

# **BULK WATER PRICES**

**from 1 July 1997**

**INDEPENDENT PRICING AND REGULATORY TRIBUNAL  
OF NEW SOUTH WALES**

# **BULK WATER PRICES**

**from 1 July 1997**

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## Foreword

Major changes are occurring that affect bulk water customers in NSW. Water diversions are being capped to limit environmental damage. A national approach to pricing policy is being developed to better reflect the cost of service provision and to help allocate resources efficiently. In August a major water reform package was endorsed by Cabinet.

Water users' outputs are subject to the vagaries of weather and world commodity markets. On the input side, institutional barriers to trading in water are being unwound.

This price Determination is concerned with the price charged for water services by the Water Administration Ministerial Corporation (WAMC). Water users have asked the Tribunal for fair and reasonable prices that accurately reflect the costs incurred by the Corporation in the efficient provision of water services. A clear message from water customers is that they are happy to pay for water services which are necessary, including some resource management activities, provided that all services are carried out efficiently.

Environmentalists have submitted to the Tribunal that water abstraction has two costs. One cost is the provision of water services (storage, transportation, monitoring and metering). The other cost is damage done to the environment.

The Department of Land and Water Conservation (DLWC) has estimated the costs incurred in providing bulk water services. It has then attempted to distribute these costs between water extractors and other beneficiaries of these services.

The DLWC's budget estimates reveal a substantial shortfall between revenue from water charges and costs incurred in providing services. This difference is currently met by taxpayers.

The Tribunal must decide what is an efficient cost level, what proportion of costs are attributable to water users, and how charges should be structured. The prices determined by the Tribunal are the maximum that may be charged. Lower prices may only be charged by the DLWC with the approval of the Treasurer.

In 1996/97 the Tribunal left prices unchanged because the data provided by the DLWC was inadequate for a decision. The DLWC remains unable to provide full details of the actual costs incurred, including key performance standards and efficiency targets. The DLWC has yet to provide an acceptable basis for deciding who benefits from its services and by how much. However, the Tribunal recognises the difficulty of this task.

For 1997/98 the Tribunal has determined prices that recover known, recorded actual costs plus a proportion (50 percent) of a renewals annuity to finance future capital and maintenance expenditure. This is the major reason for price increases at this point in time. This extra charge ensures the satisfactory provision of infrastructure. To improve fairness to customers while improving cost recovery, the charges remain regionally based. However, there is a stronger emphasis on the amount of water used. While the new prices mean some customers must pay significant percentage increases (around 20 percent) the extra revenue raised still recovers only a low proportion of total costs. Notwithstanding the uncertainty regarding the DLWC's costs, the Tribunal is persuaded that revenues resulting from the proposed new prices will not result in an over recovery of the users share of

efficient costs of service delivery, resource management and asset maintenance in any of the regions.

If the DLWC's projections of cost recovery are proven, there is a significant gap between costs and revenue. The size of this gap will be unknown until there is agreement on:

- What bulk water services are necessary?
- What is an efficient cost level for these services?
- How should these costs be shared between different bulk water users and the general taxpayer?

This Determination represents a reasoned and reasonable step towards an equitable recovery of efficient costs, incurred in the provision of bulk water services, in New South Wales.

Thomas G Parry  
*Chairman*  
September 1997



**INDEPENDENT PRICING AND REGULATORY TRIBUNAL**  
OF NEW SOUTH WALES

**REPORT TO THE PREMIER ON MAXIMUM PRICES FOR BULK WATER SERVICES  
UNDER SECTION 12 (1)(a) OF THE INDEPENDENT PRICING AND REGULATORY  
TRIBUNAL ACT, 1992**

**Matter No.:** SPDR/95/01

**Report:** No. 6, 1997

**Agency:** The Water Administration Ministerial Corporation (administered by the Department of Land and Water Conservation).

**Services:** Any services provided by the Water Administration Ministerial Corporation, to the extent that the service involves:

- a) the making available of water; or
- b) the making available of the Corporation's supply facilities; or
- c) the supplying of water, whether by means of the Corporation's water supply facilities or otherwise.

**Declaration of government monopoly services under Section 4 of the Act:**

Order dated 4 October 1995 - page 7115, Gazette No. 122

## 1 INTRODUCTION

As required by section 12 (1) of the *Independent Pricing and Regulatory Tribunal Act 1992*, the Independent Pricing and Regulatory Tribunal (the Tribunal) has investigated information presented by the Department of Land and Water Conservation (DLWC), on behalf of the Water Administration Ministerial Corporation (WAMC), and determined maximum prices to be charged for bulk water services from 1 July 1997.

The Tribunal's Determination of maximum prices for these services is attached to this report.

## 2 THE PRICE DETERMINATION PROCESS

In its Interim Report, the Tribunal called for pricing proposals from the DLWC and asked interested persons to make submissions in response to the DLWC's proposals<sup>1</sup> and the Tribunal's recommendations.<sup>2</sup>

The DLWC's pricing proposals are explained below in section 4. A list of submissions received in response to the Interim Report and the Draft Determination is presented in Appendix 1. A summary of the main points raised in submissions is also provided in Appendix 1.

The Tribunal held public hearings during March 1997 in Moree, Dubbo, Sydney and Griffith. Copies of all submissions and transcripts of each hearing are available at the Tribunal's offices at Level 2, 44 Market Street, Sydney or they can be viewed at our website, [www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au)

Additional meetings with stakeholders were held during April and May 1997 at Leeton, Casino, Kempsey, Moree, East Maitland, Dareton, Deniliquin, Forbes, Dubbo, Penrith and Bega.

On 17 July 1997, the Tribunal released a Draft Determination of bulk water prices to apply from 1 July 1997.

The Tribunal members who considered the 1997/98 bulk water Determination were:

- *Dr Thomas G Parry, Chairman*
- *Mr James Cox, Full-time Member*
- *Professor Warren Musgrave, Temporary Member*

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<sup>1</sup> The DLWC made two written submissions (in January 1997 and February 1997) and provided two supporting documents (an *Asset Management Strategy* and a *Critical Action Plan* for unfunded resource management activities). These are discussed in Section 6.1.

<sup>2</sup> IPART, *Bulk Water Pricing: an Interim Report*, October 1996.

### *The price Determination process for 1998/99*

The next price Determination process will commence with consideration of a submission from the DLWC in January 1998. The DLWC's submission must contain a pricing proposal which for pricing purposes:

- ◆ clearly ring-fences bulk water activities<sup>3</sup>
- ◆ better identifies bulk water beneficiaries and proposes a fair and transparent system for calculating cost sharing
- ◆ includes a regional breakdown of actual costs for bulk water services
- ◆ provides appropriate performance measures, including specific efficiency targets
- ◆ recommends specific new regional price levels and any revisions of price structures within a program to progressively achieve acceptable cost recovery.

All stakeholders, and especially bulk water users, are encouraged to review the DLWC's submission and pricing proposals for 1998/99 and to provide submissions by March 1998 to help the Tribunal to set prices.

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<sup>3</sup> Effective ring fencing achieves a clear accounting and cost separation of divisions of an operation that may be viewed as having conflicting objectives or competitive advantages in their dealing with each other.

### 3 SUMMARY OF THIS DETERMINATION

This Determination sets the Water Administration Ministerial Corporation's bulk water prices to apply from 1 July 1997.<sup>4</sup> The principal features of the Determination are:

- ◆ A stronger emphasis on paying for water actually used to improve equity and give better signals to conserve water.
- ◆ The new regulated water charges supersede a variety of small charges, simplifying customer accounts and making it easier for customers to estimate their water costs.
- ◆ Region-specific, two-part tariffs for regulated rivers will result in increased regional revenue of up to 20 percent.<sup>5</sup> Exceptions are the Murray and Murrumbidgee regions, where tariffs have been set to maintain existing average revenue because a price increase is not supportable on current information.
- ◆ New unregulated river prices will result in increased revenue of 15 percent. In the future, the Tribunal intends to implement usage based pricing for unregulated rivers. To facilitate this important change, the DLWC must expedite the process of converting licences from area-based entitlements to metering the volume of water used.
- ◆ Prices for groundwater are adjusted to increase both the fixed and usage components of existing charges. As a result, groundwater revenue will rise by approximately 15 percent.

The greater emphasis on usage charges will mean that the impact on individual water users will depend on their level of consumption.

The differences between the draft and final Determinations are:

- ◆ The Draft Determination provided a number of alternative pricing approaches, pending input from users and the DLWC. For the purpose of the final Determination, the Tribunal has decided which of the alternatives will be adopted.
  - In the case of unregulated rivers, proposal 2a was chosen. This reflects the intention to introduce metering on unregulated rivers. This option results in fairer prices, as low-volume users will pay less and high-volume users will pay more.
  - In the case of groundwater, proposal 3 was selected to introduce usage based prices for larger users. This option also increases the fixed charge for all groundwater users to improve the low level of cost recovery.
- ◆ There are minor adjustments to the fixed charges for some areas and districts.
- ◆ Industrial users will be charged a total of \$10/ML on the greater of usage or entitlement. This change formalises regional arrangements whereby some industrial customers were extracting off-allocation water, increasing usage above their entitlement.

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<sup>4</sup> In all regions except the Barwon, the 1997/98 water year runs from 1 July 1997 to 30 June 1998. In the Barwon region the 1997/98 water year runs from 1 October 1997 to 30 September 1998.

<sup>5</sup> The actual increase in revenue from 1996/97 to 1997/98 will depend on water usage in each region. Most regions will increase by between 14 and 20 percent. A similar revenue increase was also sought in the Hunter region. This was prevented by the large number of sleeper licences and implementation of greater usage based pricing which removed the minimum annual charge system.

Due to the incomplete nature of the information provided there is still considerable uncertainty regarding the exact level of the DLWC's total of efficient costs. In particular the DLWC has not been able to satisfy the Tribunal as to the extent of resource management costs attributable to irrigators.

However, a consultant's review of the DLWC's asset management plan has provided the Tribunal with a firm basis for considering cost recovery of infrastructure maintenance and refurbishment in terms of an annuity. The Tribunal is persuaded that increased revenue from new prices on regulated rivers, will not result in an over recovery of the users share of efficient costs of operation, infrastructure maintenance and resource management in any region. Only in the Murray and Murrumbidgee is there a possibility that revenues may be close to appropriate levels, so revenues in those regions have been maintained at current levels pending clarification of costs related to the Murray Darling Basin Commission and resource management costs.

## 4 SUBMISSIONS

### 4.1 Submissions by the DLWC

The Tribunal asked the DLWC to submit a pricing proposal, with supporting information on the costs it incurs in supplying, managing and regulating water usage. However, the DLWC's water-related activities are not separately accounted for within its expenditure on land, water and vegetation-related activities.<sup>6</sup> The DLWC has embarked on a work program to generate this cost information,<sup>7</sup> but for its pricing proposals for 1997/98, only the apportionment of budget estimates was available. The same information constraint applied for 1996/97.

The DLWC prepared the following five documents for Tribunal consideration:

1. *1997/98 submission to IPART on Bulk Rural Water Pricing*, January 1997. This submission apportions the budget costs of conducting the DLWC's water supply and resource management activities between water users and government on the basis of the benefits received by each group. To serve as a guide for the Tribunal, the DLWC also estimated bulk water prices based on full recovery of water users' share of these budgets. However, the DLWC does not recommend that these prices be levied.
2. *DLWC's Unfunded Water Resource Management Activities*, January 1997. The DLWC has supplied a list of additional resource management work that it regards as necessary. The January 1997 prices are revised to fully recover the DLWC's assessment of water users' share of including all of the proposed new resource management costs.
3. *Asset Maintenance Strategic Plan*, December 1996. This plan provides forecasts of the costs of maintaining, refurbishing and upgrading the DLWC's water infrastructure over the next thirty years.
4. *Response to "Bulk Water Prices: an Interim Report – Independent Pricing and Regulatory Tribunal"*, February 1997. This submission responds to the recommendations made in the Interim Report and establishes a *Critical Action Plan* for implementation.
5. *Additional regional budget cost information*. This information was provided to the additional meetings in April and May 1997 to explain the DLWC's assessments of the costs of bulk water services in each region for regulated, unregulated and groundwater. The DLWC has proposed how these costs should be shared between users and government.

### 4.2 Submissions on the Interim Report and Draft Determination

The Tribunal received 58 submissions in response to the Interim Report and the DLWC's pricing submissions. A further 57 submissions were received in response to the Draft Determination.

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<sup>6</sup> River operations accounts cover only a limited subset of the DLWC's water-related costs. The DLWC's financial statements do not separate water, land and vegetation activities.

<sup>7</sup> DLWC response to *Bulk Water Prices: an Interim Report – IPART, October 1996*, February 1997, pp 32-35.

Key issues raised in the submissions are:

- widespread concern about the lack of transparency in the DLWC financial information and the poor accountability of the DLWC for quality of service standards
- support for greater commercial reform of the DLWC including further changes to create an efficient bulk water business which is customer focused
- broad support for the Tribunal's pricing principles, in particular, the greater emphasis on usage based pricing
- willingness by most customers to pay increased charges if it can be demonstrated that prices are fair, free of cross subsidy and recover only the efficient costs of necessary bulk water activities
- concern that simplifying charges, through aggregation of service specific prices (eg metering), will result in less control and capacity to monitor the DLWC expenditure
- the need for a regional approach due to the many region-specific factors, licence system deficiencies and localised tariff problems
- concern about the gap between the DLWC's figures for full cost recovery and the revenue raised from current charges
- the need to account fully for environmental water flows and costs in water charges.

A detailed summary of the main issues raised in submissions is contained in Appendix 1. Copies of all submissions are available from the Tribunal.

The Tribunal wishes to thank all contributors to this review for their valuable inputs.

## 5 ISSUES CONSIDERED BY THE TRIBUNAL UNDER SECTION 15

The Tribunal is required to have regard to matters listed in Section 15 of the *Independent Pricing and Regulatory Tribunal Act 1992* and to indicate how it has had regard to them. These matters are discussed below.

### 5.1 Costs and efficiency

- \* *the cost of providing the services concerned [S15(1)(a)]*
- \* *the need for greater efficiency in the supply of services to reduce costs for the benefit of consumers and taxpayers [S15(1)(e)]*
- \* *the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body [S15(1)(h)]*
- \* *the need to promote competition in the supply of the services concerned [S15(1)(i)]*

The Tribunal argues that prices for bulk water services should recover the efficient economic costs incurred by the DLWC in delivering bulk water and administering the associated resource management and licensing activities. To determine these costs the Tribunal must know the proportion of the DLWC's total costs that are incurred to supply bulk water and resource management services, whether these costs reflect efficiently delivered services and ultimately what proportion of these costs should be attributed to extractive water users.

#### 5.1.1 The costs of bulk water services

Full recovery of economic costs implies that bulk water prices should recover the appropriate share of total operations, maintenance and administration costs, capital charges and external environmental costs. Joint costs should be apportioned to users on the basis of the principles that the impactor or the beneficiary pays. The Tribunal has developed a definition of the economic costs of bulk water services which is presented in the box below.

#### **The economic costs of bulk water services**

- recurrent costs of operations, maintenance, metering, and administration of regulated rivers, unregulated rivers and groundwater sources
- recurrent costs of resource management of regulated rivers, unregulated rivers and groundwater sources
- recurrent costs of dealing with the external environmental impacts of water use
- a capital cost calculated using the annuities approach to fund refurbishment and replacement costs for infrastructure assets on regulated rivers. This should not include a rate of return on existing infrastructure assets
- a depreciation charge for fixed assets that have finite lives
- a real rate of return on new investments and augmentations to existing infrastructure on regulated rivers
- licencing and other regulation related costs.

In attempting to measure the full economic costs of its bulk water-related services, the DLWC has encountered a series of problems. The DLWC attributes these problems to difficulties in amalgamating the financial systems of the three government departments which formed the DLWC. That these difficulties have proven insurmountable is due in part to the DLWC not using disaggregated cost information to manage its operations.

The DLWC has embarked on a work program which will link disaggregated cost information to particular programs and services and reconciles it against actual expenditure. This information will ultimately be available by region (in some cases, by valley) and by water source (regulated rivers, unregulated rivers and groundwater).

Until this information is available, however, the Tribunal must make its Determinations mindful of the following limitations in the cost information presented in the DLWC's submissions.

- Information presented in the submissions is limited to budget information. Reconciliation to actual expenditure is not possible at this stage.
- Some of the activities included in the water-related cost base span land, water and vegetation related activities. Judgements had to be made by the DLWC on which proportion of these programs relates to water.
- The lack of appropriate financial management systems. These are required to accurately ring fence water-related activities and demonstrate the efficiency with which these activities are carried out.

Table 1 shows the DLWC's estimate for 1997/98 of the bulk water related recurrent expenses plus a DLWC estimate of necessary expenditure on asset management (the asset annuity) and resource management (the *Critical Action Plan*). Each of these cost elements has been apportioned between regions.

Table 1 DLWC estimate of bulk water related costs 1997/98

Region	Regulated Rivers (\$'million)			Unregulated Rivers (\$'million)		Ground Water (\$'million)		Region Total (\$'million)
	Recurrent	Asset annuity	Critical Action Plan	Recurrent	Critical Action Plan	Recurrent	Critical Action Plan	All costs
Barwon	7.8	10.3	1.6	1.8	1.3	2.0	0.3	25.1
Central West	6.9	7.3	1.5	2.2	1.3	1.1	0.5	20.8
Murrumbidgee	6.3	4.9	0.3	2.0	0.3	1.3	0.2	15.4
Murray	7.6	4.5	1.1	1.6	0.9	1.1	0.2	17.0
Far West	1.9	0.0	1.1	1.7	0.7	0.9	0.4	6.7
North Coast	1.3	0.6	0.8	2.0	2.2	0.7	0.4	8.0
Hunter	4.7	3.4	0.9	1.7	1.2	0.9	0.4	13.2
Sydney/South Coast	1.5	0.6	0.6	3.5	2.1	1.5	0.6	10.3
Hunter Water Corporation	0.0	0.0	0.1	0.2	0.5	0.0	0.2	1.0
Sydney Water Corporation	0.0	0.0	0.5	1.5	1.8	0.1	0.1	4.0
<b>Total</b>	<b>38.0</b>	<b>31.7</b>	<b>8.4</b>	<b>18.1</b>	<b>12.4</b>	<b>9.6</b>	<b>3.3</b>	<b>121.6</b>

Source: DLWC January 1997 submission, Asset Management Plan and Critical Action Plan of unfunded resource management activity.

- Notes:
- 1 DLWC advises that the Asset Management Plan and the Annuity need revision as they contain only a small proportion of the NSW government's contribution to MDBC & the Border Rivers Commission capital costs.
  - 2 The columns headed "Recurrent" are the proportions of recurrent costs which the DLWC estimates are related to bulk water services.
  - 3 The column headed "Asset annuity" records region-specific annuity payments calculated to generate sufficient revenue to maintain, refurbish and replace, as necessary, the DLWC's water-related infrastructure over the coming thirty years.

### 5.1.2 Capital costs

The DLWC has estimated the total costs of NSW managed infrastructure over the next 30 year period to be \$861m.<sup>8</sup> Of this sum, 68 percent is dam related expenditure; 28 percent is weir related and the remaining 4 percent is for gauging stations expenditure and bores sunk to monitor basin conditions. The DLWC advises that this capital cost estimate includes only a small portion of the NSW Government's contribution to maintenance and refurbishment of Murray Darling Basin Commission (MDBC) assets and Borders Rivers Commission assets. The annuity amount to fund the DLWC program reported in their January 1997, 30 year plan is \$31.7m per annum, however, DLWC report that this is likely to increase.

The Tribunal engaged consultants Gutteridge, Haskins & Davey (GHD) to examine the process used by the DLWC to develop their asset management plan. The consultants reviewed the process by which the plan was developed and the quality of the completed plan. The main findings of the GHD examination are:

1. GHD has a "good" (about 82 percent) degree of confidence in the DLWC's asset management plan for dams and a "medium" (about 68 percent) degree of confidence in the asset management plan for weirs.
2. GHD is certain (100 percent confident) that over the next 30 years that at least \$480m will need to be spent on dams and \$165m on weirs for maintenance and refurbishment. When \$38.2m for gauging stations and groundwater monitoring bores is included, the total becomes \$680m over the next 30 years. This requires an annuity of \$25m.

