



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

# Gingin groundwater allocation plan

Statement of response

March 2015

*Securing Western Australia's water future*





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# Contents

Contents .....	iii
Gingin groundwater allocation plan – Statement of response .....	1
The public comment period .....	1
Completing the plan.....	1
Submissions received.....	1
Comments received and the department’s responses .....	2
Where to next? .....	14
Further information .....	15
Shortened forms .....	17
Glossary .....	18
References and further reading .....	19

## Tables

Table 1	Respondents to the plan for public comment.....	2
Table 2	General comments and questions received on the plan .....	2
Table 3	Comments and question on the water allocation approach .....	3
Table 4	Comments and questions on trading entitlements and licensing .....	5
Table 5	Comments and question on access to public water supply provisions and public water supply reserves .....	8
Table 6	Comments on reserving water for agricultural expansion and demands ..	10
Table 7	Comments on policy, the first-in first-served approach and water use efficiency.....	10
Table 8	Comments on groundwater-dependent ecosystems.....	11
Table 9	Comments and question on monitoring and assessment .....	11
Table 10	Comments on recouping unused entitlements, water availability and hydrogeological reporting .....	12
Table 11	Comments on evaluation, allocation limit components and terminology...	13
Table 12	Comments on values studies, community education and maps .....	14



# Gingin groundwater allocation plan - Statement of response

This statement provides the Department of Water's response to the comments, issues and questions raised in submissions to the *Gingin groundwater allocation plan: for public comment* (DoW 2013).

## The public comment period

The *Gingin groundwater allocation plan: for public comment* was open for public comment from 16 August to 6 December 2013.

During the public comment period, the Department of Water (department) sent more than 160 letters to stakeholders to notify them that the plan was open for public comment. Also, 50 copies of the plan were provided to stakeholders.

An invitation to comment and receive copies of the plan was advertised during the comment period in the following publications:

- *Advocate (Bullsbrook, Bindoon and Gingin)* (21 August 2013).
- *Geraldton Mid-West Times* (22 August 2013)

The department met with representatives from a number of interested parties to brief them on the plan and, in some cases, to respond to and clarify points raised in their submission.

## Completing the plan

Following the public comment period, we worked closely with our stakeholders to complete the *Gingin groundwater allocation plan* (the plan) (DoW 2015a). We considered all of the comments, issues and questions raised in the submissions and at subsequent stakeholder meetings to complete the plan.

## Submissions received

During the comment period, we received 13 formal submissions from a range of interest groups (Table 1). We considered all of the comments, issues and questions raised in submissions in finalising the plan. Our responses to these are provided in this statement.

**Table 1** Respondents to the plan for public comment

Respondents	Interest group	Number of responses
Department of Aboriginal Affairs Department of Agriculture and Food Department of Parks and Wildlife Department of Planning WA Wheatbelt Development Commission WA	Other state departments	5
Groundwater Consulting Services Pty Ltd	Agriculture and irrigation	1
Gingin Water Group Incorporated	Community	1
Shire of Chittering Shire of Dandaragan (2 responses)	Local Government	3
Water Corporation	Public water supply	1
West Koojan-Gillingarra Land Care District Committee	Land care	1
	Individual	1
<b>Total</b>		<b>13</b>

## Comments received and the department's responses

The following tables summarise the issues and questions raised in the public submissions and the department's responses. The comments are grouped according to the water allocation issue they relate to.

**Table 2** General comments and questions received on the plan

Comment	Department of Water response
<p><b>Support for the plan and general management approach</b></p> <p>Three respondents were supportive of the plan, agreeing the plan is a positive step in water management. In particular, two respondents said that the plan:</p> <ul style="list-style-type: none"> <li>provides greater certainty to water users and improves social and environmental outcomes</li> <li>sets out the means of preserving the groundwater and maintaining the environment.</li> </ul> <p>One respondent congratulated the department on the plan and the amount of research that has gone into it.</p>	<p>Noted – we value the support that stakeholders have expressed for the plan and thank them for their submissions and interest in managing water in the Gingin plan area. We will work to ensure stakeholder and community engagement continues in the Gingin area.</p>



