

## **B10.5 WATER REFORM, WESTERN AUSTRALIA**

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Attachment 1: Timetable of future water allocation plans and environmental water provision studies – as at June 1999

## Table of Abbreviations

ARMCANZ	Australia and New Zealand
ANZECC	Conservation Council
Aqwest	Busselton Water Board
BWB	Bunbury Water Board
CALM	Department of Conservation and Land Management
CEO	Chief Executive Officer
CN	Competitive Neutrality
COAG	Council of Australian Governments
CPA	Competition Policy Agreements
CRR	Council for Regulatory Reform
CSO	Community Service Obligation
EBIT	Earnings before Interest and Tax
EPA	Environment Protection Authority
EWP	Environmental Water Provision
EWR	Environmental Water Requirement
GRV	Gross Rental Value
GL	Gigalitre (1 000 ML)
GTE	Government trading enterprises
IRM	Integrated Resource Management
kL	Kilolitre (1 000 L)
LMAP	Land Management Area Plan
LRMC	Long Run Marginal Cost
MoU	Memorandum of Understanding
ML	Megalitre (1 000 kL)

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NCC	National Competition Council
NHMRC	National Health and Medical Research Council
NMU	Non-Metropolitan Urban service provider
NRM	Natural Resource Management
NWQMS	National Water Quality Management Strategy
OWR	Office of Water Regulation
RAP	Regional Allocation Plan
RIWI Act	Rights in Water and Irrigation Act, 1914
RoR	Rate of Return
SCARM	Management
SCI	Statement of Corporate Intent
SDP	Strategic Development Plan
SRAP	Sub Regional Allocation Plan
SRP	Senior Review Panel
SSC	State Salinity Council
SWQIP	State Water Quality Implementation Plan
SWQMS	State Water Quality Management Strategy
TER	Tax Equivalent Regime
WACC	Weighted Average Cost of Capital
WAWA	Water Authority of Western Australia
WC	Water Corporation
WC Act	Water Corporation Act 1995
WRC	Water and Rivers Commission
WRC Act	Water and Rivers Commission Act 1995
WSC Act	Water Services Co-ordination Act 1995
WSAA	Water Services Association of Australia

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# B10 Water Reform

## B10.5 Western Australia

### B10.5.1 EXECUTIVE SUMMARY

This is an assessment of Western Australia's performance against the strategic framework for water reform. The assessment provides an overview of the reforms implemented and measurement of the reforms against specific commitments in the strategic framework.

The assessment considers both legislation and policy initiatives and the application of the initiatives in specific circumstances.

### PROGRESS ON REFORMS

#### *Cost Reform and Pricing*

- As regards urban full cost pricing, the Water Corporation (WC), Bunbury Water Board (Aqwest) and Busselton Water Board (BWB) have substantially achieved full cost recovery. The City of Kalgoorlie-Boulder also appears to have a tariff that will ensure at least cost recovery at the lower bound. The Council notes that greater confidence could be shown in the assessment of cost recovery if the service providers were subject to independent regulation.
- As regards two part tariffs, the WC, Aqwest and BWB have implemented two part tariffs for water supply. However, many sewerage services, services to vacant land and services to some industrial and commercial properties are charged on the basis of property values. In addition, bulk water is not separately charged for. Western Australia has identified timetables to implement pricing reforms in respect of these matters or made commitments to review existing arrangements. The Council will monitor implementation of these programs prior to the third tranche assessment.
- Western Australia has not removed cross subsidies, and the Council's concerns in this regard again revolve around the retention of property based charging and the failure to ringfence bulk water service charges. The timetable outlined by Western Australia to comply with these commitments will be monitored by the Council prior to the third tranche assessment.
- Although there is a substantial Community Service Obligation (CSO) payment made to non-metropolitan urban water customers, Western Australia has a clearly defined and well targeted CSO regime such that the objective of full cost recovery is not undermined.
- Excluding reservations as regards the price setting, the information provided indicates that metropolitan service providers have a real rate of return on assets as required by the strategic framework.

- Appropriate policies are not yet in place to provide for the robust appraisals regarding economic viability of new rural schemes; Western Australia has committed to finalising policies and applying these to new schemes. The role of the Environmental Protection Authority in assessing the ecological sustainability of new schemes should provide for a robust assessment process. The Council suggests that, as regards the review of the Farm Water Grant Scheme, that a specific objective or criteria concerning ecological sustainability of on farm storages be included.
- A process for the operational responsibility for the management of irrigation areas to be devolved has been identified and substantially implemented. The Council notes that it will look to the finalisation of this process prior to the third tranche assessment.

### ***Institutional reform***

- Significant and prompt implementation of institutional reform in Western Australia has occurred and there is substantial separation of functions. Western Australia has advised that it will continue to review options regarding Ministerial responsibility and the Council would look to appropriate reforms being implemented prior to the third tranche assessment.
- The Council has concerns regarding the roles of the Minister for Water Resources and the Treasurer in price regulation. The Council considers that the most appropriate role for government is to set an appropriate regulatory framework within which an independent regulator sets prices. Western Australia has advised that it will to continue to review options regarding price regulation and the Council would look to appropriate reforms being implemented prior to the third tranche assessment.
- The Council will look to continuing reform as regards plumbing regulation.
- The WC has a commercial focus. The Council will continue to monitor the implementation of competitive neutrality reforms for other service providers.
- Performance monitoring and benchmarking practices present in Western Australia satisfy reform commitments. The Council will continue to monitor the development of NMU and rural agency performance indicator tools.

### ***Allocations and trading***

- The proposed legislation implementing a comprehensive system of water entitlements in Western Australia provides for two tiers of water entitlements, those that are licensed and those that are not. The Council notes that the legislation, although drafted, is not presently before the Parliament. Western Australia has committed to passage of the legislation and the Council will undertake a supplementary assessment of this reform commitment by June 2000.
- The proposed policy for environmental water provisions is largely consistent with the *National Principles for the Provision of Water for Ecosystems* and has been

generally applied in the plans provided to the Council. The Council notes that the policy is expected to be finalised by January 2000.

- The Council has some concerns about the trade-off of one wetland for another in the Jandakot Mound. Western Australia is to develop a State Policy Position on acceptable mitigating mechanisms for any development, and the Council will review this policy prior to the third tranche assessment.
- The Council has agreed to the implementation program for allocations as outlined in Attachment 1 to the assessment. In doing so, the Council notes that the implementation programs may change over time but for the third tranche assessment such changes would need to be agreed with the Council.
- With the passage of the water allocation and trading legislation, temporary and permanent trading in water will be able to occur in a manner consistent with the reform commitments.

~~Environmental Quality~~ Implementation Plan The Strategy will be published in August

- Information provided concerning integrated catchment management and natural resource management in Western Australia indicates an integrated approach permitting significant community involvement. The Council notes that a Natural Resources Management framework has been developed and is to be trialled for twelve months prior to final approval. The Council will review this matter prior to the third tranche assessment.
- Western Australia has developed a draft State Water Quality Management Strategy 1999. The Council is satisfied that the second tranche reform commitment has been met. The Council notes that it will continue to review the implementation of the strategy, including monitoring and compliance, prior to the third tranche assessment.

#### ***Public education and consultation***

- There has been extensive public consultation and education programs by Western Australia in introducing water reform. The Council, although concerned at the failure to fully consult with the public concerning full cost recovery, is satisfied that, on the whole, public consultation has been satisfactory. The Council notes its preliminary view that service providers are not appropriate public education suppliers on matters such as water conservation. The Council will continue to review this matter prior to the third tranche assessment.

## **ASSESSMENT**

The Council is of the view that, on the whole, Western Australia has met major reform commitments for the purposes of the second tranche.

The Council will undertake a supplementary assessment by 30 June 2000 to assess whether legislation to effect water allocation and trading reform commitments has been passed by the Western Australian Parliament. The Council notes that failure to

pass the legislation may have implications for its recommendation on the second part of second tranche payments.

The Council has now built up a considerable amount of information concerning Western Australian Water Reform. Matters of concern have been noted and these and the remaining aspects of the strategic framework will closely scrutinised over the period prior to 30 June 2001.



## **B10.5.2 REFORM COMMITMENT: COST REFORM AND PRICING**

### **Major Urbans and Non-Metropolitan Urbans**

#### **10.5.2.1 Drawing on the advice of the Expert Group and complying with the ARMCANZ full cost recovery guidelines, jurisdictions are to implement full cost recovery.**

Water businesses must price between a floor price which allows for the continuing commercial viability of the system and a ceiling price which incorporates asset values and a rate of return but does not include monopoly profits:

- the floor price includes provision for future asset refurbishment or replacement using an annuity approach where service delivery is to be maintained; and
- the ceiling price includes provision for asset consumption and cost of capital calculated using a weighted average cost of capital (WACC).

Within the band, a water business should not recover more than operational, maintenance and administrative costs, externalities, taxes or tax equivalent regimes (TERs), the interest costs on debt, and dividends (if any) set at a level that reflects commercial realities and simulates a competitive market outcome.

The level of revenue should be based on efficient resource pricing and business costs. In determining prices, community service obligations (CSOs), contributed assets, the opening value of assets, externalities including resource management costs and TERs should be transparent. The deprival value methodology should be used for asset valuation unless a specific circumstance justifies another method.

### **Western Australian arrangements**

#### **Introduction**

The three major providers of urban water services are the Water Corporation (WC), Aqwest (formerly Bunbury Water Board) and Busselton Water Board (BWB). In addition, twenty local authorities operate their own sewerage schemes, the largest being the City of Kalgoorlie-Boulder (about 10 000 connections) and the smallest the Shire of Victoria Plains (about 40 connections).<sup>271</sup>

The WC, by far the biggest of the providers, was corporatised in 1996 and supplies bulk storage, bulk transfer, water treatment and reticulation, wastewater treatment and reticulation and stormwater services. the WC supplies water services to a population of 1 343 000 and wastewater services to 1 150 000. In 1997-1998, 247 116 ML of water (431 kL per property) was supplied, residential consumption accounting for about 68 per cent of this water. 87 965 ML (188 kL per property) of wastewater was collected. Sixty per cent of water supplied by the WC was collected from impounding

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<sup>271</sup> Report on Institutional Role Separation in the WA Water Industry, Office of Water Regulation, 1997.

reservoirs (that is, dams etcetera) and the remaining 40 per cent extracted from groundwater supplies.<sup>272</sup>

### Second tranche report

The second tranche report notes that all providers are implementing full cost recovery and that annual reports detail operating costs, dividends, TERs and CSOs. It is also noted that all urban water service providers are attaining a positive real Rate of Return (RoR) on the written down replacement costs as follows: WC, 4.4 per cent; Aqwest, 3.9 per cent; BWB, 5.6 per cent. The report notes that the Minister for Water Resources and the Treasurer have agreed to the adoption of a target real RoR of 4 per cent for assets created before 1 January 1996 and 6 per cent for assets created since 1 January 1996.

### Water Corporation Annual Report

In 1997-1998 total revenues for the WC were \$903 million<sup>273</sup> including service (\$383 million) and volume (\$195 million) charges and CSOs valued at \$180 million. Operating expenditure totalled \$464 million. Depreciation was approximately \$181 million.<sup>274</sup> Income tax of \$133 million represented Sales, Income and other taxes under the *State Enterprises (Commonwealth Tax Equivalent) Act 1996*.

CSO contributions were received from the State Consolidated Revenue Fund for: costs in respect of country water, sewerage, drainage and irrigation services; the infill sewerage program;<sup>275</sup> and revenue forgone and administration charges from rebates and concessions to pensioners, seniors and exempt bodies on annual service charges, water consumption charges and other fees and charges. Pensioner and senior concessions are 50 and 25 per cent of annual charges respectively.<sup>276</sup>

As regards borrowings, it is noted that funds are raised through the Western Australian Treasury Corporation and the borrowings can be seen to have an implicit Government guarantee. The merits of various funding options and credit ratings available to the WC are under review. The *Water Corporation Act 1995* (the WC Act) provides for the payment of a loan guarantee fee.<sup>277</sup> In further information

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<sup>272</sup> WSAA Facts '98.

<sup>273</sup> Figures rounded to nearest \$million.

<sup>274</sup> Depreciation is charged as an expense on a straight line basis over the estimated useful life (full useful life over which assets will be utilised) of the asset, making appropriate allowance for residual values.

<sup>275</sup> A program to eliminate septic tanks to protect groundwater, public health and the environment. 11 080 sewer connections (costing \$80m) were completed in 1997-1998.

<sup>276</sup> [www.watercorporation.com.au/accounts/seniors3.html](http://www.watercorporation.com.au/accounts/seniors3.html).

<sup>277</sup> Sections 83 and 84.

provided to the Council<sup>278</sup> Western Australia indicated that the current fee is 0.2 per cent, and in 1998-1999 amounted to \$701 608.

Assets were valued at about \$8 709 million. The Annual Report notes that at 1 July 1994 all plant and equipment integral to the Water Authority of Western Australia (WAWA), were independently revalued at current written down replacement value using the deprival method.<sup>279</sup> This was indexed in December 1995 (prior to corporatisation and the creation of the WC). The Annual Report also notes that:

*'land and buildings are revalued every three years and property, plant and equipment are valued comprehensively every three to five years at current written down replacement value, using the deprival methodology in accordance with "Guidelines in Accounting Policy for the Valuation of Government Trading Enterprises – using current valuation methods" issued in October 1994 by the Steering Committee on National Performance Monitoring of Government Trading Enterprises'.(p39)*

Asset values are adjusted bi-annually through the application of appropriate economic and engineering indices (last indexed March 1998).

The Annual Report notes that the RoR on Assets for 1997-1998 was 3.8 per cent and that a pricing path has been designed to achieve a 4 per cent rate of return on pre-corporatisation assets and a 6 per cent return on subsequent investments for the year 1999-2000.

### **Water Corporation Act 1995**

The WC Act provides for the establishment of the WC<sup>280</sup> and requires it, in performing its functions, to act in accordance with prudent commercial principles and to endeavour to make a profit, consistently with maximising its long term value.<sup>281</sup> Part 4, Division 4 of the WC Act provides for the Minister for Water Resources to give directions in writing to the WC and where compliance would be against the above principles the WC is to notify the Minister who is to consult with the Treasurer and having regard to the consultations cancel or confirm the relevant direction.<sup>282</sup> Part 5 of the WC Act provides for *Financial Provisions* and relevantly states that all of the shares are to be allotted to the Minister and shares in the authorized capital of the corporation are not to be held otherwise than by the Minister.