GHD has recommended ways in which the DLWC should improve its asset management plan and the costs and benefits of this work. ***The Tribunal will seek reports from the DLWC on the implementation of these recommendations.***

The bulk of the DLWC's planned expenditure is on dam refurbishment. Prior to the asset plan review by GHD, the DLWC originally planned to spend \$356m in this area. A significant portion of the capital programs for both dams and weirs involves environmental works for either variable level off-takes to permit operators to discharge appropriately oxygenated water downstream; or fish ladders, stairs or lifts to enable fish to continue to pass up and down water systems. The major components of planned dam expenditure are contained in Table 2.

**Table 2 Summary of the DLWC's 30 year Asset Plan - Dam Capital Expenditure**

<b>DLWC's proposed 30 year dam capital expenditure</b>	<b>\$ million</b>
Installation of variable level off-takes	115
Remedial works	105
Emergency works at Hume Dam	56
Spillway related works, mainly upgrading Copeton Dam spillway	49
Major refurbishments	24
Other	7
<b>Total</b>	<b>356</b>

Source: DLWC January 1997 submission, 30 Year Asset Management Plan.

<sup>8</sup> Details of these cost estimates are summarised in Table 7.1 on p 74 of the DLWC's January 1997 submission. Expenditure shown in Table 7.1 should total \$861m when some typographical errors are corrected.

**Table 3 Minimum DLWC 30 year asset expenditure**  
**(Estimated by GHD from the DLWC 30 Year Asset Management Plan)**

Region	Dams Maintenance	Refurbishment	Weirs Maintenance	Refurbishment	Gauging Stations Maintenance	Monitoring Bore Maintenance	Totals	
<b>Barwon</b>	63.77	134.94	7.39	4.16	8.65	1.12	220.03	30 year expenditure
	2.13	5.59	0.25	0.14	0.29	0.04	8.44	Annuity
<b>Central West</b>	56.37	63.84	13.28	12.34	9.23	1.48	156.54	30 year expenditure
	1.88	2.82	0.44	0.41	0.31	0.05	5.91	Annuity
<b>Murrumbidgee</b>	27.67	21.39	22.17	26.93	5.65	0.58	104.39	30 year expenditure
	0.92	0.98	0.74	0.90	0.19	0.02	3.75	Annuity
<b>Murray</b>	23.26	15.33	14.76	34.11	1.60	0.69	89.75	30 year expenditure
	0.78	0.92	0.49	1.14	0.05	0.02	3.40	Annuity
<b>Hunter</b>	40.43	9.81	26.72	0.00	1.72	0.02	78.70	30 year expenditure
	1.35	0.31	0.89	0.00	0.06	0.00	2.61	Annuity
<b>North Coast</b>	9.58	0.34	0.20	0.43	3.77	0.05	14.37	30 year expenditure
	0.32	0.02	0.01	0.01	0.13	0.00	0.49	Annuity
<b>Sydney / Sth Coast</b>	11.37	0.44	0.22	0.00	3.66	0.02	15.71	30 year expenditure
	0.38	0.02	0.01	0.00	0.12	0.00	0.53	Annuity
<b>Totals</b>	<b>232.45</b>	<b>246.09</b>	<b>84.74</b>	<b>77.97</b>	<b>34.28</b>	<b>3.96</b>	<b>679.49</b>	<b>30 year expenditure</b>
	<b>7.76</b>	<b>10.66</b>	<b>2.83</b>	<b>2.60</b>	<b>1.15</b>	<b>0.13</b>	<b>25.13</b>	<b>Annuity</b>

Note: This table does not include an assessment of regional costs related to MDBC assets in other States, for which NSW must make a contribution.

The Tribunal's recommendation<sup>9</sup> to use an asset annuity approach met with a mixed reaction in submissions. The annuity acts a proxy for asset consumption. Many water user groups are concerned that an annuity fund will not be preserved for asset work and would be used elsewhere by the DLWC or government in general.<sup>10</sup>

The primary reason for using an asset annuity approach in bulk water pricing is to ensure prices accurately reflect the resources utilised to supply the services. An asset annuity is a more accurate reflection of the funds required to maintain the service capacity of infrastructure than accounting depreciation.<sup>11</sup> The second reason for recovering an asset annuity is to ensure that sufficient funds are available to cover essential maintenance and renewal and, finally, replacement, when this becomes necessary.

Therefore the Tribunal is concerned to see that an asset annuity is included in the long term bulk water prices and that the work required to maintain the service capacity of assets is carried out as and when it falls due. The MDBC and State Government's rapid funding of repairs following the recent crisis at Hume Dam serve as an illustration of the owners' commitment to funding the renewal of water regulation assets as and when required.

### 5.1.3 Efficiency of service delivery

The Tribunal's Interim Report stresses that water charges should recover only the costs of delivering water services in the most efficient way.

The DLWC's submission in 1996<sup>12</sup> cites nine external reviews since 1984 and two internal reviews as evidence of efficiency within the DLWC.<sup>13</sup> The two internal reviews were completed in 1994 and a set of indicators developed by which the former Department of Water Resources (DWR) tracked performance of each of its key programs. Unfortunately, DWR's performance indicators were not maintained following amalgamation. Additionally, the previous efficiency reviews are no longer valid, following the restructure of the DLWC.

The DLWC's February 1997 submission<sup>14</sup> indicates an intention to develop a new set of performance indicators to provide appropriate management information to the new agency as well as to meet the Tribunal's needs.

The issue of efficiency within the DLWC is crucial. The Tribunal's Interim Report raised a number of matters put to the Tribunal alleging inefficiency within the DLWC.<sup>15</sup> These issues are yet to be addressed. The DLWC submissions did not include specific steps to achieve efficiency gains to minimise, where possible, the need for prices to rise.

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<sup>9</sup> See IPART, *Bulk Water Prices: an Interim Report*, October 1996, pp 53-55 & Recommendation 5.3.

<sup>10</sup> Submissions to IPART including Colly Cotton, Murray Irrigation and Murrumbidgee Irrigation.

<sup>11</sup> To calculate an asset annuity requires an independent assessment of the total funding needed for all asset refurbishment and replacement over a given period (say 30 years). The annuity calculation provides an equal annual charge that if invested at an assumed interest rate will fully fund these works.

<sup>12</sup> DLWC, Submission to IPART, *Water Pricing 1996*, January 1996.

<sup>13</sup> DLWC, Submission to IPART, *Water Pricing 1996*, page B37 & DLWC *Response to Bulk Water Prices: an Interim Report – IPART*, February 1997, p 1.

<sup>14</sup> DLWC, *Response to Bulk Water Prices: an Interim Report – Independent Pricing and Regulatory Tribunal – October 1996*, February 1997, pp 12-19.

<sup>15</sup> IPART, *Bulk Water Prices: an Interim Report*, October 1996, p 61.

**Prior to future Determinations, the Tribunal will require the DLWC to provide suitable efficiency indicators. These indicators must enable a fair assessment of service quality, efficiency and reliability as required by Section 15 of the Tribunal's Act.**

#### **5.1.4 Cost sharing between beneficiaries**

The DLWC's January 1997 submission<sup>16</sup> describes the process by which an expert group within the DLWC calculated that \$44.1m from a recurrent budget of \$350m<sup>17</sup> should be recovered from water users.<sup>18</sup>

The DLWC acknowledged that its submission contained judgements and assumptions which were used as proxies for hard facts.

This submission does not recommend bulk water prices for 1997/98, but is intended as one important input in the independent IPART process that will lead to price Determination.<sup>19</sup>

The DLWC's approach was to examine individual line items in its Chart of Accounts to determine whether an activity was in the 'water' sector of the department's functions (and if so in what proportion), as well as to allocate it to a COAG cost category.

Once the portion of the activity in the water sector had been estimated this fraction was further apportioned to resource management, operations or regulation and then in terms of water source (regulated, unregulated, or groundwater). Finally, the users' share of these proportions was estimated.

The main problems of this approach are:

- the analysis used budget estimates and not actual costs incurred in services
- inadequate linkage between expenditure and the level of service provided
- the cost apportionment process was inherently subjective and should have involved discussions with stakeholders
- no reconciliation of the current service level and the minimum necessary service level desired by customers
- no connection was established between specific water uses, programs, and specific environmental problems
- there was insufficient identification of specific benefits and beneficiaries of the various programs.

Clearly there are great difficulties in quantifying the extent to which the many classes of users benefit from the services provided by the DLWC. The government's contribution to the costs of the DLWC's bulk water activities in 1995/96, was over 75 percent of total income in that year. Hence the current government contribution appears well in excess of the benefits enjoyed by 'other beneficiaries'.

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<sup>16</sup> DLWC, *1997/98 Submission to IPART on Bulk Rural Water Pricing*, January 1997, pp 63 and 64

<sup>17</sup> \$65.7m was estimated to be the water related costs within the recurrent budget of \$350m, and \$44.1m was estimated as the share of these costs attributable to water users.

<sup>18</sup> DLWC, *1997/98 Submission to IPART on Bulk Rural Water Pricing*, January 1997, Appendix B2.

<sup>19</sup> DLWC, January 1997 submission, p ii.

### 5.1.5 Service contracts

The DLWC and equivalent agencies in Victoria and Queensland, share responsibility for management and water sharing at the state borders. The MDBC controls and operates dams and weirs on the Murray and lower Darling rivers. Operation of the Murray system on behalf of MDBC is performed by the DLWC and the Victorian Department of Natural Resources. Corporatisation of the MDBC will lead to the formalisation of commercial service contracts between the MDBC and the DLWC.

Funding of the MDBC is covered in an agreement between the New South Wales, Victorian, South Australian and Federal governments. NSW pays approximately one third of the operating costs and one quarter of the capital costs.

The Dumaresq Barwon Border Rivers Commission (DBBRC) controls Glenlyon Dam on the Dumaresq River on behalf of NSW and Queensland and is funded in equal parts by NSW and Queensland.

The NSW government makes annual contributions to the MDBC and the DBBRC. Only a small fraction of the NSW contribution to the MDBC is recovered from water users in the Murray region. Similarly, none of the funding of the DBBRC is recovered from water users in the Barwon region. The Tribunal's Draft Determination identifies these as areas where the DLWC should examine whether it has accurately identified the correct proportion of costs attributable to water users.

### 5.1.6 Promotion of competition in the supply of services

To ensure the efficient supply of high quality internal services requires regular comparative assessments against externally provided services. The Tribunal's Interim Report concludes that a move to a greater regional focus for the DLWC's activities would greatly improve opportunities for better and more efficient delivery.

The DLWC's submissions do not include any proposal to conduct region based benchmarking of its activities or benchmarking against other organisations. This is regrettable. The establishment of an annual benchmarking program to assess the cost of key services in each region is now essential. Benchmarking would enable the DLWC to implement the best practice approach to each activity across all regions.

The DLWC currently performs about 60-70 percent of all day to day maintenance in-house. The remaining maintenance tasks are completed by contractors. Gate painting, for example, is now mostly contracted out. Major refurbishment (such as the recent remedial work at Hume Dam) is project managed by the DLWC, who supervise external contractors. The design and construction of these works is subject to open tender. It is understood that the new Water Services Division within the DLWC will have a contract manager. This manager will be responsible for establishing a uniform tender process across the state and developing further opportunities for contestability.<sup>20</sup>

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<sup>20</sup> DLWC, Parramatta Office.

## 5.2 Consumer protection

- \* *the protection of consumers from abuses of monopoly power in terms of price, pricing policies and standard of services [S15(1)(b)]*
- \* *the effect on general price inflation over the medium term [S15(1)(d)]*
- \* *the social impacts of the Determinations and recommendations [S15(1)(k)]*

### 5.2.1 Pricing

The Tribunal's Interim Report argues that the best way to avoid abuse of monopoly power by the DLWC is to ensure cost reflective charges, transparency of accounting information, and, where appropriate, accountability for service levels to bulk water customers.

Most submissions from water user groups state that they do not object to paying a fair price for water provided they can satisfy themselves that the DLWC is providing bulk water services efficiently, that the services provided represented value for money, and that the charging system does not create any significant cross subsidies.

Many of the DLWC's activities in managing water resources provide public benefits. These are defined as advantages from which individuals cannot be excluded and the extent to which one individual benefits does not diminish the benefits available to others. An example of a public good is the flood mitigation benefits provided by some dams.

Other DLWC activities deal with diffuse sources of pollution where the nature of the pollution is so widespread that the problem cannot be attributed to a single cause or individual. An example of diffuse source pollution is dry-land salinity where land clearing by past and present generations has mobilised salt that now finds its way into rivers.

The Tribunal proposes to take account of these public goods and diffuse impacts by recognising some proportion of the costs incurred by the DLWC as attributable to other beneficiaries. This assessment will be conducted on a region, or valley specific, basis wherever possible.

### 5.2.2 The fair treatment of bulk water users

The charges proposed by the Tribunal are based on the DLWC's existing licensing classification system for bulk water customers. However, the Tribunal is concerned about a range of unfair licence classification issues. The large number of anomalies requires a full revision of the current system of licensing for bulk water customers.

The Tribunal is specifically concerned about anomalies such as:

- users of commercial water volumes who are not (or who cannot be) charged, eg some high flow licence holders, some riparian (riverside) users and floodplain graziers
- enforcement and compliance powers over unlicensed users
- users in some areas and districts pay for system losses, while others do not
- some areas and districts were paying standard river pumper metering, some paid a discounted metering fee and others paid nothing for metering
- the considerable variability in the levels of grant funding paid to areas and districts for channel rehabilitation and associated works

- some customers do not have a licence, yet are supplied and invoiced each year
- the security of usage and charging basis for power generation companies varies
- the necessity of having 30 different licence categories to cover the three basic charge levels (high security, general security and industrial)
- the use of drought declarations to waive some charges in the Barwon while other drought declared regions received no such waiver.

The Tribunal acknowledges that some of these issues are complex and longstanding. **The DLWC must improve the equity of the licencing system and report on progress in future submissions.**

### 5.2.3 Service standards

Submissions to the Tribunal regarding the current standard of service offered by the DLWC, vary greatly across the state. Many submissions praise the quality of service provided by regional DLWC staff, but express concerns about contributing towards head office costs.<sup>21</sup> In part this may reflect remoteness from head office services and difficulty in seeing the contribution that the head office makes to servicing the needs of water customers.

Other submissions are critical of many aspects of the DLWC's activities. In submissions and public hearings water users have argued that the DLWC had not performed any work in their area,<sup>22</sup> and had issued too many licences, thereby reducing the reliability of supply to existing water users.<sup>23</sup>

Some of the criticisms of the DLWC appear to have foundation. Many relate to resource sharing decisions by the DLWC who must, in certain instances, restrict some water users' access to water. The sharing of water resources between competing claims is currently a key task of the DLWC.

**The strongest message from these criticisms is that the DLWC does not have a clear customer service focus.** The separation of commercial water delivery functions from resource management and regulatory functions would allow the DLWC's service delivery functions to focus on how best to provide services to bulk water customers. The DLWC is currently separating water delivery functions from resource management and regulatory functions.

The Tribunal sees great merit in the DLWC developing a customer service charter in consultation with water users and other stakeholders, prior to the 1998/99 Determination.

In developing a charter, DLWC should consider the proposal from the Namoi Valley Water Users Association (see Box). ***To facilitate the implementation of a charter the Tribunal seeks comments from other users on whether this charter covers their key water service requirements.***

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<sup>21</sup> Hearing transcript volume 1, March 6 1997, p 76, line 53.

<sup>22</sup> Hearing transcript volume 1, March 6 1997, p 59, line 26.

<sup>23</sup> Hearing transcript volume 1, March 6 1997, p 36, line 5.

### Proposed Bulk Water Customer Service Charter

1. Water resource availability assessment
2. Supply of water ordered with minimum losses
3. Consistent and cost effective metering
4. Maintenance of river channel capacity
5. Planned asset refurbishment to maintain service delivery of infrastructure
6. Water quality monitoring with scientific integrity
7. Objective prioritisation of environmental issues and actions to address priority issues
8. Effective representation of water users' interests at MDBC and structured communication about MDBC with water users
9. Regional focus and provision of water business activities and services
10. Concrete boundaries for regions, no gerrymanders.

Source: Namoi Valley Water Users' Association, submission to the Tribunal, August 1997.  
A similar charter has been proposed by Murray Irrigation Limited, May 1997.

A major weakness in the current institutional arrangements is that the DLWC simultaneously sets standards for using and managing water resources, runs a commercial water delivery business, and enforces compliance with water use standards by that business. Invariably conflicts are inherent in completing these diverse roles. By comparison, the metropolitan water corporations (ie Sydney and Hunter Water) are focused commercial water delivery businesses which comply with licence conditions and standards enforced by the Licence Regulator and the Environment Protection Authority.

The Tribunal applauds the creation of a water services division within the DLWC to manage its water supply infrastructure and water delivery functions. Although the separation is only partial, it should facilitate a clearer customer focus for water delivery and a commercial focus for bulk water supply.

#### 5.2.4 Impact of Determination on the cost of living

The maximum prices set in this Determination will not have a significant impact on the general level of inflation. The price of bulk water is an input to the cost of irrigated agricultural production. However the proportion of total variable costs represented by these costs is typically small. As a proportion of total variable costs the DLWC's bulk water charges vary from as low as 1-2 percent for a large cotton farm, to 5-7 percent for a large rice farm.<sup>24</sup> By contrast, changes in the price levels of key inputs such as labour, fuel, machinery, interest and chemicals have a far greater impact on farm costs.

The Tribunal acknowledges that bulk water costs are a more significant proportion of the total variable costs of smaller farmers, but the impact on general levels of inflation is again likely to be small. The impact of the Tribunal's Determination is considered more fully in Section 8.

<sup>24</sup> IPART, *Bulk Water Prices: an Interim Report*, October 1996, p 116.

### 5.2.5 Social impacts

Many submissions to the Tribunal highlight the importance of irrigated agriculture to the regional economies of NSW, and hence to the prosperity of regional communities. Submissions from councils in particular, regarded increased water prices as a threat to the viability of smaller rural communities.<sup>25</sup>

The Tribunal's Interim Report suggests the development of a modelling approach to assess the impact of increased water charges on marginal farmers. Some submissions question the purpose of this modelling, believing the Tribunal could then set prices based on capacity to pay rather than on the cost of the DLWC services.<sup>26</sup>

Other submissions explain that while the impact of increased charges is not significant in itself, the combined effect of increased water charges and lower water allocations could reduce the profitability of some water users.<sup>27</sup>

In September 1997 the government announced the formation of a task force to develop guidelines for assessing the socio-economic impact of water policies. Government agencies will model the impact of the reforms using these guidelines. They will advise community based water management committees, who will be charged with recommending river flow objectives. The Tribunal looks forward to the assistance these guidelines may provide in assessing the social impact of any future increase in bulk water charges. In the interim, the Tribunal will continue to set prices based on economic costs, but impacts on marginal farmers will be assessed as a check on whether outcomes are reasonable.

The September 1996 prospectus from Colly Cotton Limited provides an interesting insight into the appropriateness and size of current charges in the Barwon region. The prospectus states:

“... imposition of the water management charge of \$1.35/ML will have virtually no impact on profitability since water represents a small proportion of total production costs (<2%) in comparison to the real value of water to the Colly enterprise”.<sup>28</sup>

Colly Cotton has confirmed that bulk water costs are less than 2 percent of variable costs for cotton production as stated in Section 5.2.4. The imposition of the water resource management charge (WRMC) increased average Barwon revenue by around 50 percent.<sup>29</sup> Colly states that this increase, despite its large size, will not impact on company profitability. However, the Tribunal accepts that the impact on smaller farmers may be greater than that experienced by Colly due to the large scale of Colly operations.

There is no doubt that regulated water supply is crucial to the irrigation industry and hence to the prosperity of a number of rural and regional economies. There is also no doubt that the proposed implementation of caps on water supply is causing an unprecedented level of concern over the future reliability of water supply and rising environmental water

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<sup>25</sup> See submissions to the Tribunal eg Cabonne Council, Nambucca Shire Council and Council of the Shire of Urana.

<sup>26</sup> See Submissions to the Tribunal's Interim Report, eg Murray Irrigation Limited, 18 February 1997, p 4.

<sup>27</sup> See submissions to the Tribunal eg Mr Colin Dowling, Colonel G.B. McLean (RL) and the Peel Valley Water Users Association.

<sup>28</sup> Colly Cotton Limited, Prospectus, September 1996, p 71.