Comment	Department of Water response
<p><b>Indigenous heritage and sites</b></p> <p>One respondent submitted a comment on Indigenous sites, commending the department for the plan not having any direct impact upon Aboriginal heritage sites.</p>	<p>Noted – the department considers registered sites in assessing water licence applications under Schedule 1, Division 2, Section 7(2) of the <i>Rights in Water and Irrigation Act 1914</i>.</p>
<p><b>Plan area</b></p> <p>Two respondents had a number of recommendations on further defining the plan boundaries and identifying sites of interest:</p> <ul style="list-style-type: none"> <li>i. Subarea boundaries have no hydrogeological significance and should be set around hydrogeology and water use.</li> <li>ii. Break the allocation areas into aquifer sub-headings in the summary table.</li> <li>iii. Table 2 should have references to the corresponding figures.</li> <li>iv. Include a web link to the water availability database to assist water users to find out further information.</li> </ul>	<ul style="list-style-type: none"> <li>i. Noted – the department has divided the plan area into management units for administrative purposes and where possible, we have tried to align our management boundaries with hydrogeological boundaries.</li> <li>ii. Noted – the summary table has now been updated to include aquifers and water availability in these aquifers.</li> <li>iii. References to the aquifers in Figures 2 to 5 are listed under each aquifer in Table 1 of the plan.</li> <li>iv. Noted – a link to the department’s Water Register is under the water availability table in the plan’s Summary section. For the most up-to-date water availability information, contact our regional office: Department of Water Swan-Avon Regional Office 7 Ellam St Victoria Park WA 6230 Telephone 08 9250 8000</li> </ul>
<p><b>Plan objectives</b></p> <p>One respondent noted that plan objectives a. and b. were unclear and required further transparency and clarification.</p>	<p>Noted – we have further refined the objectives in the final plan. Refer to Chapter 2 of the plan.</p>

*Table 3 Comments and question on the water allocation approach*

Comment	Department of Water response
<p>Two respondents requested clarity on the volume of ‘Unlicensed – Exempt’ water use in Table 2 of the plan (now Table 3 in the final plan), in particular:</p> <ul style="list-style-type: none"> <li>i. concern that such large volumes continue to be allocated to the exempt component</li> <li>ii. how the exempt allocation will be recorded and monitored</li> <li>iii. that a review of exemptions be done</li> <li>iv. recommend that the 0.2 ha allocation for exempt use is made clearer and referenced.</li> </ul>	<ul style="list-style-type: none"> <li>i. The department used land use data from the Department of Agriculture and Food (DAFWA) and cadastral information from Landgate to estimate exempt use in the plan area. For further information on how we calculated exempt use, refer to Chapter 3 of the <i>Gingin groundwater allocation plan methods report</i> (DoW 2015b) (methods report).</li> <li>ii. The department will review the exempt allocation when we evaluate the plan. Refer to Chapter 6 of the plan for further information on plan implementation and evaluation.</li> <li>iii. Noted – as above (ii).</li> <li>iv. We have clarified in the final plan that the 0.2 ha reference comes directly from the</li> </ul>

Comment	Department of Water response
	Rights in Water and Irrigation Act Exemption and Repeal (section 26C) Order 2011. Refer to Chapter 4 – Exemptions.
<p>Two respondents made comments regarding the allocation limits and allocation limit decisions:</p> <ul style="list-style-type: none"> <li>i. The plan could elaborate on the reasons for the difference between the estimated yield and allocation limit in the surficial aquifers in the northern areas of Red Gully and Victoria Plains.</li> <li>ii. It would be of interest to new licence applicants as to why the department decided ‘below yield’ and whether there is the likelihood that this could be revised to ‘at yield’ as demand increases in the future.</li> <li>iii. One respondent noted that the year 2020 wasn’t soon enough for a climate review.</li> </ul>	<ul style="list-style-type: none"> <li>i. Allocation limits are generally set less than the estimated yield for surficial resources because they are generally low yielding and water may be difficult to access. In these cases, we have set the limit close to current use. Further information on the surficial aquifers’ bore yields can be found in Table 1 of the final plan and Section 6.1 of the methods report. When we assess individual licence applications we also consider factors such as soil and crop types and water use efficiency to determine site-specific water needs. If the department receives information from applicants that suggests certain locations are higher yielding, we will review the information as part of the annual evaluation of the plan (refer to Chapter 6 of the plan).</li> <li>ii. Noted – as above (i).</li> <li>iii. This plan updates allocation limits from the 2002 interim strategy (WRC 2002) and factors in a 15 per cent reduction in rainfall to 2020, consistent with predictions of future rainfall. We will assess how the resources are responding to climate in our regular plan evaluations (refer to Chapter 6 of the plan). If we find that an adjustment is required, we will consider amending or replacing the plan before 2020 through this process. The plan will remain in effect until it is replaced by a new water allocation plan, is amended, or is revoked by the Minister for Water.</li> </ul>
<p>Two respondents made comments relating to the rising watertable in the Victoria Plains. In particular, suggesting that the plan could address increased water levels in the Shire of Victoria Plains and the associated land management strategies of the land custodian.</p>	<p>Groundwater levels are generally declining in the central and southern portions of the plan area. In some localised areas, water levels are rising due to past land clearing and this is causing issues for some landholders. The department will continue to work with DAFWA and other government agencies, local shires and community groups to investigate these issues.</p>
<p>One respondent requested that a licensing protocol be developed to ensure the department considers the three allocation plans in the area in licence assessments – Gingin groundwater (DoW 2015a), Gngangara groundwater (DoW 2009a) and Gingin surface water (DoW 2011) allocation plans.</p>	<p>Noted – the department will continue to consider all relevant allocation plans when assessing individual water licence applications, as instructed under Schedule 1, Division 2, Section 7(2) of the <i>Rights in Water and Irrigation Act 1914</i>.</p>

