



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

South West

.....
groundwater areas allocation plan

Statement of response

Looking after all our water needs

March 2009

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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For more information about this report, contact:

Wayne Tingey
Regional Manager,
South West regional office
35–39 McCombe Road
Bunbury Western Australia 6230
or
PO Box 261
Bunbury Western Australia 6231
Telephone 08 9726 4111
Facsimile 08 9726 4100

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Statement of response – South West groundwater areas allocation plan

This statement is the Department of Water's response to the comments received on the *South West groundwater areas water management plan – allocation: draft for public comment* (Department of Water 2008). All of the comments we received were considered in finalising the plan.

Summary

The draft plan was open for a three month public comment period, from 29 February to 19 May 2008. Letters inviting comment on the draft plan were sent to:

- local members of parliament and council (15)
- local government authorities (8)
- Indigenous representatives (4)
- other government departments (14)
- industry associations, industry representatives, land conservation district committees, tourism groups and environmental groups (93)
- individuals who expressed an interest in water management in the South West (140).

An invitation to comment was also advertised each month during the three month public comment period in the following newspapers: *The West Australian*, *Augusta–Margaret River Times*, *Augusta–Margaret River Mail*, *Bunbury Mail*, *Busselton–Dunsborough Mail*, *Bunbury Herald*, *Busselton–Dunsborough Times*, *Donnybrook Bridgetown Mail* and the *South Western Times*.

During the public comment period the department made presentations at more than 15 workshops, and at meetings held with various stakeholder groups, including eight of the public comment respondents.

Over 150 copies of the plan (both paper and CD versions) were requested through the department's allocation planning email address or through one of the department's South West offices.

A total of 30 submissions were received during the draft plan comment period from a range of interest groups (Table 1). We appreciate the effort put into all of the submissions that were received and have considered all of the comments from them in finalising the plan. This statement responds to the comments and summarises how they are addressed by the management arrangements set out in the plan.

Interest groupings of respondents to the draft plan

Interest group	No. of submissions
Agriculture and irrigation	5
Community	3
Conservation and environment	2
Individual	5
Local government	4
Mining and industry	5
Other state government	3
Public water supply	3
Total	30

Comments received and the department’s responses

The following tables list a summary of the main issues and questions raised through the public consultation process and how the department is addressing them (Tables 1 to 12). The comments have been grouped by the type of water related issue raised by the public submissions.

Most of the comments received were concerned with trading, allocation of water, public water supply, licensing, the environment, ground and surface water management and licensing policy. A list of the respondents and their associated interest group is given at the end of this report. It is important to note that respondents representing a specific interest group may also have commented on other areas of interest (see Table 13).

Table 1 General comments received on the draft plan

Comment	Department of Water response
<p>Support for the plan Six respondents expressed their specific support for the plan. Most respondents saw the plan as a positive step in water management, with respondents highlighting that the plan provided a good level of detail, was fair in its decisions and provided an open, transparent and clear framework for the future allocation of groundwater in the South West.</p>	<p>The Department of Water values the stakeholders' support for the plan. We will continue to work with stakeholders to ensure information is available and engagement occurs on major issues and concerns as we progress with developing the statutory allocation plan.</p>
<p>Communications Five respondents expressed concern that the community was not informed enough regarding the science used in decision-making and that regular updates should be publicly available, to help educate water users and the general community.</p>	<p>We have produced several technical and supporting documents during the planning process and will publish documents as part of the implementation of the plan. All of our documents used in developing the allocation plan are available on our website: <www.water.wa.gov.au/allocationplanning> The department has run many workshops and public presentations on planning in the region, ranging from stakeholder and industry specific meetings to large community presentations and workshops.</p>
<p>Implementing the plan: Monitoring Six respondents commented on monitoring in the plan, covering the following points:</p> <ul style="list-style-type: none"> • Substantial improvements are required to maintain and improve the level of baseline knowledge. • The need for a real time monitoring network of bores, meters, piezometers and general data collection of groundwater information. • The need for adequate funding for all monitoring and a transparent process to constructively inform the community of the results. 	<p>We are investing in improving our systems and databases to cope with the required level of monitoring and ongoing assessment needed to implement plans across the state. Monitoring and licensing data will be reported through the annual evaluation statement (see Section 7.2). Please see the department's website for the <i>South West groundwater areas monitoring program</i> (Department of Water 2008). Data collected from the department's monitoring network is also available from our database through a data request form found which can be found at <www.water.wa.gov.au> Tools > Monitoring and data>. Or email <waterinfo@water.wa.gov.au></p>
<p>Implementing the plan: Actions Six respondents requested a prioritisation of the actions and objectives, including timelines, resources and methods for evaluation.</p>	<p>The plan now includes how we will evaluate, assess and monitor the actions and objectives of the plan (Section 3.1, 3.2 and 7.2).</p>

