



Government of **Western Australia**  
Department of **Water**

# Warren-Donnelly surface water allocation plan

For public comment





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Department of **Water**

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*Looking after all our water needs*

Department of Water

Water Resource Allocation and Planning series

Draft report

June 2010

Department of Water  
168 St Georges Terrace  
Perth Western Australia 6000  
Telephone +61 8 6364 7600  
Facsimile +61 8 6364 7601  
www.water.wa.gov.au

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Project team: Rob Donohue (Project Manager, Water Allocation Planning) Emily Said (Project Officer, Water Allocation Planning), Felicity Bunny (District Manager), Mark Pearcey (Supervising Engineer, Surface Water Assessment) and Steve DeMunck (Surface Water Licensing, Manjimup/Blackwood District).

Project board: Rob Hammond (Director Water Resource Use), Susan Worley (Manager Allocation Planning Branch), John Connolly (Manager Water Licensing Branch), Bev Thurlow (Manager South West Region), and Rick Bretnall (Manager Water Resource Assessment Branch).

For more information about this report, contact Felicity Bunny (District Manager, Warren Blackwood) at the South West region office, 35–39 McCombe Road Bunbury Western Australia 6230 or P O Box 261 Bunbury Western Australia 623. Telephone 08 9726 4111. Facsimile 08 9726 4100.

## Foreword

This water allocation plan provides the Department of Water's direction for the allocation of surface water in the Warren-Donnelly area.

Parts of some catchments in the area have a high number of on-stream dams that collectively store a large volume of streamflow for irrigated agriculture. In 2008 we recognised that the degree of development in the area may potentially impact the security of water supply to existing or future water users and to the environment. The department capped further water development and initiated work on this allocation plan.

This plan provides new allocation limits. These allocation limits are the result of modelling the ecologically sustainable yield of Warren-Donnelly surface water resources and accounting for risks to the environment and future water supply from the Warren catchment.

This plan also provides our policies on licensing and allocating water, objectives for the water resource and for managing water allocation and how we will implement and evaluate this plan.

Your input on our *Warren-Donnelly surface water allocation plan* is important. It will help us improve the plan. Once you have read this document, we encourage you to send us your comments by 6 September 2010.

We will respond to all of the submissions we receive on this water allocation plan in a statement of response document. This document will be released with the final plan and will describe how we have responded to your submissions and where they have been considered in finalising the plan.



Kim Taylor

Director General, Department of Water

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## Summary

The Department of Water is responsible for allocating and licensing the state's water resources. The department uses water allocation plans to manage how water is taken from groundwater and surface water systems.

In making allocation decisions, the department considers the needs of licensed water users and the community as a whole. Our aim is to provide water to maximise the economic benefits of water use while maintaining the social and environmental values of water resources.

## Need for an allocation plan in this area

In the Warren-Donnelly area, streamflow is intercepted by on-stream dams and is used as a source of water for irrigation of agricultural crops, public water supply and small scale stock and domestic use. In 2008, early results from hydrological studies indicated that some areas may be fully or over-allocated, due to the high density of on-stream dams. To maintain the use of surface water at sustainable levels, the department announced allocation limits that effectively capped water use in highly developed areas.

This brought forward the need to develop an allocation plan and review the allocation limits and strategy for allocating Warren-Donnelly surface water resources. To do this review we have considered data from hydrological, ecological and farm dam studies, the potential for additional water use and the impact of further allocations on existing water users, the environment and salinity. This plan is a result of these considerations and the development of our approach to allocation of surface water in the Warren-Donnelly area.

## Water use and availability

The Donnelly River Basin is divided into nine surface water resources (areas). Water is still available for further licensing in three of these surface water resources. Water has been set aside for small scale stock and domestic water use, which is exempt from licensing.

There are 16 surface water resources in the Warren River Basin. Water is still available for licensing in some surface water resources. No more water is available in the Tone River, Upper Lefroy, East Brook and Unicup Lakes resources. Water has been set aside in all resources for small scale stock and domestic water use, which is exempt from licensing.

## Allocation and licensing approach

This plan sets new allocation limits that replace those announced in 2008. From June 2010, the department will allow water use up to the allocation limits and in accordance with the licensing and allocation approach set out in this plan.



## Allocation planning and salinity recovery

The Warren River Basin is one of five salinity recovery catchments in Western Australia where the department is working towards improving surface water salinity. Streams in the upper Warren River basin are salty, while streams in more forested catchments are fresh.

As part of developing this plan, we have considered how further allocations from fresh tributaries in the Warren River Basin may affect salinity recovery. We have allocated additional small volumes of water from these fresh, low water use resources to allow for some development while keeping the potential of the basin as a longer term water supply.

### How can you have your say?

Your comments can help us improve this plan. We will review and consider your comments before finalising the *Warren-Donnelly surface water allocation plan*. Along with the final plan, we will produce a statement of response to summarise comments and our responses to them. Please state clearly if you do not wish us to quote directly from your comments.

Please send your comments to <allocation.planning@water.wa.gov.au> or the address listed at the start of this plan by 5:00 pm, 6 September 2010. If mailing, please write 'Allocation plan submission' on the envelope.



# 1 Introduction

## 1.1 Purpose of the plan

The department initiated allocation planning in the Warren-Donnelly area because information from a study on sustainable diversion limits (SKM 2008) indicated that some surface water resources may be fully or over-allocated. This meant that additional water use could affect the supply of water to existing users and the health of river ecosystems already under pressure from catchment clearing, salinisation, water abstraction and decreasing rainfall.

In 2008, to maintain sustainable use of surface water resources, the department announced interim allocation limits that effectively capped water use at current levels in the highly developed areas.

The purpose of this plan is to set new allocation limits and to improve how we manage the allocation of surface water resources in the Warren-Donnelly area. The planning process has considered:

- new data from studies completed in 2009 that assessed the impact of current water use on river flow and identified the ecologically sustainable yields of rivers in the South West region
- the large number of on-stream farm dams, the total volume of streamflow being captured annually by these dams and results of farm dam mapping
- the impact of further allocations on existing water users, the environment and salinity in the Warren River Basin.

## 1.2 Scope of the plan

The plan sets out:

- the allocation planning boundaries for surface water resources
- the amount of surface water available for allocation
- our approach to managing surface water including:
  - the objectives for water allocation and use
  - policies for allocating water licence entitlements
  - how we will implement, evaluate and review the plan.

