# Advice on the Department of Water's Cost Efficiency and Water Resource Management and Planning Charges

*A report prepared*
*for the Economic Regulation Authority*

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# Executive Summary

As part the Economic Regulation Authority's inquiry into water resource management and planning charges, Marsden Jacob Associates has been commissioned to:

1. review the Water Licence Fee Model developed by the Department Of Water;

2. recommend any changes to the proposed options for water resource management charges on Water Allocation Licensing and Planning;

3. review expenditure levels including comparison of past expected and actual expenditure levels, projected future expenditure and consider the efficiency of the Department of Water's expenditure.

***Water Licence Fee Model***

Our review has identified that the assumptions and methodology utilised in the *Water Licence Cost Recovery Calculation Tool* (provided by the Department of Water) are not, at this stage, sufficiently rigorous to allow results to be utilised as a basis for water management charges. The Department has acknowledged that additional analysis of input costs and/or data collection would be required to provide a robust and defensible estimate. We have also noted some specific issues with the model that could be corrected for future applications.

Our review also provides recommendations regarding a number of changes that would allow the collection of more cost reflective fees in the future.

**It is recommended that more rigorous collection and allocation of costs be required before the model is utilised as a basis for charging. In particular, DOW should:**

1. **identify the full cost of allocation licensing and planning;**

2. **collect additional information on staff activities in various workstreams; and**

3. **ensure the effective assignment of allocation planning costs.**

***Review expenditure levels and efficient levels of expenditure***

MJA has assessed the Department of Water's expenditure levels, both historical and future projected expenditure. Our review also considers the efficiency of the Department by examining the available benchmark data to compare the organisation against other water resource management departments and considers changes in Key Performance Indicators (KPIs) over time. Finally we have considered the internal and external processes used to assign and control expenditure.

MJA has found the internal and external systems utilised by the Department provide a sound basis for prioritising and managing individual projects once an overall budget has been determined. However, the breakdown of costs reported both externally and within the organisation do not provide sufficient information to allow robust benchmarking or for

considering the efficiency of the organisation's operations. In addition, the KPIs that are reported externally are of limited value as they are not comparable with KPIs utilised by other water management agencies in Australia and have not been reported in a consistent manner over time.

We have therefore recommended a number of changes that would allow the improved assessment of efficiency over time and support benchmarking with at least one other water resource management agency.

**It is recommended that the following changes be implemented to assist DOW and ERA assess the efficiency of DOW expenditure:**

1. **collect relevant KPIs that will allow benchmarking over time and benchmarking with other jurisdictions;**

2. **complete a detailed process review;**

3. **freeze changes to the relevant KPIs or require retrospective reporting if KPIs change over time.**

# 1. Introduction

## 1.1. Overview

The West Australian Treasurer has requested the Economic Regulation Authority (ERA) to undertake an inquiry and provide recommendations on the issue of water resource management and planning charges.

The focus of this inquiry is on the costs incurred by the Department of Water (DOW) in its activities to efficiently plan and manage the State's water resources, and how best to recover those costs.

The ERA has previously published an Issues Paper on 30 April 2009 and a Discussion Paper on 6 August 2009. The ERA expects to produce a Draft Report in October 2009 and a Final Report by the end of 2009.

The ERA has commissioned Marsden Jacob Associates (MJA) to:

1. review the Water Licence Fee Model developed by DOW;

2. examine the effectiveness of the processes used by DOW to control expenditure and to align expenditure with priorities; and

3. review expenditure levels including a comparison of past expected and actual expenditure levels, projected future expenditure and consider efficient levels of expenditure.

# 2. Review the Water Licence Fee Model

DOW is responsible for the quantity, quality, use and availability of the state's water resources and ensures that all Western Australians have access to water services.

In October 2005, DOW was established to replace the Water and Rivers Commission. This was formalised on 1 February 2008 when the *Water Resources Legislation Amendment Act 2007* formally transferred all functions to the Minister for Water Resources and the Department of Water.

In the Issues Paper for this inquiry[1] the ERA summarised DOW's roles as:

- Assess, allocate and licence water resources
- Manage flooding and drainage
- Manage water quality
- Policy advice and reform
- Support water service industry
- Executive and corporate functions

Under these categorisations, the largest single activity undertaken by DOW is the assessment, allocation and licensing of water resources. DOW can proclaim a ground water area or surface water area under the *Rights in Water Irrigation Act, 1914,* within which it is prohibited to take water except in accordance with a licence or under an exemption. These powers are set out under section 5C of the Act. Prior to issuing licences DOW assesses the water resource to determine the sustainable level of abstraction for the resource.

The number of licences issued under this legislation is set out in Table 1.

Table 1: Number of Licences under Section 5C of the *Rights in Water Irrigation Act*

| Licence type | Number |
|---|---|
| Ground Water Licence | 10,557 |
| Surface Water Licence | 908 |
| New Applications (2008-09) | 1,794 |

*Source: Based on licensing data from June 2009 – See Appendix 1*

[1] Economic Regulation Authority *Issues Paper - Inquiry into Water Resource Management and Planning Charges*, 30 April 2009

In addition to licences under Section 5C of the *Rights in Water Irrigation Act, 1914* DOW can issues licences under Section 26D to construct or alter a well and permits under section 11, 17 and 21A which all cover aspects of obstruction or interference with a watercourse.

## 2.1. Background on Water Licence Fees

In its response to the ERA's Issues Paper DOW proposed four cost recovery options for water allocation licensing and planning. These specific activities have been identified as DOW note that they could be implemented under the current legislation, whereas other costs may require a legislative change.

The four cost recovery options proposed by DOW for water allocation licensing and planning are:

- Option 1 Fee bands based on effort or time (or time taken) to issue a licence;
- Option 2 A "fee for service" approach;
- Option 3 A fee based on the volumetric allocation and the total level of resource use in that area; and
- Option 4 A fee based purely on volumetric allocation.

DOW also presented a model that provides input data and estimates fees for Option 2 and Option 3. The remainder of this section considers the model in more detail.

## 2.2. Overview of the Water Licence Fee Model

DOW presented a model constructed in Microsoft Excel by ACIL Tasman that provides input data and estimates fees for Option 2 and Option 3. Each of the models allocate costs accrued in water allocation and planning to new licence applicants (in the form of an application fee) and to existing water licence holders[2] (in the form of an annual licence fee). In addition, each of the models attempt to allocate costs on a cost reflective basis such that smaller and simpler licences will be charged less than more complex and larger licences.

*Option 3*

As the simpler of the two models, we consider Option 3 first. The model uses estimates of the cost of licensing, including regional overheads, and deducts the cost associated with servicing the Water Corporation and also an estimate of the cost attributable to public benefits. MJA understand that the estimates provided by the ERA have been developed at a high level only and have not been endorsed by senior management.

The model then uses a high level estimate to split DOW costs between:

a) applications and licence renewals (charged in the upfront application fee); and

b) compliance and monitoring (charged in the annual fee).

[2] The models focus on groundwater licences issued under section 5C of the *Rights in Water Irrigation Act, 1914*.

In each case the costs are allocated between applicants or existing licence holders based on:

- the volume of water allocated in the licence; and
- the total proportion of the sustainable yield of the water resource that is being accessed that has been allocated, expressed as Category 1 to Category 4 areas.

Finally, the figures presented in Table 2 are utilised by DOW to reflect the relative level of effort exerted by DOW to provide services to each category of licence holder. For example, the table indicates that the time spent servicing a licence holder in a Category 1 area with an allocation below 5,000 kL is only 7% of that required to service a licence holder in a Category 4 area with an allocation greater than 5,000,000 kL.

Table 2: Effort Expended for various types of licences used in both funding options

| | Category 1 | Category 2 | Category 3 | Category 4 |
|---|---|---|---|---|
| **Allocation volume\ Catchment type** | **<30% allocated** | **30%-70% allocated** | **>70% allocated** | **>100% allocated** |
| **0 - 5,000** | 7 | 7 | 11 | 11 |
| **5,001- 50,000** | 7 | 7 | 11 | 11 |
| **50,001-100,000** | 11 | 11 | 20 | 20 |
| **100,001 - 500,000** | 20 | 20 | 40 | 40 |
| **500,001 -1,000,000** | 40 | 40 | 60 | 60 |
| **1,000,001- 5,000,000** | 60 | 60 | 80 | 80 |
| **>5,000,000** | 80 | 80 | 100 | 100 |

Source: ACIL Tasman *Water Licence Cost Recovery Calculation Tool*

The proportions shown in Table 2 are utilised to allocate the costs associated with applications and annual fees amongst licence holders to derive a final charge.

The charges determined for Option 3 range from $148.18 to $2,116.91 for annual fees and from $180 to $11,365 for licence renewals or new licence applications.

*Option 2*

Under Option 2 the annual fee is calculated identically to Option 3, however the application/renewal fee is charged based on the type and complexity of "services" required by the licence holder. These services can be summarised as follows:

Technical Assessment — This is the time required to complete the assessment required for all licence applications under section 7.2 of the *Rights in Water and Irrigation Act, 1914*. The relevant section of the Act is included in Appendix 2 to this report.

All licence applications undergo some level of technical assessment – but the level of assessment required varies between different licence applications.

| | |
|---|---|
| Operating Strategy | This is a requirement licence applications which have the potential to impact the environment or other water users. This requirement is set out in detail in the following policies:<br>Statewide Policy No. 10 Use of Operating Strategies in the Water Licensing Process<br>Statewide Policy No 16 Policy on water conservation / efficiency plans |
| Hydrology/ Hydrogeology | This is a requirement licence applications which have the potential to impact the environment or other water users. This requirement is set out in detail in the following policies:<br>Statewide Policy No. 19 Hydrogeological reporting associated with a Groundwater Well Licences – The assessment table for this policy is included in Appendix 3 of this report. |

Each of these services is also ranked in complexity from Level 1 to Level 3. DOW's estimate of the proportion of effort required for each category of licence holder is set out in Table 3.

Table 3: Time required for various levels of assessment under fee for service model

| Score relative weights fee for service model | | | |
|---|---|---|---|
| **Weights** | **Technical Assessments** | **Operating strategy** | **Hydrology/ Hydrogeology** |
| **Level 0 (no charge)** | - | 0 | 0 |
| **Level 1** | 5 | 7.5 | 3 |
| **Level 2** | 15.5 | 15.5 | 7.5 |
| **Level 3** | 40 | 40 | 15 |

Source: ACIL Tasman *Water Licence Cost Recovery Calculation Tool*

The charges determined for Option 2 range from $148.18 to $2,116.91 for annual fees and from $591 (for a basic technical assessment only) to $11,235 (for a Level 3 assessment requiring a technical assessment, operating strategy and hydro report) for licence renewals or new licence applications.

## 2.3. Assessment of the Model

DOW present the *Water Licence Cost Recovery Calculation Tool* as a model that provides an indicative cost per application or cost per licence based on the input costs and the spread of work between new and ongoing licences of different types. DOW has indicated that the model should not be viewed as a finished product upon which licence fees could be based.

Through our review of the model and discussions with DOW staff we have come to the conclusion that the model provides a sound starting point for the consideration of licence

fees, but that the model should not be used for determining resource charges at this stage because:

- the model includes substantial assumptions on the appropriateness of input costs and is highly conservative. Therefore the full cost of water allocation planning and licensing will not be reflected in the final charge;
- the model allocates costs to different licence types on the basis of assumptions and estimates that have been determined at a high level only and require greater rigour to provide a defensible basis for charging; and
- the model includes some errors that are known by DOW.