<sup>29</sup> The introduction of the \$1.35 meant that on average Barwon revenue would increase by 46 percent. Entitlement charges rose from \$2.25 to \$3.60 with a usage charge of \$1.50/ML. Average Barwon Valley usage was assumed to be approximately 525Gl.

requirements. Notwithstanding these factors, after examining the quantum of increases in bulk water bills, the Tribunal has satisfied itself that a 20 percent increase in revenues from water charges is unlikely to have a substantial social impact.

### 5.3 Financial viability

- \* *the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of NSW [S15(1)(c)]*
- \* *the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets [S15(1)(g)]*

The DLWC does not recover its full bulk water operating costs from user charges. In 1996/97 an estimated \$22m was recovered from water users to contribute to the estimated \$65.7m of recurrent expenditure attributable to extractive water users. Additionally, extractive users should also contribute to an asset annuity estimated by DLWC at \$31.7m. Most funding for bulk water services is obtained through government contributions (ie deficit funding).

The creation of a water services division within the DLWC should enable better financial accountability as it is expected that the division will ultimately be financially viable in its own right. However, recovering bulk water costs through appropriate charges should not detract from the possibility that large efficiency gains may be achievable across the organisation as a whole, resulting in a substantial decrease in total operating costs.

The new prices set by the Tribunal for 1997/98 will have a beneficial impact on the DLWC's capital base because, all else being equal, the increase in revenue will reduce the shortfall between revenue and expenditure. However, the shortfall remains significant. The DLWC is funded by government for its capital requirements and does not borrow in its own right.

This Determination is consistent with achieving a reduction in the government subsidy for bulk water services. The greatest scope for reducing the cost to government of bulk water services resides in reducing service costs to efficient levels.

### 5.4 Environmental issues

- \* *the need to maintain ecologically sustainable development by appropriate pricing policies that take account of all the feasible options available to protect the environment [S15(1)(f)]*
- \* *considerations of demand management and least cost planning [S15(1)(j)]*

#### 5.4.1 Ecologically sustainable development (ESD)

The Tribunal is of the view that achieving progress towards ESD requires:

- An adequate understanding of the status of the resource to enable progress towards ecological sustainability to be monitored and to provide early recognition of any indication of its deterioration or any other associated problems.
- A working knowledge of the various interrelationships involving the resource to enable responses to be developed which address the problems identified.

- Appropriate mechanisms to inspire relevant human activities which value and preserve the resource and to minimise any future deterioration.

Market mechanisms are most effective where there is good knowledge of the resource and an appropriate regime of resource ownership. In such circumstances, prices reflect the full cost of the resource, including the cost of environmental externalities.

Most resource degradation has resulted from a complex mix of inappropriate actions over a long period, rather than from a specific instance of substantial malpractice. With incomplete knowledge, the most effective remedy is a management approach to rural production that places increased emphasis on ecological sustainability.

Water pricing must reflect the costs involved in supplying the resource. A two-part tariff reflects the costs by recovering marginal costs through a usage component and recovering fixed and capital costs through a fixed component. Where capacity is usually expanded in large, expensive increments, it is appropriate that long run marginal costs be considered when usage charges are assessed.

The difficulties of quantifying the costs of environmental damage are well understood. It is broadly accepted that the extent of resource degradation is related to water usage. This suggests that some proxy for the cost of environmental externalities should be included within the usage charge. This Determination emphasises the significance of usage charges. This initiative will help to lower the environmental costs of water extraction. The Tribunal will continue to canvass all stakeholders for ways of improving pricing structures in order to reduce environmental impacts.

### *Enhancing ESD in the Critical Action Plan*

The DLWC's *Critical Action Plan*<sup>30</sup> prioritises activities necessary to improve services and the condition of the water system. The plan was developed to help the DLWC implement the Tribunal's Interim Report recommendations.

The Critical Action Plan was largely superseded by the government's Water Reform Package. However, the Tribunal believes that the following actions remain essential to deliver a superior outcome for managing the environment:

- an analysis of the condition of the State's water resources
- an analysis of the most serious problems associated with the resource
- a discussion about how the plan addresses the serious problems
- a strategy to minimise any future deterioration of land or water resources
- a clear specification of deliverable outcomes for water users, and details of the costs of achieving them.

### **5.4.2 Demand management and least cost planning**

The usage component of the two-part tariff is one way for providing incentives to use water more efficiently. In the case of bulk water, however, the effectiveness of this incentive is influenced by other factors.

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<sup>30</sup> Submission to the Tribunal, February 1997.

In the northern regions, where water is the limiting resource and provides very high returns, demand for water is relatively inelastic. Irrigators will carefully use as much water as they can obtain to maximise their returns. Because of the narrow range of crops that can be produced, irrigators are vulnerable to commodity prices.

In the southern regions, water costs generally represent a higher proportion of total costs. The average demand for water in the south is influenced by rainfall amounts and regularity. Whilst a wider range of crops is possible, substantial start up costs are required for some of the largest water using activities.

Throughout the State, price plays a subsidiary role in demand management. Administrative decisions and planning probably have more direct effect. The Tribunal recognises that numerous on-farm irrigation costs, such as pumping, are usage based. Often several times larger than bulk water prices, on-farm water costs provide better conservation incentives than bulk prices even when usage is billed separately. The ability to trade water provides another demand management incentive. Overall, the Tribunal considers that the demand management role of usage pricing is pertinent.

## 5.5 Standards

\* *standards of quality, reliability and safety of the services concerned [S15(1)(l)]*

### 5.5.1 Dam safety

The DLWC is subject to dam safety guidelines set by the Australian National Committee on Large Dams (ANCOLD). These guidelines specify the appropriate peak maximum flood that dams should be designed to withstand, for an assessed level of risk. The greater the consequences of failure for a dam, the higher the assessed risk. In the light of revised hydrological data and assessed risk Burrinjuck Dam, for example, was recently upgraded to withstand a 1 in 1 million year flood.

The DLWC has determined that several more of its dams need to be upgraded. As part of its ongoing review of the DLWC's asset management plan, the Tribunal will ask the DLWC to examine the appropriateness of these standards for all of its dams.

### 5.5.2 Metering

Accurate metering is vital to fair revenue collection from all customers and effective resource management. In 1993 the DLWC engaged consultants, Johnson and Armstead, to audit the effectiveness of water metering in the NSW river systems. In 1995 the DLWC conducted meter reviews of the Macquarie, Lachlan and Murrumbidgee rivers. Concerns raised in both metering reports are that:

- there is no systematic procedure for checking the accuracy of installed meters
- a large proportion of meters are poorly installed
- the quality and coverage of metering are poor, decreasing the accuracy of readings
- there are no standards for meter selection, installation and maintenance
- there is not enough staff to maintain surveillance and maintenance of meters
- there is proof of tampering and unauthorised changes to meters
- existing disciplinary procedures for breach of metering conditions need strengthening

- the DLWC needs to enforce the available disciplinary procedures for breaches of metering.

Following these reports, the DLWC undertook to implement the following remedial actions:

- implement a quality process for metering and water use data
- enhance the CAIRO system<sup>31</sup> of river management to improve water ordering
- produce a metering manual
- implement regular reviews of meter performance
- document all repairs to meters
- seal meters and allow only safe and ready access to meters.

Accurate metering with universal coverage of all significant usage is critical for the fair invoicing of all customers and effective resource management.

### 5.5.3 Environmental standards

The Tribunal acknowledges the Government's recent development of river flow objectives and water quality standards for all NSW surface and groundwater, and the MDBC cap. One obvious role for these standards is to achieve an appropriate balance between preserving (or improving) the quality of the NSW water system while allowing irrigators access to water when extraction impacts will be minimal.

The implementation of river flow and water quality goals will have cost implications for the DLWC operations. The Tribunal believes that the costs of complying with the new environmental standards are legitimate costs of doing business when they relate to or are caused by water extraction.

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<sup>31</sup> CAIRO is a river operations model which can prevent the diversion of water without the prior completion of a telephone order. The telephone ordering system requires customers to input meter readings. This data enables cross-checking of orders against diversions to signal instances of fraud.

## 6 OTHER ISSUES CONSIDERED BY THE TRIBUNAL

### 6.1 Council of Australian Governments (COAG)

COAG is an important consideration in this review of bulk water prices. However, the first priority for all pricing Determinations of the Tribunal, is to ensure compliance with Section 15 of the Tribunal's legislation. Most of the water principles established by COAG are consistent with the Tribunal's Section 15 requirements. A possible area of divergence is that the Tribunal must also assess the social impacts of price Determinations and protect consumers from the abuse of monopoly power.

#### The Key COAG Bulk Water Principles

All Australian governments endorsed a *Water Resource Policy* at the February 1994 meeting of COAG. The key bulk water principles of the policy agreed by COAG are:

- consumption based pricing to achieve full cost recovery and a positive return on assets by 2000/01, wherever practical
- ensure that sufficient funds are set aside for asset refurbishment
- full and transparent disclosure of actual costs with separate CSO funding of any shortfall between costs and water revenue.<sup>32</sup>

The Tribunal is aware that when NSW is assessed for federal compensation payments relating to the implementation of competition policy, a likely criterion is the achievement of full cost recovery for water. Some regions have a significant array of major dams, yet relatively few users over which to spread the costs. These regions will require an ongoing CSO to supplement commercially viable levels of water pricing. It remains uncertain whether CSOs will be included as revenue in assessing full cost recovery. This may delay the attainment of full cost recovery in some regions.

To ensure that no significant adverse social impacts are sustained, the Tribunal has a preference for pursuing a program of moderate price increases. The continuation of this program is dependent upon the DLWC satisfactorily completing the Tribunal's information requirements, and implementation of the Tribunal's pricing principles.

Many COAG reforms require the DLWC to initiate the same changes that the Tribunal has recommended. These include the establishment of an asset annuity, the efficient provision of services, and institutional separation of functional areas. COAG working groups are undertaking benchmarking and efficiency measures of several natural resource management agencies. These working groups may be useful to the DLWC if they can prove its relative level of efficiency to the Tribunal.

<sup>32</sup> Summarised from a COAG Communique, from the meeting held on 25 February 1994, Hobart.

## 7 BASIS OF THE TRIBUNAL'S DETERMINATION

### 7.1 Bulk water charges for 1997/98

An ideal charging structure should be cost reflective, simple, fair, and should provide the correct incentives for the DLWC to efficiently meet water orders. The charging structure should also provide incentives for water users to conserve water where possible to avoid potential environmental damage associated with water extraction.

**The new prices for 1997/98 are contained in the Pricing Schedule appended to this Determination.**

The 1997/98 Determination simplifies the previous pricing system and establishes a simple two-part tariff with fixed and usage components. As part of these reforms, the Tribunal has increased the significance of water usage charges and deleted a multitude of small charges.

A number of submissions in response to the Draft Determination seek to retain the previous pricing structure, which featured numerous service specific charges.<sup>33</sup> This preference is based on the belief that a service specific charge (eg metering, water quality) enables tighter control of the DLWC activities and expenditure. However, the Tribunal believes that monitoring of revenue inflows and expenditure line items is best achieved by the DLWC's providing detailed, audited financial statements on a regional basis rather than through a complex structure featuring an array of small charges.

### 7.2 The previous pricing structure

The previous pricing structure features the following components:

1. *delivery service charge*: variable charge calculated on usage (ie water diverted)
2. *metering charge*: variable charge calculated on usage
3. *water resource management charge*: flat, statewide charge (\$1.35) calculated on entitlement
4. *minimum annual charge (MAC)*: the minimum charge payable regardless of usage levels
5. *environment levies*: charge to some regions for additional resource management activities
6. *licensing charges*: lump sum payable every five years or in annual instalments
7. *localised charges*: specific charges to repay asset capital expenditure sought by irrigators.

The previous charging system attempted to isolate specific costs and recover revenue equivalent to those costs. The system aimed to equate specific revenues to major costs and to prevent expenditure overruns. Proliferation of this approach could see a charge levied against each expenditure line item. Instead expenditure can be monitored and controlled through accurate reporting of actual expenditure within audited financial statements.

#### 7.2.1 How the previous pricing system worked

The previous pricing system was essentially two systems with a change over point where an individual's usage exceeded the MAC usage percentage for that region.

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<sup>33</sup> Submissions including Australian Conservation Foundation, DLWC, MIA, MRMB and Broken Hill Water Board.

The MAC was implemented to ensure that the regional river operations accounts had sufficient revenue stability to ensure ongoing viability. The MAC also reduced the cash flow risk for the DLWC. The 100 percent MAC which previously applied to the Murray and Murrumbidgee regions meant that the invoices for over 90 percent of customers in these regions were totally fixed. This system provided low incentives for water conservation as any usage below entitlement was at no extra cost.

The incentive to minimise diversions was low where usage was below the MAC percent.<sup>34</sup> In this instance, all charges were entitlement based (fixed) and calculated two ways:

1. delivery and metering charges were multiplied by entitlement and the MAC percentage
2. a statewide water resource management charge of \$1.35 was multiplied by the total entitlement.

**To provide better signals to conserve water and a fairer pricing system the Tribunal has removed the MAC system.** The fixed charge is now the new minimum charge which is around 20 percent lower than 1996/97 charges for most regulated water customers.

#### *Metering charges*

Metering charges were previously set by river management boards to recover costs for:

- reading water meters periodically
- ensuring customers have operational meters which capture all water diverted
- testing and recalibrating water meters to ensure accurate invoicing
- processing invoices and collecting payments.

Whether a meter encounters a large flow of water or a small one, the costs of assessing a meter are nearly identical. This negates the logic of a usage charge. The metering activities are predominantly fixed in nature. This suggests that an entitlement based charge would be more cost reflective. As part of this Determination, **all charges previously levied for metering have been incorporated into the new fixed charge.**

Regions which previously operated with a high MAC percent, may have given a lower priority to the regular and accurate metering of small licence holders. With a high MAC percent, the cost of periodic meter reading for all small licences would probably exceed the additional revenue collected. From this Determination onwards, usage levels will alter invoices amounts regardless of licence entitlement. The change may necessitate a revision in the approach to metering in some regions. This may alter metering costs. Again, the Tribunal stresses the importance of accurate metering with universal coverage to provide fair invoices and conserve water.

A two-part tariff is more equitable because it is a pricing structure that results in lower bills when consumption is voluntarily reduced or water allocations are lower. It will provide an element of financial relief when users are unable to, or choose not to, take advantage of their full entitlement.

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<sup>34</sup> For example, a general security South Coast irrigator had a MAC of 80 percent. Assuming an entitlement size of 1000ML, for all usage between 0 and 800ML (80 percent) an irrigator was paying \$3,750. Hence the bulk water marginal cost of usage below the MAC percent was zero and the incentive to moderate bulk water usage was low.

### 7.3 The new pricing structure

Submissions from numerous irrigator groups and agribusiness ventures express dissatisfaction with the risk sharing balance in current charges. The general view is that water users are least able to pay during dry periods when little or no water is available, yet the high fixed entitlement based charges remains payable.<sup>35</sup>

The Tribunal's October 1996 Interim Report on Bulk Water Prices' recommendation 3.10 states that,

Charges should be based on a two-part tariff with an access charge and a usage charge based on fixed and variable components respectively. Where the quantum of these costs is uncertain a pragmatic balance should be struck between them.<sup>36</sup>

Submissions following the Interim Report express general support for the two-part tariff format due to benefits such as improved usage signals, a more cost reflective pricing structure and a simplification of the myriad of current charges.<sup>37</sup> On balance, the Tribunal sees significant merit in increasing the importance of the usage component of pricing.

### 7.4 Why the Tribunal has increased bulk water charges

The Tribunal's Interim Report provides extensive discussion of cost recovery. Full recovery of economic costs implies that bulk water prices should recover from users operations, maintenance and administration costs, capital charges and external environmental costs. Joint costs should be apportioned between users on the basis of impactor or beneficiary pays principles.

The cost information available to the Tribunal is not sufficient to provide a clear, medium term direction for prices, but does, on balance, justify some increase in bulk water prices. In particular the Tribunal believes that additional contributions to asset maintenance and increased metering are a priority.

The estimates of expenditure provided in the tables below are likely to be revised considerably when the DLWC's financial reporting improves.

The 1997/98 prices for regulated rivers have been set with regard to:

- the existing contributions to river operations by water users
- metering expenses
- the capital annuity estimated to be required to fund infrastructure expenditure (this includes asset maintenance)
- the DLWC's estimates of the costs of resource management that are attributable to users
- submissions made to the Tribunal regarding these resource management costs (following the regional meetings).

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<sup>35</sup> See submissions such as the Gwydir Valley Irrigators and the Namoi Valley Water Users' Associations.

<sup>36</sup> Independent Pricing & Regulatory Tribunal, *Bulk Water Prices, Interim Report*, October 1996, p 32.

<sup>37</sup> See submissions from Murray Irrigation Limited, CIA, Colly Cotton, Macquarie Food and Fibre Association, NSW Agriculture, West Corugan Irrigation, Western Murray Irrigation Limited.

The Tribunal feels certain that the charges proposed fall short of capturing all resource management costs relating to water use. The proportion of these costs that is recovered from bulk water charges is likely to increase when these costs are properly accounted for and the link to service levels is clarified.

A significant part of the DLWC activity in the southern regions is work done under contract for the Murray Darling Basin Commission (MDBC). The Commission is funded by the States and the Commonwealth. The DLWC should review whether it has correctly assessed the proportion of this funding that should be recovered from water users in the southern regions. The main reason water prices differ between southern NSW and Victoria seems to be that different proportions of MDBC funding are recovered from users in the respective regions.

The 1997/98 prices for unregulated rivers and groundwater have been set with regard to:

- the DLWC's estimates of the costs of resource management that are attributable to users
- submissions made to the Tribunal regarding these resource management costs (following the regional meetings).

In particular, the Tribunal believes that additional spending on metering is a priority. It is essential that the DLWC maintain its commitment to conduct more accurate and extensive metering of the abstraction of water. To assist with demand management it is also important that users be encouraged to install meters.

#### 7.4.1 Regulated rivers

The DLWC proposes that water users pay 58.6 percent of "resource management" costs, 74.1 percent of operational" costs, 100 percent of "regulatory" costs and 70 percent of asset maintenance and renewal costs (calculated as a regional annuity totalling \$31m).<sup>38</sup> These amounts are shown in the first column of Table 4.

**Table 4 Regulated rivers expenditure and revenue**

	Expenditure (\$'000)		Revenue (\$'000)		
	DLWC est of user share of costs plus 70% of DLWC regional annuity	Average river operations contribution plus 50% GHD annuity	Average river operations contribution 1992/93-1995/96	1996/97 Revenue (projected)	Est revenue from two-part tariffs, estimated 1997/98 usage
Barwon	12,818	6,681	2,476	5,182	5,945
Macquarie	5,263	2,707	1,152	1,903	2,190
Lachlan	4,548	2,442	1,057	2,210	2,420
Murrumbidgee	7,679	4,120	2,245	5,560	5,600
Murray & Far West	8,713	3,524	1,824	5,180	5,220
Hunter	5,551	1,765	455	620	630
Syd Sth Coast	1,444	296	36	55	65
Nth Coast	1,336	300	10	24	28
<b>Total</b>	<b>47,352</b>	<b>21,835</b>	<b>9,255</b>	<b>20,734</b>	<b>22,098</b>

Notes: The Tribunal's proposed two-part tariffs for regulated rivers are explained in Section 7 below.

<sup>38</sup> DLWC, 1997/98 Submission to IPART on *Bulk Rural Water Pricing*, January 1997, p 62. These proportions are summaries of disaggregated costs sharing ratios, details are from DLWC's second submission: *DLWC Response to Bulk Water Prices: an Interim Report* – IPART – October 1996, February 1997.

For comparison, the second column of Table 4 shows how the addition of 50 percent of the costs of asset maintenance and renewal (calculated as a regional annuity totalling \$25m) to the average contributions already made by water users to river operations accounts. The amounts in the second column are likely to understate the expenditure which should be recovered from water users. However, the Tribunal is unable to gauge the degree of understatement until actual expenditures by the DLWC are accounted more accurately.

The most significant expenditures not properly accounted for are contributions by NSW to the MDBC and the Dumaresq-Barwon Border Rivers Commission, and additional resource management costs incurred by the DLWC, but not previously included in the river operations accounts.

