

# Volume 2

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## **B10.1 Introduction**

### **B10.1.1 Water Reform Commitments**

#### **B10.1.1.1 Background**

Australia is now in its sixth year of implementing significant reforms to the water industry. The water resources policy agreed to by all Australian governments has and will continue to fundamentally change the way water is allocated, delivered and paid for. The reforms traverse the urban and rural sectors of the industry, including wastewater. They embrace ecological and economic objectives to ensure water is used sustainably and efficiently.

Storing, transporting, treating and disposing of water is an industry as much as any other utility. The water industry's assets are of a similar magnitude to the electricity, telecommunications and airline sectors. Provision of water and wastewater services to the largest urban areas in Australia consumes some \$41 billion of assets, and providers accrue \$4.4 billion in revenue from domestic customers and \$1 billion in profits for government owners. Irrigation water is estimated to add over \$3 billion to Australia's annual agricultural output.

The way in which water is stored, extracted, delivered, used and disposed of can have profound ecological and economic effects. Residential consumers who do not pay for water according to the amount they use have few incentives to use water wisely such as mending a leaking tap. Where service providers seeking to maximise profits also have responsibility for deciding how to manage a water catchment, economic pressures may impact on the catchments' health. The disposal of wastewater and stormwater pollutants in ocean outfalls has caused considerable concern and debate amongst affected communities. The use of water needs to recognise that the value of water as an input to agricultural industries varies from \$70 a megalitre in rice production to about \$200 in the sugar industry and in excess of \$600 for vegetable growers.

Salinity provides perhaps the most graphic example of the interplay of water use and the demands of modern Australia. Salt exists naturally in the soil. However, rising water tables, caused in part by land clearing and irrigation, has led to a \$700 million loss in land capital values, an estimated \$130 million lost in annual agricultural production. There are 2.5 million hectares of severely salt-affected land today and potentially more than 15 million hectares in 50 years. Salinity damages land and freshwaters, affecting the diversity and number of many native plants and animals in affected ecosystems. It has resulted in reduced water quality for downstream users, water that may be too salty to drink and salt affected irrigation water that may the limit type of crops which can be grown. Salinity damages roads and buildings and corrodes pipes and fittings.

### **B10.1.1.2 The Council of Australian Governments' water reform policy**

In 1994, the Council of Australian Governments (COAG), agreeing *'that action needs to be taken to arrest widespread natural resource degradation in all jurisdictions occasioned, in part, by water use and that a package of measures is required to address the economic, environmental and social implications of future water reform'*, adopted a water reform framework (the strategic framework) to *'achieve an efficient and sustainable water industry'*. The strategic framework recognised the diverse structures that existed across the water industry while providing an integrated approach to water resource management.

A meeting of the National Competition Council, High Level Steering Group, Committee on Regulatory Reform and representatives of the Australian and New Zealand Environment and Conservation Council in January 1999 (the Tripartite meeting) clarified elements of the strategic framework relating to institutional arrangements, pricing and groundwater. The Tripartite meeting also proposed an extension to the timeframe for jurisdictions to implement water allocations and trading reforms. The Tripartite meeting reflected the ongoing commitment of all jurisdictions to reforms while highlighting the complexity in implementing various strategic framework commitments. These clarifications have been approved by Senior Officials and presented by the Prime Minister to the Council of Australian Governments. The National Competition Council has assessed progress of States and Territories on the basis of these adjustments to the strategic framework.

The strategic framework includes the following commitments:

- pricing reform based on the principles of consumption-based pricing, full-cost recovery and removal or publication of subsidies and cross-subsidies. For urban water services the achievement of this reform is to be achieved by 1998 and for rural water supply by 2001;
- implementation of water allocations or entitlements, including allocations for the environment as a legitimate water user, separated from land title. This will facilitate trade of water and its reallocation to higher value uses. The strategic framework originally envisaged that arrangements would be in place and considerable progress made by 1998. Environmental allocations for overallocated or stressed rivers are now required by 2001. Substantial completion of agreed implementation programs is required by 2005. The Council has published States' implementation programs in the assessments;
- by 1998, the structural separation of the roles of service provision from water resource management, standard setting and regulatory enforcement;
- future investment in new rural schemes or extensions to existing schemes being undertaken only after appraisal indicates it is economically viable and ecologically sustainable;
- the implementation of integrated catchment management and water quality guidelines; and
- educating Australians about the need for water reform and consulting about the way reforms will be implemented.

### **10.1.1.3 Some Achievements**

States, Territories and local governments have achieved significant reforms in providing water and wastewater services to consumers since the strategic framework was agreed. In part, the changes are an evolutionary response to the many economic and ecological issues facing the water industry. In part, they can be attributed to the integrated approach adopted by the strategic framework to harness change across a most diverse industry. Some of the changes can also be attributed to the process of competition policy reform occurring across governments.

The Council's assessments of progress on water reform demonstrate the real commitment to ensuring a sustainable and viable water industry. What follows are some examples of reforms from across jurisdictions.

#### **Cost Reform and Pricing**

Prices are perhaps the most significant part of any provider/customer relationship. In the past water prices have not reflected the value of services provided. For example in many areas commercial customers have paid more than the cost of the services received while residential customers have paid significantly less.

Under the strategic framework States and Territories have agreed to restructure water tariffs based on the principles of consumption-based pricing, full-cost recovery, cross-subsidies between customer classes being reduced or eliminated, and remaining subsidies made transparent. While this may lead to increasing some water charges COAG considered that the impact on consumers would be offset by cost reductions from more efficient service provision.

The second tranche assessment has focussed on pricing reforms in the urban sector, including major cities, provincial centres and country towns. All jurisdictions have made progress towards their pricing commitments.

In many cases, water bills have fallen. Pricing reform across the Australian metropolitan water industry has contributed to the more than 16 per cent reduction in water and sewerage bills between 1992-1993 and 1997-1998, and a decline in operating costs of over 18 per cent. Small business water bills in Victoria have decreased by as much as two-thirds through the replacement of property value based pricing with consumption based pricing.

Customers are using less water. A 20 per cent reduction in water use in Brisbane between 1995-1996 and 1997-1998 is attributed to the adoption of metering and pay for use pricing.

Assistance is still available for those who need it. Pricing reform under the strategic framework does not mean that concessions to community groups, pensioners or those in rural or remote communities will be removed. Governments continue to provide substantial assistance to these groups transparently through clearly defined and separately funded Community Service Obligations.

Governments are looking at new projects from both a financial and environmental perspective. This will go a long way to ensuring that mistakes in water management of the past are less likely to be repeated in the future. States have undertaken detailed

assessments of new projects that have resulted in some proposed rural water schemes being found wanting either environmentally or economically, and therefore not built.

### **Institutional Reform**

Service providers are required to deliver water and wastewater services in as commercial a manner as possible. They operate at '*arms length*' from government and are clearly accountable for their financial and operational performance. Governments' role continues through control of standard setting and regulatory functions and resource management. All institutions should have clear and non-conflicting objectives and more transparent accountability mechanisms.

Water Authorities are being broken up into service providers and regulators. In Western Australia the previous Water Authority of Western Australia became the Water Corporation on 1 January 1996. The Water and Rivers Commission was established at this time to manage and protect Western Australia's water. The Office of Water Regulation was also established to administer a licensing scheme that set standards of service for the Water Corporation and other water service providers.

Water Corporations are being given commercial objectives and providing significant dividends to governments. In 1997-1998, the 19 largest urban water service providers, serving around 13 million Australians, paid almost \$800 million to government owners. At the same time water and sewerage bills fell across the industry.

Rural communities are being involved in managing their water services. In Victoria Rural Water Authorities enter into water service agreements with Water Services Committees. Water users elect the members of these committees and the agreements cover areas including water pricing, corporate planning, investment and service delivery. Catchment Management Authorities perform rural resource management functions.

Governments are ensuring appropriate controls remain on their water businesses. In New South Wales the Independent Pricing and Regulatory Tribunal (IPART) sets prices for major urban centres and rural bulk water. The IPART process permits the public and service providers to make submissions on pricing determinations. IPART provides independence and transparency in the price setting process. Service providers are bound by the price determinations. The Independent Pricing and Regulatory Commission in the ACT provides similar integrity in setting the water service charges for ACTEW customers. Independent price oversight has also been introduced in sections of the South Australian and Tasmanian water industries.

### **Water Allocations and Trading**

When water is scarce, clearly defining water property rights and permitting trade in those rights means water can move to its highest value use. When this occurs together with legal recognition of the needs of the environment for water, there is a strong basis on which ecologically sustainable development can proceed. People needing water can buy it from those who are not using all of their entitlement.

The co-operation of the states<sup>48</sup> of the Murray Darling Basin provides a good example of the integrated nature of water allocation and trading reforms.

Irrigators and other users are being given clear rights in water. A comprehensive system of water property rights separate from land and other rights has in large part been implemented in Victoria. This process has occurred over a number of years. In New South Wales, water rights for most of the Murray Darling Basin are separated from land title. South Australia has also implemented significant reforms to separate water rights from other rights.

In addition, New South Wales, Victoria and South Australia have agreed to cap their diversions from the Murray-Darling Basin to 1993-1994 levels. This was a landmark decision in natural resource management against a background of over 100 years of active development of the Basin's water resources. Queensland is looking to join the other states in capping diversions. The cap strikes a balance between consumptive and environmental needs. It helps ensure security of supply for water users. An independent audit, published by the Murray Darling Basin Commission, reports on compliance with cap commitments, recording achievements and initiatives to meet the cap.

The Murray-Darling Basin Commission has co-ordinated a pilot interstate water trading project. In an environment where no further water is available for extraction, this is permitting water to move to areas where it is highly valued.

In Victoria there was significant intrastate water trading in 1997-1998; some 20 000 ML of water was permanently transferred and another 250 000 ML water temporarily traded. A recent conservative estimate of annual gains to the New South Wales economy from water trading was about \$65 million.

### **Environment and water quality**

The strategic framework acknowledges the importance of allowing enough water to remain in our rivers and streams to achieve a healthy sustainable riverine environment.

The problems of stressed rivers are being addressed. Different jurisdictions have each adopted their own approach towards the goal of attaining healthy rivers, streams, wetlands, groundwater systems and other water systems. To varying degrees common threads in the approaches developed include establishment of environmental flow requirements, strategies for reducing withdrawals in over-allocated systems, support for Integrated Catchment Management approaches, and implementation of the National Water Quality Management Strategy.

Local groups are involved in making decisions. In NSW, community based groups have negotiated and implemented environmental flow rules on all regulated rivers.

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<sup>48</sup> New South Wales, Victoria, South Australia, Queensland and the Commonwealth are all party of the Murray-Darling Basin Agreement and participate in the Murray-Darling Basin Commission and Ministerial Council. The ACT participates, since 1998, in relevant affairs of the Commission and Ministerial Council.

Most unregulated rivers have been classified as to their stress and this will influence decisions such as the priority for development of management plans.

Governments are addressing water quality through whole of catchment approaches. In Victoria Catchment Management Authorities develop and co-ordinate Regional Catchment Strategies in conjunction with other stakeholders such as landcare groups and local councils. Detailed work programs address issues such as salinity, pest plants and animals and the effects of irrigation.

The National Water Quality and Management Strategy is being developed in response to growing community concern about the condition of the nation's water and the need for environmentally sustainable management. Nationally consistent approaches are being developed to address the key issues in water quality management that impact on the environment. Policies, principles and national guidelines are being drafted by specialist working groups with community input to enable the development and implementation of State and regional goals and action plans.

### **Public Consultation and Education**

In order to gain public recognition of the need for urgent action to reform the water industry and acceptance of the solutions proposed in the strategic framework, governments have engaged in extensive consultations with the whole community, including irrigation farmers, residents, environmental groups and students.

In Western Australia, the proposed reforms to water entitlements and trading have been the subject of mailouts, public meetings and ongoing discussions stretching over some 18 months.

