

# Second Draft Report

## Inquiry into Water Resource Management and Planning Charges

2 November 2010

Economic Regulation Authority



WESTERN AUSTRALIA

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## Executive Summary

The purpose of this report is to seek comment from interested parties on a set of proposed fees and charges that would recover the proportion of the Department of Water's water resource management and planning costs that have been justified as being efficiently incurred on behalf of identifiable private parties.

The inquiry is being undertaken in response to a request from the Treasurer in April 2009. This report also includes revisions to three of the draft recommendations that had been proposed in the Draft Report, following the Authority's consideration of comments by interested parties. The other recommendations made in the Draft Report remain unchanged.

The Authority invites feedback from interested parties on the second Draft Report recommendations by 20 December 2010.

The Authority has estimated that in 2008-09, the Department of Water incurred a total of \$29.2 million of costs that could be justified as being efficiently incurred on behalf of the users of its services (out of the Department's total expenditure of \$108.0 million in 2008-09 – all of the Department's major activities are listed in **Appendix E**).

In the cost information submission prepared for the Authority<sup>1</sup>, the Department of Water estimated that the total costs to undertake the water resource management and planning activities that are suitable for cost recovery were \$56.0 million in 2008-09 (see Table 1.1). These activities and costs contribute to nine water resource management and planning services that have been identified by the Department, although some activities and costs contribute to other services that are not considered in this report. After allocating all or part of the activities and costs to the nine services, the Department estimated that the total cost of providing these services was \$46.3 million in 2008-09. This amount was then reduced by the costs that were incurred on behalf of the wider public (the public good component), leaving only the costs of providing these services that were incurred on behalf of private parties, with the total costs to be recovered estimated to be \$39.8 million.

These same three steps have been performed by the Authority to establish the efficient costs incurred by private parties that can be recovered from users of the Department's services.

- As a first step, the Authority estimated the total efficient costs of the activities (\$41.6 million compared to the Department's \$56.0 million).
- Secondly, all or some of the activities and costs were allocated to the nine services identified by the Department of Water. The estimated efficient costs of providing these water resource management and planning services were \$34.3 million in 2008-09.
- The final step was to remove any costs that were incurred on behalf of the wider community (public good component), which results in total efficient costs to be recovered from identifiable private parties of \$29.2 million.

These efficient total costs provide an appropriate basis for establishing service fees and charges. Other costs that are being incurred may be efficient, but the Department of

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<sup>1</sup> The cost information submission from the Department of Water is available on the Authority's website.

Water does not have the systems in place to justify the recovery of those costs from users at this time.

**Table 1.1 Summary of Costs to be Recovered**

Department of Water Estimates			Authority's Assessment		
Estimated Total Cost of Activities	Estimated Total Cost of Providing Services	Total Costs to be Recovered	Estimated Efficient Costs of Activities	Estimated Efficient Costs of Providing Services	Total Efficient Costs to be Recovered
55,984,845	46,277,288	39,755,591	41,598,390	34,336,619	29,206,798

The Authority has developed the proposed charges after considering submissions received from stakeholders and input from the following consultants, whose reports are available on the Authority's website:

- PricewaterhouseCoopers has reviewed the effectiveness and efficiency of the Department of Water's water resource management and planning activities and costs;
- Quantum Management Consulting & Assurance has carried out a review of the processes used by the Department of Water in carrying out its key water resource management and planning services; and
- The Resource Economics Unit has undertaken a case study on the Warren-Donnelly catchment in the vicinity of Manjimup to determine if the Department of Water is undertaking unnecessary work when determining allocation limits and water availability.

The Authority anticipates that the Department of Water will continue to develop its data collection systems so that in future it can justify a greater amount of cost recovery from the users of its services. The Authority recommends another review be undertaken in three years.

If the Authority's draft recommendations are implemented, the Department of Water's indicative water resource management and planning fees and charges would apply to water users as outlined in Table 1.2. The Authority's draft recommendation is that the indicative fees and charges be phased in over a three year period.

Following a subsequent review of the Department of Water's costs in three years time, when the Department has been able to collect data over a longer period of time, the Authority could reassess the efficiency of the Department's costs, as well as the conservative approach to cost recovery that has been adopted.

**Table 1.2 Authority's Indicative Fees and Charges Based on Recovery of 2008-09 Efficient Cost Estimates**

Services	Year 1 – 25 Per Cent of Efficient Costs Recovered (\$)	Year 2 – 50 Per Cent of Efficient Costs Recovered (\$)	Year 3 – 100 Per Cent of Efficient Costs Recovered (\$)
<b>A. Processing and assessment of applications for water licences and permits (per application)</b>			
<b><i>New 5C licence*</i></b>			
Low risk	525	1,051	2,101
Medium risk	965	1,930	3,860
High risk**	838	1,675	3,350
<b><i>5C licence renewals*</i></b>			
Low risk	206	413	825
Medium risk	264	528	1,056
High risk**	248	496	992
<b><i>Other licence application fees</i></b>			
Amendment of a licence	595	1,190	2,380
Trade or transfer of a licence	733	1,467	2,933
Licence to construct or alter a well	415	831	1,661
Permit to interfere with bed or banks	418	836	1,672
<b>B. Licensing of the Water Corporation for the IWSS – Indicative Only (annually)</b>	68,108	136,215	272,430
<b>C. Providing water allocations and managing the ongoing use of water (per licensee)</b>			
<b><i>Water licensing policy and enforcement (annually)</i></b>	37	75	149
<b><i>Water allocation planning and management (annually)</i></b>			
C1	24	49	97
C2	97	195	390
C3/C4*			
Low risk	76	152	304
Medium risk	152	304	608
High risk	380	760	1,520
<b>D. Water Metering</b>			
<b><i>Meter supply and installation (per meter)</i></b>	879	1,759	3,518
<b><i>Meter maintenance, reading and other (annually)</i></b>	234	467	935
<b>E. Protecting public drinking water sources (annually)</b>			
<b><i>Planning and Implementation – Indicative</i></b>			
Water Corporation	394,651	789,302	1,578,604
Aqwest	6,758	13,515	27,031
Busselton Water	2,365	4,730	9,461
<b><i>P1 Land Management - Indicative</i></b>			
Water Corporation	13,966	27,932	55,865
<b><i>Purchase of P1 Land - Indicative</i></b>			
Service providers			Case-by-case

Services	Year 1 – 25 Per Cent of Efficient Costs Recovered (\$)	Year 2 – 50 Per Cent of Efficient Costs Recovered (\$)	Year 3 – 100 Per Cent of Efficient Costs Recovered (\$)
<b>F. Providing advice on statutory referrals (per referral)</b>			
<b>Sub-division and development applications</b>	152	305	610
<b>Clearance of sub-division conditions</b>	192	384	768
<b>Local planning proposals</b>	742	1,483	2,967
<i>Floodplain management advice (per advice)</i>	169	337	674
<i>Provision of water information (per information provision)</i>	32	65	129

\* The low, medium and high risk categories are explained on pages 48-49 in this report.

\*\* High risk applications generally require more documentation from applicants than medium risk applications, such as hydrological reports, which reduces the level of effort that is required by the Department of Water when assessing licence applications.

In regard to the recovery of efficient costs from licence holders, the Authority's draft recommendations that underpin the indicative fees and charges in Table 1.2 are that:

- The upfront application fees for new 5C licences and 5C licence renewals should be differentiated based on the level of effort applied to assess and process applications of different risk categories (low, medium or high).
- The upfront application fees for other licences and permits should be based on the average efficient cost incurred by the Department in assessing and processing each type of instrument.
- The direct licensing costs for the Integrated Water Supply Scheme (**IWSS**) that are actually incurred efficiently each year by the Department of Water should be recovered from the Water Corporation through an annual charge, to be phased in over a three year period in line with other fees and charges. The indicative charges included in Table 1.2, which are based on the 2008-09 actual costs, have only been provided to give an indication of what the charges might be.
- The annual charges to licence holders to recover the Department's efficient costs to provide water allocations and manage the ongoing use of water should be based on the total level of effort involved in undertaking the allocation planning and related activities (aggregated across regions), but differentiated according to resource management categories and risk levels.

The Authority's draft recommendation in relation to water metering is to recover the efficient costs incurred by the Department on behalf of metered customers on the Gngara Mound and in the Carnarvon Groundwater Area from those customers. This should be done through an upfront charge per meter to recover the costs of meter supply and installation for new customers (and existing customers when meters are replaced) and an annual charge per meter to recover the average costs of meter reading and maintenance for both existing and new customers.

- Another draft recommendation is that the efficient actual costs incurred by the Department on behalf of water service providers in providing water source protection services should be recovered from the service providers at the end of each financial year, phased in over a three year period. The Water Corporation is the largest customer of these services, although Aqwest (Bunbury Water Board) and Busselton Water are also likely, albeit small, customers. The indicative charges included in Table 1.2, which are based on the 2008-09 actual costs, have only been provided to give an indication of what the charges might be.

In regard to the other services undertaken by the Department of Water that have been identified for potential cost recovery, the Authority's draft recommendations are that:

- The efficient costs incurred by the Department in assessing sub-division and development applications, clearing subdivision conditions and local planning proposals should be recovered from the users of these services (such as the Western Australian Planning Commission and local governments). However, the efficient costs incurred in providing information for district planning proposals and regional planning proposals should not be recovered from the users of those services, as it is generally not possible to identify those who cause the costs to be incurred.
  - The proposed fees for the above services should be based on the Department of Water's average cost of assessment per referral, although the Department should continue to collect data on the level of effort associated with assessing statutory referrals with low, medium or high level of complexity. This should enable the introduction of more cost reflective fees in the future.
- In principle, the efficient costs incurred by the Department of Water in providing services to guide urban drainage and management should be recovered from the users of these services. However, the Department does not have sufficient information to establish a cost per unit at this stage, which means that it is not possible to introduce charges for these services in this report. The Department should continue to collect information about these services and their cost to enable the introduction of charges in the future.
- The efficient costs incurred by the Department of Water in providing floodplain management advice and water information to private parties (for example, developers and real estate agents) should be recovered from users of the services provided that the costs of implementing charges for these services would not outweigh the benefits. The Department raised this possibility in its cost information submission.
  - Further, if the provision of water information to private parties becomes available for free from the Bureau of Meteorology, the Department of Water should cut back its water information provision service and refer any inquiries from private parties to the Bureau of Meteorology.

Examples of what impact the indicative fees and charges will have on various licence holders is provided in **Appendix G**. As an example, a small horticulture business with an allocation volume of 18,500 kilolitres per year, that takes groundwater from a source that is fully or over allocated, would pay an annual charge of \$1,669 (\$149 for water licensing policy and enforcement services and \$1,520 for water allocation planning and management services). The proposed licence renewal fee would be \$992, noting that the licence application fee that would apply to a new application for the same allocation volume from the same source would be \$3,350.

Another example is that of a small agriculture business, with an allocation volume of 72,000 kilolitres per year that takes groundwater from a source that is largely unallocated. In this case, the annual charge would be \$246 (\$149 for water licensing policy and enforcement services and \$97 for water allocation planning and management services), and the proposed licence renewal fee would be \$825. A new licence application for the same allocation volume from the same source would be charged an application fee of \$2,101.

The Authority is inviting feedback from stakeholders on the capacity of different groups to pay the indicative fees and charges.

The Authority has published an Issues Paper, a Discussion Paper, a first Draft Report and held a round table to obtain feedback on the principles that would be applied in recovering the costs of water resource management and planning. The Authority wishes to thank those who provided submissions in response to the Issues Paper, Discussion Paper and first Draft Report. Those submissions, along with the discussions held at the round table, have helped to formulate the draft recommendations in this report.

The Authority now welcomes a further round of submissions on the additional draft recommendations that set out the proposed fees and charges, with submissions due by 20 December 2010. The Final Report for the inquiry will be delivered to the Treasurer by 28 February 2011 and the Treasurer will, in accordance with the Act, have 28 days to table the report in Parliament.

## Summary of Draft Recommendations

### Changes to Draft Recommendations in the First Draft Report (See Appendix C for Full List of Draft Recommendations)

- 1) For public open spaces, water resource management and planning costs be recovered from public funds.
- 2) The Department of Water to not reimburse licence holders for the costs of information provided in licence applications.
- 3) The costs incurred by the Department of Water in managing garden bores not be recovered from bore owners.

### Accountability, Effectiveness and Efficiency in Water Resource Management and Planning Activities

- 4) The Authority estimates that in 2008-09 the Department of Water incurred a total of \$29.2 million of costs that is considered to be efficiently incurred on behalf of identifiable private parties and provides an appropriate basis for service fees and charges.

### Processing and Assessment of Applications for Water Licences and Permits

- 5) The upfront application fees for new 5C licences and 5C licence renewals be differentiated based on the level of effort applied to applications of different risk categories (low, medium or high).
- 6) The Department of Water to continue collecting data on the level of effort required to assess licence applications of different risk categories. This includes collecting data on groundwater and surface water licence applications, and applications from large customers.
- 7) Other licence and permit application fees be based on the average cost incurred by the Department of Water in assessing and processing each type of instrument.
- 8) The Department of Water to collect data and analyse the results to establish the different levels of effort required to assess and process other licence and permit application fees which are currently based on average costs.

### Providing Water Allocations and Managing the Ongoing Use of Water

- 9) The efficient water allocation planning and environmental water planning costs, and the efficient costs of the other activities that support allocation planning, be recovered annually from users based on the total (aggregated across regions) level of effort involved in undertaking the allocation planning and related activities, but differentiated according to resource management categories and risk level. Appendix G provides information on the impact of the Authority's proposed fees and charges for a range of different licence holders.

### Licensing of Water Corporation in the IWSS

- 10) The direct licensing costs for the IWSS that are incurred each year by the Department of Water be recovered from the Water Corporation through an annual charge.

### Water Metering

- 11) The costs incurred by the Department of Water on behalf of metered customers on the Gngara Mound and in the Carnarvon Groundwater Area be recovered from those customers, in the form of:

- an up-front charge per meter to recover the costs of meter supply and installation for new customers (and existing customers when meters are replaced); and
- an annual charge per meter to recover the average costs per meter of meter reading and maintenance for existing and new customers.

### **Water Source Protection**

- 12) The efficient actual costs incurred by the Department of Water in providing water source protection services be recovered from the service providers (Water Corporation, Aqwest and Busselton Water) at the end of each financial year.

### **Cost Recovery and Indicative Fees and Charges for Other Services**

- 13) The efficient costs incurred by the Department of Water in assessing sub-division and development applications, clearing subdivision conditions and local planning proposals be recovered from users of the services. The proposed fee to be based on the Department's average cost of assessment.
- 14) The Department of Water to continue collection of data on the level of effort required to assess statutory referrals with low, medium or high levels of complexity to enable the introduction of more cost reflective fees in the future.
- 15) The efficient costs incurred by the Department of Water in providing information for district planning proposals and regional planning proposals not be recovered from users of these services.
- 16) As the cost per unit of output for the Department of Water's services to guide urban drainage and management are not available, the costs incurred by the Department in providing these services not be recovered from users at this stage. The Department of Water to continue collection of information about these services and their cost to enable the introduction of fees in the future.
- 17) The efficient costs incurred by the Department of Water in providing floodplain management advice and water information to private parties be recovered from users of the services, unless the Department of Water provides information which shows that the costs of implementing fees for these services would outweigh the benefits.
- 18) In addition, if the provision of water information becomes available for free from the Bureau of Meteorology, the Department of Water to wind back its water information provision service and refer any inquiries to the Bureau of Meteorology.

### **Impacts of Fees and Charges and Implementation**

- 19) The Authority invites stakeholders to make submissions with information about capacity to pay issues in relation to the proposed water resource management and planning fees and charges.
- 20) The Authority recommends that the proposed water resource management and planning charges be phased in over a three year period as outlined in Appendix F.

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# 1 Introduction

The Treasurer of Western Australia gave written notice to the Authority, on 2 April 2009, to undertake an inquiry into water resource management and planning charges in Western Australia.

The inquiry has been referred to the Authority under section 32 of the *Economic Regulation Authority Act 2003 (Act)*, which provides for the Treasurer to refer to the Authority inquiries on matters related to regulated industries (gas, electricity, rail and water).

## 1.1 Terms of Reference

The Terms of Reference for the inquiry are provided in **Appendix A**.

In accordance with the Terms of Reference, the Authority is to provide the Government with a range of options and recommendations for:

- the recovery of the water resource planning and management expenses incurred by the Department of Water; and
- the most appropriate regulatory arrangements for the setting of service standards for the water resource manager, the setting of the charges and the subsequent recovery of those charges from water users.

In considering the options, the Authority is to consider and develop findings on:

- the tasks or activities undertaken in the efficient management of the State's water resources by the Department of Water, that would appropriately be recovered from water users;
- the most appropriate level of cost recovery from water users; and
- the most appropriate allocation of costs between licence holders and other water users.

The options recommended to the Government are to include:

- the implementation impacts for various types of users, including a sensitivity analysis on capacity to pay assumptions; and
- opportunities for implementation under both the existing legislative responsibilities of the Department of Water as well as those specified by the National Water Initiative.

The Authority is also required to have regard to:

- the Government's social, economic and environmental policy objectives;
- the Government's obligations as a signatory to the National Water Initiative Intergovernmental Agreement; and
- any relevant pricing principles arising from the 1994 Council of Australian Governments water reform agreement and the National Water Initiative.

In undertaking the inquiry, the Authority recognises section 26 of the Act, which requires the Authority to have regard to:

- the need to promote regulatory outcomes that are in the public interest;
- the long-term interests of consumers in relation to the price, quality and reliability of goods and services provided in relevant markets;
- the need to encourage investment in relevant markets;
- the legitimate business interests of investors and service providers in relevant markets;
- the need to promote competitive and fair market conduct;
- the need to prevent abuse of monopoly or market power; and
- the need to promote transparent decision making processes that involve public consultation.

## 1.2 Background

As part of this inquiry, the Authority has:

- Published an Issues Paper on 30 April 2009 and called for submissions from stakeholder groups, industry, government and the general community on the matters in the Terms of Reference. Thirty two submissions were received in response to the Issues Paper.
- Published a Discussion Paper on 6 August 2009, which called for submissions from interested parties to provide feedback on the principles the Authority should use in developing the draft recommendations. Eight submissions were received in response to the Discussion Paper.
- Held a round table on 10 August 2009, where interested parties discussed issues of relevance to the inquiry.
- Published a Draft Report on 3 December 2009, which called for submissions from interested parties on the draft recommendations developed by the Authority. Fourteen submissions were received in response to the Draft Report.

In the first Draft Report, the Authority did not propose any indicative fees or charges to recover water resource management and planning costs, as further information was needed from the Department of Water. However, in that report the Authority:

- developed draft principles to guide the recovery of the costs of managing and planning water resources;
- developed a preferred approach for recovery of water resource management and planning costs which can be adopted by the Authority once the relevant information becomes available, subject to any concerns raised in submissions;
- suggested that the Department of Water develop more appropriate service standards and performance indicators to allow analysis over time and benchmarking with other relevant agencies. The development of service standards and performance indicators would ideally be undertaken in conjunction with stakeholders, such as through a water industry committee representing different stakeholder groups; and
- suggested a preferred approach for the regulatory arrangements for water resource management and planning, where the Authority would have an ongoing

role to undertake efficiency reviews of the Department of Water and independently determine water resource management and planning charges, while a water industry committee would work with the Department of Water to ensure that service standards and performance measures are appropriate and achieved.

The majority of the Authority's draft recommendations received support by stakeholders and have not been revisited in this second Draft Report. However, some draft recommendations have been reconsidered by the Authority after receiving feedback from stakeholders. These draft recommendations are reviewed in section 2 of this report.

The remainder of this report is focussed on the development of indicative fees and charges to recover the Department of Water's water resource management and planning costs. The structure of the report is outlined below.

### 1.3 Structure of this Report

In determining the appropriate level of cost recovery for the Department's water resource management and planning activities, from whom those costs should be recovered, and how they should be recovered, the Authority has adopted the following sequence of steps. These steps provide the outline of the report.

- 1) The Department has submitted a number of activities as suitable for cost recovery from private parties and has provided its estimates of the costs incurred in carrying out those activities (section 3.3).
- 2) The Authority has reviewed the effectiveness with which the Department carries out its activities, and the Department's cost efficiency, to determine the efficient costs of carrying out the cost recoverable activities (section 3.4). This included consideration of input from PricewaterhouseCoopers, Quantum Management Consultant & Assurance and the Resource Economics Unit. The final reports prepared by these consultants are available on the Authority's website.
- 3) The Authority has reviewed the efficient costs to assess whether there are public good elements, taking into account the Department's views on an appropriate private/public split in costs, and has determined the proportion of efficient costs that it considers appropriate to be recovered from particular private parties (section 3.5).
- 4) Next, the Authority has developed charges to recover the efficient costs of the activities from the parties for which the costs have been incurred, taking into account that some activities may be carried out for a range of different services (sections 4 to 7).
- 5) The Authority has then examined the impacts of the charges on different parties and has taken these impact assessments into account in developing its draft recommendations for charges (section 8).

### 1.4 Review Process

The recommendations of this inquiry will continue to be informed by the following public consultation process:

- Following consideration of submissions and the provision of cost information from the Department of Water, the Authority has developed a set of indicative water

resource management and planning fees and charges, presented in this second Draft Report. Public submissions on the second Draft Report are invited by 20 December 2010 (see section 1.5 below on how to make a submission).

- A round table will be held in November 2010, where interested parties will be invited to discuss the indicative water resource management and planning fees and charges.
- The Final Report for the inquiry is to be delivered to the Treasurer by 28 February 2011 and the Treasurer will, in accordance with the Act, have 28 days to table the report in Parliament.

The Authority has and will continue to consult with its Consumer Consultative Committee during the course of the inquiry.

In accordance with section 45 of the Act, the Authority will act through the Chairman and members in conducting this inquiry.

## 1.5 How to Make a Submission

Submissions on any matter raised in this second Draft Report or in response to any matters in the Terms of Reference should be in both written and electronic form (where possible) and addressed to:

Inquiry into Water Resource Management Charges  
Economic Regulation Authority  
PO Box 8469  
Perth Business Centre  
PERTH WA 6849

Email: [publicsubmissions@erawa.com.au](mailto:publicsubmissions@erawa.com.au)  
Fax: (08) 9213 1999

Submissions must be received by 20 December 2010.

Submissions made to the Authority will be treated as in the public domain and placed on the Authority's website unless confidentiality is claimed. The submission or parts of the submission in relation to which confidentiality is claimed should be clearly marked. Any claim of confidentiality will be dealt with in the same way as is provided for in section 55 of the *Economic Regulation Authority Act 2003*.

The receipt and publication of a submission shall not be taken as indicating that the Authority has knowledge either actual or constructive of the contents of a particular submission and, in particular, where the submission in whole or part contains information of a confidential nature and no duty of confidence will arise for the Authority in these circumstances.

Further information regarding this inquiry can be obtained from:

Dr Ursula Kretzer  
Manager Projects  
Economic Regulation Authority  
Ph: (08) 9213 1900

Media enquiries should be directed to:

Ms Sue McKenna  
The Communications Branch Pty Ltd  
Ph: 61 8 9254 4044  
Mb: 0424 196 771

## 2 Review of Draft Recommendations in the First Draft Report

In the first Draft Report released on 3 December 2009, the Authority presented its draft recommendations on water resource management and planning charges. However, it did not propose any indicative fees or charges to recover the Department of Water's water resource management and planning costs in the Draft Report as further information on costs was required from the Department of Water. This information has now been provided to the Authority.

The Authority recommended the principles that should apply to the recovery of water resource management and planning costs in the draft report, and it also applied these principles to water resource management and planning charges, since this is when issues arise for stakeholders. A number of draft recommendations resulted from the application of the principles, such as how to allocate costs to private and public users.

Information in submissions from stakeholders on the draft recommendations has caused the Authority to review some of its earlier findings, although the majority of the Authority's draft recommendations remain unchanged. This section sets out the principles that should apply and provides a discussion about the issues that have been reviewed by the Authority in relation to the application of these principles to water resource management and planning charges.

Sections 3 to 7 of this report outline the proposed methods of cost recovery and indicative water resource management and planning charges, based on the Authority's draft recommendations and feedback from stakeholders in submissions.

### 2.1 Principles of Water Resource Management and Planning Charges

The Authority outlined the principles that it believed should be applied in the first Draft Report. They were:<sup>2</sup>

1. The costs of activities to address impacts, or potential impacts, arising from the use of water resources, be recovered from those who cause the costs to be incurred, if the parties can be identified.
2. If the parties who cause costs to be incurred cannot be identified, costs be recovered from public funds.
3. The costs of activities that produce outputs in the nature of public goods be borne by the public.
4. If costs are incurred on behalf of private parties for activities that also produce outputs in the nature of public goods, the costs be shared between the private parties and the public.
5. Only efficiently incurred costs be recovered from licence holders and other private parties.

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<sup>2</sup> First Draft Report (December 2009), draft recommendations 1(a)-1(g).

6. Water licensing and the recovery of costs from licence holders be implemented in such a way that benefits exceed costs.
7. Any charges to licence holders be: practical to implement; clear and transparent; and equitable, with licence holders in similar situations facing similar charges.

There were no objections to these principles in the submissions.

The National Water Initiative (**NWI**) pricing principles for recovering the costs of water planning and management activities, released on 23 April 2010, are provided in **Appendix B**. These principles have been developed by the Australian Government and state and territory governments to provide guidelines for rural and urban pricing practices, and to assist jurisdictions to implement the water pricing commitments in a consistent way.