Comment	Department of Water response
<p>One respondent suggested that groundwater abstraction should be reduced overall until levels are restored to a point that allows the natural environment to recover.</p>	<p>Noted – the department will assess and manage risks to the environment using the new allocation limits, licensing rules and the monitoring defined in the plan. We also consider potential impacts on the water resource and its dependent values when assessing water licence applications under Schedule 1, Division 2, Section 7(2) of the <i>Rights in Water and Irrigation Act 1914</i>. Where necessary, we have reduced allocation limits to below use and will focus on these areas for compliance and enforcement, recoup of unused water entitlements and water use efficiency to reduce risks to the resource. In other areas, we have reduced allocation limits to current use to cap additional licensing and focus more on water use efficiency.</p>
<p><b>Allocation limit revision</b> The Chandala Yarragadee resource.</p>	<p>Since the release of the plan for public comment, we have reviewed our allocation limits and decision making. One of the outcomes is an increase of the allocation limit for the Chandala Yarragadee resource from 850 to 1050 ML/year. This has now been updated in the final plan.</p>
<p><b>Question</b> Is water from the Victoria Plains subarea allowed to be taken from a spring which arises on a property?</p>	<p>Yes, this is exempt from licensing under the <i>Rights in Water and Irrigation Act 1914</i>. Landholders can take water from springs arising on their land and wetlands wholly on their land, provided the resource is not sensibly diminished.</p>

*Table 4 Comments and questions on trading entitlements and licensing*

Comment	Department of Water response
<p><b>Trading water entitlements</b> Four respondents had extensive comments on water trades and trading zones:</p> <ul style="list-style-type: none"> <li>i. Water is being held by licensees for purely speculative trading reasons and who are profiteering from this.</li> <li>ii. The plan could address the complex challenges and conflicting needs on water trading, commercial water ventures and water for essential public service.</li> <li>iii. New water trading zones should be established to enable agricultural water users to trade when allocations limits are reached or where already reached.</li> <li>iv. Concern with the Bindoon, Gingin, Moora town sites, Wannamal and Victoria Plains having nil reserved for public water supply</li> </ul>	<ul style="list-style-type: none"> <li>i. The department has state-wide policies that aim to prevent speculative water trading. The plan and the <i>Rights in Water and Irrigation Act 1914</i> state that a person must have access to the water resource (i.e. own or have legal access to the land) to hold a water licence. Further, under the <i>Rights in Water and Irrigation Act 1914</i> and in accordance with Statewide policy no. 11 – <i>Management of unused licensed water entitlements</i> (WRC 2003), the department recoups unused water entitlements.</li> <li>ii. The plan addresses the complex water issues in the plan area and enables sustainable and secure water resource use. It also outlines clear trading policies designed to protect the long-term use of the resource, and ensures water is available for growth across industries and essential town</li> </ul>

Comment	Department of Water response
<p>and the impacts this will have with trading.</p> <p>v. All planning applications should carefully consider the impact on the water resource and if the impact is negative the existing water licence is not transferred.</p>	<p>water supplies.</p> <p>iii. The plan establishes clear trading zones in the plan area. As per Operational policy no. 5.13 – <i>Water entitlement transactions for Western Australia</i> (DoW 2009b), trading is possible in the Gingin plan area.</p> <p>iv. Noted – as above (i and ii). The department is working with the Water Corporation to assess local public water supply needs to towns within the plan area including Bindoon, Chittering, Dandaragan, Gingin, Moora, Victoria Plains, Wannamal and surrounds. Existing water supplies to these towns are likely to be sufficient to 2020. Additional groundwater supplies may be accessed from the Surficial and Mirrabooka aquifers or through trading/transfers with existing licensees. The department does not control the water market and does not compel existing licensees to sell. Refer to Chapter 3 of the methods report for further information on factors considered in developing the plan.</p> <p>v. Noted – the department considers potential impacts on the water resource and its dependent values when assessing water licence applications under Schedule 1, Division 2, Section 7(2) of the <i>Rights in Water and Irrigation Act 1914</i>.</p>
<p>One respondent suggested explanatory text to be added to the water trading restrictions in the plan: 'It is unclear why trading can be done from Zone 2 to Zone 1, but not from Zone 2 to Zone 3.'</p>	<p>We have provided more detail on water trading restrictions in Chapter 4 of the plan. Further information on the department's reasoning behind these trading restrictions is also available in Chapter 6 of the methods report. Trading zones have been put in place to address declining pressure heads in the southern portion of the Cowalla Leederville–Parmelia resource. Direct recharge does not occur in this portion of the resource and this is the area of highest abstraction. In order to alleviate this stress on the resource, we have established trading rules that encourage trades in a northerly direction.</p>
<p><b>Water entitlements</b></p> <p>One respondent raised the issue of individuals holding water for speculative developments, in particular that:</p> <p>i. water licences should be specific to the property and cannot be sold to other locations</p> <p>ii. these individuals are denying current and future development opportunities</p>	<p>i. Water can be traded to other locations. Refer to Operational policy no. 5.13 – <i>Water entitlement transactions for Western Australia</i> (DoW 2009b).</p> <p>ii. The department only grants licences to applicants that demonstrate a clear use for water as per <i>Operational policy no. 5.13 – Water entitlement transactions for Western Australia</i> (DoW 2009b). This prevents speculative licences being granted. If a</p>