Waterwatch is a national community waterway monitoring and environmental education program that promotes water quality monitoring. It involves Commonwealth, State and local governments, school communities, the business sector and other organisations and creates a community ownership ethic for catchment wide land and water management. As a result of growing community participation, the program has developed into a network of more than 1 800 groups regularly monitoring at 4 000 sites across Australia, building a picture of the health of waterways and catchments.

## **B10.1.2 Assessing water reform**

### **Process of assessment**

COAG adopted the strategic framework at its meeting in February 1994. The National Competition Council was charged with assessing the implementation of the strategic framework along with other National Competition Policy reforms in April 1995.

Since that time, the Council has worked with jurisdictions to increase understanding of the water reform commitments and develop an assessment process that is co-operative, sensible and fair.

For example, the Council secretariat participated in the Standing Committee of Agriculture and Resource Management Taskforce (Taskforce) between 1996 and 1998. Achievements of the Taskforce included the conduct of voluntary reviews of reform implementation and the development of full cost recovery guidelines. In 1998, the High Level Steering Group comprising Chief Executives of water agencies replaced the Taskforce to provide further focus in water reform.

All Heads of Government received the Council's letter in June 1998 clarifying the Council's interpretation of a number of technical matters in the strategic framework. In December 1998 the Council again wrote to all Heads of Government providing an assessment document in which all relevant elements of the strategic framework and the Council's interpretation of commitments were included.

As noted above, in January 1999 the Council participated in the Tripartite meeting with representatives of all States and Territories.

The Council has engaged in bilateral discussions with every State and Territory in completing this assessment. Those discussions have enabled information sharing, clarified further reform commitments and provided an effective forum to discuss issues arising in the assessment process. All jurisdictions have been provided with draft assessments for comment and correction. The Council believes that this '*no surprise*' assessment process engenders confidence in both the assessments themselves and any conclusions drawn or recommendations made by the Council.

Because the history, institutional structures and physical environment varies greatly across the country, there are different reform issues in each State and Territory. Therefore, there are differences between the jurisdictions in the type of information and the issues discussed in these assessments.

Overall, the second tranche assessment has focussed on looking at the systems and structures States and Territories have in place and assessing whether they will deliver real benefits to the water industry in the future. In the third tranche assessment the Council will also be looking for further evidence to demonstrate that these benefits have been realised.

### **Council recommendations**

The water industry is incredibly diverse. Water resources include groundwater and surface water, ephemeral and continuous flow rivers and streams and regulated and unregulated systems. Providers include government departments and statutory corporations, local government and private companies. Some rivers are overallocated while others are virtually pristine. Some catchments are used for a variety of agricultural, community, recreational and water supply uses while others are used primarily for water supply and nature conservation.

This means that the way in which reforms have been implemented has differed from jurisdiction to jurisdiction. The Council's assessments reflect this.

The assessments also emphasise further progress of water reform. Where the Council is not satisfied that a reform commitment has been met, States and Territories have identified a path to implement change. Slippages in the implementation of the

strategic framework have not resulted in the Council recommending deductions in competition payments. In relation to some specific commitments, the Council will undertake a supplementary assessment of reform progress. However, where the strategic framework may have been breached, the Council has suspended part of the competition payments pending further information and assessment.

## **B10.1.3 Summary of jurisdictions' assessments**

### **Cost Reform and Pricing**

#### **Urban full cost pricing**

New South Wales, Victoria, Western Australia, South Australia, Tasmania and the ACT have achieved substantial full cost recovery throughout most city and town areas.

Queensland was unable to provide the Council with information for many water service providers, although some local governments are well advanced in achieving reforms. Guidelines have been developed to assist local governments in implementing appropriate tariffs. The Northern Territory's primary service provider did not recover the cost of water and sewerage businesses in 1997-1998, however a significant improvement is forecast for 1998-1999.

#### **Urban consumption based pricing**

Access and use charges for water services have been implemented in Victoria, Western Australia, the Northern Territory and the ACT. Access and use charges for water services have also been implemented throughout much of New South Wales, Queensland and South Australia, although there remain significant free water allowances in some areas. In Queensland issues involving the implementation of tariff reform recommendations still need to be resolved. Tasmania has experienced delays in implementing two part tariffs although the State government has undertaken to put in place two part tariffs where cost effective.

Property based sewerage tariffs have been replaced with a cost reflective charge in Victoria, the ACT, the Northern Territory and throughout most of New South Wales and Queensland. Western Australia, South Australia and Tasmania have in large part retained property based charges, although Western Australia has identified a timetable to remove these pricing structures.

Victoria, New South Wales, Queensland and Tasmania have identified metropolitan bulk water charges. Vertically integrated water service providers in Western Australia, South Australia and the Northern Territory have not identified bulk water charges but a process is underway to achieve this.

#### **Removal of cross-subsidies**

Cross-subsidies between customer classes have on the whole been removed from pricing structures in the ACT. New South Wales, Victoria, Western Australia and

South Australia have removed many cross-subsidies and where they remain processes have been identified to review and reform tariffs.

The progress of reform in Queensland, the Northern Territory and Tasmania is less certain, although Queensland has developed guidelines to assist local governments to identify cross-subsidies.

### **Community Service Obligations**

Clearly identified and targeted community service obligation (CSO) payments are made to water service providers in New South Wales, Victoria, Western Australia, South Australia and the ACT. The Northern Territory has recently refined its CSO framework.

Queensland was unable to provide the Council with details of many CSO payments. The Tasmanian government is working with local governments to develop an appropriate CSO framework.

### **Rate of Return**

Service providers in most jurisdictions earn positive rates of return. The position is less clear in Queensland, where there is insufficient information presently available. Improvements are expected in the Northern Territory and Tasmania has initiated measures to promote performance.

### **Assessment of economic viability and ecological sustainability of rural schemes**

New investments in rural water schemes in most jurisdictions are the subject of robust appraisals regarding economic viability and ecological sustainability.

There are concerns regarding the assessment and/or implementation of recommendations for a number of recent infrastructure projects in Queensland. The Council is working with Queensland prior to finalising its recommendations in respect of these schemes.

### **Devolution of management of irrigation schemes**

Irrigators in most jurisdictions now manage or own their irrigation infrastructure, or work co-operatively with government agencies. Queensland and Tasmanian arrangements are currently subject to review.

### **Institutional Reform**

#### **Separation of functions**

In many sections of the water industry throughout Australia, the functions of regulation, standard setting and resource management have been removed from service providers. The assessments recognise the considerable progress to date, notably in sections of the New South Wales, Victoria, Western Australia, South Australia and the ACT water industries. The Council is of the view, however, that there remains significant work to be done.

Most States and Territories have undertaken further reviews of institutional frameworks or have committed to do so. For example, New South Wales is in the process of implementing water reforms recommended by the Sydney Water Inquiry. Victoria has undertaken to review current institutional arrangements. Queensland has developed proposals for licensing water service providers and is considering responses. Western Australia is continuing to review options as regards price regulation. South Australia is transferring plumbing regulation from the service provider. Tasmania has new institutional arrangements before the Parliament. The ACT has completed a comprehensive review of regulatory arrangements for water and is presently consulting on recommendations. The Northern Territory has separated resource management and service provision and is considering options for separating service provision and regulatory functions.

### **Commercial focus for metropolitan service providers**

The Council is satisfied that metropolitan water and wastewater providers in all states and territories have appropriate arrangements to maximise efficiency of service delivery, or will achieve this in the near future.

### **Participation in performance monitoring and benchmarking arrangements**

All states and territories are participating in industry-wide comparison and benchmarking initiatives.

### **Water allocations and trading**

#### **Comprehensive systems of water entitlements**

Victoria, South Australia and the ACT have implemented legislation separating water rights from land title.

New South Wales has arrangements that provide for separation in large part, although some water entitlements remain linked to the land; a comprehensive review of water legislation will take place this year. Western Australia has drafted and Tasmania has introduced into Parliament legislation to implement reforms. Queensland has consulted regarding its water law reform proposals and is presently preparing legislation to update existing systems. The Northern Territory has undertaken to amend relevant regulation.

#### **Allocations for the environment**

All states and the ACT have developed timetables to review surface and groundwater resources and provide a better balance between consumptive use and environmental needs. Many rivers, streams and aquifers have been reviewed and there is substantial evidence of beneficial environmental outcomes.

The Northern Territory has outlined its program to identify environmental flows but has not provided a finalised timetable. New South Wales, Queensland and Western Australia are still to finalise legislative reforms to facilitate ecological outcomes. Tasmania has introduced the necessary legislation into Parliament.

### **Arrangements for water trading**

Victoria, South Australia and the ACT have in place appropriate legislative provision to permit trade in water resources. New South Wales also provides for extensive trading of water entitlements although further reform has been identified. Western Australia and Tasmania have legislation either drafted or before Parliament. Queensland and the Northern Territory have developed proposals for water trade reforms and are drafting the necessary legislation or regulatory amendments.

### **Environment and water quality**

#### **Integrated Resource Management**

There is a wide variety of structures, agencies and policies in place across states and territories to further implement integrated resource management of land and water resources. The development of many arrangements is ongoing, and processes and actions are continuing in consultation or partnership with water users, environmental advocates and local communities.

#### **National Water Quality Management Strategy**

All states and territories have contributed the development and implementation of National Water Quality Management Strategy Guidelines.

#### **Public Consultation and Education**

The Council has been impressed with the extensive education to consumers of water about the need for reforms. Consultation, in particular about reforms to water rights, has resulted in schemes being created or proposed to address unique needs of diverse communities and industries.

### **Overall assessment of implementation of water reform**

The Council is satisfied that Victoria and the ACT have met reform commitments required for the second tranche.

There will be a supplementary assessment of water reform in New South Wales, Western Australia, Queensland and Tasmania in June 2000 to assess whether legislation to effect water allocation and trading reform has been passed by respective Parliaments. The Tasmanian assessment will also include consideration of institutional reforms included in proposed legislation and progress with pricing reform.

There will be a supplementary assessment of South Australia's commercial water pricing in December 1999 following announcement of the State's retail water pricing policy. Progress on bulkwater, commercial and wastewater pricing will also be assessed in June 2000.

There will be a supplementary assessment in December 1999 of Queensland's progress on reform commitments in relation to urban cost recovery and pricing, and institutional arrangements.

During this time the Council will seek to work through outstanding issues concerning the assessment of economic viability and ecological sustainability of rural schemes. The Council has recommended a suspension of 25 per cent of Queensland's competition payments in respect of this matter.

The Council will also undertake a further review of Tasmania's progress on the implementation of two part tariffs for urban water supply and devolution of irrigation management in December 1999.

Finally, the Council will assess, in December 1999, the Northern Territory's reform progress in relation to urban cost recovery, bulk water pricing, cross-subsidies, water allocations and trading, and institutional reform. The Council will also look for a comprehensive timetable on action to be taken in relation to priority river and ground water systems.

### **Future assessment of water reform**

The Council has now built up a considerable amount of information concerning water reform across States and Territories. Matters of general concern have been noted. Where reforms have not been fully met, governments have committed to further processes. These matters and the remaining aspects of the strategic framework will be closely scrutinised during the period prior to the third tranche assessment.