## 1.3 Plan area

The plan covers the Warren and Donnelly river basins, an area of almost 6100 km<sup>2</sup>, in the south-west of Western Australia (Figure 1). About two-thirds (4000 km<sup>2</sup>) of the plan area is covered by state forest, national park and nature reserve. The townships of Manjimup and Pemberton are located within the plan area.

This plan applies to all watercourses in the Warren-Donnelly area. In areas that are proclaimed under the *Rights in Water and Irrigation Act 1914* (Section 1.4 and Figure 2), the department actively manages water resources by licensing the take and use of water. The plan area is the:

- Warren River and tributaries surface water area, proclaimed in 1959
- Donnelly River System surface water area, proclaimed in 1968.

## 1.4 Water resources covered by this plan

Rivers in the area include the Warren River and its tributaries; including Tone, Perup, Yerraminup, and Wilgarup rivers and Lefroy Brook, and the Donnelly River and its tributaries, including Barlee Brook.

For allocation planning and licensing purposes, the department has divided the Warren-Donnelly area into 25 surface water subareas, based on hydrological catchment boundaries (Figure 2).

In this plan, the subarea is the allocation unit and is referred to as a surface water resource. We have set an allocation limit for each resource, which is the total amount of surface water available for take at the most downstream point of the resource (Section 3).

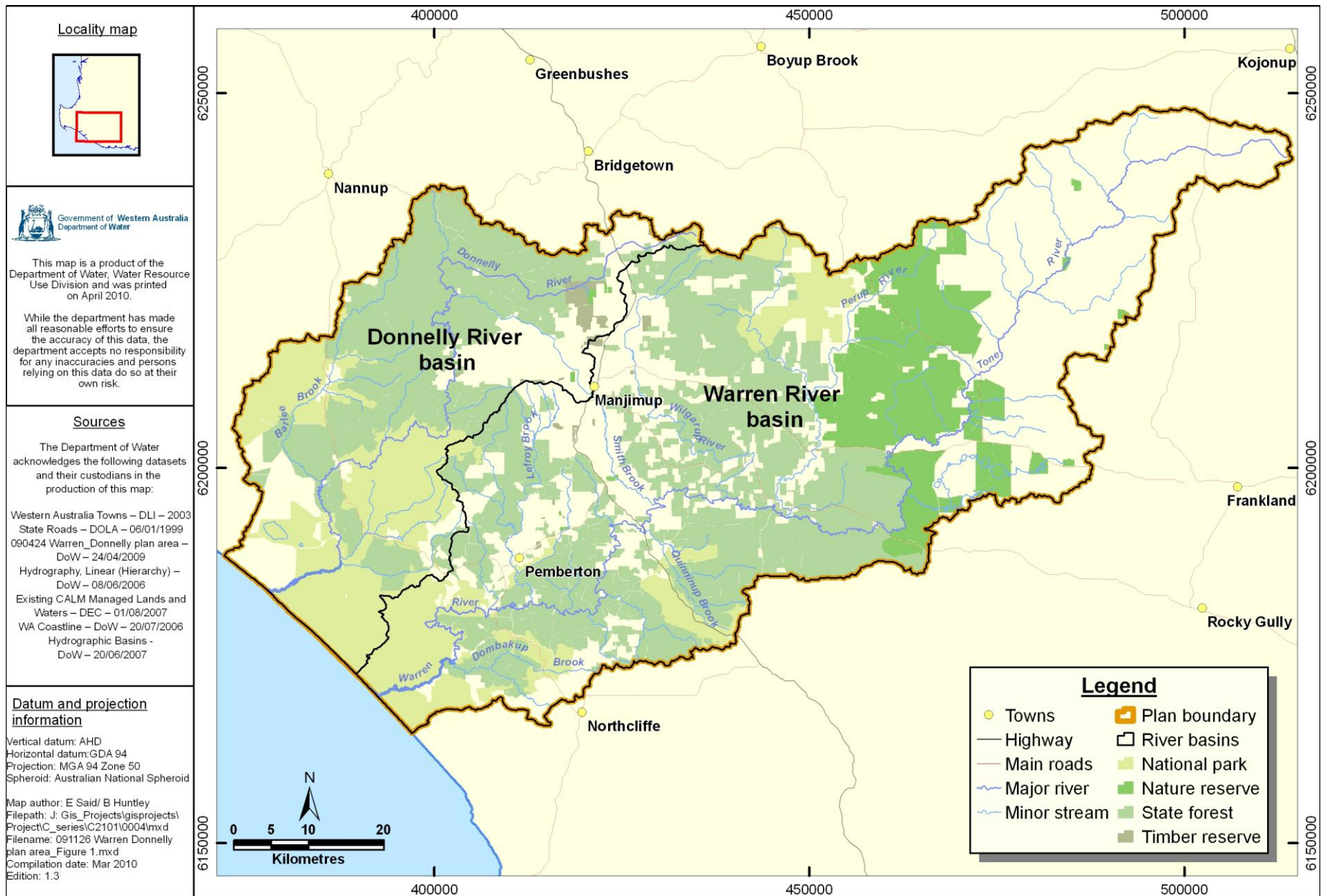


Figure 1 Area covered by this plan



Figure 2 Surface water resources and proclaimed areas this plan applies to

## 1.5 When and for how long will this plan apply?

The *Warren-Donnelly surface water allocation plan* will come into effect from the day it is released for public comment. The department will finalise the plan after considering submissions we receive during the comment period, and the final plan will remain valid until it is replaced. The department may review and amend allocation limits separate to reviewing the plan.

The plan evaluation process will recommend whether a review of the plan is required (Section 6.2).

## 1.6 Updating legislation and this plan

The government of Western Australia is currently updating and reviewing its legislation for the state's water resources. The approach and structure of this plan is consistent with the requirements of the *Rights in Water and Irrigation Act 1914* and, as far as possible, with the intent and purpose of the new legislation. Once new legislation is enacted, any future update of this plan will incorporate the appropriate changes and mechanisms for allocating water.

## 2 What we want this plan to achieve and how we will measure it

This section outlines our objectives for allocating surface water in the Warren-Donnelly area and the strategies we will use to meet our objectives. In the Warren-Donnelly area, the department aims to sustainably allocate surface water to support local economic development without affecting supply to existing water users or the river environment.

### 2.1 Objectives of this plan

The water resource objectives of this plan are to:

- a. maintain sufficient flow regimes that protect the existing river ecology and social values
- b. maintain a winter flow regime that provides sufficient flows for existing water users
- c. ensure changes to water quality through allocation are compatible with salinity recovery in the Warren River Basin.