The principles that were recommended by the Authority in its first Draft Report are consistent with these NWI pricing principles.

## 2.2 Issues Arising from the Application of the Principles

As indicated again in the submissions from stakeholders, it is in the application of the principles to water resource management and planning charges that issues arise. This section provides some clarification on some of the issues raised by stakeholders in their submissions.

The Authority provided some guidelines in the draft report on how to allocate costs between public and private users based on the accepted principles listed above. In summary, these were:<sup>3</sup>

- Some water resource management and planning activities produce outputs in the nature of public goods. The costs of these activities should be recovered from public funds.
- Other activities are carried out by the Department of Water to address impacts, or potential impacts, associated with the use of water resources. Regulation, such as licensing, is needed to ensure that the use of water resources complies with the standards demanded by society. Costs are incurred by the Department, or by private parties, to ensure those standards are met.
  - For costs incurred by the Department, where it is possible to identify those who caused the costs to be incurred, the costs should be recovered from these parties (individuals or groups).
  - If those who caused the costs to be incurred cannot be identified, the costs should be recovered from public funds.
  - Some activities may be carried out to address impacts resulting from past actions, activities, or government decisions. These are legacy costs and should be recovered from public funds.
  - Some activities may be to address impacts, but may also have public good elements. The costs of these activities should be shared between those who cause the impacts, and therefore the costs to be incurred, and the public.

<sup>3</sup> First Draft Report (December 2009), p9.

- If the standards applied to water use activities change, the costs of meeting the new standards should be borne by those who are required to comply with them. However, such changes will need to be justified on cost benefit grounds and based on the community's willingness to pay for the changes to service standards.

There was some confusion in submissions as to what constitutes a “public good”. For example, some stakeholders submitted that all water resource management and planning activities are public goods and should be funded as a core function of government since they are essential services that are in the public interest.

In the Discussion Paper, published in August 2009, the Authority explained the differences between private and public goods. Public goods are very different to the “private goods” that are more familiar to consumers (private goods are goods for which ownership is generally undisputed).

- In the case of private goods, you can exclude other people who have not paid for the good from using it, and your use of the good denies others from using it.
- Public goods, on the other hand, are goods that cannot readily be owned by any one person. This means that it is difficult to exclude people from using the good. However, any one person's use of a public good will generally not detract from anyone else's use of it.

One of the most often cited examples of a public good is national defence, which is a good “consumed” by all Australians from which no-one can be excluded and one person's consumption of it does not reduce another's. An environmental amenity (such as the air quality) is another example of a public good.

Public goods can also have benefits that are limited to a local population. For example, the parks and ovals provided by local governments have local public good characteristics because they are generally of benefit to the local community.

The Authority's view is that the services performed by the Department of Water to assess and determine the amount of water that can be allocated to licence holders, and to manage the allocated amount of water over time, are largely private goods (or services in this case). The costs incurred by the Department in providing these services should therefore be recovered, at least in part, from licence holders.

### **2.2.1 Application of Principles to Recover Water Resource Management and Planning Costs**

The Authority's draft recommendations were that the efficient costs of water resource management and planning activities incurred by the Department of Water directly associated with:

- public drinking water supplies be recovered from public drinking water suppliers through a direct charge;
- the assessment of subdivisions be recovered from the Western Australian Planning Commission;
- water metering be recovered from metered licence holders (including the costs of purchase, installation, maintenance and reading of meters); and

- the provision of licences be recovered from licence holders.<sup>4</sup>

The Authority's view was that, in addition to the direct costs of processing and evaluating licences, a number of other activities were part of the ongoing costs of licensing and should be recovered from licence holders:<sup>5</sup>

- licence compliance monitoring and enforcement;
- water licensing policy;
- allocation planning;
- environmental water planning;
- groundwater and surface water assessment; and
- water measurement and information.

However, the Authority also considered that the last four of these activities had a public good component and that a small proportion of these costs should be recovered from the public.<sup>6</sup>

There was some support for the principle that costs should be allocated to those who cause the costs to be incurred (Department of Water, Turf Growers Association WA, Water Corporation, Rio Tinto). The Department supported the Authority's recommendations on which activities would be appropriate for cost recovery; i.e. water metering, urban water management, water source protection, and licensing (including application assessment and processing, compliance monitoring and enforcement, as well as some costs of allocation planning, environmental water planning, water licensing policy, groundwater and surface water assessment, and water measurement and information).

In the first Draft Report, the Authority indicated that it was likely to engage a consultant to undertake a process review of the functions performed by the Department of Water. A consultant, Quantum Management Consulting & Assurance, was subsequently appointed to undertake a detailed process review of the Department's activities that were identified in the draft report as suitable for cost recovery. A final report, which is available on the Authority's website, was delivered to the Authority in March 2010. This report is considered in more detail in Section 3.4.

The consultant has described in detail the processes used by the Department of Water for each of the water resource management and planning activities. The consultant's report sets out:

- process maps and detailed descriptions of the activities and tasks undertaken for each function, and the processes and systems used to carry out these tasks and activities;
- the number of full time equivalents allocated to undertake each function, and activities within each function; and
- case studies that illustrate the typical processes for different activities within each function.

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<sup>4</sup> First Draft Report (December 2009), draft recommendations 9-12.

<sup>5</sup> Ibid, draft recommendation 13(b).

<sup>6</sup> Ibid, draft recommendation 14.

## 2.2.2 Amendments to Authority's Draft Recommendations

As mentioned earlier, the Authority has reviewed its draft recommendations (listed in **Appendix C**) in light of information provided by stakeholders in submissions. Most of the draft recommendations remain unchanged and will not be repeated in this second Draft Report. However, the Authority has reconsidered its suggestions in relation to:

- the recovery of water resource management and planning costs for public open spaces;
- recognition of the contribution of licence holders to water resource management and planning activities (e.g. through rebates provided by the Department of Water); and
- recovery of some of the costs of water resource management from garden bore owners.

These issues are discussed separately below.

### *Parks and Public Open Spaces*

In the first Draft Report, the Authority suggested that there could be a case for sharing the costs of water resource management of public open spaces between public and private beneficiaries, and asked for comments. Draft recommendation (4) stated:

For public open spaces, water resource management and planning costs should be shared between local governments and the general community, as not all users of such open spaces are local rate payers.

Submissions that addressed this issue were of the view that parks and public open spaces are primarily in the nature of public goods and their costs should be recovered from public funds (Western Australian Local Government Association (**WALGA**), Department of Water, Water Corporation). The Department of Water noted the impracticability of recovering such costs from local councils.

The Water Corporation questioned the merits of charging organisations that predominantly service communities, citing “environmental flows, scheme water services, public open spaces and many farming and agricultural activities”. The Corporation submits that there is no basis, on efficiency or equity grounds, for recovering some of the costs from private parties (the local rate payers).

The Authority agrees that to the extent that there is a private cost element to water resource management and planning activities for local parks, the complexity and cost of recovering these costs would outweigh any benefits.

### *Recognising the Contribution of Licence Holders to Water Resource Management and Planning Activities*

The Authority suggested that the Department of Water could partially reimburse licence holders for work carried out that contributes significantly to the development of water allocation plans or broader water resource assessment processes. This reimbursement could be a waiver of some or the entire allocation planning component of the annual charge for eligible applicants.

Several submissions noted the extensive contribution of other parties to water resource management and planning in Western Australia and submitted that any charges should

exclude the costs of these activities (WALGA, Chamber of Minerals and Energy (CME), Rio Tinto). WALGA provided an extensive list of water resource management activities undertaken by local governments in relation to public open spaces, drainage, urban water management and planning, subdivision development, and metering, and expressed concern that charges would be imposed for activities that are collaborative in nature. The CME, Rio Tinto and the Water Corporation supported the principle that licence holders who carry out work that contributes to allocation plans should be entitled to a reduction in their licence fees.

However, the Department of Water submitted that most of the work carried out by licence holders is for their private benefit and that very little of the information obtained from licence applicants is utilised in the development of allocation plans.

Harvey Water noted the wide range of reporting and compliance responsibilities it faces as a water licence holder, which it estimates as costing around \$300,000 per annum.

The Authority has examined this issue in more detail and, given that it is unlikely that the information obtained from licence applicants is used during the development of allocation plans, and the difficulty in identifying where this was actually occurring, it no longer recommends that the Department of Water should partially reimburse licence holders.

### *Garden Bores*

In the draft report, the Authority suggested that there could be a case for recovering some of the costs of water resource management from garden bore owners. However, the Department of Water and Water Corporation did not support this view.

The Department of Water submitted that it would be difficult to identify bore owners and that the administrative costs would outweigh the benefits of charging bore owners. Although the Department's cost to manage garden bores has not been established, it is only likely to be in the order of \$2 million at most. This would result in an annual charge of about \$11 per bore averaged over 177,000 bores. The Department believes that the costs of administering such a scheme are likely to greatly exceed this.

In assessing cost recovery options for unlicensed water users (and garden bores in the Perth region in particular), the Department submitted that it is important that the benefits of garden bores should be considered. The water sourced by garden bores would generally not be used otherwise and provides a fit for purpose water source that reduces the amount of water that needs to be sourced for the Integrated Water Supply Scheme. The costs to the community of managing, sourcing and supplying that water would be substantially greater than the Department of Water's management costs associated with garden bores.<sup>7</sup>

The Water Corporation submitted that it does not have a record of all bore owners, so additional work would be required to establish a register of bore owners.

After considering the feedback from stakeholders, the Authority believes that there are benefits associated with garden bores, as they reduce the demand for water from the IWSS and the water from garden bores would generally not be used otherwise. Furthermore, there may be some difficulty in identifying the bore owners and the administrative costs of licensing bores would likely outweigh any revenues from charging bore owners.

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<sup>7</sup> Department of Water submission on the Draft Report, pp2-3.

### **Changes to Draft Recommendations in the First Draft Report (See Appendix C for Full List of Draft Recommendations)**

- 1) For public open spaces, water resource management and planning costs be recovered from public funds.
- 2) The Department of Water to not reimburse licence holders for the costs of information provided in licence applications.
- 3) The costs incurred by the Department of Water in managing garden bores not be recovered from bore owners.

## 3 Accountability, Effectiveness and Efficiency in Water Resource Management and Planning Activities

### 3.1 Terms of Reference

The Authority is requested in the Terms of Reference to consider and develop findings on:

- the tasks or activities undertaken in the efficient management of the State's water resources, by the Department of Water, that would appropriately be recovered from water users; [and]
- the most appropriate level (or percentage) of cost recovery from water users.

### 3.2 Background

The Department of Water carries out a wide range of water resource management activities, which are listed in **Appendix E**. However, only some of these activities will be suitable for cost recovery in accordance with the principles discussed in section 2. Many activities are in the nature of public goods (for example, development of strategic water policy and legislation). Other activities are carried out on behalf of private parties, but those parties cannot be identified (for example, non-licensed water users who benefit from activities to establish the availability of water resources). However, for a number of activities it would be possible to recover the costs from the parties for which those costs have been incurred.

The cost information submission from the Department of Water provided information on the level of effort and costs involved in undertaking water resource management and planning activities identified by the Authority as suitable for cost recovery in the first Draft Report.

In assessing the appropriateness of cost recovery for each activity, the Authority has asked the following questions.

- What does the Department do? If costs are to be recovered from private parties, there is a need for the Department to be transparent and accountable for its activities – customers need to be able to see what they are paying for.
- How effective is the Department in carrying out its activities? Customers need to be assured that the Department is carrying out the right activities in meeting its obligations under the legislation.
- How efficient is the Department in carrying out its activities? Customers should pay no more than the efficient level of costs of providing services.

This section deals with the estimation of the efficient costs of carrying out water resource management and planning activities. To determine this, the Authority has considered the Department's submission on its costs, and has engaged consultants to examine the Department's processes, effectiveness and efficiency in carrying out its activities. The reports by the consultants are available on the Authority's website.

Section 3.3 summarises the Department's submission on the activities proposed for cost recovery and provides the Department's cost estimates of carrying out these activities.

Section 3.4 outlines the Authority's assessment of the Department's accountability, effectiveness and cost efficiency and presents the Authority's conclusions on the efficient costs of the Department's activities.

A further consideration is whether there is an element of public good to any of the activities. The Department has outlined in its submission its assessment of the proportion of costs for each activity that need not be recovered from private parties. The Authority has considered this assessment as part of the analysis on cost recovery and indicative charges for each of the services in sections 4 to 7.

In determining how much customers should pay for the Department of Water's services, the Authority has adopted a conservative approach to ensure that no inefficient costs are passed on. This is because the information provided by the Department is not complete, and the Department would need to collect data over a longer period of time to enable the Authority to establish with greater certainty that the costs incurred are efficient.

### **3.3 Department of Water's Submission on its Services, Activities and Costs**

In its submission, the Department has identified nine services as being suitable for cost recovery, either immediately or sometime in the future. They are:

- processing and assessing applications for water licences and permits;
- providing water allocations and managing the ongoing use of water;
- licensing of the Water Corporation for the Integrated Water Supply Scheme;
- water metering;
- protecting public drinking water sources;
- providing advice on statutory referrals;
- guiding urban drainage and water management;
- providing floodplain management advice; and
- providing water information.

To provide these services the Department carries out a range of different activities. Some activities are exclusive to a particular service, but other activities may be carried out for a number of different services. For example, groundwater assessment, investigation and review contributes mainly to the provision of water allocations and managing the ongoing use of water, but may also be carried out for the protection of public drinking water sources and to guide urban drainage and water management. The relationship between the services provided and the activities carried out to provide those services is shown in the Department's cost summary in Table 3.7.

#### **3.3.1 Department of Water's Activities**

This section, drawn from the Department's submission on the costs of its activities, provides a brief description of the activities carried out by the Department in providing the nine services proposed for potential cost recovery.

## Water Licensing and Compliance

- The water licensing and compliance activity, which is largely undertaken by people in the Department's regional offices, involves the issuing of licences and permits associated with the taking of water for commercial use and public water supply. This includes assessing applications for licences to take water, permits to interfere with bed and banks, and licences to construct or alter wells. As part of this activity, the Department also undertakes compliance work in the form of water use surveys, compliance checks, assessing monitoring reports and responding to complaints. The Department submits that water licensing and compliance activities contribute exclusively to the service of processing and assessing licence applications.

## Water Licensing Support

- The water licensing support team in the head office provides support to the licensing process to ensure that the licensing function operates smoothly and efficiently. It maintains the licensing systems, provides training, offers guidance on complex licensing issues, and manages the appeals process against licensing decisions.<sup>8</sup> The Department submits that water licensing support activities contribute exclusively to the service of processing and assessing licence applications.

## Regional Hydrogeological Advice

- This activity involves the provision of advice from regionally specialised hydrogeologists to support assessments of groundwater licence applications. Hydrogeological advice is provided for complex groundwater licence applications that have significant potential to affect other users, the water resource or the environment. The Department submits that regional hydrogeological advice contributes exclusively to the service of processing and assessing licence applications.

## Water licensing policy

- The Department develops water licensing policies at the operational level to determine rules and approaches to licence allocation and management. The Department submits that the activity of water licensing policy contributes exclusively to the service of providing water allocations and managing the ongoing use of water.

## Enforcement

- The Department carries out investigations into breaches of statutes and licence terms and conditions and collates information needed to enforce actions. The Department submits that the activity of enforcement contributes exclusively to the service of providing water allocations and managing the ongoing use of water.

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<sup>8</sup> This is done through liaison with the State Administrative Tribunal.

## **Water allocation planning**

- The Department develops water allocation plans to determine the amount of water that can be allocated to users in surface water or groundwater controlled areas. Allocation plans identify water management objectives, environmental water requirements, water use impacts, water allocation limits, licensing policy and rules, and management responses. The Department submits that water allocation planning contributes exclusively to the service of providing water allocations and managing the ongoing use of water.

## **Environmental water planning**

- In this activity, the Department identifies the amount of water required by the environment in a given area to preserve specified environmental values. The Department submits that environmental planning activities contribute exclusively to the service of providing water allocations and managing the ongoing use of water.

## **Surface Water Assessment**

- The surface water assessment activity involves the Department undertaking analysis and hydrological studies. The Department's view is that these activities contribute largely (80 per cent) to the service of providing water allocations and managing the ongoing use of water, while some (10 per cent) are carried out as part of processing and assessing water licence applications. The remaining 10 per cent of surface water assessment activities are carried out to support functions that cannot be attributed to private parties, such as assessing the impact of climate change on surface water sources, or providing advice on surface water licence applications in areas that are not covered by an allocation plan.

## **Groundwater assessment, investigation and review**

- This activity involves investigation of the State's groundwater systems, through groundwater drilling, measurement and modelling to assess the availability, distribution and quality of groundwater resources and their response to groundwater use and land use. The Department submits that the majority of this activity (90 per cent) contributes to the service of providing water allocations and managing the ongoing use of water, with the remainder of the activity supporting the services of protecting public drinking water supplies (5 per cent) and guiding urban drainage and water management (5 per cent).

## **Water information collection**

- This activity involves the operation and maintenance of over 300 surface water gauging stations and 3,000 groundwater monitoring bores to collect information on surface water and groundwater resources across the State. The Department estimates that around 15 per cent of surface water information collection costs and 70 per cent of groundwater information collection costs are associated with the provision of water allocations.

## Water information management

- The Department manages all the water information it collects in central databases. This activity involves collating all data, assuring data quality, storing and retrieving data, and reporting data for water accounting purposes. The Department estimates that 30 per cent of water information management activity contributes to the service of providing water allocations and managing the ongoing use of water.

## IWSS licensing

- IWSS licensing covers the activities carried out by the Department to provide licences to the Water Corporation to provide public drinking water supplies to the Integrated Water Supply Scheme (IWSS). The IWSS covers a wide area, including Perth, Mandurah, many towns in the wheatbelt and eastwards as far as Kalgoorlie and Norseman. Water for the IWSS is drawn from a complex range of groundwater and surface water sources. The costs associated with the IWSS are identified separately as a service to a major customer, and the Department submits that the activity of IWSS licensing contributes exclusively to the service of providing licences to the Water Corporation for the IWSS.

## Water Metering

- The water metering activity involves the installation, maintenance and reading of state-owned water meters for bores in the high use and high risk groundwater areas on the Gngangara Mound and in the Carnarvon Groundwater Area. The Department estimates that all of the water metering activity contributes to the service of water metering.

## Water source protection planning

- Water source protection planning by the Department involves the preparation of water source protection plans for water services providers (primarily the Water Corporation, but also Aqwest (Bunbury Water Board) and Busselton Water. These plans are to ensure the availability of safe, reliable and good quality supplies of public drinking water by guiding land use and management activities in the vicinity of drinking water sources. The Department submits that water source protection planning activities contribute exclusively to the service of protecting public drinking water supplies.

## Preparation of guidance notes

- The Department prepares guidance notes on water resource management impacts and issues relating to land use planning and development. The guidance notes are for land use planning agencies, local councils and developers. The Department submits that the activity of preparing guidance notes contributes equally to two services: the protection of public drinking water supplies and the provision of advice on statutory referrals.

## Implementation of water source protection plans

- Implementation of water source protection plans is carried out by the Department's regional offices and involves providing advice on land use planning and development in drinking water catchments and other activities, such as providing signage. The Department estimates that some of this activity (20 per cent) is carried out to support the service of protecting public drinking water supplies.

However, the majority of water source protection plan implementation (80 per cent) is carried out as part of the service of providing advice on statutory referrals.

### **Acquisition of P1 land**

- The Department negotiates with landowners to purchase land required for the protection of public drinking water supplies (Priority 1, or P1, land). The Department submits that all of this activity contributes to the service of protecting public drinking water supplies.

### **Land asset management**

- The Department owns and controls over 713,000 hectares of land, including P1 land and reserves vested in the Department. The Department estimates that 20 per cent of the costs of the activity of land management contribute to the service of protecting the public drinking water supplies.

### **Statutory referrals**

- The Department provides advice to the Western Australian Planning Commission (**WAPC**), local governments and developers on the water resource management implications of planning and development proposals. These proposals may range from local sub-divisions and development applications, to district or regional level planning proposals. The Department submits that all of this activity contributes to the service of providing advice on statutory referrals.

### **Drainage and water management planning**

- The Department carries out technical assessments and develops drainage and water management plans on urban areas proposed for future development to provide guidance to planning organisations (such as the WAPC) and developers on water management issues associated with development. The Department submits that all of the costs of drainage and water management planning activities can be attributed to the service of guiding urban drainage and water management.

### **Arterial drainage studies**

- The Department carries out arterial drainage studies in order to implement the better urban water management framework.<sup>9</sup> This activity involves developing better management practices and governance for drainage, planning drainage research and development, carrying out studies on drainage management, including nutrient discharge, and addressing ways to improve or maintain drainage infrastructure. The Department submits that all of the costs of arterial drainage studies can be attributed to the service of guiding urban drainage and water management.

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<sup>9</sup> See WA Planning Commission (October 2008), *Planning Bulletin 92: Urban Water Management*. The Better Urban Water Management framework has been developed jointly by the Department for Planning and Infrastructure, the Department of Water, the Western Australian Local Government Association and the Australian Government Department of Environment, Water, Heritage and the Arts.

### Floodplain management advice

- The Department provides advice, primarily to local governments, on floodplain areas and flood levels. The advice is generally related to specific developments and is aimed at ensuring that there are no unacceptable risks of flood. The Department submits that all of this activity contributes to the service of providing floodplain management advice.

### Water information provision

- The Department receives around 2,800 requests each year for information on water resources. The Department provides this information by extracting information from its systems and developing tools, maps and models to access and display the information. The Department estimates that all of the water information provision activity contributes to the service of providing water information.

### 3.3.2 The Department's Estimates of Costs of its Activities

The Department's submission to the Authority on the costing of its activities ("**cost submission**") is available on the Authority's website.<sup>10</sup> The Authority received a draft of the Department's cost submission in May 2010 and the final cost submission on 6 September 2010.

In its cost submission, the Department estimates that the total cost to undertake all of its activities was just under \$108 million in 2008-09. Cost information at an activity level has been provided for three full years, 2006-07, 2007-08 and 2008-09 and for the first eight months of 2009-10 (July to February). The Department has allocated activity costs, either wholly or partially, to the services to which they contribute. In its submission, the Department considered that 51 per cent, or \$56.0 million, of the total cost reflects the cost of activities which wholly or partly contribute to services that may be suitable for cost recovery.<sup>11</sup>

The Department's cost estimates include an allocated amount of the following overhead costs (or "on costs" as they are called in the Department's submission):

- corporate overheads (including finance and administration, human resources, information technology and the corporate executive);
- regional administration overheads (the costs of operating each regional office: Kimberley, Kwinana Peel, Mid West Gascoyne, Perth, Pilbara, South Coast, South West and Swan Avon); and
- divisional executive costs (the costs of the executive for the Water Resource Use, Water Resource Management and Regional Management and Water Information divisions).

The Department of Water's estimated costs of activities are outlined in Table 3.1.

<sup>10</sup> Department of Water (2010), *Economic Regulation Authority Inquiry into Water Resources Management and Planning Charges: Costing of Water Activities*.

<sup>11</sup> The total cited by the Department in its cost submission (page v) was \$55.5 million, which excludes the costs of regional hydrological surveys of \$441,160. However, these costs are included in later parts of the submission, so the Authority has included them in the Department's total estimate.

**Table 3.1 Department of Water Estimates of Costs of Activities**

Activity to be Costed	Department of Water Cost Estimates		
	Direct Costs (\$)	Overheads (\$)	Total Costs (\$)
Drainage and water management planning	1,541,744	126,521	1,668,265
Arterial drainage studies	1,237,649	270,494	1,508,143
Statutory referrals	985,021	439,180	1,424,201
Floodplain management advice	580,409	147,891	728,300
Water source protection planning	849,024	257,412	1,106,436
Implementation of water source protection plans	447,096	246,914	694,010
Preparation of guidance notes	657,067	194,409	851,476
Water allocation planning	2,795,917	749,919	3,545,836
Environmental water planning	2,524,990	597,325	3,122,315
Water licensing policy	1,695,837	191,558	1,887,395
Water licensing and compliance	5,047,313	2,784,235	7,831,548
Water licensing support	878,658	334,784	1,213,442
IWSS licensing	237,139	87,072	324,211
Enforcement	482,004	139,315	621,319
Metering	2,573,092	381,877	2,954,969
Groundwater assessment, investigation and review	9,021,978	681,828	9,703,806
Regional hydrogeological advice (2009/10 est)			441,160
Surface water assessment	621,357	149,286	770,643
Water information collection	7,760,884	2,533,315	10,294,199
Water information management	1,175,926	504,567	1,680,493
Water information provision	393,022	160,132	553,154
Acquisition of P1 land	2,721,700		2,721,700
Land assessment management	277,397	60,427	337,824
<b>Total</b>	<b>44,505,224</b>	<b>11,038,461</b>	<b>55,543,685</b>

Source: Department of Water "Costing of Water Activities"

Table 3.2 on the next page shows how the Department has allocated the estimated costs of its activities (totalling \$56.0 million) to its water resource management and planning services that have been identified as suitable for cost recovery.