Comment	Department of Water response
<ul style="list-style-type: none"> <li>iii. a water licence should not belong to the owner of the property</li> <li>iv. licence holders should pay an annual levy for the water they are licensed to use at a set rate per gigalitre</li> <li>v. a licence should not be viewed as a saleable asset and should only be transferable by the department</li> <li>vi. new licences need to be restricted and the department needs to be firm in the face of commercial pressure and lobbying by vested interests.</li> </ul>	<p>licensee's plans of water use change, licensees are required to notify the department. Water may be recouped if it is not used in accordance with Statewide policy no. 11 – <i>Management of unused licensed water entitlements</i> (WRC 2003).</p> <ul style="list-style-type: none"> <li>iii. In Western Australia, water is vested in the Crown under the <i>Rights in Water and Irrigation Act 1914</i>, and the department is responsible for its management. A licence entitlement granted under the <i>Rights in Water and Irrigation Act 1914</i> defines the legal right of the licensee, specifying the purposes for which the water may be taken and the period the licence is valid for.</li> <li>iv. Noted – under the <i>Rights in Water and Irrigation Act 1914</i> we are able to charge certain fees; however, there are no plans by the current government to seek cost recovery associated with water licences.</li> <li>v. Noted – as above (iii). Trading of water licences or entitlements is optional and can only occur if there is a willing buyer and seller of the water. The department does not involve itself with financial transactions that occur between licensees. Trading is important because it provides an avenue for the distribution of water for future use in fully-allocated areas. For more detail on trading, refer to point (i).</li> <li>vi. Noted – we will only license water up to the allocation limits. Where the allocation limit is reached, the department will encourage alternative sources, water use efficiency and trading.</li> </ul>
<p><b>Water Pricing</b></p> <p>One respondent made several comments about introducing water pricing to licensees, these comments:</p> <ul style="list-style-type: none"> <li>i. If current water users had to pay for their water, they would only closely monitor their water usage to minimise leaching.</li> <li>ii. It is wrong that the use of water on a commercial scale is viewed as a right and not seen as a privilege that should be paid for.</li> </ul>	<ul style="list-style-type: none"> <li>i. Under the <i>Rights in Water and Irrigation Act 1914</i> we are able to charge certain fees; however, there are no plans by the current government to seek recovery of costs associated with water licences.</li> <li>ii. Noted – as above (i).</li> </ul>
<p><b>Questions</b></p> <ul style="list-style-type: none"> <li>1. Is there opportunity for 'B-class' (less reliable) entitlements to be issued in the future?</li> <li>2. How long can a water trader retain an</li> </ul>	<ul style="list-style-type: none"> <li>1. No – 'B-class' entitlements are better suited for surface water systems where there is additional water flowing in wetter years. They are not suitable for the groundwater systems in Gingin.</li> <li>2. The department may recoup unused water</li> </ul>

Comment	Department of Water response
<p>inactive (unused) water allocation?</p> <p>3. Shouldn't a water service provider be custodian of any unused or surplus water?</p> <p>4. Will new licence applicants for Mirrabooka Aquifer (Zone 1) be required to have the same level of licence assessment information as those in Zones 2 and 3?</p>	<p>entitlements under the <i>Rights in Water and Irrigation Act 1914</i> and in accordance with Statewide policy no. 11 – <i>Management of unused licensed water entitlements</i> (WRC 2003). Because licence applications and renewals are assessed on a case-by-case basis, we can't provide a definitive time period to answer this question.</p> <p>The department may also request a schedule of proposed water use from licensees and applicants when assessing and issuing a licence. This schedule outlines specified dates for each stage of development and associated water use. The department will monitor compliance with this schedule and may recoup water that is not being used consistent with the schedule.</p> <p>3. No – in Western Australia water is vested in the Crown under the <i>Rights in Water and Irrigation Act 1914</i> and the department is responsible for its management. Like all other users, water service providers need to apply for a licence to take water and/or access a public water supply reserve. If a water service provider is not using their water entitlement, the department may seek to recoup unused water.</p> <p>4. Trading zones are only applicable to licensees and applicants in the Leederville–Parmelia resource.</p>