The water use management objectives of this plan are to:

- d. ensure surface water abstraction remains within ecologically sustainable levels
- e. maintain the reliability of supply to water users
- f. minimise the impacts of new on-stream dams on existing water users and the environment.

### 2.2 How we will meet the objectives of this plan

To meet the objectives of this plan we will:

- apply the department's approach for allocating and licensing water (Section 4)
- license water according to department policies (Section 4)
- carry out the actions in this plan (Section 6.1).



## 3 Allocation limits

Allocation limits are the annual volume of water set aside for consumptive use from a water resource. This includes water available for licensing and water for uses exempt from licensing.

For detail on the methodology and information we used to set allocation limits see *Warren-Donnelly surface water allocation decisions* (DoW 2010b).

Allocation limits and the status of water availability for licensing are presented in Table 1 for each of the 25 surface water resources in the Warren-Donnelly area.

Please contact our Manjimup office on 08 9771 1878 for up-to-date information on the volume of water available for future use. Once a resource is fully allocated, the department will refuse applications for new (or increases to) surface water entitlements.

### 3.1 Components of the allocation limit

To account for water use the department divides the allocation limit into three components – licensable, unlicensable and reserved water components. The allocation limit, its components and the status of water availability for general licensing are shown in Table 1 for each surface water resource.

Licensable components include water for general licensed entitlements and water for public water supply. Before we can provide water for licensing we have to account for any water use that is exempt from licensing (unlicensed) and water reserved for future use. Water uses exempt from licensing include water taken:

- for riparian rights or stock and domestic use only (i.e. water for household purposes and non-intensive stock watering)
- from springs and wetlands wholly within a property
- from streams arising on a property
- in areas not proclaimed
- by plantations.

The unlicensed component in Table 1 represents our estimates of existing and potential unlicensed use based on stock and domestic farm dams (DoW 2010b). As part of the ongoing allocation process we will refine estimates of unlicensed use (Section 6.1), including water uses other than stock and domestic water use. This will better define how much water is available for licensing.

To meet the Water Corporation's projects for future public water supply needs we have reserved water in Record Brook (500 ML), Upper Warren (500 ML) and Four Mile Brook/Big Brook (50 ML).

Table 1 Allocation limit, components of the allocation limit and resource status

| Resource   | Allocation limit ML/yr | Allocation limit components ML/yr |                     |                             | Reserved water Public water supply | Status of water availability for licensing <sup>1</sup><br>(as at June 2010) |
|--|------------------------|-----------------------------------|---------------------|-----------------------------|------------------------------------|--|
|  |                        | General licensing                 | Public water supply | Unlicensable Unlicensed use |                                    |  |
| <b>Warren River and tributaries surface water area</b> |                        |                                   |                     |                             |                                    |  |
| Tone River   | 55                     | 50                                | 0                   | 5                           | 0                                  | No water available   |
| Perup River  | 1 571                  | 1 434                             | 0                   | 138                         | 0                                  | Water available  |
| Yerraminnup River                                      | 124                    | 113                               | 0                   | 11                          | 0                                  | Water available  |
| Wilgarup River   | 8 027                  | 7 350                             | 0                   | 677                         | 0                                  | Limited water available  |
| Upper Warren   | 4 368                  | 3 484                             | 0                   | 384                         | 500                                | Water available  |
| Quinninup Brook  | 1 422                  | 1 267                             | 30                  | 125                         | 0                                  | Water available  |
| Smith Brook  | 4 362                  | 3 745                             | 0                   | 617                         | 0                                  | Limited water available  |
| Diamond Tree Gully                                     | 682                    | 623                               | 0                   | 59                          | 0                                  | Water available  |
| Upper Lefroy   | 6 975                  | 5 581                             | 894                 | 500                         | 0                                  | No water available   |
| East Brook   | 3 627                  | 3 258                             | 0                   | 370                         | 0                                  | No water available   |
| Lefroy Brook   | 2 905                  | 2 108                             | 450                 | 347                         | 0                                  | Water available  |
| Four Mile Brook/<br>Big Brook                          | 5 294                  | 4 505                             | 450                 | 290                         | 50                                 | Water available  |
| Treen Brook  | 2 570                  | 2 345                             | 0                   | 225                         | 0                                  | Water available  |
| Dombakup Brook   | 3 783                  | 3 443                             | 0                   | 339                         | 0                                  | Water available  |

<sup>1</sup> Please contact our Manjimup office on 08 9771 1878 for up-to-date information on the volume of water available for future use. Resource status indicates how much of the water available for general licensing has been allocated and whether water is available for new licences. Water available means < 70 per cent has been allocated and limited water available means 70 to 100 per cent has been allocated. Note that water available is also assessed for each licence application at the local scale (see Section 4).

| Resource  | Allocation limit ML/yr | Allocation limit components ML/yr |                     |                                |                                       | Status of water availability for licensing <sup>1</sup><br>(as at June 2010) |
|---|------------------------|-----------------------------------|---------------------|--------------------------------|---------------------------------------|--|
|   |                        | General licensing                 | Public water supply | Unlicensable<br>Unlicensed use | Reserved water<br>Public water supply |  |
| Lower Warren                                    | 1 965                  | 1 790                             | 0                   | 174                            | 0                                     | Water available  |
| Unicup Lakes <sup>2</sup>                       | 0                      | 0                                 | 0                   | 0                              | 0                                     | No water available   |
| <b>Warren totals</b>                            | <b>47 730</b>          | <b>41 096</b>                     | <b>1 824</b>        | <b>4 260</b>                   | <b>550</b>                            |  |
| <b>Donnelly River System surface water area</b> |                        |                                   |                     |                                |                                       |  |
| Upper Donnelly                                  | 3 906                  | 3 558                             | 0                   | 349                            | 0                                     | Water available  |
| Manjimup Brook/<br>Yanmah-Dixvale               | 6 441                  | 5 900                             | 0                   | 541                            | 0                                     | Limited water available  |
| Middle Donnelly                                 | 2 366                  | 2 162                             | 0                   | 204                            | 0                                     | Water available  |
| Record Brook                                    | 500                    | 0                                 | 0                   | 0                              | 500                                   | No water available   |
| Barlee  | 0                      | 0                                 | 0                   | 0                              | 0                                     | No water available   |
| Lower Donnelly                                  | 14                     | 13                                | 0                   | 1                              | 0                                     | No water available   |
| Carey Brook                                     | 0                      | 0                                 | 0                   | 0                              | 0                                     | No water available   |
| Beedelup Brook                                  | 806                    | 739                               | 0                   | 67                             | 0                                     | No water available   |
| Fly Brook                                       | 867                    | 795                               | 0                   | 72                             | 0                                     | No water available   |
| <b>Donnelly totals</b>                          | <b>14 900</b>          | <b>13 166</b>                     | <b>0</b>            | <b>1 233</b>                   | <b>500</b>                            |  |

<sup>2</sup> The Unicup Lakes resource is proclaimed under the Warren River and tributaries surface water area but is within the Muir-Unicup surface water allocation area (water resource database information). The allocation limit was set at current use (0) to help protect the environment.