Comment	Department of Water response
<p>Local area information</p> <p>Several respondents requested more localised information to be available to help with understanding water use and guide new licence proposals.</p>	<p>To support the plan we have developed the following documents (subarea reference sheets) to provide local area information:</p> <ul style="list-style-type: none"> • <i>Bunbury and South West Coastal groundwater areas subarea reference sheets</i> (Department of Water 2009). • <i>Busselton–Capel groundwater area subarea reference sheets</i> (Department of Water 2009). • <i>Blackwood groundwater area subarea reference sheets</i> (Department of Water 2009). <p>They are available from our website.</p>
<p>Other plans</p> <p>Nine comments were received regarding other water plans which overlap the plan area. Respondents were concerned that the plan did not clearly link in with the <i>Whicher area surface water management plan</i> (Department of Water 2009), <i>South West regional water plan</i> (Department of Water 2009) and the State Water Resource Management and Reform Program.</p> <p>Respondents ideally wanted to see ground and surface water resources jointly managed together in one plan.</p>	<p>The plan is consistent with the South West regional water plan and the <i>Whicher area surface water allocation plan</i> (Department of Water 2009), and meets the requirements of the State Water Resource Management and Reform Program.</p> <p>The department is working towards integrating surface and groundwater management in future allocation planning across the south west (see Section 2.4).</p>
<p>Definitions</p> <p>Four respondents requested clarification of the definition of wetlands, aquifer, subarea, groundwater, surface water and stock, domestic and garden (including exemptions) in the plan.</p>	<p>The glossary and the use of these terms throughout the plan have been clarified.</p>
<p>Questions</p> <p>1. How can the community or interest groups get involved with projects to help water management?</p>	<p>Community or interest groups can get involved in water management by contacting the department or the South West Catchments Council or a local natural resource management groups.</p> <p>You can also request to participate in future consultation, public meetings or be part of projects by contacting your local Department of Water office or community group.</p>
<p>2. Does the department have the manpower and resources to carry out all of the actions and commitments detailed in the plan?</p>	<p>We will endeavour to meet all of the actions and commitments detailed in Sections 7.1 and 7.3 of the plan, and over the next three to five years with funding from the <i>Australian Government's Water for the Future – Water Smart Australia program</i> and the state government.</p>

Table 2 Comments on allocation of water

Comment	Department of Water response
<p>A third of the respondents observed inconsistencies between the allocation limit tables and the information in the text.</p>	<p>The department has amended the plan accordingly (see the Summary, Section 4.1 and Table 3). The allocation table is current as of January 2009. Up-to-date information is available by contacting the department's district offices in the South West region.</p>
<p>Methodology A third of the respondents commented on the methodology used to determine the allocation limits and requested that the information become publicly available. Several respondents questioned the science used to justify the allocation limits. This included accounting for potential impacts associated with abstracting all available groundwater on potential acid sulfate soils, caves and surface water.</p>	<p>The department has released <i>Reviewing the allocation limits for the South West groundwater areas allocation plan</i> (Department of Water 2008) (referred to as the 'Allocation limits document') which details how the allocation limits have been reviewed.</p> <p>This includes how we have accounted for potential acid sulfate soils, caves and surface water interactions. Policies (Section 5.1) for the aquifers in the Cape to Cape subareas (Section 5.2, Tables 7 to 10) and the Superficial Aquifer on the Scott coastal plain have been added to the plan to address the highlighted impacts.</p>
<p>Environmental water provisions Twelve comments from five respondents were received on environmental water provisions. The main issues covered were:</p> <ul style="list-style-type: none"> i. Community and stakeholders' consultation and participation in determining environmental, economic and social objectives for water management. ii. Community participation in assessing options and considering trade-offs and value prioritisation in allocating water to the environment and other uses. iii. Clear links between monitoring and the environmental water provisions decision-making process. 	<ul style="list-style-type: none"> i. The community and stakeholders were involved in the environmental water provisions process through workshops held in May 2006 which used a multi-criteria analysis process to establish clear values for water management. The outcomes of the workshops are detailed in <i>Groundwater management in the South West – Bunbury, Busselton–Capel and Blackwood groundwater areas: findings of stakeholder workshops</i> (Beckwith Associates 2006). The findings of the workshops were used in reviewing the allocation limits. ii. Future planning activities will be more localised and have targeted local community consultation to address these issues. iii. Monitoring information collected by the department (and licensees) will be used in reviewing the plan to ensure that the environmental water provisions are being met and supporting the plan's objectives. <p>See <i>Management triggers and responses for groundwater-dependent ecosystems in the South West groundwater areas</i> (Del Borrello 2008) for more information.</p>

Comment	Department of Water response
<p>Priorities for water allocation Six comments from five respondents requested a clearly defined hierarchy for water allocation in the plan. This included justifying the principle where the environment has the highest priority in water allocation.</p>	<p>The plan has been updated (Section 3.1 and 5.1) to clearly state the hierarchy for water allocation and how it is considered in defining the allocation limits.</p>
<p>Questions</p> <p>1. How will any additional water, identified through further investigations, recouping, or as a result of changing allocation limits, be released?</p>	<p>A project is underway to develop policy for selecting and implementing release mechanisms, which may include merit select, auctions, and/or tenders. It is scheduled for consultation in the second quarter of 2009.</p>
<p>2. How will the release of additional water affect existing entitlements?</p>	<p>It will only affect prospective water users and may influence the price of water.</p>
<p>3. If additional water is identified by someone other than the Department of Water how will the benefits be shared?</p>	<p>If a proponent undertakes investigations as part of their licence application and the investigation shows there is more water in the area than required by the licensee, the allocation limits will be reviewed for that area and may be updated. The proponent does not 'own' any increase in the available water.</p>
<p>4. How will information on releasing additional water reach the public?</p>	<p>Where significant changes in the allocation limits are made, and all pending applications have been processed, any changes to the limits will be advertised in state and local newspapers and on the department's website.</p>
<p>5. Do the allocation limits nominated for the Superficial Aquifer include dams?</p>	<p>Allocation limits were set to reflect the safe (renewable) level of abstraction in each subarea and aquifer. They do not include 'dams' but include excavations.</p> <p>See <i>Reviewing the allocation limits for the South West groundwater areas</i> (Department of Water 2008) and the <i>Whicher area surface water allocation plan</i> (Department of Water 2009) for more information.</p>
<p>6. From which bores has the drawdown in the Yarragadee been estimated when determining the allocation limits?</p>	<p>All of the monitoring bores we have in the Yarragadee Aquifer were used in developing the allocation limits, in particular the bores in the recharge area on the Blackwood Plateau. Monitoring information submitted by licensees was also used.</p>