## **B10.2 WATER REFORM, NEW SOUTH WALES**

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## Table of Abbreviations

ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ANZECC	Australian and New Zealand Environment and Conservation Council
AWT	Australian Water Technologies P/L
CRCFE	Co-operative Research Centre for Freshwater Ecology
CM Act	Catchment Management Act 1989
CMC	Catchment Management Committee
CMT	Catchment Management Trust
COAG	Council of Australian Governments
CPA	Competition Policy Agreements
CSO	Community Service Obligation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DLWC	Department of Land and Water Conservation
DUAP	Department of Urban Affairs and Planning
EBIT	Earnings before Interest and Tax
EFR	Environmental Flow Rules
EPA	Environment Protection Agency
GCC	Gosford City Council
GMC	Groundwater Management Committee
GMP	Groundwater Management Plan
GTE	Government Trading Enterprise
HRC	Healthy Rivers Commission
HWC	Hunter Water Corporation
IAG	Independent Audit Group
IPART	Independent Pricing and Regulatory Tribunal

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KL	Kilolitre (1 000 l)
LIS	Line in the Sand
LRMC	Long Run Marginal Cost
LWMP	Land and Water Management Plan
MDBC	Murray Darling Basin Commission
ML	Megalitre (1000 kL)
MoU	Memorandum of Understanding
NCC	National Competition Council
NHMRC	National Health and Medical Research Council
NMU	Non-metropolitan Urban Water Authority/Supplier
NPWS	National Parks and Wildlife Service
N SW Health	Department of Health
NWQMS	National Water Quality Management Strategy
OL	Operating Licence
OMA	Operating, Maintenance and Administration expenses
RoR	Rate of Return
RFMP	River Flow Management Plan
RMC	River Management Committee
RMP	River Management Plan
RWA	Rural Water Authority
SCA	Sydney Catchment Authority
SCARM	Standing Committee on Agriculture and Resource Management
SWC	Sydney Water Corporation
SOC	State Owned Corporations Act 1989
TCM	Total Catchment Management
TER	Tax Equivalent Regime

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WAC	Water Advisory Council
WACC	Weighted Average Cost of Capital
WQAP	Water Quality Action Plan
WSAA	Water Services Association of Australia
WSC	Wyong Shire Council

# B10 Water Reform

## B10.2 New South Wales

### 10.2.1 EXECUTIVE SUMMARY

This is an assessment of New South Wales' 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*

- Water service providers under the jurisdiction of the Independent Prices and Regulatory Tribunal (IPART) have substantially achieved full cost recovery.
- Non Metropolitan Urban service providers (NMUs) are also in large part attaining full cost recovery as required by the framework. The Council considers that the various mechanisms outlined by New South Wales to encourage full cost recovery provide considerable incentive to local governments to meet reform commitments.
- The Council will monitor the implementation of a Tax Equivalent Regime for NMUs prior to the third tranche assessment.
- Sydney Water Corporation (SWC) and Hunter Water Corporation (HWC) have implemented effective two part tariff regimes.
- The large base consumption allowance for Gosford Water Corporation (GCC) and Wyong Shire Council (WSC) customers effectively results in many being charged a single access fee without a volumetric charge or consumption based pricing; the Council notes the advice of New South Wales that this will be eliminated from 1 July 2000.
- The majority of larger NMUs have implemented two part tariffs. The Council notes in this respect that the IPART Pricing Principles for NMUs reflect the strategic framework requirements for consumption based pricing. There are, however, significant water businesses that have not met reform commitments. The Council notes the commitment of New South Wales to negotiate on a case by case basis with the local governments that have made little to no progress towards appropriate tariffs. The Council will monitor the further implementation of pricing reform for these local governments prior to the third tranche assessment.
- There is an emphasis on volumetric charging for both metropolitan bulk water and waste water pricing.

- HWC has removed cross-subsidies and SWC will shortly have achieved this objective.
- Because of the large base allowance provided by GCC and WSC, the Council is concerned at the cross-subsidisation of some water users by those whose water use is less than the allowance. The Council notes that this allowance will be eliminated from 1 July 2000.
- While there has been strong commitment by the New South Wales and local Government NMUs to remove cross-subsidies, significant businesses still retain pricing structures that suggest cross-subsidisation between customer classes. The Council will monitor the further implementation of pricing reform for these local governments prior to the third tranche assessment.
- New South Wales has a clearly defined and well targeted Community Service Obligation (CSO) regime.
- Service providers, on the whole, have a real rate of return on assets as required by the strategic framework.
- New investments in rural schemes are the subject of robust appraisals regarding economic viability and ecological sustainability.
- Operational responsibility for the management of irrigation areas has been devolved.

The Council is, on the whole, satisfied that New South Wales has met reform commitments for pricing reform for the second tranche.

### ***Institutional reform***

- The Council has reviewed the findings of the Sydney Water Inquiry and regards the recommendations as to institutional arrangements as being consistent with the water reform commitments. The Council notes the creation of the Sydney Catchment Authority (SCA) to take over responsibility of the catchment and the re-ordering of the relationship between SWC and New South Wales Health. The Council will continue to monitor implementation of other recommendations prior to the third tranche assessment. The Council would also expect to see a flow through of the recommendations to HWC.
- Present regulatory arrangements for NMUs are being improved to provide increased transparency as to financial accountability of service providers and reviewed to permit greater separation of functions. The Council will carefully review new arrangements prior to the third tranche assessment to ensure rigorous separation of service provision from other functions.
- Present arrangements for State Water achieve, in large part, appropriate institutional separation for rural water supply.
- SWC and HWC have a commercial focus.

- Performance monitoring and benchmarking practices present in New South Wales at this time meet framework commitments, although the Council will continue to monitor the development of NMU and rural agency performance indicator tools.

The Council is satisfied that New South Wales has met its second tranche commitments to reform water industry institutions, though some areas will be monitored closely prior to the third tranche assessment.

### *Allocations and trading*

- The present entitlement system in regulated systems and groundwater meets the requirements of the framework. However, the Council is not satisfied that this is the case for water licences on unregulated rivers and streams. In these systems the title to water is presently tied to the land area and use. The Council is therefore not satisfied that New South Wales has in place a comprehensive system of water entitlements backed by separation of water property rights from land title and a clear specification of entitlements in terms of volume, reliability or transferability. The reform agenda outlined by New South Wales addresses many of the aspects of the framework. New South Wales has committed to reviewing its present legislation and the Council will undertake a supplementary assessment for this reform commitment by June 2000.
- The achievement of New South Wales in developing Environmental Flow Rules (EFRs) on regulated rivers has advanced the process of balancing environmental and consumptive uses of water. However, the Council is not satisfied that allocations have been developed for the environment in other systems. Progress in unregulated systems is somewhat dependent on reforms outlined by New South Wales. Policy work for groundwater management is still being developed. The Council will undertake a supplementary assessment for this reform commitment by June 2000.
- The Council has agreed to the implementation program for allocations as outlined in attachments 3, 4 and 5. In doing so, the Council notes that the implementation programs may change over time provided there is agreement between New South Wales and the Council.
- Significant trading in water is occurring in New South Wales, with some 200 000-700 000 ML traded annually and a significant net contribution to the New South Wales rural economy. The Council is not satisfied, however, that present trading arrangements remove impediments to trade. In some cases approvals for trades can take several seasons. Many of the acknowledged deficiencies will be addressed by new water licensing arrangements. In addition, reviews underway will examine and make recommendations regarding trading rules. The Council will undertake a supplementary assessment for this reform commitment by June 2000.

The Council is not satisfied that New South Wales has met this reform commitment and will undertake a supplementary assessment by June 2000.

### ***Environment and water quality***

- The extensive work of New South Wales in integrated resource management satisfies the requirement of the strategic framework. The Council has reviewed the provisions of the *Catchment Management Act 1989* and notes that it provides a comprehensive framework consistent with the strategic framework. The Council also notes that new initiatives such as the Healthy Rivers Commission and the development of Land and Water Management Plans will ensure continuing review of and improvement to existing management practices.
- New South Wales has met its second tranche reform commitment in respect of the National Water Quality Management Strategy. The Council notes that it will continue to review the implementation of the strategy, including monitoring and compliance, prior to the third tranche assessment. The Council notes the recommendations of the Sydney Water Inquiry concerning the quality of SWC's water supply and will continue to monitor the implementation of the recommendations prior to the third tranche assessment.

The Council is satisfied that New South Wales has met its second tranche commitments in respect of the environment and water quality. These matters will be closely reviewed by the Council for all jurisdictions prior to the third tranche assessment.

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

- New South Wales has embarked on extensive public consultation and education programs as part of reform initiatives and ongoing work.
- 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, New South Wales has met major reform commitments for the purposes of the second tranche.

The Council will undertake a supplementary assessment on 30 June 2000 to assess whether legislation to effect water allocation and trading reform commitments has been passed by the New South Wales 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 New South Wales 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.

## **B10.2.2 REFORM COMMITMENT: COST REFORM AND PRICING**

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

#### **10.2.2.1 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, 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.

### **NSW arrangements**

#### **Background**

New South Wales has four principal metropolitan water suppliers (Sydney Water Corporation (SWC), Hunter Water Corporation (HWC), Gosford City Council (GCC) and Wyong Shire Council (WSC)) whose prices are regulated by the Independent Pricing and Regulatory Tribunal (IPART). Sydney Water Corporation supplies water services to 3 489 000 persons and Hunter Water Corporation to a population of some 469 000 persons.<sup>49</sup> Each of these authorities presently own their own dams and supply their own bulk water.

In addition there are one hundred and twenty-six NMUs, operated on the whole by local government councils, whose prices are not regulated by IPART, although IPART has provided guidelines for pricing.<sup>50</sup> Some 80 per cent of NMUs supply water and sewerage services to populations of less than 20 000, 50 per cent to

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<sup>49</sup> WSAA Fact '97, The Australian Urban Water Industry.

<sup>50</sup> IPART has produced *Pricing Principles for Local Water Authorities* (September 1996) which examined 'generic issues in order to identify the scope for a common approach to pricing principles'.

populations of less than 5 000 and 15 per cent of NMUs to populations of less than 1 500. Some NMUs own their own dams and have a statutory right to provide their own bulk water, while the majority are supplied bulk water by the Water Administration Ministerial Corporation, part of the Department of Land and Water Conservation. It is noted that DLWC supplies bulk water to other users including for example irrigators, industry and farmers. Other NMUs are supplied by SWC and, in the case of two authorities, HWC.<sup>51</sup> Both SWC and HWC both pay volumetric water usage charges to DLWC. IPART regulates bulk water pricing.

## Full Cost Recovery

### IPART

Prices for SWC and HWC have been regulated by IPART since 1992. At present both are the subject of a four year price path (1996-2000) and have undergone a mid-term price review. The SWC review resulted in a reduction in annual sewerage charges for non-residential customers by an additional amount of \$40 million because of changes in CPI below those forecast. GCC and WSC have been regulated since 1996, and are presently on a three year price path (reviewable 1999). In determining prices, IPART is required to have regard to particular matters including:<sup>52</sup>

- the cost of providing the services concerned;
- the protection of consumers from the abuses of monopoly power in terms of prices, pricing policy and standard of services;
- the appropriate rate of return (RoR) on public sector assets, including appropriate payment of dividends to the Government;
- the need for greater efficiency in supply of services so as to reduce costs for the benefit of consumers and taxpayers;
- the need to maintain ecologically sustainable development by appropriate pricing policies that take account of options to protect the environment;
- the impact on pricing policies of borrowing, capital and dividend requirements of the agency (in particular, the need to renew or increase relevant assets);
- the need to promote competition in the supply of the services concerned;
- the social impact of the determination; and
- the standards of the services.

IPART also undertook a review of charging by NMUs and produced the Pricing Principles for Local Water Authorities (the principles) to be applied to them.

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<sup>51</sup> Dungog Council, which is the eighth largest customer of HWC, and is treated as a large customer, and a small village of 100 connections which is part of the Mid Coast Water area of supply.

<sup>52</sup> Independent Pricing and Regulatory Tribunal Act, 1992, section 15.

Relevantly, the principles endorsed the application of competitive neutrality where appropriate (Recommendation (R) 2.2), and supported the view that all local water authorities should urgently move to recover operations, maintenance and administration costs (R 4.1). In the medium term the Tribunal generally supported the achievement of minimum business cost recovery as defined by the COAG Expert Group (i.e., incremental costs, R 4.2) and considered that positive real rates of return can be appropriate in choosing and charging for new investments in water services (R 4.3). The Tribunal also noted its preference for a simple two part tariff with the usage component based on the marginal cost of supply (R6.2), although remarking that in a very few water supply systems there may be little gain in terms of efficiency from moving to this system (R 6.3).