### 2.3.1. Assumptions on input costs

DOW has taken a conservative approach to costs to be recovered by resource management charges. DOW has identified for recovery:

- water licensing, compliance and enforcement costs; and
- a portion of Planning (Allocation Planning and Environmental Water Planning) costs narrowly associated with licensing and compliance.

This approach appears to be due to the legal interpretation of the fees that can be charged under the existing *Rights in Water Irrigation Act, 1914*. However, this methodology substantially underestimates the total cost of water resource management and planning in Western Australia.

As set out below, the *Intergovernmental Agreement On A National Water Initiative* (2004), provides some guidance on elements that should be included in the calculation of water resource management charges and requires that charges are set through a transparent process.

**Relevant sections of the**
***Intergovernmental Agreement On A National Water Initiative*, 2004**

**Cost Recovery for Planning and Management**

67. The States and Territories agree to bring into effect consistent approaches to pricing and attributing costs of water planning and management by 2006, involving:

    i) the identification of all costs associated with water planning and management, including the costs of underpinning water markets such as the provision of registers, accounting and measurement frameworks and performance monitoring and benchmarking;

    ii) the identification of the proportion of costs that can be attributed to water access entitlement holders consistent with the principles below:

        a) charges exclude activities undertaken for the Government (such as policy development, and Ministerial or Parliamentary services); and

        b) charges are linked as closely as possible to the costs of activities or products.

68. The States and Territories agree to report publicly on cost recovery for water planning and management as part of annual reporting requirements, including:

    i) the total cost of water planning and management; and

    ii) the proportion of the total cost of water planning and management attributed to water access entitlement holders and the basis upon which this proportion is determined.

An alternative process for the determination of input costs is proposed in Section 3 of this report, which more closely aligns with the requirements of the National Water Initiative. We note that changes to the current legislation may be required to bring these charges into effect and that the costs identified by DOW could potentially be utilised until such changes were finalised.

### 2.3.2. Allocation of costs

Within the Allocation Licensing function, DOW has limited knowledge of the actual time spent on various licence types (e.g. large/small allocations, Category 1-4 areas) or the time spent on various services provided (e.g. technical assessment, operating strategy or hydrogeology reports). This lack of verifiable information affects the veracity of cost allocation for both the Option 2 and 3 charging models. However, as Option 2 attempts to allocate costs in a more detailed manner, the lack of accurate information is more apparent.

As a result of the lack of accurate information, some of the model outputs fail a "sensibility check". For example, we would anticipate that the "units of effort" reported throughout the model were developed on a consistent basis (for example on the basis of the number of hours required for each task). However, the model determines the costs associated with the annual fee as $21 per "unit of effort", while the costs associated with the new applications are $90-$118 per "unit of effort". These results indicate that "units of effort" have been determined differently in different areas of the model and therefore that a more detailed justification would be required to ensure the allocations were soundly developed and defensible.

A further concern for Option 2 is that the model estimates the number of hydrogeology reports and operating strategies that would be required and this varies greatly from the actual numbers used in the 2008-09 financial year. This discrepancy is summarised in Table 4.

Table 4: Estimated and Actual number of Hydrogeology Reports and Operating Strategies

| | Hydrogeology Reports | Operating Strategies |
|---|---|---|
| **Model Estimates (per annum)** | 874 | 1,455 |
| **2008-09 Actual Data** | 43 | 123 |

*Source: ACIL Tasman Water Licence Cost Recovery Calculation Tool and DOW*

The lack of information on the correct allocation of costs is also apparent in a number of other assumptions used in the models, however many of these estimates are less complex and are based on the best estimates of managers in the area. These include:

- time spent on the Water Corporation;
- time spent on Non Billable items (eg. response to Ministerial questions); and
- allocation of work between annual monitoring and new licences and renewals (75%-25% and 50%-50%).

### 2.3.3. Known Errors

The model includes some minor errors that are known by DOW:

- the model attributes regional overheads to licence holders, but the Water Corporation does not have any overheads included. This was acknowledged as an error by DOW; and
- the model uses 10,500 as the number of licences, which is only the number of groundwater licenses and does not include surface water licences (around 900 in number). This appears to be because Surface Water Areas are not currently stored in the Allocation Database on a Category 1-4 basis; and
- the model applies the application fee to both applications and licence renewals. In 2008-09 there were 1,794 new applications and 1,494 renewals. However, DOW

has advised that they would not apply any fee to a renewal. This discrepancy between the model's approach and DOW's stance means that the model either significantly overstates the income that would be generated, or understates the cost of a licence application; and

- the model applies a growth rate of 5% of existing licences to determine the number of new licence applications. This method appears to produce a result that differs from the actual number of new applications received. Ideally, the actual number of applications (potentially estimated or averaged over time) should be utilised for improved accuracy.

These issues would require rectification before the model could be utilised for charging purposes.

# 3. Suggested way forward for the Water Licence Fee Model

The principles underlying DOW's proposed water resource management charges, in particular Option 2 and 3 (see previous section of this report), generally utilise sound principles for the allocation of costs and cost recovery.

However, it is recommended that more rigorous collection and allocation of costs be required before the model is utilised as a basis for charging. In particular, DOW should:

4. identify the full cost of allocation licensing and planning;
5. collect additional information on staff activities in various workstreams; and
6. ensure the effective assignment of allocation planning costs.

These issues are outlined in more detail below.

## 3.1. Identify the full cost of allocation licensing and planning

The *Water Licence Cost Recovery Calculation Tool* currently includes only a limited number of the direct costs related to allocation licensing and allocation planning, and will thus not reflect the full cost of managing water resources throughout the state. MJA understand that DOW has constrained the costs to be recovered only to licensing activities due to the fee provisions that currently exist under the *Rights in Water Irrigation Act, 1914*.

It is recommended that DOW seek the necessary changes in legislation to allow full cost recovery. In the short term, charges could be based only on the cost supported by legislation, however a full detailing of costs would provide a transparent indication of the cost recovery shortfall and provide an impetus for change.

If affordability is considered an issue then it is recommended that, in accordance with the *Intergovernmental Agreement On A National Water Initiative* (2004), the full cost recovery be determined and affordability be considered in a separate, transparent manner.

A preliminary analysis of DOW budget indicates that the full cost of allocation licensing and planning could include:

- an allocation for corporate overheads (HR, IT, Finance);
- an allocation for DOW's executive;
- as allocation for groundwater and surface water assessments;
- an allocation for water measurement and information; and

- an allocation for capital assets that provide the water information.

The inclusion of each of these items would require the allocation of common costs between water resource licensing and other activities.

More detailed consideration should also be given to the portion of costs licence holders should pay and the portion that should be borne by government. This discussion can be framed in terms of the *Impactor Pays* principle compared with the *Beneficiary Pays* principle. In general, licence holders and unlicensed water users will be considered impactors, while the environment and downstream water users will be considered beneficiaries.

Two key considerations include:

1. **the proportion of cost to be allocated to the environment:** There is a strong argument that the majority of licensing and planning work undertaken by DOW would not be required without licensees and other water users. Therefore the environment (a beneficiary) should not be allocated any cost unless the work would have been undertaken regardless of water users (impactors);

2. **the proportion of cost to be allocated to unlicensed water users:** Ideally, all water users should be charged for water resource management, however it is recognised that charging unlicensed users is difficult in practice and may be cost prohibitive. Therefore, if unlicensed users are not charged, the proportion of costs associated with those users would be excluded from the costs charged to licence holders. Where certain costs are required for both licensed and unlicensed use (e.g. water resource planning) the costs could be allocated between users on an equitable basis (e.g. volume of water allocated).

A preliminary estimate of the full costs for allocation licensing and support work has been attempted in Table 5, based on the 2009-10 budget information. In this table we refer to *% related to licensee benefits*, which is the inverse of any allocation made for public benefits and "non-recovery" activities.

As both the assignment of costs to allocation licensing and the determination of the proportion related to public benefit / licensee benefit requires a detailed analysis, we have estimated these values at a high level only to illustrate the process rather than to provide a definitive estimate.

Table 5: Indicative estimate of full cost of Allocation Licensing and Planning

| Activity | 2009-10 Budget ($ million) | % related to licensing and planning (Estimated) | Sub-Total | % related to licensees * (Estimated) | Total |
|---|---|---|---|---|---|
| **Allocation Licensing** | $6.87 | 93% | $6.35 | 90% | $5.72 |
| **Hydro Assessment & Enforcement** | $0.80 | 100% | $0.80 | 90% | $0.72 |
| **Allocation Planning** | $4.52 | 93% | $4.18 | 50% | $2.09 |
| **Regional overheads** | $3.20 | 30% | $0.96 | 65%[3] | $0.62 |
| **Groundwater and surface water assessments** | $3.90 | 90% | $3.51 | 75% | $2.63 |
| **Water measurement and information** | $5.14 | 75% | $3.86 | 50% | $1.93 |
| **Capital for maintenance of existing network and expansion** | $7.20 | 75% | $5.40 | 50% | $2.70 |
| **Corporate overheads (HR, IT, Finance, Vehicles)** | $16.90 | 33%[4] | $5.58 | 65%[5] | $3.61 |
| **Department's Executive** | $2.30 | 33%[6] | $0.76 | 65%[7] | $0.49 |
| **Total** | **$50.83** | | **$31.40** | | **$20.51** |

*Source: Based on data from the ACIL Tasman model and 2009-10 Project Data*

* *Excluding public benefits, work undertaken for Water Corporation and other "non-recovery" activities such as responding to Ministerial questions.*

[3] Based on a weighted average of the other line items

[4] Based on an FTE allocation of costs

[5] Based on a weighted average of the other line items

[6] Based on an FTE allocation of costs

[7] Based on a weighted average of the other line items

As outlined in Table 5, a more complete allocation of costs results in a total (preliminary) cost of $20.5 million to be charged to licence holders and new applicants, which is more than double the total cost used in the existing model ($8.89 million).

## 3.2. Collect additional information on staff activities in various workstreams

While it is desirable to allocate fees for water allocation licensing on a cost reflective basis, there is currently a lack of information for this to occur with confidence. Two steps are required to ensure that the funds collected are appropriate:

- in areas where some work is relevant to water allocation, ensure that the relevant work is "ring-fenced" from other activities; and
- within licensing and planning allocate funds appropriately between licence applications and existing licences and between licences of different types (licence volume and total level of abstraction).

Currently DOW uses a relatively small number of projects to manage its time and resources (in 2009-10 there are 215 CF Recurrent projects with an average value of around $330,000). A consolidation of projects appears to have occurred over time, which may have occurred to provide administrative efficiencies. However, the separation of large projects into their component elements would provide greater transparency over the planned and actual work undertaken by DOW.

Within the allocation licensing function a greater level of detail is required on the time taken in the assessment and management of different licence types. This could be collected in a number of different ways, including:

- more accurate time keeping for all staff;
- a sample approach to time keeping – where detailed times for assessments are measured for a limited time period and /or for a limited number of personnel; or
- formalised interviews where line managers provide best estimates on a regular basis.

These options are provided in order of declining accuracy, but also declining administrative burden. Further consideration is required to determine the cost-benefit trade-off associated with improving the level of accuracy compared with the corresponding administrative burden.

## 3.3. Ensure the effective assignment of allocation planning costs

Under both Option 2 and 3 Allocation Planning work is currently allocated between all licence types on the basis of the time taken for allocation licensing assessments. However, it is not clear that this method allocates allocation planning costs appropriately.