Comment	Department of Water response
<p>7. Is pre-existing groundwater use in the Cape to Cape area going to be considered in line with the <i>Whicher area surface water allocation plan</i> (Department of Water 2009)? Is it already included in the allocation limits?</p>	<p>Pre-existing use from dams that have been constructed by excavation to capture groundwater in the Cape to Cape North and South, Cowaramup and Rosa groundwater subareas are likely to require a groundwater licence.</p> <p>The current surface water allocation limits in the <i>Whicher area surface water allocation plan</i> (Department of Water 2009) have factored in estimates of dam usage in the Cape to Cape subareas. The implementation of licensing surface water users in the area will identify and license any groundwater contributions to dams.</p>
<p>8. How will the plan manage the situation for prospective water users in the Cape to Cape region if there is no surface or groundwater available? Where do these users go? What other options for water could be considered?</p>	<p>While lack of water will constrain development in some areas, decisions to manage within a sustainable level are public policy and supported by the community. It is the prospective water users' responsibility to investigate other water sources in fully allocated areas.</p> <p>Trading may be an option where water is available in another subarea and can be piped across to the demand point.</p>

Table 3 Comments on land and water planning

Comment	Department of Water response
<p>Three respondents mentioned that the department should be liaising with other agencies on planning and land use change. This included emphasising that any future planning considers alternative water sources where allocation limits are reached and using a total water cycle approach for all developments.</p>	<p>Land planning has been considered in setting the allocation limits in this plan (see the allocation limits document). The department has also considered future land and water planning in developing the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009).</p> <p>The Western Australian Planning Commission (WAPC) in conjunction with the department has released <i>Better Urban Water Management</i> (WAPC 2008) which identifies how water planning is linked into the land use planning process. Table 1 at the start of that document provides a framework for integrating total water cycle management in planning decisions.</p> <p>The department also provides comments on local town planning schemes and subdivision proposals. We will be referring these authorities to our water management and allocation plans for use in land use planning.</p> <p>Local 'whole of water cycle' management and alternative sources will be encouraged through the licensing assessment process and by implementing water conservation and efficiency plans for large groundwater users.</p>

Table 4 Comments on managing water resources

Comment	Department of Water response
<p>Ground and surface water connectivity Three comments were received about the high connectivity of groundwater and surface water in the lower parts of the Blackwood River and the Cape to Cape region. Respondents requested recognition of water connectivity in areas of high use and more information to understand the impacts of water use on connected systems (particularly dam excavations).</p>	<p>To further develop our understanding, we have increased our monitoring and investigations in areas of high connectivity, particularly in the Capel, Margaret, Brunswick, Donnelly and Blackwood rivers where the confined aquifers (Leederville and Yarragadee) provide the summer base flows and maintain important aquatic and riparian ecosystems. We are also investigating the impacts of farm dams (on and off stream) as part of the actions of the <i>Whicher area surface water allocation plan</i> (Department of Water 2009).</p>
<p>Ground and surface water connectivity – licensing Comments were also received on the need to review licensing of groundwater and surface water in the plan area to avoid duplication of licences.</p>	<p>The department is currently reviewing the licensing arrangements in areas of high connectivity to avoid duplication of licences as part of implementing the <i>Whicher area surface water allocation plan</i> (Department of Water 2009). Proponents must demonstrate their impacts are within acceptable limits for all water-dependent systems as part of the licence approval process.</p>
<p>Water quality Four respondents requested that the plan clarify what is required for monitoring and management of water quality, so that requirements are not duplicated and unnecessary conditions placed on licensees. The management of water levels and quality should be proactive and cost effective.</p>	<p>The policies for managing water quality have been updated in the plan (Section 5.1). We are reviewing licence conditions for water quality monitoring to make sure that they are consistent and fair across the plan area. More information on water quality is available in:</p> <ul style="list-style-type: none"> • <i>Better urban water management framework</i> (WAPC 2008). • <i>A water quality improvement plan for Vasse–Wonnerup wetlands and Geographe Bay Catchment, draft for public comment</i> (Department of Water 2009). • <i>South West regional water plan (supporting detail)</i> (Department of Water 2009).
<p>Hydrogeology and investigations Most respondents noted that the hydrogeological information in the plan was comprehensive. However, it was noted by five respondents that there are some areas where further investigations and new modelling (which must be fully funded) is required to decrease uncertainty in the allocation limits. Respondents requested further investigations into climate impacts and groundwater–surface water interconnectivity as these are the areas of highest uncertainty.</p>	<p>Additional work is currently underway to improve our understanding of groundwater across the plan area and is partly funded by the Australian Government’s <i>Water for the Future – Water Smart Australia program</i>. The work will aim to meet Actions 1, 3, 5–7, and 9 of the plan. The annual evaluation statement will provide a summary of these investigations. Updates will be available on our website. All information collected through the investigations will be used in reviewing the allocation limits. Other investigations on surface water, climate and connected systems are also underway as part of the <i>Whicher area surface water allocation plan</i> (Department of Water 2009).</p>

Comment	Department of Water response
<p>Questions</p> <p>1. Where are the rainfall data collection points that show the drying climate over the past 30 to 40 years? How has this been accounted for?</p>	<p>The Bureau of Meteorology sites (SILO) and the department's telemetry monitoring data were all used in developing the plan. This information has shown a change in the rainfall regime (duration, intensity and timing) over the last 30 to 40 years which all contribute to decreased rainfall recharge and runoff.</p> <p><i>Reviewing the allocation limits for the South West groundwater areas</i> (Department of Water 2008) details how rainfall has been factored into the methodology for determining how much water is available for licensing.</p> <p>Further information on how the climate is changing in the South West can be found on the Indian Ocean Climate Initiative website <www.ioici.org.au>.</p>
<p>2. Is there any evidence that the Scott coastal plain has seawater interface problems?</p>	<p>The seawater interface is currently several kilometres offshore along the Scott coastal plain. Exactly how far, or how much it is likely to move following increased abstraction, is currently unknown. Allocation limits are set to prevent any future problems.</p>
<p>3. How will the department monitor the seawater interface and what are the consequences of not meeting the monitoring triggers?</p>	<p>We have set the allocation limits to maintain the seawater interface offshore and will be monitoring water quality along the coast.</p> <p>If the interface is found to be mixing with an aquifer (increasing the salinity) we will restrict abstraction and may require draw points to be moved to protect the aquifer.</p>
<p>4. Limitations have been placed on available water with no obvious effects from current abstraction. Are the limits realistic? Are there abstraction impacts at present?</p>	<p>Water levels are declining at present in many places, with recharge reliability factored into the allocation limits to prevent further drawdown that may affect groundwater-dependent ecosystems or other users.</p> <p>Details on the rate of groundwater decline and the attributed causes (abstraction and climate) are described in <i>Groundwater level trends analysis for the South West groundwater areas</i> (Golder, 2008).</p>
<p>5. How is the department going to manage surface water sources which depend on groundwater to maintain flow?</p>	<p>The review of the allocation limits factored in connectivity between water sources in determining the volume of water available for use.</p> <p>The management zones and local area policies will restrict groundwater abstraction in areas of high connectivity.</p>