### Asset valuation

As regards the valuing of the assets, the *Line in the Sand* (LIS) approach, developed jointly by Treasury, IPART and New South Wales Water Industry Working Group, is integral to pricing of water. LIS involves determining a value for a water supply agency's existing asset base by discounting expected future cash flows by the cost of capital; it effectively:

*'writes down the value of the GTEs asset base relative to its depreciated replacement costs. It assumes that a GTEs assets are worth no more than the [net present value] of the service potential from these assets discounted at the opportunity cost of capital.'*<sup>53</sup> (p12)

Future expenditure on new assets is to be recovered at full economic cost including WACC. The departure from the Expert Group's advice on asset valuation (the preferred deprival value methodology) is explained by the explicit recognition of past investment practices that preceded the strategic framework. In addition, all costs incurred after *drawing the line in the sand* are fully recovered, including the opportunity cost of capital.

### Financial performance

As regards SWC & HWC, snapshots of the financial performance for 1996-1997<sup>54</sup> are as follows:

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<sup>53</sup> New South Wales Treasury report *Valuation of Infrastructure Assets for Pricing Purposes* (September 1997), part 3.2.

<sup>54</sup> From IPART mid term reviews.

**Table 10.2.1 Financial performance of SWC and HWC, 1996-1997**

<u>Measure*</u>	<u>SWC</u>	<u>HWC</u>
Total Revenue	1201	135
Operating expenditure	662	65
Depreciation	175	28
EBIT	364	43
Interest	187	7
Profit before tax (includes abnormal items)	177	54
Tax or equivalent	99	12
Dividend	78	26

\* all figures in \$million

HWC and SWC earn real rates of return on assets of around 2 per cent.<sup>55</sup>

As regards GCC and WSC, the IPART determination indicates that in 1998-1999, these providers are estimated to have rates of return of 2.6 per cent and 2.7 per cent respectively. It appears from the determination (paragraph 5.3.1 of both determinations) that neither authority is subject to a TER. It is noted that the Council was informed that GCC may not be complying with intent of the IPART determination and that this will be reviewed by IPART and any adjustments made in the July 1999 price determination.

The July 1997 Department of Local Government booklet '*Pricing and Costing for Council Businesses – A Guide to Competitive Neutrality*' (the Competitive Neutrality Guide) noted that water supply and sewerage services (for NMUs) should be regarded by Councils as businesses. For those water businesses that have a turnover of greater than \$2 million (Category 1 businesses) the Competitive Neutrality Guide required that they be corporatised, apply full cost attributions, make CSOs explicit and operate in the same regulatory framework as private business. For those businesses with turnovers of less than \$2 million (Category 1 businesses) there is no requirement to corporatise and there is more flexibility as regards cost attribution. The Competitive Neutrality Guide provides information or guidance concerning the following relevant matters:

- that the pricing policy for water businesses will include a reliable allocation of both direct and indirect costs;

<sup>55</sup> Rate of return = EBIT/Average fixed assets, COAG Stocktake Report by SWC and HWC, 8/98.

- that TERs, debt guarantee fees and a RoR on capital should be included in the pricing policy where relevant;
- that regard should be had to the IPART principles; and
- that councils will need to make subsidies for both categories explicit.

The RoR formula for local government businesses is expressed as operating result before capital amounts/written down replacement cost of property, plant and equipment. The Guide noted that as regards water businesses, a different context having regard to the IPART Pricing Principles, is appropriate.

The December 1997 New South Wales annual report notes that the NMU sector also achieves positive rates of return on the replacement cost of assets. At a bilateral meeting between Council and New South Wales officials on 19 October 1998 New South Wales officials advised that 80 per cent of NMUs achieve a positive RoR averaging 2.5 per cent. It was noted that full cost recovery may be impossible for some towns with declining populations.

The 1995-1996 *New South Wales Water Supply and Sewerage Performance Comparisons* indicates that the majority of NMUs returned positive rates of return on water and sewerage,<sup>56</sup> ranging from about 7.5 per cent (Kempsey) to about -5 per cent (two unnamed councils with populations of less than 1 500 and 1 501-5 000 respectively). The median real RoR for water supply was 2.1 per cent and for sewerage was 2.8 per cent. The report notes that a large number of councils had a negative operating sales margin for sewerage. These councils should review their charges to ensure they recover total costs.

### **Further information provided to the Council**

In further information provided to the Council (18 May 1999), New South Wales advised that all NMUs are at least recovering operation, maintenance and administration costs. Department of Local Government comparative information on performance notes that average water service revenue for all categories of local government exceeds water service costs.

Legislation<sup>57</sup> requires separate accountability for water and sewerage rates and for the purposes of rate pegging local government's general income charges for water and sewerage services are excluded. NMU assets have been priced at current replacement cost using prices derived from a database of competitive tenders<sup>58</sup>. Local governments are encouraged (via financial incentives) to prepare strategic business plans for water and sewerage services covering the next 20 years; plans for 83 (of 126) NMUs have

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<sup>56</sup> Parameter:  $((\text{total revenue} - \text{grants for acquisition of assets} - \text{total expenditure} + \text{interest expense} - \text{interest income}) \times 100) / (\text{written down replacement cost of property, plant and equipment})$ .

<sup>57</sup> Section 409, Local Government Act.

<sup>58</sup> The Reference Rates manual is indexed annually and a full revaluation is undertaken every five years.

been prepared. The financial plan is used to negotiate levels of customer service at agreed annual charges and demonstrate financial viability.

As regards those service providers with more than 10 000 assessments information provided is summarised at Attachment 1. In addition, the following relevant information was provided:

- Local governments supplying about 5 per cent of NMU water have a negative RoR on water and/or sewerage services.
- 3 of the 10 *sewerage only* local governments, with a turnover of about \$1.2 million have a negative RoR.
- 2 of the 8 *no sewerage* local governments, with a turnover of \$2.84 million have a negative RoR. Central Tablelands has a turnover of \$2.74 million and a negative RoR of 0.9 per cent. There is a pay for use tariff structure.
- Albury has a -0.6 per cent RoR on water assets and 7.1 per cent RoR on sewerage assets. Broken Hill has a 0.7 per cent RoR on water assets and a -1.1 per cent return on sewerage assets (RoR on water business assets 0.2 per cent). Goldenfields has a -0.8 per cent RoR on water assets.

The following information is provided concerning the two remaining sizeable water and sewerage providers with negative rates of return:

<b>Relevant indicator</b>	<b>Bourke Council</b>	<b>Greater Lithgow City Council</b>
Water consumption	2 530	2 460
Water supply turnover	\$0.7million	\$3.17million
Sewerage turnover	\$0.48million	\$1.88million
Economic RoR	-5.4 per cent	-2.9 per cent

In further information provided to the Council<sup>59</sup> it was noted that local government businesses pay state charges but are not subject to Commonwealth taxes or tax-equivalents. New South Wales noted that the question of TERs was yet to be resolved at a national level and that it was preferred to address the issue through a national process.

### **Council Comment**

The Council notes that there has been substantial progress in relation to the implementation of full cost pricing in New South Wales. The Council is of the view that the regulation of pricing by IPART has ensured both a consistent approach and integrity in the price setting process. This integrity is evidenced, for example, by the reduction in SWC sewerage charges in the mid-term review because of forecasting

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<sup>59</sup> 24 June 1999.

inaccuracies. The transparent process, detailed reasons and separation of prices regulator from monopoly service provider are strengths of the IPART process.

The Council is satisfied that HWC and SWC:

1. meet operating, maintenance and administration costs;
2. meet interest costs;
3. pay tax or a tax equivalent;
4. pay a debt guarantee fee;
5. pay a dividend to government; and
6. earn a real RoR on capital.

As regards the valuation of assets, the Council notes that while the method adopted by New South Wales is not strictly in accordance with the advice of the Expert Group, nevertheless the adoption of this approach will result in a lowering of the upper band of pricing, and will not result in the water monopolies recovering more than monopoly revenues. The Council is satisfied that the approach is consistent with the spirit of full cost recovery.

The Council is therefore satisfied that, in respect of urban water authorities, full cost recovery has been substantially implemented.

The same can be said of GCC and WSC with the exception of payment of Commonwealth taxes or a TER and a dividend to government.

In respect of other NMUs, the Council notes that the IPART guidelines and Local Government Guide are on the whole consistent with the strategic framework for pricing reform.

The information provided by New South Wales satisfies the Council that in large part NMUs are attaining full cost recovery as required by the framework. In particular, large local government water and wastewater businesses are on the whole achieving a positive economic RoR on assets. The Council is satisfied that the asset valuation method employed by New South Wales NMUs is both substantially independent and appropriate.

The Council also notes that the New South Wales assurance that all local government water and wastewater businesses are meeting the costs of operating, maintenance and administration costs from revenues. Although NMU businesses are subject to state charges, they are not presently subject to a full TER regime.

The Council considers that the various mechanisms outlined by New South Wales to encourage full cost recovery provide considerable incentive to local governments to meet reform commitments.

While the Council is satisfied that the reform commitments for the second tranche have been in large part met, it will continue to monitor the further implementation

of full cost recovery, including the implementation of a full TER regime for NMUs, prior to the third tranche assessment.

**10.2.2.2 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 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 RoR

### **NSW arrangements**

#### **Non-bulk water and sewerage charges**

##### **IPART**

IPART has made determinations in respect of access and usage charges for SWC and HWC.<sup>60</sup> The marginal cost of service provision was considered by IPART when determining the respective components.

As regards SWC water usage revenue as a proportion of total revenue has risen from 21 per cent in 1989 to 76 per cent in 1997. Reform at SWC has resulted in an 85 per cent reduction (\$357 million) in the revenue raised from property taxes and the remaining elements of the charging system for water and sewerage services scheduled to be eliminated by the year 2002. This program has been endorsed by IPART. As at the second tranche, remaining property value based tariffs are estimated to be \$61 million and are transparently published by IPART. To the extent that the usage charge exceeded the marginal cost of supply, IPART's determination noted that it may be thought of as including a component to recover the environmental costs associated with the storage, provision and use of water.

Additional information provided by New South Wales noted that those tariffs partly based on property tariffs had the following elements: a service charge; a property value based charge; and a usage charge. The revenue collected from the property value based charge was a small component of the total amount collected.

HWC has a usage and access or service charge in respect of both water and wastewater determined by IPART. Implicit in the determination is the consideration of the marginal cost of access and supply. The IPART determination noted a HWC submission that, in respect of wastewater usage charges, these were frequently criticised as being little more than an additional, but poorly understood water-use charge. IPART determined to reduce this aspect of the HWC tariff, increase the water usage charge and increase the sewerage

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<sup>60</sup> IPART medium term price paths, 7/96.

charge. In part these adjustments reflected the desire to avoid a cross-subsidy from the water business to the sewerage business.

The GCC and WSC water businesses also have two part tariffs set by IPART. GCC structures its tariff to include an access and base allowance (200 kL) charge and an additional charge (per kL) for usage above the base allowance; the average water consumption for GCC customer is 220 kL. WSC has a similar tariff structure. New South Wales has advised the Council that this prepaid allowance will be eliminated from 1 July 2000; some correction is required in respect of pensioner rebates prior to its elimination.

## NMUs

New South Wales advised in the 1998 annual report that more than 40 per cent of NMUs have implemented two part tariffs. The 1995-1996 *New South Wales Water Supply and Sewerage Performance Comparisons* notes the DLWC's opinion that many councils are under-estimating the true cost of their water supply. Table 2 of that report noted that while twenty-four councils used a two part tariff, another twenty councils employed an inclining block tariff and a further seventy councils provided an annual allowance with a volumetric tariff for usage in excess of the allowance.