This concern is highlighted by the steep increase in the cost of allocation plans between Category 1 and Category 4 areas, as set out in Table 6.

Table 6: Estimated Costs of Allocation Plans

| Category | % Water Resource Allocated | Estimated cost of allocation plan |
|---|---|---|
| **Category 1** | 0% to 30% | $ 50,000 |
| **Category 2** | 30% to 70% | $ 150,000 |
| **Category 3** | 70% to 100% | $ 1,000,000 |
| **Category 4** | > 100% | $ 5,000,000 |

*Source: DOW Allocation Planning Branch*

It is unclear whether the significant increase in cost for each Category is reflected in the underlying allocations of "effort expended" in the tables that are used as the basis for charging (refer Table 2 and Table 3). As allocation plans are a significant cost item, it may therefore be appropriate for DOW to consider a two stage cost allocation process that allocates the costs of developing allocation plans first, and then allocates costs to licence holders or to services as a transparent second step.

# 4. Alternative fee structures

In this section we consider two alternative fees structures that could be implemented immediately.

Given the lack of firm information on the time taken to assess various types of new licences there are a limited number of fully defensible fee structures. Two options include:

- a fee based only on the estimated minimum cost of providing licensing activities. This approach has the advantage that no customer would be overcharged while DOW was making the changes necessary to develop a fully cost reflective fee structure;
- a flat or "postage stamp" application and annual fee. This approach is less precise than the methodologies provided by DOW, but is provided predominantly for reference purposes.

Each of these options are considered in detail below.

## 4.1. Minimum Fees

***Application Fee***

As set out in section 2.2, DOW's Option 2 charging model determines an application fee based on whether an application requires one or more of the following services:

- Technical Assessment (undertaken for every new application);
- Hydrology/Hydrogeological Assessment; and
- Operating Strategy.

Furthermore, ACIL Tasman has recommended that each of these services is charged based on the level of complexity in providing the service, which is assigned a rating from Level 1 to Level 3. The proposed process for determining the level of assessment is relatively complex and requires some subjective decisions. As the actual number of Hydrogeology Reports and Operating Strategies for 2008/09 is reported to be 43 and 123 respectively (from a total of 1,794 new applications, refer 2.3.2), it is questionable whether calculating the Level of these services provides sufficient value to justify the additional administrative complexity and potential for customer dispute[8].

[8] Total combined revenue for both services would be approximately $50,000 per year based on 143 Operating Strategies and 43 Hydro Assessments, allocated Level 1-3 based on the proportions outlined in the ACIL Tasman Water Licence Cost Recovery Calculation Tool and recovering the cost for the minimum number of hours for each level of assessment (see process for recovering minimum fee for Technical Assessments below).

By contrast, a Technical Assessment is required for every application. DOW suggest that the time required to complete the Technical Assessment of a licence application would be:[9]

- 5-10 hours for a Level 1 assessment;
- 10-15 hours for a Level 2 assessment; and
- 25-50+ hours for a Level 3 assessment.

The times outlined above appear to be best estimates only and are not supported by a robust cost collection exercise. However, the minimum time estimates appear reasonable and could potentially be used as the basis for applying a minimum charge that would ensure applicants are not overcharged while more robust cost allocation procedures were being developed.

Based on the 2009-10 budget data the average cost per hour for allocation licensing staff is $47.13[10]. Therefore the charge for providing the minimum level of assessment would be:

- $236 for a Level 1 assessment;
- $471 for a Level 2 assessment;
- $1,178 for a Level 3 assessment.

While the framework developed by ACIL Tasman could be utilised to determine whether Technical Assessments should be rated Level 1, 2 or 3, we understand that DOW has some reservations about this method, which requires some subjective assessment.

There are two possible methods to overcome the concerns about the proposed framework for determining the level of assessment. Firstly, the minimum fee ($236) could be charged for all assessments. This is quite close to the $250 application fee proposed by DOW. If this fee were collected for all licence applications then the total revenue collected would be around $450,000 per annum.

Secondly, DOW has previously assigned a simplistic level of risk analysis to licence applications, based on the level of the resource's allocation and the licence volume. This is set out in Table 7. Consideration could be given to whether this table could be adapted to determine the appropriate level of technical assessment by mapping Low/Medium/High to Levels 1, 2 and 3 respectively.

[9] ACIL Tasman (2009) *Options for cost recovery in water licensing*, pp55-56

[10] 2009/10 budget is $6,869,400 divided by 84.5 FTEs working a provisional 46 Weeks at 37.5 Hours per week

Table 7: DOW risk assessment approach to licence applications

**Risk assessment matrix**

| Licence \ Resource | C1 (less than 30 percent allocated) | C2 (30 to 70 percent allocated) | C3 (70 to 100 percent allocated) | C4 (more than 100 percent allocated) |
|---|---|---|---|---|
| Less than 5 ML | Low | Low | Medium | High |
| 5 to 500 ML | Low | Medium | High | High |
| more than 500 ML | Medium | High | High | High |

Source: ACIL Tasman, *Options for Cost Recovery in Water Licensing*, 2009

If the Level 1-3 fees were collected for all licence applications then, based on the number of assessments estimated in the *Water Licence Cost Recovery Calculation Tool*, the total revenue collected would be around $950,000 per annum.[11]

***Annual Fee***

No similar estimates were provided regarding the minimum time required for annual monitoring or compliance activities. A "relative effort score" was provided by DOW to ACIL Tasman,[12] however the commentary associated with the table clearly indicates that the scale is arbitrary and does not necessarily relate to the time spent on each activity. However, we note that the minimum annual fee calculated in the *Water Licence Cost Recovery Calculation Tool* (after adjustment for the known errors outlined in section 2.3.3) is $136.50, which would reflect a time of 2.9 hours per licence holder per annum. This estimate does not appear unreasonable, however no direct evidence has been provided to assess whether the estimate appropriately reflects the time associated with minimum compliance and monitoring activities. An annual fee of $136.50 charged for all licence holders would collect around $1,565,000.

It is recommended that DOW confirm whether a minimum fee structure could defensibly be developed and applied in the short term to allow additional time for the collection of information to support a more comprehensive fee structure.

## 4.2. Flat Rate Annual Fee or Application Fee

If the minor corrections to the *Water Licence Cost Recovery Calculation Tool* outlined in sections 2.3.3 were made, the model indicates that DOW would require $3,129,218 through annual fees and $5,581,365 through new applications. Using a flat rate or "postage stamp" approach, this would give an annual fee of $274[13] and an application fee of $3,111[14].

[11] Based on the profile for new applications in June 2009 outlined in Table 3.3 of Appendix 1 and the total new applications for the 2008-09 financial year. This gives 658 Level 1, 765 Level 2, and 371 Level 3 assessments.

[12] ACIL Tasman (2009) *Options for cost recovery in water licensing*, p 73

[13] Based on 10,500 ground water licences and 900 surface water licences.

[14] Based on 1,794 applications per annum. NB, does not include a charge for renewals. If the cost were spread between applications and renewals the cost would be $1,897.

Under this approach, DOW would collect approximately $8,710,000 annually.

We note that this approach would require a more robust spread of costs between annual fees and application fees to be fully defensible, however collection of this data would be less burdensome than the more detailed timekeeping required to also allocate costs between licence holders.

# 5. Assessing the efficiency of the Department

In this section we consider the efficiency of the Department of Water through a variety of measures, we also report on a recent effectiveness review that was undertaken on the Department by the Office of Auditor General.

In considering the efficiency of DOW we:

- summarise the changes in DOW's budget over the period from 1998-99 to the current time in addition to the forward estimates until 2011-12;
- consider benchmarks against another water resource management agencies;
- consider DOW's Key Performance Indicators to assess whether these show efficiencies over time;
- finally we review DOW's planning, budgeting and project management processes to consider whether these processes are likely to result in the efficient allocation and use of funds. We also consider a measure of the effectiveness of the project management process.

## 5.1. Effectiveness review - Office of Auditor General Reports

The Western Australian Auditor General recently completed a follow-up report on Water Resource Management in Western Australia.[15] This report focussed particularly on the Water and Rivers Commission's (now the Department of Water's) progress in treating issues identified in the first report made in 2003[16].

In summary the 2003 report found:

- *The State's ground and surface water monitoring program has been progressively reduced. As a result, [the Water and Rivers Commission] WRC does not have the information needed to accurately determine the sustainable level of groundwater and surface water use in many areas of the State.*
- *WRC has not determined allocation limits for a significant number of water resources. Where limits have been determined, they have not always been entered into WRC's primary water management database, though licences to take water from these areas have nevertheless been issued.*
- *Licensed water use in parts of 13 of the State's 44 groundwater management areas exceeds the estimated sustainable limit.*

[15] Western Australian Auditor General, *Management of Water Resources in Western Australia – Follow-up*, Public Sector Performance Report 1 – April 2009

[16] Western Australian Auditor General, *Management of Water Resources in Western Australia* Second Public Sector Performance Report, Report No 7 September 2003

- *WRC is falling behind in its processing of water licences despite staff efforts to improve licensing procedures. The average waiting time for a licence is three months, with some licences taking over nine months to process.*

- *Only 11 per cent of the State's 25 652 water licences have ever been checked for compliance. Lack of regular surveys means WRC cannot accurately assess water use and availability.*

- *WRC has not won any of the last 25 appeals against decisions to refuse further water allocations.*

The 2009 follow-up report found:

> *The department has made good progress in addressing most of the issues raised in our 2003 report. As a result the department is in a better position to more effectively manage WA's water resources. However, significant challenges remain.*

The report also recommended that DOW:

- *meet its planned timelines for identifying and implementing improvements to the surface water measurement network and address deficiencies in data accuracy and processing*
- *complete outstanding protection plans for public drinking water source areas*
- *complete water resource allocation plans according to agreed standards and schedules*
- *develop proactive compliance monitoring programs based on strategic risk assessments in each region*
- *ensure all compliance activities and outcomes are recorded in a common format to provide adequate information for managers to track implementation and guide future business and strategic planning*

## 5.2. Review expenditure levels over time

### 5.2.1. Background on Department of Water Budget

DOW receives three significant forms for funds:

1. Consolidated Funds (CF) Recurrent;

2. CF Capital; and

3. External Funds (such as Federal Government Grants and fee for service work)

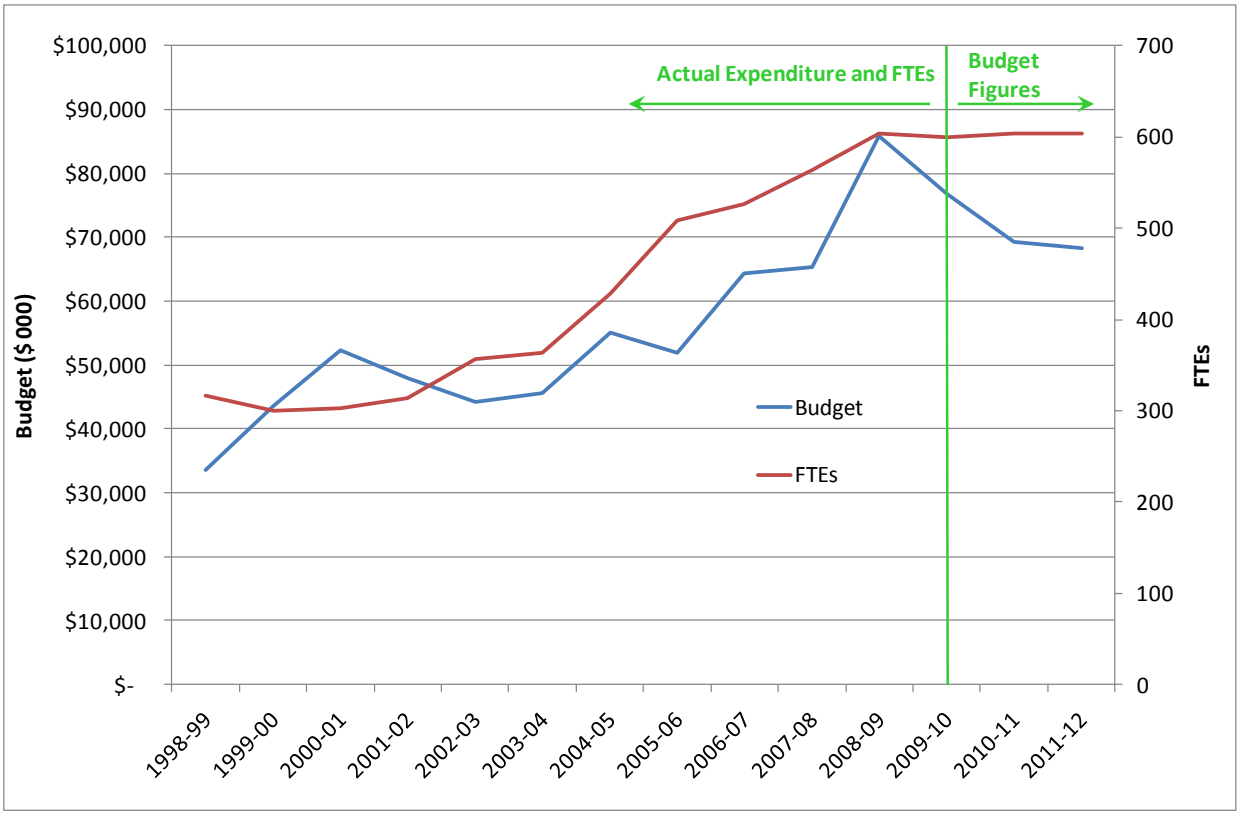
This review focuses on CF Recurrent funds as CF Capital funds are relatively minor and externally funded activities are not the subject of the current ERA inquiry.

### 5.2.2. Changes in Department of Water Budget

The Department's budget can be tracked over time using reported expenditure in the Department of Treasury and Finance's budget papers[17].

This is outlined in Figure 1, below in the form of budget and staff numbers (shown as Full Time Equivalents or FTEs).

**Figure 1: CF Recurrent Budget and Staff Numbers (FTEs) over time**




*Source: Reported actual budgets and FTEs in Department of Treasury and Finance budget papers.*[18]

The chart demonstrates that the budget and FTEs have increased substantially in recent years – particularly in the period from 2005-06 to 2008-09.

[17] The budget figures shown are the Total Appropriations provided to deliver services (does not include Capital Funds or Administered Transactions)

[18] 2010-11 and 2011-12 FTE figures obtained from DOW Finance Department

The significant upward trend in costs suggests that the efficiency of the department should be carefully reviewed. However, complicating the assessment, DOW has been through a significant number of changes in the period outlined in Figure 1. These include:

- merger with Department of Environmental Protection to form the Department of Environment in 2001-02;
- demerger from Department of Environment in 2005-06
- restructure of internal planning and reporting lines in 2005-06.

More specifically, DOW indicated that the 2004-05 and 2005-06 budgets were impacted by:

1. transfer of Office of Water Policy into DOW including 20 FTEs;
2. transfer of Office of Water Strategy from Department of Premier and Cabinet into DOW including 12 FTEs; and
3. additional funding received as part of the response to the Office of Auditor General's report on Water Resource Management in WA.

These changes, and the associated changes in reporting policy, prevent the analysis of year on year efficiency over the last decade.

In addition to these increases, several New Resource Proposals resulted in substantial increases in budgets and FTEs for 2006-07, 2007-08 and 2008-09. These increases are summarised in Appendix 4 and indicate the distribution of the budget and FTE increase received.

## 5.3. Benchmarking with other Water Resource Management Organisations

A measure of the efficiency of DOW can be made by comparing its activities and costs to other water resource management organisations. Comparisons or benchmarking of this kind allows the identification of innovations and efficiencies within each organisation and encourages the rapid spread of these efficiencies. The most advanced form of benchmarking used in the water industry is made by the UK Water Services Regulation Authority, more commonly known as OFWAT, which uses benchmarking to drive "comparative competition".

However there are currently two significant barriers with benchmarking in the Australian water industry:

- lack of available information; and
- differences between the organisations' activities, resulting in differing cost structures.

As New South Wales has the most advanced form of water resource management charges in Australia MJA attempted to draw comparisons between DOW and the New South Wales Department of Water and Environment (DWE).

While DWE currently does give an account of its activities in its Annual Report (Figure 2), these do not indicate levels of efficiency. Furthermore, there is a lack of information publicly available to allow us to develop Key Performance Indicators for DWE that provide a useful comparison to DOW.

**Figure 2: Reported figures from DWE**

Table 1.2: Water licences managed at 30 June 2008

| WMA 2000 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Water access licences (current) on the Water Access Licence Register | n/a | 11,290 | 13,894 | 14,704 |
| Access licences* converted and still to be listed on the Water Access Licence Register | n/a | 860 | 147 | 26 |
| Water supply work approvals | n/a | 3,080 | 8,245 | 10,247 |
| Water use approvals | n/a | 1,825 | 1,856 | 1,863 |
| Combined approvals (water supply work and water use) | n/a | 5,440 | 6,899 | 7,323 |
| **WA1912** | | | | |
| licences – surface | n/a | 13,783 | 13,946 | 13,967 |
| licences – groundwater (bores) | n/a | 92,232 | 90,815 | 88,228 |

*Applies to access licences still to be listed where existing WSPs have commenced

Table 1.3 Licensing WMA2000

| New Water Access Licences* | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|---|---|---|---|---|
| Applications received | 36 | 70 | 227 | 238 |
| Applications determined and notified** | 6 | 77 | 164 | 187 |
| Licences registered | 5 | 63 | 113 | 273 |
| Average processing time (days)*** | n/a | 69 | 76 | 60 |

*Source: DWE 2007-08 Annual Report*

The New South Wales regulator , the Independent Pricing and Regulatory Tribunal (IPART) has indicated that it intends to develop Key Performance Indicators for DWE in the next pricing review, which is due to commence shortly (December 2009).

In addition IPART have expressed a strong desire to benchmark DWE's activities against other water resource management agencies. The fortuitous timing for this review means that the ERA and IPART could jointly develop Key Performance Indicators, allowing comparisons to be made in the future.

## 5.4. Key Performance Indicators

As part of the budget process all government departments in Western Australia report on Outcomes, Services and Key Performance Information.

DOW reports along three services:

1. Urban Water Management and Industry Services;
2. Water Use Allocation and Optimisation; and
3. Catchment and Waterways Health.

This structure is represented in Figure 4 on page 29.

The budget papers include Key Performance Indicators for each of the three services and these Indicators are also included in the Annual Report.

The Indicators provided by DOW are relevant to this analysis but cannot be used to track efficiencies in their current form because:

- DOW has altered its indicators a number of times in recent years, meaning that tracking efficiency changes over time is not possible; and
- the indicators are provided at a high level and tend to blend pieces of information. Each of the Key Performance Indicators for *water use allocation, management and optimisation* are considered in Table 8 below, including comments regarding their usefulness in assessing efficiency.

Table 8: Assessment of Key Performance Indicators

| **Key Performance Indicator** | **Comments on using this indicator to measure efficiencies** |
|---|---|
| Average cost per water allocation plan completed | Provided as a three year rolling average and currently no number is provided |
| Average time taken (days) to process a licence by water category grouping (Categories 1-4) | This measures only the time elapsed in processing a licence application and does not measure the actual staff time spent assessing the application. This indicator is based on a survey that is undertaken annually for a set period and the measure only includes applications that were both received and completed in the survey period. |
| Average cost per water licence (all categories) | This measure includes applications and renewals for Ground Water Licences (under the *Rights in Water Irrigation Act, 1914)* and Licences under the *Metropolitan Water Supply, Sewerage, and Drainage Act, 1909* which the department does not actively manage.<br><br>However, it does not include Surface Water Licences issued under the *Rights in Water Irrigation Act, 1914*. |
| Total number of licences processed by category group (Categories 1-4) | This measure includes applications and renewals for Ground Water Licences (under the *Rights in Water Irrigation Act, 1914* and Licences under the *Metropolitan Water Supply, Sewerage, and Drainage Act, 1909* Which the department does not actively manage. It does not include Surface Water Licences *Rights in Water Irrigation Act, 1914*. |

*Source: MJA analysis*

DOW collects a large amount of information for internal measures which could be developed to produce Key Performance Indicators. Appendix 1 provides a monthly report that is produced for allocation licensing and shows a number of internal measures that are monitored.

Appendix 5 also considers other related measures that were examined in relation to the effectiveness of DOW's budgeting and project management over time.

## 5.5. Review of processes used to control expenditure

MJA reviewed DOW's planning, budgeting and project management processes to determine whether these processes were likely to result in the efficient allocation and use of funds. We also considered a measure of the effectiveness of the project management process.

In reviewing processes used to control CF Recurrent funds we consider the:

- "external budgeting" processes between DOW and the Department of Treasury and Finance;
- internal budgeting processes; and
- project management processes used to control expenditure throughout the year.

### 5.5.1. External Budgeting

In managing and compiling the state budget, the Department of Treasury and Finance (DTF) oversee appropriations and forward estimates for DOW.

DOW report to DTF along three service categories (in accordance with DOW corporate planning categories):

1. Urban Water Management and Industry Services
2. Water Use Allocation and Optimisation
3. Catchment and Waterways Health

DTF work closely with DOW during two phases of the year:

- February – May each year focussing on budget preparation; and
- November-December each year focussing on a Mid Year Review.

During the budget preparation DOW may submit New Resource Proposals, and following assessment by DTF, these are approved or rejected by Cabinet.

DTF have limited involvement in the allocation of CF Recurrent funds to individual priorities or projects within DOW and within the constraints of the total appropriation, DOW has flexibility to manage its budget as required.

In addition to reviewing New Resource Proposals, DTF have responsibility for implementing efficiencies enforced through government policy, as set out below.

## *Enforced efficiencies through the government policy*

MJA understand that DTF has a long standing policy that government departments gain approximately half the agreed salary increase each year, with the aim that the remaining cost increase is absorbed through efficiencies.

In addition, a major part of the 2009-10 Budget was the implementation in agency budgets of a 3% efficiency dividend. The impact of this budget and other related reductions on DOW budget is summarised in Table 9.