Table 5 Comments on managing water in the environment

Comment	Department of Water response
<p>Acid sulfate soils Seven comments from three respondents raised the issue of potential acid sulfate soils in relation to water management in the plan. They included the need to:</p> <ul style="list-style-type: none"> • restrict disturbance to PASS to make sure such soils are left in situ and undisturbed where possible • restrict abstraction in areas of PASS from all aquifers connected with an identified PASS site • expand the Beenup ASS management zone to cover the rest of the Scott coastal plain to increase recognition and management of this issue by licensees and licensing officers • provide information on assessment of water use impacts in potential acid sulfate soils areas, and what needs to be monitored. <p>It was also noted that the increasing problems stemming from potential acid sulfate soils, particularly on the Swan and Scott coastal plains, is of concern, given the degradation of most wetlands and waterways (particularly the Scott River) in the region and the drying climate.</p>	<p>Disturbance and abstraction in areas at high risk of potential acid sulfate soils will be restricted through the licence assessment process (Section 5.1).</p> <p>Potential acid sulfate soils have also been considered in developing the allocation limits (see the allocation limits document) and in Actions 5 and 6 (currently underway) which will improve our understanding for the next plan.</p> <p>The department is currently engaging with other agencies to improve the ‘whole of government’ approach to the management of potential acid sulfate soils.</p> <p>The potential acid sulfate soils management zone in the Beenup subarea is designed to manage abstraction in this area of existing acid sulfate soils, and where acid forming soils have been exposed in the past. The rest of the Scott coastal plain will be managed through the normal licensing assessment process and the policies in the plan.</p> <p>The department will be working with the Department of Environment and Conservation (DEC) in assessing potential acid sulfate soils related water use.</p> <p>Further information on potential acid sulfate soils can be found on the DEC website <www.dec.wa.gov.au>.</p>
<p>Groundwater-dependent ecosystems and ecological water requirements – general Five respondents requested clarification on understanding which groundwater-dependent sites need to be protected and why.</p>	<p>Our key ecological sites for monitoring and reporting are detailed in <i>Management triggers and responses for groundwater-dependent ecosystems in the South West groundwater areas</i> (Del Borrello 2008). This document provides detail on our key groundwater-dependent ecosystem sites for monitoring and management.</p> <p>The full list of sites and investigations that have been completed are summarised in <i>A summary of investigations into ecological water requirements of groundwater-dependent ecosystems in the South West groundwater areas</i> (Hyde 2008). Additional information on site locations is included in the subarea reference sheets.</p>

Comment	Department of Water response
<p>Groundwater-dependent ecosystems and ecological water requirements – risks from abstraction</p> <p>Respondents also commented on the risk of allocating water near groundwater-dependent ecosystem sites in the event of declining water levels. The comments included:</p> <ul style="list-style-type: none"> • Ecological triggers must be factored into management actions and licensing decisions. • Trade-offs for the environment which requires supplementation or other methods of artificially maintaining sites is unacceptable. • The relevant resource condition targets established through the regional natural resource management planning process and other governmental and community driven projects which manage the environment must be recognised in the plan. 	<p>The licence assessment process considers impacts of abstraction on local groundwater-dependent ecosystems and the ecological water requirement triggers are described in <i>Management triggers and responses for groundwater-dependent ecosystems in the South West groundwater areas</i> (Del Borrello 2008).</p> <p>We agree that artificial maintenance is not always a long-term solution to the impacts of abstraction. This is clearly stated in Table 4 of the plan, under environmental policies.</p> <p>We work with the Environmental Protection Authority on any applications requiring trade-offs to achieve the best outcome for the water resources and its dependent environment.</p> <p>The department has a comprehensive integrated natural resource management program and recognises the contribution natural resource management has to water management.</p> <p>Natural resource management is part of ‘whole of water cycle’ management and is recognised in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009) which provides an overview of the natural resource management priority setting process.</p>
<p>Groundwater-dependent ecosystems – monitoring</p> <p>Eight comments from four respondents requested regular monitoring and reporting on groundwater-dependent ecosystems, including predetermined actions on how the department will respond to identified impacts if needed.</p>	<p>Information on the South West groundwater areas monitoring program is currently available on our website. A shallow drilling program at key groundwater-dependent ecosystem sites on the Swan coastal plain is currently underway. This will provide additional information on seasonal variation in water levels and rainfall. This program will increase our understanding of groundwater-dependency and water level changes and how to best manage it.</p> <p>Appendices B and E of the plan identify the triggers for assessing impacts on groundwater-dependent ecosystem and describe how to respond when triggers are reached.</p>
<p>Questions</p> <ol style="list-style-type: none"> 1. Why is the Vasse–Wonnerup wetland system excluded from groundwater-dependent ecosystem monitoring? 	<p>The Vasse–Wonnerup wetland system is a large modified water body, fed through natural watercourses and drainage. It is not maintained by groundwater.</p>

Comment	Department of Water response
2. Does water for the environment take into consideration the carbon footprint that is put in place by having to import food from interstate? Should some of the environmental water be used to counter-balance this?	In the context of this plan, water for the environment refers to the in situ environment within the plan area that is linked to a water resource.