Information provided to the Council in December 1998 as part of the assessment process<sup>61</sup> noted that the forty-seven out of one hundred and eighteen NMUs audited use two part tariffs. Those that did not represent a small percentage of all water used (only seventeen having an annual turnover of more than \$2 million per annum).

New South Wales has advised<sup>62</sup> that most of the remaining NMUs plan to implement two part tariffs although for 10 per cent of NMUs, two part tariffs will not be cost effective. It is noted that the IPART NMU pricing principles prefer an usage component in two part tariffs that reflects the marginal cost of supply.

Additional information provided to the Council by New South Wales noted tariff structures for NMUs with in excess of 10 000 connections as set out in Attachment 2. In addition, the following information was provided:

- 64 NMUs (55 per cent numerically, 70 per cent of financial turnover and water diversions, up from 17 per cent numerically in 1993) have pay for use tariffs.
- 9 NMUs with a water business with a turnover of >\$2 million have not committed to adopting a two part tariff. Some of these have reform proposals developed for consideration of relevant local governments prior to 30 June 1999. Others are gradually reducing the free allowance over time.

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<sup>61</sup> This document, entitled *New South Wales NMU summary data* is unreferenced, undated and does not provide information as to what period of time it relates to.

<sup>62</sup> October 1998 meeting.

- 13 NMUs with a turnover of \$1-2 million have not committed to adopting a two part tariff.
- 30 NMUs with a turnover of <\$1 million have not committed to adopting a two part tariff.

New South Wales has estimated that about 35 NMUs could justifiably be exempted from pricing requirements including: five moderate sized towns for which domestic customers are not metered and there are no capital works required to augment supply; and about 30 small towns (less than 2 000 persons) where the costs involved in metering, analysis and development of the pay for use tariff and negotiating with customers would be greater than the benefits achieved.

Seven moderate sized towns are unmetered: Bourke is to be provided financial assistance towards the supply cost of meters; Brewarrina proposes to install meters within three years; Corowa proposes to install meters in conjunction with the construction of new water treatment works; and Griffith is presently installing meters. All these NMUs will be in a position to implement pay-for-use tariffs after metering is carried out.

Forbes (population: 8500) has a *green oasis* policy and is not fully metered and unlikely to be so in the near future.

Balranald, Denilquin, Murrumbidgee and Walgett (population: 18 000) at present have no plans to install meters. These towns draw water directly from river flows and New South Wales states that it would not be cost-effective for them to be metered unless augmentation to the present supply is proposed, as the capital and operating cost of metering would not be counter-balanced by savings.

New South Wales has noted that the Government will strongly encourage relevant NMUs to implement pay for use tariffs. Initiatives include issuing step-by-step guidance to develop and implement a pay-for-use tariff. The Minister will shortly issue guidelines for NMUs on implementing IPART principles.

In a further response to the Council<sup>63</sup>, New South Wales noted that seven local governments with water businesses greater than \$2 million per year, 14 local governments with businesses between \$1 million and \$2 million and 30 local governments with water businesses valued at less than \$1 million have not adopted IPART recommendations of a two part tariff. It is proposed to negotiate on a case by case basis with those local governments of a significant size which have made little or no progress towards an appropriate tariff structure. This approach would mean considering larger water businesses first.

### **Metropolitan Bulk Water Pricing**

SWC has pricing for bulk water set by IPART as part of its general price determination. The price differentiates between differing water qualities and is charged on a volumetric basis to reflect the full value of the water provided,

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<sup>63</sup> Letter dated 24 June 1999.

including a marginal capacity component reflecting the cost of the next augmentation. SWC provides bulk water services through its wholesale subsidiary business<sup>64</sup> to its retail subsidiary business. A two-part charge (fixed and variable component) covers the costs and includes a return on assets.<sup>65</sup> SWC has noted<sup>66</sup> that some limited contractual arrangements do not return positive rates of return and are not the subject of IPART determinations; on expiry of the contractual arrangements SWC intends to ensure new arrangements reflect the water reform principles.

There is no separate determination for the provision of bulk water by HWC, although large water users (in excess of 1000 kL per year) are charged a discounted water rate which the Tribunal noted avoids adverse impacts on residential customers with higher water use.

The 1998 New South Wales Annual report noted that for both SWC and HWC, pricing provides for a positive real rate of return on bulk water assets.

### **Metropolitan bulk wastewater pricing**

SWC has in place a two-tiered system for sewerage charges: a flat charge for residential and low-discharging non-residential properties (based on a *deemed* discharge of 180 kL of waste per year); a volumetric charge for non-residential properties discharging in excess of 500 kL. In addition an access charge (assessed on the basis of the water meter fitted) is levied. Property value-based charges may also be made against non-residential properties, although they are being phased out. In addition, trade waste charges are levied through negotiated agreements that reflect both the volume and concentration of pollutants; the charges are on a volumetric basis.<sup>67</sup> Sewerage charges are set by IPART and reflect submissions from SWC proposing charges reflecting costs associated with collection, transportation and treatment of wastewater.

HWC applies sewer use charges to both the residential and non-residential sector, the charges based on volume (the discharge factor assumed to be 50 per cent for residential customers) and structured to recover the marginal cost of collecting, transporting and treating waste of domestic strength. In addition trade waste charges are applied to non-residential properties discharging wastes in excess of domestic strength, the charges reflecting the strength of the waste.<sup>68</sup> All properties are charged sewerage access charge assessed on the basis of the water meter fitted. Sewerage charges are set by IPART.

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<sup>64</sup> The reforms noted under *Institutional Separation* will result in bulk water provision being transferred to the Sydney Catchment Authority.

<sup>65</sup> SCARM Taskforce review, Dec 1997.

<sup>66</sup> COAG Stocktake Report.

<sup>67</sup> COAG Stocktake Report.

<sup>68</sup> COAG Stocktake Report.

### **Council Comment**

The Council notes that, as with full cost recovery, New South Wales has made substantial progress in implementing consumption based pricing. This process is being facilitated by IPART and evidenced by the regard had to the marginal cost of water supply in determining supply charges.

Where pricing indicates that some urban water customers are either partly based on property values (as is the case with some SWC customers) or alternatively the volumetric component does not reflect marginal costs and makes up only a small part of the total charge (as is the case with GCC and WSC customers who have a base allowance that is almost equal to the average water consumption) a path to remove these charges has been clearly identified.

The IPART Pricing Principles for NMUs reflect the strategic framework requirements for consumption based pricing. The information provided to the Council indicates the strong commitment of many local governments to implement two part pricing in many cases.

There are, however, significant water businesses that have not met reform commitments. For example, for the NMUs with more than 10 000 connections:

- 49 000 assessments/119 000 persons have water tariffs including a property value component.
- 106 000 assessments/238 000 persons have water tariffs including a base allowance ranging from 75-455 kL.
- 82 000 assessments/200 000 persons have sewerage tariffs based on property value.

The Council considers that pricing reforms need to be promoted in these NMUs as a matter of priority. New South Wales has committed to negotiating on a case by case bases with the local governments that have made little to no progress towards appropriate tariffs. The Council will monitor the further implementation of pricing reform for these local governments prior to the third tranche assessment.

As regards both metropolitan bulk water and waste water pricing, the Council concludes that there is an emphasis on volumetric charging. As regards tradewaste water, the pricing shows the increased sophistication of qualitative pricing to reflect the higher cost of service provision for heavily polluted water.

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

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.

## **NSW arrangements**

### **IPART**

In its price determinations for SWC, HWC, GCC and WSC IPART has contributed to and documented progress on the elimination of cross-subsidies by: significantly reducing residential and non-residential property-value based charges for water and sewerage services; publishing remaining cross-subsidies and charting a process to eliminate such charges.

The 1998 New South Wales Annual Report noted that the removal of property value-based charges as the primary source of revenue has had a considerable impact on the reduction of cross-subsidies. For example, by the year 2002 the proportion of revenue to SWC from non-residential customers will have fallen to 30 per cent of total revenue; in 1992-93 this sector accounted for 24 per cent of water consumption, 6 per cent of properties served, and contributed 44 per cent of revenue. In 1993 the cross subsidy from non-residential to residential customers was estimated to be \$300 million per annum. This will be reduced to approximately \$61 million per annum in 1999-2000 and eliminated by the year 2002. The cross-subsidy is transparent and published by IPART.

IPART has noted that HWC has eliminated all property based tariffs and water and sewerage charges for residential and non-residential customers are now the same. As a result non-residential revenue had fallen by 20 per cent in real terms between 1992 and 1995.

Similarly, GCC and WSC have removed property value-based pricing. Remaining price discriminations (for example, the treatment of strata titled units with a single master meter attached in WSC, the base allowance in tariff structures in GCC and WSC) were the subject of comment by IPART in 1996, and should be removed from July 2000.

### **NMUs**

IPART noted in the July 1997 *Pricing Principles* document that under then current pricing arrangements, there was significant cross-subsidisation of water services. IPART, while re-iterating its view that CSOs are issues of government policy, noted that any subsidies should preferably be funded through explicit and transparent payments. IPART noted that cross-subsidies were likely to be largest and least transparent for communities which have retained property value based charging accompanied by pre-paid water allowances. IPART recommended that the implementation of user-pay pricing should eliminate any significant cross-subsidies.

The 1998 Annual Report noted that the application of IPART's pricing principles for local water authorities is a crucial first step towards systematic reform and the removal or transparency of cross-subsidies in the NMU sector.

New South Wales has noted that NMUs water and wastewater businesses are required to identify and either eliminate or justify cross-subsidies through transparency and CSOs. Elimination of significant cross-subsidies between classes of customers is proceeding with the adoption of consumption based pricing and over 75 per cent of NMU water service revenue will be subject to consumption based pricing from 1999-2000. The 25 per cent of NMU water suppliers and 35 per cent of NMU sewerage providers with a land value component in charging structures will be strongly encouraged to remove any land value component from their charging for each of water supply and sewerage within 2 years.

In a further response to the Council<sup>69</sup>, New South Wales proposed to negotiate on a case by case basis with those local governments of a significant size which have made little or no progress towards an appropriate tariff structure. This approach would mean considering larger water undertakings first.

### **Council Comment**

The progress of SWC and HWC in removing cross-subsidies is both substantial and illustrative of the significant benefits that accrue when pricing reflects the cost of service provision rather than the value of property. Although SWC still has some way to go to complete the transfer to full consumption based pricing, the remaining cross-subsidy is both transparent and temporary. HWC has achieved full consumption based pricing.

In addition, there has been progress in removing cross-subsidies in GCC and WSC, and a path to remove the generous base allowance included in water tariff structures.

In considering the performance of the NMU sector, the Council notes the considerable progress of local governments on implementation of tariff reform. However, significant businesses still retain pricing structures that suggest cross-subsidisation between customer classes. The Council considers that pricing reforms need to be promoted in these NMUs as a matter of priority. The Council again notes the commitment of New South Wales to negotiate on a case by case basis with the local governments that have made little to no progress towards appropriate tariffs. The Council will monitor the further implementation of pricing reform for these local governments prior to the third tranche assessment.

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<sup>69</sup> Letter dated 24 June 1999.

#### 10.2.2.4

**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, well targeted, explicit and transparent, and the departure from the general principle of full cost recovery must be justified.

#### NSW arrangements

The 1998 New South Wales annual report noted that metropolitan water agencies receive CSO funding from the Budget, primarily for pensioner rebates and exemption of certain properties (for example, schools/charities) from payment of access charges. The cost of the program is made transparent through IPART process and annual Statements of Corporate Intent made with Treasury. The payments are fully accounted for and made to the water suppliers as CSOs in accordance the Government's Social Policy Program.

NMUs are required, under the Local Government Act, 1993, to reduce water supply and sewerage charges for eligible pensioners by 50 per cent up to a maximum of \$87.50 per annum. Local governments are re-imbursed for this revenue reduction by the Department of Local Government.