The Tribunal's estimate of revenue from the charges to apply from 1 July 1997 is shown in the last column of Table 4. Revenue in 1997/98 is expected to be slightly above revenue in 1996/97 and significantly higher than in past years.

#### **7.4.2 Unregulated rivers and groundwater**

The DLWC's estimate of the costs that should be recovered from those who draw water from unregulated rivers and groundwater is shown in the first columns of Tables 5 and 6. Considerable work is required to identify both the services provided and the costs incurred by the DLWC on unregulated rivers and groundwater. However, based on feedback from regional meetings and its own assessment of the attributed costs, the Tribunal feels there is sufficient justification to approve some increases in charges. This is particularly true for metering costs.

**Table 5 Unregulated rivers expenditure and revenue**

	<b>Expenditure ('000)</b>	<b>Revenue ('000)</b>	
	<b>DLWC's estimate of use share of costs</b>	<b>1996/97 from existing charges</b>	<b>1997/98 from new charges</b>
<b>Barwon</b>	1,076	121	179
<b>Macquarie</b>	748	90	109
<b>Lachlan</b>	612	39	49
<b>Murrumbidgee</b>	1,315	83	145
<b>Murray &amp; Far West</b>	2,164	100	199
<b>Hunter</b>	1,089	168	150
<b>Sydney South Coast</b>	2,022	202	179
<b>North Coast</b>	1,142	248	202
<b>Total</b>	10,168	1,051	1,212

Note: The Tribunal's proposals for bulk water charges on unregulated rivers are explained in Section 7 below.

Some unregulated rivers (such as the Barwon-Darling) are located downstream from regulated rivers (in the Barwon region). The availability of water for water users on such 'unregulated' rivers is affected by structures built on regulated rivers. This is a complex issue determined by hydrology and water sharing decisions made by the DLWC. The DLWC should examine whether some of its asset and river operations costs should be attributed to some "unregulated" rivers.

**Table 6 Groundwater expenditure and revenue**

	Expenditure ('000)	Revenue ('000)	
	DLWC's estimate of user share of costs	1996/97 from existing charges	1997/98 from new charges
Barwon	1,453	565	648
Macquarie	402	143	155
Lachlan	329	123	134
Murrumbidgee	892	173	199
Murray & Far West	1,403	112	129
Hunter	574	76	92
Sydney South Coast	894	53	60
North Coast	487	51	61
<b>Total</b>	<b>6,434</b>	<b>1,296</b>	<b>1,478</b>

Note: The Tribunal's proposals for bulk water charges for groundwater are explained in Section 7 below.

## 7.5 Why the Tribunal increased the usage component of pricing

The Tribunal has increased the significance of usage based charges in surface and groundwater charges. This was achieved primarily through the removal of the minimum annual charge (MAC) system.

Cost reflectivity and customer equity are the keys to an optimum price structure. A pricing structure must also be functional and able to achieve an acceptable balance in the risk borne by the DLWC and users. Where the product is an important natural resource, the pricing structure must provide signals which encourage careful usage.

A major benefit of greater usage pricing is to help encourage water saving behaviour. This will have a positive improvement on the environment and the quality of the NSW water system.

The review of the DLWC activities reveals that the majority of bulk water costs are fixed in nature. However, some costs of the bulk water business are variable, such as the processing of water orders and the frequency of water releases. Additionally, other costs are discretionary in nature meaning the DLWC can delay, defer, modify or abandon some activities.<sup>39</sup> Examples of discretionary activities include preventative maintenance, strategic planning and community education. Therefore, a two-part tariff featuring both fixed and usage components has been implemented.

**Table 7 Changes to the statewide proportion of fixed and usage regulated river revenue**

Estimated revenue (%) from	1994/95	1995/96	1996/97 <sup>40</sup>	1997/98
Fixed charges	81	91	92	72
Usage charges	19	19	8	28
Total	100	100	100	100

Note: For comparison purposes, the table assumes average statewide usage of 5.2m ML and that entitlements are constant at 1997/98 levels.

<sup>39</sup> See Coleambally Irrigation, submission to the Tribunal, March 1997.

<sup>40</sup> Although the charging system was unchanged between 1995/96 and 1996/97 the proportion of fixed charge revenue rose due to the collection of the WRMC in the Barwon. The Barwon was previously granted a Ministerial waiver from this charge due to drought declarations.

Pure application of cost reflective pricing requires that if costs are entirely fixed in nature a flat fee structure should be utilised. In bulk water all entitlement-based charges are fixed. Where costs increase directly with each unit supplied, a variable or usage pricing structure is more cost reflective. The Tribunal is of the view that bulk water supply has a combination of fixed and variable costs. Even though the size of variable costs is lower, the proportion of revenue recovered from usage charges should improve equity and the environment by linking consumption to invoices. The proportions of fixed and variable charges will be refined in future Determinations following analysis of actual costs incurred.

### *Regulated rivers*

The Gwydir Valley Irrigators Association (GVIA) has repeatedly expressed the wish to have charges based entirely on usage. GVIA believes it is unfair to pay entitlement-based charges in drought periods when the irrigators are short of income and usage charges better match their capacity to pay. In recognition of the Barwon's allocation volatility, the Tribunal has increased the usage component of Barwon revenue from approximately 31 percent in 1994/95 to 43 percent in 1997/98.

For the southern valleys where a 100 percent MAC applied there has been no usage component in the invoices of customers who have used less than their entitlement. In this instance, an arbitrary usage price was required. The southern usage amount (\$0.60/ML) was selected to reflect the Tribunal's view that somewhere between 20 and 40 percent of costs are in some way variable. The southern usage charge was selected following consultation with the relevant industry participants. It was also chosen to be significant and not token in nature.

The prices for 1997/98 represent an increased the DLWC revenue of approximately 15.2 percent above 'average season usage' levels.<sup>41</sup>

The statewide entitlement of 7.36m ML will produce a fixed revenue of \$15m in 1997/98. Statewide usage is likely to vary between 4-6m ML (average 5.2m ML). This will result in likely usage revenue of between \$5-8m (average \$6m).

Table 7 illustrates the extent to which the Tribunal's 1997/98 Determination has increased the significance of usage related charges. The proportion of usage based revenue is now largest in the Lachlan and Barwon Regions (43 percent) and smallest in the Murrumbidgee (20 percent). Following removal of the 100 percent minimum annual charge, the proportion of revenue recovered from usage in the southern regions will be progressively increased over the course of future Determinations. The Tribunal recognises that regional variations in allocation volatility, resource management activities, asset sizes and maintenance practices gives rise to the need for differences in the size of usage charges.

Table 7 also demonstrates the impact of the governments introduction of a statewide water resource management charge (WRMC: \$1.35) in 1995/96. This entitlement based charge further increased the fixed nature of bulk water charging.

**The future split between revenue raised from usage and fixed charges will be refined on a valley specific basis when better DLWC cost accounting information is available.** The Tribunal will complete an analysis of actual costs from regional financial statements. The

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<sup>41</sup> Based on the increase in DLWC regulated revenue calculated from new 1997/98 prices and 1996/97 prices assuming 'steady state' usage based on an eight year valley average (1989/90 – 1996/97).

Tribunal will assess the proportion of fixed and variable costs when adjusting the two-part tariff.

The Tribunal also notes that most irrigation areas and districts, in their internal charging to members, also utilise a two-part tariff featuring usage and fixed components.<sup>42</sup> These areas commonly set the usage component of charges at a level exceeding the proportion of their variable costs. The main reasons for having a stronger usage price is a desire to provide a fairer charging system and to give signals to their members to conserve water.

### **Why a customer's invoice will fluctuate more**

Following this Determination, invoice amounts are likely to fluctuate more than previously, due to the greater significance of usage charges and the removal of the minimum annual charge system.

The Barwon and the Central West regions already had some considerable volatility of bulk water charges and the changes will be less discernible in those regions. In the southern regions the new charging system removes the 100 percent minimum annual charge and introduces a usage based payment. These changes will result in greater fluctuation in bills.

#### **A customer's water usage will vary due to four main factors:**

1. **The interval between natural rainfall events.** Most pasture, crop and horticulture activities require a sizeable watering every fortnight. Where rainfall events occur every ten days irrigation demand and hence invoices will be low and many customers will become 'dozers' (nil users) for the season. Where rainfall occurs every three weeks (or longer) water demand and invoices will be higher. Rainfall interval is the key determinant of usage in the southern and coastal regions.
2. **The allocation to users.** The amount of irrigation water available is formalised with DLWC allocation announcements. The allocation is made following an analysis of dam holdings, hydrology and catchment conditions. In regions with low or irregular average rainfall, the allocation size is likely to be the main determinant of usage.
3. **Demand for and availability of off-allocation water.** Major rainfall events which result in dam spill overs, maintenance related water releases and programmed water releases prior to flood catchment inflows result in the DLWC offering off-allocation water. Off-allocation has great attraction to irrigators where they hold a licence of a size less than their requirements, operate in valleys with unreliable and irregular natural rainfall or can utilise large on-farm water storages. Off-allocation demand is higher in the Barwon and the Central West.
4. **Changes to activities undertaken and areas irrigated.** Changes to enterprise activities, an expansion/contraction of the area under development or the level of use of water saving infrastructure (eg use of pipes instead of channels) will alter the demand for water.

#### **7.5.2 The impact on regulated licence holders who do not use water**

Licence holders who do not divert any irrigation water are known as sleepers. In this Determination the Tribunal has shifted the emphasis of pricing towards water usage. As a consequence, all sleepers will have a reduced bulk water bill for the 1997/98 season. A fixed charge remains warranted from sleepers because they retain the capacity to commence diverting and assets are maintained to accommodate their potential usage.

<sup>42</sup> Irrigation Areas such as Murray Irrigation, Coleambally Irrigation and Jemalong Irrigation use two part tariffs. However, Murrumbidgee Irrigation uses a different two part tariff set in arrears by a matrix. Simplistically, MIA use a standard fixed charge and a usage charge calculated at year end. The annual volume of water sold in MIA is divided total costs (less fixed revenue) to set the usage price for the year.

The Tribunal wishes to emphasise that the decrease in invoices to sleepers was a consequence of the desire to shift to usage pricing. It notes that implementation of the water resource management charge increased most sleeper invoices by around 100 percent with remarkably few licence cancellations. This was despite considerable DLWC efforts to encourage sleepers to surrender licences. The Gwydir Valley Irrigators Association commented that the sleeper invoice decrease had increased the capital value of land held by sleepers. The Tribunal disagrees with the Association, as the average decrease in Barwon sleeper water charges (\$730 per annum<sup>43</sup>) is small compared to the impact of changes in other land value drivers, such as commodity prices and interest rates. Overall, the Tribunal is confident that a water invoice decrease of under 20 percent will not be a major factor in encouraging sleepers to either trade, surrender or retain their licences.

### *Unregulated rivers*

Existing charges on unregulated rivers are fixed, but vary in accordance with the type of licence (irrigation, recreation, industrial or town water supply). Fixed charges for irrigation licences vary with the number of hectares that may be irrigated. In 1996/97 annual charges for irrigation licences on unregulated rivers varied from \$80 for 12 hectares (effectively \$6.67 per hectare) to \$210 for 162 hectares (\$1.30). Licences for areas greater than 162 hectares were \$250. This pricing structure is inequitable because the costs per hectare incurred by the DLWC in monitoring and managing water use are unlikely to decline so sharply as water use increases.

The Tribunal intends to link charges more closely to the amount of water used. Because unregulated water usage for irrigation is not metered (except for some large users on the Barwon-Darling river), the proposed charges are fixed amounts. Some unregulated water users, such as town water supply, are metered, but do not have a volumetric licence. Hence, the proposed charges for towns include a fixed and a usage charge.

The DLWC intends to work with water users to convert existing licences based on land size to volumetric allocations and to install metering. The DLWC's priority is to meter and monitor all usage from stressed rivers. It is possible that usage on unstressed rivers will not be metered in the foreseeable future. The identification of stressed rivers and the development of management plans is likely to take at least two years.

The charge determined for 1997/98 is based on \$3.75 per hectare. This will result in a bill reduction for smaller licences and an increase for those irrigating over 20 hectares. The basis on which current area licences are converted to volumetric licences will be set by the DLWC in consultation with water users and is likely to vary between regions depending on climate, irrigation practices, crop types and other factors. In developing its alternative proposals for the Draft Determination, the Tribunal assumed a conversion rate of 4ML/Ha. In horticulture and dairying conversion rates of 3ML/Ha and 5ML/Ha respectively may be more accurate. It is envisaged that there will be a wide range of usage patterns, requiring substantial investigation before appropriate conversion rates can be determined.

Under the previous structure, all towns on unregulated rivers pay the same charge. Depending on the number of licences held, the same charge may be paid by very small and

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<sup>43</sup> Assumes Barwon sleeper irrigation licence size is approximately equal to the average Barwon irrigation licence size (ie 1220ML). Average previous Barwon irrigator sleeper invoice: 1220ML x \$3.60 = \$4,390  
Average new Barwon irrigator sleeper invoice: 1220ML x \$3.00 = \$3,660. The average Barwon sleeper invoice decrease for 1997/97 is estimated at \$730 or 20 percent.

very large water users. The charge determined for 1997/98 reduces the fixed charge from \$265 to \$100 and introduces a usage charge of \$0.47/ML. In so doing, it is recognised that towns probably have less impact on rivers than irrigation, but in some cases are likely to incur large costs in complying with river flow objectives (RFO's). The impact of the changes to charging for towns, particularly the larger ones, is low when assessed on a per ratepayer basis.

There is no immediate intention to meter or charge for riparian use. However, it should be noted that riparian use can have a significant impact on water quality. Also riparian use may be seen as inequitable during times of low flow when irrigation use is restricted. Consequently, the cost of riparian use may have to be transparently identified as a community service obligation.

### *Groundwater*

The DLWC has informed the Tribunal that most groundwater licences of 20 megalitres and above are metered, or will be soon.

Existing charges for groundwater use include fixed charges of \$75 per licence and \$0.40 per megalitre of licensed entitlement. Water users in designated areas will continue to pay an additional \$25 per licence fixed charge to recover some additional metering and monitoring expenses. This is necessary due to aquifer problems including high salinity and low flow rates.

Existing charges do not vary with the volume of water used. The Tribunal plans to introduce two-part fixed and usage charges which better reflect water usage in bulk water bills and recover increased revenue from larger water users (over 20ML per year). There is an increase in the base charge for all users. The increase may encourage the surrender of some sleeper licences, though this is unlikely to be significant. In setting the base charge for groundwater, the Tribunal has recognised that there are many high volume licences particularly in the Namoi that are dormant (ie sleepers). Hence, any decrease in the fixed charge would have an adverse impact on the total groundwater revenue.

The Tribunal is aware that in some areas like the Peel Valley, the nature of the aquifers is such that many bores are low yielding requiring users to install multiple bores for relatively low total flows.<sup>44</sup> Consequently, the Tribunal will request the DLWC to examine the feasibility of introducing a system whereby for users of less than 20ML in total, say, the first bore will attract the full base charge, but the base charge for subsequent bores will be heavily discounted.

### **7.5.3 High security water**

High security (HS) licence holders are guaranteed to receive 100 percent of their licensed allocations in all but the worst drought years. This insurance function justifies a price premium to reflect the service provided by river regulation. Additionally, the Tribunal considers that in the interests of customer fairness, general security (GS) users who do not receive the same insurance service should pay a lower price than high security users.

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<sup>44</sup> Submissions from the Kingdon Ponds and Tributaries Water Users Association, 21 August 1997, and Bhima Pty Ltd, 22 August 1997.

**In future Determinations, the Tribunal will endeavour to set the size of each region's, high security premium to general security water, based on an estimate of the costs of the avoided risk of not being supplied with their full entitlement.**

Premiums will vary between regions and will be determined by climate, hydrology and water sharing decisions made by the DLWC. The Tribunal asks that the DLWC complete this estimation prior to the next Determination.

In the interim, the Tribunal has calculated high security premiums which maintain the current proportion of additional revenue generated by existing premiums.<sup>45</sup>

A major reform of this Determination is the transfer of the high security premium from the usage component to the access component. Previously high security premiums were calculated mainly on water usage in the region.<sup>46</sup> The high security premiums proposed by the Tribunal have been moved over to the fixed charge because the additional cost of providing high security water appears to relate to the fixed costs of maintaining and renewing dams and weirs.

The 1996/97 pricing structure charged high security (HS) users a premium of between 1 and 1.87 times the general security (GS) delivery service charge. The cost reflectivity of charging high security on a usage basis is poor. The DLWC has stated that:

In an operational sense there are no additional costs incurred with high security users.<sup>47</sup>

The Tribunal believes that the additional fixed costs of ensuring HS supply are significant. However, they remain unquantified. In simplistic terms the higher fixed costs relate mainly to the need to retain several seasons of water in reserve to guarantee HS users. The DLWC submission attempts to quantify the additional water reserves it has to retain to service HS users. The DLWC results estimate that to guarantee supply of 1ML of HS water requires between 1.2 and 2.5ML of GS water, depending on local valley conditions.<sup>48</sup>

The Pricing Schedule appended to this Determination contains the new fixed prices for high security users. The new premium size in price levels have been set to result in minimal overall change to high security invoices, aside from general change in valley prices. The new premium levels are lower than the previous premiums. This is because the calculation is now by entitlement, which usually raises greater revenue.

The Tribunal recognises that in southern valleys where allocation previously approached or exceeded 100 percent, the fixed costs of HS supply are lower. Evidence of this is the Murrumbidgee region, where high security users paid the same charges as general security users. This uniform charge level recognised some conversions from larger entitlement GS licences to smaller entitlement HS licences. However, the Tribunal is of the view that HS users in all valleys should pay some premium (albeit a small one of 5 percent in the Murrumbidgee) to reflect the insurance benefit or service they receive.

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<sup>45</sup> Previously there was no premium for high security water in the Murrumbidgee. To improve uniformity and equity, the Tribunal has established a small premium of \$0.12 per ML of entitlement, or 5 percent. This will be adjusted following provision of better high security cost information in future determinations.

<sup>46</sup> The existing high security premium in the Barwon was already levied on the fixed charge.

<sup>47</sup> DLWC submission to the Tribunal, January 1997, p 83.

<sup>48</sup> See DLWC submission to the Tribunal, January 1997, p 83-85.

The Tribunal carefully assessed a submission from the MIA Council of Horticulture Associations (MIACHA) on the establishment of a premium for HS water. MIACHA believe that the premium is unfair for the following reasons:

- MIACHA previously forfeited 20 percent of its general entitlement to convert to HS
- the supply privileges of HS are not guaranteed by legislation
- any additional costs of HS supply are unproven, particularly in the south. Establishing a premium should be delayed until any additional costs are quantified
- administrative arrangements force horticulturalists to use HS water, whereas broadacre farmers can choose their level of security.<sup>49</sup>

The Tribunal has considered these arguments, but has decided that some premium for HS water in all regions remains appropriate. The Tribunal concurs with the DLWC's view that,

The costs (of high security) are brought about by the fact that additional water needs to be kept in storage to ensure that high security users have that water available in drought times, thereby reducing the overall average available supply from the dam. The high security charge has therefore been only factored into costs associated with maintaining or refurbishing the assets.<sup>50</sup>

The appropriate (cost reflective) size of the HS premium is uncertain. This is due to changing regional allocation levels and ongoing revisions to the asset management plan. The new premium levels are based on the extra revenue previously paid by HS users. The Tribunal will seek to refine premium sizes in future Determinations.

The Tribunal wishes to assure HS licence holders that if provision of the HS service were to be discontinued, the Tribunal would remove the premium.

Areas and districts not included in the wholesale list continue to pay standard HS charges. However, within each wholesale fixed charge is an allowance for the respective HS components of each licence. The HS component is calculated at the standard river pumper levels.

#### **7.5.4 Wholesale customers**

Approximately 60 percent of the total water used on regulated rivers in NSW is extracted by irrigation areas and districts. These wholesale customers take bulk allocations from the DLWC and resell that water to their members. The costs incurred by the DLWC to deliver each megalitre of water to an area and district are lower on average than the costs of delivering that water to a river pumper. This is because the area and district aggregate water orders, billing and all interactions with the DLWC.

This wholesale function is already recognised in the charges paid by areas and districts in some regions. In the Lachlan and Murrumbidgee valleys some larger areas and districts do not pay metering charges. Others pay a negotiated lump sum metering charge. The Tribunal's proposed charges preserve the existing discounts enjoyed by these areas and districts.