Table 6 Comments on policy for licensing and water management

Comment	Department of Water response
<p>Stock, domestic and garden use Seven respondents provided ten comments on concerns that domestic bore water licensing was not accounted for, particularly in the Superficial Aquifer.</p>	We have accounted for domestic bore use across the plan area in defining the allocation limits. Please see Section 4.3 and Table 3 of the plan, or the allocation limits document, for more information.
<p>Stock, domestic and garden use – definition A departmental position (including legal implications) on what defines stock, domestic and garden use from both groundwater and surface water sources was requested.</p>	<p>The definition of stock, domestic and garden bores is described in our draft <i>Statewide policy no. 14 – Managing unlicensed groundwater use</i> (Department of Water 2008). We have also included additional information in the plan on exempt use (Section 5.1).</p> <p>The amount of water allocated to meet the needs of stock, domestic and garden water use is covered in the plan (Sections 4.1 and 5.1).</p>
<p>Licence exemptions A clear position of when a licence is not required was requested.</p>	The department’s position on when a licence is not required is stated in the draft <i>Statewide policy no. 14 – Managing unlicensed groundwater use</i> (Department of Water 2008) and in Section 5.1 of the plan.
<p>Inter-regional transfers of water A clear position on inter-regional transfers was requested by three respondents, given that water resources are limited and essentially fully allocated for use in the region.</p>	We have outlined our position on inter-regional transfers of water in the plan (Section 5.1). Water can be piped (transferred) out of a subarea in fully allocated areas through trading.

Comment	Department of Water response
<p>Licence assessment</p> <p>Nine respondents raised issues relating to the licence assessment process. They included:</p> <ul style="list-style-type: none"> i. Any requests for additional information to support a licence application should be fair and reasonable. ii. Other avenues for meeting requests for additional information as part of the assessment process should be provided – such as how to undertake the work and what existing work is already available. iii. Up-to-date information should be made available for potential investors on securing a licence to use a particular water resource. iv. The first-in first-served process should be reviewed, as it does not allow limited water resources to be best utilised based on merits and meeting regional demand. v. Licensing decisions should be clear and transparent. vi. How the local rules and the management zones work should be clear. vii. The assessment process should be consistent with other government processes. 	<ul style="list-style-type: none"> i. All existing information for an area is considered when assessing a licence application. Any requests for information will be fair and equitable. The plan informs applicants where additional work will be required and why. ii. The department provides proponents with options when additional information is requested as part of the licence assessment process. iii. The department’s district offices in the South West have the most up-to-date information on water licensing and availability. The plan details the requirements for a licence application. iv. Mechanisms for allocating water other than the first-in first-served policy, particularly in areas where the resource is over 70% allocated are being investigated. This information will be made publicly available following completion of the work. v. All licensing decisions will be consistent with the principles and objectives of the plan. vi. The local policy in management zones have been updated in the plan, with clarification on where and how they apply. vii. Our licence assessment process is in line with our obligations under the <i>Rights in Water and Irrigation Act 1914</i> and, where applicable, other government processes.
<p>Questions</p> <p>1. What parameters define a ‘major project’?</p>	<p>The definition of a major project has been updated (Section 5.1).</p>
<p>2. When will the department refer a groundwater licence application to the Environmental Protection Authority (EPA) under Section 38 of the <i>Environmental Protection Act 1986</i>?</p>	<p>Any application that has the potential to significantly impact on an important (protected by legislation) environmental site may be referred to the EPA. However, for smaller applications, the plan protects the environment and a referral will not be needed. See the environmental policies in the plan for more information (Table 4).</p>
<p>3. Are mining companies monitored for how much they dewater?</p>	<p>Mining companies monitor all of their abstraction, including dewatering activities (water levels and quality). The data is submitted to the department as part of complying with their licence.</p>

Table 7 Comments on managing licensing and compliance

Comment	Department of Water response
<p>Recouping Five respondents provided nine comments on the issue of recouping unused water entitlements. The comments included:</p> <ol style="list-style-type: none"> i. The policy should be clarified, including the process and its implications. ii. Full consideration should be given to licensees on why the water has not been used (fair and equitable). iii. The recouping process should be undertaken in conjunction with licensees and the community should be made aware when this process has been initiated. iv. Staging any recouping over time, while promoting efficiency of use and trading. 	<p>Recouping of licensed entitlements is an ongoing licensing process carried out on a regular basis.</p> <ol style="list-style-type: none"> i. <i>Statewide policy no. 11 – Management of unused water entitlements</i> (Water and Rivers Commission 2003), and the plan provide the decision-making process for how water is recouped. ii. The department uses a fair and equitable process for reviewing unused water entitlements. iii. Licensees will be informed prior to commencement of the recouping process. Where additional water becomes available through recouping the department will notify the community on how this water will be released. iv. The recouping strategy for the plan area will be staged over time in areas of high demand (Actions 10, 20 and 21). Currently the department is recouping across the plan area targeting the Yarragadee Aquifer, Leederville Aquifer in the Busselton– Capel groundwater area and Superficial Aquifer in Myalup and Wellesley groundwater subareas.
<p>Licence compliance (metering and monitoring) Licence compliance and associated work was raised by four of respondents, in particular licence conditions, including:</p> <ul style="list-style-type: none"> • installing meters and monitoring bores • monitoring bores situated in the best position (and shared where possible by other licensees) • monitoring required for a licence being clearly established and coordinated between government departments and licensees. 	<p>The plan ensures that metering and monitoring associated with a licence is appropriate for all licensees. There are provisions in the plan for joint monitoring arrangements between licensees. We support collaborative investment in private monitoring as it will help to minimise costs and will facilitate information sharing. Licensees are encouraged to discuss their monitoring concerns with the department.</p> <p>The department consults with relevant government agencies in conducting a licensing assessment and aims to minimise the duplication of work required by the proponent.</p>