**Table 5**      *Comments and question on access to public water supply provisions and public water supply reserves*

Comment	Department of Water response
<p><b>Access to public water supply</b></p> <p>One respondent commented that the Shire of Chittering is close to the Perth Metropolitan area and development in the shire is being held up by lack of access to public water supply.</p>	<p>There are existing public water supply licence entitlements in the Shire of Chittering that meet current demand to 2020. Developers are responsible for securing water supplies of any new development. The options for additional groundwater supplies in this area are the Surficial and Mirrabooka aquifers, or through trading/transfers with existing licensees. The department does not control the water market and does not compel existing licensees to sell. However, if existing licensees are not using their entitlements, the department may recoup unused water entitlements in accordance with Statewide policy no. 11 – <i>Management of unused licensed water entitlements</i> (WRC 2003).</p>

Comment	Department of Water response
<p><b>Public water supply reserves</b></p> <p>Several respondents commented on allocations for public water supply reserves (PWSR), in particular that:</p> <ul style="list-style-type: none"> <li>i. the department should consider future development and land use as part of an assessment of the sustainable groundwater resources</li> <li>ii. the plan should identify PWSR for all towns because current allocations restrict water availability for essential services, the environment and provide complex challenges to local communities</li> <li>iii. further reductions in the PWSR would not be supported</li> <li>iv. the department should develop an approach to further protecting future drinking water supply areas.</li> </ul>	<ul style="list-style-type: none"> <li>i. The plan makes as much water available as possible for future demands under a drying climate. Water is still available in most subareas for growth in commercial ventures and water has been reserved for both local towns and Perth’s Integrated Water Supply Scheme. There are also options available to towns not located near public water supply reserves.</li> <li>ii. All towns have sufficient water to 2020. We have also identified potential water sources for towns that are not located near PWSR. These include the Surficial and Mirrabooka resources, and trading/transfers with existing licensees. Reserves have not been made in the Surficial and Mirrabooka resources because of the patchy nature of these resources and variable yields.</li> <li>iii. Noted – the plan makes as much water available as possible for future demands under a drying climate. The department does not guarantee that this water will be available in future years and reserves the right to amend the PWSR at any time. Refer to Chapter 6 of the plan for information on plan implementation and evaluation.</li> <li>iv. Noted – as outlined in Chapter 4 of the plan, we will manage a process to gazette Public Drinking Water Source Protection Areas. For further explanation, see our ‘Drinking water’ page on the Department of Water website.</li> </ul>
<p><b>Local planning alignment</b></p> <p>One respondent suggested that better alignment between shires and the Western Australian Planning Commission (WAPC) would allow developers to contribute to the upgrade of local Water Corporation infrastructure.</p>	<p>Noted – this is a matter for the Water Corporation and developers to negotiate independently.</p>
<p><b>Question</b></p> <p>Is the public water supply for Dandaragan not licensed?</p>	<p>Dandaragan’s town water supply is currently provided by the Water Corporation who has a licence for 70 000 kL/year from the Cowalla Leederville–Parmelia resource. We have included a table in Chapter 3 of the plan to include the totals of current water service providers’ licences and the towns which these licences service.</p>

**Table 6** Comments on reserving water for agricultural expansion and demands

Comment	Department of Water response
<p>Several respondents queried if consideration had been given to prime agricultural land or development, particularly:</p> <ul style="list-style-type: none"> <li>i. if water has been reserved for the areas identified for prime agriculture</li> <li>ii. if water is available for future industry</li> <li>iii. that further planning should be done to ensure adequate water is available for the increasing intensive agriculture in the area.</li> </ul>	<ul style="list-style-type: none"> <li>i. There is water available for expansion of agricultural activities in the plan area. Currently, there is about 140 GL/year licensed. This means about 50 GL/year of water still available for general licensing and water can also be accessed temporarily from PWSR. Trading to obtain additional water is also an important option to be considered. Reserves for agriculture are not required because the land use in these areas is generally only agricultural.</li> <li>ii. Yes – through our annual evaluation we will regularly review existing and projected demand in the plan area. We will also work with DAFWA, the Wheatbelt Development Commission and other agencies to ensure that we continue to consider the water needs for growth in agriculture.</li> <li>iii. Noted – as above (ii). We are also currently supporting a number of DAFWA initiatives.</li> </ul>