**Table 9: Efficiency Dividend and savings outlined in the 2009-10 budget**

| | 2008-09 Estimated Actual $'000 | 2009-10 Budget Estimate $'000 | 2010-11 Forward Estimate $'000 | 2011-12 Forward Estimate $'000 | 2012-13 Forward Estimate $'000 |
|---|---|---|---|---|---|
| **3% Efficiency Dividend** | | | | | |
| Administration Costs | (474) | (290) | (290) | (290) | (250) |
| Consultancies | (241) | (698) | (698) | (698) | (609) |
| Reduction In Use Of Contractors | (493) | (600) | (540) | (520) | (450) |
| Programs | - | (357) | (300) | (287) | (250) |
| Grants | - | (300) | (300) | (300) | (260) |
| *Total Savings* | *(1,208)* | *(2,245)* | *(2,128)* | *(2,095)* | *(1,819)* |
| **Economic Audit** | | | | | |
| Reduce Reliance on Consultants | - | (300) | (350) | (400) | (400) |
| Rationalise Operating Costs | - | (370) | (370) | (370) | (370) |
| Rationalise Reporting | - | (100) | (100) | (100) | (100) |
| Regional Cost Savings | - | - | (35) | (35) | (35) |
| Workforce Mobility and Flexibility | - | (100) | (100) | (100) | (100) |

*Source: DOW 2009-10 Budget Papers*

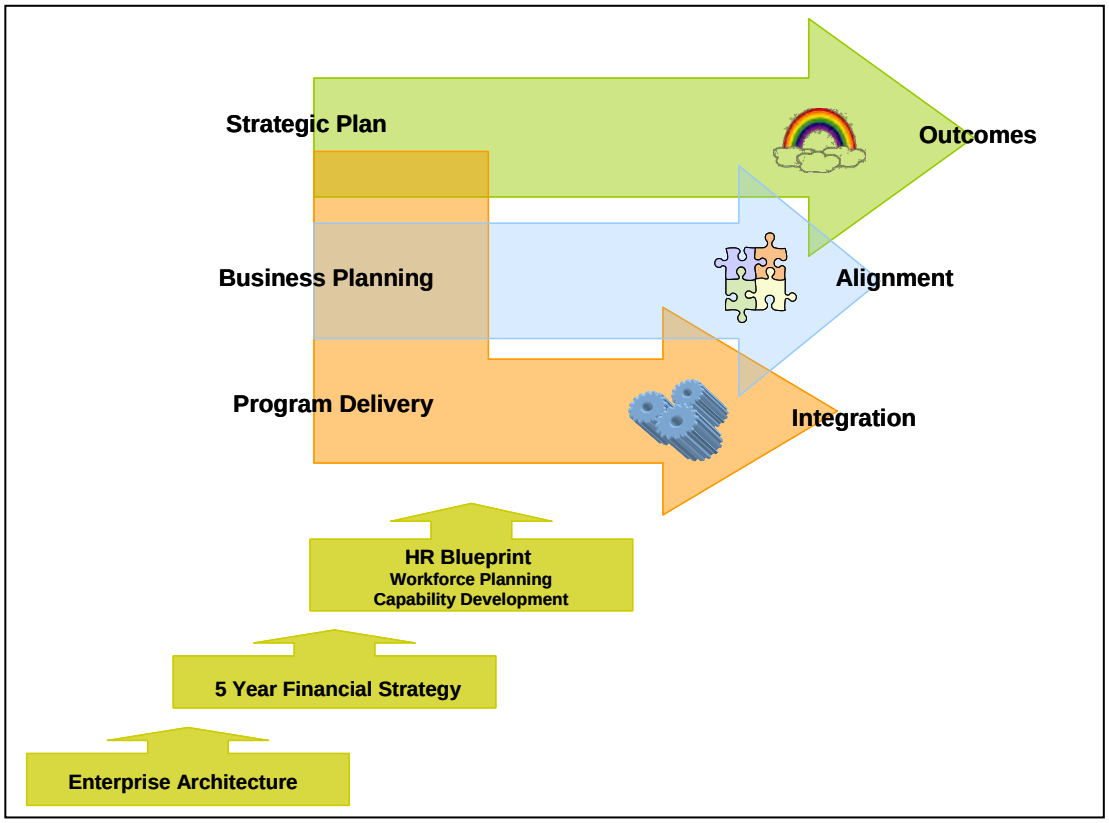
We also understand from discussions with DOW finance staff that since the completion of the budgets Department of Treasury and Finance have written to each department providing details on the savings that are required in relation to procurement and the vehicle fleet including:

- a 1.28% per annum reduction in procurement spending; and
- a 10% reduction in vehicle fleet costs by 2011-12.

### 5.5.2. Internal Budgeting

Internally DOW plans and budgets using the framework set out in Figure 3.

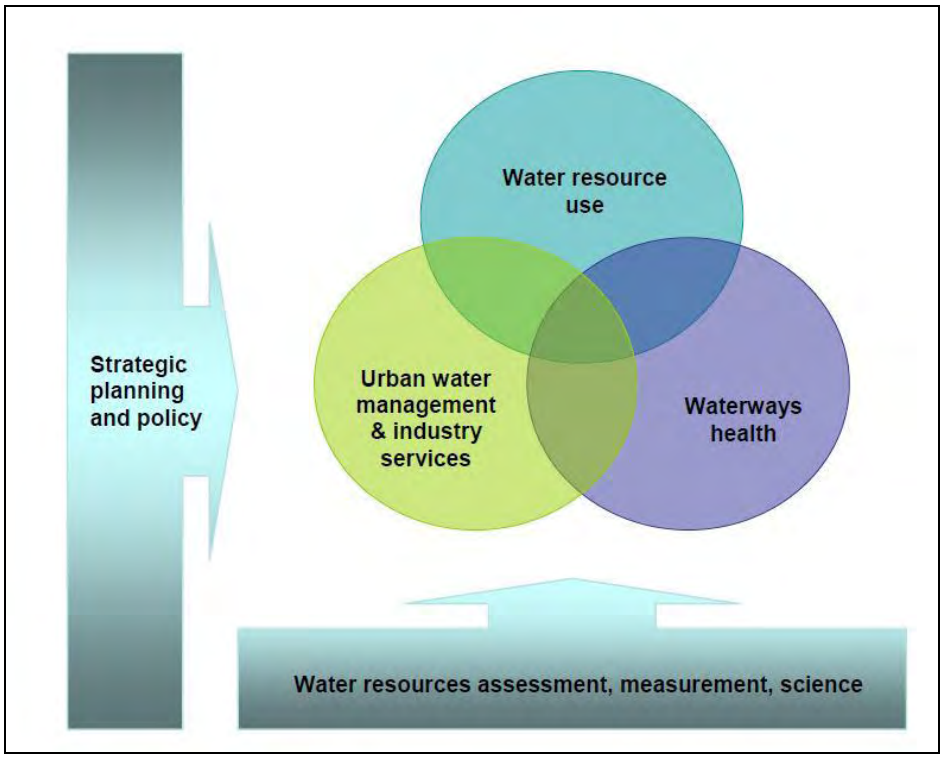
Figure 3: Internal Planning Framework




*Source: DOW*

DOW has a draft five year strategic plan that is currently not published and is supported by five year business plans for each of the six Divisions. The link between the internal planning and external budgeting and reporting is summarised in Figure 4. However, this diagram does not include the Office of Director General or the Corporate Services Division.

Figure 4: Business model used by the Department of Water




*Source: DOW response to the Issues Paper*

The five year strategic plan and business plans denote the priorities for budgeting on an annual basis. Within this framework the final details of the annual budget is agreed by the Corporate Executive group with the assistance of some senior managers.

### 5.5.3. Project management

DOW has a number of processes and systems in place to assist in the management of projects and budgets during their implementation phase.

These systems and processes are summarised below:

| | |
|---|---|
| Salary Allocation System | DOW staff are required to allocate their time to projects on a fortnightly basis through a Salary Allocation System provided on the Intranet. This allocates the staff costs to each project.<br><br>If this is not undertaken by deadline the previous salary allocation is "rolled forward". |
| Project Management System | At the commencement of each financial year DOW project managers are required to enter a predicted cashflow and Gantt chart for each project.<br><br>The Project Management System is then able to provide actual and projected budgets and timetables for all projects as well as FTE and other information.<br><br>The system is able to report on individual projects, sections by branch or division. |
| Quarterly Reporting | DOW undertakes quarterly reviews of all projects, providing an opportunity to identify projects that will be under or over budget and projects that may be delayed or require funds to be carried over. |

While these systems and processes provide a strong framework for managing DOW's work and controlling its budget two difficulties were highlighted during our analysis.

Firstly the department currently controls its work through a small number of large "project" categories. The average CF Recurrent project for 2009-10 had a budget in excess of $325,000. This makes the identification of individual activities or initiatives difficult and the cost allocations less transparent.

Secondly, DOW will move to a shared services model in November 2009, which will result in the loss of functionality to the Project Management System and will add a level of complexity for DOW managers to monitor their budgets closely.

### 5.5.4. Effectiveness measure of Project Management - History of Carryovers

The Department's historical record of actual spending compared with budget can be used as an indicator of the effectiveness of DOW's budget controls and project management processes. In particular the department's history of carryover funds can be examined.

DOW finance staff acknowledged that the Department has had a history of significant carryover funds. MJA were provided records for three years, which indicated one poor year (2006-07), where almost 10% of DOW's CF recurrent funds were carried over. The two subsequent years showed minimal funds were carried-over. This is detailed in Table 10, below.

Table 10: Carryover funds for 2006-07 to 2008-09

| Year | CF Recurrent Carryover ($000) | Percentage of CF Recurrent Budget |
|---|---|---|
| **2006-07** | 7,095 | 9.3% |
| **2007-08** | 422 | 0.6% |
| **2008-09** | 611 | 0.8% |

Source: DOW Finance Branch

It is not possible to draw a strong conclusion from a sample of only three years. However, the last two financial years have shown minimal carryover, which is indicative of effective spending control and project management processes.

## 5.6. Conclusions

The combination of the external budgeting process implemented by DTF and DOW's internal budgeting and project management system provide a sound basis for prioritising and managing individual projects once an overall budget has been determined. This process also provides a structure for funds and resources to be diverted as priorities change.

The external DTF budgeting process appears to be an effective process at managing DOW's budget on an incremental basis. However, this process does not provide an overall review of efficiency, which would allow the whole budget to be considered in detail.

The current Key Performance Indicators that are reported externally are of limited value in assessing DOW's efficiency, and it is currently not possible to benchmark these or other Key Performance Indicators against other water management agencies in Australia.

# 6. Suggested way forward

Based on the analysis in the preceding section, MJA recommend the following changes to assist DOW and ERA assess the efficiency of DOW expenditure:

1. collect relevant KPIs that will allow benchmarking over time and benchmarking with other jurisdictions;

2. complete a detailed process review;

3. freeze changes to the relevant KPIs or require retrospective reporting if KPIs change over time.

These recommendations are addressed in more detail below.

## 6.1. Collect relevant Key Performance Indicators

As described in Table 8, the existing KPIs have a number of inadequacies with respect to measuring efficiencies. Suggested modifications include:

- the average cost per water allocation plan completed is currently not reported. Ideally, the cost per plan could be broken into more detailed categories based on volume or other cost drivers;

- time spent assessing an application could be recorded in addition to the time elapsed. This would require additional time keeping within DOW and therefore should be subject to a cost-benefit analysis;

- the average cost per water licence should exclude those applications and renewals that DOW does not actively manage and should include Surface Water Licences (or alternatively these could be reported separately);

- the total number of licences processed should exclude those applications and renewals that DOW does not actively manage and should include Surface Water Licences (or alternatively these could be reported separately).

Even with these changes, the KPIs are typically presented at too high a level to provide useful statistics or to allow the measurement of efficiency gains.

DOW creates internal reports for a number of activities and an example of an Allocation Licensing report is provided in Appendix 1. Reports of this kind may be useful setting new Key Performance Indicators (KPIs).

Importantly, more detailed KPIs of this nature could allow the efficiency of DOW to be benchmarked against other Water Resource Management Agencies (see next point).

In addition the KPIs would provide a more accurate basis for measuring the efficiency of DOW over time.