Comment	Department of Water response
<p>Water use impacts</p> <p>Four respondents commented on water use and its associated impacts, in particular:</p> <ul style="list-style-type: none"> i. Public availability of water use figures. ii. Public water supply has most of the available water. iii. Public water supply is suited to spatial separation of abstraction and use, while other water users are unable to separate the location of abstraction and use as easily. iv. Public water supply and other year-round water users cause continued abstraction impacts, while agricultural industries only draw for the irrigation season, allowing the aquifers to recharge during down time. This abstraction pattern needs to be recognised. 	<ul style="list-style-type: none"> i. Section 2.7 provides water use statistics for the plan area and more detailed water use figures are available in the subarea reference sheets. ii. Across the plan area, agricultural activities account for 36% of water allocated from the Yarragadee Aquifer and 55% from the Leederville Aquifer. Less than 38% of water in Yarragadee Aquifer and 20% in the Leederville Aquifer are allocated to public water supply. iii. Agreed. However, the same rights to accessing water apply to everyone. It is the cost of moving the draw points and piping the water that is prohibitive to smaller users. iv. All abstraction has an impact. The larger the draw during the summer months, the higher the potential impact on groundwater-dependent ecosystems regardless of whether the abstraction is continuous or cyclic.
<p>Questions</p> <ul style="list-style-type: none"> 1. Perpetual licence tenure is required, why has it not been implemented? 	<p>Perpetual water access entitlements are being considered through the water reform process currently underway and will be addressed through new water resources legislation.</p> <p>The current legislation states a maximum of 10 years as the licence tenure (with the ability to renew a licence at the end of ten years).</p>
<ul style="list-style-type: none"> 2. What is happening with the pending licence applications? 	<p>The pending licence applications are being assessed and, if appropriate, issued where water is available as per the requirements of the plan. Where water is unavailable the application will be refused and alternative supplies for water will be discussed with the applicant.</p>
<ul style="list-style-type: none"> 3. Does the department plan on recouping in the Cape to Cape region and allowing for larger developments to access the recouped water? 	<p>The licensing rules for using water in the Cape to Cape subareas (North and South) have been updated in the plan (Section 5.2). Recouping is unlikely to result in more water being released. The hydrogeology of the groundwater resources in this subarea restricts the reallocation of water.</p>

Table 8 Comments on public water supply

Comment	Department of Water response
<p>Public water supply reserve Eighteen comments from seven respondents were received regarding public water supply reserves. Respondents were concerned that the reserved amounts were not consistent in the plan and the reserves for Busselton–Capel groundwater area (particularly the shire of Capel and Dunsborough) need to be reviewed in light of an expanding population.</p>	<p>The reserves in the plan have been reviewed and are now consistent throughout the document, including the reserved amounts for Busselton–Capel and Dunsborough. The reserve will be held by the department and will be released to a public water supplier where source demand has been proven (Section 5.1) and water efficiency measures are implemented. Where the reserve is not able to meet demand for drinking water the demand will need to be satisfied through trading or alternative sources.</p>
<p>Temporary allocation of public water supply reserve Seven respondents were opposed to the concept of temporarily allocating water from the public water supply reserve. If this occurs, tight operational rules and timelines will be required with clear exit strategies, no renewal options and very short durations.</p>	<p>We have updated the policies in the plan regarding the temporary allocation of reserved water. Any water supply licence issued from the reserve will be non-renewable and have legally binding timelines and operational rules.</p>

Table 9 Comments on water use efficiency

Comment	Department of Water response
<p>Water use efficiency was an important consideration for many respondents. Comments received included:</p> <ul style="list-style-type: none"> i. Emphasis on water efficiency needs to be stronger in the plan. ii. The requirements and benchmarks for what is considered to be efficient need to be clear. iii. Sustainable water use should be part of efficient water management, as the systems for delivery can be efficient but the practices of using the water may not be. 	<ul style="list-style-type: none"> i. We have improved the water use efficiency policies in the plan to be in line with <i>Statewide policy no. 16 – Policy on water conservation/ efficiency plans – achieving water use efficiency gains through water licensing</i> (Department of Water 2008). ii. Water use efficiency will be driven by the price of water and adoption of new technologies. Benchmarks for water efficiency constantly change as new technologies and practices are developed. It is up to the licensee to implement efficiencies appropriate for their water use. iii. The <i>South West regional water plan (supporting detail)</i> (Department of Water 2009) states our position and current actions for managing water efficiency and sustainable use.

Comment	Department of Water response
<p>Water efficiency in public water supply Respondents were in favour of water efficiency targets for public water service providers, with targets supported by tangible actions including metering, transparent reporting on actual use and the production of water efficiency and source development plans.</p>	<p>We are working with the three water service providers in the South West to increase water use efficiency. Our targets for public water supply (scheme water use) are described in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009) and in the plan (Objectives 4 and 5).</p> <p>Water service providers will not be able to access the public water supply reserve until targets are met and source development plans are completed (Section 5.1). We will report on the actions taken to meet these targets in the annual evaluation statement.</p> <p>All public water supply bores are metered and monitored as part of the operating conditions and reported to the department on an annual basis.</p>
<p>Community education on water efficiency Six respondents provided comments on the issue of community education which included:</p> <ul style="list-style-type: none"> • Community education is required to foster adoption of water use efficiency, including rewards for better self-management of water use. • The department needs to foster conservative use of groundwater and encourage other sources. • Communications across government on water efficiency are required and should link in with community education programs to help improve education on water use. 	<p>The department is encouraging efficient use of groundwater through domestic water use restrictions, water conservation and efficiency planning with local governments, and providing support for various water wise initiatives such as Water Wise on the Farm and the International Council for Local Environmental Initiatives.</p> <p>The department is also working with catchment groups, other government agencies and water user groups to increase community participation in water efficiency and sustainable water use.</p> <p>The actions for engaging with the community and capacity building to promote self management are detailed in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009).</p>
<p>Questions</p> <ol style="list-style-type: none"> 1. What method will be used to benchmark water efficiency or what details will be required to show that an activity is considered efficient? 	<p>The department consults with relevant agencies on best management practices for a particular water use industry to ensure water is being used efficiently. Metering will be used to provide information on water use efficiency across industries.</p> <p><i>Statewide policy no. 16 – Policy on water conservation/efficiency plans</i> (Department of Water 2008) provides some guidance on industry specific requirements for water use efficiency. See the <i>South West regional water plan</i> (Department of Water 2009) for the department’s strategic approach.</p>