In addition, the New South Wales Government provides financial assistance<sup>70</sup> in the order of \$50 million to local governments for backlog water and sewerage capital works. This applies only to backlog works as at January 1995. The works are required to bring services up to environmental to public health standards at this time and the maximum assistance is 50 per cent of capital costs.

#### Council Comment

The Council is satisfied that New South Wales has a number of clearly defined and well targeted CSOs, such as pensioner rebates, the removal of access charges for schools and charities and specific backlog capital works for NMUs. In addition, the CSOs are transparent and funded by government rather than paid for by other water users.

**10.2.2.5 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 financial performance of the water industry in New South Wales has previously been discussed (see heading *Financial Performance*). It is clear that SWC, HWC,

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<sup>70</sup> A direct grant tied to specific capital works.

GCC and WSC all achieve positive rates of return on the written down replacement costs of their assets.

In addition, most NMUs achieve a positive RoR on assets<sup>71</sup>.

Having regard to the information provided, the Council is satisfied that metropolitan and most NMU supply organisations do earn a positive RoR on the written down replacement costs of assets.

The Council notes that it will continue to monitor the rates of return for NMUs closely prior to the third tranche assessment.

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

**10.2.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater),<sup>72</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 the year 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.

### **Council Comment**

Although this is a third tranche assessment issue, the Council notes the referral of bulk water pricing by the Water Administration Ministerial Corporation to IPART. Pricing determination for monopoly service providers by an independent regulator is an approach commended by the Council as both consistent with the content and spirit of the strategic framework. The Council notes information provided indicates that, end of June 2000, cost recovery will be 83 per cent for regulated surface water, 87 per cent for unregulated surface water and 60 per cent for groundwater.

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<sup>71</sup> New South Wales has advised that the average rate of return is about 2.4 per cent.

<sup>72</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.

**10.2.2.7 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.

### **NSW arrangements**

The New South Wales Weirs Policy has as its goal: to halt and, where possible, reduce and remediate the environmental impact of weirs.<sup>73</sup> Principles adapted in support of this goal include that the construction of new weirs, or enlargement of existing weirs, shall be discouraged. In this respect notes that a proposal will not be approved unless it maintains the essential social and economic needs of the affected community.

New South Wales has also noted that weir approvals require a socio-economic assessment:

- the Environmental Planning and Assessment Act requires an environmental assessment which may include the costs and benefits of the proposed structure; and
- Part 2 of the Water Act which requires the Ministerial Corporation to consider socio-economic as well as environmental impacts of the work.

The Water Management Legislation Amendment Act 1997 has legislated that ecologically sustainable development principles be applied in water decisions.

New South Wales advised<sup>74</sup> that an economic appraisal is required as a prerequisite for government funding of capital projects (new or existing) above \$0.5 million including identification of options for capital investment and identifying costs and benefits associated with the options. In addition the *Environmental Planning and Assessment Act 1979* requires environmental impact statements.

### **Council Comment**

The reforms ushered in by the Weirs Policy and the *Water Management Legislation Amendment Act 1997* demonstrate a strong commitment by New South Wales to ensuring that new investments in river infrastructure will only be undertaken in appropriate circumstances. The Council would prefer that the Weirs Policy be

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<sup>73</sup> *New South Wales Weirs Policy* DLWC August 1997.

<sup>74</sup> New South Wales Annual Report on the application of National Competition Policy for the year ending December 1997.

legislated and will continue to monitor this matter. In conjunction with other reforms to water licensing (outlined later in the paper), the Council is satisfied that, for the second tranche assessment, this reform commitment has been met.

#### **10.2.2.8**

#### **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.

#### **NSW arrangements**

New South Wales advised that irrigation schemes were managed under semi-autonomous financial and managerial accountability within DLWC since 1979.<sup>75</sup> The SCARM Taskforce review of New South Wales progress on reform commitments (1997) notes that all government irrigation areas have been either privatised or corporatised. The privatised companies are fully accountable for all financial management and investment decisions and prices set by the authorities are passed on to irrigators through two part tariffs.

#### **Council Comment**

The Council is satisfied that management of the majority of irrigation schemes has been devolved to local bodies made up of constituent irrigators. The Council notes that where this has not occurred corporatisation of the irrigation schemes should have resulted in customers having a greater input into decisions made. On the information provided the Council is satisfied that this reform commitment has been met.

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<sup>75</sup> New South Wales Annual Report on the application of National Competition Policy for the year ending December 1997.

## **B10.2.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

### **Institutional Role Separation**

**10.2.3.1 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.

### **NSW arrangements**

#### **Generally**

As regards water resource management in New South Wales generally, the Council has been advised of the following responsibilities:

**Table 10.2.2 Institutional arrangements in New South Wales water industry**

<b>Agency</b>	<b>Function/Regulation</b>
Department of Land and Water Conservation (DLWC)	Water management planning, policy and guidelines, resource assessment and technical support
National Parks and Wildlife Service (NPWS)	Responsible for some aquatic conservation areas
New South Wales Fisheries	Responsible for aquatic habitat protection and some aquatic fauna
Department of Agriculture	Encourages maximisation of on-farm water use
Department of Urban Affairs and Planning (DUAP)	Broad planning policies and guidelines for environmental assessment
Environmental Protection Agency (EPA)	Responsible for environmental policy, planning and guidelines for water and aquatic systems

An interdepartmental committee of the Chief Executive Officers of all these organisations (known as the Water CEOs) ensures a whole of government approach to water reforms.

In addition, the principle regulatory regime can be described thus: the EPA has regulatory functions as regards pollution and licensing of discharges, IPART regulates pricing, a Licence Regulator audits the operating licences for SWC and HWC and DLWC provides water licensing, permits and regulation. The Healthy Rivers Commission (HRC) provides independent advice on water quality and flow objectives.

## Metropolitan

Regulatory responsibilities in respect of water quality, plumbing and selected development approval powers resided with SWC prior to corporatisation. Prior to the contamination events that required *boil water* alerts to be issued in respect of water supplied by SWC (July-September 1998), the following regulatory mechanisms applied:

**Table 10.2.3 Institutional arrangements in New South Wales metropolitan water industry**

Agency	Function/Regulation
DLWC	Issues Water Extraction Licence
Licence Regulator (DUAP)	Audits Operating Licence (OL) <sup>76</sup> annually
IPART	Pricing of water
Department of Health (New South Wales Health)	Exchange of information concerning health matters Memorandum of Understanding (MoU)
EPA	Wastewater licence. Regulatory role in trade waste and sewerage treatment disposal

A similar regime is in place for HWC; a licence was issued in November 1998.<sup>77</sup> The licence regulates access to bulk water and establishes a range of monitoring and reporting arrangements.

The Council was advised that SWC's laboratory testing is supplied by Australian Water Technologies P/L (AWT), a wholly owned subsidiary with its own Managing Director, Board and business units that are legally and administratively separate from the bulkwater, retail and distribution businesses of SWC.

The Sydney water crisis and resultant inquiry by Peter McClellan QC (the Sydney Water Inquiry) exposed a number of weaknesses in the regulatory and structural settings surrounding SWC including:

- the responsibilities of SWC for both catchment management and service provision led to at least a perceived conflict of interest. The New South Wales government has legislated for a Sydney Catchment Authority (SCA)<sup>78</sup> to have responsibility for the catchment including ownership and operation of infrastructure and to supply bulk water to SWC;

<sup>76</sup> Issued by the Minister for Urban Affairs and Planning as Minister responsible for Sydney Water

<sup>77</sup> Water Sharing, the way forward. New South Wales Progress on the Water Reforms 1995 to 1998 (December 1998).

<sup>78</sup> To be fully operational by 1 July 1999.

- the ownership of AWT, which supplied testing results for regulators, by SWC led to at least a perception of conflict as regards its role in water testing. McClellan recommended that an independent testing laboratory undertake testing for regulatory purposes. New South Wales has advised that this matter is being reviewed by the Cabinet Taskforce on Water;
- weaknesses in the OL of SWC as regards both its negotiation and audit. McClellan recommended that the OL for SWC be developed at arms length from SWC and that the Licence Regulator be given enhanced powers as regards auditing of the OL. The Council notes the request by the Premier to IPART<sup>79</sup> to carry out public and stakeholder consultations and make recommendations on the terms of the OL for SCA and the terms of an amended or substituted OL for SWC to take effect from 1 January 2000;
- deficiencies in the content and scrutiny of MoUs between SWC and New South Wales Health as regards communication and decision making. Recommendations in this respect included that the decision to issue a *boil water* alert be vested in New South Wales Health (this has occurred via legislation) and that the MoUs be revived to include targets, timelines and review provisions and that the Licence Regulator be given power to audit MoUs. New South Wales has also noted that the recommendation as regards MoUs has been implemented; and
- McClellan noted that the OL Minister's power in respect of SWC was limited to requesting information concerning OL compliance and directing rectification of OL contraventions, and directing SWC to perform non-commercial activities. He recommended that the Minister have sufficient power to give a direction to SWC if this was in the public interest. Legislation has given effect to this recommendation, not only for SWC but also for HWC.

## NMUs

In its September 1996 *Pricing Principles for Local Authorities*, IPART endorsed the separation of the business elements of water services from any regulatory functions exercised by local authorities. IPART encouraged service providers to be as competitive and business-like as possible and that competitive neutrality principles should also be applied.

As noted previously, the July 1997 Department of Local Government booklet '*Pricing and Costing for Council Businesses – A Guide to Competitive Neutrality*' (the Competitive Neutrality Guide) provides that water supply and sewerage services should be regarded by Councils as businesses. For those water businesses that have a turnover of greater than \$2 million the Competitive Neutrality Guide required that they adopt a corporatisation model, apply full cost attribution, make explicit any subsidies paid to the business and operate within the same regulatory framework as private business. For those businesses with turnovers of less than \$2 million the requirement for a corporatisation model will be satisfied if the business is capable of being separately identified within the operations of the local government and has a separate internal accounting and reporting framework.

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<sup>79</sup> 19 April 1999.

New South Wales Officials advised in October 1998 that the NMUs have ringfenced their operations from council activities and are moving toward a corporatisation model with the larger schemes being targeted first. Full accounting separation was required from July 1998.

New South Wales has advised the Council that local government water supply and sewerage businesses comply with the requirements for corporatisation model as the businesses are financially ringfenced and have a separate accounting and performance reporting framework. They are maintained as separate entities, provide separate financial statements and moneys cannot be diverted from them for other purposes. In addition, as part of National Competition Policy reporting requirements commencing for the reporting period ending 30 June 1999 Councils are required to report separately on water and sewerage activities.

In further information provided to the Council<sup>80</sup> New South Wales noted that DLWC currently provides IPART with a performance report of each local government's water supply and sewerage businesses in the Annual Performance Reports, which are made public. Present reports disclose whether the local governments have pay-for-use pricing and whether land values are removed from annual charges. Reports in 1999-2000 and subsequently will include whether long-term financial sustainability of the business is demonstrated through publication of appropriate strategic business and long-term financial plans.

New South Wales also noted that Water and Sewerage Regulations under the Local Government Act are under review with the intention of separating the local government management and structural arrangements and the local government approval process into separate regulatory instruments. The local government approval process will move under the control of the Environmental Planning and Assessment Act as part of the processes of integrated approvals.

New South Wales believes that these regulations, together with improved reporting requirements, will establish the appropriate institutional and administrative framework for water reform in the NMU sector.

Further information provided to the Council detailed the role of local government in natural resources management, which is said to vary widely depending on functions delegated by the State Government. Specific powers of local government include management of planning functions including: management plans, local environment plans<sup>81</sup> and developmental control plans; water functions including service provision, stormwater management planning and development consents; and bushfire risk management (overriding authority with the Rural Fire Service).