The areas and districts nominated in the Pricing Schedule appended to this Determination will pay the fixed charge noted plus the usage charge on each megalitre of water usage. All other areas and districts will pay the standard fixed charge per megalitre of entitlement,

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<sup>49</sup> Submissions to the Tribunal July and August 1997.

<sup>50</sup> DLWC, submission to the Tribunal, January 1997, p 83.

plus the usage charge per megalitre of water usage nominated for regulated river pumpers in the Pricing Schedule of this Determination.

### *Revisions to wholesale area and district fixed charge levels*

Following the Draft Determination, the Tribunal reviewed submissions to assess any need for changes to price structures and levels. As a result of this review three changes have been made to the fixed charge levels for the wholesale areas and districts. The revisions are discussed below and all the prices for 1997/98 are contained in the Pricing Schedule appended to this Determination.

1. **Jemalong:** following analysis of previous invoices, the fixed charge has been reduced by \$6,600 to reduce the forecast increase in invoice to approximately 20 percent above average previous invoices.
2. **Western Murray:** following analysis of previous invoices the fixed charge has been reduced by \$8,500 to ensure maintenance of previous year's revenue.
3. **Murray Irrigation:** following analysis of the previous invoice the fixed charge has been increased by \$79,000 to ensure maintenance of previous year's revenue.

The Tribunal notes that under the previous pricing system the charging basis for irrigation areas and districts compared to river pumpers varies between valleys. In the Lachlan and Murrumbidgee valleys some larger irrigation areas and districts were exempted from standard metering charges and pay either a nil charge or a negotiated lump sum charge for metering. By contrast all the irrigation areas and districts in the Macquarie and Murray valleys pay the standard metering charges applicable to river pumpers.

The Tribunal acknowledges that irrigation areas and districts have fewer metered off-take points requiring monitoring and measurement. For example, the DLWC monitors only three metered off-takes to supply Murray Irrigation Limited (MIL) which diverts an average of 1.6m ML of water each year to service over 1,800 shareholders.<sup>51</sup> Regular liaison and communication with MIL enables the DLWC to effectively manage and predict around 75 percent of total demand through a single client relationship. This enables savings in order processing, demand management, maintenance planning, transaction costs and debtor management.

The Tribunal is of the view that payment of a standard metering fee per ML of usage is not cost reflective for the irrigation areas and districts. The Murray Region has been using a more cost reflective metering charge system based on entitlement sizes. A flag fall of \$50 applies for small licences. The charge rises to a maximum of \$5,500 for licences over 10,000ML.

The Pricing Schedule of this Determination contains bulk water charges for eight irrigation areas and districts and schemes. The Pricing Schedule does not attempt to cover all schemes, trusts, syndicates, areas and districts. It applies only to schemes, areas and districts which are either of considerable size (over 200 gegalitres) or will incur an unsustainable price increase from paying the standard charges applicable to river pumpers. Irrigation areas and districts not featuring on the wholesale list were excluded as they are generally smaller and can pay pumper charges without significant adverse impact. Large users who seek inclusion in the wholesale fixed charge table for the 1998/99 Determination should contact their regional DLWC office.

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<sup>51</sup> Murray Irrigation Limited, submission to the Tribunal, February 1996, p 5.

### 7.5.5 Metropolitan water utilities

The relationship between the DLWC and the metropolitan water authorities is essentially a wholesale function. This means that it is appropriate to negotiate prices. The Tribunal has received submissions from both Sydney Water Corporation (SWC) and Hunter Water Corporation (HWC) seeking to retain current charge levels pending the conclusion of negotiations to define activities of each of the entities. The Tribunal has agreed to freeze these charges pending the formalisation of arrangements in operating licences.

The Tribunal notes that there has been some duplication of roles between the DLWC and the metropolitan water authorities. The Tribunal supports the recent establishment of liaison committees to ensure the coordination of work between the agencies.

**Table 8 Budget costs and revenues from SWC & HWC**

Metro water corporation	Unregulated	Groundwater	Total	1996/97 charge
SWC	\$1,484,800	\$92,500	\$1,577,300	\$1,130,000*
HWC	\$245,200	\$34,000	\$279,200	\$119,768

\* assumed to be the same as 1995/96

HWC made a submission to the Tribunal in April 1997 responding that:

- The DLWC and HWC have an effective liaison committee which negotiates funding of resource management or regulatory activities.
- HWC agrees with the amount of \$279,000 assessed as attributable to HWC in 1997/98 but this covers a lot of catch-up resource management and regulation as the relations between HWC and the DLWC are normalised into service provider/regulator.
- The longer term amount attributable will probably be closer to the amount payable under the \$1.80 per ML of water used (range \$168,199 to \$119,760).
- We request that the charge remain at \$1.80/ML and that any amounts over this be negotiated with the liaison committee.<sup>52</sup>

### 7.5.6 Town water supply

The prices for town water supply are contained in the Pricing Schedule. Following review of numerous submissions from local councils, the Tribunal remains of the belief that town water supply should be charged the same as any other water user. Numerous submissions from Councils on unregulated rivers objected to the size of invoice increases resulting from the introduction of usage pricing. However, the Tribunal believes that all customers, including towns, should have a usage component in their invoices and that the previous fixed charge structure for towns on unregulated rivers resulted in small towns cross-subsidising larger towns.

In some specific instances a local council may be able to illustrate a specific cost difference. This may be the case where a council can more efficiently complete a DLWC activity within its area. For example, a council may complete metering activities on behalf of the DLWC which could warrant charging at a discounted level.

<sup>52</sup> Submission to the Tribunal from HWC, April 1997, pp 1-2.

Some local council submissions seek a rebate for water returned into the river. Such a rebate is not available to any other customers, such as river pumpers or irrigation areas which also return considerable volumes of water to rivers. A key difficulty is that the water returned is in a variety of conditions, but usually of inferior quality to the water originally diverted. Another problem is that volumetric assessment of the water returned would be subjective and costly.

### 7.5.7 Industrial users

The Government introduced differential charging for industrial users for the 1995/96 season. Industry charges apply to activities such as coal washeries, quarries and abattoirs. Under COAG guidelines, the higher charge for industry is intended to derive a higher return on assets. Industrial use may incur some extra resource management costs. The Tribunal seeks the DLWC's analysis of this issue.

The industry charge was introduced to parallel the irrigators' \$1.35 resource management charge. However, the single charge of \$10 for industry replaces delivery service and metering charges. The average industry licence size is small at 250ML. Hence, a totally fixed charge of \$10/ML (on the greater of entitlement or usage) appears appropriate. Industry licences are high security. Hence off-allocation water is usually unavailable. This may negate the need for a usage component in industry charges.

On average the single charge of \$10/ML is about double an equivalent high security invoice. However, water quality aside, those fortunate enough to hold DLWC industry licences pay far less than businesses using local council supplied water (approximately \$700/ML).

The main problem relating to the industry charge has been due to incorrect classification of some users as industry (eg golf courses, council parks) when they are recreational. Classification problems aside, there have been no submissions to the Tribunal objecting to the industry charge. Customers who believe they have been incorrectly classified should contact their regional DLWC office.

In the absence of industrial customer submissions and specific industrial cost data, the Tribunal has decided to freeze the industrial charge at current levels. However, the Tribunal requests that the DLWC provide financial information regarding the additional costs of servicing industrial customers above the costs associated with a high security licence.

### 7.5.8 Stock and domestic users

The stock and domestic component are exempted from the \$1.35 resource management charge. Most irrigation licences have a 10ML stock and domestic component. The irrigators' component accounts for three quarters of the 65.4GL total stock & domestic entitlement. The impact of transition to payment of the new high security access premium for the irrigators will be minimal. Although the stock and domestic component of irrigators' invoices will nearly double, this equates to only a small change of up to \$20 per annum.

The Tribunal has also examined the situation of a small number of graziers who hold stock licences, commonly around 200ML, whose invoices will nearly double. For example, a 200ML stock licence in the Barwon at 100 percent usage will increase from \$900 to \$1,600

per annum. The same licence in the Murrumbidgee will increase from \$280 to \$603. Overall, the conversion to the standard high security access premium gives better equity (ie places graziers and horticulturalists on par) and appears more cost reflective as it acknowledges the insurance service provided by the DLWC.

The DLWC reports that regions have been instructed to charge feedlots the industrial user charge (\$10) for the past two years. Thus they will not be affected by charging stock and domestic at high security prices.

A submission from the GVIA seeks the introduction of charges for all stock and domestic users. However, many of these licence holders are riparian water users which are protected under the *Water Act 1912* because they have common law rights to access water.

### **7.5.9 Other bulk water charges**

#### *Licence charges*

Licence charges are payable every five years. Many holders choose to make annual payments toward the cost of their licence. Licence charges raise between \$1.25m and \$1.47m per annum. Licence charges will remain payable separately. However, the Tribunal plans to freeze licence charge levels.

The licence charge represents an administration fee to recover costs associated with documentation processing and preparation. It also represents costs involved in reassessing the appropriate ML size of each entitlement following any changes to available water supplies. Following the presentation of actual financial accounts, the Tribunal will seek indication from the DLWC that licence charges recover costs associated with documentation processing and preparation.

#### *High flow licenses*

High flow licences are opportunistic entitlements intended to be used when river flows are considered to be surplus to all other requirements. The issue of these entitlements was agreed to so that irrigators could take advantage of particularly high flows. They operate automatically once a certain gauge height is reached. The Tribunal is aware of the existence of high flow licences in the Barwon and Hunter regions. Some high flow licences have volume limits; others are unlimited once flow conditions reach a certain level. Some are metered, but the proportion is uncertain.

The DLWC has been charging the regional delivery charges for water taken under high flow licences. It is now seeking to restructure high flow licences to permit extraction during periods of off-allocation. The DLWC wishes to charge the high flow licences at the same rate as off-allocation water or the new standard usage charge per ML applicable to pumpers. As an interim measure, high flow licence holders who were previously paying delivery charges will pay the new standard usage charge. The Tribunal will complete a review of high flow pricing as part of the 1998/99 Determination. The Tribunal seeks submissions from stakeholders on issues relevant to high flow usage.

The DLWC indicate that high flow licences were often the result of local arrangements and hence they feature a variety of terms, conditions, and charging arrangements. Overall, high flow licences make resource sharing difficult because their usage is often unlimited above a certain flow level.

*Irrigators Council Levy*

This voluntary levy of \$0.05/ML on entitlement is collected by the DLWC on behalf of the NSW Irrigators Council. The Tribunal does not set charges in relation to any voluntary levies. Hence the Irrigators Council levy is unaffected by this Determination.

## 8 REQUIREMENT UNDER SECTION 16

Section 16 of the IPART Act requires an assessment of the likely annual cost to the State Government's consolidated fund if prices are not increased to the maximum level.

Bulk water revenues are difficult to forecast accurately, due to variable demand patterns, fluctuating allocation levels, and changing climatic conditions. To permit an accurate comparison, the Tribunal has used a common water usage forecast and then estimated revenue under the new and old charges. The new bulk water prices applicable from 1 July 1997 are estimated to increase revenue by \$1.77m for 1997/98. The prices are contained in the Pricing Schedule appended to this report.

### 8.1.1 Regulated rivers

The changes to regulated river prices are likely to generate an additional \$1.43m in 1997/98. The impact of the new price levels and pricing structure is estimated in Table 9.

**Table 9 Forecast valley impact of regulated charge changes**

Valley/Region	1997/98 Usage forecast ML	Est revenue based on 1997/98 (f) usage		Revenue Increase \$m
		Old charges (1996/97) \$m	New charges (1997/98) \$m	
		Barwon	730,000	
Macquarie	345,000	1.95	2.19	0.24
Lachlan	420,000	2.15	2.42	0.27
Murrumbidgee	1,910,000	5.60	5.60	0.00
Murray, Darling & Far West	1,940,000	5.22	5.22	0.00
Hunter	65,000	0.62	0.63	0.01
Sydney South Coast	10,000	0.06	0.07	0.01
North Coast	5,000	0.02	0.03	0.01
<b>Total</b>	<b>5,425,000</b>	<b>20.67</b>	<b>22.10</b>	<b>1.43</b>

### 8.1.2 Unregulated rivers

The Tribunal has adopted 'proposal 2b' from the Draft Determination. The changes to the unregulated river prices are likely to generate an additional \$161,000 in revenue for 1997/98. The regional impact of the new price levels and pricing structure is estimated in Table 10.

**Table 10 Forecast valley impact of unregulated charge changes**

Valley/Region	Est revenue based on 1997/98 (f) usage		Revenue Increase \$'000
	Old charges (1996/97)	New charges (1997/98)	
	\$'000	\$'000	
Barwon	121	179	58
Macquarie	90	109	19
Lachlan	39	49	10
Murrumbidgee	83	145	62
Murray, Darling & Far West	100	199	99
Hunter	168	150	(18)
Sydney South Coast	202	179	(23)
North Coast	248	202	(46)
<b>Total</b>	<b>1,051</b>	<b>1,212</b>	<b>161</b>

Some unregulated rivers (such as the Barwon-Darling) are located downstream from regulated rivers (in the Barwon region). The availability of water for water users on such 'unregulated' rivers is affected by structures built on the regulated river. This is a complex issue determined by hydrology and water sharing decisions made by the DLWC. The DLWC should examine whether some of its asset and river operations costs should be attributed to some 'unregulated' (or less regulated) rivers.

### 8.1.3 Groundwater

The Tribunal has adopted 'proposal 3' from the Draft Determination.

The changes to the groundwater prices are likely to generate an additional \$182,000 in revenue for 1997/98. The regional impact of the new price levels and pricing structure is estimated in Table 11.

**Table 11 Forecast valley impact of groundwater charge changes**

Valley/Region	Est. revenue based on 1997/98 (f) usage		Revenue Increase \$'000
	Old charges (1996/97)	New charges (1997/98)	
	\$'000	\$'000	
Barwon	565	648	83
Macquarie	143	155	12
Lachlan	123	134	11
Murrumbidgee	173	199	26
Murray, Darling & Far West	112	129	17
Hunter	76	92	16
Sydney South Coast	53	60	7
North Coast	51	61	10
<b>Total</b>	<b>1,296</b>	<b>1,478</b>	<b>182</b>

## 9 COMPLIANCE

### 9.1 Bulk water prices

Compliance with the Tribunal Determinations is required under Section 18 of the *Independent Pricing and Tribunal Act 1992*. Regulated government agencies are also required to include details relating to the implementation of the Determination within their annual report.

The DLWC is required to detail how each element of the 1997/98 Determination was implemented within its Annual Report for 1997/98.

### 9.2 Report recommendations

Reporting on the implementation of the Tribunal's recommendations is required under Section 18 of the *Independent Pricing and Tribunal Act 1992*. The annual report of a regulated government agency is to contain a section detailing compliance with the Tribunal's recommendations.

The DLWC 1996/97 Annual Report must specify whether each of the Tribunals Interim Report recommendations<sup>53</sup> has been implemented and, if not, the reasons why it has not been implemented.

## 10 NEXT PRICE DETERMINATION

The timetable for the Tribunal's review of bulk water prices for 1998/99 is:

- By the end of January 1998, the DLWC will prepare and circulate a submission nominating proposed bulk water charges for 1999/2000. This submission will be sent from DLWC regional offices to water users and other interest groups in their region. Persons wishing to receive a copy of the submission should contact the relevant regional office directly.
- By the end of February 1998, persons wishing to make a submission to the Tribunal commenting on the DLWC's price proposals must do so.
- In early 1998, the DLWC will hold regional meetings to explain the costs relating to each region and the activities behind those costs.
- During March and April 1998, the Tribunal will hold public hearings.
- The Tribunal will subsequently determine the maximum bulk water prices to apply from 1 July 1998.

Venues and locations for hearings and meetings will be advertised in *The Land* and in the *Sydney Morning Herald*.

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<sup>53</sup> Independent Pricing & Regulatory Tribunal, Bulk Water Prices , An Interim Report, October 1996.

## 11 QUESTIONS ABOUT THESE MAXIMUM PRICES

Any questions relating to the maximum prices in this Determination should be directed to Alex McMillan or Scott Lennon at the Tribunal on (02) 9290 8400.

**The Tribunal has no role in defining how a customer's licence is to be classified, the size of a water licence, or in setting regional allocation announcements.**

Questions relating to licence classifications, entitlements and allocations should be directed to the relevant head office or regional office of the DLWC:

### **SYDNEY**

23-33 Bridge Street  
GPO Box 39  
Sydney NSW 2001  
Ph 02 9228 6111

### **PARRAMATTA**

Macquarie Tower  
Ground Floor  
10 Valentine Avenue  
PO Box 3720  
Parramatta NSW 2124  
Ph 02 9895 6211

### **MURRAY**

8-20 Edwards Street  
PO Box 205  
Deniliquin, NSW 2710  
Ph: 03 5881 2122

### **FAR WEST**

45 Wingewarra Street  
PO Box 1840  
Dubbo, NSW 2830  
Ph 068 833000

### **HUNTER**

19 Mitchell Drive  
PO Box 424  
East Maitland, NSW 2323  
Ph. 049 341055

### **SYDNEY / SOUTH COAST**

84 Crown Street  
PO Box 867  
Wollongong, NSW 2520  
Ph. 042 268591

### **NORTH COAST**

49-51 Victoria Street  
PO Box 339  
Grafton, NSW 2460  
Ph. 066 402200

### **MURRUMBIDGEE**

43-45 Johnston Street  
PO Box 10  
Wagga Wagga, NSW 2650  
Ph. 069 230475

### **BARWON**

155-157 Marius Street  
PO Box 550  
Tamworth, NSW 2340  
Ph. 067 645900

### **CENTRAL WEST**

181 Anson Street  
PO Box 53  
Orange, NSW 2800  
Ph. 063 608278

## APPENDIX 1 - SUMMARY OF SUBMISSIONS

The Tribunal received 58 written submissions following the publication of the Tribunal's Interim Report, and in response to the DLWC submission. The Tribunal also received 57 submissions following the release of the Draft Determination.

A summary of the main points raised in the submissions to the Tribunal regarding the Interim Report and on the Draft Determination is provided below. This summary indicates the range of concerns raised by stakeholders. Given the number of submissions and the level of detail involved, it is not possible to summarise all the issues raised in each submission. However, every submission has been carefully considered by the Tribunal in preparing this report.

A register of all submissions received is provided at the end of this summary. All submissions which do not seek confidentiality are available for public inspection. More recent submissions are available on the Tribunal's website ([www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au)).

### 1. Government agencies

#### *Pricing Principles*

- It is clear that pricing policies in the NSW water industry have taken very little account of efficiency concerns. This has resulted in bulk water's being significantly underpriced in NSW. This has contributed to over-consumption and increasing environmental problems of rising water tables, salinity and wazer logging (NSW Agriculture).
- IPART's recommendation that bulk water prices should reflect the full economic and identified environmental costs of making water available is supported (NSW Agriculture, NSW Treasury, EPA).
- The removal of cross subsidies between different users is supported. Regional differences should be reflected in water use charges to minimise cross subsidies (NSW Agriculture).
- The costs of environmental damage should not be limited to costs currently expended in managing the environmental impacts of water use. Costs sharing arrangements should be borne by those contributing to the decline in water quality, in line with the polluter pays principle. There is a need to ensure that the DLWC's resource management costs relating to environmental damage are recovered from those responsible for causing damage (Environment Protection Authority).
- Whilst some studies have suggested that increasing charges may not influence water use in the short term, it will make users accountable for their actions and remove environmental subsidies, as required by COAG (EPA).
- Studies indicate that the demand for irrigation water in many areas of NSW is inelastic up to \$35/ML. Such studies indicate that increases in water prices may in fact have little effect on water consumption in the short term, but could have significant negative impacts on farm productivity (NSW Agriculture).
- Water services cannot be provided efficiently, nor can reliable demand forecasts be made, until prices are set in accordance with proper pricing principles (NSW Treasury).
- Direct beneficiaries should bear more of the costs of the publicly provided services they use, and the general taxpayer should bear less (NSW Treasury).