**Table 7** Comments on policy, the first-in first-served approach and water use efficiency

Comment	Department of Water response
<p><b>Public water supply licensing policy</b> One respondent wanted further clarity on Policy 1.5 in the plan, in particular:</p> <ul style="list-style-type: none"> <li>i. what the intended meaning of ‘water supply planning process identified by the government’ is</li> <li>ii. that the process outlined in text is unclear and not consistent with agreed government policy.</li> </ul>	<ul style="list-style-type: none"> <li>i. Noted – we have removed this point and provided additional information in Section 4.2 and Policy 1.5 in the final plan.</li> <li>ii. Noted – we have further refined the process in Section 4.2 in the final plan.</li> </ul>
<p><b>First-in first-served approach</b> Two respondents requested further detail on the first-in first-served policy in the plan, in particular that the plan should:</p> <ul style="list-style-type: none"> <li>i. consider alternative water sources and local and regional priorities over the policy</li> <li>ii. provide a web link in the text for ease of reference to the first-in first-served policy</li> <li>iii. address that the policy has the potential for profiteering with trading.</li> </ul>	<ul style="list-style-type: none"> <li>i. Noted – the department’s first-in first-served policy is being reviewed as part of our reform of water legislation. For more information refer to <i>Discussion paper – Review of first-in first-served policy</i> (DoW 2011d) and the ‘Water reform’ page on the department’s website.</li> <li>ii. Noted – a link is now provided within Section 4.2 of the plan.</li> <li>iii. Noted – refer to points in Table 4 of this statement – Trading water entitlements and Water entitlements.</li> </ul>
<p><b>Water use efficiencies</b> One respondent was displeased that the plan didn’t mention water use efficiency strategies.</p>	<p>Water use efficiency will be driven by water availability, the price of water and adoption of new technologies. Benchmarks for water</p>



Comment	Department of Water response
	<p>efficiency constantly change as new technologies and practices are developed. It is up to the individual licensee to implement efficiencies appropriate for their water use. For more information, refer to Operational policy no. 1.02 – <i>Policy on water conservation/ efficiency plans: Achieving water use efficiency gains through water licensing</i> (DoW 2009c).</p> <p>Water service providers have to provide water efficiency plans as part of their source development plans (see Policy 1.5 in the plan).</p>

**Table 8** Comments on groundwater-dependent ecosystems

Comment	Department of Water response
Two respondents noted that urgent action is required to identify, assess and prioritise the region's groundwater-dependent ecosystems. It was requested that a groundwater/surface water interaction study along the Moore River be conducted as a priority of the plan.	Noted – we have identified this as a priority (Actions 8, 9 and 10 in Table 11 of the plan). Also refer to Chapter 7 of the methods report for additional information about work we will be doing in the future to inform allocation planning.
One respondent noted the watertable on their property had dropped considerably over the last ten years, which has had a negative effect on the ecosystem.	This was a major driver for developing the plan. There are groundwater declines across the plan area caused by both abstraction and reduced rainfall, and the amount that water levels are falling varies across the plan area. We designed the allocation limits and licensing policies to find a balance between the important uses of water and protect the resource as well as the values that rely on it.
<p>One respondent commented that the department should consider:</p> <ul style="list-style-type: none"> <li>i. the impacts of perched groundwater and water level variations on wetlands</li> <li>ii. that some wetlands are dependent on surface water inputs</li> <li>iii. that the hydraulic support mechanism varies spatially, seasonally and over longer time periods and variations and uncertainty should be recognised in the plan.</li> </ul>	<ul style="list-style-type: none"> <li>i. Noted – the department considers potential impacts on the environment in assessing water licence applications under Schedule 1, Division 2, Section 7(2) of the <i>Rights in Water and Irrigation Act 1914</i>. We also use licence conditions and operating strategies to monitor licensee activities and do compliance on a local, case-by-case basis.</li> <li>ii. Noted – we recognise this dependency and have prioritised this as future actions for the plan (refer to Actions 8 and 10 of the plan).</li> <li>iii. Noted – as above (i and ii).</li> </ul>

**Table 9** Comments and question on monitoring and assessment

Comment	Department of Water response
One respondent requested additional exploration bores be installed in the Mirrabooka Aquifer, South Coastal Leederville Aquifer and along the Moore River as a high priority.	Noted.

Comment	Department of Water response
<p>One respondent insisted the department install extensive monitoring bore fields as part of project investigations for mining and fracking.</p>	<p>Noted – we have a network of monitoring bores in the plan area that monitor water levels and quality (where necessary). We will work closely with the Department of Mines and Petroleum, the Office of the Environmental Protection Authority and the Department of Environment Regulation, as well as proponents, to ensure that appropriate monitoring is in place prior to any mining and fracking activities occurring, including more detailed monitoring if necessary.</p>
<p>One respondent noted that there is no record of monitoring bores on Kayanaba Road in Figure 8 (now Figure 9 in the final plan).</p>	<p>Figure 9 displays the department’s monitoring bores. The monitoring bore on Kayanaba Road being referred to belongs to a licensee.</p>
<p>One respondent encouraged the department to continue investing in drilling and testing to the west of the Darling Scarp palaeochannels to determine the amount and quality of water.</p>	<p>Noted – we are supporting DAFWA in the West Midlands (Koojan-Gillingarra) groundwater investigations and we will continue working closely with other state agencies, licensees, drillers and consultants who may provide additional information to the department, which will add to our knowledge of the area.</p>
<p>One respondent highlighted the importance of monitoring to determine the extent to which reduced recharge is impacting on groundwater heads and sustainable yield. They also suggested that implementing the plan should involve the department using monitoring and modelling data to confirm that the 15 per cent reduction in annual average recharge is the actual observed trend.</p>	<p>Noted – the department recognises the importance of using monitoring data to assess an aquifer’s performance and response to both climate and abstraction over time. We have incorporated evaluation of groundwater levels and pressure heads into the plan as part of evaluating the plan’s resource objectives. Chapters 5 and 6 of the plan provide information on what we will measure and how we implement and evaluate the plan.</p>
<p><b>Question</b> Will the department have monitoring bores in Zone 1?</p>	<p>Yes, we will be installing additional monitoring bores in Zone 1 as part of our North Gingin groundwater investigation. Refer to Chapter 5 of the plan and Chapter 7 of the methods report for additional information on our current and future monitoring projects.</p>