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<sup>278</sup> June 1999.

<sup>279</sup> Land and Buildings valued by the Valuer General's Office in April 1994.

<sup>280</sup> Section 4.

<sup>281</sup> Section 30.

<sup>282</sup> The second tranche report notes that where such a direction is made, the cost is met from the Consolidated Fund to ensure that the commercial objective is not compromised.

## **Aqwest**

The Aqwest Annual Report for 1997-1998 indicates that 12 200 properties were connected to water supply services. Average residential water consumption was 322 kL. Water services are charged in a similar manner to the WC water supplies (service charge plus a block consumption tariff for residential customer or 61c per kL consumption tariff for non-residential consumers). Relevant information from the Annual Report includes the independent valuation of water mains in 1996 (a principle Aqwest asset, valued at approximately \$21 million), that Aqwest is subject to a TER and that a profit of \$1 912 069 (after TER) was achieved on revenues of \$6 360 308.

## **BWB**

The BWB Annual Report for 1997-1998 indicates that 6 160 properties were connected to water supply services. Average annual water consumption was 505 kL. Relevant information from the Annual Report includes that the Board revalued certain assets during the 1995-1996 financial year and that BWB made an operating profit after TER of \$0.69 million on revenues of \$3 022 308.

## **NMU Sewerage Schemes**

There are 21 local government sewerage schemes in Western Australia.<sup>283</sup> At the bilateral meeting between members of the Council secretariat and Western Australia<sup>284</sup> it was noted that there are some practical problems in obtaining information concerning the level of cost recovery such as: some activities are not separately costed out for the purposes of rates assessments; and some systems have no specialist engineers.

The only significant scheme (e.g., over 1000 connections) is the City of Kalgoorlie-Boulder. Information provided to the Council following this meeting notes that the sewerage rate for the City of Kalgoorlie-Boulder is set to recover the net cost of sewerage treatment including effluent water distribution.

## **WSAA Facts '98**

WSAA Facts notes that the average annual bill in 1997-1998 for customers supplied by the WC was \$655.90, the volumetric component of water supply constituting \$156 (or 55 per cent) of the \$282.30 average water supply component of the bill. WSAA Facts notes that the average annual WC water bill has risen 5.06 per cent between 1996-1997 and 1997-1998.

As regards financial performance measures, WSAA Facts notes that the WC's written down replacement cost of assets is about \$5 489 million. The Economic Real Rate of Return in 1997-1998 was 6.01 per cent (up from 5.09 per cent the previous year). The financial information was as follows:

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<sup>283</sup> 1997-1998 Performance Indicator Report for Local Government Sewerage Schemes.

<sup>284</sup> 14 June 1999.

**Table 10.5.1 Financial performance of the WC, 1997-1998**

	<b>\$</b>
Turnover	502 269
<b>Total income</b>	<b>512 537</b>
Operating, maintenance and administration	152 183
Other operating costs	17 828
Depreciation	108 256
<b>Total Operating Costs</b>	<b>278 267</b>
<b>Operating Profit</b>	<b>234 270</b>
Net Interest	18 508
<b>Profit before Tax</b>	<b>285 771<sup>285</sup></b>
Tax	96 177
<b>Profits after tax</b>	<b>189 594</b>
<b>Dividends</b>	<b>118 359</b>

**Bilateral meeting, 15 March 1998**

At a meeting between Western Australian representatives and members of the Council Secretariat on 15 March 1998 (the bilateral meeting) Western Australia advised that environmental and resource management costs are built into the pricing structure, although there is no direct recovery.

**Council Comment**

The Council is satisfied on the basis of information provided, that the WC:

1. meets operating, maintenance and administration costs;
2. meets interest costs including a debt guarantee;
3. pays tax or a tax equivalent;
4. pays a dividend to government; and
5. earns a real rate of return on capital.

<sup>285</sup> Adjustments of approx \$70 million.

Assets have been valued independently and the written down replacement cost for assets using deprival value methodology is consistent with the recommendations of the Expert Group. The Council notes that the reported RoRs on water businesses are such that the pricing is probably below the ceiling price<sup>286</sup>. The Council is of the view that greater confidence could be shown in such RoRs where an independent price regulator was charged with the function of determining prices for water and wastewater services.

For the purposes of this assessment, the Council is satisfied that the WC has substantially implemented full cost pricing. The Council also notes that, subject to the earlier debt guarantee issue, both Aqwest and BWB meet full cost recovery. The Council will continue to monitor these matters in the third tranche.

As regards the provision of sewerage by the City of Kalgoorlie-Boulder, the Council notes that it has not been provided with a great deal of information although the rate is struck to cover the net cost of the service. The Council notes that this approach should ensure meeting minimum cost recovery, although the Council will expect to receive more information to support this conclusion prior to the third tranche assessment. The Council notes the commitment of Western Australia to address the question of property based tariffs for sewerage provision prior to the third tranche assessment and is of the view that this response will also ensure full cost recovery should that not already be occurring.

**10.5.2.2 Jurisdictions must implement consumption based pricing. Two part tariffs are to be put in place by 1998 where cost effective. Metropolitan bulk water and wastewater suppliers should charge on a volumetric basis.**

Jurisdictions are to apply two part tariffs to surface and groundwater comprising a fixed cost of access component and a volumetric cost component.

Metropolitan bulk water and wastewater suppliers must establish internal and external charges to include a volumetric component or two-part tariff with an emphasis on the volumetric component to recover costs and earn a positive real rate of return.

**Western Australian arrangements**

**Charges for 1998-1999, WC**

Information provided by Western Australia<sup>287</sup> and on the WC website<sup>288</sup> indicates the following as regards pricing of water:

***Metropolitan Residential***

- a *Service Charge* for residential water of \$130.10.

<sup>286</sup> See for example, pricing decisions of Independent Pricing and Regulatory Tribunal (New South Wales) and Independent Pricing and Regulatory Commission (ACT).

<sup>287</sup> Letter from Dr D Morrison, Director, Competition Policy Unit, 10 May 1999.

<sup>288</sup> [www.watercorporation.com.au/accounts/country1.html](http://www.watercorporation.com.au/accounts/country1.html).

- water consumption charges in accordance with the following table:

Usage (kL)	Price (c/kL)
0-165	36.5
166-350	58.9
351-550	77.2
551-750	84.3
751-1150	89.6
1151-1950	99.8
>1950	123.3

- sewerage charges<sup>289</sup> based on the Gross Rental Valuation (GRV) in accordance with the following table:

GRV (\$)	c/\$
6 600	6.24
next 11 300	4.38
thereafter	4.05

Drainage charges are also levied on the basis of GRV.<sup>290</sup>

### ***Metropolitan Commercial***

Commercial metropolitan water charges are based on meter size (from 20mm-300mm meter and charges from \$385.65-\$86 767.20) and water consumption in accordance with the following table:

Usage (kL)	Price (c/kL)
0-600	60.6
601-1 100 000	67.6
> 1 100 000	66

The rates and charges note that new sewerage scales are currently being phased in. These include a service charge based on the number of sewerage fixtures (toilets and

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<sup>289</sup> Minimum charge: \$171.05 (equivalent to approx \$2741 GRV).

<sup>290</sup> 0.69c per dollar; minimum charge of \$42.

urinals) and a usage charge<sup>291</sup> based on the amount of discharge. A transitional arrangement to phase in the new charges is scheduled to end in 2000-1.

### ***Metropolitan Vacant Land***

Vacant land water service pricing features service, sewerage and drainage charges based on GRV and a block water consumption charge.

### ***Country Residential***

Country residential water supply pricing structure consists of an access charge equal to the metropolitan water access charge and contains a similar block tariff structure although there are more blocks and different charges for five classes of country communities. The prices charged for water usage above 451 kL are generally above prices charged for additional units of metropolitan water. All charges for additional units above 751 kL are above metropolitan water prices. The maximum charge (Class 5) is \$6.18 per kL for water supplied above 1950 kL.

Sewerage charges<sup>292</sup> are based on GRV, the rates set independently for each country town sewerage scheme and published each year.

### ***Country Commercial***

Country commercial water charges share a meter size based access fee with metropolitan commercial water suppliers and a consumption component that reflects the country residential *class* structure and has two blocks only: 0-300 kL (70.7-115.9c/kL); >300 kL (123.5-238.3c/kL).

Sewerage charges<sup>293</sup> are based on GRV, the rates set independently for each country town sewerage scheme and published each year.

### ***Country Vacant Land***

Vacant land water service pricing features service<sup>294</sup> and sewerage charges<sup>295</sup> based on GRV and a single block water consumption charge of 102.3c/kL.

### **Charges for 1998-1999, Aqwest and BWB**

The Aqwest and BWB charging schemes include: an annual supply fee and block tariff for residential properties; and commercial and industrial properties levied in accordance with a GRV rate with:

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<sup>291</sup> A 200 kL free discharge allowance applies to each property.

<sup>292</sup> Minimum charge: \$148.85.

<sup>293</sup> Minimum charge: \$374.90.

<sup>294</sup> Minimum charge: \$114.95.

<sup>295</sup> Minimum charge: \$110.



- in the case of Aqwest, a rebate of 1 kL to be allowed for 65 cents of rates paid and the excess water to be at the rate of 65 cents per kL; and
- a similar scheme for BWB although a minimum charge applies.

### **Charges for City of Kalgoorlie-Boulder**

The adopted budget for the City of Kalgoorlie-Boulder for 1998-1999, the rate for sewerage services is based on GRV with a minimum fee of \$175.

### **Second tranche Report**

The second tranche Report notes, as regards residential wastewater, that:

*it is not practical to implement a two-part tariff regime for domestic customers as there exists no practical way to determine consumption. Arbitrary rules such as assuming that 'water out' is a fixed percentage of 'water in' for residential sewerage is not adequate because this ratio differs markedly between residential water users.(p29)*

### **Other information**

The ARMCANZ/ANZECC report in the Progress of Implementation of the COAG Water Industry Reform Framework 1997 (the 1997 Progress report) notes that the pricing of metropolitan bulkwater '*has limited specific relevance in Western Australia ... where a separate bulk supplier for metropolitan supplies does not exist. However, the underlying principles are effectively being addressed under full cost recovery for urban supplies*'.(p15) Western Australian representatives advised at the bilateral meeting that there is no internal ring-fencing of bulkwater pricing.

At the bilateral meeting Western Australia advised that the pricing blocks for residential water were set to discourage heavy users. The Council was also advised that GRV pricing of wastewater is being phased out and a flat fee introduced; the flat fee will increase and eventually no consumers will be levied on the basis of property values.

In further information provided to the Council, it was noted that a comprehensive proposal for the phase-out of valuation based charges was put to the Government in 1996. The proposal was not implemented due to significant increases in charges for customers occupying low value property. In its place, minimum charges are currently being increased by 10 per cent per annum above the general price increase. The residential sewerage minimum charge will equal the non-residential standard charge in eight years in metropolitan areas, and about nine years in rural areas. In addition the WC will replace property based charges water service for vacant land with a fixed service charge over the four years beginning 1 July 2000. It was noted that these commitments are subject to the approval and priorities of the Government as price regulator.

Additionally, Western Australia noted<sup>296</sup> that there is a bulk water charging policy in place for major country customers constituting fixed and volumetric components.

Western Australia has also advised that the WC will set up separate profit and loss accounts for bulkwater and wastewater by July 2000. Revenue will be based on a volume related charge.

In addition, it was advised that BWB will aim to fit water meters to all premises in the Central Business District by 2000 as the first step to prepare for a move to across the board consumption based pricing, although there remains considerable doubt that the project could be completed by the year 2000 and without major disruptions within the Central Business District.

Aqwest's program to implement user pays systems across the remainder of the consumer base includes installation of meters to all non-residential properties by 1998-1999 and monitoring non-residential consumption and modelling of tariffs schemes continuing in 1999-2000. Implementation of the program is expected in 2000-2001.

Western Australia also noted that although there is no timetable to review/replace the property based charging for the City of Kalgoorlie-Boulder; this matter will be addressed as part of Western Australia's third tranche commitments.

### **Council Comment**

The Council notes that a two part tariff for water supply services has been implemented throughout Western Australia. This is a significant achievement and goes some considerable way to satisfying the reform commitment.

In respect of the pricing structure overall, the Council makes the following comments:

- the basis on which each part of the water supply tariff has been calculated is not transparent. The Council notes that where water prices are determined by an independent price regulator the basis for the pricing decisions is transparent, rigorous and open to public scrutiny. The Council will refer further to this matter when considering institutional arrangements in Western Australia; and
- the pricing of residential sewerage services on the basis of property values is in no way reflective of the cost of providing sewerage services. The Council is of the view that the pricing of sewerage services on the basis of GRV can lead to significant cross subsidies between customers.

The Council notes the advice that a standard charge is being phased in over eight years. The reasoning for this prolonged timeframe is the concern regarding increases in charges for customers occupying low value property. It is the Council's view that the approach consistent with the framework is that this issue is best dealt with through CSO payments, not continuation of cross-subsidies.

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<sup>296</sup> 9 June 1999.

The Council's view is of the view that a standard charge based on the cost of providing sewerage services is sufficient to meet the reform commitments. The Council considers that transition period should be shorter and will further discuss this matter with Western Australia prior to the third tranche assessment with a view to reducing the transitional period.

The Council notes that commercial metropolitan wastewater charges are presently in transition and by the years 2000-1 will be levied on a volumetric basis. The Council will monitor this matter prior to the third tranche assessment.

The Council also notes that water and wastewater access charges for country and metropolitan vacant land are based on GRV, and that this is likely to be phased out by 2004-2005.

Certain Aqwest and BWB charges, such as commercial and industrial property charges, are also based on GRV.<sup>297</sup> Steps have been taken to remove these charges and the Council will monitor this matter prior to the third tranche assessment. It will also monitor Western Australia's commitment to address the question of sewerage pricing for the City of Kalgoorlie-Boulder prior to the third tranche assessment.