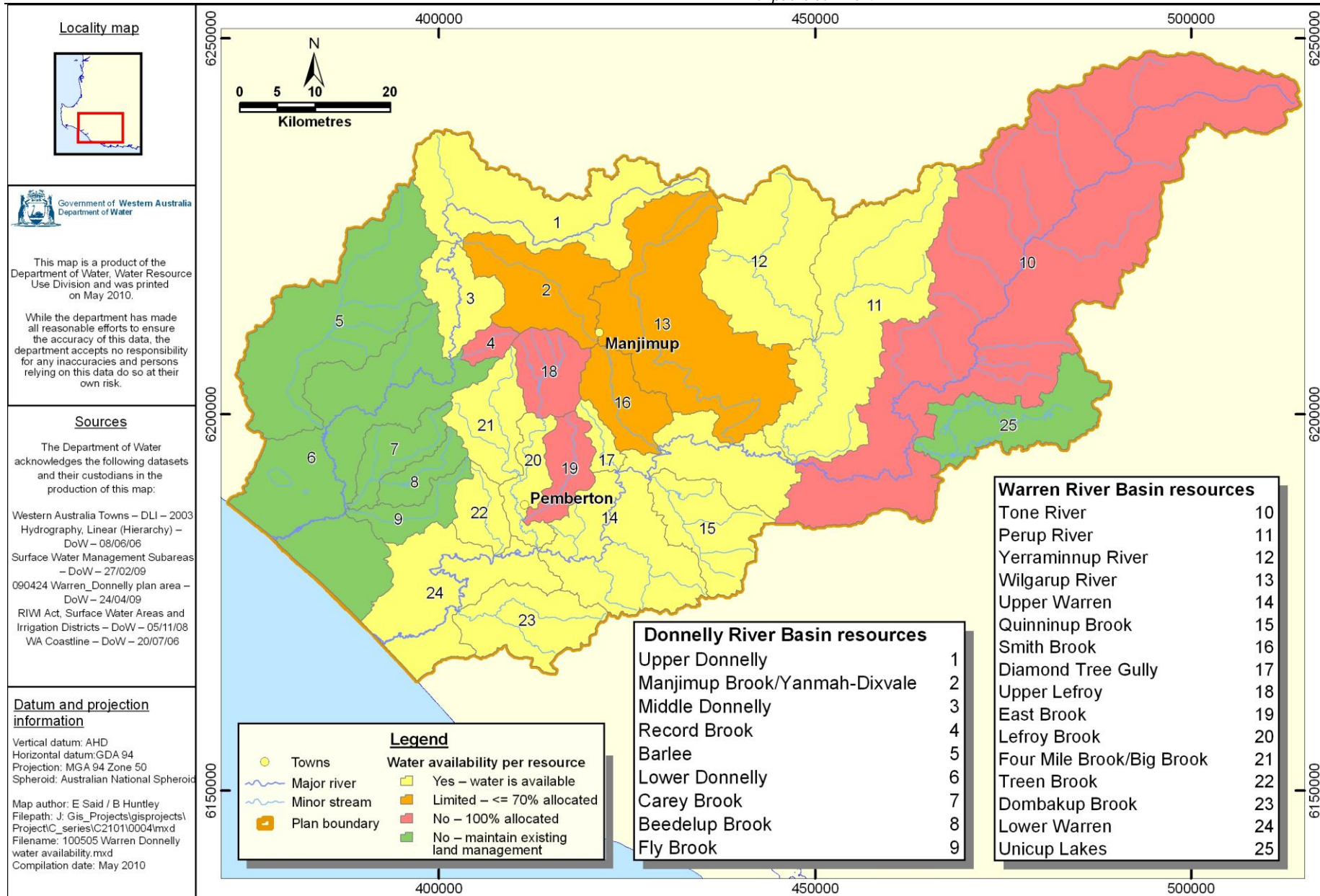


Figure 3 Surface water availability for licensing in the Warren-Donnelly area

## 4 Allocation and licensing policies

Water licences are the regulatory instrument the department uses under the *Rights in Water and Irrigation Act 1914* to manage individual take and use. Allocation plans direct the assessment and conditions of licences and develop positions to address the licensing and water allocation issues within the plan area.

The department uses relevant policies to assess licence applications, and guide water use and take where water users legally require a licence.

### 4.1 Approach to allocating water

The objectives set out in Section 2.1 provide the department's approach to allocating water in the Warren-Donnelly area. They are designed to maintain the sustainability of the surface water resources. The department uses the licensing process to allocate the available water up to the allocation limits set in Section 3.

The department applies a first-in first-served approach when assessing applications for water licences. Where additional information is requested by the department in relation to an application, and the applicant does not submit the additional information to the department in a timely manner, the department may return the application to the applicant as incomplete. If the applicant reapplies, the application will be considered as a new application under the first-in first-served approach.

At the resource scale, the department assesses whether water is available for an application based on the allocation limit component for licensing. At the local scale, water available is calculated per unit area (ML/km<sup>2</sup>) based on the catchment area upstream of the proposed abstraction point.

The department will consider the amount of surface water to be stored and used when determining the annual water entitlement for a surface water licence. For a licence for taking water from an on-stream dam, the department will set the water entitlement as the dam capacity. For a licence to pump from a watercourse into an off-stream dam, the department will set the water entitlement as the maximum volume of water to be pumped from the watercourse annually.

### 4.2 Legislative requirements

#### 4.2.1 *Rights in Water and Irrigation Act 1914*

The *Rights in Water and Irrigation Act 1914* establishes the legislative framework for managing and allocating water resources in Western Australia. Water users in the Warren-Donnelly area may require a water licence to lawfully take surface water under section 5C of the *Rights in Water and Irrigation Act 1914*.