- Any additional costs involved in providing higher security water should be fully reflected in the charges and licences which apply. If the costs of servicing the needs of higher security users vary between a normal year and a drought year, there may be some scope to introduce a conditional two-part pricing system (NSW Agriculture).
- Public utilities should operate in a commercial manner, acknowledging that where Community Services Obligations (CSOs) are identified, they should be explicitly funded from the Budget (NSW Treasury).
- Bulk water charges should be made up of a supply cost component, a resource management component, a separate licensing charge, and environmental levies on users and beneficiaries (NSW Treasury).
- Depreciation costs should not be charged on long standing infrastructure assets because such investment represents a sunk cost with no alternative use, and therefore no opportunity cost. There should be no rate of return on long standing infrastructure assets (NSW Agriculture).
- For pricing purposes, all bulk water supply assets should be classified into two groups - existing and new – using the “line in the sand” approach to valuing existing assets. The use of the annuity approach is supported to ensure that the full costs of maintaining and renewing assets are reflected in prices. However, the establishment of specific reserves within an authority's accounts is not a pricing issue (NSW Treasury).
- Water service charges should recover resource management costs incurred in *delivering* the water, but not resource management costs that arise from the *use* of irrigation water. These are better prevented or recovered through other mechanisms, such as drainage taxes (NSW Agriculture).

### *Trading in water entitlements*

- Trading in water entitlements should encourage water to be used in the most efficient way. Such a scheme should be available to all irrigators. Transfers should be allowed both within and between irrigation valleys, subject to operational and environmental constraints, and between states. The only role IPART should have regarding trading in water entitlements is ensuring that there is a consistent basis for water pricing between regions and a consistent approach to water pricing between states (NSW Agriculture).

### *Equity and impacts*

- Whilst neither depreciation nor a rate of return should be charged on existing infrastructure, this position creates the potential for pricing inequities between irrigation valleys based purely on the timing of infrastructure provision (NSW Agriculture).
- Farm level financial modelling should be undertaken to evaluate distributional impacts. The impact analysis in the Interim Report is insufficient (NSW Agriculture).
- Whilst the principal focus should be on implementing the polluter pays principle, there will be instances where it will be appropriate for beneficiaries to bear some of the cost of water management where this will be cost effective or on equity grounds (EPA).

### *Environment*

- Whilst low water prices have been a contributing factor to environmental problems within irrigation catchments, pricing not the only mechanism for inducing change (NSW Agriculture).

### *Structural/DLWC/Implementation Issues*

- The description of water used for aquaculture could be more clearly defined by the DLWC. Future pricing policy should not hinder the development of the aquaculture industry in NSW. The DLWC should consider the current trend of integrating of fish production with traditional cropping enterprises and thus define the volume of water approved for use on unregulated licences where water for aquaculture is integrated into farm production (NSW Fisheries).
- Discussions between NSW Agriculture and irrigators have emphasised the importance of transparency (of the DLWC). Most Irrigators would be prepared to pay the charge if they knew that the charge was being used for essential work (NSW Agriculture).
- Whilst there are constraints associated with reforming bulk water prices due to the inadequacy of DLWC cost accounting, the proposed charges fall well short of recovering direct water supply costs, let alone recovering externality costs (EPA).
- In relation to the reading of meters, greater self-assessment should be encouraged. This will improve management information and thus facilitate increases in water use efficiency (NSW Agriculture).
- Even though the level of full cost recovery is not yet capable of precise estimation, the proposed charges are still far from full cost recovery as defined by Treasury and by IPART (NSW Treasury).

## **2. Irrigator representative groups**

### *Pricing principles*

- Bulk water charges should only be based on the efficient cost of delivery to water users (NSW Farmers, NSW Irrigators Council).
- Water charges should be region specific and not contain cross subsidies (The Ricegrowers Association of Australia, NSW Farmers Federation, NSW Dairy Farmers).
- The Tribunal should revise its 1996/97 Determination to mandate that 80 percent of the resource management funds raised by the \$1.35 charge be spent in the valley in which they were raised (NSW Irrigators' Council).
- There is inherent uncertainty in setting water charges based on forward looking economic costs of the DLWC. It allows the DLWC open slather to include resource management/pro-environment projects and programs in its cost structure paid for by extractive users (NSW Dairy Farmers Association).
- Costs should be separated into costs which relate to the efficient supply of bulk water which should be fully charged for, and environment costs, which should be paid at a local, regional, state or federal level as appropriate (NSW Farmers).
- Economic cost components of bulk water are acceptable as long as equitable sharing arrangements based on beneficiaries are in place. All beneficiaries should contribute costs in proportion to their derived benefit (The Ricegrowers Association of Australia).
- The current 70:30 split of costs of river operations should be reduced if water users are charged for some proportion of headwork costs (NSW Irrigators' Council).
- An annuities approach to fund refurbishment and replacement costs for infrastructure is valid. Infrastructure costs are sunk costs and no rate of return is required. A 25 year period for annuity Determination should be used, but for major long life infrastructure, the annuity should be based on 50 percent of the expected cost. The remaining 50 percent should be debt funded. Depreciation charges on all assets is not necessary (The Ricegrowers Association of Australia).

- The Tribunal should recommend to the NSW Government that it seek to have compliance with the Expert Group Report of Asset Valuation Methods and Cost Recovery Definitions removed from the COAG tranche payments. That the report should be expressly rejected (NSW Irrigators' Council).
- The DLWC proposal that estimates on asset maintenance and refurbishment programs be reviewed by outside experts should be extended to all other categories of costs (NSW Farmers Association).
- Environmental levies should be negotiated with water users to address specific environmental problems. The Council does not support the unilateral imposition of levies for unnecessary or unspecified works or notional costs (NSW Irrigators Council).

### *Trading in water entitlements*

- In light of COAG recommendations, trading in water entitlements or water property rights in a transfer market will encourage water as a resource, to be used in the most efficient way. However, within the transfer market, when 'providing specific water entitlements for the environment' as instructed by government policy, this specific entitlement should be funded by government (NSW Dairy Farmers Association).

### *Equity and impacts*

- There is insufficient analysis from IPART or the DLWC as to the impact of a price rise on extractive users nor their ability to pay for any increase. Dairy farms should be one of the farm enterprises included in the modelling case study process for all relevant regions in NSW (NSW Dairy Farmers).

### *Environment*

- Increasing charges may discourage crop and pasture rotation which is good for the soil (NSW Farmers).

### *Structural change/DLWC/implementation issues*

- Structural change to separate the resource manager/operator/regulator functions need to be made. Some functions of the Ministerial Corporation should be devolved to decentralised valley management authorities. River Management Boards should be upgraded to Section 17 Advisory Board status and each river valley managed as an autonomous regional business. Each Catchment Management Committee should be upgraded to the status of a trust. The DLWC's operational role needs to be devolved to catchment communities (NSW Irrigators' Council, The Ricegrowers Association of Australia).
- Experience shows there are enormous efficiency gains to be made by separating water operations from government. Thirty to forty percent improvements in productivity have been achieved over a five year period (The Ricegrowers Association of Australia).
- IPART's terms of reference should be expanded to make recommendations on the regulation and management of bulk water (NSW Irrigators Council).
- IPART needs an additional brief to examine the most efficient way for bulk water supply services to be delivered to the community (Ricegrowers Association).
- The DLWC submission is unsatisfactory and more work is needed before any change in prices can be justified (NSW Irrigators Council).

### 3. Environment groups

#### *Pricing principles*

- The five pricing principles [in the Interim Report] should be amended to take environmental factors into account and a sixth principle should be included to require a real rate of return on new assets and (depending on IPART's Determinations) on existing assets (Australian Conservation Foundation).
- The price of water should reflect restoration and protection requirement of aquatic resources. The environment should not be made to pay for its 'fair share' of the water (Inland Rivers Network).
- The rules and processes required to identify beneficiaries and impactors, to measure costs and benefits, and to apportion costs, need to be clearly identified by the Tribunal (Australian Conservation Foundation).
- Off-allocation water should be priced (Australian Conservation Foundation).
- IPART should consider introducing a resource rent for water (Friends of the Earth).
- All extractive uses of water should be licensed and priced volumetrically, including bores and unregulated streams. Any use of water that does not sustain an ecosystem function should be priced on the impactor pays principle (World Wildlife Fund).
- The real environmental costs of irrigation must be incorporated into any model that is to be used in determining prices (Friends of the Earth).
- Only a small fraction of the 'Resource Management' costs should be met by the community because it is the extractive users who benefit exclusively from water resource operations (Inland Rivers Network).
- The Tribunal should recommend catchment wide levies on water users to pay some of the costs of managing pollution, water quality and river frontage restoration (Australian Conservation Foundation, Inland Rivers Network).
- Dams have a market value, a finite life, and should be depreciated (Friends of the Earth).
- Irrigators should pay more for greater security because it is worth more to them (Australian Conservation Foundation).
- The Tribunal should examine whether the "polluter pays" principle should apply to the cost of environmental flow regimes as both irrigators and governments are arguably polluters by their past actions (Australian Conservation Foundation).
- Hi flow licences should be charged for. In many rivers the lack of medium high flows is causing severe ecological damage (Inland Rivers Network)

#### *Trading in water entitlements*

- Trade in sleepers or dozers will increase overall water usage and inter-valley transfers are likely to damage the environment (Australian Conservation Foundation).
- Permanent tenure models of water entitlements are not acceptable because allocations could only be reduced in the future by purchasing back entitlements (Australian Conservation Foundation).

#### *Environment*

- The needs of groundwater dependant ecosystems have never been assessed or managed by the DLWC in managing groundwater (Australian Conservation Foundation).

### *Structural/DLWC/implementation issues*

- The DLWC would benefit from moving to a more accountable, transparent and efficient level of operation (World Wide Fund for Nature).
- The DLWC is not currently conforming to the Tribunal's Pricing Principles 1 (efficient service provision) or 4 (beneficiary/impactor pays) (World Wide Fund for Nature).
- By offering water users an overdraw/underdraw facility, the DLWC is acting as a interest free bank, with significant negative impacts on the environment (Australian Conservation Foundation).
- The ACF is opposed to any suggestion that government divest itself of its responsibilities for managing environmental flow allocations and giving these responsibilities to NGOs (Australian Conservation Foundation).
- Extractors should install meters on all pumps and time/flow meters be installed on larger pumps (Inland Rivers Network).
- It is important that the DLWC account for its spending, particularly by itemising and separating spending on river and environmental management and spending on irrigation-related capital works. Water Users should also know where their money is going (Australian Conservation Foundation).
- The DLWC should contract out the work to reform its information and accounting systems (Australian Conservation Foundation).

## **4. Councils**

### *Pricing principles*

- The provision of water for recreational areas should be treated as a community service obligation and paid for by the taxpayer (Carrathool Shire Council, Lachlan Shire Council). Carp control programs should be funded as community service obligations (Carrathool Shire Council).
- Charges should not be based on volumetric allocations. Charges should be based on a two-part tariff with an access charge and a usage charge (Lachlan Shire Council).
- The Gosford/Wyong Joint Water Supply Scheme should have its charges assessed separately by the DLWC in the same manner that Hunter Water and Sydney Water have their charges assessed (Gosford Wyong Joint Water Supply Scheme).
- The current charging system to town water supplies (High Security) is based solely on allocation with no usage component. In order to be more equitable and to encourage water conservation there should be a usage component (Tamworth City Council).
- It is unclear if proposed charges for unregulated rivers will apply to town water supplies owned and operated by local councils. Councils should not have to pay these charges (Tamworth City Council).
- There needs to be identification of what the fixed component of the water charges represent and how these charges are substantiated (Cowra Shire Council).
- As there are no assets involved, it is difficult to see how the proposed charges for unregulated streams can increase in direct proportion to extraction potential. In this format, the charges relate more to a resource tax which the Joint Water Supply Scheme has major concerns (Gosford/Wyong Joint Water Supply Committee).
- The positive effect of funds already expended by local water authorities does not appear to have been addressed by IPART within the Draft Determination (Gosford/Wyong Joint Water Supply Committee).

- Pricing policies should only recover the actual costs of water services and retaining the assets, but should not permit a rate of return on those assets (Hume Shire Council).
- No account seems to have been made of past capital contributions by individual users towards the provision of regulating infrastructure (Tamworth City Council).

#### *Equity and impacts*

- The Tribunal has examined the impacts of the reforms on irrigation areas but not assessed the effects on ratepayers and industry. These should all be examined, together with the social impacts resulting from the reforms (Nambucca Shire Council).
- It is inequitable to charge high security users two thirds of their allocations and low security users only have a MAC of one third of their allocation (Lachlan Shire Council).
- It is inequitable to put up town water charges but in cap rates (Bathurst City Council).
- The proposed water charges could affect the provision of water services to small struggling rural communities (Cabonne Council).
- If water charges are increased to reduce the government subsidy for bulk water, there should be a corresponding fall in government taxes (Cowra Shire Council).
- An allowance should be made for water returned to the river from off stream storages for environmental flows and for water returned to the river after being treated at a Sewerage Treatment Work (Nambucca Shire Council).
- There is an inequity between the proportion of recovered costs in the North Coast compared with its level of expenditure. In addition, there is no apparent expenditure undertaken by the DLWC on the Tweed River. In fact, works undertaken by the Council on the Tweed River provide a potential windfall to the DLWC (Tweed Shire Council).
- The proposed water charges may affect the continued functioning of recreational users such as local football and cricket sporting associations (Council of the Shire of Urana).

#### *Structural/DLWC/implementation issues*

- The cost for bulk water should be determined on a catchment basis rather than a regional basis as operational costs can vary significantly from one catchment to another (Nambucca Shire Council).
- Water meters need to be installed for irrigators on unregulated streams (Coffs Harbour City Council, Bathurst City Council).
- There is often duplication in monitoring of the river environment. A centralised body should be found to coordinate the collection of data (Coffs Harbour City Council).
- The proposed charges should be phased in over three years. The DLWC must minimise costs and to ensure accountability and transparency of these costs (Albury City Council).
- The DLWC has not been able to demonstrate how efficiently it delivers bulk water services. Documented efficiency and negotiated levels of service are absolutely necessary to justify further price movements (Tamworth City Council).
- It should be possible to allow high security allocations to be temporarily “sold”. Water users should be reimbursed for any entitlement forgone, if required by the DLWC to supply other water users (Tamworth City Council).

### Barwon region

#### *Pricing principles*

- Cost allocations need to be transparent. The impact of water charges needs to be eased during drought times, rather than being recovered on an entitlement basis. High security water should be charged at a price that includes the opportunity cost of that water to general security use. Water charges should be discounted for poor security and low reliability (Colly Cotton Ltd).
- The pricing principles prepared by IPART are not consistent (Colly Cotton Ltd).
- A \$5ML water diverted charge should be levied on all beneficiaries diverting water, the current Water Management Charge removed and there be a transparent incorporation of all charges into the \$5ML diverted fee (Gwydir Valley Irrigators' Association).
- The Tribunal must take into the account the effect of the Murray Darling Basin cap. Charges should be based on water used, not licensed allocation. Some cross-subsidisation between regions will be necessary (L Pengelly).
- The cost of delivery of water, staffing and mechanical repairs should be charged, but not any capital charges for existing works. An audit based charge to cover maintenance of dams and weirs, subject to negotiated terms is acceptable. Charges should be based on usage not entitlement. Governments, like irrigators, must budget surplus funds to cover bad seasons (Gwydir Valley Irrigators' Association).
- IPART's impact analysis include the fixed costs of using water in the north which includes the capital costs of pumping water. In addition, the impact analysis does not take account of the efficient use of water by crops such as cotton (Colly Cotton Ltd).
- The cost allocations by the expert group must be verified by an independent review and an assessment must be made of the efficiency of the activities behind these costs (Colly Cotton Ltd).
- If charges are to recover economic costs they should also take into account economic benefits that accrue to the community from irrigation (Colly Cotton Ltd).
- The asset annuity approach is supported in principle but there are concerns about which costs are to be included. Revenue raised by user charges must be quarantined for remedial works rather than going to consolidated revenue (Colly Cotton Ltd).
- Charges should not include the replacement costs of assets as this will be making this generation pay for the next generation (L Pengelly).
- In the Barwon region, the DLWC is a risk taker and manages a variable water supply. Its income should therefore vary according to the availability of the water (L Pengelly).
- Peel Valley irrigators pay the highest charges in the country. Charges should be based on water usage, not entitlements. Peel Valley Water Users would not object to an increase in charges if that increase was reflected in the delivery of some service which has tangible additional value. They are opposed to being forced to subsidise the unchecked growth of the DLWC or the types of information gathered for IPART (Peel Valley Water Users Association).
- The proposed usage water charges will go up by 20 percent over the efficient level of bulk water delivery charges (L Pengelly).
- The proposed \$75 base charge for groundwater should be abolished and charges be calculated per entitlement plus the usage charge. All entitlements, including stock and domestic users, should be charged at normal rates (Kingdom Ponds and Tributaries Water Users Association).

- The \$1.35/ML resource management tax and the 25c/ML voluntary levy have been incorporated into the new charges without validating the terms of the expenditure to date (Namoi Valley Water Users).

#### *Trading in water entitlements*

- Trading in water license for permanent and temporary transfer should be allowed to encourage efficient water use. The DLWC should meter unregulated streams for water usage. Distinct property rights should be issued to existing licence holders and administered by River Management Boards on the basis of capacity sharing (Namoi Valley Water Users' Association).
- Permanent sleepers licences should be bought back at market rates (L Pengelly) .

#### *Equity and impacts*

- The capacity of irrigators to pay for water depends on the reliability of supply, the Gwydir Valley receives very small allocations and depends on off-allocation water (Gwydir Valley Irrigators' Association).
- The three northern valleys of the Gwydir, Macintyre and Namoi produce the same output as the two southern valleys on the Murray and Murrumbidgee but use only one sixth of the water (Colly Cotton).
- In the Gwydir Valley the cost of water is 3.28 times higher than in the southern river valleys when water reliability is considered (Colly Cotton).
- Peel Valley water users should not attract the same cost structure as the massive irrigators attract. They are the smallest in the state, but are faced with paying the highest water charges in all areas of Australia. The Peel should be separated from the Barwon region and treated as a discrete valley (Peel Valley Water Users Association).
- It is discriminatory to freeze charges in the southern valleys due to lack of adequate information and then lift prices in the north where the information is also inadequate (Gwydir Valley Irrigators Association, Namoi Valley Water Users Association).
- The price of water per ML will rise due to lower allocations (Peel Valley Water Users).

#### *Environment*

- No indication is given in the Interim Report as to how polluters will be identified and charged if they are not water users (eg. dryland farmers) (Colly Cotton Ltd).
- The DLWC should manage environmental issues by non-price measures rather than through an economic penalty to individual water users (Namoi Valley Water Users' Association).

#### *Structural/DLWC/implementation issues*

- It is disappointing that the DLWC's submission did not propose any prices and this makes it difficult to respond (Colly Cotton).
- Why should the DLWC be allowed to put prices up when they have failed to demonstrate their capacity to operate and manage the irrigation assets of the State (Colly Cotton)?
- Privatised the storage and distribution function of bulk water on a valley by valley basis and create River Management Boards (Namoi Valley Water Users' Association).
- The north west total catchment committee should be split into three committees to represent each river separately. The Gwydir should be considered as an independent

entity for pricing and resource management and run as an independent s17 resource management board. Approvals and licenses by government departments should be coordinated to ensure irrigators complying with license conditions are not attributed costs as "polluters" by other agencies (Gwydir Valley Irrigators' Association).