The Council also notes that there is not internal/external charging for bulk water supplies. Western Australia's advice that the WC will set up separate profit and loss accounts for bulk water and wastewater by July 2000 with revenue based on a volume related charge should result in this commitment being met. The Council will revisit this prior to the third tranche assessment and is of the view that this process may most appropriately be carried out by an independent price regulator.

For the purposes of the second tranche, and given the further commitments made by Western Australia, the Council is satisfied that reform commitments have been substantially met or a path to resolve concerns identified.

### **10.5.2.3 Jurisdictions are to remove cross subsidies, with any remaining cross subsidies made transparent (published).**

For the purposes of the framework, a cross subsidy exists where a customer pays less than the long run marginal cost and this is being paid for by other customers. An economic measure which looks at cross subsidies outside of a Baumol band, which sets prices between incremental and stand alone cost, is consistent with the COAG objective of achieving economically efficient water usage, pricing and investment outcomes. To achieve the COAG objective, potential cross-subsidies must be made transparent by ensuring the cost of providing water services to customers at less than long run marginal costs is met:

- as a subsidy, a grant or CSO; or
- from a source other than other customer classes.

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<sup>297</sup> The effect of the rebate is to provide for a base allowance in accordance with GRV.

## Western Australian arrangements

The second tranche report notes the implementation of tariff reform measures aimed at reducing the level of cross-subsidisation between business and residential customers and ensuring tariffs better reflect cost of service provision. It is noted that this has resulted in real water costs for business falling by almost 50 per cent between 1992-3 and 1997-8.

### Council Comment

The Council notes that the implementation of volumetric charging for many water services has reduced the degree of cross-subsidisation between, for example, WC business and residential customers.

The Council remains concerned, however, that significant cross-subsidies exist. For example:

- charging vacant block access fees on the basis of GRV;
- the continuing use of property values to determine metropolitan residential sewerage charges;
- Aqwest and BWB charge for commercial/industrial properties based on GRV; and
- there is not internal or external pricing of bulk water services.

The commitments made by Western Australia in respect of these matters have been noted above. The Council is of the view that the reforms will substantially remove remaining cross-subsidies. The Council is satisfied that given both the reforms to date and further commitments, Western Australia has substantially met further commitments. It will continue to monitor these matters prior to the third tranche assessment.

#### **10.5.2.4 Where service deliverers are required to provide water services to classes of customers at less than full cost, this must be fully disclosed and, ideally, be paid to the service deliverer as a community service obligation.**

All CSOs and subsidies must be clearly defined and transparent. The departure from the general principle of full cost recovery must be explained. The Council will not make its own assessment of the adequacy of the justification of any individual CSO or cross-subsidy but will examine CSOs and cross-subsidies in totality to ensure they do not undermine the overall policy objectives of the strategic framework for the efficient and sustainable reform of the Australian water industry.

## Western Australian arrangements

The second tranche report notes that:

*given the large geographic area and the relatively low level of available water sources, the cost of providing water services in the country is considerably greater than the cost in the*

*Perth metropolitan area. Because of the Government's strong commitment to regional development it maintains a uniform tariff policy requiring the prices charged for country water services to be similar to those charged in Perth. The outcome of the high rural water supply costs and the uniform tariff policy is that there is Government subsidisation of rural water services.(p30)*

The second tranche Report notes that the WC has identified all subsidised services and these have been converted to transparent CSOs, valued in 1997-1998 at \$135.7 million. The WC CSO payment is calculated:

*by comparing the revenue for each scheme with the long-run avoidable costs. Calculations are made on a scheme by scheme basis and only loss-making rural schemes are included in the compensation claim. A list of proposed, improved or new services is provided to the Minister for Water Resources to obtain his approval before changing the quality of existing CSOs or commencing new CSOs. Any changes are identified in the annual Strategic Development Plan (SDP) and Statement of Corporate Intent (SCI), both of which require the Treasurer's concurrence.(p30)*

The WC's CSOs are subject to Ministerial and Cabinet approval through the Budget process and considered on a project by project basis. The CSO policy is said to facilitate competition and encourage performance 'by ensuring that CSOs are provided by the organisations that can do so in the most commercial manner. The policy also ensures that the Government reviews each CSO and deems the benefits of the service to outweigh the costs of delivery'.(p29)

At the bilateral meeting in March 1999 Western Australia advised that 76 per cent of users pay fully for water and a further 24 per cent are subsidised to some extent. For example, the supply of water to Kalgoorlie (population: 20 000-30 000) costs about \$4 per kL. In areas such as Kalgoorlie there are extensive consumer education programs and increased pricing as consumption increases. It was also noted that CSO payments are calculated on the basis of a RoR.

The letter to the Council of 10 May 1999 notes the WC's current metropolitan CSO payments include: pensioner and seniors concessions of \$18.6 million and pensioner deferred rates of \$0.6 million; non rated property (for example, charities, religious and sporting bodies) CSOs of \$8.5 million; and the Infill Sewerage Program of \$8 million. The total is \$35.7 million.

### **Council Comment**

The Council notes the explicit identification of CSOs and their payment to the corporatised service provider by Government. The Council is satisfied that the regime, and the manner in which it is administered ensure that the overall policy objective of full cost recovery and paying for services used is not undermined. The Council is satisfied that Western Australia has met this reform commitment.

### **10.5.2.5 Publicly owned supply organisations should aim to earn a real rate of return on the written down replacement cost of assets for urban water and wastewater.**

Jurisdictions are to have achieved progress toward a positive real rate of return on assets used in the provision of all urban water supply and wastewater services.

#### **Council Comment**

The Council notes the above information and is satisfied that, on the basis of the information provided, a RoR is being achieved in respect of the WC, Aqwest and BWB. The information concerning the City of Kalgoorlie-Boulder is inconclusive and the Council will review this matter again prior to the third tranche assessment and following the review of pricing. The Council again notes its concerns regarding the manner in which prices are set.

The Council is satisfied, however, that second tranche commitments have substantially been met.

#### **Rural Water Supply and Irrigation Services**

### **10.5.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater),<sup>298</sup> jurisdictions are to progressively review charges and costs so that they comply with the principle of full cost recovery with any subsidies made transparent.**

Jurisdictions should provide a brief status report, consistent with advice provided to ARMCANZ, on progress towards implementation of pricing and cost recovery principles for rural services.

The Council will assess jurisdictions as having complied with the pricing principles applicable to rural water supply where jurisdictions:

- have achieved full cost recovery; or
- have established a price path to achieve full cost recovery beyond 2001 with transitional CSOs made transparent; or
- for the schemes where full cost recovery is unlikely to be achieved in the long term, that the CSO required to support the scheme is transparent; and
- cross-subsidies have been made transparent.

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<sup>298</sup> Private withdrawals of groundwater include private providers and small co-operatives who extract water from bores for private use, but does not include large co-operative arrangements (including trusts) that act as wholesalers supplying water as a commercial venture and that are subject to control or directions by government or receive substantial government funding.

## Western Australian arrangements

The second tranche report notes that Western Australia has four irrigation service providers, South West Irrigation, Ord Irrigation Scheme, Preston Irrigation Scheme and Carnarvon Irrigation Scheme. The WC supplies bulk water to these schemes at less than full cost, and receives a CSO for this from the Western Australian Government. The schemes charge full cost for the service of supplying bulk water to irrigation farmers.

## Council Comment

Although this is a third tranche assessment issue, the Council notes the above information provided by Western Australia that irrigation schemes charge water consumers at full cost. However, the information also indicates that this cost includes subsidised bulk water. Any issues arising from this will be considered during the third tranche assessment.

### **10.5.2.7 Jurisdictions are to conduct robust independent appraisal processes to determine economic viability and ecological sustainability prior to investment in new rural schemes, existing schemes and dam construction. Jurisdictions are to assess the impact on the environment of river systems before harvesting water.**

Policies and procedures must be in place to robustly demonstrate economic viability and ecological sustainability of new investments in rural schemes prior to development. The economic and environmental assessment of new investment must be opened to public scrutiny.

Jurisdictions must demonstrate a strong economic justification where new investment is subsidised.

## Western Australian arrangements

The second tranche report notes that the Water and Rivers Commission (WRC) and Department of Environmental Protection ensure environmental impact issues are dealt with prior to any new development or augmentation of an existing development.

Information provided by Western Australia noted that the Environmental Protection Authority (EPA) can review any project that may have a significant impact on the environment. The EPA determines the level of assessment based on the likely magnitude of the environmental impact, the degree of public interest in the project and legal mechanisms available to manage environmental consequences of the project. The current practice is to formally assess all water projects where significant headworks and distribution infrastructure are involved.<sup>299</sup>

The second tranche report also notes that although processes and procedures are yet to be put in place for the economic appraisal of proposals:

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<sup>299</sup> Projects that propose the diversion of over 30 per cent of the available water.

*any proposed developments that are not economically viable are scrutinised by the Minister for Water Resources and the Treasurer through the budget and annual SDP and SCI processes. If approval is given, the public provider is paid a transparent CSO from the Consolidated Fund.(p31)*

### **Other information**

In additional information provided to the Council, Western Australia noted that where there are significant major proposals cost-benefit appraisals are undertaken. The studies determine net benefit to the state taking into account all the relevant costs including the full cost of water supply. It was noted that while there is a place for understanding the economic viability, it is not the only criterion Government considers. For example, if the ability to pay for services are less than full costs, Government will then consider whether its regional development objective warrants making up the difference.

The Council has also been advised <sup>300</sup> that ‘*Western Australia will finalise its policies concerning economic evaluation of rural schemes and their application to any further infrastructure projects*’.

The *Farm Water Grant Scheme* provides grants of up to \$12 500 for expenditure by landowners on water supply and planning and farm water supply works. Objectives of the scheme include reduction of the level of on-farm water deficiency, water supply self-sufficiency, improvements in the quality of water supplies, reduction in the frequency of water carting from off-farm and reduction in Government expenditure in providing farmers with emergency off-farm water sources.

A grant of 50 per cent is payable for planning and domestic supply work and 25 per cent for livestock water supplies. Applications are assessed by an approved farm water assessor and grants allocated on a priority basis. Assistance is provided to commercial broadacre farmers and assessments consider the ongoing viability of the farm.

Between 1994 and 1997, 1400 grants totalling some \$10 million were granted. The March 1999 *Waterline* (Office of Water Regulation (OWR)) noted that this policy is presently being reviewed.

### **Proposed developments**

The proposed dam in the Fitzroy River is not to be proceeded with, the proposed dam in the Harvey River has been approved subject to approval by the Environmental Protection Agency and there are proposed developments at Ord Stage 2. Should these projects proceed, the Council will undertake a review to ensure consistency with this reform commitment prior to the third tranche assessment.

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<sup>300</sup> Letter dated 22 June 1999.



### **Council Comment**

The information provided indicates that formal environmental processes are in place to ensure assessment of environmental impacts of rural schemes.

However, there is no clear requirement that new infrastructure be economically viable before it is approved. The Council notes that many of the problems that led to the agreement to implement the strategic framework had their root in the construction of uneconomic infrastructure. The Council therefore considers this matter to be of considerable importance. In Western Australia policies and procedures are being developed and there is a commitment to finalising these and applying them to further projects. The Council will monitor this matter prior to the third tranche assessment.

The Council has reviewed the Farm Water Grant Scheme and is satisfied that projects undergo economic assessment. The process of environmental assessment is less clear although the Council notes the objective of the scheme to improve water quality. The scheme is presently being reviewed and the Council will look to see that a further objective concerning the ecological sustainability of projects is also included in the objectives or criteria should the scheme be continued.

The Council is satisfied that this reform commitment has been met for the second tranche and will continue to monitor the matters noted above prior to the third tranche assessment.

#### **10.5.2.8 Jurisdictions are to devolve operational responsibility for the management of irrigation areas to local bodies subject to appropriate regulatory frameworks.**

All impediments to devolution must be removed. Jurisdictions must demonstrate that they are encouraging and supporting devolution of responsibility, including through education and training.

#### **Western Australian arrangements**

The second tranche report notes that in 1994 a decision was made to progressively increase the level of irrigator participation in the management and/or ownership of the schemes.

The South West Irrigation Scheme has two co-operatives, one to hold and maintain reticulation assets and the second to undertake management and operations of irrigation services. The WC holds bulk water assets and supplies bulk water. The transfer to a farmer co-operative of Preston Irrigation Scheme is well advanced, with the necessary bylaws passed in January 1999 and the transfer of assets and some refurbishment almost complete. For the Ord River Irrigation Scheme, operation and maintenance has been contracted out by the WC. Transfer of distribution and reticulation assets is planned for the year 2001, after the resolution of native title and environmental issues.

The Carnarvon Irrigation Scheme is more complex because: water is drawn from borefields; some farmers access this water to supplement their own bore supplies drawn from the same aquifer while others are totally dependent on the scheme's water; and the aquifer is the only water supply to the town of Carnarvon. The

scheme's water resource *'is the most limited and fragile'* and careful management is required to prevent long term damage. It is noted that the WC has established a joint management Board, with a majority of farmer members at present.

**Council Comment**

The Council notes the substantial progress made to devolve irrigation management. One scheme is devolved, one significantly progressed and difficulties in respect of the other two schemes have been identified and being worked through.

The Council is satisfied that second tranche commitments have been met. The Council will continue to monitor this matter prior to the third tranche assessment with a view to seeing all schemes devolved by 30 June 2001.

## **B10.5.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

### **Institutional Role Separation**

#### **10.5.3.1 As far as possible the roles of water resource management, standard setting and regulatory enforcement and service provision should be separated institutionally by 1998.**

The Council will look for jurisdictions, at a minimum, to separate service provision from regulation, water resource management and standard setting. Jurisdictions will need to demonstrate adequate separation of roles to minimise conflicts of interest.

### **Western Australian arrangements**

#### **Second tranche report**

The second tranche report notes that in January 1995 the Western Australian Government appointed a Water Industry Restructure Implementation Group to inquire into the operations and financing of WAWA and the separation of policy and regulatory functions from commercial functions of the authority. Subsequent to this review, three agencies were created: the WC (the commercial functions of WAWA); the WRC (to manage and protect Western Australia's surface and groundwater); the Office of Water Regulation (OWR) (the licensing authority and a source of policy advice on the economic performance of the water industry).