A permit is also required to lawfully interfere with the bed and banks of watercourses, including the installation of pumps or construction of dams, under clauses 11, 17 and 21 of the *Rights in Water and Irrigation Act 1914*.

A water licence provides a legal and secure access to water. The department manages the taking and using of water at an individual scale through the licensing process, to:

- protect other users from the impacts of water use
- protect water-dependent ecosystems from the impacts of water use
- enable the use of water for economic returns.

The granting of a licence is at the department's discretion. In exercising this discretion, the department must consider clause 7 (2) of Schedule 1 of the *Rights in Water and Irrigation Act, 1914*, together with the allocation approach outlined in the relevant allocation plan.

In granting a licence, clause 15 of Schedule 1 of the *Rights in Water and Irrigation Act 1914* enables the department to include terms, conditions and restrictions to licences. Conditions may refer to attachments or other documents that the licence must abide by.

Clause 24 (1) of Schedule 1 in the Rights in Water and Irrigation Act 1914 specifies the department's requirements for altering any licence condition and clause 26 covers the rights of licensees. Any decision made on a licence application can be appealed through the State Administrative Tribunal.

The department has developed the policies in Section 4.4 to provide further detail and direction associated with licence conditions.

#### **4.2.2 Public drinking water source areas**

Parts of the Warren-Donnelly area are proclaimed for public drinking water supply under the *Country Areas Water Supply Act 1947*. These are the:

- Lefroy Brook Catchment Area
- Manjimup Dam Catchment Area
- Manjimup Phillips Creek Catchment Area
- Quinninup Dam Catchment Area.

The department has a water source protection plan for the Quinninup Dam Catchment Area and has completed water source protection assessments for the other areas. The water source protection plans, assessments and policies and water quality protection notes are available online at <[www.water.wa.gov.au](http://www.water.wa.gov.au)> Waterways health > Drinking water or Water quality>.

#### **4.2.3 Riparian rights**

Riparian rights are detailed in Part III, Division 1B, sections 9 and 20 of the *Rights in Water and Irrigation Act 1914*. A riparian right grants a landholder the right to take surface water:

- in a proclaimed area:

- where a watercourse flows on public or Crown land adjoining their property or that is flowing across their private property
- for domestic or non-intensive stock water
- in an unproclaimed area, in addition to the above, for any other purpose to the extent that the flow of water in the watercourse or the amount of water in the wetland is not sensibly diminished.

## 4.3 Licensing approach

The licensing of taking and using of surface water and the granting of permits to interfere with the bed and banks of watercourses in the Warren-Donnelly area is managed by the department's Manjimup office. Any queries on surface water licensing or licences should be directed to this office on 08 9771 1878.

General licensing information and licence application forms are available on our website <[www.water.wa.gov.au](http://www.water.wa.gov.au)> Doing business with us > Water licensing>.

The department carries out the licensing process in accordance with the requirements of:

- the *Rights in Water and Irrigation Act 1914*
- the strategic and operational policies that apply state-wide
- local policies that apply to the plan area
- this allocation plan.

The department will also consider legislative requirements or policies of other government agencies (for example, land zoning and planning documents of the local government authorities) to ensure land and water use are integrated where possible.

The department will refuse a licence application if the licensing process finds that the allocation limit would be exceeded or local impacts will be unacceptable.

The department carries out regular licence compliance audits to ensure that water take and use is in accordance with licences and their conditions. During auditing, the department reviews monitoring data and metering data and assesses whether there are any local impacts, to ensure that the licence conditions are appropriate.

Where a surface water resource is fully allocated, people wishing to gain new surface water entitlements should consider transactions with existing licensees (transferring or trading existing water entitlements or reaching an agreement to use an existing water entitlement).

## 4.4 Licensing policies

### 4.4.1 Policies that apply state-wide

The department develops strategic and operational policies that apply across the state, including the Warren-Donnelly area. Table 2 outlines the main strategic and operational policies that apply to the Warren-Donnelly area. An up-to-date list of the

policies is available on our website: <[www.water.wa.gov.au](http://www.water.wa.gov.au)> Doing business with us > Water licensing>.

*Table 2 Main strategic and operational policies that apply to the Warren-Donnelly area*

| <b>Policy</b>  | <b>Points to note</b>   |
|--|---|
| <i>Statewide policy no. 11 – Management of unused licensed water entitlements (WRC 2003)</i>                           | To maximise development opportunities, the department may recoup portions of licensed entitlements that are consistently unused.  |
| <i>Statewide Policy no. 12 – Management of complaints and disputes on watercourses in Western Australia (WRC 2004)</i> | This policy outlines how the department addresses complaints and disputes between neighbours along the same stream or watercourse.  |
| <i>Enforcement and prosecutions policy (DoW 2008)</i>  | Failure to comply with a licence or a licence condition may result in the department taking action.   |
| <i>Operational policy no. 5.13 – Water entitlement transactions for Western Australia (DoW 2009a)</i>                  | This policy contains the department's rules for a trade, transfer or lease of all, or part of, a licence's water entitlement.   |
| <i>Strategic policy 5.03 – Metering the taking of water (DoW 2009b)</i>  | Outlines the department's position on metering the taking of water in Western Australia. The policy also details the circumstances where the department may impose metering conditions on individual licensees (mainly for groundwater).  |
| <i>Guidelines for water meter installation (DoW 2009c)</i>   |   |
| <i>Rights in Water and Irrigation (Approved Meters) Order 2009</i>   |   |
| <i>Operational policy no. 5.11 – Timely submission of required further information (DoW 2009d)</i>                     | Describes how the department manages the timelines that a licensee has for submitting any additional requested information as part of their licence application.  |
| <i>Operational policy no. 5.8 – Use of operating strategies in the water licensing process (DoW 2010a)</i>             | Describes: <ul style="list-style-type: none"> <li>• which water licence applicants are likely to require an operating strategies</li> <li>• how operating strategies form part of the conditions of a water licence</li> <li>• how licence applicants should develop an operating strategy</li> <li>• the licensee's responsibilities in complying with an operating strategy.</li> </ul> |

#### **4.4.2 Local licensing policies for the Warren-Donnelly area**

Local licensing policies that apply to the Warren-Donnelly area are set out in Table 3. Local policies complement the department's state-wide strategic or operational policies. The local policies in this plan take precedence over state-wide policies where there is an inconsistency between them.