*Table 10 Comments on recouping unused entitlements, water availability and hydrogeological reporting*

Comment	Department of Water response
<p><b>Recouping unused entitlements</b> One respondent noted that unused water entitlements should be recouped and not made available for future licensing.</p>	<p>We do not re-allocate recouped water in over-allocated areas. The department may recoup unused water entitlements under the <i>Rights in Water and Irrigation Act 1914</i> and in accordance with Statewide policy no. 11 – <i>Management of unused licensed water entitlements</i> (WRC 2003). The plan also outlines clear trading policies designed to protect the long-term use of the resource. We will regularly assess the plan through the</p>

Comment	Department of Water response
	evaluation process (refer to Chapter 6 of the plan).
<p><b>Water Availability</b></p> <p>Four respondents commented on including further detail on water availability:</p> <ul style="list-style-type: none"> <li>i. Water availability should be clear in the plan.</li> <li>ii. Aquifer details with relation to licensed entitlements and water available for licensing is not provided.</li> <li>iii. Information regarding the type of industry using water should be provided in order to indicate trends in the region.</li> <li>iv. A pie chart summarising where water is allocated would be useful to help illustrate the 41 GL reference on page 27.</li> <li>v. Clarity on whether the 'Water available' column in the summary table includes water available for trading.</li> </ul>	<ul style="list-style-type: none"> <li>i. Noted – this has now been included in the summary table.</li> <li>ii. Noted – as above (i).</li> <li>iii. Information relating to water use by industry can be seen in Chapter 3 of our methods report.</li> <li>iv. The 41 GL/year referenced on page 27 of the plan is the total amount reserved for future public water supply. The resources where these are reserved are summarised in Table 2 and Figure 6 in the plan.</li> <li>v. 'Water availability' in the summary table indicates whether water is still available for licensing (in addition to existing licensed entitlements), and therefore, doesn't include water available for trading. Licensed entitlements can be traded within the same resource.</li> </ul>
<p><b>Hydrological information</b></p> <p>Two respondents noted a lack of transparency in the reporting of hydrological materials and methodology:</p> <ul style="list-style-type: none"> <li>i. Insufficient use of new hydrogeological information in allocation limit setting.</li> <li>ii. Fund hydrogeological studies in area where there is high use and limited knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>i. Noted – this plan is an update to the interim strategy released in 2002. Its main focus is responding to a predicted 15 per cent reduction in rainfall. We note that we have not incorporated all new hydrogeological and groundwater-dependent ecosystems (GDEs) information into the plan (the department's reports from drilling projects, licensees' abstraction and monitoring data and the National Water Commission funded Mid West GDE vulnerability project). We will include this information as we implement and evaluate the plan, in making licensing decisions, as well as in our groundwater investigations (refer to Chapters 5 and 6 of the plan and Chapter 7 of the methods report for more information on monitoring, plan implementation and evaluation and additional monitoring projects). All available relevant information will be used to inform local scale licensing decisions.</li> <li>ii. Noted – we recognise that this is a priority.</li> </ul>

*Table 11 Comments on evaluation, allocation limit components and terminology*

Comment	Department of Water response
One respondent requested to be part of the annual evaluation and receive copies of the evaluation statement.	Noted – we will do internal evaluations annually and present any findings to stakeholders on request. We will publish an evaluation statement at least every three years.