In respect of plumbing services, it was noted that local government regulation of plumbing standards is constrained by State Government codes and standards and subject to appeal to the court.

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<sup>80</sup> 24 June 1999

<sup>81</sup> Created under the Environmental Planning and Assessment Act and which set basic rules for the use of private and public land.

## Rural Water

DLWC was established a separate (ring-fenced) water business entity, State Water, which commenced operations in September 1997 and holds responsibilities for operation of water delivery systems and maintenance of water infrastructure.<sup>82</sup> A business structure has been implemented allowing costing and water accounting on an individual valley basis. State Water has taken over responsibility for water use billing. The operating and water access authorities are being finalised.<sup>83</sup>

New South Wales has provided copies of draft Operating<sup>84</sup> and Water Access Authorities and stated that these create the required transparency of separation between regulator and service provider. In addition a Statement of Financial Intent is being finalised using the New South Wales Treasury corporatised business entity model.

At a meeting between Council Secretariat officers and New South Wales officials in October 1998, New South Wales advised that they believed that this form of structural separation was sufficient and that State Water had not been corporatised because the rural sector was still heavily subsidised. Price regulation would be supplied by IPART and water allocation rules set by River Management Plans developed by EPA and DLWC in consultation with users and signed off by Cabinet.

## Council Comment

As the Sydney water crisis graphically demonstrated, the failure to provide rigorous institutional separation can result in adverse outcomes for water consumers. The recommendations of the Sydney Water Inquiry provide a clear direction for the further institutional separation required for SWC in order to both clarify its objectives, remove conflicts of interest and protect the health of the public generally. The Council is satisfied that the recommendations provide for proper and rigorous monitoring of both SWC and SCA in their roles as water service providers. SCA's role as bulk supplier and manager of the catchment sits comfortably with institutional separation when the additional elements of independent price regulation and independent licence provision and regulation are imposed.

The Council will continue to monitor the separation of AWT from SWC. Although it is argued that the existing arrangement is sufficient, neither McClellan nor the Council are satisfied that it provides for both actual and perceived separation of this important and essentially regulatory function.

The implementation of reforms for HWC as regards Ministerial intervention in the public interest is appropriate. The Council does not regard this power as in any way conflicting with the separation of functions nor the corporatisation of either HWC or

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<sup>82</sup> Water Sharing, the way forward. Draft five year strategy for Water Management in New South Wales, 1999-2000.

<sup>83</sup> Water Sharing, the way forward. New South Wales Progress on the Water Reforms 1995-8 (December 1998).

<sup>84</sup> Requiring planning, customer service delivery and reporting according to existing standards that apply to all New South Wales state owned corporations.

SWC. The Council considers that a similar review of other institutional settings for HWC is appropriate in light of the crisis and will continue to monitor this matter.

The Council notes the information concerning the commercialisation/institutional separation as regards NMUs, including the comparatively large GCC and WSC water service providers. This information indicates clear separation of the water and wastewater service financial arrangements from other Council activities; this is particularly so where IPART is the price regulator.

The Council notes the proposed further public scrutiny of NMU pricing and financial management. In addition, existing regulatory arrangements are to be reviewed to further separate local government business and regulatory functions. Details of this have not been provided to the Council.

While the Council is satisfied that there has been progress on institutional reform in the NMU sector, it will carefully review new arrangements prior to the third tranche assessment to ensure rigorous separation of service provision from other functions.

As regards State Water, the Council is satisfied that a corporatised water service provider with the types of functions outlined would achieve a significant degree of institutional separation from DLWC. The additional information concerning the development of Operating and Water Access Authorities and a Statement of Financial Intent re-enforce separation of service provision and other functions. The Council notes that the present arrangements are probably sufficient to satisfy the strategic framework. The Council does note, however, its preference for a greater degree of Ministerial separation than the arrangements provide for and will seek to advance this matter with New South Wales prior to the third tranche assessment.

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

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

#### **NSW arrangements**

SWC was corporatised in January 1995 as an unlisted public company wholly owned by the New South Wales Government. The *Water Board (Corporatisation) Act 1994* provided for explicit environmental and public health objectives to have equal standing with commercial objectives.<sup>85</sup> SWC has advised<sup>86</sup> that since the early 1990s the private sector has been progressively involved in provision of contestable services such as mechanical/electrical maintenance, Build, Own and Operate (BOO) water treatment plants and an alliance construction contract with private sector partners. It was noted that in 1996-1997, 54 per cent of all operating and capital expenditure was contracted out where it enabled Sydney Water to reap the benefits of private sector involvement.

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<sup>85</sup> Report 5, chapter seven of the Sydney Water Inquiry, December 1998.

<sup>86</sup> COAG Stocktake Report.

HWC was corporatised as a state owned corporation in 1991 under the *State Owned Corporations Act 1989* (SOC Act). The SOC Act requires state owned corporations to have the principal objective of being a successful business. HWC has advised<sup>87</sup> of its structuring into three groups:

- a *core group* that manages large infrastructure, relations with Government and regulators and provision of human resource and accounting services;
- *service providers*, comprising three separate businesses that sell services to HWC and external markets. These are Hunter Water Australia (which sells water treatment, laboratory, engineering and survey and land information services), the Electrical and Mechanical Maintenance Unit and the Operations Unit; and
- the *customer services group* which deals with customer and call centres, customer surveys and community consultation.

It was noted that more than 84 per cent of the controllable costs (salaries, wages and materials etc. but excluding fixed items like depreciation) are subject to some form of market contestability or systematic benchmarking.

SWC and HWC borrow through Treasury Corporation at the market rate of interest.

As regards the implementation of competitive neutrality, it is noted that SWC and HWC are subject to independent prices oversight and are subject to TER (full Commonwealth and State taxes) and debt guarantee fees that varies in accordance with their respective credit ratings.

### **Council Comment**

The Council is satisfied that SWC and HWC have a commercial focus, achieved by corporatisation and contracting out, consistent with the strategic framework requirements. They appear on the whole to have been subjected to other CPA obligations such as competitive neutrality.

### **Performance Monitoring and Best Practice**

#### **10.2.3.3 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

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<sup>87</sup> COAG Stocktake Report.

urbans. The Council recognises the first reports for the NMU and rural sectors are likely to be a rough cut in the initial years.

### **NSW arrangements**

SWC, HWC, and GCC participate in the Water Services Association of Australia (WSAA) facts,<sup>88</sup> an annual performance monitoring report and SWC has participated in the United Kingdom Office of Water Services annual benchmarking study.<sup>89</sup>

NMUs participate in Annual Water Supply and Sewerage Performance Comparisons (the Annual Comparisons), collated by DLWC, although it is noted that the 1995-1996 report did not include twenty-five councils as they had not provided their returns. The 1995-1996 report noted the important role of the Performance Comparisons in enabling councils to compare trends in performance indicators and relative performance. In addition they are important for public accountability and required under NCP. They provide additional information about current use and assessing future needs of New South Wales country areas and ensure appropriate focus and targeting of assistance programs.

As regards rural water services, the New South Wales Annual Report in the Application of National Competition Policy for the year ending December 1997 notes that privatised irrigation companies must provide financial and management efficiency information for comparison purposes. The report also notes that New South Wales is assisting in the implementation of benchmarking for irrigation sectors for via ARMCANZ and the Steering Committee on National Performance Monitoring of GTEs.

### **Council Comment**

The Council is satisfied that there is performance monitoring and comparison of relevant water agencies through WSAA, DLWC and ARMCANZ mechanisms. The Council notes that it is aware of the participation of NMUs in the ARMCANZ performance monitoring project, being co-ordinated by WSAA.

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<sup>88</sup> WSAA facts, 1997-1998.

<sup>89</sup> COAG Stocktake Report.

## **B10.2.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

**10.2.4.1 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.

### **NSW arrangements**

#### **The existing systems of water licensing and trading**

*Issues in water access and use rights* (DLWC, December 1998) lists seven presently existing water rights:

1. non-specific, diffuse, unlicensed and non-tradable water *values* such as recreational water rights;
2. *permissions* which are specific, non-licensed and non-tradable, such as access to off-allocation<sup>90</sup> flows;
3. diffuse, specific and legislated (although unlicensed) rights that are non-tradable and without a fixed term, combining concepts of access to and use of water, such as riparian water rights and farm dams;
4. licensed, fixed term, specific rights closely linked to land title and combining concepts of access and use, such as area-based unregulated river water licences;
5. licensed, specific, fixed term rights which are volumetric, tradable and combine concepts of access and use, such as regulated water licences and some high yield bore licences;
6. licensed, specific, fixed term rights which are volumetric, tradable and separate concepts of access and use, such as water licences held by mining companies and corporate water licences; and

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<sup>90</sup> Off-allocation water is that made available to users during periods when the tributary streams entering regulated rivers downstream of dams or dam spills exceed users' demands or identified environmental needs. Extractions at such times are not accounted for against users' regulated allocations.

7. licensed, specific, fixed term rights which have controls on access and use regulatory structures, such as SWC and HWC licences and licences of irrigation trusts and corporations.

The *Water Administration Act 1986* vests in the Ministerial Corporation, a body set up by the Act, the right to the use and flow, and to control, of: water in rivers and lakes; water conserved by any works; water occurring naturally on the surface of the ground; and sub-surface water.

The *Water Act 1912* provides the main regulatory framework for New South Wales water rights. For example, it permits occupiers of land adjacent to rivers or lakes to exercise riparian rights and provides for farm dams (section 7). It provides for occupiers to apply for water licences (including terms, limitations and conditions as approved by the Ministerial Corporation (section 12)) to extract water for irrigation and other purposes (section 10). In addition, joint water supply schemes and group licences for private districts are regulated (Part 2, Divisions 4, 4A). The Act provides for permits to be issued to allow irrigation and other activities on areas of land not exceeding 4 hectares (section 18F). It also requires that a bore shall not be sunk, enlarged, deepened or altered except pursuant to a licence (sections 112, 113). It provides for a Water Management Licence to be issued to authorities (HWC is the only authority listed in the schedule) and authorises the holder to take and use water from any water source and to construct or use a water management work subject to the conditions of the licence and the provisions of the Act.

Part 2, Division 4B of the Water Act empowers the Ministerial Corporation to declare that water entitlements pursuant to a licence, permit or authority be subject to a volumetric water allocations scheme, to increase or decrease such allocations in times of surplus or shortage respectively (this power extends to all water extractions; section 22B) and that extractions are to be metered.

Part 3 of the Water Act provides for irrigation trusts to take and use water (the Irrigation Corporations Act also provides for trusts to be licensed to take water and supply to shareholders).

Part 5 of the Water Act deals with groundwater and provides for volumetric extraction and metering where ordered by the Ministerial Corporation and following the declaration of a restricted sub-surface water area. It provides for restrictions during shortages and allocation of surpluses (section 117E and 117F).

*Water sharing in New South Wales – access and use. A discussion paper* (April 1998) (the discussion paper) notes the present state of water licensing in New South Wales:

- there are over 60 000 water licences administered by DLWC, comprising 5 800 licences on regulated licences, 12 600 licences on unregulated systems and 40 000 high yielding groundwater licences (>20 ML per year, about 40 per cent of bores);
- regulated river licences are divided into the following categories: high security licences (full entitlement on in all but the most severe droughts); high flow licences (water extractions during major flow events); on allocation general security licences (annual allocation depending on water availability); off allocation general security licences (allocation when dam overflows of high flows

enter down stream storages). Individual irrigation licences are generally for a period of five years, town and industrial licences for ten years, irrigation schemes for fifteen years and urban water supplies for twenty years;

- unregulated river licences are effected by limiting pump capacity or specifying the area to be irrigated. Few licences are metered;
- groundwater licences must be metered and are subject to volumetric allocations; and
- conjunctive licences issued to some surface irrigators who are permitted to supplement reduced surface water allocations with groundwater access.