Table 3 Policies specific to surface water licensing in the Warren-Donnelly area

| Policy group | Policy detail   |
|--------------|---|
| <b>1.</b>    | <b>Assessing licence applications</b>   |
| 1.1.         | <p>Permits to interfere with bed and banks</p> <p>To assess applications for permits to construct a dam, the department requires the applicant to provide surveyed characteristics (such as location, dam level, surface contours) and the maximum storage capacity of the dam.</p>   |
| 1.2.         | <p>Applications proposing encroachment of dam water on neighbouring properties</p> <p>1.2.1. For permit and licence applications where the storage of water will encroach onto a privately owned neighbouring property, the department will require the applicant to do one of the following before the permit or licence will be granted:</p> <ul style="list-style-type: none"> <li>• amalgamate all flooded land under a single Certificate of Title</li> <li>• obtain an easement on the flooded portion of the neighbouring land</li> <li>• enter into a deed of agreement with the affected neighbour and lodge a 'subject to claim' caveat on the adjoining land title.</li> </ul> <p>1.2.2. For permit and licence applications where the storage of water will encroach onto a publicly owned neighbouring property, the department requires the applicant to do one of the following before the permit or licence will be granted:</p> <ul style="list-style-type: none"> <li>• purchase or exchange the affected public land from the vestee</li> <li>• lease the affected public land from the vestee.</li> </ul> |
| <b>2.</b>    | <b>Licence conditions</b>   |
| 2.1.         | <p>Licence conditions</p> <p>2.1.1. The department may impose conditions on licences that state the times in the year when flows must be allowed to bypass dams.</p> <p>2.1.2. The department may require licensees to complete water use return forms annually, as a condition on their licence, if:</p> <ul style="list-style-type: none"> <li>• they have both storage and a consumptive water use on their licence</li> <li>• they are in a resource that is greater than 70 per cent allocated</li> <li>• it is necessary for compliance.</li> </ul> <p>The need for water use returns will be assessed at licence renewal and following compliance audits.</p>  |

| Policy group                           | Policy detail   |
|--|---|
| <b>3. Stock and domestic water use</b> |   |
| 3.1. Stock and domestic dams           | <p>3.1.1. On-stream dams for non-intensive or non-commercial (stock and domestic<sup>3</sup>) purposes are exempt from licensing to take water, unless they exceed a storage capacity of 8000 kL.</p> <p>Note: The construction of dams for stock and domestic purposes require a permit to interfere with bed and banks.</p> <p>3.1.2. The department requires the taking of water from all on-stream dams larger than 8000 kL capacity for stock and domestic purposes to be licensed.</p> <p>Licences for these dams will include 'storage of surface water' as an authorised water use in addition to stock and domestic water use. The licence entitlement will generally equal the storage capacity of the dams.</p>  |
| <b>4. Environmental policies</b>       |   |
| 4.1. Environmental impact management   | <p>4.1.1. The department encourages water users to pump winter flows from a watercourse into an off-stream storage, rather than constructing on-stream dams or directly pumping from a watercourse in summer.</p> <p>4.1.2. The department requires all new on-stream dams with the potential to cause unacceptable impacts to downstream users and the environment to have a low-flow bypass system.</p> <p>4.1.3. The department may require new on-stream dams to include structures that allow the migration of aquatic species. This will be determined during the permit application assessment.</p> <p>4.1.4. At licence renewal, where practical, the department may require licensees with an existing on-stream dam to construct a flow bypass system to allow summer flows to bypass the dam, and/or structures that allow the migration of aquatic species.</p> <p>4.1.5. The department is unlikely to approve new applications proposing to take surface water (including by direct pumping) from a watercourse in periods of low flow (generally in summer), due to the ecological needs of the system during that time.</p> |

<sup>3</sup> Dams for stock and domestic use generally have a storage capacity of less than 8000 kL.

## 4.5 Additional information

### 4.5.1 Drinking of surface water

If surface water is to be used for private drinking water supplies, the department recommends that it be filtered, treated and tested according to public health advice from the Department of Health. Also see the department's water quality protection notes, *Australian drinking water guidelines 2004* (Australian Government 2004) and the *Australian fresh and marine water quality guidelines* (ANZECC & ARMCANZ 2000) for more information.

## 5 Monitoring program for the plan area

The department monitors streamflow and water quality at gauging stations within the plan area (Figure 4) as part of the state reference network. Streamflow information is available for most of these gauging stations on the river level monitoring page of our website <[www.water.wa.gov.au](http://www.water.wa.gov.au)>.

For this plan, streamflow data from these gauging stations was used to calculate flows for each surface water resource to determine ecologically sustainable yields. Salinity data from gauging stations was also used in our assessment of the potential impacts of abstraction on stream salinity. Both of these data analyses informed our allocation limit decisions.

### 5.1 Monitoring program

To assess the response of rivers to surface water use and to evaluate whether we are meeting the plan's resource objectives (Section 2.1), we will annually review data from relevant gauging stations to:

- determine the annual flow for each resource
- assess if flows are above minimum flows for the period 1975 to 2007
- assess whether the frequency and duration of flow is above ecological flow thresholds in the highly developed Upper Lefroy surface water resource.

### 5.2 Monitoring program review

As part of implementing this plan we will carry out a review of the current streamflow monitoring program. The review will assess whether the monitoring program supports the needs of this plan to:

- meet the objectives of this plan (Section 2.1)
- measure performance indicators (Section 6.2)
- evaluate whether our approach is appropriate for managing the surface water resources.

The review will:

- assess whether the extent of the current network of gauging stations is adequate and whether any new gauging stations are required
- assess whether the frequency of flow and salinity measurements are adequate
- recommend changes, including priorities for measurement for this plan.



Figure 4 Department streamflow gauging stations in the plan area

## 6 Implementing and evaluating the plan

This section sets out how the department will implement, evaluate and review the *Warren-Donnelly surface water allocation plan*.

### 6.1 Implementing the plan

We have committed to a list of actions (Table 4) that will enable us to implement this plan and improve planning in the future. We have developed these actions by:

- identifying the gaps in our current knowledge and information
- reviewing current management arrangements
- assessing what information we need for future planning.