#### **Water Corporation**

The commercial objectives of the WC Act have been previously outlined. The WC Act provides for the appointment of a Board of Directors to perform functions, determine policies and control the affairs of the WC, and a Chief Executive Officer who is responsible for the day-to-day operations. The WC functions<sup>301</sup> include water supply, wastewater collection and maintenance and operation of works where required to do so. The WC is required to obtain ministerial approval for transactions where the liability exceeds \$15 million or 0.25 per cent of the value of fixed assets.<sup>302</sup> In addition, the Minister must be consulted where the WC enters upon a course of action that amounts to a major initiative or is likely to be of significant public interest.

A strategic development plan (SDP) (setting out economic and financial objectives and operational targets) and statement of corporate intent (SCI) (setting out matters such as the performance targets, measures taken to protect the environment and proposed borrowings) are to be submitted yearly by the Board and require the approval of the Minister and concurrence of the Treasurer.<sup>303</sup> In addition, the Minister is entitled to have information in the possession of the WC and any subsidiary and to be kept informed of significant financial and other matters. Dividends are to be

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<sup>301</sup> Section 27.

<sup>302</sup> Section 32.

<sup>303</sup> Part 4, Divisions 1 and 2.

calculated with respect to net profits. The Board makes a recommendation to the Minister who can accept it or direct another amount be paid; the Treasurer's concurrence is required.

The second tranche report notes that the WC's performance is monitored quarterly by the OWR (service standards) and Treasury (financial performance). The WC complies with full competitive neutrality (CN) requirements.

At the bilateral meeting Western Australia advised that decisions regarding water pricing are made by Cabinet on the advice of the Minister. The OWR and Treasury make submissions on pricing.

### **Other service providers**

The second tranche report notes that Aqwest and BWB are not corporatised, as this was not seen as a cost-effective manner of achieving CN. However, CN reviews are currently being finalised. The second tranche report also notes that CN arrangements have been implemented for Kalgoorlie-Boulder sewerage services.

### **Water and Rivers Commission**

The WRC is established under the *Waters and Rivers Commission Act 1995* (the WRC Act) with functions<sup>304</sup> including:

- catchment management;<sup>305</sup>
- licensing of surface and groundwater use;<sup>306</sup>
- water conservation;<sup>307</sup>
- advising the Minister on water resource policy;
- assessing water resources;
- planning water resource use;
- promoting efficient water use;
- flood management planning and advice; and
- research and investigations relating to water resources.

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<sup>304</sup> Section 10.

<sup>305</sup> Provided for in the *Country Areas Water Supply Act 1947* and the *Metropolitan Water Supply, Sewerage and Drainage Act 1982*.

<sup>306</sup> Provided for in the *Rights in Water and Irrigation Act 1914*.

<sup>307</sup> Provided for in the *Waterways Conservation Management Act 1976*.

The WRC Act provides for the Minister to give directions in writing to the WRC and to have, on request, information in the possession of the WRC.<sup>308</sup>

### Office of Water Regulation

The *Water Services Co-ordination Act 1995* (the WSC Act) establishes the office of Co-ordinator of Water Services (who is the Head of the OWR)<sup>309</sup> and provides for functions including<sup>310</sup> the administration of a licensing scheme and providing advice to the Minister on all aspects of policy relating to water services (including charges levied for the provision of water services).

Part 3 of the WSC Act provides for operating licences to be issued to persons providing water services.<sup>311</sup> In designated (*controlled*) areas these services may not be supplied without an operating licence.

The OWR is not to grant licences unless it is satisfied that the applicant has and is likely to continue to have the financial and technical ability to provide the water services. It is a condition of every licence that the licensee provide water services and maintain works specified in the licence. Water services licences may include provisions:<sup>312</sup>

- requiring the licensee to enter into specified agreements on specified terms;
- requiring the licensee to observe industry codes;
- requiring the licensee to maintain records;
- requiring the licensee to provide specific information to the OWR;
- specifying terms and conditions of customer contracts; and
- requiring the establishment of consumer committees.

The licence for the WC is not to include provisions that, broadly speaking, affect financial operations. For example, the licence is not to provide for methods or principles to be applied by the WC in proposing prices or charges.

The Council has reviewed the licences for the WC and the Shire of Gnowangerup (140 properties connected). Both licences cover areas listed above. Both provide, for example, for the development of a customer charter that requires the OWR approval.

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<sup>308</sup> Sections 14 & 15.

<sup>309</sup> The Co-ordinator and OWR will hereinafter collectively be referred to as the OWR.

<sup>310</sup> Section 5.

<sup>311</sup> Water supply, sewerage, irrigation and drainage services.

<sup>312</sup> Schedule 1, WSC Act.

Both require complaint resolution mechanisms and provide for customer consultations.

The WSC Act provides mechanisms for remedies in individual cases of service failure.<sup>313</sup> It also provides for audit of licence conditions by an independent person acceptable to the OWR and for situations where the licensee contravenes conditions (notice, fine and cancellation of licence). In addition, the OWR has power to request relevant information to enable it to perform its functions.

The WSC Act provides for the Minister to give directions in writing to the OWR and to have, on request, information in the possession of the OWR.<sup>314</sup>

*Waterline*, the OWR newsletter noted that the primary objectives of the licences were to provide better services to customers and protect the Government's investment in the water industry. As to reporting, it was noted that some local governments had found the requirements difficult, although those received showed a strong commitment to service on behalf of local governments.

The OWR internet site provided the following relevant information:

- twenty-one licences for sewerage services have been issued to local councils;
- two licences have been issued to irrigators;
- four water supply licences have been issued; and
- The WC and the Rottnest Island Authority have been issued water, wastewater and drainage licences.

### **Other matters**

*Waterline* Volume 1, Issue 2 noted that a review of plumbing licensing was undertaken after the incorporation of the WC and proposed a structure for a plumber licensing authority. Following consultations a final report was forwarded to the Minister.

The '*Report on Institutional Role Separation in the WA Water Industry*' (OWR, 1997) provided the following table of present institutional structures:

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<sup>313</sup> Section 33.

<sup>314</sup> Sections 7 & 8.

**Table 10.5.2 Institutional role separation in the Western Australia water industry**

<b>Service Providers</b>	<b>Regulators</b>	<b>Water Resources Manager</b>
WC	OWR	
BWB	WRC	
Aqwest	Health Department <sup>315</sup>	WRC
Local Authorities	Department of Environmental Protection <sup>316</sup>	
Port Authorities	Treasury <sup>317</sup>  Department of Minerals and Energy	

The report notes that:

*The essentials of institutional reform are in place. Ongoing implementation of the reformed structure will undoubtedly see some evolution and refinement. With the establishment of the Office of Water Regulation there is a need to review Treasury's role and inter-relation with regard to rates and charges submissions as against its role with regard to State financial issues such as level of dividend to be paid by the Water Corporation.(p19)*

### **Other information**

Western Australia has advised that Treasury has a limited role in price setting, constrained to commenting on the Minister for Water Resources annual submission to Cabinet on proposed tariff increases. The requirement for Cabinet approval of any changes to water tariffs ensures that the appropriateness of tariff changes is not compromised by any potential conflict that many arise from the Treasurer's role in setting tariffs and dividend policy. Pricing reform in Western Australia is driven by two principles:

- as Government trading enterprises (GTE) embrace commercial practices efficiency gains in the form of lower costs and/or better quality of service are achieved; and

<sup>315</sup> Monitoring of drinking water quality.

<sup>316</sup> Approval of infrastructure and water service discharge.

<sup>317</sup> Involvement in rates and charges, dividends paid and CSOs for WC.

- the Government is working towards bringing GTE prices more into line with user pays principles.

It was noted that the Government will give consideration to the option of an independent regulator with duties which may include prices oversight, access and competitive neutrality across the electricity, gas and water industries.

In further information provided to the Council<sup>318</sup> it was noted that Western Australia *'will continue to review the options available regarding price regulation and Ministerial responsibility'*.

### **Council Comment**

The Council is of the view that the existing institutional structure in the Western Australian water industry shows substantial commitment to the strategic framework reform agenda and agrees that the essentials of institutional reform are in place.

The Council is satisfied that the arrangements provide significant separation of service provision roles from those of standard setting, resource management and regulation and that second tranche commitments have been largely met.

### ***Ministerial responsibility***

Almost all institutions appear ultimately responsible to the same Minister (the Minister for Water Resources), and that it would be preferable for this arrangement to be reviewed, particularly as regards the WC and the OWR.

### ***Pricing***

The Council agrees with the OWR's assessment that there is a need to review Treasury's role in price setting, and indeed the manner in which prices are set generally. The Council notes that directors of the WC are appointed on the nomination of the Minister of Water Resources, who is also the sole shareholder. The Minister, with the concurrence of the Treasurer, approves matters such as the SDP and SCI and determines the dividend to be paid to the Government. Significant financial transactions require Ministerial approval. While the advisory role of the OWR as regards pricing is noted, this advice is not made publicly available.

The role of the Treasurer in pricing on the one hand and in managing the State's finances (including dividend setting) on the other presents a real and substantial conflict of interest.

The Council is of the view that this form of price regulation provides insufficient structural separation between the commercial service provision operations of the WC and the essentially regulatory role of price setting. Price setting is an important aspect of the provider/customer relationship. In addition, the Minister or Government are not well placed to make efficient pricing decisions.<sup>319</sup> A more appropriate role for the

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<sup>318</sup> Letter of 22 June 1999

<sup>319</sup> See for example, *Metropolitan Melbourne Water and Wastewater - Price Reform*, National Economic Research Associates, April 1997.



Minister is setting an appropriate regulatory framework within which an independent regulator sets prices.

The Council has noted concerns regarding pricing structures in Western Australia. The Council's concerns include the construction of two part tariffs, the retention of property-based pricing for some water and many wastewater services and existing cross-subsidisation. In addition, the Council notes that there are at present no internal bulk water charges identified by the WC.

The Council's concerns regarding pricing could be addressed by a move to independent price regulation by the OWR or another appropriate body. This would in large part address the concerns regarding present institutional arrangements.

#### ***Further progress of issues concerning Ministerial responsibility and pricing***

The Council notes the commitment to Western Australia to continue to review the options available regarding price regulation and Ministerial responsibility. It will continue to monitor this matter prior to the third tranche assessment, and would look to appropriate reforms being implemented in this time.

#### ***Other matters***

The Council will monitor the progress of reforms to the plumbing industry following the OWR review.

#### **10.5.3.2 Metropolitan service providers must have a commercial focus, whether achieved by contracting out, corporatisation, privatisation etcetera, to maximise efficiency of service delivery.**

Incorporate appropriate structural and administrative responses to the CPA obligations, covering legislation review, competitive neutrality, structural reform.

#### **Western Australian arrangements**

Arrangements for the corporatisation of the WC have been outlined above. The ongoing CN review for Aqwest and BWB is also noted. Although no details have been provided, the Council notes the implementation of CN in Kalgoorlie-Boulder sewerage services.

#### **Council Comment**

With the previous reservations concerning institutional separation put to one side, the Council is satisfied that the WC, the metropolitan water provider, has a commercial focus to maximise efficient service delivery.

The Council will monitor the progress of CN reform in the other water service providers prior to the third tranche assessment.

## **Performance Monitoring and Best Practice**

### **10.5.3.3 ARMCANZ is to develop further comparisons of interagency performance with service providers seeking best practice.**

Jurisdictions have established a national process to extend inter-agency comparisons and benchmarking. Benchmarking systems are to be put in place for the NMU and rural sectors, “WSAA Facts” is to be used for major urbans, and service providers are to participate.

The Council will accept compliance for the three sectors subject to the Productivity Commission confirming consistency with the Report of the Steering Committee on National Performance Monitoring of Government Trading Enterprises, “*Government Trading Enterprises Performance Indicators*” (Red Book). The Productivity Commission has already confirmed the consistency of “WSAA Facts” for the major urbans. The Council recognises the first reports for the NMU and rural sectors are likely to be a rough cut in the initial years.

#### **Western Australian arrangements**

The WC participates in the WSAA Facts performance analysis. The 1997 ARMCANZ/ANZECC *Report of progress on implementation of the COAG water industry reform framework 1997* noted that Western Australia actively supported ARMCANZ development of systems for performance monitoring and the OWR will introduce these systems as methodological development makes it feasible to do so.

The 1997-1998 *Performance Indicator Report for Local Councils* (from the OWR website) provides performance indicator comparisons for certain sewerage services provided by Councils.

#### **Council Comment**

The Council is satisfied that the WC participates in interagency benchmarking through WSAA facts. The licensing and auditing of other service providers, including local council sewerage provides and irrigators, also provides for benchmarking.

Western Australia is participating in ARMCANZ processes concerning both non-metropolitan and rural water performance comparisons.

The Council is satisfied that Western Australia has met its second tranche commitment. It will continue to monitor the development of performance indicators and Western Australia's participation in these prior to the third tranche assessment.

## **B10.5.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

### **10.5.4.1 There must be comprehensive systems of water entitlements backed by separation of water property rights from land title and clear specification of entitlements in terms of ownership, volume, reliability, transferability and, if appropriate, quality.**

A 'comprehensive' system requires that a system of establishing water allocations which recognises both consumptive and environmental needs should be in place. The system must be applicable to both surface and groundwater.

The legislative and institutional framework to enable the determination of water entitlements and trading of those entitlements should be in place. The framework should also provide a better balance in water resource use including appropriate allocations to the environment as a legitimate user of water in order to enhance/restore the health of rivers. If legislation has not achieved final parliamentary passage, the Council will recognise the progress towards achieving legislative change during its assessment of compliance.

#### **Western Australian arrangements**

The Council was provided with: '*Water Law reform summary of legislative change (the summary)*', '*Water law reform guide to legislative change*', '*Water law reform appendix-current legislation*<sup>320</sup> and the *Rights in Water and Irrigation Act 1914* (RIWI Act) incorporating proposed changes (January 1999). Information in this section is drawn from these sources unless otherwise noted.