## 6.2. Complete a detailed process review

To provide a more comprehensive understanding of DOW's efficiency and effectiveness, a detailed process review of DOW's functions would be required. Ideally this should be performed with reference to water management agencies in other Australian jurisdictions.

The New South Wales competition regulator, the Independent Pricing and Regulatory Tribunal (IPART) will shortly commence the next price review for the Water Administration Ministerial Corporation (Water Resource Management work undertaken by the Department of Water and Environment). IPART have indicated in their Issues Paper and orally that they are keen to:

- benchmark the Department's performance against other water resource regulators; and
- develop meaningful Key Performance Indicators.

The serendipitous timing for the ERA and IPART reports should allow the regulators to share information on both the processes and performance of the respective departments. This would then create a forum which other state regulators could join at a later date.

## 6.3. Freeze changes to the relevant areas and Key Performance Indicators

As noted throughout our analysis, internal reorganisations and changing of KPIs has made the identification and measurement of efficiencies over time impossible.

To enable comparison of performance over time, the indicators should be frozen for a period of time or retrospective reporting of KPIs should be undertaken where the definition of the indicator changes over time (i.e. the indicator should be reported using the new definition for both current and previous years).

# Appendix 1 - Licensing statistics for 2008-09

**Licensing activity statistics for 01 July 2008 to 30 June 2009**

## Summary Reports

This monthly report covers a number of components that give a snap-shot of the allocation business on a monthly basis.

### *1: NUMBER OF LICENCES CURRENTLY INFORCE*

The number of inforce s5C licences (GWL & SWL), GWM, permits and s26D licences for the whole state in the WRL system. Results are provided at the end of the month.

*Table 1.1 – Summary Table of licences currently inforce*

| Dates | GWM | GWL | SWL | Subtotal | Permits / 26D | Total |
|---|---|---|---|---|---|---|
| 31 July 2008 | 2,351 | 10,594 | 823 | **13,768** | 914 | **14,682** |
| 31 August 2008 | 2,344 | 10,563 | 829 | **13,736** | 878 | **14,614** |
| 30 September 2008 | 2,342 | 10,544 | 821 | **13,707** | 871 | **14,578** |
| 31 October 2008 | 2,342 | 10,475 | 828 | **13,645** | 876 | **14,521** |
| 30 November 2008 | 2,341 | 10,549 | 836 | **13,726** | 889 | **14,615** |
| 31 December 2008 | 2,338 | 10,558 | 843 | **13,739** | 911 | **14,650** |
| 31 January 2009 | 2,338 | 10,520 | 854 | **13,712** | 840 | **14,552** |
| 28 February 2009 | 2,336 | 10,527 | 857 | **13,720** | 827 | **14,547** |
| 31 March 2009 | 2,335 | 10,539 | 866 | **13,740** | 862 | **14,602** |
| 30 April 2009 | 2,335 | 10,558 | 874 | **13,767** | 858 | **14,625** |
| 31 May 2009 | 2,331 | 10,557 | 883 | **13,771** | 819 | **14,590** |
| 30 June 2009 | 2,327 | 10,557 | 908 | **13,792** | 813 | **14,605** |

*Note: Stock and Domestic licences are not included.*

*Table 1.2 – No. of GWL and GWM licences for the whole state in the WRL system CATEGORY BASIS against each QUARTER*

| Inforce licences | 1St Quarter Sept. 08 | 2 nd Quarter Dec. 08 | 3 rd Quarter March 09 | 4th Quarter June 09 |
|---|---|---|---|---|
| **C1** | 998 | 991 | 1,014 | 1,049 |
| **C2** | 2,105 | 2,383 | 2,284 | 2,271 |
| **C3** | 4,775 | 4,409 | 4,217 | 4,513 |
| **C4** | 5,008 | 5,113 | 5,341 | 5,051 |
| **Total** | 12,886 | 12,896 | 12,856 | 12,884 |

*Table 1.3 – No. of GWL and GWM licences for the whole state in the WRL system as of 30/06/09*
*CATEGORY BASIS against LICENCES AMOUNT*

| Inforce licences as of 30/06/09 | <= 5 ML/a | 5 to 100 ML/a | 100 to 500 ML/a | 500 to 1,000 ML/a | > 1,000 ML/a | Total applications issued |
|---|---|---|---|---|---|---|
| **C1** | 407 | 524 | 78 | 19 | 21 | 1,049 |
| **C2** | 916 | 1,050 | 174 | 37 | 94 | 2,271 |
| **C3** | 2,338 | 1,750 | 254 | 62 | 109 | 4,513 |
| **C4** | 2,641 | 2,084 | 236 | 39 | 51 | 5,051 |
| **Total** | 6,302 | 5,408 | 742 | 157 | 275 | 12,884 |

## 2: CURRENT STATUS OF APPLICATIONS RECEIVED

The number of new applications and renewals or amendments of existing licences that have been received on a monthly basis.

*Table 2.1 – Summary Table of applications received [All Applications]*

| Dates | New applications | Renew / amend applications | Total application received for the Month | |
|---|---|---|---|---|
| 31 July 2008 | 169 | 173 | **342** | |
| 31 August 2008 | 81 | 71 | **152** | |
| 30 September 2008 | 177 | 138 | **315** | |
| 31 October 2008 | 171 | 123 | **294** | |
| 30 November 2008 | 138 | 85 | **223** | |
| 31 December 2008 | 124 | 77 | **201** | |
| 31 January 2009 | 137 | 72 | **209** | |
| 28 February 2009 | 172 | 121 | **293** | |
| 31 March 2009 | 189 | 111 | **300** | |
| 30 April 2009 | 123 | 90 | **213** | |
| 31 May 2009 | 164 | 199 | **363** | |
| 30 June 2009 | 149 | 234 | **383** | GWL/26D: 351<br>SWL/ Permits: 32 |
| **Running Total** | 1,794 | 1,494 | **3,288** | |

## 3: NUMBER OF LICENCES ISSUED DURING THE MONTH

The number of licences and permits issued during the month by time taken to process the licences.

*Table 3.1 – Summary Table for number of licences issued during the month [All Licences]*

| Dates | < 30 days | 30 – 60 days | 60 – 90 days | > 90 days | Total application issued for the Month |
|---|---|---|---|---|---|
| 31 July 2008 | 92 | 109 | 60 | 14 | **275** |
| 31 August 2008 | 31 | 41 | 32 | 99 | **203** |
| 30 September 2008 | 51 | 43 | 29 | 102 | **225** |
| 31 October 2008 | 48 | 54 | 44 | 179 | **325** |
| 30 November 2008 | 40 | 65 | 31 | 147 | **283** |
| 31 December 2008 | 43 | 64 | 38 | 153 | **298** |
| 31 January 2009 | 51 | 46 | 31 | 88 | **216** |
| 28 February 2009 | 61 | 45 | 26 | 132 | **264** |
| 31 March 2009 | 89 | 51 | 22 | 172 | **334** |
| 30 April 2009 | 60 | 57 | 23 | 138 | **278** |
| 31 May 2009 | 77 | 64 | 48 | 100 | **289** |
| 30 June 2009 | 76 | 63 | 49 | 162 | **350** |
| **Running Total** | **719** | **702** | **433** | **1,486** | **3,340** |

*Table 3.2 – No. of GW licences issued during the month on a CATEGORY BASIS against No. of DAYS*

| Issued Between 01/06/09 and 30/06/09 | < 30 days | | 30 – 60 days | | 60 – 90 days | | > 90 days | | Total applications issued for the Month | | Total applications issued |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | New | Renewal | New | Renewal | New | Renewal | New | Renewal | New | Renewal | |
| **C1** | 10 | 12 | 0 | 3 | 6 | 2 | 13 | 10 | 29 | 27 | 56 |
| **C2** | 8 | 8 | 7 | 10 | 4 | 6 | 22 | 9 | 41 | 33 | 74 |
| **C3** | 9 | 13 | 10 | 7 | 5 | 5 | 40 | 12 | 64 | 37 | 101 |
| **C4** | 2 | 4 | 10 | 17 | 2 | 14 | 2 | 21 | 16 | 56 | 72 |
| **Total** | 29 | 37 | 27 | 37 | 17 | 27 | 77 | 52 | 150 | 153 | **303** |

*Table 3.3 – No. of GW licences issued during the month on a CATEGORY BASIS against LICENCE AMOUNT*

| Issued Between 01/06/09 and 30/06/09 | <= 5 ML/a | | 5 to 100 ML/a | | 100 to 500 ML/a | | 500 to 1,000 ML/a | | > 1,000 ML/a | | Total applications issued |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | New | Renewal | New | Renewal | New | Renewal | New | Renewal | New | Renewal | |
| **C1** | 23 | 10 | 6 | 13 | 0 | 3 | 0 | 1 | 0 | 0 | 56 |
| **C2** | 26 | 2 | 13 | 19 | 1 | 4 | 1 | 0 | 0 | 8 | 74 |
| **C3** | 50 | 19 | 14 | 14 | 0 | 1 | 0 | 1 | 0 | 2 | 101 |
| **C4** | **11** | 12 | **4** | 38 | **1** | 3 | **0** | 0 | **0** | 3 | 72 |
| **Total** | 110 | 43 | 37 | 84 | 2 | 11 | 1 | 2 | 0 | 13 | **303** |

*Table 3.4 – No. of GW licences issued during the month against TIME TAKEN*

| Dates/ licence amount | <= 5 ML/a | 5 to 100 ML/a | 100 to 500 ML/a | 500 to 1,000 ML/a | > 1,000 ML/a | Total |
|---|---|---|---|---|---|---|
| < 30 days | 31 | 28 | 3 | 0 | 4 | 66 |
| 30 to 60 days | 30 | 28 | 2 | 0 | 4 | 64 |
| 60 to 90 days | 23 | 20 | 1 | 0 | 0 | 44 |
| > 90 days | 69 | 45 | **7** | 3 | 5 | 129 |
| Total | 153 | 121 | 13 | 3 | 13 | **303** |

*Table 3.5– No. of SW licences issued during the month against TIME TAKEN* ***(01/06/09 TO 30/06/09)***

| Dates/ licence amount | <= 5 ML/a | 5 to 100 ML/a | 100 to 500 ML/a | 500 to 1,000 ML/a | > 1,000 ML/a | Total |
|---|---|---|---|---|---|---|
| < 30 days | 6 | 3 | 1 | 0 | 0 | 10 |
| 30 to 60 days | 2 | 1 | 0 | 0 | 0 | 3 |
| 60 to 90 days | 2 | 1 | 0 | 0 | 0 | 3 |
| > 90 days | 11 | 14 | **3** | 1 | 2 | 31 |
| Total | 21 | 19 | 4 | 1 | 2 | **47** |

## *4: SUMMARY OF OUTSTANDING APPLICATIONS*

The backlog of current (accepted) licence applications and number of licences past their expiry date for which an application has yet to be received.