**Table 3.2 Department of Water's Estimated Costs of Providing Water Resource Management and Planning Services**

Service	Contributing Activities	Department of Water Estimates					
		Estimated Total Cost of Activity (\$)	Per Cent Contribution of Activity to Service	Estimated Total Cost of Service (\$)	Per Cent Private Benefit	Per Cent Costs to be Recovered (rounded)	Costs to be Recovered (\$)
Processing and assessment of applications for licences and permits	Water licensing and compliance	7,831,548	100%	7,831,548	100%	100%	7,831,548
	Water licensing support	1,213,442	100%	1,213,442	100%	100%	1,213,442
	Regional hydrogeological advice	441,160	100%	441,160	100%	100%	441,160
	Surface water assessment	770,643	10%	77,064	100%	10%	77,064
	<b>Sub-total:</b>			<b>9,563,214</b>			<b>9,563,214</b>
Providing water allocations and managing the ongoing use of water	Water licensing policy	1,887,395	100%	1,887,395	100%	100%	1,887,395
	Enforcement	621,319	100%	621,319	100%	100%	621,319
	Water allocation planning	3,545,836	100%	3,545,836	80%	80%	2,836,669
	Environmental water planning	3,122,315	100%	3,122,315	80%	80%	2,497,852
	Surface water assessment	770,643	80%	616,514	80%	65%	500,918
	Groundwater assessment, investigation and review	9,703,806	90%	8,733,425	80%	70%	6,792,664
	Surface water information collection	9,264,779	15%	1,389,717	80%	10%	926,478
	Groundwater information collection	1,029,420	70%	720,594	80%	55%	566,181
	Water information management	1,680,493	30%	504,148	80%	25%	420,123
<b>Sub-total:</b>			<b>21,141,263</b>			<b>17,049,599</b>	
Licensing of the Water Corporation for the IWSS	IWSS licensing	324,211	100%	324,211	100%	100%	324,211
	<b>Sub-total:</b>			<b>324,211</b>			<b>324,211</b>
Water metering	Water metering	2,954,969	100%	2,954,969	100%	100%	2,954,969
	<b>Sub-total:</b>			<b>2,954,969</b>			<b>2,954,969</b>
Protecting public drinking water sources	Water source protection planning	1,106,436	100%	1,106,436	100%	100%	1,106,436
	Groundwater assessment, investigation and review	9,703,806	5%	485,190	100%	5%	485,190
	Preparation of guidance notes	851,476	50%	425,738	100%	50%	425,738
	Implementation of water source protection plans	694,010	20%	138,802	100%	20%	138,802
	Acquisition of P1 land	2,721,700	100%	2,721,700	100%	100%	2,721,700
	Land management	337,824	20%	67,565	100%	20%	67,565
	<b>Sub-total:</b>			<b>4,945,431</b>			<b>4,945,431</b>
Providing advice on statutory referrals	Statutory referrals	1,424,201	100%	1,424,201	100%	100%	1,424,201
	Implementation of water source protection plans	694,010	80%	555,208	100%	80%	555,208
	Preparation of guidance notes	851,476	50%	425,738	100%	50%	425,738
	<b>Sub-total:</b>			<b>2,405,147</b>			<b>2,405,147</b>
Guiding urban drainage and water management	Drainage and water management planning	1,668,265	100%	1,668,265	0%	0%	
	Arterial drainage studies	1,508,143	100%	1,508,143	100%	100%	1,508,143
	Groundwater assessment, investigation and review	9,703,806	5%	485,190	0%	0%	
	<b>Sub-total:</b>			<b>3,661,598</b>			<b>1,508,143</b>
Providing floodplain management advice	Floodplain management advice	728,300	100%	728,300	100%	100%	728,300
	<b>Sub-total:</b>			<b>728,300</b>			<b>728,300</b>
Providing water information	Water information provision	553,154	100%	553,154	50%	50%	276,577
	<b>Sub-total:</b>			<b>553,154</b>			<b>276,577</b>
<b>Total Costs of Providing Services =</b>				<b>46,277,288</b>	<b>Total Costs to be Recovered =</b>		<b>39,755,591</b>

Source: Department of Water "Costing of Water Activities"

Of the \$56.0 million total cost of activities that the Department considers are suitable for cost recovery, only \$46.3 million has been allocated by the Department to the nine services listed in Table 3.2. The \$46.3 million is the Department's total cost of providing the water resource management and planning services that are suitable for cost recovery.

The remaining activity costs (\$9.7 million) that do not contribute to these nine services contribute to other services undertaken by the Department, which have not been identified as suitable for cost recovery and are therefore excluded from consideration in this report.

Of the \$46.3 million total cost of providing the services listed in Table 3.2, the Department has suggested that approximately \$39.8 million could be recovered from private parties (reflecting the component of costs that can be attributed to private parties) through fees and charges. For some activities, while the Department believes that there is a component that can be attributed to private parties, it is unable to identify these private parties at this stage. In accordance with the Authority's principles, these costs should therefore be recovered from public funds.

The Department's costs are partly funded by the Federal Government. Much of this funding has been for capital projects, such as the National Water Commission's Watersmart Australia funding for the Department of Water to undertake additional groundwater assessment activities.

## 3.4 Authority Assessment of Activities and Costs

### 3.4.1 Accountability

It is important for those who are paying for a service to be able to see what they are paying for. Transparency about the nature of the Department's activities, the reasons why they are carried out, and the way in which they are carried out can provide support and justification for different types of charges and the levels of charges. Such transparency can improve the accountability of the Department for its costs and activities, by making it easier for those being charged for a service, as well as regulators, to scrutinise the amount that is being charged.

The Authority has sought to clarify and document the way in which the Department carries out its activities in order to provide stakeholders with a clear understanding of the basis for any proposed charges.

#### *Submissions*

A number of stakeholders expressed concern regarding the Department's accountability for its costs since the Department was unable to provide sufficient information on its efficient costs prior to the first Draft Report (WAFarmers, Water Corporation, Rio Tinto, Manjimup and Pemberton Landowners Group and associated submissions). Turf Growers Association WA supported transparency and accountability in fee setting.

Manjimup and Pemberton landowners expressed alarm at the recovery from licence holders of up to \$30 million of the Department's costs (as proposed by the Department in its submission on the Issues Paper). The landowners submitted that they could not see any value to the services provided by the Department in the Manjimup area.

## Process Review

In the preparation of the first Draft Report, the Authority engaged consultants Marsden Jacob Associates (**MJA**) to examine the cost efficiency of the Department's water resource management and planning activities, focusing on the activities for which the Department is seeking cost recovery within the next one to two years. The consultants also reviewed the water licence fees model, which was developed by the Department of Water and ACIL Tasman, as well as examined the effectiveness of the processes used by the Department to control its expenditure and align it with priorities. MJA's final report to the Authority is available on the Authority's website.

Following a review of the licence fees model and discussions with staff in the Department of Water, MJA found that while the model that was developed by the Department and ACIL Tasman provides a good basis for the consideration of licence fees, there were a number of issues that prevented it from being used to determine licensing fees in its current form. This included the inability of the Department of Water to substantiate the cost estimates which underpin its licence fees model and the inclusion of model parameters, such as the units of effort, around which there was uncertainty and which could not be verified.<sup>12</sup>

As a result, the Authority asked MJA to assess if the issues in the licence fees model could be resolved to produce indicative charges for inclusion in the first Draft Report. MJA found that a large amount of work was required to resolve these issues and that the licence fees model could not be used as a basis for setting water resource management and planning charges until these issues have been resolved.

MJA recommended that more rigorous collection and allocation of costs by the Department of Water is required before the model can be used as a basis for charging. In particular, the Department should:

- identify the full cost of licensing and allocation planning activities;
- collect additional information on staff activities in various branches; and
- ensure the effective assignment of allocation planning costs.<sup>13</sup>

MJA was unable to conclude whether or not the Department of Water was undertaking its water resource management and planning activities in an efficient manner. Due to the mergers and demergers with the Department of Environment and Conservation, coupled with internal reorganisations, it was difficult to review and assess the Department's expenditure levels over time. Furthermore, the Department's key efficiency indicators that are published in the State Budget have changed three times in the last three years.<sup>14</sup>

MJA also found that it was difficult to benchmark the Department's costs against other resource managers in Australia to determine whether or not they are efficient.<sup>15</sup> This is partly due to some of the different water resource management activities undertaken in other jurisdictions, as well as the different frameworks that are in place. MJA therefore recommended that there is a need to collect more detailed key performance indicators

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<sup>12</sup> Marsden Jacob Associates, October 2009, *Advice on the Department of Water's Cost Efficiency and Water Resource Management and Planning Charges: A report prepared for the Economic Regulation Authority*, p6.

<sup>13</sup> Ibid, p10.

<sup>14</sup> Ibid, p22.

<sup>15</sup> Ibid, pp22-23.

(**KPIs**) than what is currently available to enable some level of benchmarking with other jurisdictions.<sup>16</sup>

Given the difficulties that have been experienced to date with measuring the efficiency of the Department's costs and its performance more widely, the Authority agreed with MJA's other finding that changes to the relevant areas and the more detailed KPIs that will be adopted should be kept frozen for a period of time.<sup>17</sup>

The Authority engaged consultants Quantum Management Consulting & Assurance (**Quantum**) to carry out a review of the processes used by the Department in the following services:

- processing and assessing applications for water licences and permits;
- providing water allocations and managing the ongoing use of water;
- protecting public drinking water sources;
- providing advice on statutory referrals; and
- water metering.

For each service, the consultants:

- provided a detailed process map and description of the activities and tasks undertaken by the Department;
- identified the number of full time equivalents (**FTEs**) allocated to undertake each activity; and
- provided case studies to illustrate the processes used.

Quantum was unable to provide information on the process used to allocate overhead costs to the different activities, as the Department had at that stage not allocated overheads to activities.

The final report by Quantum to the Authority is available on the Authority's website. The report sets out the processes and systems used by the Department in the following activities:

- Validating and assessing licence applications (including both low risk applications and medium/high risk applications), renewing licences, transferring a licence or water agreement and amending, cancelling, suspending, surrendering or terminating a licence.
- Licence compliance and enforcement, including the processes for dealing with complaints and investigations (low risk, medium risk and high risk).
- Allocation planning, including initial planning and assessment, and the development of low risk and medium-to-high risk allocation plans.
- Groundwater assessment, investigation and review for allocation planning, and groundwater assessment advice for other branches in the Department (e.g. drainage and waterways branch, or water recycling, public drinking water supply) or external stakeholders (e.g. National Water Commission, local government, state and federal government agencies).
- Surface water assessments, for allocation planning or for licensing.

<sup>16</sup> Ibid, p32.

<sup>17</sup> Ibid, p33.

- Metering, including assessing sites for meter installation, meter reading, and management of contractors.
- The assessment of statutory referrals, assessment of technical reports by developers, and clearance of sub-division condition requests as part of the Department's urban water and land use co-ordination.
- The development of water source protection plans.

In addition to documenting how the Department carries out its activities, the Quantum report indicated that much of the Department's work is driven by its legislative responsibilities. For example, licence application processes are aimed at checking off each of the legislative requirements in the relevant sections of the *Rights in Water and Irrigation Act 1914 (RiWI Act)*. However, the consultants recommended that any review of efficiency could consider the number and complexity of activities involved in licensing, to determine whether some tasks could be eliminated or streamlined to reduce the time needed to approve licences (e.g. fast-tracking low-risk licences).

### *Authority Assessment – Processes*

In general, the Authority notes that Quantum has not been able to determine any steps undertaken by the Department in any of the activities that cannot be justified, either in terms of fulfilling the legislative requirements, collecting and assessing information, providing sufficient checks and balances on Departmental decisions, or providing an audit trail.

However, the absence of clear processes for allocating overheads to activities is of concern.

The Authority notes from the Quantum analysis that the process for dealing with licence applications that are classified as "low risk" are considerably simpler than ones for medium or high risk applications (which have similar processes). This means that, if licence application charges are set to reflect the level of effort involved, the criteria used to determine whether a licence application is low risk or medium-high risk becomes very important.

The Authority encourages the Department to publish information on what is involved in providing its services, and the processes by which activities are carried out, in a format that is user-friendly for any customers being charged for a service.

### **3.4.2 Effectiveness and Efficiency**

Once the nature of the activities carried out by the Department of Water is understood, further questions are whether the Department is effective ("Is the Department doing the right things?") and efficient ("Is the Department carrying out its activities in a cost-effective manner?"). Once the efficient costs of carrying out each activity can be determined, those costs can then be allocated to the services that they support and the private parties to whom each service is provided.

To answer these questions, and to determine the efficient level of costs for each activity, the Authority engaged consultants PricewaterhouseCoopers (**PwC**) to carry out an effectiveness and efficiency review. The final PwC report is available from the Authority's website.

The Authority also asked the Resource Economics Unit (**REU**) to undertake a case study on the Warren-Donnelly catchment in the vicinity of Manjimup to determine whether or not

the Department of Water is undertaking unnecessary work when determining allocation limits and water availability. This case study is also available from the Authority's website.

### *Submissions*

The Department of Water submitted that it accepts the need for accountability and cost efficiency and worked with consultants to establish the efficient costs of its services for its submission. The Department reviewed the level of effort required for different activities, based on the number of staff involved, and in some cases, such as licence application processing, recording the actual time involved in different types of licence applications.

There was general support amongst other stakeholders for the view that any charges should be based only on efficiently incurred costs (Chamber of Minerals and Energy, Water Corporation, Manjimup and Pemberton Landowners, Turf Growers Association WA, Rio Tinto Iron Ore).

WAFarmers questioned the capacity of the Department to manage water resources, noting that groundwater resources in 84 sub-areas are close to or above full allocation. WAFarmers expressed concern that future charges would include the costs of addressing past allocation decisions.

WALGA identified a potential for efficiency savings in the handing over of licences from developers to local authorities, when a second application for the same licence is required.

### *PricewaterhouseCoopers Review of Effectiveness and Efficiency*

PwC was engaged by the Authority in May 2010 to carry out a review of the effectiveness and efficiency of the Department of Water in the activities which have been identified as being potentially suitable for cost recovery.

The PwC review was carried out at the detailed activity level, which best reflects the structure and organisation of the Department. A sub-set of eight of the Department's activities were examined, representing around 67 per cent of the Department's estimated cost of \$56.0 million for the activities identified for potential cost recovery. These activities were:

- water licensing and compliance;
- water allocation planning;
- groundwater assessment, investigation and review;
- water information collection (groundwater and surface water);
- IWSS licensing;
- metering;
- water source protection planning; and
- statutory referrals.

To determine effectiveness and efficiency in each of the activities, PwC examined, among other things:

- cost drivers, operating expenditure, capital expenditure, overheads and external funding;
- past budgets versus actual expenditure;

- business plans, where available, and decision-making processes for capital investments and prioritisation of expenditure; and
- performance monitoring and evidence of efficiency improvements.

In assessing the Department's efficiency, PwC was also able to benchmark the costs of some activities against costs incurred by the NSW Office of Water (**NOW**) for the same activities.

PwC's key conclusions are summarised below.

### **Strategic Planning**

PwC found evidence of increasing strategic decision making by the Department in prioritising investments and effort (e.g. in licensing, allocation planning and statutory referrals). However, PwC identified some gaps in the Department's planning processes, including a lack of cost-benefit analysis in business planning; budget decisions in some areas driven more by the availability of external funds rather than strategic priorities; and a weak linkage between performance indicators and strategic objectives.

### **Effectiveness**

PwC did not identify any areas where the Department was not meeting its legislative obligations. However, PwC identified some areas where the Department may be applying more effort than is needed for effective outcomes, for example:

- In licensing, the Department appears to apply a conservative framework, with a bias towards classifying licences in higher risk categories. Also, the Department applies high levels of effort to avoid successful appeals against rejected applications, given that the existing legislation does not provide much support to the Department's decisions to reject applications.
- There is little cost-benefit assessment of the efficient level of water source protection planning for public water supply areas.
- There is little assessment of the appropriate balance of effort in groundwater investigations between bore drilling (high cost) and modelling of data from bores (lower cost).

### **Efficiency**

#### *Operating Costs*

PwC found that, overall, activities undertaken by the Department are worthwhile, delivering value to customers and assisting in delivering water management objectives. PwC found some evidence of efficiency improvements by the Department, for example:

- reduced processing times for licence applications;
- rationalisation of frequency of meter reading;
- increased surface water gauging without an increase in operating costs; and
- reduction in time to process water measurement information.

However, there was also evidence of further scope for efficiency gains:

- budget over-runs and inadequate project planning in bore drilling projects; and

- high licence administration costs compared to the NOW (\$1,000 per licence or permit more than NOW across all instrument types).

### *Overheads*

PwC found the Department's level of overheads to be comparable to those of the NOW (around 28 per cent of total operating costs compared to 25 per cent for NOW). Corporate overheads were around 11 per cent of total expenditure compared to 13 per cent for the NOW, and within the range of 10-12 per cent recommended by the NSW government for agencies of that size.

### *Capital Expenditure*

Capital expenditure was around 17 per cent of the total cost of the identified activities in 2008-09, which is a small but not insignificant proportion. Two thirds of this capital expenditure is related to meter installation, bore drilling, and information collection.

PwC was generally satisfied that the projects undertaken were necessary to enable the Department to meet its strategic objectives. The metering program on the Gngangara Mound has delivered its targeted number of meters at a lower cost per meter than the NOW (although NOW meters have telemetry, unlike meters in Western Australia).

However, the lack of detailed business cases for many projects meant that PwC was not able to confirm that all decisions to invest had been prudent (particularly in the areas of groundwater investigation and water information collection).

### **PwC Recommendations on Efficient Level of Expenditure**

PwC recommended that the following adjustments be made to the Department's costs to ensure that no inefficient costs are included in the costs that will be recovered:

- for operating costs, a 20 per cent downward adjustment on 2008-09 operating expenditure to reflect shortcomings in business planning, budgeting and performance tracking;
- for overheads, a 5 per cent downward adjustment on 2008-09 to reflect ongoing efficiency gains; and
- for capital expenditure, a downward adjustment of \$7.57 million to capital expenditure over the period 2006-07 to 2009-10 to reflect a 25 per cent adjustment each for the bore drilling program and the water information collection program.

Table 3.3 outlines PwC's recommended cost base for cost recovery.

As suggested earlier in this section, the Authority is recommending a conservative approach to cost recovery as the information necessary for the Department of Water to demonstrate efficiency is not fully available. The Authority would expect the information would be available in three year's time for a subsequent review.

**Table 3.3 PricewaterhouseCoopers Recommendations on the Cost Base for Cost Recovery by the Department of Water**

	2008-09 (\$ million)	2009-10 budget (\$ million)	PwC Recommendation		
			% Change to 2008-09	Adjustment (\$ million)	Recommended Cost Base (\$ million)
Direct operating expenditure – including internal branch support costs	29.61	31.08	-20%	-5.92	23.69
Overheads – indirect costs or on-costs	11.04	NA	-5%	-0.55	10.49
<b>Sub-Total</b>	<b>40.64</b>				<b>34.18</b>
Capital Expenditure	14.90	16.62	-15% (or -18%) over period 2006-07 to 2009-10	-7.57 over period 2006-07 to 2009-10	
<b>Total</b>	<b>55.54</b>				

Source: PricewaterhouseCoopers (August 2010), *Effectiveness and Efficiency Review of the Department of Water, Final Report to the Economic Regulation Authority*, p10.

### Case Study on the Warren-Donnelly Catchments

As a further test of whether the Department of Water's level of effort in allocation planning and managing ongoing water use is appropriate, the Authority asked the REU to undertake a case study of the Department's allocation planning work in the Warren-Donnelly river basins (Manjimup area).<sup>18</sup> This involved an examination of the procedures, practices and costs incurred by the Department in its allocation planning function for the Manjimup area, and a review of past studies conducted by and for the Department.

#### REU's Report

In the report prepared by the REU, it was shown that the average annual stream flows in the Manjimup area as a whole are well in excess of diversions (the volume of surface water diverted for use from the resources of a river basin for supply to both within-basin and external customers). The mean annual runoff of the combined Warren and Donnelly rivers was 772,000 megalitres (ML) between 1975 and 1998, while the total water use in 2009-10 was expected to be around 35 ML. The majority of this water is for irrigated farming (85 per cent), mainly for horticultural products, and another 5 per cent of the water is used for rural domestic and stock purposes.

REU found that while most of the Donnelly catchment and a large proportion of the Warren catchment are forested, there are some areas of the catchments where farm density is very high (only 2 per cent of catchments in Victoria have a higher farm density than these areas<sup>19</sup>). In a few of these areas, the current water use is much higher than the allocation limit that was introduced by the Department in 2008 (when they were

<sup>18</sup> Resource Economics Unit, May 2010, *Report to the Economic Regulation Authority on the Department of Water's Approach to Determining Allocation Limits in the Manjimup Area for the ERA Inquiry into Water Resource Management and Planning Charges*.

<sup>19</sup> SKM (2008), *Impacts of farm dams in Lefroy Brook upstream of Channybearup*, Sinclair Knight Merz, Armadale, Victoria 3143.

classified as C4 areas).<sup>20</sup> As a result, the Department has placed a provisional cap on use in these areas, with no new licences being issued.

The sub-management areas that were classified as C4 areas were:

- Manjimup Brook/Yanmahs/Dixvale (Donnelly River basin);
- Wilgarup (Warren River basin);
- Smith Brook (Warren River basin);
- Upper Lefroy Brook (Warren River basin);
- Diamond Creek Gully (Warren River basin);
- Eastbrook (Warren River basin);
- Four Mile Brook/Big Brook (Warren River basin).

Two studies on the impact of farm dams on stream flows in the Manjimup area have been undertaken by Sinclair Knight Merz Consulting (**SKM**), one in 2007 and the other in 2008. In both studies, a modelling software package was used to estimate the effect of farm dams on surface water flows. The studies undertaken by SKM concluded that the farm dams in the Upper Lefroy Brook Catchment are significantly affecting stream flow at the Channybearup Gauge. It estimated that the annual flow is reduced by 22 per cent on average, with the largest volumetric reductions occurring during the months of April, May and June.

SKM found that the farm dams intercepted nearly all of the low summer flows, and that under natural conditions, only 24 days each year would have flow below 0.58 ML per day, compared to the observed 79 days each year with the farm dams. Also, it was found that the typically low-flow spells were nearly twice as long and 50 per cent more frequent due to the farm dams.

The Department has continued to review the allocation limit that was introduced in 2008, in particular the ecological basis used to estimate the sustainable yield.<sup>21</sup> This work has been the basis for the new Warren-Donnelly Water Management and Allocation Plan, which was released by the Department of Water for public comment in June 2010. In the allocation plan, the Department has revised the total allocation limit for the area upwards, from 46,940 ML to 62,630 ML across the two catchments. There is no more water available for allocation in six of the nine sub-areas of the Donnelly River basin, and four of the 16 surface water areas of the Warren River basin (Tone River, Upper Lefroy, Eastbrook and Unicup Lakes).

### **Assessment of the Department of Water's Level of Effort**

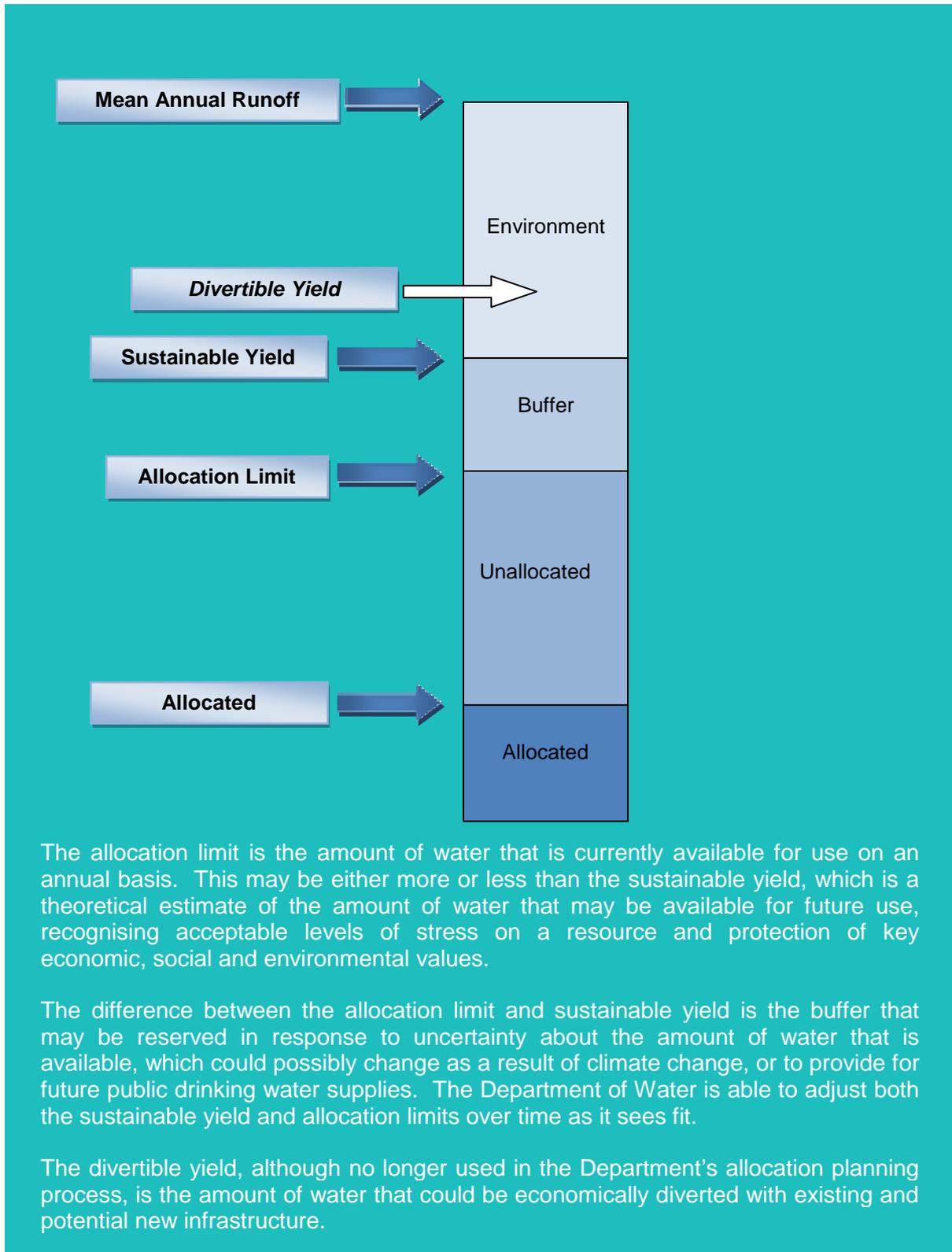
The REU reviewed the Department of Water's procedures and practices in setting allocation limits and developing allocation plans for the Warren-Donnelly Catchments. In REU's opinion, the Department's system for allocation planning gives priority to the areas that are most stressed, which is more cost efficient than a system that treated all areas in the same amount of detail.