The documents outline the existing and proposed changes to legislation governing water, and its management including allocation and trading. The insert into the proposed legislation noted that the consultation (which began in August 1997) would continue until April 1999, with a view to submitting amending legislation to Parliament in June 1999.

The following are key features of the proposed legislation:

- the definition of water and full title of the RIWI Act<sup>321</sup> is widened and updated. The definition of water resources to include stream and wetlands beds and banks, floodplains and groundwater;
- the RIWI Act is given objectives including: the sustainable and integrated management of water resources, the orderly, equitable and efficient use of water resources, fostering community consultation and participation in administration;
- the amendments provide for all water (other than spring water or certain wetland water) to be vested in the Crown;

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<sup>320</sup> All publications by WRC, August 1998.

<sup>321</sup> An Act relating to the rights, management, use and protection of water resources and for irrigation schemes and other purposes.

- riparian rights are simplified and made uniform with local rules for provisions in times of shortage and as to how water is taken (for example, building of dams);
- local Water Resources Committees (Committees) are to be established with functions including advising the Minister and the WRC, making local rules, assisting in the preparation of local plans and assisting in the resolution of disputes about water use. The Committees are appointed by the WRC on a skills basis and will make redundant the need for areas to be *proclaimed*<sup>322</sup> as local rules take over from more generalised rules presently provided for in the Act;
- local Rules can apply to:
  - control activities (for example, allocation licence conditions, interference with the flow of water, regulation of the taking of ground and surface water);
  - allow activities (for example, activities that would otherwise require a licence);
  - share water when the flow is inadequate;
  - define requirements to meet management objectives (for example, water trading rules, rates of extraction);
  - regulate works that may affect water resources (for example, pumps and meters, construction, operation and maintenance of works); and
  - manage water licences.

The summary notes that this would allow the WRC and Committees flexibility to control what needs to be controlled and leave other matters in the hands of the land owner or occupier. Local rules build on basic rules in the legislation and involve the local community;

- the creation of Regional and Sub Regional Allocation and Local Management Area Plans:<sup>323</sup>
  - Regional Allocation Plans (RAP) guide the overall management of water resources by setting priorities and objectives for the use and protection of water resources, establishing environmental values and beneficial uses for key water resources, protecting defined water resource values and promoting integration of land and water management;
  - Sub Regional Allocation Plans (SRAP) facilitate the investigation and development of water sources and the establishment of resource allocation policy (for example, provision of water for the environment and regional trading in water entitlements); and

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<sup>322</sup> The present Act provides for water licences to be required only in proclaimed areas.

<sup>323</sup> These will replace current Regional, Sub-Regional and Management Area Planning.

- Land Management Area Plans (LMAP) describe allocation and water use management policies for local water resources, environmental water provisions, flow management requirements, the quantities and timing of water extractions and market rules for trading of water;
- plans will include matters such as water management objectives, a description of the water resource and need for the water, the delegation of water management functions to local groups, duties and obligations related to water management and use, the basis of water allocations, rules for trading, activities to be licensed and relevant conditions, methods for water restrictions and the review of the plans. Public consultation as regards the plan is required and must be submitted by the Commission to the Minister for approval;
- retention by the WRC of a residual power to issue directions restricting or prohibiting a person from taking water where the water volume is inadequate to meet demands placed upon the resource or where the water is improperly used, wasted, having a harmful effect or not being used to the best advantage; and
- provision for monitoring, appeals and, in appropriate circumstances, penalties.

The RIWI Act also provides for licensing of activities including water extraction, collection and storage of water, building of dams and other works, water diversion and water discharge. In proclaimed areas these must be licensed, and in other areas local rules will specify how the activity is controlled. This includes whether a licence is necessary to carry out the activity.

Licences may be issued to owners or occupiers of land or persons who have agreements to supply water (for example, irrigation water suppliers) and who have an intention and the means to use or supply the water for a worthwhile purpose or to augment the available supply of water. This arrangement is designed to reduce speculation in water trading.

In determining licence applications the WRC is to have regard to matters including the whether the proposed taking and use of the water is in the public interest, is ecologically sustainable and environmentally sustainable, would be to the detriment of current users or prejudice the current and future needs for water and is in keeping with RAPs, SRAPs and LMAPs. Licences may be granted for a fixed or indefinite period.

Regulations are proposed to provide for possible conditions and restrictions on licences including the purpose for and use of the water, the maximum amount of water that can be extracted, monitoring of water use, the protection of other users and the environment and the construction, operation and maintenance of works.

In addition, the proposed amendments to the RIWI Act will provide for water access licences which will allow development of a water resource subject to the person undertaking investigations and developing plans in a manner satisfactory to the WRC. This proposal, modelled on exploration licences for drilling groundwater wells, is designed to provide resource security during the investigation stage.

A licence register, including details of the nature of the licence, the licence holder, a description of the water resource and the terms of the licence will be maintained and available for public inspection.

### **Other information**

The Council has had the opportunity to review the material contained in *Allocations and trading in water rights. Phase 1 Consultations. Analysis and response to submissions*<sup>324</sup>. The WRC noted that there was considerable public support for and sentiment against the proposed reforms. Concern over change was noted to be the result of individuals being satisfied with their own situation and not being aware of the problems faced by other people and in other places or of the opportunities provided by the reforms.

The WRC noted unfounded concerns regarding loss of private rights or lower resource management standards. Other concerns included taxation implications (for example, Capital Gains Tax) of water trading and processes/mechanisms to cancel licences.

A significant change to proposed legislation as a result of the consultation was that the Commission would not proceed with the proposed powers<sup>324</sup> concerning springs and wetlands wholly contained on private property and off stream (farm) dams.

The second tranche report notes that the planning process will guarantee community review and set the sustainable yield that may be taken within environmental limits. The report notes that *'environmental water requirements are defined and removed from the water available for allocation prior to allocation reaching levels that would damage the environment'*.(p34)

The Council has since been advised that the public consultation on the draft RIWI Act closed on 30 April 1999 and the Act is currently being considered by Cabinet for approval to go to Parliament in June 1999. In further information provided to the Council<sup>325</sup> it was noted that *'Without encroaching upon the role of Parliament, Western Australia commits to make every endeavour to pass amendments to the Rights in Water and Irrigation Act 1914 by 30 June 2000, and notes the Council's proposal for and interim assessment on this matter'*.

Western Australia has also noted that as part of the National Land and Water Resources Audit water resources are being systematically grouped by the level of use relative to sustainable limits.

- Level One (minor resource usage) covers resources where use is less than 30 per cent of the estimated sustainable diversion limit. Water resource management includes licensing prior to any formal planning and allowable diversions based on estimated downstream impacts or recharge estimate on the effect on adjacent wetlands. There would be a low amount of licensing and trading.

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<sup>324</sup> Including the power to resolve disputes.

<sup>325</sup> Letter of 22 June 1999.

- Level Two (growing resource pressure) covers resources where use is between 30 and 70 per cent of the estimated sustainable diversion limit; as demand grows to over 30 percent formal planning should commence. Investigation programs are upgraded and monitored data is reviewed so that more thorough estimates of the sustainable use are obtained. RAPs and large scale LMAPs are prepared and allowable diversions are based on regional estimates or more detailed recharge estimates to meet Environmental Water Provisions (EWPs; explained at B10.5.4.2).
- Level Three (strong resource competition) covers resources where use is more than 70 percent of the estimated sustainable diversion limit. Planning reviews are necessary to update provisions for the environment and prepare for water trading. SRAPs and detailed LMAPs are prepared. Reservoir and river simulation studies for surface waters and modelling studies for groundwater provide for allowable diversion with EWPs adopted as constraints. Market rules are being developed and existing licensed use reviewed.
- Level Four (resource at limit and trading active) covers resources where use is at the estimated sustainable diversion limit. Trading would be expected to be operating and if use was exceeding sustainable limits actions would be taken to correct this. Similar resource management techniques to Level Three systems are used with detailed sub area plans developed.

In further information provided to the Council<sup>326</sup> Western Australia committed ‘*that the Water Resources Allocation Committee will keep an annual watching brief on all Regional, Subregional and Local Management Plans that are more than five years old, to determine whether a review should be undertaken*’.

The Council was provided with the metering policy of the WRC. It provides for the metering of abstractions:

- in all declared areas and sub areas whenever the demand on groundwater reaches or approaches its safe yield and the installation of meters would significantly assist in the better management of the resource;
- for properties where the total licensed allocations exceeds 500 000 kL; and
- in cases where the WRC considers that the available systems of estimating usage do not give a realistic assessment of the groundwater abstraction that is actually occurring.

The metering policy provides for the publication of the intention to install meters and the costs to be recovered in respect of installation and reading of meters. The policy permits the averaging of metered extractions within limits over a three year period.

Western Australia has stated that it can be administratively efficient to control small water users by means other than licensing where the abstraction from the resource is relatively small relative to the sustainable diversion limit.

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<sup>326</sup> Letter of 22 June 1999.

At the bilateral meeting between officers of the Council secretariat and Western Australia officials on 14 June 1999 it was noted that in respect of area/crop based licences, these all include a nominal volumetric allocation or capacity share. The metering policy will be reviewed on the passage of amendments to the RIWI Act. It was also noted that it was sometimes appropriate to specify water use in licences such as where the level of recharge to groundwater systems was environmentally important.

### **Council Comment**

The Council notes that the proposed system of water licensing in Western Australia has some unique features, particularly as regards the use of local rules to determine activities including whether a licence is required to extract water from a system.

The Council notes that the draft legislation is due to go before the Parliament in June 1999.

It will provide for the separation of water property rights from other rights. In addition, the proposed system recognises both the consumptive and environmental need for water. It provides for consumptive allocations after the allocation of environmental needs. This matter is further discussed below (B10.5.4.2).

There has been extensive consultation on the reforms and this has been reflected in the draft legislation. Western Australia has advised that, except in limited circumstances, quantity of water available for allocation is generally not an issue of concern, unlike the situation in the Murray-Darling Basin. These matters have led to what is effectively a two tier system, the first tier encompassing situations where water is or is becoming scarce and the second dealing with locations where water is not scarce.

Western Australia has provided information concerning the process that leads to more detailed planning and answers some of the Council's concerns about the decision not to licence all extractions. In particular, it provides a comprehensive scheme to determine when licensing is required. Area/crop based licences have a notional volumetric allocation or capacity share permitting these to be traded.

The Council notes that the metering policy will be reviewed on passage of the amending legislation. The Council will review the policy afresh prior to the third tranche assessment.

The Council will undertake a supplementary assessment of on 30 June 2000 to assess whether there has been passage of the legislation. It will be necessary to review the finalised legislation before the Council arrives at a firm view as to whether it meets reform commitments.

#### **10.5.4.2 Jurisdictions must develop allocations for the environment in determining allocations of water and should have regard to the relevant work of ARMCANZ and ANZECC.**

**Best available scientific information should be used and regard had to the inter-temporal and inter-spatial water needs of river systems and groundwater**

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**systems. Where river systems are overallocated or deemed stressed, there must be substantial progress by 1998 towards the development of arrangements to provide a better balance in usage and allocations for the environment.**

**Jurisdictions are to consider environmental contingency allocations, with a review of allocations five years after they have been initially determined.**

Jurisdictions must demonstrate the establishment of a sustainable balance between the environment and other uses. There must be formal water provisions for surface and groundwater consistent with ARMCANZ/ANZECC “*National Principles for the Provision of Water for Ecosystems*”.

Rights to water must be determined and clearly specified. Dormant rights must be reviewed as part of this process. When issuing new entitlements, jurisdictions must clarify environmental provisions and ensure there is provision for environmental allocations.

For the second tranche, jurisdictions should submit individual implementation programs, outlining a priority list of river systems and groundwater resources, including all river systems which have been over-allocated, or are deemed to be stressed and detailed implementation actions and dates for allocations and trading to the NCC for agreement, and to Senior Officials for endorsement. This list is to be publicly available.

It is noted that for the third tranche, States and Territories will have to demonstrate substantial progress in implementing their agreed and endorsed implementation programs. Progress must include at least allocations to the environment in all river systems which have been over-allocated, or are deemed to be stressed. By the year 2005, allocations and trading must be substantially completed for all river systems and groundwater resources identified in the agreed and endorsed individual implementation programs.

### **Western Australian arrangements**

The Draft Environmental Water Provisions Policy for Western Australia (WRC, 2/99) (the policy) *explains the way the [WRC] decides how much water should be made available for the environment when making decisions about sharing (allocating the rights to use) water*.(p1) The policy notes that it is consistent with the *National Principles of the Provision of Water for Ecosystems*. The following concepts provide the basis for water allocation decisions:

- Ecological Water Requirements (EWRs) are the water regimes needed to sustain key ecological values of water-dependant eco-systems at a low level of risk; and
- Environmental Water Provisions (EWPs) are the water regimes that are to be maintained. They are set by water allocation decisions that may involve some compromise between ecological, social and economic goals.

The guiding principles for determining EWPs include:

- water allocation decisions will be based on first ensuring that essential natural ecological processes and the biodiversity of water-dependant ecosystems are maintained;
- key ecological values will be defined on an area by area basis;<sup>327</sup>
- the WRC will determine, on the basis of the best scientific information available, water regimes needed to maintain these values at a low level of risk;
- the WRC will aim to meet EWRs when adopting EWPs;
- a conservative approach will be taken in estimating EWRs and EWPs where scientific knowledge of ecosystem requirements is limited;
- where the WRC proposes not to meet EWRs and where the environmental effect may be significant, the WRC will refer the proposal to the EPA for review<sup>328</sup> and the Minister for decision;
- proposed EWPs for developed or altered water resources will consider environmental changes due to regulation as well as the capacity for restoration;
- further allocations should only occur where EWPs are being met;
- where EWPs cannot be met due to present water allocations, a strategy will be prepared to ensure such provisions are met within the minimum practicable time;
- regular reviews will consider improved knowledge and have account of the changing value society places on the environment and water resources;
- although the WRC will not participate in water trading, it may purchase entitlements as one means of reducing licensed use to sustainable levels; and
- users are responsible for the efficient use of allocations and minimising ecological damage from that use.