Table 10 Comments on future demand for water

Comment	Department of Water response
<p>Future demand Seven respondents commented on future demand and economic growth, including:</p> <ul style="list-style-type: none"> i. The plan needs to identify that future water demands are fluid and subject to change. ii. Economic demands need to be assessed on a regular basis and factored into changes to water availability. iii. Agriculture (in particular food production) should have water provided or reserved to meet demand. 	<ul style="list-style-type: none"> i. Section 2.8 of the plan discusses future water demand. These figures are fluid and subject to change based on market forces. Information on future demand is also in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009). ii. New forecasts and socio-economic studies will be undertaken to support decision-making as part of the review of this plan and each subsequent review. iii. Expansion of any water use industry, which is not met by available groundwater, could be met through efficient water use, alternative sources or trading.
<p>Water scarcity and reliability of supply Almost a quarter of respondents were concerned that water has become a scarce commodity. Comments regarding drought contingency planning and reliability of supply were the main concerns (both allocation and quality), particularly for the irrigated horticulture and viticulture sectors in extreme water scarcity situations.</p>	<p>The department manages water resources to minimise the risks to a reliable supply. By improving water use efficiency, industries can make more water available to meet demand. Water security has been accounted for in setting the allocation limits, which are set to reduce the risk to the environment and existing users. There is an option in the plan for water users to factor in drought contingency measures in times of low rainfall. The next plan will set the priorities for reliability of supply for water use sectors in times of restricted supply. The department will consult with water users in the next round of planning on the potential to make more water available at a lower level of reliability. This may increase available water in the watertable aquifer in good rainfall years.</p>
<p>Questions</p> <ul style="list-style-type: none"> 1. How has the department calculated the demand for future water? 	<p>Demand for future water is discussed in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009). The figures used in the plan (Section 2.8) are all available on our website in various documents listed in the bibliography.</p>
<ul style="list-style-type: none"> 2. There is a shortfall identified between predicted demand requirements and allocated water. What are some of the suggested options for meeting this shortfall and should there be an action for the state to identify options? 	<p>The <i>South West regional water plan</i> (Department of Water 2009) gives the department's position on meeting the challenges of increased demand with limited resources. That plan aims to provide mechanisms for managing the shortfall.</p>

Table 11 Comments on trading

Comment	Department of Water response
<p>Trading of water entitlements was a major concern for a third of the respondents, as the process for trading (including licence assessment) and its implementation was not clear enough in the draft plan.</p> <p>A clear definition of what constitutes trading and how trading will be developed and managed by the department are required, including having adequate systems in place to facilitate fair and equitable trading.</p>	<p>Trading in the South West has been active since 2002 and is managed in accordance with the <i>Rights in Water and Irrigation Act 1914</i>. The plan provides the principles for managing trading in the future.</p> <p>All of the definitions, policies and rules associated with trading have been updated throughout the plan.</p> <p>We are also reviewing the current <i>Statewide policy no. 6 – Transferable (tradeable) water entitlements</i> (Water and Rivers Commission 2001) and will be updating our licensing administration system to provide more flexibility for trading and speed up the process of trading licences.</p>
<p>Other issues related to trading included the following:</p> <ul style="list-style-type: none"> i. Government agencies need to work together to provide an integrated approach to trading and assessment, particularly with development applications that rely on water. ii. Trading must be flexible enough to deal with market fluctuations. iii. In areas where a trading market is likely, community groups could act as facilitators to ensure water goes to the highest value use. iv. Trading must be compatible with the National Water Initiative framework and principles. This includes implementing the Water Reform Implementation Committee recommendations, on unbundling of water entitlements and providing for perpetual licence entitlements. v. Trading of water entitlements should not result in inefficient use of water. 	<ul style="list-style-type: none"> i. We are working with other government agencies to help facilitate trading in the South West. All trades are assessed for their sustainability and compliance with land use planning as identified in Section 5.1. ii. Trading will be subject to market forces. The flexibility of trading is governed by the plan and the current legislation (under review). iii. There may be situations where community groups can act as water brokers for trading. How these groups may operate has not yet been explored and will be investigated as part of meeting Action 13. iv. The current plan is in line with the National Water Initiative framework and principles under the requirements of the <i>Rights in Water and Irrigation Act 1914</i>. New legislation is required to provide for the unbundling of licences and perpetual licence tenure. v. It is unlikely a trade will be inefficient as it must meet the requirements for a licence (Section 5.1).