*Table 4 Actions for implementing the plan and for future planning*

| No.                                    | Action   | Responsibility <sup>4</sup>  | Timeline      |
|--|--|--|---------------|
| <b>Actions for plan implementation</b> |  |  |               |
| <b>Evaluation statement</b>            |  |  |               |
| 1                                      | Produce and publish an annual evaluation statement   | South West Region  | Annually      |
| <b>Licensing</b>                       |  |  |               |
| 2                                      | Record and review water use information (including metered data, water use returns) from licensees and assess use of licensed entitlements | South West Region  | Annually      |
| 3                                      | Survey a subset of licence holders for water use and storage information   | South West Region  | Annually      |
| 4                                      | Conduct a compliance audit of licences   | South West Region  | Every 5 years |
| <b>Monitoring</b>                      |  |  |               |
| 5                                      | Review the monitoring program  | Measurement & Water Information, Surface Water Assessment and Water Allocation Planning branches | End 2010      |

<sup>4</sup> Department of Water branch that is responsible for implementing the actions in the plan area.

| No.                                | Action   | Responsibility <sup>4</sup>                                     | Timeline         |
|------------------------------------|--|---|------------------|
| <b>Actions for future planning</b> |  |   |                  |
| <b>Allocation decisions</b>        |  |   |                  |
| 6                                  | Refine estimates of unlicensed surface water use for each subarea (see types of unlicensed use in Section 3.1)   | Water Allocation Planning and Water Information branches        | 2013             |
| 7                                  | Investigate the highest level of on-stream dam development with minimal impact on water supply to existing water users and ecological values                                     | Water Allocation Planning and Surface Water Assessment branches | To be determined |
| 8                                  | Investigate options for lower reliability allocation classes for fully allocated surface water resources   | Water Allocation Planning Branch                                | To be determined |
| 9                                  | Review ecological water requirements and ecologically sustainable yields if annual flow is less than the minimum annual flow (calculated for 1975 to 2007) due to climate change | Water Allocation Planning Branch                                | If required      |

Table 5 summarises the performance indicators that we will use to measure the performance of this plan against its objectives.

*Table 5 Performance indicators for plan objectives*

| Performance indicator  | Objective  | How we will evaluate it  |
|--|------------|--|
| Ecological water requirements are met  | b, d and f | <ul style="list-style-type: none"> <li>Assess the frequency and duration of flows at Channybearup (Upper Lefroy resource), using actual or modelled data, against ecological flow thresholds</li> </ul>  |
| There is sufficient flow for licensees to take their whole licence entitlement volume, with dams filling before the irrigation season starts | a, e and f | <ul style="list-style-type: none"> <li>Assess the number and cause of complaints or disputes about insufficient streamflow</li> </ul>  |
| The volume of water taken by licensees is within their entitlement   | all        | <ul style="list-style-type: none"> <li>Annual review of water use returns from licensees</li> <li>Measure storage capacity opportunistically through on-site visits or aerial photography</li> <li>Assess actual use from compliance audit results (Action 4)</li> </ul> |

| Performance indicator   | Objective  | How we will evaluate it  |
|---|------------|--|
| Licensees comply with their licensing conditions (and operating strategy) | d, e and f | <ul style="list-style-type: none"> <li>• Check that new constructions built comply with conditions</li> <li>• For existing licence entitlements, undertake on-site surveys to check compliance of water use, management and structures</li> <li>• Annual review of any licensee monitoring data required as a condition on licences</li> </ul> |

## 6.2 Evaluating and reviewing the plan

We will release an annual evaluation statement each year to identify whether the plan is achieving its objectives and meeting the performance indicators. To prepare the statement we will:

- assess the allocation status for each resource and compare it with previous years
- summarise the status of actions required by the plan due within the evaluation period
- assess the status and trends of the surface water resources
- assess performance against the plan objectives
- assess if there is a need, if any, to amend or replace the plan.

The statement will be available on the department's website or by contacting the South West regional office in Bunbury or Busselton.



# Glossary

|                                       |   |
|---------------------------------------|---|
| <b>Abstraction</b>                    | Permanent or temporary withdrawal of water from any source of supply, so that it is no longer part of the resources of the locality.  |
| <b>Allocation limit</b>               | Annual volume of water set aside for use from a water resource.   |
| <b>Allocation limit component</b>     | A portion of the allocation limit, defined by the department for administrative and water accounting purposes   |
| <b>Annual water entitlement</b>       | Volume of surface water that can be taken from a watercourse during a specified water year.   |
| <b>Catchment</b>                      | Area of land from which rainfall run-off contributes to a single watercourse, wetland or aquifer.   |
| <b>Climate change</b>                 | A change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.   |
| <b>Commercial use</b>                 | Water taken from a resource that is directly or indirectly used for commercial purposes. This includes water taken for public and private purposes and water stored in a dam.   |
| <b>Dam</b>                            | An embankment constructed to store or regulate surface water flow. A dam can be constructed in or outside a watercourse.  |
| <b>Ecologically sustainable yield</b> | Amount of water that can be abstracted over time from a water resource while maintaining the ecological values (including assets, functions and processes).   |
| <b>Ecological values</b>              | Natural ecological processes occurring within water-dependent ecosystems and the biodiversity of these systems.   |
| <b>Ecosystem</b>                      | A community or assemblage of communities of organisms, interacting with one another, and the specific environment in which they live and with which they also interact, e.g. a lake. Includes all the biological, chemical and physical resources and the interrelationships and dependencies that occur between those resources. |
| <b>Environment</b>                    | Living things, their physical, biological and social surroundings, and the interactions between them.   |
| <b>Flow</b>                           | Streamflow – may be measured as m <sup>3</sup> /yr, m <sup>3</sup> /d or ML/yr. May also be referred to as discharge.   |
| <b>Interception</b>                   | A broad term encompassing the interception of rainfall, surface water runoff and groundwater recharge by a land use activity.   |
| <b>Licence</b>                        | A formal permit that entitles the licence holder to take water from a watercourse, wetland or underground source.   |
| <b>Licensed use</b>                   | Total (annual) volume of surface water that has been allocated to licensees as entitlements. This may include what is taken for public and private purposes and what can be taken to be stored in a dam.  |