<sup>20</sup> The Department of Water classifies water sources into four categories – C1, C2, C3 and C4. C1 is where less than 30 per cent of a water source is allocated, C2 is where 30 to 70 per cent of a water source is allocated, C3 is where 70 to 100 per cent of a water source is allocated and C4 is where more than 100 per cent of a water source is allocated.

<sup>21</sup> The limit on potentially divertible surface water that is allowed to be diverted after taking account of environmental values and making provision for environmental water needs.

The Department of Water's general approach to determining allocation limits, as illustrated and explained in the REU's report to the Authority, is explained in Figure 3.1.<sup>22</sup>

**Figure 3.1 Establishment of Allocation Limits**



The allocation limit is the amount of water that is currently available for use on an annual basis. This may be either more or less than the sustainable yield, which is a theoretical estimate of the amount of water that may be available for future use, recognising acceptable levels of stress on a resource and protection of key economic, social and environmental values.

The difference between the allocation limit and sustainable yield is the buffer that may be reserved in response to uncertainty about the amount of water that is available, which could possibly change as a result of climate change, or to provide for future public drinking water supplies. The Department of Water is able to adjust both the sustainable yield and allocation limits over time as it sees fit.

The divertible yield, although no longer used in the Department's allocation planning process, is the amount of water that could be economically diverted with existing and potential new infrastructure.

<sup>22</sup> Resource Economics Unit, May 2010, *Report to the Economic Regulation Authority on the Department of Water's Approach to Determining Allocation Limits in the Manjimup Area for the ERA Inquiry into Water Resource Management and Planning Charges*, pp16-17.

The case study has indicated that, in the case of the Warren-Donnelly surface water area, the level of management response in allocation planning by the Department appears to have been appropriate and justified. The Authority notes, in particular, that:

- While the annual rainfall and run-off levels in the Warren-Donnelly catchments are high relative to other parts of the state, there are local sub-areas within the catchments where farm dam densities are very high by comparison to other parts of Australia. In these sub-areas, the interception of surface water by farm dams can significantly reduce stream flows in the summer and autumn months.
- Hydrological studies by the Department have focussed on those parts of the catchment where surface water issues are most critical.
- The development of a water allocation plan for the area has required a high level of engagement by the Department with water users in the area, and the collection of scientific evidence to support and justify any decisions on water allocations.

### *Authority Assessment – Effectiveness and Efficiency*

The Authority acknowledges that any examination of the effectiveness and efficiency of the Department as a water resource manager is likely to be difficult. Firstly, it is hard to make comparisons between different agencies, as the nature of water resource management activities is that they are often specific to local conditions, with costs driven by local water resource conditions and constraints. Secondly, the Department has never had to scrutinise the costs of its activities to the degree necessary to support cost recovery. This meant that systems to monitor costs of specific activities have had to be established to provide information for this inquiry, and will need to be further developed to provide ongoing monitoring of costs. These factors have made it difficult to draw many firm conclusions on the effectiveness and efficiency of the Department.

The Authority also notes significant progress by the Department in recent years towards addressing shortfalls identified in earlier reviews (such as the Auditor General's report in 2003), including the increased effort in developing allocation plans and reducing the backlog in processing of licence applications. The Authority also notes that the level of corporate overheads incurred by the Department appear reasonable.

However, the PwC review did identify some broad areas in which there appears to be scope for further efficiency improvements. The Authority notes that planning of expenditure (particularly capital expenditure), in relation to achieving defined strategic objectives, could be improved. The adjustments to capital expenditure and operating expenditure recommended by PwC are significant. However, the Authority considers that it is appropriate for any new fees and charges to be based on costs where there is a high degree of confidence that they have been efficiently incurred. There is a chance that this approach could result in an under-recovery of efficient costs. However, this could be seen as a precautionary approach to cost recovery until the Department has improved its systems of cost information management and collection to improve the certainty about the efficient cost base of its activities.

The case study of allocation planning in the Warren-Donnelly surface water area has provided the Authority with a further check on the level of activity by the Department with regard to allocation planning. This area was chosen as a case study since the Manjimup and Pemberton Landowners Group has submitted that the Department of Water does not provide any services that benefit the businesses in their area and that there is no

evidence that licensing services are necessary in what they consider to be a water abundant region.<sup>23</sup>

The case study undertaken by the REU has indicated that, in the case of the Warren-Donnelly surface water area, the level of management response in allocation planning by the Department appears to have been appropriate and justified.

A further issue is the treatment of external revenues. The Department received \$6.4 million in external revenues across the 24 activities, with the majority of this in the activities of groundwater assessment, investigation and review (\$4.2 million), water information collection (\$1.1 million) and allocation planning (\$0.97 million). The PwC review concluded that much of this funding was deployed as capital expenditure.

The Department in its submission included costs funded by external revenues on the grounds that the services provided by the external funds would continue to be provided under a regime of cost recovery and would therefore need to be paid for. However, the Authority considers that when setting fees and charges, the costs of actuals funded by external revenues should be removed. The PwC study found that there is a weak link between the use of external funds and pre-determined policy objectives. Further, the evidence of efficiency in the use of external funds is relatively weak, such as in the case of significant budget overruns in groundwater investigation projects. The Authority's position is therefore that any fees and charges that are imposed should recover only those costs the Department incurs in providing services.

There is an issue regarding the service of providing water information, in which the Department provides data to private and public parties upon request. The Department is compelled under the *Commonwealth Water Act 2007* to provide water information to the Bureau of Meteorology (**BOM**) promptly (the costs of this information collection and transfer are captured under the activity of Water Information Management). The Department notes in its cost submission that in future, the BOM intends to publish this information free of charge through its Australian Water Resource Information System. In this event, it would not be feasible for the Department to impose fees for water information requests, where the same information is available elsewhere at no cost.

Equally, it would not be efficient for the Department to be engaged in the activities of answering queries if the provision of such information is duplicated by BOM. The Authority therefore recommends that, where water information is provided by BOM, the Department should stop providing information to private and public parties and instead direct them to publicly available sources. Accordingly, the resourcing of this service should be reduced to reflect the reduction in the costs of providing the service.

### 3.4.3 Conclusion on Efficient Costs of Activities

To determine the cost base for cost recovery, the Authority has had regard to the advice provided by its consultants in reviewing the processes, effectiveness and efficiency of the Department, as well as the principles for cost recovery outlined in the first report. In deriving an estimate of the efficient costs of the Department's activities, to provide a basis for cost recovery, the Authority has made the following adjustments to the Department's 2008-09 costs:

- External revenues spent in 2008-09 have been deducted from the recoverable costs. As external revenues have tended to fund capital expenditure programs, the Authority has deducted external revenues for each activity first from capital

<sup>23</sup> Manjimup and Pemberton Landowners Group submission on the Issues Paper, p3.

expenditure, where there is a capital expenditure component, and then from operating expenditure.

- Operating expenditures have been reduced by 20 per cent on the 2008-09 operating costs for each activity.
- Capital expenditure in the activities of groundwater assessment, investigation and review, and water information collection has been reduced by 25 per cent each on the 2008-09 capital expenditure costs. Capital expenditure for metering has not been reduced, as these costs appear to be efficient.
- Overhead costs have been reduced by 5 per cent on the 2008-09 figures. Although PwC's review concluded that the Department of Water's overhead costs appeared to have been incurred efficiently, it suggested that overhead costs should be reduced by 5 per cent per annum to achieve ongoing efficiency gains.

Following the advice provided by PwC, the Authority has adopted a conservative approach to cost recovery by making the above adjustments to the Department's cost estimates. This is due to the fact that the information that was provided by the Department of Water in its cost submission is not complete, and that the Department needs to collect data about its levels of effort over a longer period of time before the Authority can establish with any great certainty what the Department's efficient costs are. However, by adopting PwC's recommended adjustments to the costs that should be recovered, the Authority believes that no inefficient costs are being passed on to customers.

In adopting PwC's recommended adjustments, the Authority is not suggesting that the Department of Water is necessarily operating inefficiently or that it should reduce its number of full time equivalents.

The Authority's estimated efficient costs that should be recovered, based on the adjustments to the Department's cost estimates that were discussed before, are summarised in Table 3.4. The Department of Water's cost estimates that were provided in its cost submission are also summarised to show the adjustments that have been made to the different activity costs.

**Table 3.4 Department of Water's Cost Estimates and Authority's Estimate of Efficient Cost Base**

Activity to be Costed	Department of Water Estimates (\$)			Authority Assessment (\$)		
	Direct Cost	Overheads	Total Cost	Efficient Direct Costs	Efficient Overheads	Efficient Total Costs
Water licensing and compliance	5,047,313	2,784,235	7,831,548	4,037,850	2,645,023	6,682,874
Water licensing support	878,658	334,784	1,213,442	702,926	318,045	1,020,971
Regional hydrogeological advice (2009/10 est)			441,160			
Surface water assessment	621,357	149,286	770,643	497,086	141,822	638,907
Water allocation planning	2,795,917	749,919	3,545,836	1,481,241	712,423	2,193,664
Environmental water planning	2,524,990	597,325	3,122,315	1,936,786	567,459	2,504,244
Water licensing policy	1,695,837	191,558	1,887,395	1,356,670	181,980	1,538,650
Enforcement	482,004	139,315	621,319	385,603	132,349	517,952
Groundwater assessment, investigation and review	9,021,978	681,828	9,703,806	3,706,565	647,737	4,354,301
Water information collection **	7,760,884	2,533,315	10,294,199	5,203,432	2,406,649	7,610,082
Water information management	1,175,926	504,567	1,680,493	841,243	479,339	1,320,582
IWSS licensing	237,139	87,072	324,211	189,711	82,718	272,430
Metering	2,573,092	381,877	2,954,969	2,478,074	362,783	2,840,857
Water source protection planning	849,024	257,412	1,106,436	679,219	244,541	923,761
Acquisition of P1 land	2,721,700		2,721,700	2,721,700		2,721,700
Land assessment management	277,397	60,427	337,824	221,918	57,406	279,323
Preparation of guidance notes	657,067	194,409	851,476	525,654	184,689	710,342
Implementation of water source protection plans	447,096	246,914	694,010	357,677	234,568	592,245
Statutory referrals	985,021	439,180	1,424,201	788,017	417,221	1,205,238
Drainage and water management planning	1,541,744	126,521	1,668,265	1,233,395	120,195	1,353,590
Arterial drainage studies	1,237,649	270,494	1,508,143	990,119	256,969	1,247,089
Floodplain management advice	580,409	147,891	728,300	462,550	140,496	603,046
Water information provision	393,022	160,132	553,154	314,418	152,125	466,543
<b>Total</b>	<b>44,505,224</b>	<b>11,038,461</b>	<b>55,984,845</b>	<b>31,111,852</b>	<b>10,486,538</b>	<b>41,598,390</b>

\*\*90 per cent of water information collection costs are for surface water information collection (\$9,264,779 in 2008/09) and 10 per cent are for groundwater collection (\$1,029,420 in 2008/09).

Source: Department of Water cost submission and Authority analysis.

## 3.5 Allocation of Activity Costs to Services and Private Parties

In the previous section, the Authority assessed the accountability, effectiveness and efficiency of the Department of Water's activities and costs. This section is concerned with the next two steps in determining the costs that can be recovered from private parties.

Firstly, the costs of each of the services provided by the Department (the activities and associated efficient costs that were assessed in section 3.4 contribute to nine services) have to be determined by allocating the costs of the activities across the services which they support.

Secondly, the costs of each service that can be recovered from private parties should be reduced by any costs associated with the provision of public goods, or services to private parties who cannot be identified.

The Authority's assessment of recoverable costs differs from the Department's estimates, firstly due to the initial cost base as shown in Table 3.4 (\$41.6 million versus \$56.0 million as outlined in the previous section), and secondly due to the assumptions made regarding the allocation of those costs to services and private parties.

### 3.5.1 Department of Water Submission

The Department's allocation of costs to services and assumptions about private versus public goods can be seen in Table 3.2. This table shows that, of the Department's estimated total cost of activities of \$56.0 million:

- \$46.3 million could be allocated to the services identified for potential cost recovery; and of this amount
- \$39.8 million could be allocated to private parties who could be identified.

In terms of allocating activity costs to services, the Department identified many of the activities as being carried out exclusively for the provision of a single service (e.g. 100 per cent of the costs incurred for the activities of water licensing and compliance, water licensing and support and regional hydrological assessment are incurred as part of the service of processing and assessment of licence applications). However, a few activities are carried out more generally across the Department and are used to support a number of services. The Department's estimated allocations of activities to services are illustrated in Table 3.5.

**Table 3.5 Department of Water's Allocation of Activities to Services**

Activity	Processing and Assessment of Applications for Water Licences and Permits (Upfront Payment) (%)	Providing Water Allocations and Managing the Ongoing Use of Water (Annual Payment) (%)	Licensing of the Water Corporation for the IWSS (%)	Protecting Public Drinking Water Sources (%)	Providing Advice on Statutory Referrals (%)	Guiding Urban Drainage and Water Management (%)	Providing Floodplain Management Advice (%)	Providing Water Information (%)	Water Metering (%)	Total (%)
Water licensing & compliance	100									100
Water licensing support	100									100
Regional hydrogeological advice	100									100
Surface water assessment	10	80								90
Water allocation planning		100								100
Environmental allocation planning		100								100
Water licensing policy		100								100
Enforcement		100								100
Groundwater assessment, investigation & review		90		5		5				100
Groundwater information collection		70								70
Surface water information collection		15								15
Water information management		30								30
IWSS licensing			100							100
Water source protection planning				100						100
Acquisition of P1 land				100						100
Land assessment management				100						100
Preparation of guidance notes				50	50					100
Implementation of water source protection plans				20	80					100
Statutory referrals					100					100
Drainage and water management planning						100				100
Arterial drainage studies						100				100
Floodplain management advice							100			100
Water information provision								100		100
Metering									100	100

In terms of private versus public goods or services, the Department submitted that for six of the nine services listed below, all (100 per cent) of the costs could be recovered from private parties that can be identified:

- processing and assessment of licences (from licence applicants);
- IWSS licensing (from the Water Corporation);
- water metering (from metered users on the Gngangara Mound and Carnarvon);
- protecting public drinking water sources (from water service providers);
- providing advice on statutory referrals (from WAPC or local government agencies seeking this advice); and
- providing floodplain management advice (from WAPC or local government agencies seeking this advice).

For the other three services, the Department's view was that there were public good elements that would reduce the costs to be recovered from private parties. The Department submitted that:

- In providing water allocations and managing the ongoing use of water, the costs of water licensing policy and enforcement should be fully recovered from water allocation holders, as these costs were incurred exclusively for these private parties. However, for the other activities involved in this service (water allocation planning, environmental water planning, assessment and information collection on water resources, and water information management), while the majority of costs could be attributed to water allocation holders (80 per cent), a small proportion could be viewed as being provided for parties that could not be identified (e.g. recreational users, non-licensed water users, future water users).
- In guiding urban drainage and water management, all the costs associated with arterial drainage studies could be attributed to identifiable private users (land holders and developers in existing urban areas). However, the activities of drainage and water management planning, and the assessment of groundwater resources as part of drainage and water management, are often associated with future urban planning at the strategic level so the parties cannot be identified.
- Half of the users of the service of water information provision are from the private sector (consultants and companies), while the remainder are from federal, state and local governments, universities and non-government organisations. The Department has therefore identified half of the costs as suitable for recovery.

### **3.5.2 Authority Assessment**

In reviewing the allocation of the costs of activities to each of the services, the Authority accepts the Department's recommended cost shares.

- For those activities which relate directly and exclusively to the provision of a particular service, it is evident from the description of these services, and the Authority's understanding of the nature of these activities from discussions with the Department, that there is a clear link to those services.
- For other activities, which are shared across services (e.g. surface water assessment, groundwater assessment, investigation and review, water information collection), it is more difficult to assess the precise allocation of activity costs to services without carrying out a detailed and comprehensive cost audit, especially as the Department's cost information is categorised by activity and not by service.

- However, the process review carried out for the Authority by Quantum confirms that the activities identified contributed to the services to which they have been allocated. The shares of costs allocated to different services appear consistent with the Authority's understanding of the nature of the services provided.

In assessing, for each service, whether there is a component of public good costs that should not be recovered from private parties, the Authority has drawn on the principles for distinguishing between private and public goods (see section 2.1). It should be noted that there are a range of activities carried out by the Department which have been previously identified as being entirely in the nature of public goods that have not been considered for cost recovery in this inquiry (for example, strategic policy development, indigenous and remote community services and support, salinity recovery and engineering).

Of the services identified as having some component of private good, the Authority accepts the Department's view that particular services are provided exclusively for private parties who can be identified (i.e. processing and assessment of licences; water licensing policy and enforcement; IWSS licensing; water metering; protecting public drinking water sources; providing advice on statutory referrals; arterial drainage studies; and providing floodplain management advice). These services would not be, and are not, provided for parties other than the recipients of those services. Further, those requesting or requiring the services can be readily identified, and fees and charges can be levied.

The Authority also accepts the view that the activities of drainage and water management planning and groundwater assessment as part of the Department's service of guiding urban drainage and water management are of a high level, regional and strategic nature. These activities are often aligned with planning for future urban development and it is difficult to identify the parties for whom the service is being provided. It is therefore not appropriate or feasible to recover the costs of these activities from private parties.

The Authority's view regarding the public good component of a number of allocation planning activities<sup>24</sup> is that the private good component of the activities may be slightly less than the 80 per cent share suggested by the Department.

- As part of allocation planning, the Department undertakes assessments to determine environmental water use requirements and environmental or social impacts of water use. The consideration of environmental and/or social impacts benefits parties other than the water allocation holders (who are the private parties that can be identified).<sup>25</sup> These activities would not be carried out if not for the environmental values and standards imposed by these parties and the broader community.
- Several submissions have noted the public good aspects to allocation planning activities. Rio Tinto agreed with the Authority's assessment that there is an element of public benefit in water allocation planning which needs to be allocated accordingly. The Manjimup and Pemberton Landowners Group submitted that the water resource management activities undertaken by the Department, including planning, are essential services that should be undertaken and funded by the Government (that is, all of these activity costs are considered to be of benefit to the wider community).

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<sup>24</sup> These are water allocation planning, environmental water planning, surface water assessment, groundwater assessment, investigation and review, water information collection, and water information management.

<sup>25</sup> Other parties which may benefit from allocation planning include current and future residents and recreational users in allocation plan areas.

- The NSW regulatory agency, the Independent Pricing and Regulatory Tribunal (**IPART**), used a public/private cost share ratio of 30/70 for the activities of water sharing plan development and water use plans. This ratio reflects the principle that these activities are principally directed at monitoring, evaluation and planning driven by extraction quantities or extractive use, but that a lesser component of costs is associated with maintaining standards demanded by the community.

While it is still the case that the majority of allocation planning activities are carried out for, and because of, water allocation holders, the Authority's view is that a private good cost share of 70 per cent would better reflect the degree to which allocation planning activities are carried out to meet broader community standards (e.g. environmental, social, health).

Applying these assumptions (on the allocation of activity costs to services and to private parties) to the efficient costs of each activities result in an overall total of \$29.2 million to be recovered from private parties (see Table 3.6 below).

**Table 3.6 Summary of Service Costs to be Recovered**

Department of Water Estimates			Authority's Assessment		
Estimated Total Cost of Activities	Estimated Total Cost of Providing Services	Total Costs to be Recovered	Estimated Efficient Costs of Activities	Estimated Efficient Costs of Providing Services	Total Efficient Costs to be Recovered
55,984,845	46,277,288	39,755,591	41,598,390	34,336,619	29,206,798

Table 3.7 sets out the full calculation of costs for each activity and service. For consistency with the conservative approach adopted by the Authority, these costs do not include the administrative costs of billing that the Department might incur if fees and charges are implemented. As the indicated fees and charges are based on historical costs, the Department has not incurred any billing costs yet, and it has not provided any estimates to the Authority for consideration.

If fees and charges for water resource management and planning services are implemented, and another review of the Department's activities and costs is undertaken, any efficient costs that are incurred by the Department that are associated with billing customers would need to be considered for inclusion at that time.

Table 3.7 Estimated Service Costs for Recovery

Service	Contributing activities	Department of Water Estimates					Authority Assessment				
		Estimated Total Cost of Activity	Per Cent Contribution of Activity to Service	Estimated Total Cost of Service	Per Cent Private Benefit	Costs to be Recovered	Estimated Efficient Cost of Activity	Per Cent Contribution of Activity to Service	Estimated Efficient Costs of Services	Per Cent Private Benefit	Efficient Costs to be Recovered
Processing and assessment of applications for water licences and permits	Water licensing and compliance	7,831,548	100%	7,831,548	100%	7,831,548	6,682,874	100%	6,682,874	100%	6,682,874
	Water licensing support	1,213,442	100%	1,213,442	100%	1,213,442	1,020,971	100%	1,020,971	100%	1,020,971
	Regional hydrogeological advice	441,160	100%	441,160	100%	441,160		100%		100%	
	Surface water assessment	770,643	10%	77,064	100%	77,064	638,907	10%	63,891	100%	63,891
	<b>Sub-total:</b>			<b>9,563,214</b>		<b>9,563,214</b>			<b>7,767,736</b>		<b>7,767,736</b>
Providing water allocations and managing the ongoing use of water	Water licensing policy	1,887,395	100%	1,887,395	100%	1,887,395	1,538,650	100%	1,538,650	100%	1,538,650
	Enforcement	621,319	100%	621,319	100%	621,319	517,952	100%	517,952	100%	517,952
	Water allocation planning	3,545,836	100%	3,545,836	80%	2,836,669	2,193,664	100%	2,193,664	70%	1,535,565
	Environmental water planning	3,122,315	100%	3,122,315	80%	2,497,852	2,504,244	100%	2,504,244	70%	1,752,971
	Surface water assessment	770,643	80%	616,514	80%	500,918	638,907	80%	511,126	70%	357,788
	Groundwater assessment, investigation and review	9,703,806	90%	8,733,425	80%	6,792,664	4,354,301	90%	3,918,871	70%	2,743,210
	Surface water information collection	9,264,779	15%	1,389,717	80%	926,478	6,849,073	15%	1,027,361	70%	719,153
	Groundwater information collection	1,029,420	70%	720,594	80%	566,181	761,008	70%	532,706	70%	372,894
Water information management	1,680,493	30%	504,148	80%	420,123	1,320,582	30%	396,175	70%	277,322	
	<b>Sub-total:</b>			<b>21,141,263</b>		<b>17,049,599</b>			<b>13,140,749</b>		<b>9,815,505</b>
Licensing of the Water Corporation for the IWSS	IWSS licensing	324,211	100%	324,211	100%	324,211	272,430	100%	272,430	100%	272,430
	<b>Sub-total:</b>			<b>324,211</b>		<b>324,211</b>			<b>272,430</b>		<b>272,430</b>
Water metering	Water metering	2,954,969	100%	2,954,969	100%	2,954,969	2,840,857	100%	2,840,857	100%	2,840,857
	<b>Sub-total:</b>			<b>2,954,969</b>		<b>2,954,969</b>			<b>2,840,857</b>		<b>2,840,857</b>
Protecting public drinking water sources	Water source protection planning	1,106,436	100%	1,106,436	100%	1,106,436	923,761	100%	923,761	100%	923,761
	Groundwater assessment, investigation and review	9,703,806	5%	485,190	100%	485,190	4,354,301	5%	217,715	100%	217,715
	Preparation of guidance notes	851,476	50%	425,738	100%	425,738	710,342	50%	355,171	100%	355,171
	Implementation of water source protection plans	694,010	20%	138,802	100%	138,802	592,245	20%	118,449	100%	118,449
	Acquisition of P1 land	2,721,700	100%	2,721,700	100%	2,721,700	2,721,700	100%	2,721,700	100%	2,721,700
	Land management	337,824	20%	67,565	100%	67,565	279,323	20%	55,865	100%	55,865
	<b>Sub-total:</b>			<b>4,945,431</b>		<b>4,945,431</b>			<b>4,392,660</b>		<b>4,392,660</b>
Providing advice on statutory referrals	Statutory referrals	1,424,201	100%	1,424,201	100%	1,424,201	1,205,238	100%	1,205,238	100%	1,205,238
	Implementation of water source protection plans	694,010	80%	555,208	100%	555,208	592,245	80%	473,796	100%	473,796
	Preparation of guidance notes	851,476	50%	425,738	100%	425,738	710,342	50%	355,171	100%	355,171
	<b>Sub-total:</b>			<b>2,405,147</b>		<b>2,405,147</b>			<b>2,034,205</b>		<b>2,034,205</b>
Guiding urban drainage and water management	Drainage and water management planning	1,668,265	100%	1,668,265	0%		1,353,590	100%	1,353,590	0%	
	Arterial drainage studies	1,508,143	100%	1,508,143	100%	1,508,143	1,247,089	100%	1,247,089	100%	1,247,089
	Groundwater assessment, investigation and review	9,703,806	5%	485,190	0%		4,354,301	5%	217,715	0%	
	<b>Sub-total:</b>			<b>3,661,598</b>		<b>1,508,143</b>			<b>2,818,394</b>		<b>1,247,089</b>
Providing floodplain management advice	Floodplain management advice	728,300	100%	728,300	100%	728,300	603,046	100%	603,046	100%	603,046
	<b>Sub-total:</b>			<b>728,300</b>		<b>728,300</b>			<b>603,046</b>		<b>603,046</b>
Providing water information	Water information provision	553,154	100%	553,154	50%	276,577	466,543	100%	466,543	50%	233,272
	<b>Sub-total:</b>			<b>553,154</b>		<b>276,577</b>			<b>466,543</b>		<b>233,272</b>
	<b>Totals:</b>			<b>46,277,288</b>		<b>39,755,591</b>			<b>34,336,619</b>		<b>29,206,798</b>

### **Accountability, Effectiveness and Efficiency in Water Resource Management and Planning Activities**

- 4) The Authority estimates that in 2008-09 the Department of Water incurred a total of \$29.2 million of costs that is considered to be efficiently incurred on behalf of identifiable private parties and provides an appropriate basis for service fees and charges.