Comment	Department of Water response
vi. Water trading should not allow for the creation of 'water barons'.	<p>vi. This plan and the <i>Rights in Water and Irrigation Act 1914</i> states that a person must have access to the water resource (that is, own or have legal access to the land) to hold a water licence.</p> <p>The complete separation of land and water rights, allowing people who do not have access to land in a subarea to purchase water, requires a change to the legislation (which has not yet occurred). This process would be run in consultation with the community.</p>
Questions	
1. Why is trading required?	Trading of water licences or entitlements is optional and can only occur if there is a willing buyer and seller of the water. Trading provides an avenue for the redistribution of water for future use in fully allocated areas.
2. Why can't water be traded across subareas?	Allocation limits are based on hydrogeological data on a subarea scale to maintain a certain level of abstraction and minimise the risk of impacts to the water resource and its dependent systems. Allowing an increase in the draw from a subarea above the allocation limit has the potential to seriously affect the existing users, environment and water resource. However, water can be piped across subarea boundaries (see question 3 below).
3. Can a trade occur where water is piped from one subarea to use in another?	Water may be traded from a subarea (the location of the draw point) and piped to a new location (another subarea) so long as the impacts of the draw remain in the original area and are acceptable.
4. Will the department provide compensation if the allocation limit variations have an impact on trading? Are licensees going to be compensated if recouping is undertaken for licensed entitlements that have been used?	A person will not be entitled to compensation unless that person meets the criteria set out in Clause 39 of the <i>Rights in Water and Irrigation Act 1914</i> (see the State Law publisher website for the full reference < www.slp.wa.gov.au >).
5. Why are mining companies different in their abilities to trade across subareas and move water around the region?	The ministerial arrangement has been clarified and explained in the plan under Section 2.8. Trading rules apply to everyone equally except for policy 12.1.1 for the listed mining companies in the plan, as this agreement was entered into prior to finalising the plan.

Table 12 Comments on water reform

Comment	Department of Water response
<p>Alternative water sources</p> <p>The need for alternative water sources was raised by four respondents. The comments included:</p> <ul style="list-style-type: none"> i. Alternative water sources should be efficient and cost effective to allow for demand to be met in areas where water supply is limited. The cost should be comparable to existing sources to encourage adoption. ii. Proposals to investigate innovative solutions to water shortages should be encouraged. iii. Alternative sources should be pushed across the 'whole of government' for all land use change and development, moving land and water management towards sustainable use of water resources. iv. New projects should investigate alternative sources where water is limited as part of the development plan approval. Water requirements must be considered as primary for all new developments (of any kind) before proceeding with development. No new developments should be allowed in areas without any water. 	<p>Alternative supply is a strategic issue in water management and is addressed in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009).</p> <ul style="list-style-type: none"> i. The demand for alternative water sources will be driven by water availability and cost will reflect demand. ii. The State Water Resource Management and Reform Program encourages investigation into innovative solutions to water shortages and development of alternative supplies. iii. The State Water Resource Management and Reform Program and the actions in the <i>South West regional water plan</i> (Department of Water 2009) both identify alternative sources and fit for purpose use as issues for water resource management over the next 10 years. To meet these actions the department, together with CSIRO and the Water Corporation, is undertaking investigations into alternative sources. iv. For all new projects requiring water, the proponent must consider water before other approvals are sought. Developments can occur in fully allocated areas if groundwater is not required and alternative sources or trading can meet demand.
<p>Plantations</p> <p>Most of the local government agencies and water user group submissions were concerned with plantation management. Comments were strongly in favour of managing plantations through licensing and regulation, including monitoring drawdown impacts on throughflow and potential acid sulfate soils.</p> <p>There was also some concern regarding the time frames for developing regulation, as the longer plantations remain unregulated the more they are planted in areas where land may be considered valuable for food production.</p>	<p>Plantation management is discussed in the <i>South West regional water plan (supporting detail)</i> (Department of Water 2009) and the <i>South West groundwater area allocation plan</i> (Department of Water 2009) (Section 2.9 and Action 14).</p> <p>The current legislation does not provide for the management or licensing of water use by plantations. It is proposed that new legislation will provide for regulation of water use by plantations and other water intercepting activities, where necessary.</p> <p>The department is preparing guidelines for local governments to help manage water related impacts by plantations.</p> <p>This will be released to the public in early 2009. Policy to support the implementation of the new legislation is in preparation.</p>

Comment	Department of Water response
<p>Self management and risk sharing A third of all respondents commented on self management of water resources. Comments requested action on implementing self management for groundwater abstraction. The following points were raised:</p> <ul style="list-style-type: none"> • Self management is useful where there is a degree of commonality in the water abstraction, use, or environmental management of the resource. • The level of management granted to the community or water user groups needs to be determined, including the ability to self manage water use and aspects of water management, with regulation by the department. • Managing water and engaging with the community requires a clear risk sharing and risk assignment framework to be developed. 	<p>The department is currently undertaking work on self management as detailed in Section 2.9 and Action 13 of the plan.</p>

Where to next?

We have carefully considered each comment and response in finalising the *South West groundwater areas allocation plan*. The final plan will come into force following endorsement by the Minister for Water.

For more information on how the plan will be implemented and reviewed and how it will meet its commitments, please see Chapter 3 (objectives, strategies and performance indicators), Chapter 6 (monitoring) and Chapter 7 (implementation, actions and review).

List of respondents

Interest group	Respondents
Agriculture and irrigation	Agribusiness Research and Management Margaret River Wine Industry Association Scott River Growers Group The Western Australian Farmers Federation Pastoralists and Graziers Association of Western Australia
Community	Blackwood Basin Group Scott Steering Committee Whicher Water Resource Management Committee
Conservation and environment	Leeuwin Environment Conservation Council of Western Australia
Individual	Five individuals
Local government	Shire of Nannup Shire of Capel Shire of Busselton Shire of Augusta-Margaret River
Mining and industry	South West Drillers group Rockwater Bemax Resources BHP Billiton Chamber of Minerals and Energy
Other state government	Department of Indigenous Affairs Department of Agriculture and Food South West Development Commission
Public water supply	Water Corporation Busselton Water Board Aqwest (Bunbury Water Board)

Further information

The plan and its supporting documents are available from the department's website: <www.water.wa.gov.au/allocationplanning> go to South West groundwater.

For further information please email <allocation.planning@water.wa.gov.au> or contact:

Bev Thurlow
Bunbury regional office
35–39 McCombe Road
Bunbury Western Australia 6230

PO Box 261
Bunbury Western Australia 6231

Telephone 08 9726 4111
Facsimile 08 9726 4100

References and further reading

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