The policy notes the need for legislative change (that is, the proposed amendments to the RIWI Act) to support water allocation planning. It also notes that while these principles provide generic guidance, more detailed guidelines will develop from their application.

The principles are to be applied in preparing SRAPs and LMAPs. Both of these require Ministerial approval. Both provide for wide public consultation.

The policy also notes that some water resources have important *environmental and insitu water values* and consumptive use water allocations will usually be refused.

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<sup>327</sup> The EPA has a primary role in setting environmental objectives and outcomes that will guide the selection of key ecological values.

<sup>328</sup> The EPA can determine that a formal assessment is required and can make recommendations to the Minister for the Environment.

The second tranche report notes that seven rivers are regulated and five presently five have environmental water provision determined at the regional level. 44 groundwater systems are actively managed and 26 have regional, sub-regional or management area EWRs set or in preparation. It is also notes that Western Australia has no river systems that are stressed as a result of the over allocation of water uses.

The *Status of implementation of a National Policy on the provision of water for ecosystems* (WRC, January 1999) (the implementation report) notes that approximately half of the river systems in the south west of Western Australia have been assessed for beneficial values (including environmental values) through regional planning. However, few detailed EWRs/EWPs for these systems have been investigated.

As regards groundwater, two regional allocation plans<sup>329</sup> have been developed and a plan for the Kimberly region is being developed. Three sub-regional allocation plans in the Perth area<sup>330</sup> addressing EWRs and EWPs are finalised. The implementation report notes that where management areas fall within the boundaries of the plans the EWPs have determined the available sub-area allocations for the management area plans. Other groundwater management area plans, where there are no sub-regional allocation plans, have not had EWPs developed in detail, although: draw downs have not generally been large or concentrated; initial allocations are based on conservative estimates; and the WRC has set generic rules to ensure, for example, that abstractions do not occur within a certain distance from wetlands.

EWRs have not been met in the following systems:

- in two areas of native vegetation on the Gngangara Mound the EWP is less than the EWR. The formal environment impact assessment concluded that hastened progress to a *drier type vegetation community structure* was an acceptable trade-off to public water supply in these areas. The groundwater level below EWR caused by extractions in the Gngangara Mound was countered by artificially maintaining wetlands; and
- the significant effect on wetlands due to extractions in the Jandakot Mound was mitigated by the purchase of equivalent wetlands for inclusion in the conservation estate.

The implementation report notes the commitment to continuous water level (groundwater), flow (surface) and biological monitoring and flora and fauna surveys. the WRC is presently negotiating for cost-sharing arrangements.

The *East Gngangara Environmental Water Provisions Plan*<sup>331</sup> (WRC, October 1997) identifies wetlands, springs/seepages and phreatophytic vegetation<sup>332</sup> dependant on

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<sup>329</sup> Perth to Bunbury (1991) and Busselton to Walpole (final stages of preparation).

<sup>330</sup> East and Central Gngangara and Jandakot.

<sup>331</sup> A sub-regional plan.

<sup>332</sup> Vegetation which obtains water supply from roots in or near the surface.

groundwater and nominates EWRs for each to maintain ecological values on the basis of scientific knowledge. The plan identifies permissible abstractions and EWPs. It is noted that *'if necessary production wells will be turned off in dry periods to ensure EWPs are maintained'*.(pV) The plan notes that although EWRs are not finalised for wetlands, interim EWRs are met. EWRs for vegetation would not be met and *'the result will be the gradual loss of some more mature banksia trees and their replacement by more drought tolerant seedlings'*.(pVI) The plan includes details of the WRC monitoring and reporting and ongoing consultation commitments.

The *Swan Groundwater Area Allocation Plan*<sup>333</sup> (WRC, December 1997) considers four aquifers supplying the area and the use to which each is put. The plan considers geomorphic and hydrological attributes of the aquifers, ongoing detailed monitoring regimes for the water resource and the available groundwater (which is dependant on the amount of recharge and environmental requirements). A number of groundwater allocation guidelines are outlined including:

- conditions for granting a groundwater licence;
- terms for licences;
- an order for priority of groundwater use (the environment is identified as the first priority);
- that allocations in respective sub-areas should not exceed the total allocation limit for that sub-area;
- licences to abstract at a rate of greater than 500 000 kL/annum are required to be metered; and
- groundwater abstraction for domestic or stock purposes from the superficial aquifer at less that or equal to 1 500 kL/annum is generally exempt from licensing.

The sub-area rules include specific provisions relating to, for example, who may approve licences, which aquifer is to be accessed and the construction requirements of various wells.

The *Proposed Harvey Basin Surface Water Allocation Plan*<sup>334</sup> (WRC, November 1997) identified significant ecological, consumptive, recreational and aesthetic values of the Basin. EWRs were identified (through a consultancy) and impacts of water resource development proposals (including financial costs and ecological impacts of alternatives)<sup>335</sup> discussed. EWPs, broadly consistent with the recommendations of the consultancy report, were identified. Further consumptive allocations were then

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<sup>333</sup> A subregional plan including allocations of particular areas in the sub-region.

<sup>334</sup> A sub-regional plan.

<sup>335</sup> The Council is aware that the proposed Harvey Dam has been approved by the Western Australia Cabinet subject to approval by the EPA.

identified. Catchment management initiatives to provide a framework for river restoration were also outlined.

### **Further responses of Western Australia**

In additional information provided to the Council, Western Australia noted that EWRs and EWPs for new water source developments are referred to the EPA. For example, the Jandakot mound was formally assessed and appropriate conditions set. This is described as an open and transparent process, including a third party appeal system. Wherever possible EWPs are set in accordance with EWRs.

In addition, a State Wetland Co-ordinating Committee has been established to implement the State Wetlands Policy. *'One of the first actions is to develop a State Policy Position on acceptable mitigating mechanisms from any development'*.

The WRC, in conjunction with the EPA and Department of Environmental Protection is finalising the policy after the public consultation period and final approval is expected before January 2000.

The Council has been provided with a copy of the proposed timetable for implementation EWPs in RAPs, SRAPs and LMAPs. This is attachment 1 to the assessment. The table sets out current licensed and estimated future<sup>336</sup> allocations for surface water and groundwater. It also identifies some current use and present progress of management plans for groundwater systems.

It is noted that a major review of all water resource use is being carried out under the National Land and Water Resources Audit and when this project is completed late in the calendar year 2000, a significant update of priorities is foreshadowed and modifications to the planned program are likely.

### **Council Comment**

The *National Principles of the Provision of Water for Ecosystems* includes the following principles directly relevant to the Council's assessment:

***Principle 1 River regulation and/or consumptive use should be recognised as potentially impacting on ecological values.***

The Council notes that the policy recognises that regulation and consumption of surface water and consumption of groundwater impacts on ecological values.

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<sup>336</sup> Allocations in five years.

***Principle 2 Provision of water for ecosystems should be on the basis of the best scientific information available on the water regimes necessary to sustain the ecological values of water dependent ecosystems.***

It is difficult to say what 'best scientific information' at any point in time is. However, in this respect the Council notes the following matters showing a strong commitment to this principle:

- the WRC's stated commitment to use of best scientific information;
- the use of relevant scientific information in developing the plans provided to the Council;
- the referral of appropriate matters to the EPA for review; and
- regular reviews will consider improved knowledge.

***Principle 3 Environmental water provisions should be legally recognised.***

The Council notes that the use of EWRs and EWPs leads to specific recognition of the needs of the environment and protects the environment's water. In particular, the permitting of future allocations only if consistent with EWPs protects the environment's water.

***Principle 4 In systems where there are existing users, provision of water for ecosystems should go as far as possible to meet the water regime necessary to sustain the ecological values of aquatic ecosystems whilst recognising the existing rights of other water users.***

In addition to the above information, the Council notes that proposed EWPs will be developed to account for changing water regulation and the capacity for restoration.

***Principle 5 Where environmental water requirements cannot be met due to existing uses, action (including reallocation) should be taken to meet environmental needs.***

The Council notes the commitment to meet EWPs *within the minimum practicable time* and that the WRC may purchase entitlements to reduce licensed use.

***Principle 6 Further allocation of water for any use should only be on the basis that natural ecological processes and biodiversity are sustained.***

In addition to the information above, the Council notes that a conservative approach will be taken in estimating EWRs and EWPs where scientific knowledge is limited.

### **Other information**

The Council's review of provision and allocation plans indicates that the guiding principles have generally been applied in the plans provided.

However, the Council notes with some concern the purchase of wetlands in Gngangara to accommodate wetlands lost due to extractions. The Council's view is that such an

arrangement does not meet reform commitments and it would be concerned if further such trade-offs occurred to the very clear detriment of the environment. The Council notes that one of the first actions of the State Wetland Co-ordinating Committee is to develop a State Policy Position on acceptable mitigating mechanisms for any development. The Council will review the policy in the third tranche.

The Council notes that the EWP policy is still in draft form. Western Australia has advised that the policy will be finalised in January 2000. In part the policy awaits the passage of the reforms to the RIWI Act and the Council has notes that the legislation is to go before Parliament in June 1999. This will be the subject of a supplementary assessment.

The Council has reviewed the programs for implementation provided by Western Australia and notes that many RAPs, SRAPs and LMAPs are either completed or expected to be available by the year 2001. The Council agrees to the implementation programs provided by Western Australia. The Council, in doing so, notes the following relevant matters:

- the National Land and Water Resources Audit, funded under the Natural Heritage Trust, is presently being undertaken and will provide valuable information to jurisdictions and the Council as to any relevant systems not included in the programs or that require a higher priority;
- the High Level Taskforce on Water Reform may, prior to the third tranche assessment, undertake to identify some relevant criteria for classifying stressed systems. This process may result in a modification to implementation programs; and
- implementation programs, by their nature, may need to be amended depending on many factors including proposed new developments and other significant events.

The Council is therefore of the view that the implementation programs may change prior to the third tranche assessment provided there is agreement between Western Australia and the Council.

#### **10.5.4.3 Arrangements for trading in water entitlements must be in place by 1998. Water should be used to maximise its contribution to national income and welfare.**

**Where cross border trade is possible, trading arrangements must be consistent between jurisdictions and facilitate trade. Where trading across State borders could occur, relevant jurisdictions must jointly review pricing and asset valuation policies to determine whether there is any substantial distortion to interstate trade.**

Jurisdictions must establish a framework of trading rules, including developing necessary institutional arrangements from a natural resource management perspective to eliminate conflicts of interest, and remove impediments to trade. The Council will assess the adequacy of trading rules to ensure no impediments. If legislation has not achieved final parliamentary passage, the Council will recognise the progress towards achieving legislative change during its assessment of compliance.

As noted above, for the second tranche, jurisdictions should submit individual implementation programs, outlining a priority list of river systems and groundwater resources and detailed implementation actions and dates for allocations and trading to the Council for agreement, and to Senior Officials for endorsement. This list is to be publicly available.

Cross border trading should be as widespread as possible. Jurisdictions are to develop proposals to further extend interstate trading in water.

### **Western Australian arrangements**

The proposed amendments to the RIWI Act will permit the transfer of water licences on transfer of land and/or where there is inadequate water supply to satisfy user requirements and the WRC is satisfied that local rules are in place to manage the trade. Trade is not permitted to a person who is not permitted to hold a licence.

Transfer will require the WRC approval. Transfers may be refused on the same basis as licences are refused. In addition, local rules may prohibit the permanent transfer of a licence. The WRC may direct that an expert assessment of the proposed transfer be undertaken and applications for transfer are to be advertised and submissions invited.

In addition, the WRC may buy water where there is a need to reduce overall water use, an entitlement is not being used, the water use is considered inappropriate or at the direction of the Minister. The WRC may sell a licence where, for example, further water is available for trading or a licence has been surrendered, cancelled or not renewed.

The second tranche report notes that the legislative power to transfer licences will not be available until 1999. As an interim measure licence holders will be able to surrender licences on condition that replacement licences be issued to nominated parties. The WRC will administer this scheme. The South West Irrigation Co-operative established leasing of water rights in 1996 and permanent sale of shares in 1998.

The *Transfer of water entitlements* information bulletin (South West Irrigation, December 1996) outlines a scheme for temporary (one year) transfers of water entitlements between co-operative members. Rules include: that one irrigator cannot own more than 20 per cent of shares; that water can only be transferred within the same supply source; and that the water access charge is payable by the seller and the consumption charge by the buyer.

The *Wanneroo Groundwater Area proposed licence trading rules* (Wanneroo Groundwater Advisory Committee and the WRC, February 1999) include provisions such as:

- allocations must be leased for a minimum period of two years;
- sales and leases are to be confined to the same sub-area;
- sales and leases are only permitted in fully allocated areas;



- the applicant may be required to show that the transfer will not damage the aquifer or the environment;
- unused parts of licences must be surrendered prior to water allocation transfer; and
- domestic allocations (1500 kL per annum) cannot be sold.

The WRC proposes to maintain an information base of trading in allocations and publish the information with details such as the sub-areas where trading is permitted, the type of trade (for example, sale or lease), the volume and price of water traded and the initial and new use of the water.

The second tranche report noted that cross-border trading is not possible, although in the future water may be traded across the Western Australian-Northern Territory border if the Ord irrigation scheme is expanded. Such a scheme would be under common management and pricing and allocation rules for water traders will be identical, resulting in no restriction in trade.

### **Council Comment**

The Council notes that there is little trade presently occurring in Western Australia, and that Western Australia has advised that the reason for this is that water for allocation is generally not scarce. The Council notes that implementation program (Attachment 1) indicates that there are some systems that are fully allocated and users would benefit from water trading opportunities.

The current system does not provide for the transfer of a water licence other than by the interim measure of surrender of the licence and sale to a nominated person. Additionally, there is some limited leasing of water entitlements. But the current system clearly falls short of the requirements of the strategic framework.

The trading scheme builds on the reforms proposed for water allocations and retains features such as local trading rules and the requirement for the WRC approval. The rules proposed seem to be directed at such matters as preventing speculative water trading and safeguarding environmental needs. Although the proposed system of trading rules will, to some extent, impede trade, there are justifications provided for the restrictions.

An information base will be developed to provide institutional support to trading. It will inform the market both as to where trade is occurring and typical prices.