## 4 Water Licensing – Cost Recovery and Indicative Fees and Charges

### 4.1 Background

Water licensing covers a range of activities undertaken by the Department of Water, including dealing with licence applications, assessing and enforcing compliance, allocation and environmental water planning, groundwater and surface water assessment, and water measurement and information.

In this section, the method for recovering the efficient costs that have been incurred by the Department of Water in providing services to water licence holders is considered. Indicative charges that should apply to water licence holders are also provided, which are based on the Authority's preferred methods for recovering the efficient costs that were established in the previous section (see Table 3.7).

#### 4.1.1 *First Draft Report Recommendations*

In its Draft Report, the Authority identified that cost recovery of the water resource management and planning costs associated with water licensing should be consistent with the key principles that any charges to licence holders should reflect as closely as possible the efficient costs of the activities that have been carried out in providing those licences.

The Authority also indicated that the issue of who is causing the costs to be incurred is central to the development of water licence charges. In determining how to recover the costs of water licences, it is necessary to establish:

- which costs would appropriately be recovered from licence holders, and which would not; and
- the best method for recovering those costs that have been efficiently incurred (through an up-front fee, or an annual charge, or a combination).

The key principle used to identify which water resource management and planning costs should be recovered from licence holders is that the costs are related to activities that are carried out for, and because of, licence holders – to provide them with their water allocations and to protect the security of those entitlements.

When an application is lodged for a licence or permit, or renewal or amendment of a licence or permit, the Department of Water incurs costs associated with:

- assessing and processing that application;
- establishing the amount of water that can be safely allocated to the licence or permit holder (including assessing impacts on the environment and other users); and
- setting licence conditions and operating strategies.

These are the up-front costs of water licensing that are associated with applications. According to the Department, these costs will vary from application to application, depending on the complexity of the water issues involved.<sup>26</sup>

Once a licence has been allocated, there are ongoing costs to the Department in monitoring the licence and ensuring compliance with licence conditions. There are also other activities, such as allocation planning, water licensing policy, groundwater and surface water assessment, and water measurement and information, which are carried out on an on-going basis to protect the security of licence holders' entitlements, by determining the available water resources.<sup>27</sup>

The Authority's draft recommendations in relation to water licensing were that:<sup>28</sup>

- Efficient costs incurred by the Department of Water that are directly related to the provision of licences be recovered from licence holders.
- Charges to licence holders should reflect, as closely as practicable, the efficient costs of services provided by the Department of Water in the issuing and monitoring of those licences:
  - Costs associated with the processing and assessment of applications be recovered through an up-front application charge.
  - Costs associated with on-going water resource management and planning activities related to licences (i.e. compliance monitoring and enforcement, allocation planning, environmental water planning, water licensing policy, ground water and surface water assessment, and water measurement and information) be recovered through an annual charge.
- The activities of allocation planning, environmental water planning, groundwater and surface water assessment, and water measurement and information have a "public good" component, as the information they produce is of benefit to the wider community. The Authority recommended that a small proportion of these activities be allocated to the general public.

A number of different approaches to cost recovery were considered in the first Draft Report:

- A "fee for service" approach, where licence holders would pay an application fee reflecting the complexity of the services provided by the Department in processing their application, and an annual fee to recover ongoing water resource management and planning costs.
- A "volume by catchment" approach, where licence holders would pay an application fee and an annual charge, both based on the volume of the application and degree of allocation of water resources in the catchment.
- Charges based on the size of a licence, where the fees for licence applications and renewals would be minimal while the annual fee would increase with the volume category of the applicant.
- A volumetric charge, where the total costs of water licensing are divided by the total volume of water allocations to derive a charge (\$ per ML allocation) which would be applied to all licence holders. Small users with allocations below 2 ML would not be charged under this approach.

<sup>26</sup> First Draft Report (December 2009), pp24-25.

<sup>27</sup> Ibid, p28.

<sup>28</sup> Ibid, draft recommendations 12, 13 and 14.

The Authority also outlined the approaches to cost recovery through licence fees adopted by the Western Australian Department of Fisheries and the New South Wales Office of Water (as determined by the Independent Pricing and Regulatory Tribunal).<sup>29</sup>

The Authority's preferred approach in the first Draft Report was the "fee for service" approach to licence charges, with an upfront application fee reflecting the costs and complexity of assessing different licence applications (including the level of technical assessments, hydrological or hydrogeological assessments and operating strategies involved in a licence), and an annual charge reflecting the ongoing monitoring and planning costs for different licences.

### 4.1.2 Submissions

In its submission the Chamber for Minerals and Energy (**CME**) supported a "fee for service" approach in which fees reflect the level of complexity of a licence and discounting for public benefits. However, CME strongly opposed volumetric charging. It also opposed the setting of charges based on the combination of allocation size and percentage catchment allocation (C1 to C4), on the basis that this approach ignores the geographical variations in management input. Rio Tinto also strongly disputed the Department's position that larger volume licences incur higher water resource management costs.

Rio Tinto submitted that those with low compliance and enforcement (C&E) costs should not cross-subsidise those with high C&E costs, and that these should be paid through public funds unless they can be targeted to reflect costs.

The Turf Growers Association WA submitted that it did not support volumetric charging.

The Manjimup and Pemberton Landowners Group and associated stakeholders supported licence administration fees based on an hourly fee for services provided for each licence.

The Department of Water did not support the Authority's preferred approach to the "fee for service" charges (in which the administration charge is differentiated depending on the level of complexity of the licence assessments). The Department submitted that this approach would be costly to implement and manage, and may not capture the cost of future scarcity or environmental externalities. The Department's preference is for the simpler approach, in which both the administration fee and the annual charge are based on a matrix of licence size and percentage water allocation.

In its cost information submission, the Department identified three services that it is providing as part of its water licensing function:

- Processing and assessing applications for water licences and permits.
- Providing water allocations and managing the ongoing use of water (including metering).
- Licensing of the Water Corporation for the IWSS.

The first two services, which are provided to all licence holders, are discussed below whereas the third service is discussed in section 4.4.

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<sup>29</sup> Ibid, chapter 3.

## 4.2 Processing and Assessment of Applications for Water Licences and Permits

### 4.2.1 Department of Water Submission

The Department of Water deals with over 3,000 applications for licences or permits every year. This service includes the activities that are involved in assessing these applications and issuing the licence or permit. It also includes the maintenance of licensing processes and support systems.

There are 13,796 water use licences in force (as at 30 June 2009), covering 759 groundwater resources and 181 surface water resources throughout Western Australia.

The Department submitted that all of the activities carried out as part of the processing and assessment of applications for water permits or licences are carried out directly for identifiable private parties, i.e. the licence applicants.

#### *Establishing Levels of Effort*

A number of different applications for licences and permits (instruments) are assessed and determined by the Department of Water:

- Licences to take water (known as 5C licences), including new applications, renewals, amendments, transfers, trades and agreements.
- Permits to interfere with bed and banks of surface water systems.
- Licences to construct or alter wells (26D licences).

The Department issued 3,346 instruments in 2008-09, and the number issued for each type of instrument is provided in Table 4.1. Information about the proportional level of effort involved in processing the different types of instruments is also included in this table.

To determine the level of effort, the Department established a three month time-keeping process for its licensing staff from two locations (the Swan Region and Busselton offices). Staff recorded the level of effort involved in each of 10 identified process steps, as well as various details about the type and complexity of the application.

**Table 4.1 Number of Licensing Instruments Issued by Type and Level of Effort Involved**

Instrument type	Number issued 2008-09	Proportion of effort (%)
New licence to take water	934	35
Renewal of licence to take water	940	26
Amendment of a licence to take water	534	16
Trade or transfer of a licence to take water	160	6
Licence to construct or alter a well	726	16
Permit to interfere with bed or banks	52	1
<b>Total</b>	<b>3,346</b>	<b>100</b>

Source: Department of Water, *Costing of Water Activities*, p38.

The Department analysed the information recorded as part of the time-keeping process further, including the time taken to complete specific activities associated with processing

and assessing applications for water licenses. Table 4.2 shows the costs involved in undertaking activities that are common to all application types and the activities that may only apply to certain application types, or for which the level of effort is likely to vary across the application types.

**Table 4.2 Average Cost of Licensing Activities by Instruments (2008-09)**

Instrument type	Common admin activities (\$)	Water resource impact assessment (\$)	Hydro assessment (\$)	Operating strategy (\$)	Site survey (\$)	Total (\$)
New 5C	1,159	700	490	383	831	3,563
Renewal 5C	1,028	339	325	250	719	2,661
Amendments	1,231	469	364	216	651	2,931
Trade/Transfer	1,243	502	344	423	1,099	3,611
26D	1,076	445	207	317	0	2,045
Permits	994	307	211	53	493	2,059

Source: Department of Water, *Costing of Water Activities*, p39.

The Department indicated that the relative level of effort does not vary too much between most of the activities across the different instruments. However, the costs associated with 26D licences (to construct or alter wells) and permits (to interfere with bed and banks of surface water systems) are often lower as they do not generally require hydrological assessment, and 26D licences do not require a site survey.

There are some assumptions and limitations to the data and approach adopted by the Department, which have made it difficult to undertake more detailed analysis of the cost of the different types of allocation processes and assessments.<sup>30</sup> Nevertheless, the Department of Water has been able to undertake some analysis to differentiate the costs associated with:

- low, medium and high risk applications for new 5C licences and renewals of 5C licences;
- surface water and groundwater applications for new 5C licences; and
- low, medium and high risk applications for new 5C groundwater licences.

This analysis, and information about the different costs, is provided in the next three tables.

<sup>30</sup> The Department of Water advised that there are some inherent assumptions and limitations to the data and approach taken, which have largely arisen due to the short timeframe available for data collection and analysis. As a result, it is likely that the results of the analysis would change if the exercise was performed over a longer period of time. For more information on the limitations and assumptions, see Department of Water (May 2010), *Costing of water activities*, p38.

**Table 4.3 Level of Effort per Licensing Instrument by Risk Category<sup>(a)</sup>**

Instrument type	Average total hours	Number of instruments	Total hours	Proportion of effort (%)
<b>New 5C</b>				
Low	11.94	422	5,042	33
Medium	21.95	198	4,346	28
High	19.06	314	5,982	39
<b>Total</b>		<b>934</b>	<b>15,370</b>	<b>100</b>
<b>Renewals</b>				
Low	12.19 <sup>(b)</sup>	754	9,190	77
Medium	15.51	88	1,372	11
High	14.68	98	1,435	12
<b>Total</b>		<b>940</b>	<b>11,996</b>	<b>100</b>

(a) Risk categories take into account factors such as the level of resource allocation (C1 to C4), the potential for unacceptable impacts on other users or the environment, and the volume of water requested.

(b) The average amount of hours required to assess low risk licence renewals is greater than the average time taken to assess low risk new licences. The Department of Water has suggested that this is due to a high proportion of C3 and C4 category applicants being reclassified at the low level of assessment for renewals.

Source: Department of Water, *Costing of Water Activities*, p40.

The data in Table 4.3 shows that, on average, a greater level of effort is required to assess medium risk licences than high risk licences, and the Department believes that this reflects the real level of effort involved. This is because applicants for high risk licences often submit greater levels of documentation, they may even have had a consultant involved, and they have undertaken and submitted their own hydrogeological assessment, which would typically well exceed the estimated licence applications and renewals costs (see Table 4.7). This results in a reduced information collection and assessment effort for the Department of Water.

**Table 4.4 Level of Effort by Water Type for New 5C Licences**

Instrument type	Average total hours	Number of instruments	Total hours	Proportion of effort (%)
<b>New 5C</b>				
Groundwater	18.31	798	14,610	89
Surface water	12.83	136	1,745	11
<b>Total</b>		<b>934</b>	<b>16,356</b>	<b>100</b>

Source: Department of Water (May 2010), *Costing of Water Activities*, p41.

Table 4.4 shows that the level of effort for assessment of a new groundwater licence application is significantly greater than that for a surface water licence application. The Department of Water advises that this is because the assessments of groundwater licence applications are more complex than surface water licence applications.

Table 4.5 provides information about the level of effort involved in assessing low, medium and high risk groundwater licence applications, assuming the same split of low, medium and high risk instruments as for new 5C licence applications in Table 4.3. This information is not available for surface water licence applications, due to the low number

of surface water applications received by the Department during its data collection period over the three month time-keeping process. The Department should continue to collect data on surface water licence applications to enable it to determine the level of effort involved in assessing low, medium and high risk surface water licence applications.

**Table 4.5 Level of Effort by Risk Category for New 5C Groundwater Licences**

Instrument Type	Average Total Hours	Number of Instruments	Total Hours	Proportion of Effort (%)
<b>New 5C Groundwater</b>				
Low	13.43	361	4,844	35
Medium	21.46	169	3,630	26
High	20.06	268	5,379	39
<b>Total</b>		<b>798</b>	<b>13,853</b>	<b>100</b>

Source: Department of Water (May 2010), *Costing of water activities*, p40.

## 4.2.2 Authority Assessment

In the first Draft Report, the Authority recommended that the efficient costs incurred by the Department of Water that are directly related to the provision of licences be recovered from licence holders.

This is consistent with the principle that the costs of activities to address impacts, or potential impacts, arising from the use of water resources should be recovered from those parties who cause the costs to be incurred, if the parties can be identified. Costs may be caused by individuals (for example assessment and monitoring of individual licences) or groups (for example allocation planning for groups of licence holders).

As outlined earlier in section 3, the Authority's view is that 100 per cent of the costs of the activities that are incurred by the Department of Water in processing and assessing applications for water licences and permits should be recovered from the licence or permit holders, as these costs are incurred by individual licence or permit holders that can be identified.

### Charging Structure

The Authority's proposed charges to recover the Department of Water's efficient costs of processing and assessing new 5C licences and 5C licence renewals are set out in Table 4.6. These charges reflect the different levels of effort for the Department in processing and assessing licence applications and renewals based on the risk category that the licence application falls into (depending on a number of factors, such as how much of a resource is allocated, how much water an applicant is applying for, and what the impact is on other users and the environment). When setting the risk level, the three key considerations for the Department are:

- The allocation limit in the management area both before and after consideration of the application;
- The size and type of application under consideration and factors associated with that, including the likely impact if the allocation is granted; and
- The likely decision based on the assessment undertaken. Where the assessment suggests that the application should be refused, the level of assessment is based

on the highest level of risk regardless of other considerations. This means that a considerable level of effort is applied by the Department of Water when it is assessing applications that are likely to be refused.

This risk assessment for licence applications is set out in more detail on page nine in the report prepared for the Authority by Quantum Management Consulting & Assurance (available on the Authority's website).

The proposed application fees for new 5C licences and 5C licence renewals in Table 4.6 reflect the average costs per instrument for low, medium and high risk categories.

**Table 4.6 Authority's Proposed Fees for New 5C Licence Applications and 5C Licence Renewal Applications**

Instrument Type	Number of Instruments	Total Efficient Cost to be Recovered (\$)	Cost per Instrument (\$)
<b>New 5C Licence</b>			
Low	422	886,714	2,101
Medium	198	764,312	3,860
High	314	1,052,027	3,350
<b>Total</b>	<b>934</b>	<b>2,703,053</b>	<b>2,894</b>
<b>Licence Renewals<sup>(a)</sup></b>			
Low	754	622,424	825
Medium	88	92,923	1,056
High	98	97,190	992
<b>Total</b>	<b>940</b>	<b>812,538</b>	<b>864</b>

*(a) Recovery of 40 per cent of total costs for common administrative activities.*

As mentioned in section 3, PricewaterhouseCoopers (PwC) found that the Department has high licence administration costs compared to the New South Wales Office of Water (\$1,000 per licence or permit higher across all instrument types). This could be due to a number of reasons, such as the potentially higher level of effort required to administer groundwater licences, of which there are more in Western Australia, or economies of scale being achieved in New South Wales, where there are a larger number of licences in force.

In regard to licence renewals, PwC noted that the costs of renewals are relatively high in comparison to the cost of an application for a new licence, in particular for the low-level risk assessment category.

Despite a licence having been in place for a number of years and DoW having previously assessed the licence, the costs are similar for low risk licence renewals and new applications, while high-risk renewals cost around three quarters of the cost of a new licence.

DoW considers that the relatively high cost of renewal is due to, firstly, the inclusion of on ground compliance surveys in the cost of licence renewals, which is a cost not incurred in the granting of a new licence. Secondly, a higher proportion of licence renewals are dealt with at the low risk level of assessment (80 per cent for renewals compared to 45 per cent for new licences). As a result, a higher proportion of C3 and C4 category applications at the low level of assessment for renewals, increasing the average cost of renewal

assessments compared to low-level assessments for new licences. A basic underlying administrative cost is also associated with all licence processing. (PwC report, p50)

The Authority's view is that the Department appears to put too much effort in assessing and processing licence renewals, as each application for renewal is considered on a case by case basis, in a similar manner to a new licence application. The Authority understands that when a licence is first issued to a water user, the Department's intent is that the licence will be renewed for as long as the user wants to take the water. It is also understood that the vast majority of licence renewals are accepted, although the conditions of the licence may have been amended. In addition, if the right amount of allocation planning was undertaken by the Department, there is likely to be more certainty about water resources and the amount of water that can be allocated to existing and new users. This should reduce the need for assessing renewals on a case by case basis, and licence renewals would be more administrative in nature.

As a result, based on the information provided by the Department of Water in its cost submission (see Table 4.2) that approximately 40 per cent of the costs of licence renewals are incurred by common administrative activities,<sup>31</sup> the Authority suggests that only 40 per cent of licence renewal costs be recovered through application charges.

The remaining 60 per cent of the efficient licence renewal application costs,<sup>32</sup> equating to approximately \$1.2 million, have been allocated by the Authority to water resource management and planning activity costs, which are proposed to be recovered through annual charges from all licence holders. This additional funding to undertake allocation planning reflects the view that the Department of Water should prepare more detailed allocation plans, which set out the amount of water that is available to existing and new users, rather than assess each licence renewal application in detail. As the Department prepares more detailed allocation plans, there should be a reduction in the ongoing need for case by case assessments of licence renewals (it should also reduce the Department's level of effort in assessing and processing new licences over time).

As indicated in section 4.2.1, the level of effort applied by the Department in assessing high risk licences is less than what is required to assess most medium risk licences. This is largely due to the additional reports that applicants for high risk licences are required to submit to the Department, which reduces the level of effort required to assess a licence application. These reports can be very expensive for licence applicants although they vary greatly in costs due to the nature of a project and location of a project. The estimated cost ranges of these reports have been provided by the Department of Water and are outlined in Table 4.7.

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<sup>31</sup> This includes the administrative activities that are common across all applications, such as the completion of the initial check list, review and sign off of application decisions and fielding of application related inquiries.

<sup>32</sup> The other licence renewal costs listed by the Department are associated with water resource impact assessments, hydro assessments, operating strategies and site surveys.

**Table 4.7 Estimated Costs of Reports Required by the Department of Water**

Report Type	Cost Range (\$)
<b>Hydrological/Hydrogeological Reports</b>	
Level 1	5,000-20,000
Level 2	10,000-50,000
Level 3	20,000-200,000
<b>Operating Strategies</b>	2,000-25,000
<b>Monitoring Reports</b>	
Monitoring and Aquifer Review Report	2,000-35,000
Monitoring Program Summary Report	1,500-10,000

While applications for high risk licences are incurring a lower fee than medium risk licences under the proposed charging structure, these applicants are generally paying significant amounts to prepare the reports that the Department requires to assess their licence applications. Applicants for medium risk licences do not incur the same amount of costs in preparing such reports (if required), and the assessment of these licence applications often requires more effort by the Department of Water as a result.

However, some applications for licences within each risk category may require a lot more effort by the Department of Water than others, and the Department of Water should continue to collect information about the level of effort required for different types of applications. If possible, the Department should also collect data on the level of effort required to assess and process applications for large customers, such as the Water Corporation and large mining companies.

For other licence and permit applications, the Authority is proposing charges that reflect the average cost of each instrument. The Department of Water has not been able to differentiate the costs for these instruments based on the level of effort involved for low, medium or high risk applications.

**Table 4.8 Authority's Proposed Fees for Other Licence Applications**

Instrument Type	Number Issued	Proportion of Effort <sup>(a)</sup> %	Total Efficient Cost to be Recovered (\$)	Average Cost per Instrument (\$)
Amendment of a licence to take water	534	16	1,271,160	2,380
Trade or transfer of a licence to take water	160	6	469,244	2,933
Licence to construct or alter a well	726	16	1,205,972	1,661
Permit to interfere with bed or banks	52	1	86,962	1,672

(a) From Table 4.1 Number of Licensing Instruments Issued by Type and Level of Effort Involved.

There are issues associated with setting fees and charges based on average costs. For example, the level of effort required for each application may vary greatly, and it would be more cost reflective to set charges based on the level of effort involved by the Department of Water in assessing a particular licence, rather than having some applicants subsidise other applicants.

It is understood that this is not much of a concern for applicants who want to trade or transfer a licence to take water, since the Department of Water has advised that trades or

transfers are generally in areas where water sources are more than 100 per cent allocated, and the average level of effort is very similar for all applications.

However, the level of effort in assessing and processing applications seeking to amend a licence to take water may vary greatly depending on the amendments being sought. If water resource management and planning charges are implemented, the Department should collect data and analyse the results to establish the different levels of effort required to assess and process various types of licences, to allow the introduction of more cost reflective licence application fees in the future.

### Processing and Assessment of Applications for Water Licences and Permits

- 5) The upfront application fees for new 5C licences and 5C licence renewals be differentiated based on the level of effort applied to applications of different risk categories (low, medium or high).
- 6) The Department of Water to continue collecting data on the level of effort required to assess licence applications of different risk categories. This includes collecting data on groundwater and surface water licence applications, and applications from large customers.
- 7) Other licence and permit application fees be based on the average cost incurred by the Department of Water in assessing and processing each type of instrument.
- 8) The Department of Water to collect data and analyse the results to establish the different levels of effort required to assess and process other licence and permit application fees which are currently based on average costs.

## 4.3 Providing Water Allocations and Managing the Ongoing Use of Water

### 4.3.1 Department of Water Submission

The Department of Water undertakes a number of activities to determine the amount of water that can be taken by all water users within a water resource and manage the ongoing use of that water.

The Department indicated that the activities associated with this service do not apply equally to all licence holders, and as a result, it suggested that this service area be separated into the following two components:

- water policy and enforcement activity costs, to be recovered equally from all licence holders; and
- water allocation and planning support activity costs, to be recovered through different charges from licence holders.

### *Water Licensing Policy and Enforcement*

According to the Department of Water, water licensing policy and enforcement activities apply to all water users, regardless of the water resource management area from which they are taking water, the amount of water that is allocated from a resource, or the nature of the licence. As such, the Department believes that it is appropriate to charge for these costs equally across all users.

### *Water Allocation Planning and Support Services*

The remaining activities are associated with the allocation of water to users, either directly through allocation planning or indirectly, through the activities that support allocation planning. The Department presented the costs of these activities in several ways in its cost information submission:

- The total costs of the activities by the total number of water licences in force (basis for a flat fee to apply to all licence holders).
- The total cost by resource management category and by the number of licences in each resource management category (basis for a charging regime based on resource management category – C1 to C4).
- The total cost of each plan prepared, with some analysis by number of users, volume of water, and approximate duration of plans (basis for charges to licence holders which would vary by region to reflect the costs of allocation plans and support activities).

### **4.3.2 Authority Assessment**

As discussed in section 3, the Authority agrees with the Department of Water that the activities of allocation planning, environmental water planning, groundwater and surface water assessment, and water measurement and information are carried out primarily for private parties (water allocation holders), but also have a “public good” component. However, the Authority recommends a slightly higher proportion of these costs to be allocated to the public than that suggested by the Department (30 per cent rather than 20 per cent), to reflect the degree to which community standards underpin the types and amount of activities undertaken in providing water allocations and managing the ongoing use of water.