- The financial statements and the management of the DLWC must be subject to a public audit (Gwydir Valley Irrigators' Association, Namoi Valley Water Users' Assoc).
- Until the DLWC substantiates its financial position, and full meet all requisitions, no price increase should be agreed (Gwydir Valley Irrigators' Association).
- The DLWC should not charge resource management costs to the Peel River because it has never done any resource management work on the Peel River (L Pengelly).
- The DLWC has not provided any infrastructure to the Cockburn Valley and in fact allowed gravel extraction to occur which was an environmental disaster. It is unfair to charge any irrigator in this valley (Cockburn Valley Water Users Association).
- IPART has proposed charges for recreational, stock and domestic users of regulated rivers but there is no mechanism to charge these groups (Gwydir Valley Irrigators' Association, Namoi Valley Water Users' Assoc).
- The DLWC continues to incur any costs it wishes and passes them on to the irrigators. The DLWC's Tamworth office has gone in seven years from 3 staff to 60 without any change to workload or service levels (Peel Valley Water Users Association).
- The DLWC can not justify why meters are required for groundwater. Is the only reason that meters are required to enable a usage charge? (Peel Valley Water Users Association)

### 5. Murrumbidgee and Murray Regions

#### *Pricing principles*

- Coleambally Irrigation put forward a model for Access and Usage Fees they are considering as an alternative to the DLWC Delivery Service Charge for the Murrumbidgee (Coleambally Irrigation).
- IPART must complete a detailed review of MDBC pricing principles (Murray Irrigation).
- Irrigators in the NSW Murray Valley have never agreed the 70:30 ratio is an equitable split for the Murray Valley (Murray Irrigation).
- The major concern with the interim cost sharing of 50:50 for resource management costs is that irrigators in the Murray are already making a substantial direct financial contribution to resource management which other catchment residents and water users are not (Murray Irrigation).
- As approximately 80 percent of Wah Wah Management Board's supply is re-use water, the water has already had a Delivery Service Charge paid on it and to have to pay it again would be double dipping (Wah Wah Management Board).
- Environmental and external costs should be more transparently reported by the DLWC. Operating and maintaining systems should be reflected in regional charges (Murrumbidgee River Management Board).
- It is acceptable to recover costs from the beneficiary provided the beneficiaries are involved in genuine negotiations to determine whether the cost is efficient and justified (Murrumbidgee Irrigation).
- Asset management program should identify expenditure required over the next five years. The costs of maintaining this program should be determined and an annual

charge struck that averages the costs to irrigators and other beneficiaries. Refurbishment or replacement of assets outside the asset management program should be debt financed. Funds for refurbishment or replacement of assets should be quarantined from use for any other purpose (Murray Irrigation).

- All beneficiaries should contribute to water costs in proportion to their derived benefit. Delivery charges should not take into account external factors such as water quality, capital value and security of supply. A two-part tariff is supported (MIA Council of Horticultural Associations).
- There is no justification for charging a rate of return on existing assets. This is only justified if Government funds new assets up front. A 20 year rolling annuity is supported. A depreciation charge is appropriate for assets that have a market value and are not part of the refurbishment annuity (MIA Council of Horticultural Associations).
- There should be a mixture of debt and annuity financing for capital funding provided there is an appropriate structure and control mechanism (Coleambally Irrigation).
- The licensing system needs reviewing. Bulk diverters, such as West Corugan, are heavily subsidising individual diverters (West Corugan Private Irrigation District).
- Some recognition should be given in prices for the poor quality, highly variable and unreliable flows that water users from the Coleambally Outfall Drain receive as compared to the more secure river pumper and irrigation area landholders (Coleambally Outfall Drain Water Users Association).
- It is difficult to apply cost sharing principles to the beneficiaries who are widely dispersed throughout the community. Irrigators are the only group of beneficiaries of DLWC services who are easily identified, metered, and charged by the DLWC (Murray Irrigation, Coleambally Irrigation).
- Central agencies of Government tend to interpret COAG uncritically and advocate substantial increases in the price of irrigation water based on poorly defined concepts such as full cost recovery, tax equivalents and erroneous concepts such as inclusion of rate of return on “sunk” capital investment (Murray Irrigation).
- There is no evidence that the resource management charge went on payments in the Murrumbidgee Region and so the charge should be removed (Coleambally Irrigation).
- The compulsory use of high security water for horticultural plantings is supported provided a greater definition of “high security” can be provided, including water sharing rules during times of resource scarcity (MIA Horticultural Council).
- A fair and transparent means of calculation the charge is developed and charges are not changed without consultation with the stakeholders (MIA Horticultural Council).
- The fixed component of the new charges is too high. Higher usage charges are preferred. The costs of regulated water may be so high as to increase illegal usage where metering is not stringent (Murray Catchment Management Committee).
- The two-part tariff has been proposed without justification and with strong regional opposition. The fixed charge is not based on fixed costs. The only use for a variable charge is where costs are marginal. It is wrong to allow the body which decides what water is available to also bill on available water. Bulking charges together only continues the past practice of hiding costs and serves to confuse the customer. It is anything but transparent (Murrumbidgee Irrigation).
- The two-part tariff is not based on any economic theory and will thwart COAG principles (Murrumbidgee River Management Board).

- Customers need direct input to the development and acceptance of resource management programs and their budgets. The Tribunal should adopt the SCARM recommendation that any resource management charge must:
  - be incurred
  - affect the water business's direct users; and
  - be charged to the water business (Murrumbidgee Irrigation).
- The proposed fixed charges may impact excessively during drought conditions. The charges should be lessened when allocations are drawn at less than, say 75 percent (West Corugan Private Irrigation District).
- If the resource management charge is rolled into the two-part tariff, there is concern that the funds will not be spent as originally intended (Western Murray Irrigation).

### *Water trading/property rights*

- Establishing property rights to water is fundamental to the continued development of the water trade market and future investment in irrigated agriculture and is essential for future regional development (Murray Irrigation, Coleambally Irrigation).

### *Equity and impacts*

- It is difficult for groundwater pumpers, who are more independent and self contained than surface water users, to organise and present a united position. In addition the information provided on DLWC costs in relation to groundwater is limited (Murrumbidgee Ground Water Pumpers Association).
- Current assessments are that the proposed charges will over recover \$2.2m from regulated water users in 1997/98 (Murrumbidgee River Management Board).

### *Environment*

- Water pricing should not play a role in the implementation of environmental or competition reforms (Coleambally Irrigation). Water pricing should not be used as the key tool to tackle environmental problems (Murray Irrigation).
- The current generation should not impose costs on future generations and past generations should not impose costs on current generations in the environmental area (Murrumbidgee Irrigation).
- Water users are not wholly responsible for water quality problems. Management of wetlands is a community responsibility (Murrumbidgee Irrigation).
- Resource management problems are due to the 'all valleys are the same' view. Neither the problems nor the solutions are the same and policy must be regionally developed to be relevant (Murrumbidgee River Management Board).
- Policies on pricing, allocations and resource management ignore the major sustainability problems in the Murray-Darling Basin, particularly salinisation (Col G McLean).
- Some recognition should be given for the reduction in salt loads that Coleambally Outfall Drain Water Users achieve by extracting drainage water for the Coleambally Outfall Drain (Coleambally Outfall Drain Water Users Association).

### *Structural/DLWC/implementation issues*

- The DLWC needs to be directed to reduce the costs of its operations and improve the transparency of its activities. Internal reforms achieved by Murray Irrigation Ltd demonstrate the significant opportunities to improve the operational efficiency of

government run monopolies. The onus should be on the DLWC to substantially improve its costing and administration systems before any price rise is allowed (Murray Irrigation).

- River management and catchment management should be regionalised. A Valley Management Authority should be established to manage the operational activities of the Murrumbidgee. Current River Management Boards should be upgraded to s17 advisory board status (Murrumbidgee Irrigation, Coleambally Irrigation, Murray Irrigation, Murrumbidgee River Management Board, MIA Council of Horticultural Associations).
- Catchment Management Committees should be upgraded to trusts with regional levying powers so that regional beneficiaries can be levied and resource management functions can be addressed regionally and equitably (Murrumbidgee Irrigation, Murrumbidgee River Management Board).
- The bulk water distribution component of the DLWC should be set up as a Government Trading Enterprise. The commercial activities of the DLWC should be established as separate entities consistent with competition principles. Until the resource operator unit is separated from the resource manager and regulator units, we are unlikely to define the core bulk water delivery responsibilities (Murrumbidgee River Management Board).
- There is no reason why any region should pay head office costs for services not requested by the region (Murrumbidgee River Management Board).
- The Tribunal must assess any duplication between agencies, ie the EPA and the DLWC (Murray Irrigation).
- There is no justification for an increase in prices when the DLWC has not been able to justify such an increase (Murrumbidgee Irrigation).
- The proposed two-part tariff will increase costs for private diverters who use all their allocation by 2.4 percent. For 100 percent allocation users within Murrumbidgee Irrigation the increase will be 10.5 percent. This conflicts with the aim of nil increase in the Murrumbidgee Region (Murrumbidgee River Management Board).

## 6. Central West and Far West Regions

### *Pricing principles*

- Charges should be based on a two-part price system, the first which reflects a right of access to the resource and a proportion of resource management costs, and the second, which reflects usage. This principle should apply to unregulated streams and groundwater as well as regulated streams. The DLWC should also meter water users on unregulated streams and groundwater (Macquarie River Advisory Committee).
- Prices should reflect consideration of TCM principles because careful management of the upper catchment is important to the quantity and quality of water downstream (Lachlan Catchment Management Committee).
- Actual water used should be the basis for calculating charges, not entitlement. Pricing on entitlement is a resource tax and will lead to economic distortions developing in water use (Macquarie Food & Fibre Association).
- If some arbitrary decisions must be made in assessing operational, management and regulation costs, then the proportion of total flows extracted for private and/or commercial use is a fair basis for allocation (Macquarie River Advisory Committee).
- The Tribunal should urge the government to introduce a sensible system of property rights for all users including the environment (Macquarie Food & Fibre Association).

- IPART's analysis does not take river reliability into account. The low reliability of supply for Macquarie users must be considered in setting water charges (Macquarie River Food & Fibre Association, Narromine Irrigation Board of Management).
- Licences for water allocations should be in perpetuity, with a small annual fee to cover the cost of issuing the licence (Lachlan River Advisory Committee).
- Issues such as water quality and environmental flows have a direct effect on water costs and benefits and must be considered by the Tribunal (Macquarie Food and Fibre).
- Current levels of extraction are not ecologically sustainable. Prices should increase by 5 percent p.a. to encourage more efficient water use (Darling River Environmental Group).
- The public benefits of irrigation well exceed the costs. There are numerous other examples of government sustaining losses for a broader public benefit (C Dowling).
- Despite submissions to the contrary, the proposed fixed water charges are too high. This will encourage inefficiency from the DLWC because the income is always there, force the use of water particularly from low users, and there is no account of exactly how the funds raised from these charges will be spent (Lachlan River Advisory Committee).
- The high security water charge does not appear to take into account of the fact that high security water is held in the reservoir for longer periods of time and is subject to more losses (Lachlan River Advisory Committee).
- There is a need to look much more closely at who are the wider beneficiaries from irrigation works in determining prices. In the case of the Macquarie, the environment and the marshes have benefited from changes to operational rules. To what extent is this included in cost sharing? (Narromine Irrigation Board of Management)

### *Equity and impacts*

- The viability of the members of the Narromine Irrigation has worsened in recent years due to a fall in total allocations from the Macquarie 13 to 9 percent. Any socio-economic analysis should consider the inequality between riparian users and irrigators (Narromine Irrigation Board of Management).
- The DLWC 'regions' do not correspond to a 'catchment' model. The Tribunal should note that the water charges for the Macquarie are approximately 23 percent higher per ML in the Macquarie than the Lachlan (Macquarie River Food & Fibre Association).
- The damage caused by over allocation of water licences in the past, should not be paid for by existing water users. Farmers input costs have to be reduced to allow profitability. Higher water costs could severely affect the viability of irrigators in the Lachlan Valley (Lachlan River Advisory Committee/Mid Lachlan Water Users).
- Higher prices for irrigation water will further depress land values in rural areas (Lachlan River Advisory Committee/Mid Lachlan Water Users).
- Why have irrigation areas in the Macquarie not been given the same discounts that have been applied to irrigation areas in other valleys? (Macquarie River Advisory Committee, Macquarie River Food and Fibre, Narromine Irrigation Board of Management)
- The Draft Determination lacks any consideration of the social impacts of the Determination. The irrigation industry is being unfairly loaded with the costs associated with the river, despite using about 25 percent of its flow (Macquarie River Food and Fibre).

- Conditions on Macquarie groundwater licences prevent the full usage of the entitlement, so why is entitlements used as a basis for charging? (Macquarie Food and Fibre)

#### *Environment*

- There is inadequate information about the level of flows necessary to restore river health. In view of this, the State should not commit water licences beyond a river's capacity and adopt a cautious approach where information is scarce. Sleeper licences should be cancelled without compensation (Bathurst Conservation Group).
- The Tribunal needs to ensure that it continues to consult with the community as this review process continues. In the Macquarie Marshes catchment, it is important to recognise community/local government/state planning activities being developed or that have been developed (Macquarie Marshes Catchment Committee).
- Any charge based on "entitlement" must take into account the fact that this entitlement has been reduced by Government policy (Macquarie River Food and Fibre).

#### *Structural/DLWC/implementation issues*

- Why should NIBM members pay increased prices for the operation of an inefficient and deteriorating network which provides a significantly reduced reliability and one which is managed by an organisation with little regard for providing services to their farmer customers? (Narromine Irrigation Board of Management)
- The DLWC should continue to carry out the resource manager and regulatory functions (Lachlan Catchment Management Committee).
- River Management Boards should be established under s17 of the Water Act (Macquarie River Food & Fibre).
- Significant scope exists for improved internal efficiency by the DLWC. If improvement cannot be achieved, the DLWC's operations should be corporatised and run by a Board of water users (Lachlan Valley Water Users/Lachlan Valley River Advisory Committee).
- The DLWC should either restructure to enable accurate allocations of costs or it should divest some of its functions to joint government/community natural resource corporations (Macquarie River Advisory Committee).
- It is virtually impossible to explicitly criticise the charges proposed because of the absence of any credible quantitative analysis of the cost of the various water management activities of the DLWC (Macquarie River Advisory Committee).
- The DLWC have not been able to provide reliable financial information or any useful information about its levels of services. Until this information is provided, no further price increase should be allowed (Jemalong Irrigation Ltd).
- There are concerns that the increased charges will be subsumed into the DLWC's general operating revenue rather than spent on resource management activities in the region (Murray River Advisory Committee).
- It was not possible to fully identify the costs of one function in the Central West. It would be interesting to see what distinguished the lack of information in the Murray and Murrumbidgee regions that allow them an exemption from price increases. Until transparent costs can be produced, there should be not increase in water charges (Macquarie Food and Fibre).

## Coastal Regions

### *Pricing principles*

- Hunter catchment's physical, economic and historic characteristics have not been sufficiently taken into account in establishing a rationale for determining local water prices (Hunter Catchment Management Trust).
- There are three main ways to improve the cost recovery of bulk water services:
  - (i) increase the amount of water used by granting new licences and encouraging relocation of other water users.
  - (ii) increase the charge per megalitre of water. The depressed state of the beef economy may lead to decreased water usage and surrendering of licences if water charges rise in an excessive manner. Should an increase in water charges be necessary, then moderation would be a vital component in the calculations.
  - (iii) decrease the administration expenses associated with the water system. If users are to cover these administration costs, then they must be minimal and accountable. Since the Toonumbar Dam is under allocated, it may be feasible to avoid the costs of metering each individual user (Toonumbar Dam Water Users Association).
- The water management charge should not be further increased. The funding of additional DLWC activities peculiar to HWC should be negotiated through the existing liaison committee (Hunter Water Corporation).
- Water tables indicate that irrigation is by far the biggest consumptive use of water. However, the dam system in the Hunter is set up to provide 100 percent reliability for power-generation, coal mining and related industries which benefits all of NSW. Hunter bulk water users should not have to pay for this dam system and related catchment management (Hunter Catchment Management Trust).
- The DLWC costs are estimates and apportionment is unclear. Until there is greater rigour and transparency, charges should remain at existing levels (Sydney Water).
- The different charges that apply to regulated, unregulated and groundwater as well as different charges for metropolitan water utilities does not achieve competitive neutrality in terms of having one price for users of the same resource (Hunter Water Corporation).
- The charges proposed exceed the benefits received from DLWC activities. If the DLWC wants to charge for maintaining specific streams, it must take greater responsibility for the streams and the costs incurred in maintaining them (Buckrabendinni Water Users).
- The bulk water suppliers and local water authorities in the South Coast region should not have regulatory powers and should charge prices that reflect actual cost and provide appropriate signals to resource development (Resource Allocation P/L).
- The proposed charges are unjustified and should not be levied against each well. Users need to be assured that the money is used for the purposes it is levied (G White).
- Much of the stresses on the resource of the river are due to urban development. DLWC costs are driven by urban development. These should not be paid for by agricultural river users (Upper Nepean River Water Users Association).
- It is of concern that the commercial extraction of spring water is not properly metered or charged for (Tuggerah Lakes Catchment Management Committee).

*Equity/environment*

- The IPART report fails to recognise that the South Eastern Region has had substantial water drawn away from their catchments by government funded schemes such as the Shoalhaven and Snowy Mountains Schemes (C Halton).
- Landholders in the Bega Valley should gain some benefit from the fact that large public capital expenditure is not being requested to install drainage and pumping schemes in the region (Resource Allocation P/L).
- The proposed water charges are exorbitant for small farms compared with the amounts charged to larger irrigated farms. IPART should consider the fact that some dam water is used in fighting bush fires (R Gibson).
- It is unfair for licensed bores to carry costs for unlicensed bores (G White).
- Sydney Water uses 88 percent of the water in the Nepean catchment and yet, is apparently charged a relatively small amount (Upper Nepean River Water Users Association).

*Structural/DLWC/implementation issues*

- The DLWC has not been able to provide information on its services and should not be able to increase prices until it does (Upper Nepean River Water Users Association).
- The DLWC do nothing in relation to managing or supplying groundwater and should not be able to charge for it (N Cameron).
- Sleeper licences should be available to the community to trade, buy or borrow. If free high flow licences are allowed on regulated rivers, then these should also be allowed on unregulated rivers (Broke/Fordwich Winegrowers Association).
- Prices should be finalised by March each year to assist in business budgeting. If prices are to increase, bills should be levied quarterly to coincide with cash flows and normal billing periods. Funds raised from the charges should not be subsumed into general operating revenue (MidCoast Water).