Currently cross-border trading is not possible. However, the proposed trading regime for the Ord project, should that proceed, would provide consistent cross-border rules and not impede trading. The Council will monitor the development of this matter prior to the third tranche assessment.

The legislation to permit a trading regime is to go before the Western Australian Parliament in June 1999. On passage of the legislation the Council is satisfied that this reform commitment would be met. This matter will be the subject of a supplementary assessment on 30 June 2000.

## **B10.5.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.5.5.1 Jurisdictions must have in place integrated resource management practices, including:**

- **demonstrated administrative arrangements and decision making processes to ensure an integrated approach to natural resource management and integrated catchment management;**
- **an integrated catchment management approach to water resource management including consultation with local government and the wider community in individual catchments; and**
- **consideration of landcare practices to protect rivers with high environmental values.**

The Council will examine the programs established by jurisdictions to address areas of inadequacy. Programs would desirably address such areas as government agency co-ordination, community involvement, co-ordinated natural resource planning, legislation framework, information and monitoring systems, linkages to urban and development planning, support to natural resource management programs and landcare practices contributing to protection of rivers of high environmental value.

#### **Western Australian arrangements**

*Integrated Resource Management in Western Australia*<sup>337</sup> (the IRM paper) noted that a draft Natural Resources Management Policy to guide the direction of natural resource management (NRM) has been released in Western Australia with the vision: To optimise sustainable management of the State's natural resources through efficient and effective partnership between all levels of government and the community.

The IRM paper notes that the Ministries of Environment, Water Resources, Primary Industries and Planning are key NRM agencies. Advisory councils made up of community and agency representatives (for example, WRC, Western Australian Planning Commission, EPA), public service agencies with specific management responsibilities (for example, WRC, Department of Conservation and Land Management (CALM)) and district level bodies provide the structure that co-ordinates NRM. CEOs and Senior Officers Groups co-ordinate planning and management across agencies. The approach is said to provide balanced co-ordination and support from the State level to the local level without imposing overly regulated processes.

Generic issues, such as land clearing, salinity, and wetlands are advanced by joint policies and Memoranda of Understanding which specify overall objectives and the roles of specific agencies.

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<sup>337</sup> Undated and unsourced. Provided to Council in April 1999.

The IRM paper notes that the WRC,<sup>338</sup> CALM<sup>339</sup> and Agriculture WA<sup>340</sup> provide regional structures with strong community links. Local co-ordination is achieved through meetings of District managers. Regional organisations, such as the Swan Catchment Council and the South West Catchment Council have been established for each of the NRM regions<sup>341</sup> and a number of sub-regional groups (for example, the Blackwood Basin Group) have been formed for large and complex basins. Regional strategies are being developed to identify NRM priorities and actions consistent with State and National policies and strategies.

Community involvement is built in at all levels (for example, representation on the State Salinity Council (SSC), in regional planning teams and sub-regional groups) and at a local level over 300 sub-catchment groups and 150 Land Conservation District committees are established.

At regional, sub-regional and local levels partnership and service agreements are specifying the roles and resources each party contribute.

The Council has been provided with a copy of the NRM Policy entitled *Western Australian Government Framework to assist in achieving Sustainable Natural Resource Management*<sup>342</sup>. The policy's purpose is to establish a framework for a co-ordinated and integrated approach to natural resource development in Western Australia by the four key agencies (Agriculture WA, the Department of Conservation and Land Management, the Department of Environmental Protection and the Water and Rivers Commission). It provides for Western Australia's NRM goal as: Responsible conservation and sustainable management of the State's natural resources through efficient and effective partnerships between all levels of Government, industry and the community. Its approach is consistent with the information provided by Western Australia.

The policy is to be developed and enhanced as discussion and consultation occur, and a review performed in 12 months to evaluate effectiveness and efficiency. During this time consultation with peak stakeholder groups will occur before the policy is submitted to the Cabinet Standing Committee on Salinity Management for final approval.

Also provided to the Council was the *Criteria for Endorsement of Regional Strategies*. The criteria require strategies to include: goals compatible with NRM objectives; development of a strategy that involves most and remains open to stakeholders; demonstration of integrated activities with Government, industry and community involvement; and recognition of and building on local community values

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<sup>338</sup> Primary sponsor of wet catchments.

<sup>339</sup> Lead agency for protected lands and high priority biodiversity catchments.

<sup>340</sup> Primary sponsor of dry catchments.

<sup>341</sup> Pastoral, Metro, Central Agricultural, South West, South Coast and Northern Agricultural Regions.

<sup>342</sup> 13 May 1999.

and visions. The criteria outline the underlying principles for an effective strategy including development of consultative processes, long term direction, vision and goals, monitoring and evaluation and consistency with other relevant strategies.

Other features of the NRM processes in place in Western Australia include:

- information and monitoring systems through such mechanisms as *State of the Environment* reporting and research undertaken by bodies such as the SSC;
- linkages of to urban and development planning through mechanisms such as the Western Australian Planning Commission's NRM Standing Committee, statutory regional plans,<sup>343</sup> sub-regional plans<sup>344</sup> and NRM input into town planning schemes; and
- the State Waterways WA program which is developing strategies for on-ground action through facilitation and support of local groups and embedding water management in a catchment management context.

### Salinity Action Plan

The Salinity Action Plan (SSC, Draft Update, 1998) identifies the vision: '*Land and water salinity will be brought under control and, where practical, reversed to produce productive, healthy and sustainable landscapes*'.(pVII) The plan identifies the causes and outlines the impacts of salinity. The aims of the plan include:

- reducing the rate of degradation of agricultural land and where practical recovering, rehabilitating or managing salt-affected agricultural land;
- protection and restoration of water resources to ensure salinity levels are kept at a level that permits safe, potable water supplies;
- protection and restoration of high value wetlands and natural vegetation; and
- protection of infrastructure affected by salinity.

Five water management practices are proposed, including: increasing water use by introducing deep-rooted perennial species; increasing water use by annual crops and pastures; collecting, reusing and/or disposing of surface water; draining, pumping and disposing of groundwater; and improving protection and management of remnant vegetation. The plan also outlines research and development requirements and training and educational needs.

Implementation mechanisms include the provision of information to individual landholders. Catchment support will be provided to sub-catchment groups in 34 *focus*

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<sup>343</sup> Regional plans identify NRM constraints and incorporate NRM protection zones to, for example, protect water supply catchments.

<sup>344</sup> Subregional plans integrate environmental objectives in land use planning.

*catchments*<sup>345</sup> to provide examples of best knowledge and practice and provide learning opportunities. Recovery plans to restore *recovery catchments*<sup>346</sup> will be developed by Government and the catchment community.

Co-ordination of the process will be provided by agencies such as the WRC for recovery catchments, CALM for natural diversity catchments and Agricultural WA for focus and rural infrastructure catchments. In addition, the EPA and the Department of Environmental Protection will develop broad environmental objectives and monitoring and evaluating criteria with agencies and the community.

Other initiatives include the Rural Towns program to protect designated rural infrastructure affected by salinity.

The whole of community approach includes a Cabinet Standing Committee on Salinity Management, advised by the SSC, which in turn is assisted by the Salinity Council Reference Group, representing regional catchment groups, Natural Heritage Trust regional assessment panels and representatives of tertiary institutions, Aboriginal interests and Greening WA.

Financial arrangements to support the Salinity Action Plan have been identified. In addition, monitoring and evaluation mechanisms are outlined.

### **Council Comment**

The information provided to the Council indicates that an integrated approach to natural resource management including catchment management is being implemented in Western Australia. The information provided regarding the NRM policy demonstrates: interagency co-ordination, involvement of local government; involvement of the community; and consideration of a range of initiatives to protect the health of natural resources.

The NRM policy is to be trialled for a period of twelve months before final approval. The Council will look to reviewing the final policy prior to the third tranche assessment.

The Salinity Action Plan, an example of NRM provided, outlines a coherent and co-ordinated approach to approaching the salinity problem in Western Australia. This is undoubtedly one of the most pressing concerns. The Council is satisfied that this approach is consistent with the strategic framework requirements.

The Council is satisfied that Western Australia has met its second tranche commitments.

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<sup>345</sup> Those catchments where productive agricultural land is the main asset at risk and where it is largely within the means of landholders to implement changes to farm practices to restore the land.

<sup>346</sup> Those catchments where major and high priority public resources, such as water resources, natural diversity (for example, wetlands and conservation reserves) and towns, are at risk.

**10.5.5.2 Support ANZECC and ARMCANZ in developing the National Water Quality Management Strategy (NWQMS), through the adoption of market-based and regulatory measures, water quality monitoring, catchment management policies, town wastewater and sewerage disposal and community consultation and awareness.**

Jurisdictions must have finalised development of the NWQMS and initiated activities and measures to give effect to the NWQMS.

**Western Australian arrangements**

The second tranche report notes the active participation in and support of NWQMS since the early 1990s through involvement in ARMCANZ, ANZECC and the NHMRC. A State Water Quality Management Strategy (SWQMS) and State Water Quality Implementation Plan (SWQIP) are being developed.

Market based approaches to waste management, including cost incentive methods to support recycling of waste materials or their safe disposal and water discharge licensing with a fee structure rewarding best management practices complements other regulatory approaches such as pollution control processes.

Catchment management strategies (outlined above), water quality monitoring and urban stormwater management guidelines are other examples of the implementation of NWQMS.

The *State Water Quality Management Strategy, Agency Implementation Framework* (WRC, Preliminary Working Paper, February 1999) (the SWQMS framework) notes the prime role of the WRC in implementing NWQMS in Western Australia. The prime water quality objective is proposed as: To achieve sustainable use of the State's water resources by protecting, enhancing where degraded by past land use, their quality while maintaining economic and social development. Ecologically Sustainable Development is said to form the foundation of water quality management. Guiding strategies for the SWQMS include an integrated framework, involvement of stakeholders and the community, the need to develop a strong, growing and diversified economy that can enhance the capacity for environmental protection and a cautious approach where there are threats of serious or irreversible environmental damage. The principles also provide for a mix of market and regulatory instruments.

The SWQMS framework provides for the various agency roles including:

- Agriculture WA, sustainable management of resources used for agriculture;
- CALM, conservation and management of native plants and animals;
- Department of Environmental Protection, pollution control provisions, reporting (the State of the Environment report) and investigation;
- Department of Minerals and Energy, ensure mineral and petroleum projects address SWQMS;
- the EPA, protection of the environment;

- Health Department of Western Australia, protection of drinking water;
- Ministry for Planning/Planning Commission, promotion and integration of water quality management through the planning process;
- the OWR, assisting in co-ordination of water quality commitments through licensing; and
- the WRC, addressing water quality problems through catchment management and source protection planning.

The Senior Review Panel (SRP), consisting of the relevant agencies, will develop the SWQIP focusing on objectives, actions, priorities, guidelines and agency responsibilities. A review would be conducted every three years. The SRP would be the primary co-ordination mechanism.

Western Australia has provided a copy of the draft SWQMS (WRC, May 1999). The policy is presently released for public comment and will be published in August 1999. The SWQMS has a number of guiding principles and strategies to give effect to the general principles established under the NWQMS. The principles include an integrated framework to address water quality management, stakeholder and community involvement, enhancing environmental protection through economic growth, being cautious in decision making and continually improving performance. Strategies include use of an integrated resource management approach, involving and informing community and key stakeholders, preparation of water quality management guidelines and requiring the polluter to avoid pollution and pay for the cleanup.

Western Australia has noted that the proposed action plan involves establishing co-ordinating mechanisms, developing effective partnerships between all stakeholders, establishing consultative mechanisms, developing the SWQIP to determine priority areas, assessing existing plans, policies etcetera for consistency with the SWQMS, establishing interagency agreements and collating and promoting access to water quality data.

An example of the integrated approach to groundwater protection provided to the Council is the Jandakot Groundwater Protection Policy developed by the Planning Commission in conjunction with WRC and the EPA. The policy:

- identifies principles of groundwater protection and the use of groundwater;
- establishes water quality objectives and criteria;
- provides for matters such as protection of native vegetation, subdivision and land uses permitted including special requirements; and
- provides for implementation.

### **WSAA Facts**

WSAA Facts '98 noted that the WC had 99.7 per cent compliance with 1987 NHMRC bacteriology quality guidelines and 98.8 per cent compliance with physico-chemical

guidelines. All wastewater treatment plants were 100 per cent compliant with licence conditions.

**Council Comment**

The Council notes the participation and support of Western Australia in NWQMS activities.

The SWQMS strategy provides a detailed process to create and implement a state water quality management strategy. The draft SWQMS should be published in August 1999, and part of the subsequent action plan will include the development of the SWQIP.

The Council is satisfied that Western Australia has met this reform commitment.

The Council notes that it will continue to review the implementation of the strategy, including monitoring and compliance, prior to the third tranche assessment.



## **B10.5.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

### **10.5.6.1 Jurisdictions must have consulted on the significant COAG reforms (especially water pricing and cost recovery for urban and rural services, water allocations and trade in water entitlements). Education programs related to the benefits of reform should be developed.**

The Council will examine the extent and the methods of public consultation, with particular regard to pricing, allocations and trade. The Council will look for public information and formal education programs, including work with schools, in relation to water use and the benefits of reform.

#### **Western Australian arrangements**

The second tranche report notes the lead role of the WRC in consulting on proposed changes to water allocation and trading regimes. This included a mail out of proposals, public meetings, information available on the website, analysis of responses, further consultation regarding recommendations and consultation on proposed legislation. The Council has been provided with various examples of information used in consultation.

The second tranche report notes that although consultation on full cost recovery did not occur with the public, consultation did occur with major service providers. Public consultation occurred on the separation of institutions and NCP legislation reviews.

A Western Australian Water Education Steering Committee has been established to co-ordinate agency and service provider publications and information services. Material developed includes TAFE Water Resources Studies, *Waterwise* school programs, *Ribbons of Blue* scientific programs and videos regarding urban and rural groundwater management.

The Council has been provided with copies of the OWR *Waterline* newsletter, *Principles of Public Consultation* developed by the WRC and reports on present and planned public consultation and education programs. The WRC and the OWR have responsibility for all consultations excluding the *Waterwise* schools program and summer conservation program, which are the responsibility of the WC.