### *Water Licensing Policy and Enforcement*

The Authority is proposing that a flat annual fee should apply to all water users to recover the efficient costs of the water licensing policy and enforcement activities, calculated by dividing the total efficient costs of these activities by the number of total licences in force (13,796 licences were in force at 30 June 2009).

**Table 4.9 Indicative Annual Charges for Water Licensing Policy and Enforcement**

Activity	Total Efficient Cost 2008-09	Number of Licences in Force – June 2009	Average Cost per Licence (\$)
Water licensing policy	1,538,650	13,796	112
Enforcement	517,952	13,796	38
<b>Total</b>	<b>2,056,602</b>	<b>13,796</b>	<b>149</b>

This would result in an approximate annual cost of \$149 per water user.

### *Water Allocation Planning and Support Services*

The most efficient and cost reflective option to recover the costs of water allocation planning and environmental water planning activities, and their support activities, would be to set charges which recover the Department of Water's efficient allocation planning costs for each plan that is prepared, from the users that are covered by each plan. For example, the costs of the recent Whicher Surface Water Plan would be recovered by the surface water users that take water in the recently proclaimed Whicher region in the South West of Western Australia. However, there are a number of issues with such regional charges, such as:

- Many allocation plans have been undertaken by the Department recently and these have been funded by the general public, which means that many water users would not need to pay any allocation planning costs until their plans are reviewed, which could be another ten years.
- The costs of plans may be difficult to estimate, so fees would need to be determined after a plan has been completed, which means that the Department of Water needs a funding mechanism to pay for the plans up front and recover the costs later. Costs could be recovered as an annual payment over time from affected water users, perhaps over the ten years when the plan is in force.

The Authority's view is that the efficient water allocation planning and environmental water planning costs, and the efficient costs of the other activities that support allocation planning, should be recovered annually from users based on the total (aggregated across regions) level of effort involved in undertaking the allocation planning and related activities (total efficient cost to be recovered in 2008-09 was approximately \$9.0 million), but differentiated according to resource management categories and risk level.

The level of effort required depends on how much of a water resource is allocated (based on resource management categories C1 to C4) and the risk category that is assigned to a licence holder when submitting a licence application (depending on a number of factors, such as how much of a resource is allocated, how much water an applicant is applying for, what the impact is on other users and the environment). As a result, within each resource management category, charges would be set based on the Department's level of management effort for low, medium and high risk water users.

The resource management categories and associated risk categories are set out in the text box on top of the next page, while the risk categories that are assigned to licence applications are explained in section 4.2.2.

**Figure 4.1 Resource Management Categories and Risks****Resource Management Categories****Low risk (C1):**

- Relatively low use, 0-30 per cent of allocation limit used (C1 resource management category), or
- Low risk to environment, or
- Low consequences of current and short to medium term use

**Medium risk (C2):**

- Medium use, 31-70 per cent of allocation limit used (C2 resource management category), or
- Medium risk to assets and users, or medium consequences if use changes, or potential to jump quickly to high use

**High risk (C3):**

- High use, 70 to less than 100 per cent of allocation limit used (C3 resource management category), or
- High risk or high consequences if level of use increases without improvements to management

**High risk (C4):**

- 100 per cent or greater than 100 per cent allocation limit used (C4 resource management category) for any management area in a plan area

The cost share between the resource management categories (C1 to C4) in Table 4.10 is based on the estimate that total effort to support C3/C4 areas<sup>33</sup> is two times that for a C2 area, and the effort for C1 areas is a quarter that of a C2 area (resulting in a relative cost ratio of 1:4:8 for C1, C2 and C3/C4 areas). This estimated ratio reflects the information provided by the Department of Water in its submission.<sup>34</sup>

According to the Department, the different levels of effort required to support low, medium and high risk water users (only relevant for users in C3/C4 areas) results in a relative cost ratio of 1:2:5, as can also be seen in Table 4.10. This means that the total effort to support a high risk user is two and half times that for a medium risk user, and the effort for low risk users is half that required for a medium risk user.

The average costs of water allocation planning and management of water use per licence is higher for water users in C2 areas (\$390 per annum) than low risk water users in C3/C4 areas (\$304 per annum). This is because all the water users in C2 areas incur the same costs (total costs are averaged across all users) whereas different water users in C3/C4 areas incur different costs (low risk users require much less effort than medium or high risk users).

<sup>33</sup> It is understood that the level of effort required to undertake allocation planning and resource management activities for C3 and C4 areas is almost the same.

<sup>34</sup> Department of Water (May 2010), *Costing of water activities*, p48.

Some thought should be given to the impact that a large new user might have on a water resource, in particular when a water resource moves from one resource management category to another due to an increase in the allocation limit. For example, if an allocation given to a large user results in a resource moving from a C1 resource to a C3 resource, and most of the water is allocated to one big user, the proposed differentiation of costs based on risk categories may not adequately reflect the costs that are incurred by the large user. Consideration should be given to other approaches that might be more cost reflective, such as setting charges for water allocations and management of water use based on resource management categories and different volumes of water allocated to users. The Authority will examine this issue further in the final report.

**Table 4.10 Authority's Proposed Charges for Water Allocations and Management of Water Use**

Resource Management Category	Number of Water Use Licences	Efficient Cost Share <sup>(a)</sup> (\$)	Average Cost per Licence (\$)
C1	1,049	102,235	97
C2	2,727	1,063,092	390
<b>C3/C4</b>			
Low risk	4,609	3,593,540	304
Medium risk	2,004	1,562,476	608
High risk	3,407	2,656,366	1,520
<b>All</b>	<b>13,796</b>	<b>8,977,709</b>	<b>651</b>

(a) This includes 60 per cent, or \$1.2 million, of the efficient licence renewal costs (see discussion in section 4.2.2).

### Providing Water Allocations and Managing the Ongoing Use of Water

- 9) The efficient water allocation planning and environmental water planning costs, and the efficient costs of the other activities that support allocation planning, be recovered annually from users based on the total (aggregated across regions) level of effort involved in undertaking the allocation planning and related activities, but differentiated according to resource management categories and risk level. Appendix G provides information on the impact of the Authority's proposed fees and charges for a range of different licence holders.

## 4.4 Separate Billing for Large Licence Holders

In the draft report, the Authority suggested that where the costs associated with licensing of particular large licence holders (such as the Water Corporation) can be accurately identified, such costs should be charged to that licence holder.<sup>35</sup>

### 4.4.1 Background

In its submission on the Issues Paper, the Department of Water proposed to bill large water users separately if the direct costs of water resource management and planning activities incurred by the Department on behalf of a particular licence holder can be clearly identified. In the first instance, the Department proposed separate charging for the Water Corporation. However, it considered that co-operatives and other large users could eventually be treated separately like the Water Corporation.<sup>36</sup>

The Authority accepted that there is a case for charging some large customers their direct licensing costs, which would be excluded from the general licensing costs, if there are adequate systems in place to separately identify these costs. Further, other large customers, not just the Water Corporation, should be given the option of individual charging if the administration costs are not prohibitive. Where it is not practical to charge large customers directly, the Authority suggested that the charging regime should be sufficiently flexible to have charges adjusted if there is a clear case of either over or under charging.

In the case of the Water Corporation, the Authority proposed that there may be a need for independent verification of any water resource management costs incurred by the Department, as there may not be sufficient incentive to minimise such costs, which are passed on to the Corporation's customers.<sup>37</sup>

### 4.4.2 Department of Water Submission

In the Department of Water's cost information submission, the licensing of the Water Corporation for the Perth integrated water supply scheme has been separated out and costed as a specific activity undertaken by the Department.<sup>38</sup> In 2008-09, the Department of Water's actual costs to provide this service was \$324,211 (including overheads).<sup>39</sup>

### 4.4.3 Other Submissions

The CME, Water Corporation, Rio Tinto and Harvey Water supported separate billing of large users. However, the Manjimup and Pemberton Landowners Group questioned why this should not be extended to all parties, with licence holders paying on the basis of the services provided and the number of hours of work involved in each licence application.

<sup>35</sup> First Draft Report (December 2009), draft recommendation 16.

<sup>36</sup> Department of Water submission on the Issues Paper, pp118-119.

<sup>37</sup> First Draft Report (December 2009), pp37-39.

<sup>38</sup> Licensing of the Water Corporation for other areas of the State (outside of the IWSS) are incorporated into the general costs of licensing. In addition, the ongoing water resource management and planning costs incurred by the Department of Water on behalf of the Corporation are not included in this activity. The IWSS provides water to the Perth metropolitan area, the Goldfields and some towns in the wheatbelt.

<sup>39</sup> Department of Water (May 2010), *Costing of water activities*, pp41-42.

The Department of Water submitted that the determination of direct charges to a broader set of large users would require the Department to review its administrative systems to allow for the segregation of costs on a case-by-case basis.

#### 4.4.4 Authority Assessment

The Authority's view is that all of the Department of Water's efficient costs that contribute to the licensing of the Water Corporation in the IWSS should be recovered from the Water Corporation. The Corporation would then most likely seek to pass these costs on to its IWSS customers, which would be considered by the Authority during its reviews of the Water Corporations water charges. This is consistent with the principle that costs incurred exclusively on behalf of private parties who can be identified should be recovered from those parties (ultimately, IWSS water customers). Separate billing for the Water Corporation (and other large customers in the future) would also make it easier for the Department's customers to understand and scrutinise costs that are incurred on their behalf.

Outside of the IWSS, the Water Corporation's licensing fees are charged on the same basis as all other water users.

#### Licensing of Water Corporation in the IWSS

- 10) The direct licensing costs for the IWSS that are incurred each year by the Department of Water be recovered from the Water Corporation through an annual charge.

### 4.5 Indicative Water Licence Fees and Charges

Table 4.11 provides a summary of the indicative water licensing fees and charges that are proposed by the Authority.

**Table 4.11 Summary of Proposed Water Licensing Fees and Charges**

<b>Instrument Type</b>	<b>Cost per Instrument (\$)</b>
<b>New 5C Licence</b>	
Low	2,101
Medium	3,860
High	3,350
<b>Licence Renewals</b>	
Low	825
Medium	1,056
High	992
<b>Amendment of a licence to take water</b>	2,380
<b>Trade or transfer of a licence to take water</b>	2,933
<b>Licence to construct or alter a well</b>	1,661
<b>Permit to interfere with bed or banks</b>	1,672
<b>Ongoing Services to Licence Holders</b>	<b>Annual Charges (\$)</b>
<b>Water licensing policy</b>	112
<b>Enforcement</b>	38
<b>Water allocations and management of use</b>	
C1	97
C2	390
<b>C3/C4</b>	
Low risk	304
Medium risk	608
High risk	1,520

## 5 Water Metering – Cost Recovery and Indicative Fees and Charges

The Authority's draft recommendation was that the efficient costs of water resource management and planning activities incurred by the Department of Water that are directly associated with water metering be recovered from metered licence holders. This would include recovery of the cost of purchase, installation, maintenance and reading of meters.<sup>40</sup>

This section considers the methods for recovering the Department of Water's efficient costs of water metering, for water meters that are owned by the Department. The Authority's indicative water metering charges are also provided in this section.

### 5.1.1 Background

Water metering involves the installation, maintenance and support of a meter or a number of meters on river pumps or bores to measure the volume of water extracted, and the collection and recording of such data.

The Department of Water has an existing policy on metering, which requires that licence holders with allocations over 500 ML per year have to install, maintain and read their own meters, as part of their licence conditions and management of their own water use. Since this policy does not appear to result in any costs being incurred by the Department, there are no costs to be recovered from these licence holders.<sup>41</sup>

However, the Department has started to install meters for other licence holders with allocations above 50 ML per year in high demand and high risk areas (such as sub-areas on the Gngangara Mound). This metering program is currently funded by the Department of Water, although funding is being sought from the Commonwealth Government to enable the Department to install meters for most licence holders with an allocation above 50 ML in the future.<sup>42</sup>

In relation to the cost recovery of these metering activities, the Authority's view in the first Draft Report was that there are private benefits that arise from metering, since licence holders will have more certainty about the amount of water that has been allocated to them in their licences as well as knowledge about how much water they are using. Further, in many instances licence holders can sell any water savings identified through metering to other water users. The Authority therefore suggested that it would be appropriate to recover all or most of the efficiently incurred costs associated with water metering from licence holders.

The Authority's preferred option of cost recovery for water metering activities was one where the cost of purchasing and installing meters are recovered by the Department of Water over time through an annual charge, perhaps over the life of the meters. The ongoing operational costs for maintenance and readings that reflect the costs of providing the services should also be recovered from users through the annual charge.<sup>43</sup>

<sup>40</sup> First Draft Report (December 2009), draft recommendation 11.

<sup>41</sup> Department of Water's submission on the Issues Paper, p52.

<sup>42</sup> Ibid, p52.

<sup>43</sup> First Draft Report (December 2009), pp23-24.

## 5.1.2 Department of Water Submissions

In its submission on the Authority's draft report, the Department of Water supported the draft recommendation regarding the recovery of costs from metered licence holders. However, it made a number of comments about water metering as well.

The Department indicated that it is important to recognise that the cost of purchase and installation of water meters is not a one off cost, as meters should be replaced periodically to maintain the performance of the meters. It also suggested that the costs associated with the analysis, storage and provision of meter reading data to licensees should be recovered.

It was noted by the Department that some licensees may raise equity concerns about this draft recommendation. This is because the Department of Water has funded the purchase and installation of 1,250 state-owned meters across the Gngangara Mound since 2005 as part of its metering pilot project. No costs have been recovered from licensees, who were advised that they would not be charged for the installation and maintenance of those meters.<sup>44</sup>

In its cost information submission, the Department of Water sets out that under the metering activity, it undertakes the installation, maintenance and reading of state-owned water meters. The Department's metering program installs, maintains and monitors flow meters on bores within high use and high risk groundwater sub-areas on the Gngangara Mound and the Carnarvon Groundwater Area, for which water use information is critical for management. More recent information from the Department shows that 1,266 meters have been fitted over the past few years across 18 groundwater sub-areas on the Gngangara Mound.<sup>45</sup>

The Department submitted that it incurred \$2,954,969 in 2008-09 in its water metering activities for both the Carnarvon Groundwater Area and the Gngangara Mound. The Department has only used the 2008-09 metering activity costs for the Gngangara Mound to provide a per meter cost, as these are the most recent. These costs, which are outlined in Table 5.1, only apply to licensees who have a state-owned meter in place.

**Table 5.1 Costs of Metering Activities per Meter Installed at Gngangara Mound in 2008-09**

Area	Activity	Cost (\$)	Number of meters	Cost per meter (\$)
Gngangara Mound	Meter supply and installation	1,461,925 <sup>(a)</sup>	398	3,673
	Meter maintenance	78,670 <sup>(a)</sup>	28	2,810
	Meter reading and other activities <sup>(b)</sup>	1,157,292	1,266	914 <sup>(c)</sup>
<b>Total</b>		<b>2,697,887<sup>(d)</sup></b>		

(a) Installation and maintenance costs as per contract for service for 2008-09. Costs do not include internal management costs.

(b) Other costs include program planning and management, establishing and managing installation and maintenance contracts, data management and reporting.

(c) Annual cost per meter – two readings per year. This applies to all metered licensees.

(d) Remaining costs of \$257,082 are for Carnarvon (the total cost of metering in 2008-09 was \$2,954,969).

Source: Department of Water (May 2010), *Costing of Water Activities*, p54.

<sup>44</sup> Department of Water's submission on the Draft Report, p4.

<sup>45</sup> Department of Water (May 2010), *Costing of Water Activities*, p27.

### 5.1.3 Other Submissions

The CME and WALGA, who are required in some circumstances to install water meters, and monitor and report on water use to the Department of Water, were concerned that they would be charged for water metering activities by the Department of Water. The CME submitted that charges for water metering activities are not acceptable if water metering is provided and monitored by the user. WALGA suggested that local governments should be excluded from any charges associated with water metering as they undertake the metering activities, not the Department of Water.

## 5.2 Authority Assessment

Consistent with the principles outlined in the first Draft Report, the Authority considers that it is appropriate for the Department to recover the costs it incurs for any metering services it provides to metered customers. These services include the front-end costs of supplying and installing meters, and ongoing costs of maintaining and reading meters, and any other services directly related to metered customers (e.g. managing meter data for the purpose of determining water use and efficiency for individual customers). However, it is important to note that the purpose of meter charges is to recover only the costs of metering activities carried out by the Department. If there are instances in which metered customers provide these services themselves they would be exempt from charges.

Following consideration of PwC's advice in relation to the Department of Water's water metering activities and costs, the total efficient costs to be recovered from licence holders with state-owned meters on the Gngangara Mound were around \$2.6 million in 2008-09.

The Authority concurs with the view of the Department that all of the costs of its metering activities can be considered as private costs (costs of services provided for private parties who can be identified). For customers in regions where there is a high use of groundwater and where management of groundwater resources is critical, metering is necessary to provide sufficient information to provide water allocations to those customers. Alternatively, the metering services would not be required in the absence of these customers.

In terms of the charging structure, the Authority is of the view that an appropriate structure is one which separates the upfront costs of meter supply and installation from ongoing costs of meter reading and maintenance. Separation of these two different services would allow metered customers to out-source meter provision, installation or maintenance (subject to meeting service standards agreed with the Department), which could result in cost savings. However, it is likely that the Department would need to remain involved in meter reading to ensure data integrity.

Therefore, the Authority recommends that meter charges include:

- a separate fee per meter to cover the costs of meter supply and installation (which could be paid off over time in instalments by the customers); and
- an annual charge to cover the average costs per meter customer of providing meter reading and maintenance services.

The Authority considers that this is an appropriate approach to cost recovery for future meter services. That is, customers provided with these services from the time the charges are implemented would be required to pay. Customers who already have meters installed would therefore not have to pay for supply and installation of these meters, but would need to pay for meter reading and maintenance services provided by the

Department for those meters, as well as the costs associated with meter replacements and any new meters installed.

In regard to the equity issue raised by the Department of Water in its cost submission, while the Authority acknowledges that there is an inequity between licence holders who will have to pay for the supply and installation of new meters while existing users with water meters did not have to pay, the Authority's proposal that existing users will have to pay for the supply and installation of meters when they are replaced will reduce this inequity issue over time.

### 5.3 Indicative Fees – Water Metering

Based on the Authority's estimate of efficient costs of metering services for the Gngangara Mound in 2008-09, the Authority has determined that the average cost per customer for meter supply and installation is \$3,518 per meter (which can be paid upfront or through annual instalments over the life of the meter), and the average annual cost per meter for meter reading and maintenance is \$935 (see Table 5.2).

**Table 5.2 Authority's Proposed Water Metering Charges Based on 2008-09 Efficient Costs of Service**

Metering	Per Cent of Costs	Number of Meters	2008-09 Efficient Costs to be Recovered (\$)	Cost/Charges per Meter (\$)
Total costs			2,840,857	
Carnarvon costs			257,082	
<b>Total costs to be recovered</b>			<b>2,583,775</b>	
Meter supply and installation	54	398	1,400,090	3,518
Meter maintenance <sup>(a)</sup>	3	28	75,343	2,691
Meter reading and other activities	43	1,266	1,108,342	875
Combined meter maintenance, reading and other activities				935

(a) The number of meters that required maintenance in 2008-09 was not very high.

#### Water Metering

11) The costs incurred by the Department of Water on behalf of metered customers on the Gngangara Mound and in the Carnarvon Groundwater Area be recovered from those customers, in the form of:

- an up-front charge per meter to recover the costs of meter supply and installation for new customers (and existing customers when meters are replaced); and
- an annual charge per meter to recover the average costs per meter of meter reading and maintenance for existing and new customers.

## 6 Water Source Protection – Cost Recovery and Indicative Fees and Charges

The Authority's draft recommendation was that the efficient costs of water resource management and planning activities incurred by the Department of Water that are directly associated with the protection of public drinking water supplies should be recovered from public drinking water suppliers through a direct charge.<sup>46</sup>

This section outlines the proposed method to recover the efficient costs incurred by the Department of Water in providing water source protection services to the water service providers.

### 6.1 Background

Costs are incurred by the Department of Water in relation to the protection of drinking water sources that are then licensed for abstraction by water service providers, such as the Water Corporation, Aqwest (Bunbury Water Board) and Busselton Water.

If costs were to be recovered from water service providers, the Water Corporation has indicated that it would like to have an influence on the water source protection activities it would be paying for, either directly through the purchase of specific services, or indirectly on the setting of priorities for the Department of Water to align with those of the Water Corporation. The Corporation would like to identify priority drinking water source protection plans and agree with the Department on appropriate timetables for completing such plans.

The Authority proposed that the Water Corporation, and other service providers if relevant, should ideally be able to purchase the specific services required from the Department of Water.

### 6.2 Department of Water Submission

The Department of Water is responsible for protecting the quality of drinking water sources in Western Australia so that the public has access to a reliable, safe, good quality drinking water and public health is not compromised. To achieve this, the Department prepares drinking water source protection plans for new and existing water sources, which provide guidance on appropriate land use activities and identify actions necessary to protect the quality of the resource.<sup>47</sup>

There were 146 public drinking water sources in Western Australia as of 30 June 2009, of which 102 have water source protection plans in place. The Department prepares between 10 and 15 plans each year depending on how complex the plans are. Fourteen plans were prepared in 2009-10.

According to the Department,<sup>48</sup> the amount of effort involved in preparing water source protection plans depends on the complexity of:

<sup>46</sup> First Draft Report (December 2009), draft recommendation 9.

<sup>47</sup> Department of Water (May 2010), *Costing of water activities*, p19.

<sup>48</sup> *Ibid*, p57.

- land uses;
- geographical location; and
- level of community interest/stakeholder involvement.

The protection of public water supplies requires contributions from a number of activities undertaken by the Department, not just the activity of preparing drinking water source protection plans. This includes groundwater assessment, investigation and review; preparation of guidance notes; implementation of water source protection plans; acquisition of P1 land; and land management.

The Department's view is that all of these activities support the service of protecting public drinking water supplies which are carried out for identifiable third parties (public drinking water suppliers on behalf of their customers). All the costs incurred in providing the service should therefore be recovered from public drinking water suppliers.

In its submission, the Department of Water classified plans into two categories, simple and complex. The Department then estimated that a simple plan requires 35 per cent of the effort of a complex plan. It should be noted that the acquisition of P1 land and land management do not apply across all public drinking water sources.<sup>49</sup>

The number of simple and complex plans for each service provider is provided in Table 6.1, with the vast majority of plans applying to the Water Corporation's drinking water sources.

**Table 6.1 Number of Water Source Protection Plans by Water Service Providers**

Service Provider	Number of Simple Plans	Number of Complex Plans	Total Plans
Water Corporation	64	36	100
Aqwest	0	1	1
Busselton Water	1	0	1
<b>Total</b>	<b>65</b>	<b>37</b>	<b>102</b>

Source: Department of Water (May 2010), *Costing of water activities*, p59.

The Department suggested that for the acquisition of P1 land and the ongoing management of this land, costs should be recovered from the relevant public drinking water service provider on a case-by-case basis.

The Department generally only buys one or two properties each year, and sometimes there are no acquisitions. In 2008-09, the Department purchased two properties in highly vulnerable groundwater sources. Both of these sources are operated by the Water Corporation.

In regard to the ongoing management of land, the Department advised that all P1 properties owned by the Department are located in drinking water supply catchments operated by the Water Corporation. It therefore suggests that the ongoing management costs for P1 land should be recovered from the Water Corporation.<sup>50</sup>

<sup>49</sup> Ibid, p57.

<sup>50</sup> Ibid, p59.

## 6.2.1 Authority Assessment

The Authority's view is that all of the costs of the activities that contribute to water source protection services of public drinking water sources should be recovered from public drinking water suppliers. The efficient costs of preparing and implementing water source protection plans were estimated to be \$1.6 million in 2008-09 and the majority of these costs could be allocated to the Water Corporation as it was the major user of this service during the year.

However, the Authority is concerned that the level of effort to prepare water source protection plans may not be efficient, and that there may be other options that could achieve safe drinking water supplies at a lower cost. PricewaterhouseCoopers observed in its report to the Authority that there is a potential for the Department of Water to over-service water source protection in the form of increased quality of plans and possibly plan coverage of public drinking water sources. This is likely because:

- [P]lans are produced to a standard set out by the *Australian Drinking Water Guidelines 2004*, which may not necessarily reflect the most efficient level of planning;
- neither the Water Corporation nor the Health Department face the costs of the demands they place on DoW for this activity – that is, the economic costs of restricting activities (in terms of welfare reduction) are not necessarily factored into the cost-benefit assessment of protecting water quality through preventative planning measures as opposed to addressing quality problems as they emerge;
  - in particular, the Water Corporation has a commercial interest to minimise the potential future costs of treating contaminated water, and will therefore have an incentive to use the planning process to restrict catchment activities that could have adverse impacts on water quality and/or yield; and
- there is an untested assumption that high-quality protection plans are required for all water sources – whereas, there may be scope for reducing the quality of these plans to meet a 'fit for purpose' criterion. (PwC report, pp78-79.)

The implementation of charges for water source protection services may improve the efficient level of water source protection planning being undertaken by the Department, although it is unlikely to have a major effect on the incentive for the Water Corporation to use this planning process instead of other, possibly more efficient options.

In regard to the acquisition of P1 land and the ongoing management of this land, the Authority suggests that the efficient costs should be recovered from the relevant public drinking water service provider on a case-by-case basis as costs are incurred.