|                                     |  |
|-------------------------------------|--|
| <b>Off-stream storage</b>           | Storages (such as farm dams, turkey's nest dams) that are not on defined waterways or watercourses and primarily store water extracted from rivers or aquifers, or from flood water emanating from rivers or from local catchment runoff.  |
| <b>On-stream storage</b>            | Storages (such as farm dams) that are built on or within a defined waterway or watercourse.  |
| <b>Over-allocated</b>               | Total surface water use is greater than the allocation limit for a designated management area.   |
| <b>Plantation</b>                   | A non-irrigated crop of trees grown or maintained so that the wood, bark, leaves and/or essential oils can be harvested or used for commercial purposes (including through the commercial exploitation of the carbon absorption capacity of the forest vegetation).  |
| <b>Proclaimed resource</b>          | <p>An area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> to enable water licensing, that is used for water allocation planning and management.</p> <p>Surface water is proclaimed as a surface water area, irrigation district or proclaimed river under Part III Division 1B s.6 of the <i>Rights in Water and Irrigation Act 1914</i>.</p> |
| <b>Reliability</b>                  | Frequency with which water allocated under a water access entitlement can be supplied in full. Referred to in some states as 'high security' and 'general security'.   |
| <b>Resource</b>                     | See surface water resource.  |
| <b>Riparian right</b>               | Right of a riparian landowner to take water from a watercourse, that flows through or is contiguous to their property, unlicensed and free of charge for the purpose of non-intensive stock and ordinary domestic use, without sensibly diminishing the flow of water downstream.  |
| <b>Salinity</b>                     | Measure of total soluble salt or mineral constituents in water. Water resources are classified based on salinity in terms of total dissolved solids (TDS) or total soluble salts (TSS). Measurements are usually in milligrams per litre (mg/L) or parts per thousand (ppt).   |
| <b>Self-supply</b>                  | Water diverted from a source by an individual, company or public body for their own private use.   |
| <b>Spring</b>                       | A spring is where water naturally rises to and flows over the surface of land.   |
| <b>Stock and domestic water use</b> | Water that is used for ordinary domestic purposes associated with a dwelling, such as water for cattle or stock other than those being raised under intensive conditions; water for up to 0.2 ha (if groundwater) or 2 ha (if surface water) of garden from which no produce is sold. This take is generally considered a basic right.                             |
| <b>Subarea</b>                      | A subdivision within a surface water or groundwater area, defined for the purpose of managing the allocation of water resources. Subareas are not proclaimed and can therefore be changed internally without being gazetted.   |

|   |  |
|---|--|
| <b>Surface water</b>                    | Water flowing or held in streams, rivers and other wetlands on the surface of the landscape.   |
| <b>Surface water allocation area</b>    | An area defined by the Department of Water, used for water allocation planning and management, that is generally a hydrologic basin or part of a basin.  |
| <b>Surface water allocation subarea</b> | An area within a surface water management area defined by the Department of Water, used for water allocation planning and management, that is generally a hydrologic catchment.  |
| <b>Surface water resource</b>           | Defined area for allocation and licensing decisions for a particular plan area. For this plan, surface water resource boundaries are the same as surface water allocation subareas.  |
| <b>Take</b>                             | <p>Take, in relation to water, means to remove water from, or reduce the flow of water in, a watercourse, wetland or underground water source, including by:</p> <ol style="list-style-type: none"><li>pumping or siphoning water</li><li>stopping, impeding or diverting the flow of water</li><li>releasing water from a wetland</li><li>permitting water to flow under natural pressure from a well or</li><li>permitting stock to drink from a watercourse or wetland</li></ol> <p>and includes storing water during, or ancillary to, any of those processes or activities.</p> <p>(Definition from the <i>Rights in Water and Irrigation Act 1914</i>)</p> |
| <b>Unlicensed use</b>                   | <p>Water use that is currently exempt from licensing under the <i>Rights in Water and Irrigation Act 1914</i>. For surface water, this includes water taken:</p> <ul style="list-style-type: none"><li>for small scale household purposes and non-intensive stock watering</li><li>from springs and wetlands wholly within a property</li><li>from streams arising on a property</li><li>in areas not proclaimed</li><li>by plantations.</li></ul>   |
| <b>Use</b>                              | Water taken for private benefit consumptive purposes including irrigation, industry, urban, stock and domestic, aesthetics, lifestyle and storage.   |
| <b>Watercourse</b>                      | <p>A watercourse means:</p> <ol style="list-style-type: none"><li>any river, creek, stream or brook in which water flows</li><li>any collection of water (including a reservoir) into, through or out of which any thing coming within paragraph (a) flows</li><li>any place where water flows that is prescribed by local by-laws to be a watercourse</li></ol> <p>and includes the bed and banks of any thing referred to in paragraph a, b or c.</p> <p>(Definition from the <i>Rights in Water and Irrigation Act 1914</i>)</p>  |

|                                   |  |
|-----------------------------------|--|
| <b>Water-dependent ecosystems</b> | Those parts of the environment which are sustained by the permanent or temporary presence of water.  |
| <b>Water entitlement</b>          | Quantity of water that a person is entitled to take annually in accordance with the <i>Rights in Water and Irrigation Act 1914</i> or a licence.   |
| <b>Water regime</b>               | A description of the variation of flow rate or water level over time. It may also include a description of water quality.  |
| <b>Water reserve</b>              | An area proclaimed under the Metropolitan Water Supply, Sewerage and Drainage Act 1909 or Country Areas Water Supply Act 1947 to allow the protection and use of water on or under the land for public water supplies. |
| <b>Water use return</b>           | A form that some licensees are required to submit to the department each year, as a condition on their licence, that provides information on how much water they stored in their dam/s and used in the past year.      |
| <b>Waterways</b>                  | All streams, creeks, stormwater drains, rivers, estuaries, coastal lagoons, inlets and harbours.   |

## Volumes of water

|                             |                      |             |      |
|-----------------------------|----------------------|-------------|------|
| One litre                   | 1 litre              | 1 litre     | (L)  |
| One thousand litres         | 1000 litres          | 1 kilolitre | (kL) |
| One million litres          | 1 000 000 litres     | 1 megalitre | (ML) |
| One thousand million litres | 1 000 000 000 litres | 1 gigalitre | (GL) |

## References and further reading

Commonwealth Scientific and Industrial Research Organisation 2009, *Surface water yields in south-west Western Australia*, a report to the Australian Government from the CSIRO South-West Western Australia Sustainable Yields Project, CSIRO Water for a Healthy Country Flagship, Australia.

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— 2004, *Statewide policy no. 12 – Management of complaints and disputes on watercourses in Western Australia*, Government of Western Australia, Perth.

WRC – see Water and Rivers Commission



A decorative graphic consisting of several concentric, overlapping circles in a lighter shade of blue, resembling ripples on water, positioned in the lower half of the page.

*Looking after all our water needs*

**Department of Water**

168 St Georges Terrace, Perth, Western Australia  
PO Box K822 Perth Western Australia 6842  
Phone: (08) 6364 7600  
Fax: (08) 6364 7601  
[www.water.wa.gov.au](http://www.water.wa.gov.au)