**LIST OF SUBMISSIONS TO THE INTERIM REPORT**

<b>Organisation</b>	<b>Representative</b>
Individual	Mr Robert Caldwell
Individual	Mr E M Corcoran
Individual	Mr C C Halton
Individual	Colonel G B McLean
Individual	Mr Laurie Pengelly
Individual	Mr Jim Downey
Australian Conservation Foundation	Mr Tim Fisher
Bathurst Conservation Group	Ms Isabel Higgins
Bellriver Pastoral Company	Mr Stephen Brown
Buckrabendinni Water Users Group	Mr R Forbes
Burruga & District Community Association Incorporated	Mr J J Byrne
Carrathool Shire Council	Mr John Millay
Coffs Harbour City Council	Mr Simon Thorn
Coleambally Irrigation	Mr Mark Bramston
Coleambally Outfall Drain Water Users Assoc.	Mr Geoff Chapman
Colly Cotton Group of Companies	Mr E A Rowlands
Darling River Environment Group	Mr Peter Thompson
Dept of Land & Water Conservation	Dr Robert Smith
Environment Protection Authority	Mr Drew Collins
Friends of the Earth	Mr Dietrich Willing
Gosford-Wyong Joint Water Supply	Mr Daryl Dutton
Gwydir Valley Irrigators Association	Mr E Rowlands
Hunter Catchment Management Trust	Mr Ian Furner
Hunter Water Corporation	Mr David Evans
Inland Rivers Network	Ms Sally Hunt
Lachlan Catchment Management Committee	Ms Margaret McKellar
Lachlan River Advisory Committee	Mr T J Brady
Lachlan Shire Council	Mr Desmond O'Shea
Local Government & Shires Association	Mr Brendan Hartnett
Macquarie Generation	Mr Grant Every-Burns
Macquarie Marshes Catchment Committee	Mr Eric Fisher
Macquarie River Advisory Committee	Mr Ian Rogan
Macquarie River Food & Fibre Association	Mr Ben Bootle
Minister for Land and Water Conservation	The Hon Kim Yeadon MP
MIA Council of Horticultural Associations Inc	Mr Roger Hoare
Murray Irrigation Limited	Mr Bill Hetherington
Murrumbidgee Groundwater Pumpers Association	Mr Gerard Toscan

## SUBMISSIONS TO THE INTERIM REPORT - CONTINUED

Organisation	Representative
Murrumbidgee Irrigation	Mr Wal Hood
Murrumbidgee River Management Board	Mr Rel Heckendorf
Nambucca Shire Council	Mr B R Redman
Namoi Valley Water Users Association	Mr Jeremy Killen
Narromine Irrigation Board of Management	Mr E O Whittle
NSW Agriculture	Dr K P Sheridan
NSW Border Rivers Council Inc.	Mr Peter P Rohan
NSW Dairy Farmers Association	Mr Arthur Burns
NSW Farmers' Association	Mr Ian McClintock
NSW Fisheries	Mr Ian Lyall
NSW Irrigators' Council	Mr Gary Donovan
NSW Treasury	Mr John Pierce
Peel Valley Water Users Association	Mr Ildu Monticone
Resource Allocation Pty Ltd	Ms Valerie Masterton
Stewarts River Water Users Assoc.	Mr Oliver Ivers
Tamworth City Council	Mr Kim Woodbury
The Ricegrowers' Association of Australia	Mr Mike Hedditch
Toonumbar Dam Water Users' Association	Mr G Bebb
Wah Wah Management Board	Mr Russell Campbell
West Crougan Private Irrigation District	Mr Peter Wallis
World Wide Fund for Nature Australia	Mr Ray Nias

**LIST OF SUBMISSIONS TO THE DRAFT DETERMINATION - 1997/98**

<b>Organisation</b>	<b>Representative</b>
Individual	Mr Neville Cameron
Individual	Mr Col Dowling
Individual	Mr Ray Gibson
Individual	Mr C C Halton
Individual	Mr & Mrs P & B Henson
Individual	Colonel G B McLean
Individual	Mr Laurie Pengelly
Individual	Mr Greg White
Albury City Council	Mr B J McLennan
Australian Conservation Foundation	Mr Tim Fisher
Bathurst City Council	Mr Chris Pitkin
Broken Hill Water Board	Mr Roger Edwards
Cabonne Shire Council	Mr Graeme Fleming
Cadell Construction Joint Water Supply Scheme Inc	Mr K J Barlow
Cockburn Valley Water Users Association	Mr Ian Coxhead
Coleambally Irrigation	Mr A V Wray
Colly Cotton Group of Companies	Mr E A Rowlands
Cowra Shire Council	Mr Carl Berry
Dept of Land & Water Conservation	Mr A E Barr
Dept of Land & Water Conservation	Dr Robert Smith
Environment Protection Authority	Dr Neil C Shepherd
Gosford-Wyong Joint Water Supply	Mr Daryl Dutton
Gum Flat Public School	Mr Andrew Bennett
Guyra Council	Mr Geoff Brooks
Gwydir Valley Irrigators Association	Mr John Seery
Hume Shire Council	Mr Don Pollard
Inland Rivers Network	Ms Sally Hunt
Jemalong Irrigation Limited	Mr E Z Hamilton
Kempsey Shire Council	Mr K J Finnie
Kingdon Ponds and Tributaries Water Users Association	Mr Lloyd Rossington
Lachlan River Advisory Committee	Mr Jock H Coupland
Lower Clarence County Council	Mr Jim Fear
Macquarie River Advisory Committee	Mr Ian Rogan
Macquarie River Food & Fibre Association	Mr Ben Bootle
MIA Council of Horticultural Associations Inc	Mr Brett Tucker

**SUBMISSIONS TO THE DRAFT DETERMINATION - 1997/98 CONTINUED**

<b>Organisation</b>	<b>Representative</b>
MidCoast Water	Mr Neil Hanington
Murray Catchment Management Committee	Mr Bill Currans
Murrumbidgee Irrigation	Mr David Ledgerwood
Murrumbidgee River Management Board	Mr Rel Heckendorf
Nambucca Shire Council	Mr B R Redman
Namoi Valley Water Users Association	Mr Jeremy Killen
Narromine Irrigation Board of Management	Mr E O Whittle
NSW Agriculture	Dr K P Sheridan
NSW Farmers' Association	Mr Kent Burgess
NSW State & Regional Development	Mr Loftus Harris
NSW Treasury	Mr John Pierce
Peel Valley Water Users Association	Mr Ildu Monticone
Sydney Water Corporation	Mr Paul Broad
Tamworth City Council	Mr Wilton Boyd
The Broke/Fordwich Winegrowers Association	Mrs Wendy Lawson
Tuggerah Lakes Catchment Management Committee	Mr R B Epis
Tweed Shire Council	Dr John Griffin
Upper Nepean River Water Users Association	Mr John Stanham
Urana Shire Council	Mr Peter Daley
Weddin Shire Council	Mr Trevor Lobb
West Crougan Private Irrigation District	Mr Peter Wallis
Western Murray Irrigation Ltd	Ms Susan Chapman

**APPENDIX 2 - IMPACTS ON TYPICAL BILLS**

## Typical bulk water bills from proposed two-part tariffs with a 100 ML license (general security)

<b>Sleepers (nil usage)</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
Barwon	360	300	-17
Macquarie	240	200	-17
Lachlan	233	210	-10
Murrumbidgee	283	230	-19
Murray & Far West	359	230	-36
Hunter	328	265	-19
Sydney Sth Coast	375	300	-20
Nth Coast	360	300	-17

<b>Use 30% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
Barwon	405	405	0
Macquarie	240	281	17
Lachlan	233	288	24
Murrumbidgee	283	248	-12
Murray & Far West	359	248	-31
Hunter	328	340	4
Sydney Sth Coast	375	360	-4
Nth Coast	360	360	0

<b>Use 50% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
Barwon	435	475	9
Macquarie	285	335	18
Lachlan	282	340	21
Murrumbidgee	283	260	-8
Murray & Far West	359	260	-28
Hunter	328	390	19
Sydney Sth Coast	375	400	7
Nth Coast	360	400	11

<b>Use 75% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
Barwon	473	563	19
Macquarie	338	403	19
Lachlan	355	405	14
Murrumbidgee	283	275	-3
Murray & Far West	359	275	-23
Hunter	401	453	13
Sydney Sth Coast	375	450	20
Nth Coast	360	450	25

<b>Use 100% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
Barwon	510	650	27
Macquarie	405	470	16
Lachlan	428	470	10
Murrumbidgee	283	290	2
Murray & Far West	359	290	-19
Hunter	475	515	8
Sydney Sth Coast	435	500	15
Nth Coast	435	500	15

<b>Use 120% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
Barwon	540	720	33
Macquarie	474	524	11
Lachlan	487	522	7
Murrumbidgee	313	302	-4
Murray & Far West	374	302	-19
Hunter	534	565	6
Sydney Sth Coast	495	540	9
Nth Coast	495	540	9

Typical bulk water bills from proposed two-part tariffs with a 1000 ML license (general security)

<b>Sleepers (nil usage)</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
<b>Barwon</b>	3,600	3,000	-17
<b>Macquarie</b>	2,400	2,000	-17
<b>Lachlan</b>	2,326	2,100	-10
<b>Murrumbidgee</b>	2,830	2,300	-19
<b>Murray &amp; Far West</b>	2,590	2,300	-11
<b>Hunter</b>	2,870	2,245	-22
<b>Sydney Sth Coast</b>	3,750	3,000	-20
<b>Nth Coast</b>	3,600	3,000	-17

<b>Use 75% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
<b>Barwon</b>	4,725	5,625	19
<b>Macquarie</b>	3,375	4,025	19
<b>Lachlan</b>	3,548	4,050	14
<b>Murrumbidgee</b>	2,830	2,750	-3
<b>Murray &amp; Far West</b>	2,590	2,750	6
<b>Hunter</b>	3,608	4,120	14
<b>Sydney Sth Coast</b>	3,750	4,500	20
<b>Nth Coast</b>	3,600	4,500	25

<b>Use 30% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
<b>Barwon</b>	4,050	4,050	0
<b>Macquarie</b>	2,400	2,810	17
<b>Lachlan</b>	2,326	2,880	24
<b>Murrumbidgee</b>	2,830	2,480	-12
<b>Murray &amp; Far West</b>	2,590	2,480	-4
<b>Hunter</b>	2,870	2,995	4
<b>Sydney Sth Coast</b>	3,750	3,600	-4
<b>Nth Coast</b>	3,600	3,600	0

<b>Use 100% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
<b>Barwon</b>	5,100	6,500	27
<b>Macquarie</b>	4,050	4,700	16
<b>Lachlan</b>	4,280	4,700	10
<b>Murrumbidgee</b>	2,830	2,900	2
<b>Murray &amp; Far West</b>	2,590	2,900	12
<b>Hunter</b>	4,345	4,745	9
<b>Sydney Sth Coast</b>	4,350	5,000	15
<b>Nth Coast</b>	4,350	5,000	15

<b>Use 50% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
<b>Barwon</b>	4,350	4,750	9
<b>Macquarie</b>	2,850	3,350	18
<b>Lachlan</b>	2,815	3,400	21
<b>Murrumbidgee</b>	2,830	2,600	-8
<b>Murray &amp; Far West</b>	2,590	2,300	-11
<b>Hunter</b>	2,870	3,495	22
<b>Sydney Sth Coast</b>	3,750	4,000	7
<b>Nth Coast</b>	3,600	4,000	11

<b>Use 120% of entitlement</b>	1996/97	1997/98	change
	\$ charge	\$ charge	%
<b>Barwon</b>	5,400	7,200	33
<b>Macquarie</b>	4,590	5,240	14
<b>Lachlan</b>	4,866	5,220	7
<b>Murrumbidgee</b>	3,126	3,020	-3
<b>Murray &amp; Far West</b>	2,738	3,020	10
<b>Hunter</b>	4,935	5,245	6
<b>Sydney Sth Coast</b>	4,950	5,400	9
<b>Nth Coast</b>	4,950	5,400	9

**APPENDIX 3 - EFFECT OF DETERMINATION ON EXISTING CHARGES**

**Effect of the Determination on existing charges on regulated rivers**

<b>Charge (paid by)</b>	<b>Details</b>	<b>Effect of Determination</b>
<b>Delivery service</b> (all regions except Barwon)	Charges for water delivery which vary between regions and are calculated on water usage.	Replaced by two-part tariffs.
<b>Metering</b> (all regions except Murray, Far West and Barwon)	Charges for metering which vary between regions and are calculated on water usage.	Replaced by two-part tariffs.
<b>Metering</b> (Murray and Far West)	Fixed charges for metering that range from \$50 to \$5500 increasing with entitlement size.	Replaced by two-part tariffs.
<b>Minimum annual charge (MAC)</b> (all regions except Barwon)	Minimum charges calculated at the regional delivery service and metering charges, assuming a minimum water usage. The minimum water usage assumed varies between regions.	Replaced by two-part tariffs.
<b>Water resource management</b> (all regions)	A state-wide charge of \$1.35 per megalitre of entitlement	Replaced by two-part tariffs.
<b>Two-part tariff</b> (Barwon)	The Barwon region has an existing two-part tariff for water.	Replaced by two-part tariffs.
<b>Water quality monitoring</b> (Central West and Barwon)	A voluntary levy of \$0.25/ML of entitlement in the Barwon region. The Macquarie region participates in the program, but funds the contribution from the delivery service charge on usage.	Replaced by two-part tariffs.
<b>Licensing fees</b> (all regions)	Fixed fees payable every five years or in annual instalments	Maintained at existing levels.
<b>Sydney Water and Hunter Water Corporations</b>	\$1.80/ML of water usage.	Maintained at existing levels.
<b>Industrial use</b> (all regions)	\$10/ML on the greater of usage or entitlement is the total charge payable for the industrial usage component of all licences.	Maintained at existing levels.
<b>Administration fee</b> (Hunter)	An account keeping fee of \$45 per licence per year.	Maintained at existing levels.

## Effect of the Determination on existing charges on regulated rivers, cont'd

Charge (paid by)	Details	Effect of Determination
<b>Calibration Charge</b> (Hunter)	Fixed charges of \$200 for the first pump and \$100 for each consecutive pump to recover the costs of calibrating power meters used to measure the amount of water extracted.	Maintained at existing levels.
<b>Irrigators Council Levy</b> (all inland regions)	A voluntary levy of \$0.05/ML on entitlement collected by the DLWC on behalf of the NSW Irrigators' Council.	Not set by Tribunal.
<b>Pindari levy</b> (Border rivers within the Barwon)	A charge of \$9.40 (escalating at 5% p.a.) on water usage to recover some of the capital costs of enlarging Pindari dam. The charge is set in a Memorandum of Understanding with the NSW Border Rivers Council and ceases when a total of \$37,500,00 has been paid.	Not affected.
<b>Shelf Price for new water entitlements</b> (Hunter)	New water entitlements from Glenbawn Dam are available for sale at \$260/ML for general security and \$650/ML for high security. Annual charges for this water are \$17/ML of usage.	Maintained at existing levels.
<b>High flow licences</b>	Some water users hold licences which allow them to divert water during times of high river flow. Charges for water extracted by these users are at the respective regional usage price.	Holders previously paying delivery charges pay usage price. Prices to be reviewed for 1998/99.
<b>Glennies Creek Agreement</b> (Hunter)	The Glennies Creek Dam Act and Agreement permit Macquarie Generation to access water in the Hunter region and prescribes a formula for payment of this water. The Agreement is current until 2035.	Not affected.
<b>Groundwater monitoring</b> (Hunter)	Payment made to recover the costs of groundwater monitoring as a condition of a sand mining permit.	Maintained at existing levels.
<b>Rice environmental monitoring</b> (Murrumbidgee)	An annual fee of \$142.50 paid by all farmers who have grown rice during the previous season to recover rice environmental monitoring costs.	Maintained at existing levels.

Effect of the Determination on existing charges on regulated rivers, cont'd

Charge (paid by)	Details	Effect of Determination
<b>Rice environmental monitoring for licensed pumpers</b> (Murray and Murrumbidgee)	Farmers applying to grow rice pay an application fee of \$650 for the first 100 hectares and \$375 for every 50 hectares thereafter to recover drilling and assessment costs  Existing rice growers also pay \$550 for the first 100 hectares and \$300 for every 50 hectares thereafter to recover monitoring costs.	Maintained at existing levels.
<b>Lowbidgee Flood Control and Irrigation District</b> (Murrumbidgee)	A charge of \$0.10/hectare and an internal (non-DLWC) district charge of \$3.90/hectare.  The District does not have a licensed entitlement.	Maintained at existing levels.
<b>Waddy Scheme</b> (Murray)	An additional \$1.00/ML of entitlement for five years from 1993/94.	Maintained at existing levels.
<b>Wakool, Colligen, Neimur, Little Meran Creek Water Trust</b> (Murray)	A management fee of \$1.00/ML on entitlement	Maintained at existing levels.
<b>Gol Gol Creek and Gol Gol North Creek</b> (Far West)	An additional Delivery Service Charge of \$2.94/ML of entitlement.	Maintained at existing levels.
<b>Gol Gol North Creek</b> (Far West)	\$7/ML for a weed eradication program and \$1.00/ML as a drainage charge (for small area farms based on the greater of usage or entitlement and for large area farms based on the greater of half entitlement or usage).	Maintained at existing levels.
<b>Hydro power royalties</b> (all regions)	Hydro power stations at Wyangala, Glenbawn, Copeton, Burrinjuck, Pindari, Burrendong and Keepit Dams are charged a royalty on revenue from electricity generation.	Maintained at existing levels.
<b>Application Fees for Water Transfers and Overdraws</b> (all regions)	Application fees for water transfers and overdraws to recover administrative costs: <ul style="list-style-type: none"> <li>• surface water temporary transfers \$75</li> <li>• surface water permanent transfer \$250</li> <li>• groundwater temporary transfers \$200</li> <li>• overdraws \$25</li> </ul>	Maintained at existing levels.



**INDEPENDENT PRICING AND REGULATORY TRIBUNAL**  
OF NEW SOUTH WALES

**DETERMINATION OF BULK WATER SERVICES UNDER SECTION 12 (1)(a) OF  
THE INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT, 1992**

**Matter No.:** SPDR/95/01

**Determination:** No. 6, 1997

**Agency:** The Water Administration Ministerial Corporation  
(administered by the Department of Land and Water  
Conservation).

**Services:** Any services provided by the Water Administration  
Ministerial Corporation, to the extent that the service  
involves:

- a) the making available of water; or
- b) the making available of the Corporation's supply facilities; or
- c) the supplying of water, whether by means of the Corporation's  
water supply facilities or otherwise.

**Declaration of government monopoly services under Section 4 of the Act:**

Order dated 4 October 1995 - page 7115, Gazette No. 122

**Maximum prices determined under Section 14 of the Act to be charged from 1 July  
1997 (except for regulated water supply in the Barwon region where the maximum  
prices will apply from 1 October 1997).**

## PRICING SCHEDULE

### Regulated rivers

The prices for bulk water supplied to each of the Irrigation Areas and Districts nominated in Table 1 shall be the prices set out in Table 1 of this Pricing Schedule.

The prices for bulk water supplied to all other water users on regulated rivers in each of the DLWC's regions are set out in Table 2 of this Pricing Schedule.

Prices for bulk water supplied on regulated rivers pursuant to industrial use licences or industrial components of licences is \$10/ML of entitlement or usage, whichever is the greater.

### Unregulated rivers

Prices for access to bulk water pursuant to irrigation licences are set out in Table 3.

Prices for access to bulk water pursuant to town water supply, recreational and industrial licences are set out in Table 4.

### Groundwater

Prices for access to groundwater are contained in Table 5

### Other charges

Prices for bulk water services to Sydney Water Corporation and Hunter Water Corporation are \$1.80/ML of water usage.

An administration fee for accounting keeping of \$45 per licence per year shall apply in the Hunter region.

A calibration charge of \$200 for the first pump and \$100 for each consecutive pump shall apply in the Hunter region.

### Voluntary charges

New and existing voluntary charges can continue to be negotiated between the Water Administration Ministerial Corporation and water users without referral to the Tribunal.

### New or additional charges

All other prices or charges for bulk water services provided by the Water Administration Ministerial Corporation not referred to specifically in this Determination, shall remain at 1996/97 levels. The Water Administration Ministerial Corporation cannot levy any new or additional charges for any bulk water services, other than in accordance with this Determination, or with the approval of the Tribunal in future Determinations.

**Table 1 Wholesale charges for nominated Areas and Districts**

<b>Wholesale Irrigation Areas &amp; Districts</b>	<b>Fixed charge (\$)</b>	<b>Usage charge (\$ per megalitre)</b>
Murrumbidgee Irrigation Area	2,108,000	0.60
Coleambally Irrigation Area	756,000	0.60
Jemalong Irrigation Limited	151,500	2.60
West Cororgan Irrigation Limited	112,500	0.60
Western Murray Irrigation Limited	112,500	0.60
Murray Irrigation Limited	2,112,000	0.60
Moira Irrigation Scheme	62,000	0.60
Eagle Creek Scheme	29,200	0.60

Note: The fixed charges for the wholesale Areas and Districts include premiums for the high security component of each licence.

**Table 2 Fixed and usage charges for regulated river pumpers from 1 July 1997**

<b>Valley/Region</b>	<b>Fixed charge</b>		<b>Usage Charge \$/ML of usage</b>
	<b>General security \$/ML of entitlement</b>	<b>High security \$/ML of entitlement</b>	
Barwon	3.00	4.50	3.50
Macquarie	2.00	2.60	2.70
Lachlan	2.10	3.15	2.60
Murrumbidgee	2.30	2.42	0.60
Murray, Darling & Far West	2.30	2.53	0.60
Hunter	2.20	3.08	2.50
Sydney South Coast	3.00	3.90	2.00
North Coast	3.00	3.90	2.00

#### Notes

1. These charges apply to all water used pursuant to irrigation, town water supply, recreation and stock and domestic licenses.
2. The usage charge is paid on all water diverted (allocation or off-allocation) or transferred to another region.
3. The Hunter region administration charge, Pindari levy, Gol Gol levy, Waddy Scheme charge, Merran Creek charge, rice environmental monitoring charges in the Murray and Murrumbidgee regions remain separately payable.
4. Licensing charges remain separately payable.
5. The Industry charge of \$10/ML on entitlement remains the total charge for the industrial usage component of licences. Where industrial usage is greater than entitlement, the applicable charge is \$10/ML of usage.

**Table 3 Prices for water for irrigation licenses on unregulated rivers**

Area (ha)	1997/98 (\$)
12 and below	50
20 and below	80
40 and below	150
80 and below	300
162 and below	608
Greater than 162	\$3.75/hectare

**Table 4 Prices for access to water pursuant to town water supply, recreational and industrial licences on unregulated rivers.**

	Fixed Charge (\$)	Usage Charge (\$/ML)
1997/98	100	0.47

**Table 5 Prices for access to groundwater**

	Base charge (\$ per bore)	Fixed charge (\$/ML of entitlement on licences over 20 ML)	Usage charge (\$/MI) (\$/MI of usage on licences over 20ML)
1997/98	85.00	0.40	0.20

Note: The base charge in defined groundwater areas is \$110 per bore for 1997/98.

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