#### **Council Comment**

The Council is generally satisfied that the reforms to the water industry implemented or proposed by Western Australia has been the subject of considerable consultation. This is particularly true of the proposed rural water reforms as regards allocations and trading.

The Council has reservations concerning the admitted failure to consult the public as regards full cost recovery. However consultation regarding other major initiatives has occurred and having regard to the success at implementing reform and consultation regarding reforms across the water industry the Council is satisfied that there is a genuine commitment by Western Australia to public consultation.

The Council has concerns regarding the ongoing education provided by the WC, including the *Waterwise* program, because it involves the service provider selling a conservation message while profiting from customers with greater water usage. The Council notes that this does not lend itself easily to conveying the hard messages about the state's water and the need to conserve it.

The Council notes its preliminary view that service providers are not appropriate public education suppliers on matters such as water conservation. The Council will continue to review this matter prior to the third tranche assessment.



**Timetable of future water allocation plans and environmental water provision studies**

**– as at June 1999**

The following timetable has been prepared as part of the implementation program for the Council of Australian Government's 1994 Water Reform Framework Agreement. Preparation of an implementation program was agreed at a Tripartite Water Meeting of January 14, 1999 involving representatives of SCARM's High Level Steering Group on Water, the Council for Regulatory Reform (CRR) and the National Competition Council (NCC).

Estimates of the sustainable limits and current licensed use are being regularly updated and upgraded. The figures used are the best available as at March, 1999. A major review of all water resource use is being carried out under the National Land and Water Audit. When this project is completed late in calendar year 2000, a significant update of priorities is foreshadowed and modifications to the planned work program are likely.

River Basin	Level of fresh and marginal current water use (relative to the sustainable diversion limit of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal sustainable diversion limit <sup>347</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Basin	River catchments where water use is concentrated	Current licensed use	Expected use or allocated amounts in 5 years time			
Esperance Coast	Low	None	0%	< 5%			
Albany Coast	Low	Two Peoples Bay area	4%	> 10%			2003
Denmark River	Low	Scotsdale Brook	1%	< 5%			2005
Kent River	Low	None	0%	< 5%			
Frankland River	Low	None	0%	< 5%			
Shannon River	Low	None	0%	< 5%	2000		
Warren River	Low	Lefroy Brook	13%	< 20%	2000		2001
Donnelly River	Low	Manjimup Brook	6%	< 10%	2000		2001
Blackwood River	Low	Low	0%	< 5%	2000		
Busselton Coast	Low	Margaret River area, Capel River	2%	< 10%	2000		2003
Preston River	Low	Preston Valley	2%	< 5%	Now		2005
Collie River	Medium	Lower Collie and Leshenaunt Inlet	58%	< 80%	Now		2001

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<sup>347</sup>

**Sustainable Diversion Limit** – is the water available for diversion after first making provision for the environment. Estimates used to calculate the current use % are based on estimates from available in allocation plans. A notional 80% of the “Engineeringly practical diversion limit” has been used where no allocation plan has set a sustainable diversion limit.

River Basin	Level of fresh and marginal current water use (relative to the sustainable diversion limit of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal sustainable diversion limit <sup>347</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Basin	River catchments where water use is concentrated	Current licensed use	Expected use or allocated amounts in 5 years time			
		streams					
Harvey River	Medium <sup>348</sup>		61%	100%	Now	Now	
Avon	Medium <sup>349</sup>		41%	< 50%			
Murray River & Swan Canning	High	Lower Canning, North Dandalup	78%	> 80%	Now	2003 <sup>350</sup>	2001
Moore-Hill River	High	Gingin Brook, Lennard Brook	98%	100%	Now		2002
Yarra-Yarra	Nil		Nil				
Ningham	Nil		Nil				
Greenough River	Nil		Nil				
Murchison River	Low		0%	< 5%			
Wooramel River	Nil		Nil				
Gascoyne River	Low		0%	< 5%			

<sup>348</sup> Planned to move into the High category when the new Harvey Dam is complete

<sup>349</sup> Use is moderate or high because there is limited fresh or marginal water available – growth pressures are low and potable water for towns in the (whealtbelt) area is imported from the Swan Canning River Basin via the Goldfields and Agricultural Water Supply scheme.

<sup>350</sup> A sub-regional review of sustainadiversion limits from Metropolitan reservoirs is required in addition to the more detailed EWPs for Canning and North Dandalup Rivers set for 2001

River Basin	Level of fresh and marginal current water use (relative to the <b>sustainable diversion limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>347</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Basin	River catchments where water use is concentrated	Current licensed use	Expected use or allocated amounts in 5 years time			
Lyndon-Minilya	Low		0%	< 5%			
Ashburton River	Low		0%	< 5%			
Onslow Coast	Low		0%	< 5%			
Fortescue River	Low		0%	< 5%		2000	2000
Port Hedland Coast	Low	Harding River	27%	27%		2000/1 <sup>351</sup>	
De Grey River	Low		0%	< 5%			
Cape Leveque Coast	Nil		Nil				
Fitzroy River	Low <sup>352</sup>		0%	< 50 <sup>353</sup> %	2001	2002 <sup>354</sup>	
Lennard River	Low		0%	< 5%	2001		
Isdell River	Low		0%	< 5%	2001		

<sup>351</sup> As part of the review of the environmental water provisions associated with the Millstream Aquifer - Harding Reservoir conjunctive use scheme that supplies towns in the West Pilbara

<sup>352</sup> Subject to current development proposals that could bring use to Medium or High levels in 5 to 10 years

<sup>353</sup> Assuming current proposals for cotton developments based on groundwater are extended to surface water. The regional and sub-regional allocation planning process will be important in identifying whether the development is environmentally acceptable.

<sup>354</sup> Sub-regional EWP studies would progress following regional allocation studies and positive outcomes of project pre-feasibility studies

River Basin	Level of fresh and marginal current water use (relative to the <b>sustainable diversion limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>347</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Basin	River catchments where water use is concentrated	Current licensed use	Expected use or allocated amounts in 5 years time			
Prince Regent river	Low		0%	< 5%	2001		
King Edward River	Low		0%	< 5%	2001		
Drysdale River	Low		0%	< 5%	2001		
Pentecost River	Low		0%	< 5%	2001		
Ord River	Low <sup>355</sup>		19%	100%	2001	2003 <sup>356</sup>	
Keep River	Nil		Nil				

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<sup>355</sup> Water use will grow to high levels over the next 5 to 10 years with the Stage 2 developments.

<sup>356</sup> Interim allocations and EWPs will be set in 1999

Groundwater Management Area	Level of current fresh and marginal water use (relative to the sustainable diversion limit of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal sustainable diversion limit <sup>357</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Management Area	Sub-areas where water use is concentrated (in or near the High category)	Current licensed use	Expected use or allocated amounts in 5 years time			
Albany	High	Racecourse, Prison and Sandpatch	98%	100%			2000 <sup>358</sup>
Arrowsmith	Medium		36%	>50% <sup>359</sup>			Now <sup>360</sup>
Blackwood	Low		11	< 20%	Now		
Bremer Bay	Medium		52%	< 60%			2003 <sup>361</sup>
Broome (excluding Roebuck sub-	Medium	12 Mile, Townsite, Skuthorpe,	49%	< 60%			Now

<sup>357</sup> **Sustainable Diversion Limit** – is the water available for diversion after first making provision for the environment. Estimates used to calculate the current use % are based on estimates from available in allocation plans. Sustainable groundwater level abstraction limits are set on recharge estimates and updated as the response of the aquifers to abstraction is monitored. Groundwater levels are maintained in equilibrium with the climate. Groundwater level regimes are set in particular cases to ensure protection of wetlands and riparian vegetation. These must be maintained and act as constraints on the sustainable abstraction limits.

<sup>358</sup> Existing limits have been set from reviews of the performance of the town water supply scheme.

<sup>359</sup> Could be higher if major new steel development proposal proceeds

<sup>360</sup> Update of the allocations for the Allanooka sub-area targeted for 2001

<sup>361</sup> While limited fresh to marginal water is available, growth is slow to moderate – last Town Water Supply groundwater review was in 1998



Groundwater Management Area	Level of current fresh and marginal water use (relative to the <b>sustainable diversion limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>357</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Management Area	Sub-areas where water use is concentrated (in or near the High category)	Current use	Expected use or allocated amounts in 5 years time			
area)		Coconut Wells					
Broome-Roebuck Sub-area	Low		1%	< 10%			
Bullsbrook	Medium		54%	< 60%	Now	Now	Now
Bunbury	Medium	Dardinup, Australind			Now		Now
Busselton-Capel	Medium	Broadwater-Jindong, Busselton-Capel Hill, Elgin-Capel River,	42%	< 60%	Now		Now-sub-area updates by 2001

Canning-Kimberley	Low		< 2%	> 70% <sup>362</sup>	2001	2002 <sup>363</sup> for part	
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<sup>362</sup> The economic feasibility and environmental sustainability of a major irrigation project based on using groundwater abstraction from the La Grange sub-basin of the Canning Groundwater Basin is under way.

<sup>363</sup> The Commission is preparing a Sub-regional Allocation plan for the La Grange sub-basin so that EWPs and sustainable diversion limits are set before approval is given to the Irrigation Project.

Groundwater Management Area	Level of current fresh and marginal water use (relative to the <b>sustainable division limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>357</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Management Area	Sub-areas where water use is concentrated (in or near the High category)	Current licensed use	Expected use or allocated amounts in 5 years time			
Carnarvon	High		100%				2000 <sup>364</sup>
Cockburn	High	Kwinana Beach, Lake Coogee, Wattleup	98%	100%	Now	Now, in part	Now - updated 2000
Collie	High		100% <sup>365</sup>	100%	Now		Now
Derby	Medium		46%	< 50%			Now
East Murchinson	High <sup>366</sup>		77%	> 80%		2001	
Esperance	Low	Township and adjacent area <sup>367</sup>	19%	< 25%			2000 <sup>368</sup>
Gascoyne-	Low	Townsite and Exmouth North	22%	< 30%			1999

<sup>364</sup> Allocations are a function of time since last river flow and have been in place for over 10 years. A draft plan is in preparation that is codifying these rules and including the needs of the environment.

<sup>365</sup> Additional draw is also licensed for de-watering coal mines and its use as cooling water in power production

<sup>366</sup> The use is "High" because the fresh and marginal resource is small – licensed use is dominated by mine de-watering and mineral processing using hyper saline water

<sup>367</sup> Use in these sub-areas is at sustainable limits and some relocation of TWS bores may be necessary

<sup>368</sup> In preparation

Groundwater Management Area	Level of current fresh and marginal water use (relative to the <b>sustainable division limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>357</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Management Area	Sub-areas where water use is concentrated (in or near the High category)	Current licensed use	Expected use or allocated amounts in 5 years time			
Exmouth area		subareas					
Gascoyne(excl. Exmouth and Yalgoo areas)	Low		23%	< 30%			2004
Gingin	Low	Seabird, Eclipse Hill	21%	> 30%			Now
Gnangara	High		85%	> 90%	Now	Now <sup>369</sup>	
Goldfields	High <sup>370</sup>		93%	> 95%			Now
Gwelup	High <sup>371</sup>		99%	99%	Now		
Jandakot	High		85%	> 90%	Now	Now	Now
Jurien	Low		6%	< 10%			Now
Kondinin-Ravensthorpe	Medium <sup>372</sup>		31%	< 40%			

<sup>369</sup> Abstraction is from extensive bore-fields developed for public supply. These have sub-regional effects. Local area plans are available down gradient in the Wanneroo Management Area.

<sup>370</sup> The use is "High" as the fresh and marginal resource is small – licensed use is dominated by mine de-watering and mineral processing using hyper saline water

<sup>371</sup> Groundwater area defined to cover public water supply bore-field - hence level of water use.

<sup>372</sup> The use is Medium as the fresh and marginal resource is small – licensed use is dominated by mine de-watering.

Groundwater Management Area	Level of current fresh and marginal water use (relative to the <b>sustainable division limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>373</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Management Area	Sub-areas where water use is concentrated (in or near the High category)	Current licensed use	Expected use or allocated amounts in 5 years time			
Mirrabooka	High		73%	> 80%	Now	Now	Now
Murray	Low		13%	< 30%	Now		2000
Perth	Low		21%	< 50%	Now		
Pilbara (excl. Millstream sub-area)	Medium <sup>373</sup>	De Grey River Alluviums	34%	< 70%	2002		2001
Pilbara - Millstream	High		100%	100%	2002		Now <sup>374</sup>
Rockingham	Medium		41%	< 70%	Now		
Serpentine	Medium	Byford, Jandakot  Serpentine	54%	< 70%	Now		2002
South west coastal		Lake Preston	47%	< 70%	Now		Now
Swan			81%	> 90%	Now	Now	Now
Wanneroo			92%	~ 100%	Now	Now	Now <sup>375</sup>

<sup>373</sup> Considerable brackish and saline mine de-watering is also licensed. Growth pressures are difficult to estimate as they are based on particular mineral development projects proceeding.

<sup>374</sup> To be updated by the year 2002.

Groundwater Management Area	Level of current fresh and marginal water use (relative to the <b>sustainable diversion limit</b> of resources that are of fresh or marginal salinity)		Licensed use or planned use across basin - % of the fresh and marginal <b>sustainable diversion limit</b> <sup>375</sup>		Regional Allocation Plans and EWPs (time when available)	Sub-Regional Allocation Plans and EWPs (time when available)	Local Area Plans and EWPs (time when available)
	Across Management Area	Sub-areas where water use is concentrated (in or near the High category)	Current licensed use	Expected use or allocated amounts in 5 years time			
Yanchep			12%	> 30%	Now	Now	Now

Small Groundwater Management Areas with a fresh or marginal sustainable diversion limit of less than 1 GL/yr are not included. (These are Bolgart, Condinup, Dwellingup, Gibson , Hopetoun, New Norcia, Westonia, Yenart, Yerecoin, Happy Valley, Rottnest Island)

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<sup>375</sup> Trading rules are being developed for incorporation in an updated plan by the year 2000. This will occur under the amended Rights in Water and Irrigation Act

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