<b>Comment</b>	<b>Department of Water response</b>
<p><b>Allocation limit components</b></p> <p>One respondent requested further clarity or explanatory notes on the terms and allocation limit components used in Table 2 of the plan.</p>	<p>Definitions of components are provided in Chapter 3 of the plan.</p>
<p><b>Terminology</b></p> <p>Three respondents had several comments on terminology, including:</p> <ul style="list-style-type: none"> <li>i. the bureaucratic use of ‘may’ in policy statements</li> <li>ii. the inappropriate, interchangeable use of ‘water supplier’, ‘water service provider’ and ‘bulk water provider’</li> <li>iii. the Water Corporation is not the only service provider operating within the region.</li> </ul>	<ul style="list-style-type: none"> <li>i. The use of ‘may’ is necessary in policies as licence applications are assessed on a case-by-case basis and each individual application will require a different level of assessment and information.</li> <li>ii. Noted – changed to ‘water service provider’ throughout.</li> <li>iii. Noted – where appropriate, changes have been made in the plan.</li> </ul>

*Table 12 Comments on values studies, community education and maps*

<b>Comment</b>	<b>Department of Water response</b>
<p><b>Values studies</b></p> <p>One respondent requested further work to survey social and environmental values.</p>	<p>Noted – as per Actions 1, 3, 4, 7, 9 and 10 of the plan, we aim to do social and environmental values studies through evaluations and in preparing for a future replacement plan.</p>
<p><b>Community education</b></p> <p>One respondent encouraged the department to do a community education program relating to water information.</p>	<p>Noted – as per Action 7 of the plan, we aim to do a community education program.</p>
<p><b>Map locations</b></p> <p>Insert map reference into Table 2 for ease of identifying locations within the content of the table.</p>	<p>References to the aquifers in Figures 2 to 5 are listed under each aquifer in Table 1 of the plan.</p>

## Where to next?

Where indicated in the tables above, responses have been incorporated in the final *Gingin groundwater allocation plan* (DoW 2015a). The plan is available from the department’s website <[www.water.wa.gov.au](http://www.water.wa.gov.au)>. It outlines how the department will allocate and manage groundwater resources in the Gingin area through licensing, assessment, policy and reporting.

## Further information

For licensing information, please contact our regional office:

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Phone 08 9250 8000

For planning information, please contact:

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Email [allocation.planning@water.wa.gov.au](mailto:allocation.planning@water.wa.gov.au)



## Shortened forms

DAFWA	Department of Agriculture and Food Western Australia
DoW	Department of Water
GDE	Groundwater-dependent ecosystem
PWSR	Public water supply reserves
WRC	Water and Rivers Commission

## 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)

## Glossary

<b>Abstraction</b>	Withdrawal of water from any surface water or groundwater source of supply.
<b>Allocation limit</b>	The annual volume of water set aside for use from a water resource.
<b>Annual water entitlement</b>	The amount of water specified on a licence issued under Section 5C of the <i>Rights in Water and Irrigation Act 1914</i> that can be taken each year (dates specified on the licence).
<b>Licence (or licensed entitlement)</b>	A formal authorisation that entitles the licence holder to take water from a watercourse, wetland or underground source under the <i>Rights in Water and Irrigation Act 1914</i> .
<b>Over-allocation</b>	Where the total volume of water allocated out of the resource (that could be abstracted at any time) is over the set allocation limit.
<b>Reliability</b>	The frequency with which a water licence holder can access their full annual water entitlement.
<b>Social value</b>	An in-situ quality, attribute or use that is important for public benefit, welfare, state or health.
<b>Subarea</b>	A subdivision, within a surface or groundwater area, defined to better manage water allocation. Subarea boundaries are not proclaimed and can therefore be amended without being gazetted.



## References and further reading

- Department of Water 2009a, *Gnangara groundwater areas allocation plan*, Department of Water, Perth.
- 2011a, *Gingin surface water allocation plan*, Department of Water, Perth.
- 2011b, *Water allocation planning in Western Australia: a guide to our process*, Department of Water, Perth.
- 2013, *Gingin groundwater allocation plan: for public comment*, Department of Water, Perth.
- 2015a, *Gingin groundwater allocation plan*, Department of Water, Perth.
- 2015b, *Gingin groundwater allocation plan methods report*, Department of Water, Perth.
- Water and Rivers Commission 2002, *Managing the water resources of the Gingin Groundwater Area, WA - Interim Sub-Regional Allocation Strategy*, Water and Rivers Commission, Perth.

## Legislation

- Government of Western Australia 1914, *Rights in Water and Irrigation Act 1914*, Perth.
- 1914, *Rights in Water and Irrigation Exemption and Repeal (section 26C) Order 2011*, Perth.

## Policy

- Department of Water 2003, Statewide policy no. 11 – *Management of unused licensed water entitlements*, Water and Rivers Commission, Perth.
- 2009b, Operational policy no. 5.13 – *Water entitlement transactions for Western Australia*, Department of Water, Perth.
- 2009c, Operational policy no. 1.02 – *Policy on water conservation/efficiency plans: Achieving water use efficiency gains through water licensing*, Department of Water, Perth.
- 2011c, Operational policy no. 5.01 – *Managing water reserved for use by drinking water service providers*, Department of Water, Perth.
- 2011d, *Discussion paper – Review of first-in first-served policy*, Department of Water, Perth.



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