## 6.2.2 Indicative Charges for Water Source Protection

The Authority has not estimated what the indicative charges for water source protection would be. Instead it recommends that the total amount of the actual costs incurred by the Department of Water in providing water source protection services should be recovered from the service providers at the end of each financial year. This should be based on mutual agreement about the work that should be undertaken and the Department of Water should provide the service providers with the estimated costs of this work at the beginning of each year.

In 2008-09, the efficient actual costs that would have been recovered from the service providers are as outlined in Table 6.2.

**Table 6.2 2008-09 Annual Charges for Water Source Protection Services**

Services	Annual Charges (\$)
<b>Preparation of plans; groundwater assessment, investigation and review; preparation of guidance notes; and implementation of plans</b>	
Water Corporation	1,578,064
AQWEST	27,031
Busselton Water	9,461
<b>P1 land management</b>	
Water Corporation	55,865
<b>Purchase of P1 land</b>	
From relevant service providers	Case-by-case basis

### Water Source Protection

- 12) The efficient actual costs incurred by the Department of Water in providing water source protection services be recovered from the service providers (Water Corporation, Aqwest and Busselton Water) at the end of each financial year.

## 7 Other Services – Cost Recovery and Indicative Fees and Charges

There are a range of other services provided by the Department of Water for other parties such as government agencies, local government authorities, the Western Australian Planning Commission and private developers. These services involve investigation of water resources and the provision of information and advice on water resources, in many cases to assist land development and the management of drainage and floodplains. This section discusses the activities involved and possible recovery of costs by the Department for:

- providing advice on statutory referrals;
- guiding urban water management;
- providing floodplain management advice; and
- providing water information.

### 7.1 Urban Drainage and Water Management

#### 7.1.1 Background

The Department of Water's urban water management activities are divided into two different sections:

- Urban drainage planning and water assessment, which develops drainage and water management plans for urban and coastal areas. This section also leads the development of best management practices for water resources and industry guidelines for planners and developers.
- Water and land use coordination, which provides advice to decision making authorities, such as the WAPC, on planning proposals that have water management implications. This includes assessment of subdivision applications referred to the Department of Water by the WAPC. The water and land use coordination section also develops strategic planning guidance on how the development industry can meet water resource management requirements, as well as cooperates with other Departments and the development industry to streamline approvals processes.<sup>51</sup>

For most of these activities, the costs that are incurred are not caused by a particular user or group of users, and as such the wider community should continue to pay for most of the urban water management activities. The exception is where the Department assesses subdivision applications that have been referred from the WAPC, where it is possible to identify the user who is causing the costs to be incurred.

As a result, the Authority's view in the first Draft Report was that the costs of assessing subdivision plans should be recovered from the users of this service. If the WAPC, or an area in the Department of Planning, undertook the assessments of water related issues themselves, presumably these costs would be included in its subdivision fees, which are understood to be fully cost reflective.

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<sup>51</sup> First Draft Report (December 2009), pp20-21.

The Authority's preferred option for cost recovery was for the Department of Water to recover its costs associated with subdivision assessments from the WAPC, who then has the option to pass these costs onto the applicants in order for it to continue its recovery of all the costs that it incurs.

### 7.1.2 Advice on Statutory Referrals

The Department of Water provides advice to the WAPC and local governments on specific planning and development proposals, which have water management implications. Proposals range from local subdivision and development applications, to strategic regional scale schemes or planning proposals.

The Department responds to around 2,000 statutory referrals of land planning and development applications from local governments and the WAPC every year.

The service that is undertaken by the Department is the provision of advice to decision making authorities on water management impacts (including impact on water source protection areas) of proposed land use development.

The provision of advice on statutory referrals is supported by some other activities, namely the implementation of water source protection plans and the preparation of guidance notes. The majority (80 per cent) of activities relating to the implementation of water source protection plans relate to the provision of advice on land use and development proposals in drinking water supply catchments. The Department also produces guidance notes on the impact of land use and development proposals.

The Department advised that it is moving towards investing more effort at the strategic level, as this will minimise the need for it to be involved in local scale proposals in the future.<sup>52</sup>

#### Department of Water Submission

In 2008-09, the Department responded to 2,189 statutory referrals. These referrals varied considerably in their complexity and the effort involved in responding. The Department receives five different types of statutory referrals (not just subdivision plan referrals), which are listed in Table 7.1. In order to understand the level of effort involved in responding to the various statutory referrals, the Department implemented a two month time keeping exercise for relevant full time equivalents. These officers were asked to record the level of effort that was involved in responding to the five different types of statutory referrals and to record additional details around the complexity, amount of public interest and water resource risk. In addition, they were asked to record whether or not the referral involved assessment of a technical report, which is believed to add to the level of effort required. The results of this time keeping exercise are outlined in Table 7.1.<sup>53</sup>

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<sup>52</sup> Ibid, p18.

<sup>53</sup> The Department of Water advised that the results should be treated with some caution as there are some inherent assumptions and limitations to the data and approach taken, which have largely arisen due to the short timeframe available for data collection and analysis. As a result, it is likely that the results of the analysis would change if the exercise was performed over a longer period of time. For more information on the limitations and assumptions, see Department of Water (May 2010), *Costing of water activities*, pp63-64.

**Table 7.1 Relative Effort Involved in Responding to Statutory Referrals (April-May 2010)**

Referral Type	Number of referrals received	Percentage of total effort involved
Sub-division and development applications	233	45
Local planning proposals	40	38
District planning proposals	20	14
Regional planning proposals	3	0
Clearance of sub-division conditions	8	2

Source: Department of Water (May 2010), *Costing of water activities*, p62.

The Department prepared a table that shows the relative costs of simple, medium and complex referrals for the sub-division and development referrals, and the local and district level planning proposals (see Table 7.2). Due to the limitations of the data discussed in the footnote on the previous page, regional planning proposals and the clearance of sub-division conditions were excluded from this analysis.

For the three categories of referral, the level of effort involved seems to reflect the level of complexity. However, the level of effort involved in responding to district planning proposals may be understated due to the limitations of the data outlined in the Department's submission.<sup>54</sup>

**Table 7.2 Relative Costs of Simple versus Complex Referrals**

Referral Type	Average cost, high complexity referrals (\$)	Average cost, medium complexity referrals (\$)	Average cost, low complexity referrals (\$)
Sub-division and development applications	2,060.64	1,545.57	414.12
Local planning proposals	5,304.11	3,941.53	646.95
District planning proposals	3,237.28	1,945.19	1,184.03

Source: Department of Water (May 2010), *Costing of water activities*, p64.

The Department also assessed the level of effort involved for the different referral types depending on whether or not a technical report was submitted and required consideration. As can be seen in Table 7.3, the level of effort involved increases significantly where a technical report is attached to an application for most statutory referral types. The exception is the time taken for regional planning proposals and clearance of sub-division conditions, where less effort seems to be involved when a technical report is attached. This could be as a result of data limitations, or for sub-division clearances, it could be that the information provided in a technical report makes the Department's assessment process quicker.<sup>55</sup>

<sup>54</sup> Department of Water (May 2010), *Costing of water activities*, p64.

<sup>55</sup> Ibid, p64.

**Table 7.3 Level of Effort Involved, With and Without Technical Reports**

Referral Type	Average hours with technical support	Average hours without technical support	Average hours total
Sub-division and development applications	2.96	0.76	1.16
Local planning proposals	7.74	1.93	5.64
District planning proposals	4.95	2.64	4.26
Regional planning proposals	0.75	0.83	0.78
Clearance of sub-division conditions	1.00	1.60	1.46

Source: Department of Water (May 2010), *Costing of water activities*, p65.

The Department is expecting that the number of statutory referrals will continue to increase over time, although it is working on reducing this workload through working with local governments to increase their capacity to assess water management issues, and through streamlining its responses to sub-division applications.<sup>56</sup>

### Authority Assessment

The Authority's view is that the costs incurred by the Department of Water in assessing sub-division and development applications, clearing subdivision conditions and local planning proposals should be recovered from the users as these can be identified. In 2008-09, the efficient costs of these three services to be recovered were approximately \$1.7 million. The indicative average charges to recover these costs are provided in Table 7.4.

The Authority is proposing that charges not be differentiated for the level of complexity of the statutory referrals at this stage due to the limited data available to the Department in estimating the levels of effort for the different types of referrals. However, the Department should continue to collect data to enable it to analyse and determine the level of effort that is required for low, medium and high complexity referrals for the subsequent review of fees and charges that was proposed by the Authority in the first Draft Report.

**Table 7.4 Authority's Proposed Charges for Statutory Referrals Identified for Cost Recovery**

Referral Type	Average Charges* (\$)
Sub-division and development applications	610
Clearance of sub-division conditions	768
Local planning proposals	2,967

\* Based on recovery of efficient costs and annualised number of referrals.

The costs incurred by the Department in responding to the other statutory referrals (district planning proposals and regional planning proposals) are not recommended to be recovered from users, as it is difficult to identify specific users of the service, in particular the future users.

<sup>56</sup> Ibid, p65.

### 7.1.3 Urban Water Management

The Authority did not identify this service as being suitable for immediate cost recovery in its draft report.

#### *Department of Water Submission*

The Department of Water provided more detailed information about the sub activities undertaken in the urban water management area in its cost information submission, which was provided to the Authority on 31 May 2010. In this area, the Department's sub activities are:

- drainage and water management planning;
- arterial drainage studies; and
- some groundwater assessment, investigation and review.

The drainage and water management planning activity, which is largely driven by the rapid urban expansion of Perth into high water table areas,<sup>57</sup> involves the Department undertaking technical assessments and developing drainage and water management plans for proposed future urban development areas. These plans provide guidance to planning organisations, such as the WAPC, and developers on water management issues and how they should be considered in the planning and development process.<sup>58</sup> The Department has not allocated any of these activity costs, or the small contribution from the groundwater assessment, investigation and review activity costs, to private parties, as the Department does not believe that private parties can be identified.

Under the arterial drainage studies sub activity, the Department is implementing the better urban water management framework in existing drainage areas. This includes the development of best urban water management practices, progressing drainage governance issues, planning drainage research and development, and undertaking studies and assessments to address management issues (such as nutrient discharge) and explore opportunities for retrofitting of drains to improve water management outcomes. The studies also address the need to upgrade or maintain existing drainage infrastructure to improve performance.<sup>59</sup>

The key service undertaken by the Department of Water, based on the activities discussed above, is the provision of advice to guide the management of water in urban areas.

The Department advised that it cannot determine the cost per unit of output for services related to guiding urban drainage and water management at this stage, including the cost per unit output for arterial drainage studies. This is because there is no defined standard product for arterial drainage studies, with the scope of the studies varying greatly depending on the management issues involved. The Department needs more time to collect information on the scope of each study, activities involved and the costs that are incurred in providing these studies.

<sup>57</sup> For example, the localities of Byford, Jandakot and Murray.

<sup>58</sup> Department of Water (May 2010), *Costing of water activities*, p16.

<sup>59</sup> Ibid, p17.

## Authority Assessment

As the cost per unit of output for the services to guide urban drainage and water management are not available, the Authority recommends that the costs of these services should not be recovered from users at this stage. However, the Department of Water should continue to collect information about these services and their costs, to enable the introduction of charges in the future.

## 7.2 Floodplain Management Advice

Floodplain management advice involves the Department providing advice to decision-making agencies (mostly local governments) on floodplain areas and flood levels, which are often related to specific planning and development proposals. The objective of this sub activity is to protect life and property, by ensuring that development does not occur in areas with an unacceptable risk of flood.<sup>60</sup>

The Authority did not identify this service as being suitable for immediate cost recovery in its draft report.

### 7.2.1 Department of Water Submission

There is only one activity which contributes to the provision of this service and the Department of Water believes that all the costs of undertaking this service can be allocated to private users. They include proponents of land use and development proposals in or near floodplain areas via local governments, WAPC or consultants. The Department also receives requests for information from property valuers, real estate agents and other government agencies.

The Department responds to around 900 floodplain enquiries every year, and it can take anything from thirty minutes to as much as four days to provide the advice. However, the Department does not have any real data to differentiate the costs of these requests, depending on their complexity or scope.

In 2008-09, the Department responded to 895 requests for floodplain information at a cost of \$728,300. Based on this information, the average cost per enquiry was \$814. The Department does not have any data to distinguish the costs of different requests, which vary depending on the complexity or scope of a request.<sup>61</sup>

As the cost per service is quite small, the Department suggested that the administration costs of recovering these costs in a number of ways may outweigh the benefits.<sup>62</sup>

### 7.2.2 Authority Assessment

The efficient costs incurred by the Department of Water in its provision of floodplain management advice in 2008-09 were \$603,046. Based on the 895 requests for information received in 2008-09, the efficient average cost per enquiry was \$674.

In principle, the Authority's view is that the efficient cost of providing floodplain management be recovered from users, initially through an average charge of \$674 per

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<sup>60</sup> Ibid, p18.

<sup>61</sup> Ibid, pp67-68.

<sup>62</sup> Ibid, p68.

enquiry. Once the Department has collected information about costs of different requests, charges which better reflect the level of effort involved in providing the advice should be implemented.

However, the Department suggested that since the cost per service is quite small, the administration costs of recovering the costs of providing floodplain management advice may outweigh the benefits. The Authority needs further information from the Department to establish whether or not this is the case, and if it is, cost recovery of this activity will need to be reconsidered before the final report is delivered to the Government.

## 7.3 Provision of Water Information

### 7.3.1 Background

The Department of Water provides information on water resources in response to requests from a wide range of parties, including consultants, state and federal government agencies, universities, companies and private individuals.

The Authority did not identify this service as being suitable for immediate cost recovery in its draft report.

### 7.3.2 Department of Water Submission

The Department of Water estimated that the service of providing water information incurred total costs of \$553,154 in 2008-09. There was only one activity (water information provision) associated with this service, which is carried out by the Department's data provision group. Records on information requests maintained by the group (including the scope of the data requested and the party making the request) show that 51 per cent of the requests are for private parties (e.g. companies, developers, private individuals). The remainder of the requests are for government, universities and non-government organisations. The Department has therefore submitted that 50 per cent of costs (\$276,577) could be recovered from private parties.<sup>63</sup>

The Department submitted that in 2009, 1,804 information requests were received from private parties, giving an average cost per data request of \$153.

It is anticipated that there may be less demand for this service in the future, as the Bureau of Meteorology (**BOM**) will be making information from its Australian Water Resource Information System freely available. Furthermore, the Department suggested that the cost of recovering the costs of water information provision is likely to outweigh the benefits.<sup>64</sup>

### 7.3.3 Authority Assessment

The Authority's view is that the efficient cost of providing water information to private parties (totalling \$233,272 in 2008-09) should be recovered from these users. Based on the 2008-09 costs, the efficient average cost per enquiry was \$129.

As with cost recovery for floodplain management advice, the Department believes that the cost per service is quite small, and that the administration costs of recovering the costs of

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<sup>63</sup> Ibid, pp68-69.

<sup>64</sup> Ibid, p69.

providing water information may outweigh the benefits. The Authority needs further information from the Department to establish whether or not this is the case, and if it is, cost recovery of this activity will need to be reconsidered before the final report is completed.

In addition, if the information becomes available for free from the BOM, the Department of Water should wind back its services in this area and refer any enquiries to the BOM.

### Cost Recovery and Indicative Fees and Charges for Other Services

- 13) The efficient costs incurred by the Department of Water in assessing subdivision and development applications, clearing subdivision conditions and local planning proposals be recovered from users of the services. The proposed fee to be based on the Department's average cost of assessment.
- 14) The Department of Water to continue collection of data on the level of effort required to assess statutory referrals with low, medium or high levels of complexity to enable the introduction of more cost reflective fees in the future.
- 15) The efficient costs incurred by the Department of Water in providing information for district planning proposals and regional planning proposals not be recovered from users of these services.
- 16) As the cost per unit of output for the Department of Water's services to guide urban drainage and management are not available, the costs incurred by the Department in providing these services not be recovered from users at this stage. The Department of Water to continue collection of information about these services and their cost to enable the introduction of fees in the future.
- 17) The efficient costs incurred by the Department of Water in providing floodplain management advice and water information to private parties be recovered from users of the services, unless the Department of Water provides information which shows that the costs of implementing fees for these services would outweigh the benefits.
- 18) In addition, if the provision of water information becomes available for free from the Bureau of Meteorology, the Department of Water to wind back its water information provision service and refer any inquiries to the Bureau of Meteorology.

## 8 Impacts of Fees and Charges and Implementation

### 8.1 Terms of Reference

In making its recommendations to the Government, the Authority is required to provide options that include:

- the implementation impacts for various types of users, including a sensitivity analysis on capacity to pay assumptions; and
- opportunities for implementation under both the existing legislative responsibilities of the Department of Water as well as those specified by the National Water Initiative.

The Authority is also required, in developing its recommendations, to have regard to:

- the Government's social, economic and environmental policy objectives;
- the Government's obligations as a signatory to the National Water Initiative Intergovernmental Agreement; and
- any relevant pricing principles arising from the 1994 Council of Australian Governments water reform agreement and the National Water Initiative.

### 8.2 Impacts of Fees and Charges

#### 8.2.1 *Background*

The Authority's draft recommendation was that "ability to pay" concerns should not influence the design of cost-reflective water resource management and planning charges. Cost reflective charges help to promote the use of water resources in their highest value use and discourage water use for activities where it is not valued.

The Authority does not generally support subsidies for groups of water resource users who claim that they do not have the ability to pay, as licence holders tend to use water for commercial purposes. However, if there is a recognised affordability issue pertaining to any groups who only use the water for household purposes, subsidies would be better provided by grants rather than through the design of the charging regime.

#### 8.2.2 *Submissions*

The Authority only received a few comments on impacts in submissions as it did not publish any indicative fees or charges in the first Draft Report. Many stakeholders wanted to wait for information about proposed fees and charges before commenting on impacts.

There was support for the principle that capacity to pay concerns should not influence the design of charges (CME, Water Corporation, Department of Water and Rio Tinto).

WALGA submitted that any increases in charges passed on by local government to developers could reduce developers' motivation for best practice and innovation in water resource management of new developments.

The Manjimup and Pemberton Landowners Group noted that the recovery of \$30 million from licence holders could mean licence fees of between \$3,000 and \$12,000 per year for Manjimup licence holders.

CME requested that any impact of charges on the competitiveness of Western Australian industries be considered.

### **8.2.3 Authority Assessment**

The Authority has considered the impact of water resource management and planning fees and charges on water users. The Department of Water has provided examples of different types of water licence holders, which have been used by the Authority to examine the impact of charges. These were categorised into type of enterprise, source of water, volume of allocation, level of catchment allocation, and typical level of effort involved.

For example, a new licence applicant for a small farm using groundwater in an area that is classified as C3, seeking an allocation of 72,000 kilolitres per year, would be charged an application fee of \$3,860 and ongoing annual water resource management and planning charges of \$757 at the end of the proposed phasing in period. This and other examples are provided in **Appendix G**.

Some water users would also be subject to water metering charges, if they are in high use and high risk groundwater sub-areas where the Department installs government owned water meters as part of its metering program. Based on recovery of efficient costs, when the Department of Water installs a new water meter, the water user would be charged an upfront fee of \$3,518 for the supply and installation of the meter. This could also be paid for through annual instalments over the life of the meter. In addition, they would be charged an annual fee of \$935 to recover the Department's costs to maintain and read the meters. These proposed charges are based on the Department's efficient actual costs in 2008-09, and would apply at the end of the proposed three year phase in period.

The Authority will further examine the capacity of licence holders and other water users to pay the indicative fees and charges in the Final Report and it is inviting submissions from stakeholders on capacity to pay issues to be considered as part of the Authority's examination.

#### *Ability to Pay by Agricultural Water Users*

There is no actual income data available to the Authority to assess the affordability of fees and charges for agricultural water users. However, given the scale of the proposed charges, the Authority would be surprised if the indicative fees and charges resulted in any farms becoming unviable. If such a small cost does cause financial problems for a user, then it is likely that the user would be very vulnerable even if these charges were not imposed.

#### *Impacts on Water Service Providers*

The indicative charges will also have an impact on the water service providers, in particular the Water Corporation. It is expected that the additional costs for the Water

Corporation to pay water resource management and planning charges will be recovered from its customers.

The indicative charges that would apply to the Water Corporation to recover the Department of Water's efficient costs incurred to provide licensing services for the IWSS and the efficient costs associated with water source protection were estimated at approximately \$1.9 million in 2008-09. This includes fees and charges for water source protection of \$1,578,064, management of Priority 1 land of \$55,865, and IWSS licensing of \$272,430, but excludes licensing charges outside of the IWSS and the annual water resource management and planning charges.

In 2008-09, the Department also purchased two properties in highly vulnerable groundwater sources operated by the Water Corporation. The cost of these properties, which would have been recovered from the Water Corporation, was just over \$2.7 million.

These indicative fees and charges only represent a very small proportion of the Water Corporation's annual operating and capital expenditure, and are not likely to have a significant impact on the Water Corporation's customers.

The indicative fees and charges of \$4.6 million (\$1.9 million for water source protection and IWSS licensing and \$2.7 million for land purchases) that would have applied to the Water Corporation only represent around 0.2 per cent of the Water Corporation's total revenue in 2009-10, which was approximately \$1.9 billion.<sup>65</sup> As indicated before, these fees and charges exclude the licensing charges that would apply to the Water Corporation outside of the IWSS and the annual charges for water allocation planning and ongoing water management services.

Aqwest's total revenue in 2009-10 was around \$9.5 million<sup>66</sup> and the indicative charges for water source protection services that would have applied to Aqwest in 2008-09 were \$27,031, which is around 0.3 per cent of Aqwest's revenue.

The indicative water source protection charges that Busselton Water would have paid in 2008-09 were \$9,461, compared to its total revenue of \$7.2 million earned in 2009-10<sup>67</sup> (the indicative charges only represent around 0.1 per cent of revenue).

The upfront licensing fees and the ongoing water resource management and planning charges that would apply to Aqwest and Busselton Water are not included as there are no estimates available to the Authority.

### *Impacts on the WA Planning Commission*

The WAPC collects fees for applications made under the *Planning and Development Act 2005*, the *Strata Titles Act 1985* and associated regulations. The WAPC reviews its fees annually, and from 1 July 2010 to 30 June 2011, subdivision applications proposing two lots up to and including 100 lots attract a fee of \$1,533 plus \$35 per lot. For example where five lots are proposed the application fee is \$1,533 plus \$175 (five lots multiplied by \$35) which totals \$1,708. Applications proposing 101 lots or greater attract a fee of \$5,033 plus \$11.70 per lot for every lot in excess of 100 lots. For example, where 105 lots are proposed the application fee is \$5,033 plus \$58.50 (five lots multiplied by \$11.70) which totals \$5,091.50.<sup>68</sup> It is understood that the fees that are collected by the WAPC for

<sup>65</sup> Water Corporation's 2009-10 Annual Report.

<sup>66</sup> Aqwest's 2009-10 Annual Report.

<sup>67</sup> Busselton Water's 2009-10 Annual Report.

<sup>68</sup> WAPC website (<http://www.planning.wa.gov.au/Form%201A%20fees.pdf?id=2341>)

subdivision applications recover 100 per cent of the assessment costs incurred by the WAPC.

The indicative fee required to recover the efficient costs incurred by the Department in assessing subdivision and development applications is \$610 (by the end of the three year phase in period). If the Department is required to clear any sub division conditions, an additional charge of \$768 would be required from the WAPC at the end of the three year phase in period.

If these indicative charges were introduced in full in 2010-11 and the WAPC passed on the Department of Water's fee to applicants, the fee for an application where five lots are proposed would increase from \$1,708 to \$2,318. The Authority does not believe that this increase in fees would deter developers or land owners from subdividing land.

### *Impacts on Local Governments*

Local governments currently pay separate water licensing fees for public open spaces, although it is understood that the Department of Water is considering whether or not a single fee for water licensing could be paid by each local government instead. The water licensing fees that a local government would have to pay under the proposed fees and charges would therefore vary depending on the number of licences held.

**Appendix G** provides examples of the fees and charges that would be applicable to a local government for different public open spaces. A local government who is taking, or seeking to take, groundwater for a small public open space used for recreation that is assessed as low risk by the Department of Water, would be charged:

- \$2,101 for a new licence application;
- \$825 for a licence renewal application; and
- \$453 per annum for ongoing water resource management.

Where a local government is taking, or seeking to take, groundwater for a large public open space used for recreation, assessed by the Department as a medium risk, the proposed fees and charges would be:

- \$3,860 for a new licence application;
- \$1,056 for a licence renewal application; and
- \$757 per annum for ongoing water resource management.

Local governments have the option to pass all or some of its water licensing costs onto its rate payers.

### **Local Government Planning Fees**

The *Planning and Development Regulations 2009* provide a framework for local government fees and charges for planning services and include details of the fees that may be levied. In 2009, the *Planning and Development (Local Government Planning Fees) Regulations 2000* were consolidated into the *Planning and Development Regulations 2009*.

Fees for development applications are based on a sliding scale, and a maximum fee of \$135 applies to development applications where the estimated cost of development is up to \$50,000. Fees are capped at a maximum fee of \$31,350 for developments with an estimated cost of \$21.5 million or more. The fee for determination of a development

application for an extractive industry is \$676, while the cost of advertising and specialist reports are separate charges. A sliding scale of fees also applies to applications for subdivision clearances, starting at \$67 per lot for five lots or less. The fee to provide a subdivision clearance for 195 lots or more is \$6,756.<sup>69</sup>

The proposed charges to recover the Department of Water's costs in assessing development applications for local governments (\$610 per application) and clearing subdivision conditions (\$768 per clearance) could be passed on to the developers through the existing charges by local governments for development applications.