*TABLE 4.1 – SUMMARY TABLE FOR OUTSTANDING APPLICATIONS*

| | **Outstanding applications** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dates** | **< 30 days** | | **30 t** | | **60 to 90 days** | | **>90 days** | | **Sub total** | | **Total for the month** |
| | GW | SW | GW | SW | GW | SW | GW | SW | GW | SW | |
| 31 July 2008 | - | - | - | - | - | - | 729 | 158 | 729 | 158 | 887 (>90 days) |
| 31 August 2008 | - | - | - | - | - | - | 864 | 195 | 864 | 195 | 1,059 (>90 days) |
| 30 September 2008 | 199 | 20 | 129 | 13 | 170 | 19 | 905 | 207 | 1403 | 259 | **1,662** |
| 30 November 2008 | 168 | 20 | 172 | 31 | 140 | 20 | 904 | 175 | 1,384 | 246 | **1,630** |
| 31 December 2008 | 110 | 10 | 141 | 17 | 141 | 27 | 902 | 169 | 1,294 | 223 | **1,517** |
| 31 January 2009 | 99 | 49 | 122 | 20 | 143 | 24 | 935 | 155 | 1299 | 248 | **1,547** |
| 28 February 2009 | 194 | 15 | 112 | 18 | 104 | 29 | 930 | 187 | 1,340 | 249 | **1,589** |
| 31 March 2009 | 178 | 14 | 152 | 16 | 87 | 13 | 883 | 196 | 1,300 | 239 | **1,539** |
| 30 April 2009 | 138 | 13 | 177 | 13 | 121 | 20 | 854 | 193 | 1,290 | 239 | **1,529** |
| 31 May 2009 | 239 | 18 | 186 | 16 | 148 | 17 | 850 | 172 | 1,423 | 223 | **1,646** |
| 30 June 2009 | 257 | 10 | 218 | 20 | 138 | 14 | 818 | 136 | 1,431 | 180 | **1,611** |

*GW - **Groundwater Area***
*SW - **Surfacewater Area***

*Table 4.2 – No. of GW groundwater licences outstanding during the month on a CATEGORY BASIS against No. of DAYS*

| **As of 30/06/09** | **< 30 days** | | **30 – 60 days** | | **60 – 90 days** | | **> 90 days** | | **Total applications outstanding for the Month** | | **Total applications outstanding** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | New | Renewal | New | Renewal | New | Renewal | New | Renewal | New | Renewal | |
| **C1** | 10 | 3 | 4 | 7 | 8 | 3 | 92 | 28 | 114 | 41 | 155 |
| **C2** | 25 | 14 | 20 | 24 | 17 | 12 | 138 | 67 | 200 | 117 | 317 |
| **C3** | 29 | 26 | 31 | 28 | 19 | 28 | 171 | 131 | 250 | 213 | 463 |
| **C4** | 22 | 128 | 14 | **90** | 11 | **40** | 87 | **104** | 134 | **362** | 496 |
| **Total** | 86 | 171 | 69 | 149 | 55 | 83 | 488 | 330 | 698 | 733 | **1,431** |

*Table 4.3 – No. of GW groundwater licences outstanding during the month on a CATEGORY BASIS against LICENCE AMOUNT.*

| As of 30/06/09 | <= 5 ML/a | | 5 to 100 ML/a | | 100 to 500 ML/a | | 500 to 1,000 ML/a | | > 1,000 ML/a | | Total applications outstanding |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | New | Renewal | New | Renewal | New | Renewal | New | Renewal | New | Renewal | |
| **C1** | 57 | 3 | 33 | 20 | 9 | 8 | 4 | 5 | 11 | 5 | 155 |
| **C2** | 88 | 18 | 72 | 50 | 23 | 28 | 4 | 4 | 13 | 17 | 317 |
| **C3** | 110 | 33 | 89 | 92 | 35 | 39 | 11 | 23 | 5 | 26 | 463 |
| **C4** | 74 | **48** | 41 | **264** | 11 | **38** | 4 | **8** | 4 | **4** | 496 |
| **Total** | 329 | 102 | 235 | 426 | 78 | 113 | 23 | 40 | 33 | 52 | **1,431** |

*Table 4.4 – No. of outstanding applications (GW) during the month against TIME TAKEN*

| Dates/ licence amount | <= 5 ML/a | 5 to 100 ML/a | 100 to 500 ML/a | 500 to 1,000 ML/a | > 1,000 ML/a | Total |
|---|---|---|---|---|---|---|
| < 30 days | 96 | 144 | 10 | 1 | 6 | 257 |
| 30 to 60 days | 66 | 130 | 15 | 3 | 4 | 218 |
| 60 to 90 days | 42 | 73 | 20 | 2 | 1 | 138 |
| > 90 days | 227 | 314 | 146 | 57 | 74 | 818 |
| Total | 431 | 661 | 191 | 63 | 85 | **1,431** |

*Table 4.5 – No. of outstanding applications (SW) during the month against TIME TAKEN*

| Dates/ licence amount | <= 5 ML/a | 5 to 100 ML/a | 100 to 500 ML/a | 500 to 1,000 ML/a | > 1,000 ML/a | Total |
|---|---|---|---|---|---|---|
| < 30 days | 1 | 8 | 1 | 0 | 0 | 10 |
| 30 to 60 days | 9 | 9 | 2 | 0 | 0 | 20 |
| 60 to 90 days | 6 | 5 | 2 | 0 | 1 | 13 |
| > 90 days | 43 | 56 | 25 | 7 | 5 | 136 |
| Total | 59 | 78 | 30 | 7 | 6 | **180** |

The Cause of Outstanding Applications and reason for the delays in processing an application

*TABLE 4.5 – CAUSE OF OUTSTANDING APPLICATIONS - To Date [GW & SW]*

| Dates | Awaiting information from another agency | Awaiting information from applicant | Awaiting information from internal branch | Under assessment [Regional Resourcing Limitations] | No flag assigned – follow-up with Regions required | Total |
|---|---|---|---|---|---|---|
| 31 July 2008 | 8 | 378 | 24 | 396 | 211 | **1017** |
| 31 August 2008 | 10 | 380 | 37 | 440 | 192 | **1,059** |
| 30 September 2008 | 7 | 423 | 48 | 883 | 301 | **1,662** |
| 31 October 2008 | 8 | 417 | 73 | 992 | 110 | **1,660** |
| 30 November 2008 | 6 | 422 | 60 | 1,105 | 37 | **1,630** |
| 31 December 2008 | 7 | 405 | 70 | 1,013 | 22 | **1,517** |
| 31 January 2009 | 13 | 407 | 83 | 1,029 | 15 | **1,547** |
| 28 February 2009 | 26 | 447 | 62 | 1,046 | 8 | **1,589** |
| 31 March 2009 | 16 | 394 | 54 | 1,070 | 5 | **1,539** |
| 30 April 2009 | 19 | 366 | 52 | 1,090 | 2 | **1,529** |
| 31 May 2009 | 17 | 349 | 91 | 1187 | 2 | **1,646** |
| 30 June 2009 | 14 | 342 | 187 | 1,067 | 1 | **1,611** |

Table 4.6 shows the number of outstanding applications being processed on a regional basis by month.

*TABLE 4.6 – NUMBER OF OUTSTANDING APPLICATIONS REPORT: REGIONAL BREAKDOWN - AS OF 30 JUNE 09*

| Region | Outstanding applications | | | | | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Groundwater | | | | *Surface Water* | | | | | | | |
| | May 09 | | June 09 | | May 09 | | June 09 | | May 09 | | June 09 | |
| | With Flag | With out Flag | With Flag | With out Flag | With Flag | With out Flag | With Flag | With out Flag | With Flag | With out Flag | With Flag | With out Flag |
| ATRIUM | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| GF | 14 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 15 | 0 |
| KP | 244 | 0 | 229 | 0 | 11 | 0 | 9 | 0 | 255 | 0 | 238 | 0 |
| MW | 155 | 0 | 257 | 0 | 3 | 0 | 4 | 0 | 158 | 0 | 261 | 0 |
| KM | 39 | 0 | 17 | 0 | 15 | 0 | 6 | 0 | 54 | 0 | 23 | 0 |
| PL | 118 | 0 | 74 | 0 | 48 | 0 | 14 | 0 | 166 | 0 | 88 | 0 |
| SC | 50 | 0 | 64 | 0 | 2 | 0 | 2 | 0 | 52 | 0 | 66 | 0 |
| SN | 513 | 1 | 507 | 0 | 36 | 0 | 35 | 0 | 549 | 1 | 542 | 0 |
| SW | 288 | 1 | 267 | 1 | 105 | 0 | 107 | 0 | 393 | 1 | 374 | 1 |
| **TOTAL** | 1,421 | 2 | 1,430 | 1 | 223 | 0 | 180 | 0 | 1,644 | 2 | 1,610 | 1 |

## *5: COMPLIANCE INSPECTION ACTIVITY*

The numbers of compliance inspections undertaken during the month are shown. Groundwater inspections are separates into C1 to C4 categories, and surface water inspections are reported as a single figure.

### TABLE 5.1 – SUMMARY TABLE FOR NUMBER OF COMPLIANCE INSPECTIONS UNDERTAKEN

| Dates | C1 | C2 | C3 | C4 | SW | Total |
|---|---|---|---|---|---|---|
| 31 July 2008 | 4 | 12 | 26 | 220 | 6 | **268** |
| 31 August 2008 | 12 | 26 | 49 | 102 | 2 | **191** |
| 30 September 2008 | 10 | 10 | 25 | 136 | 5 | **186** |
| 31 October 2008 | 6 | 19 | 31 | 33 | 2 | **91** |
| 30 November 2008 | 2 | 11 | 94 | 207 | 2 | **316** |
| 31 December 2008 | 5 | 16 | 20 | 144 | 2 | **187** |
| 31 January 2009 | 13 | 23 | 24 | 33 | 15 | **108** |
| 28 February 2009 | 1 | 5 | 4 | 60 | 5 | **75** |
| 31 March 2009 | 12 | 18 | 19 | 145 | 15 | **209** |
| 30 April 2009 | 1 | 1 | 2 | 6 | 0 | **10** |
| 31 May 2009 | 2 | 0 | 2 | 82 | 0 | **86** |
| 30 June 2009 | 0 | 1 | 1 | 4 | 2 | **8** |

## *6: INFORCE LICENCES PAST EXPIRY DATE*

As of the 1st July 2007 the facility to enable WRL to automatically *Expire* licences 30 days after their expiry date was activated, thereby returning the associated entitlement back to the pool and making the water available for reallocation.

**TABLE 6.1 - NUMBER OF INFORCE LICENCES PAST THEIR EXPIRY DATE – To Date**

| Dates | *Groundwater* | *Surface water* | *Total* |
|---|---|---|---|
| 31 July 2008 | 66 | 6 | **72** |
| 31 August 2008 | 60 | 8 | **68** |
| 30 September 2008 | 92 | 6 | **98** |
| 31 October 2008 | 60 | 8 | **68** |
| 30 November 2008 | 58 | 4 | **62** |
| 31 December 2008 | 117 | 12 | **129** |
| 31 January 2009 | 90 | 6 | **96** |
| 28 February 2009 | 90 | 6 | **96** |
| 31 March 2009 | 104 | 18 | **122** |
| 30 April 2009 | 103 | 13 | **116** |
| 31 May 2009 | 98 | 5 | **103** |
| 30 June 2009 | 170 | 9 | **179** |

The table below shows the reduction in the number of licences due to the automatic expiry in the WRL system.

