring beneath the ground surface in the saturated zone, being the area below the water table where all soil spaces, pores, fractures and voids are filled with water.

**groundwater-dependent culturally significant area** means an area determined by the Minister to be a groundwater-dependent culturally significant area.

**groundwater-dependent ecosystem** is an ecosystem that has its species composition and natural ecological processes wholly or partially determined by groundwater.

**high priority groundwater-dependent ecosystem** means an area specified in section 33(1).

**High Priority Groundwater-Dependent Ecosystem Map** means the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023 High Priority Groundwater-Dependent Ecosystem Map*, GDE037, version 1.

**Note**— The High Priority Groundwater-Dependent Ecosystem Map is available on the Department's website.

**in-river pool** means a natural pool, lagoon or lake within a river or stream, but does not include—

(a) a pool on a flood-runner or floodplain, or

(b) a pool on an effluent that only begins to flow during high flows.

**in-river dam pool** means the water impounded by an in-river dam, but does not include water in an in-river pool.

***karst*** means an area of land, including subterranean land, developed in soluble rock through the processes of solution, abrasion or collapse, together with its associated bedrock, soil, water, gases and biodiversity.

***kl/day*** means kilolitres per day.

***Logbook***—see section 44.

***LTAEL***—see section 16.

***Minimum Construction Requirements for Water Bores in Australia***—see section 44.

***ML/unit share*** means megalitres per unit share.

***ML/year*** means megalitres per year.

***operational meter***—see section 44.

***Plan Map*** means the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023 Plan Map*, WSP015, version 3.

***planning approval*** means—

- (a) a development consent under the *Environmental Planning and Assessment Act 1979*, Part 4, or
- (b) a State significant infrastructure approval under that Act, Part 5.1, or
- (c) a transitional Part 3A project approval under that Act, Schedule 6A.

**Note**— The Environmental Planning and Assessment Act 1979, Schedule 6A has been transferred to the Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017. ***reduced available water determination***—see section 16.

***replacement access licence*** has the same meaning as in the Act, Schedule 10, clause 2.

***replacement groundwater work***—see section 30.

***surface water*** means all water naturally occurring on the surface of the land, including all rivers, lakes and wetlands, within the boundaries of the water sources shown on the Plan Map.

***the Act*** means the *Water Management Act 2000*.

***third order or higher stream*** means a stream identified as a third order or higher stream, as determined in accordance with the system set out in the *Water Management (General) Regulation 2018*, Schedule 2.

***Unregulated Plan*** means the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023*.

***water account debit***—see section 44.

***water year*** means a period of 1 year commencing on 1 July.

***wetland*** means either of the following—

- (a) coastal wetlands,
- (b) declared Ramsar wetland.