In regard to the recovery of the Department of Water's costs associated with providing advice on local planning proposals, a fee of \$2,967 would be applicable to local governments. If it is possible, local governments could choose to pass these charges onto customers who use local planning services.

## 8.3 Implementation of Fees and Charges

In regard to the Department's legislative powers to implement water resource management and planning charges, the Authority's view in the first Draft Report was that the Government should ensure that State legislation provides for the appropriate recovery of water resource management and planning costs. As it is the Authority's role to make independent recommendations to government and up to the government to implement those recommendations should it choose to, the Authority has not sought legal advice regarding the provision under legislation to recover different types of costs.

As noted in the first Draft Report, the National Water Commission has cited that the lack of progress in Western Australia towards cost recovery in water resource management and planning is a failure by the State to meet its obligations under the National Water Initiative (NWI). The Authority's view is that the proposed fees and charges to recover the efficient costs of the Department of Water's water resource management and planning activities that are outlined in this second Draft Report represent a key step towards meeting the State's obligations under the NWI.

### 8.3.1 National Water Initiative

Several stakeholders submitted that fees and charges should not be introduced in isolation from the implementation of the State's other commitments in relation to the NWI, such as the legislative reform (WAFarmers).

WALGA recommended that the Authority wait for the outcome of the National Water Commission's inter-jurisdictional working group on the pricing principles for water resource management and planning charges to ensure that any cost allocation does not conflict with these principles.

Rio Tinto did not agree with the Authority that the costs of increases in service standards should be borne by licence holders, arguing that under the NWI risk assignment framework the cost of policy change is incurred by government rather than by users.

CME submitted that future obligations, such as the development of statutory water management plans under the NWI, have not been addressed.

<sup>69</sup> WAPC, 2010, Planning *Bulletin 93/2010 Planning and Development Regulations 2009 (Part 7 Local Government Planning Charges)*.

Harvey Water requested clarification of how charges would reflect the costs of issuing licences in perpetuity, as proposed for the new water legislation.

### 8.3.2 *Phasing In of Fees and Charges*

The Authority's view is that a conservative approach to cost recovery should be adopted since this is the first time that the Department has been required to collect and analyse information about its activities and costs. The full costs of the Department of Water's activities should not be recovered at this stage, for the following reasons:

- Many of PricewaterhouseCoopers findings in relation to the effectiveness and efficiency of the Department of Water's activity costs were inconclusive. As a result, more information over a longer period of time is required to provide greater certainty about the Department of Water's costs and levels of effort in undertaking activities.
- The proposed charges are indicative only as they are based on 2008-09 costs – the actual costs of activities over the next three years are likely to be different and it is important to ensure that any charges do not exceed efficient costs.
- The Department's costs are based on planned FTEs, not actual FTEs, which could be overstating the actual costs that are incurred since the Department has varying vacancy rates across its activities.
- The Department is still implementing reforms in the water industry as required under the NWI. Until these reforms have been implemented and it is known what impacts these will have on the Department's activities and costs, the full costs should not be recovered.

It is therefore suggested that the proposed fees and charges should be phased in over a three year period, and the Department of Water's activities and costs be subjected to another review which would establish the fees and charges that should be implemented after this three year period.

The Authority's proposed fees and charges, and the phasing in of these charges, for the following five services that have been identified as suitable for cost recovery, are outlined in **Appendix F**:

- Processing and assessment of applications for water licences and permits.
- Licensing of the Water Corporation for the IWSS.
- Providing water allocations and managing the ongoing use of water.
- Protecting public drinking water sources.
- Providing advice on statutory referrals.

### 8.3.3 *Administrative Costs to Implement Fees and Charges*

As mentioned in section 3.5.2, the Department of Water's cost estimates do not include costs to implement and administer the proposed water resource management and planning fees and charges. Consequently, the Authority's proposed fees and charges do not include the recovery of any costs that might be incurred by the Department to implement and administer billing systems.

In some cases, the Department has indicated that the administrative costs of setting up and maintaining billing systems may be greater than the actual costs of providing the services. If the Department provides evidence that this is the case for some of the

services considered in section 7, the Department should not recover its costs incurred in providing those services. This is consistent with the Authority's draft principle that water licensing and the recovery of costs should be implemented in such a way that benefits exceed costs.

If fees and charges for water resource management and planning services are implemented and another review of the Department's activities and costs is undertaken as recommended in the Authority's first Draft Report, any efficient costs that are incurred by the Department that are associated with billing customers would need to be considered for inclusion at that time.

### Impacts of Fees and Charges and Implementation

- 19) The Authority invites stakeholders to make submissions with information about capacity to pay issues in relation to the proposed water resource management and planning fees and charges.
- 20) The Authority recommends that the proposed water resource management and planning charges be phased in over a three year period as outlined in Appendix F.

# APPENDICES

## 9 Appendix A. Terms of Reference

### INQUIRY INTO WATER RESOURCE MANAGEMENT AND PLANNING CHARGES

#### TERMS OF REFERENCE

I, TROY BUSWELL, Treasurer, pursuant to section 32(1) of the Economic Regulation Authority Act 2003, request that the Economic Regulation Authority (ERA) undertake an inquiry and provide the Government with a range of options and recommendations for:

- the recovery of the planning and management expenses incurred by the Department of Water for the sustainable management of the State's water resources; and
- the most appropriate regulatory arrangements for the setting of service standards for the resource manager, the setting of the charges and the subsequent recovery of those charges from water users.

The options are to include:

- the implementation impacts for various types of users, including a sensitivity analysis on capacity to pay assumptions; and
- opportunities for implementation under both the existing legislative responsibilities of the Department of Water as well as those specified by the National Water Initiative.

In doing so, the Authority is requested to consider and develop findings on:

- the tasks or activities undertaken in the efficient management of the State's water resources, by the Department of Water, that would appropriately be recovered from water users;
- the most appropriate level (or percentage) of cost recovery from water users; and
- the most appropriate allocation of costs between licence holders and other water users (licensed entitlement or actual use).

In developing its recommendations, the Authority will have regard to:

- the Government's social, economic and environmental policy objectives;
- the Government's obligations as a signatory to the National Water Initiative Intergovernmental Agreement; and
- any relevant pricing principles arising from the 1994 Council of Australian Governments water reform agreement and the National Water Initiative.

The Authority will release an issues paper as soon as possible after receiving the reference. The paper is to facilitate public consultation on the basis of invitations for written submissions from industry, government and all other stakeholder groups, including the general community.

A draft report is to be available for further public consultation on the basis of invitations for written submissions.

The ERA will complete a final report no later than nine months after receiving the Terms of Reference.

**TROY BUSWELL MLA**

**TREASURER, MINISTER FOR COMMERCE;**

**SCIENCE AND INNOVATION; HOUSING AND WORKS**

The Treasurer has approved an extension, to 28 February 2011, for the Authority to deliver the final report for its inquiry into water resource management and planning charges.

## 10 Appendix B. National Water Initiative Pricing Principles

### Pricing Principles for Recovering the Costs of Water Planning and Management Activities<sup>70</sup>

*Principle 1: Water planning and management activities.*

A framework for classifying water planning and management activities has been developed (see **Appendix C**). This provides the basis on which water planning and management activities can be classified on a consistent basis.

*Principle 2: Government Activities*

Water planning and management costs that are recovered through charges from water users should exclude the costs of activities undertaken for government, such as strategic or overarching policy development and Ministerial or Parliamentary services.

*Principle 3: Cost-effectiveness test*

The costs of water planning and management activities that have been identified for cost recovery from water users (in whole or in part) should be 'tested' for cost-effectiveness by an independent party, and the findings of such cost-effectiveness reviews are to be made public.

*Principle 4: Cost allocation*

Costs are to be allocated between water users and governments', using an impactor pays approach.

*Principle 5: Differentiation of costs*

Where practicable, water planning and management costs are to be identified and differentiated by catchment or valley and by water source. Similarly, any water planning and management charges should in turn recover the costs of the activities concerned and be differentiated by catchment or valley or region, and by water source (e.g. regulated, unregulated or groundwater sources) where practicable.<sup>71</sup>

*Principle 6: Community Service Obligations*

Where it is practical to do so, jurisdictions should aim to reduce or eliminate subsidies or Community Service Obligations. Any shortfall between the revenue required to achieve cost recovery from water users and the total costs recovered through water charges should be reported in a transparent manner.

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<sup>70</sup> National Water Initiative Pricing Principles, pp14-15.

<sup>71</sup> For example, it is not considered practicable to differentiate water planning and management charges by catchment, valley or region or by water source where a jurisdiction can demonstrate that water planning and management costs do not vary significantly across catchments, valleys or regions or by water source, or it is very costly to determine costs at this level. A broader charge (such as a state-wide charge) may be applied where this is currently the case. Ibid, p15.

## 11 Appendix C. Draft Recommendations in the Authority's First Draft Report

### Principles for the Recovery of Water Resource Management and Planning Costs

- 1) The Authority recommends that the following principles be applied to the recovery of water resource management and planning costs:
  - a) The costs of activities to address impacts, or potential impacts, arising from the use of water resources, be recovered from those parties who cause the costs to be incurred, if the parties can be identified. Costs may be caused by individuals (for example assessment and monitoring of individual licences) or groups (for example allocation planning for groups of licence holders).
  - b) If the parties who cause costs to be incurred cannot be identified, costs be recovered from public funds.
  - c) The costs of activities that produce outputs in the nature of public goods be borne by the public.
  - d) If costs are incurred on behalf of private parties for activities that also produce outputs in the nature of public goods, the costs be shared between the private parties and the public.
  - e) Only efficiently incurred costs be recovered from licence holders and other private parties.
  - f) Water licensing and the recovery of costs from licence holders be implemented in a way such that benefits exceed costs.
  - g) Any charges to licence holders be:
    - practical to implement;
    - clear and transparent; and
    - equitable, with licence holders in similar situations facing similar charges.

### Allocation of Costs to Private and Public Users

- 2) The allocation of costs between private and public users be determined for each individual water resource management and planning activity, based on who is causing the costs to be incurred.
- 3) The costs of water used as an input into commercial operations, including farming enterprises, would include the associated costs of water resource management and planning.
- 4) For public open spaces, water resource management and planning costs be shared between local governments and the general community, as not all the users of such open spaces are local rate payers. The Authority is seeking feedback on the appropriate proportion of costs to be recovered from rate payers.

### Nexus between Costs and Charges

- 5) Where practicable, charges to licence holders would vary by region to reflect the costs of water resource management in each region.

### Recognising the Contribution of Licence Holders to Water Resource Management and Planning Activities

- 6) Licence holders who carry out work that contributes significantly to allocation plans could receive a reduction in their licence fees (e.g. by waiving some or all of the

allocation planning cost component of their licence fee). The Authority will examine this issue further and is seeking feedback from interested parties.

### **Equitable Charges**

- 7) Garden bore owners in Perth would ideally be charged for the costs that they cause to be incurred in monitoring and managing Perth's groundwater resources. The Authority will examine further whether this can be achieved in a cost efficient way and make a recommendation in the final report.

### **Ability to Pay for Different Users**

- 8) Ability to pay concerns should not influence the design of water resource management and planning charges. Subsidies are generally not supported for groups of water resource users who claim that they do not have the ability to pay, as licence holders tend to use water for commercial purposes. However, if there is a recognised affordability issue pertaining to any groups who only use the water for household purposes, subsidies would be better provided by grants rather than through the design of the charging regime.

### **Water Source Protection**

- 9) The efficient costs of water resource management and planning activities incurred by the Department of Water that are directly associated with the protection of public drinking water supplies be recovered from public drinking water suppliers through a direct charge.

### **Assessment of Subdivision Applications**

- 10) The efficient costs of water resource management and planning activities incurred by the Department of Water that are directly associated with the assessment of subdivisions be recovered from the Western Australian Planning Commission.

### **Water Metering**

- 11) The efficient costs of water resource management and planning activities incurred by the Department of Water that are directly associated with water metering be recovered from metered licence holders. This would include recovery of the cost of purchase, installation, maintenance and reading of meters.

### **Water Licensing**

- 12) Efficient costs incurred by the Department of Water that are directly related to the provision of licences be recovered from licence holders.
- 13) Charges to licence holders should reflect, as closely as practicable, the efficient costs of services provided by the Department of Water in the issuing and monitoring of those licences:
  - a) Costs associated with the processing and assessment of applications be recovered through an up-front application charge.
  - b) Costs associated with on-going water resource management and planning activities related to licences (i.e. compliance monitoring and enforcement, allocation planning, environmental water planning, water licensing policy, groundwater and surface water assessment and water measurement and information) be recovered through an annual charge.
- 14) The activities of allocation planning, environmental water planning, groundwater and surface water assessment and water measurement and information have a "public good" component, as the information they produce is of benefit to the wider community. The Authority recommends that a small proportion of the cost of these activities be allocated to the general public.

### **Proposed Options for Recovering the Costs of Water Licensing**

- 15) A “fee for service” approach to licensing charges complies with the cost recovery principles in that it:
- is able to reflect the different services, and their varying levels of complexity and effort, provided by the Department in the processing and assessment of licences and the monitoring and enforcement of compliance with licence conditions;
  - is transparent to licence holders; and
  - can accommodate an adjustment of charges to reflect any public benefits associated with licensing.
- 16) Where the costs associated with licensing of particular large licence holders (such as the Water Corporation) can be accurately identified, such costs should be charged to that licence holder.

### **Implementation of Water Resource Management and Planning Charges**

- 17) The Department is not able, at this stage, to provide the information needed for the Authority to determine the efficiency or cost reflectivity of the costs to be allocated to licence holders.
- 18) The Department of Water is therefore asked to provide detailed information to the Authority about how its costs are incurred and allocated to various functions by the end of May 2010.
- 19) The Department to recover from users all of the efficient costs incurred to prepare water source protection plans, the assessment of subdivision referrals and the undertaking of water metering activities, once the Authority has determined the level of efficient water resource management and planning costs incurred by the Department.
- 20) The Department to introduce detailed performance indicators that are more relevant than those that currently exist, which should remain unchanged for a period of time to allow analysis over time and benchmarking with other similar agencies.

### **Legislative Powers**

- 21) The Government should ensure that State legislation provides for the appropriate recovery of water resource management and planning costs.

### **Setting Service Standards and Performance Indicators**

- 22) The Department of Water to develop service standards and performance indicators for the relevant water resource management and planning activities in conjunction with a water industry committee or existing key stakeholder groups.

### **Regulatory Oversight**

- 23) Water resource management and planning charges be set and reviewed every three years by the Authority.

## 12 Appendix D. National Water Initiative Framework for Classifying Water Planning and Management Activities

**Table 12.1 NWI Framework for Classifying Water Planning and Management Activities**

Activities	Whole or Partial Cost Recovery from Users
<b>A. Water Reform, Strategy and Policy</b>	
1. Development of intergovernmental agreements (e.g. National Water Initiative)	No
2. Development of broad strategies for managing water (e.g State Water Plan in Western Australia)	No
3. Development and/or refinement of overarching statutory instruments (e.g. NSW <i>Water Management Act 2000</i> )	No
<b>B. Water Planning</b>	
1. Water resource planning (development of water resource plans; operationalisation and implementation of plans; monitoring and evaluation of planning outcomes and progress against targets; and review of water resource plans/development of new plans)	Yes
2. Environmental and ecosystem management planning (development of environmental management plans where related to water resources; and development of plans to manage water-dependent ecosystems)	Yes
<b>C. Water Management</b>	
1. Measures to improve water use (water use efficiency programs; development of property level water management plans; Great Artesian Basin Sustainability Initiative; and flood plain management)	Yes
2. Construction of works (construction of weirs, replacement of bores etc. to achieve water management outcomes – does not include significant water supply infrastructure)	Yes
3. Environmental works (works to reduce or remediate environmental impacts arising from water use)	Yes
<b>D. Water Monitoring and Evaluation</b>	
1. Monitoring and evaluation of water resources (water resource monitoring; water use monitoring; and water resource assessment)	Yes
2. Monitoring and evaluation of water dependent ecosystems (monitoring and evaluation of riverine health, wetland health and estuary health)	Yes
<b>E. Information management and reporting</b>	
1. Water resource accounting (development of frameworks and systems; and data collection and processing)	Yes
2. Publication of water resource information (including water use statistics, water trading statistics, resource condition and assessment reporting)	Yes
<b>F. Water Administration and Regulation</b>	
1. Administration of entitlements and permits (granting of water allocations, entitlements and permits to users; processing of	Yes

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	applications and transactions; management of bulk water entitlements; ensuring compliance with licence and other conditions; regulation of water related works or developments; and benchmarking costs and standards of water planning and management activities)	
2.	Development of entitlement frameworks (including overland flow, interception and non use 'entitlements')	Yes
3.	Administration of water trading arrangements (development and regulation of trading frameworks; and facilitation and administration of water trading)	Yes
4.	Business administration (pricing review and implementation; financial management and reporting; and billing and debt management)	Yes
5.	Administration of water metering arrangements (development of metering requirements and standards; implementation of metering requirements; and on-going management of metering activities)	Yes
<b>G. Water Industry Regulation</b>		
1.	Oversight of water businesses (review of water business operations to ensure compliance with statutory requirements)	Yes

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## 13 Appendix E. List of All Major Water Resource Management and Planning Activities Undertaken by the Department of Water

**Table 13.1 List of All Major Water Resource Management and Planning Activities Undertaken by the Department of Water**

List of Activities	
Water licensing and compliance	Water resource recovery
Water licensing support	Wheatbelt catchment water management
Regional hydrogeological advice	Climate, water and vegetation
IWSS licensing	Waterways
Water licensing policy	Aquatic risk
Enforcement	Aquatic chemistry and ecology
Water allocation planning	Policy reform implementation
Environmental water planning	Policy and water reform coordination
Water recycling and efficiency	Strategic water policy and planning branch administration
Rural water planning	Strategic water management
Water metering	Strategic water issues
Groundwater investigation, assessment and review	Legislation and legal services branch administration
Surface water assessment	Legal services
Spatial analysis (GIS)	Legislation
Water information collection	Water services branch administration
Water information management	Water services policy
Water information provision	Strategic water industry policy
Water accounting	Indigenous and remote communities water services
Statutory referrals	Indigenous support (affairs)
Drainage and water management planning	Regional water management
Arterial drainage studies	Regional coordination
Floodplain management advice	Corporate services
Water source protection planning	Officer of the Director General
Acquisition of Priority 1 land	Water resource use executive
Land assessment management	Water resource management executive
Preparation of guidance notes	Policy and planning executive
Implementation of water source protection plans	Regional management and water information executive

Source: Department of Water's submission on the Issues Paper (June 2009) and Department of Water's cost information submission (May 2010).

## 14 Appendix F. Recommended Fees and Charges for Water Resource Management Activities Phased in Over Three Years

Table 14.1 Proposed Phase In of Fees and Charges

Services	Year 1 – 25 Per Cent of Efficient Costs Recovered (\$)	Year 2 – 50 Per Cent of Efficient Costs Recovered (\$)	Year 3 – 100 Per Cent of Efficient Costs Recovered (\$)
<b>Processing and assessment of applications for water licences and permits (per application)</b>			
<b><i>New 5C licence</i></b>			
Low risk	525	1,051	2,101
Medium risk	965	1,930	3,860
High risk	838	1,675	3,350
<b><i>5C licence renewals</i></b>			
Low risk	206	413	825
Medium risk	264	528	1,056
High risk	248	496	992
<b><i>Other licence application fees</i></b>			
Amendment of a licence	595	1,190	2,380
Trade or transfer of a licence	733	1,467	2,933
Licence to construct or alter a well	415	831	1,661
Permit to interfere with bed or banks	418	836	1,672
<b>Licensing of the Water Corporation for the IWSS – Indicative Only (annually)</b>	68,108	136,215	272,430
<b>Providing water allocations and managing the ongoing use of water (per licensee)</b>			
<b><i>Water licensing policy and enforcement (annually)</i></b>	37	75	149
<b><i>Water allocation planning and management (annually)</i></b>			
C1	24	49	97
C2	97	195	390
C3/C4			
Low risk	76	152	304
Med risk	152	304	608
High risk	380	760	1,520
<b>Water Metering</b>			
<b><i>Meter supply and installation (per meter)</i></b>	879	1,759	3,518
<b><i>Meter maintenance, reading and other (annually)</i></b>	234	467	935

Services	Year 1 – 25 Per Cent of Efficient Costs Recovered (\$)	Year 2 – 50 Per Cent of Efficient Costs Recovered (\$)	Year 3 – 100 Per Cent of Efficient Costs Recovered (\$)
<b>Protecting public drinking water sources (annually)</b>			
<b><i>Planning and Implementation - Indicative</i></b>			
Water Corporation	394,651	789,302	1,578,604
AQWEST	6,758	13,515	27,031
Busselton Water	2,365	4,730	9,461
<b><i>P1 Land Management - Indicative</i></b>			
Water Corporation	13,966	27,932	55,865
<b><i>Purchase of P1 Land - Indicative</i></b>			
Service providers			Case-by-case
<b>Providing advice on statutory referrals (per referral)</b>			
<b><i>Sub-division and development applications</i></b>	152	305	610
<b><i>Clearance of sub-division conditions</i></b>	192	384	768
<b><i>Local planning proposals</i></b>	742	1,483	2,967
<i>Floodplain management advice (per advice)</i>	169	337	674
<i>Provision of water information (per information provision)</i>	32	65	129

## 15 Appendix G. Examples of Impacts of Fees and Charges

**Table 15.1 Examples of Impacts of Fees and Charges at the End of the Phase In Period**

Type of Enterprise	Source of Water	Volume of Allocation (kL)	Level of Catchment Allocation	Typical Level of WRM Effort	Application Risk Category	New Licence Application Fee (\$)	Licence Renewal Fee (\$)	Annual Charge Category	Annual Charge (\$)
Small Winery	Groundwater	11,400	C1	Low	Low	2,101	825	C1	246
Small Agriculture	Groundwater	72,000	C1	Low	Low	2,101	825	C1	246
Large Winery	Groundwater	360,000	C1	Medium	Medium	3,860	1,056	C1	246
Large Agriculture	Groundwater	4,500,000	C1	High	High	3,350	992	C1	246
Mining-Exploration	Surface water	31,666	C2	Low	Low	2,101	825	C2	539
Roadworks	Surface water	31,668	C2	Low	Low	2,101	825	C2	539
Small Horticulture	Groundwater	18,500	C2	Low	Low	2,101	825	C2	539
Golf Course	Groundwater	262,500	C2	Medium	Medium	3,860	1,056	C2	539
Mining-Dewatering	Groundwater	3,800,000	C2	High	High	3,350	992	C2	539
Large Horticulture	Groundwater	10,000,000	C2	High	High	3,350	1,056	C2	539
Water Service Provider	Groundwater	12,000,000	C2	High	High	3,350	992	C2	539
LGA-Small Public Open Space/Recreation	Groundwater	5,250	C3	Low	Low	2,101	825	C3	453
Caravan Park	Groundwater	15,000	C3	Medium	Medium	3,860	1,056	C3	757
Abattoir	Groundwater	35,000	C3	Medium	Medium	3,860	1,056	C3	757
Small Agriculture	Groundwater	72,000	C3	Medium	Medium	3,860	1,056	C3	757
LGA- Large Public Open Space/Recreation	Groundwater	580,050	C3	Medium	Medium	3,860	1,056	C3	757
Large Agriculture	Groundwater	4,500,000	C3	High	High	3,350	992	C3	1,669
Water Service Provider	Groundwater	950,000	C3	High	High	3,350	992	C3	1,669
Commercial Irrigation	Surface water	55,500,000	C3	High	High	3,350	992	C3	1,669
Mining-Dewatering	Groundwater	10,886	C4	High	High	3,350	992	C4	1,669

Type of Enterprise	Source of Water	Volume of Allocation (kL)	Level of Catchment Allocation	Typical Level of WRM Effort	Application Risk Category	New Licence Application Fee (\$)	Licence Renewal Fee (\$)	Annual Charge Category	Annual Charge (\$)
Small Winery	Groundwater	11,400	C4	High	High	3,350	992	C4	1,669
Large Winery	Groundwater	360,000	C4	High	High	3,350	992	C4	1,669
Small Horticulture	Groundwater	18,500	C4	High	High	3,350	992	C4	1,669
Large Horticulture	Groundwater	10,000,000	C4	High	High	3,350	992	C4	1,669
School	Groundwater	28,500	C4	High	High	3,350	992	C4	1,669
Industrial	Surface water	4,400,000	C4	High	High	3,350	992	C4	1,669

## 16 Appendix H. Glossary

Act	<i>Economic Regulation Authority Act 2003</i>
AWRIS	Australian Water Resource Information System
BOM	Bureau of Meteorology
CME	Chamber of Minerals and Energy
FTEs	Full time equivalents
IPART	Independent Pricing and Regulatory Tribunal (NSW)
IWSS	Integrated Water Supply Scheme
Landowners group	Manjimup and Pemberton Landowners Group
kL	Kilolitre, which is one thousand litres
KPI	Key Performance Indicators
MJA	Marsden Jacob Associates
ML	Megalitre, which is one million litres
NOW	New South Wales Office of Water
NWI	National Water Initiative
P1 land	Priority 1 land
PwC	PricewaterhouseCoopers
Quantum	Quantum Management Consulting & Assurance
REU	Resource Economic Unit
RiWI Act	<i>Rights in Water and Irrigation Act 1914</i>
SKM	Sinclair Knight Merz Consulting
WALGA	Western Australian Local Government Association