*TABLE 6.2 – INFORCE LICENCES PAST EXPIRY DATE: REGIONAL BREAKDOWN - To Date*

| Region | Number of inforce licences past expiry date but yet to enter process | | | | Total | |
|---|---|---|---|---|---|---|
| | *Groundwater* | | *Surface Water* | | | |
| | May 09 | June 09 | May 09 | June 09 | Apr 09 | May 09 |
| GF | 3 | 3 | 0 | 0 | 5 | 3 |
| ATRIUM | 1 | 16 | 0 | 0 | 0 | 16 |
| KP | 37 | 51 | 0 | 0 | 31 | 51 |
| KM | 1 | 22 | 0 | 0 | 9 | 22 |
| MW | 7 | 14 | 0 | 4 | 4 | 18 |
| PL | 3 | 6 | 0 | 0 | 4 | 6 |
| SC | 3 | 8 | 0 | 0 | 3 | 8 |
| SN | 34 | 40 | 0 | 0 | 45 | 40 |
| SW | 9 | 10 | 5 | 5 | 15 | 15 |
| **TOTAL** | **98** | **170** | **5** | **9** | **116** | **179** |

# Appendix 2 – Assessment requirements for licence applications

*Rights in Water and Irrigation Act 1914*
Schedule 1 (Licensing and related provisions) Division 2 (Applications and licensing decisions)

**7. Grant or refusal at Minister's discretion**

(1) The grant or refusal of an application for a licence and the terms, conditions and restrictions to be included in the licence are, subject to clause 8, at the discretion of the Minister.

(2) In exercising that discretion, the Minister is to have regard to all matters that the Minister considers relevant, including whether the proposed taking and use of water —

(a) are in the public interest;

(b) are ecologically sustainable;

(c) are environmentally acceptable;

(d) may prejudice other current and future needs for water;

(e) would, in the opinion of the Minister, have a detrimental effect on another person;

(f) could be provided for by another source;

(g) are in keeping with —

(i) local practices;

(ii) a relevant local by-law;

(iii) a plan approved under Part III Division 3D Subdivision 2; or

(iv) relevant previous decisions of the Minister;

or

(h) are consistent with —

(i) land use planning instruments;

(ii) the requirements and policies of other government agencies; or

(iii) any intergovernmental agreement or arrangement.

# Appendix 3 - Decision table for Hydrogeological Assessments

**Table 1. Decision table for Hydrogeological Assessments**

| Volume requested (kL/year) | Level of allocation | Potential for unacceptable impacts | | Existing salinity* (Milligrams per Litre) |
|---|---|---|---|---|
| | | Other users | GDEs | |
| <10,000 (0 points)<br>10,001 – 50,000 (2 point)<br>50,001 – 250,000 (4 points)<br>250,001 – 500,000 (6 points)<br>500,001 – 1,000,000 (8 points)<br>1,000,000 – 2,500,000 (15 points)<br>> 2,500,000 (20 points) | 0 – 30% (C1) (0 points)<br>30 – 70 % (C2) (1 points)<br>70 – 100 % (C3) (3 points)<br>> 100 % (C4) (5 points) | Impacts unlikely (0 points)<br>Impacts possible (2 points)<br>Impacts likely (5 points) | Impacts unlikely (0 point)<br>Impacts possible (2 points)<br>Impacts likely (5 points) | Fresh <500 mg/L (4 points)<br>Marginal TDS 501 – 1,500 mg/L (3 points)<br>Brackish TDS 1,501 – 5,000 mg/L (2 points)<br>Saline TDS 5,001 – 50,000 mg/L (1 points)<br>Hypersaline >50,000 mg/L (0 points) |
| ***Points assigned = a*** | ***Points assigned = b*** | ***Points assigned = c*** | ***Points assigned = d*** | ***Points assigned = e*** |

**Assign points for each column in the table (ie volume, allocation, potential impacts – users, GDEs and salinity), and add to give a score.**

*Note: Policies or management plans developed for specific areas may override this decision making process in those areas.*

**Salinity categories obtained from National Land and Water Audit (reference)*

**Score ( = a+b+c+d+e)**

| | |
|---|---|
| 0 – 7 points | Generally no assessment required, unless other knowledge of risks indicates that H1 level assessment (*desktop Hydrogeological Assessment)* is warranted. |
| 8 – 12 points | H1 level assessment (*desktop Hydrogeological Assessment)*. However, low volume applications with low risk of impacts may not warrant an assessment. These cases can be discussed with the Regional Hydrogeologist. |
| 12 – 18 points | H2 level assessment *(basic Hydrogeological Assessment including installation and testing of investigation bores).* |
| > 19 points | H3 level assessment *(detailed Hydrogeological Assessment including installation and testing of investigation bores, and a groundwater model).* |

Source: Statewide Policy No. 19 Hydrogeological reporting associated with a Groundwater Well Licences

# Appendix 4 - Impact of New Resource Proposals budgets for 2006-07 to 2008-09

| | 2006/07 | | 2007/08 | | 2008/09 | | 2009/10 | |
|---|---|---|---|---|---|---|---|---|
| **Initiative** | **$'000's** | **FTE's** | **$'000's** | **FTE's** | **$'000's** | **FTE's** | **$'000's** | **FTE's** |
| | | | | | | | | |
| Improved Water Resource Mgt and Info | 1,245 | 13.0 | 1,913 | 20.0 | 2,046 | 21.0 | 1,914 | 21.0 |
| Improved Water Resource Mgt and Info | 763 | | 1,178 | | 1,258 | | 1,178 | |
| Irrigation Reform Program | 4,140 | 9.0 | 4,467 | 10.0 | 2,974 | 8.0 | 2,426 | 8.0 |
| Perth Region | 536 | 1.5 | 504 | 1.5 | 479 | 1.5 | 479 | 1.5 |
| Perth Region | 238 | | 77 | | 0 | | 0 | |
| Drinking Water Source Protection | 632 | 5.0 | 632 | 5.0 | 632 | 6.0 | 632 | 6.0 |
| Drinking Water Source Protection | 0 | | 0 | | 97 | | 97 | |
| Drainage and Associated Functions | 1,331 | 9.5 | 2,191 | 12.0 | 2,759 | 12.0 | 2,775 | 12.0 |
| Drainage and Associated Functions | 558 | | 1,197 | | 660 | | 665 | |
| Implementation of Floodplain | 289 | 0.5 | 289 | 0.5 | 289 | 0.5 | 289 | 0.5 |
| **Total 2006-07 Additional Funding** | **9,732** | **38.5** | **12,448** | **49.0** | **11,194** | **49.0** | **10,455** | **49.0** |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Maintain Water Resource Information | | | 478 | - | 490 | 1.0 | 562 | 2.0 |
| Maintain Water Resource Information | | | 952 | 9.0 | 976 | 9.0 | 1,119 | 10.0 |
| Maintain Water Resource Information | | | 753 | - | 772 | - | 885 | 1.0 |
| Maintain Water Resource Information | | | 1,313 | 9.0 | 1,345 | 9.0 | 1,539 | 9.0 |
| Sub Total 2007-08 Maintain Water Resource Info | 0 | - | 3,496 | 18.0 | 3,583 | 19.0 | 4,105 | 22.0 |
| | | | | | | | | |
| GSS | | | 3,274 | 3.0 | 3,501 | 3.0 | 735 | - |
| Statutory Management Plans | | | | | 1,386 | - | 479 | - |
| **Total 2007-08 Additional Funding** | **0** | **-** | **6,770** | **21.0** | **8,470** | **22.0** | **5,319** | **22.0** |
| | | | | | | | | |
| | | | | | | | | |
| New Initiatives | | | | | | | | |
| State Water Recycling Strategy | | | 0 | 1.0 | 1,654 | 4.5 | 632 | 3.5 |
| Water Efficiency Measures | | | 3,018 | 1.0 | 642 | 2.0 | 412 | 1.0 |
| Sub Total 2008-09 New Initiatives | 0 | - | 3,018 | 2.0 | 2,296 | 6.5 | 1,044 | 4.5 |
| Bilateral - Additional Funding | | | | | | | | |
| *Water Reform Implementation* | | | | | | | | |
| Water Licensing and Accounting | | | | | | | | |
| Water licensing | | | | | 740 | 8.0 | 1,025 | 12.5 |
| Water entitlements and trading | | | | | 550 | 2.0 | 731 | 4.0 |
| Water accounting | | | | | 465 | 4.0 | 455 | 4.0 |
| Information Technology | | | | | 1,356 | 1.0 | 0 | |
| Sub Total 2008-09 Water Licensing and Accounting | 0 | - | 0 | - | 3,111 | 15.0 | 2,211 | 20.5 |
| | | | | | | | | |
| Metering | | | | | 539 | 2.0 | 749 | 4.0 |
| Compliance enforcement unit & Water Efficiency Measures | | | | | 1,113 | 8.0 | 1,055 | 8.0 |
| Investigation and assessment | | | | | 400 | | 550 | |
| Statutory allocation planning | | | | | 550 | | 700 | |
| Water licence administration fees | | | | | 7,117 | | 2,617 | |
| GROH - Staff costs (non salary) | | | | | 400 | | 440 | |
| Measuring and monitoring assets - SGIP | | | | | 0 | | 0 | |
| Measuring and monitoring assets - SRN Maintain Monitoring Bores (capital escalation) | | | | | 0 | | 0 | |
| Measuring and monitoring assets - Surface water - River Gauging Stations (capital escalation) | | | | | 0 | | 0 | |
| Sub Total 2008-09 Other Bilateral | 0 | - | 0 | - | 10,119 | 10.0 | 6,111 | 12.0 |
| | | | | | | | | |
| **Total 2008-09 Additional Funding** | **0** | **-** | **3,018** | **2.0** | **15,526** | **31.5** | **9,366** | **37.0** |

Source: Dow Finance Department[19]

[19] A Sarich, Document 3

# Appendix 5 - Development and consideration of new ratios to assess efficiencies over time

We considered whether various measures could be used to determine the effectiveness of DOW's budgeting and project management or to create ratios that measure the efficiency of the department over time. To undertake this we considered:

- the proportion of DOW's budget spent on Corporate Services and other support overheads; and
- the ratio of the number of staff to the total budget to consider the cost per employee.

## Proportion of overheads

Given the substantial increase in DOW's CF Recurrent budget over the previous 10 years we considered whether this was reflected in an increase or decrease in the proportion of overheads.

DOW were unable to provide comparable internal budgeting figures for the period prior to 2006-07, however three years of historical data and three years of planning data, beyond the current year are outlined in Table 11, below.

**Table 11: Proportion of Departmental overheads (Corporate Services and Office of Director General) 2006-07 to 2012-13**

| | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|---|---|---|---|---|---|---|---|
| Budget | $13,929[20] | $15,636 | $19,780 | $19,266 | $18,272 | $19,326 | $21,306 |
| % total Budget | 18% | 21% | 25% | 27% | 28% | 29% | 32% |
| Overheads per FTE ($ 000) | $23.73 | $27.72 | $32.75 | $32.11 | $30.25 | $32.00 | - |

Source: DOW Finance Department[21]

The significant changes in Corporate Services budget from year to year (eg. 2006-07 to 2007-08) appears to indicate either the movement of costs within the department or an individual large expenditure item. This makes the tracking of efficiency/inefficiency trends impossible making this analysis redundant. However, we do note the upwards trend for all these numbers expected from 2007-08 to 2012-13 – which appears to be largely due to an increased budget share for Corporate Support.

[20] Actual Budget Figures minus the Capital User Charge ($13.4 million) to allow comparison to other years.

[21] Actual expenditure figures used for previous years. Budget figures used for 2009-10 and future years.

## Budget to employee ratio

Finally we considered the ratio of the CF recurrent budget per employee over the time period from 1998-99 to present and the predicted ratio for the period to 2011-12.

To provide a consistent comparison, Figure 5, below expresses this ratio adjusted to 2009 values.

**Figure 5: Budget per employee ($ 000) adjusted to 2009 values**


Source: DOW Finance Department

While the change in this ratio over time indicates a substantial reduction in the operating budget available, it is highly unlikely that this change is due entirely to efficiency gains. Instead the change is likely to be indicative of a policy for reduced outsourcing of work.