The discussion paper notes that due to licence extractions currently equalling or exceeding volumes that can be supplied or extracted without unacceptable environmental damage or impact on other users, embargoes are in place. The only option for new or expanding enterprises to is buying either an existing water licence or land with a licence attached. Temporary transfers (all or part of a single year allocation) have resulted in 200 000-700 000 ML of water being traded annually.

*Water Trading on Regulated Rivers – Benefits of Separation of Access and Use Rights* (undated, received from DLWC) notes that the existing licences deal with both water access and water use and in effect the Department is using the water licence to both define water access conditions and those relating to water use on land.

### **Proposed reforms**

The discussion paper proposes the replacement of the current water licences with:

- a water access right, established under legislation and wholly or partly transferable, which is defined as a fixed percentage of the water available for extraction at any one time; and
- a water use right, established under legislation and defined as a right to apply and use water at a specific location. Because it is site-specific the licence would not be transferable.

The advantages of this system, according to the discussion paper, include increased flexibility for water users and more explicit consideration of environmental protection requirements. Users would have the flexibility of accessing water from a number of sources (including surface and groundwater) with the total use coming under the one water use licence. This ensures the impacts of all water uses could be considered together permitting consistent and holistic management.

The discussion paper canvasses a number of options for security of tenure of licences including renewable limited term (every five years or longer term) access and use rights, rolling and permanent rights. Options concerning reviews include reviews occurring every five or ten years or as determined by the relevant river or groundwater management plan. In addition the discussion paper explores whether a water use right should be a prerequisite for an access right.

The paper also canvasses issues concerning the hierarchy of access rights and conversions of existing rights to water access and user licences. It looks at issues concerning riparian rights and small farm dam (less than 7 ML capacity). It canvasses issues of transferring water access rights including proposing either that rules for trading be articulated in river and groundwater management plans or alternatively that general rules be developed at a state level with more explicit rules applying in each valley and groundwater system as required. It also discusses issues of intervalley and interstate trading.

The discussion paper canvasses four options for dealing with sleeper and dozer licences: cancellation; restriction of access to periods of high flow; partial loss of unused entitlements; and full activation of licences.

In developing the issues surrounding access to water, the discussion paper canvasses the conversion of high security licences to general security. The discussion paper examines continuous accounting and capacity sharing arrangement for water entitlements. It traverses issues surrounding off-allocation water access (including separate licensing, access and transferability) and floodplain licensing, and proposes that water savings be dealt with by satisfaction of river health needs, increasing reliability or government trading in saved water.

As regards unregulated rivers, the discussion paper notes the move towards volumetric licences with maximum daily volumes and classification of licences into: Class A licences permitting access during low flow periods (no or minimal access would be permitted at these times); Class B licences permitting access during moderate flow periods; and Class C licences permitting access during moderate to high flow periods. The discussion paper identifies the a conversion process that involves: converting licences to a volumetric basis; assigning an access class; developing a river management plan including rules for trading; and linking access licences to river management plans.

The *Volumetric Conversions* pamphlet (DLWC, December 1998) outlines the following steps to convert existing rights to volumetric licences:

1. determining annual licence limits;<sup>91</sup>
2. determining daily flow shares. This process includes deciding the total volume of water that can sustainably be extracted in a catchment and sharing this amongst licence holders; and
3. establishing associated administrative and operational arrangements including water use monitoring, cost recovery, rostering and notifying users of daily flow conditions.

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<sup>91</sup> The formula used is: *Active Area* (number of licensed hectares with a history of irrigation) x *Zone Active Area* ('zone' is the climatic zone in which the licence is located) + *Inactive Area* (number of licensed hectares with no history of irrigation) x *Zone Inactive Area*. The *Zone Active Area* is based on a consideration of a regional theoretical crop water rate (ML/ha/yr.), water usage records and annual return data. The *Zone Inactive Area* may be less than this, especially in the Murray-Darling Basin.

The pamphlet notes that a steering group will be set up, including community and water user representatives. Trial data collection surveys, metering and interim flow sharing/rostering arrangements are presently being trialled.

New South Wales has advised the Council that unregulated rivers account for only 5-10 per cent of all surface water extractions. Substantial progress has been made on the design and policy underlying the conversion process. Development of conversion factors has balanced the need to bring volumetric conversions close to the Murray Darling Ministerial Cap volumes (see 10.2.4.2) while recognising existing economic production. Establishing volumetric conversions does not require significant legislative amendment (minor legislative amendment is required to remove area limitations) and is not dependent on water licensing reform.

The present timeframe is for the transition of all irrigation licences from area to annual volumes by July 2000, and the establishment of daily flow access conditions by July 2001. DLWC has also commenced the rollout of metering for all licences and establishing operations and compliance systems to allow new conditions to be implemented.

Groundwater issues are considered in the discussion paper. Groundwater aquifers are classified as being high, medium or low risk. Existing licences, which contained no volume restraints or specified an area of land that could be irrigated, are being converted to volumetric licences with an entitlement to a share as opposed to a specific volume. Groundwater management plans will set rules such as the total volumes of water that can be extracted and trading of access rights. The discussion paper also canvasses groundwater issues concerning: management of sleeper and dozer licences; licensing bores that are presently unlicensed<sup>92</sup>; splitting conjunctive licences into separate surface and groundwater access rights.

The farm dams policy<sup>93</sup> (effective from January 99) has been announced and replaces legislative restrictions on non-commercial farm dams of 7 ML to provide for a harvestable and non-transferable right for all landowners to collect 10 per cent of run-off each year. New South Wales has advised that: calculations to implement the policy have been completed and a series of state-wide maps are currently in production which will provide the legal basis for the harvestable right; and discussions with Parliamentary Counsel to implement the policy as regulation are underway.

The Water Management Legislation Amendment Act 1997 has permitted reforms in: requiring the application of ecologically sustainable development principles in water decisions; licensing HWC and SWC; providing new opportunities for water trading; and providing new powers for managing groundwater.

New South Wales advised the Council that the Government has stated that a comprehensive overhaul of the Water Act will be achieved by the end of 1999. The

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<sup>92</sup> New South Wales has advised that since 1983 all groundwater allocations have been volumetric and the present licensing system requires all bores which yield more than 20 ML a year to be metered. An estimated 95 per cent comply with this requirement.

<sup>93</sup> *Farm Dams Policy* (DLWC December 1998).

reform will be based on community feedback to the discussion paper and will result in a more equitable water access and use rights system. The Government has committed to legislating the prior right of environmental flows over consumptive use.

Complex issues concerning the proposed water sharing model are being resolved prior to embodiment in legislation, including a trial administrative separation of access and use rights. In addition, a review of water legislation recently developed in Australia and overseas, to assist in the development of new legislation, is currently being undertaken.

### **Council Comment**

The Council notes the thorough review of the present system of water entitlements by New South Wales. The splitting of water rights into access and user rights appears, on the information provided to the Council, to be New South Wales' preferred model, and the Council takes note of the advantages that this system is expected to deliver. The Council notes that some other jurisdictions may have set about defining water entitlements without this degree of sophistication. On the basis of information provided, the Council is satisfied that the reforms proposed have been subjected to very considerable consultation and commends this.

The significant policy and consultative phase of the development of New South Wales water entitlements has not at this stage been accompanied by significant legislative or other regulatory change. The Council notes the advice of New South Wales that there will be a comprehensive overhaul of water legislation by the end of 1999, and that the farm dams policy is presently the subject of consultations with Parliamentary Counsel.

The Council accepts that, in its present form, the entitlements for regulated rivers may be sufficient to satisfy the requirements of the strategic framework. The entitlements are separated from land title and have specification in terms of volume, a hierarchy of supply and transferability. Groundwater licences are metered and subject to volumetric allocations and may well be sufficient to meet mere reform commitments.

Unregulated river water entitlements, which New South Wales notes account for only a small proportion of extractions, remain at present linked to and dependent on the land title. Water extracted on unregulated rivers is at present not measured volumetrically but instead is determined by the area of the land to be supplied and/or the pump capacity extracting water. A volumetric conversion program has been commenced and arrangements for its implementation are advancing with a timetable for transition of irrigation licences by December 1999 and daily flow access conditions progressively developed, with high stressed rivers completed by June 2000.

Given the present state of water allocations for unregulated rivers, the Council is not satisfied that New South Wales has made sufficient progress to be regarded as having satisfactorily met this aspect of the strategic reform agenda. The Council is not therefore satisfied that there is a comprehensive system of water entitlements backed by separation of water property rights from land title and clear specification in terms of volume or transferability.

The Council notes its preliminary view that the proposed reforms are probably sufficient to meet the requirements of the framework, but would need to see any finally legislated water entitlements before arriving at a firm view.

The Council will undertake a supplementary assessment in June 2000 to satisfy itself that water legislation reform has been undertaken.

#### 10.2.4.2

**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 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 Council 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.

#### **NSW arrangements**

The information pamphlet '*Water reforms – securing our water future. Information for water users*' (September 1997) outlines proposed reforms to the New South Wales water industry.

The pamphlet notes the embargo on the issue of new licences for water extraction placed on all regulated (since the early 1980s) and unregulated rivers (since the setting of the cap on water extractions in 1995) in the Murray Darling Basin. Significant reforms in 1995 documented in the pamphlet include:

- delivery of water to the Macquarie Marshes and Gwydir wetlands;
- establishing the Healthy Rivers Commission to conduct inquiries into priority rivers;
- developing interim river water quality and flow objectives;
- referral of DLWC bulk water pricing to IPART; and
- setting up the Water Advisory Council (WAC) to advise on the implementation of reforms.

### **Proposed reforms**

The 1997 reforms introduced by the pamphlet aim to achieve clean, healthy and productive water use by:

Achieving a better balance in water use by more explicit and careful sharing of water between the environment and water users. The reforms in this respect include:

- specific sharing arrangements on regulated rivers. The pamphlet notes that all major regulated rivers are stressed and proposes consultation (through community based management committees including water users and conservation groups) to define environmental flow rules (reviewed annually with a major review before the end of five years) for providing an environmental share and an initial five year resource security for water users. The rules will be backed by licences and administration arrangements (such as the lifting on the moratorium on sleeper and dozer licences on regulated streams) and the growth in use will be balanced by a reduction in supply reliability to all users;
- the release of options for environmental objectives<sup>94</sup> covering river flows and water quality. The objectives establish quality and amount of water in rivers and timing and variability of flows. Reform objectives include a sustainable river and therefore rural sector, better habitats and more successful breeding for native fish and water birds, and healthy wetlands; and
- identification of stressed unregulated rivers and groundwater systems and developing river flow management plans (RFMP) and water quality action plans (WQAP)<sup>95</sup>. RFMPs will take into account environmental objectives and scientific information, defining water access rights and placing measures to fix

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<sup>94</sup> New South Wales has since advised that environmental objectives will be set by Government.

<sup>95</sup> New South Wales has since advised that one water management plan, addressing both water quality and river flow objectives, will be developed.

water sharing rules. WQAPs will focus in pollution reduction strategies. A similar process is proposed for groundwater, and will be backed by licensing reforms (volumetric licences with conditions defining access to flows at particular times) and monitoring. Where rivers are unstressed or groundwater aquifers a low risk the embargo on new licences will be lifted to enable additional development.

Investment strategies will provide investment confidence by clarifying water access and use rights (initially for a period of five years) and free-up and expand water trading opportunities. In addition Government investment is proposed by way of incentive funding for irrigation efficiency gains, provision of support to regional community based water committees, provision of country town water supply and sewerage schemes. This incentive funding is intended to improve planning and operation management, provide capital works to meet public health and environmental standards and implement of land and water management plans for irrigation areas. Finally, the appointment of IPART to review bulk water prices and interim water management charges is noted as a measure to meet full cost pricing objectives.

Reshaping the interaction between government and communities by establishing community based groups for regulated and stressed unregulated rivers and groundwater systems and institutional separation of water service providers from regulators.

Other initiatives identified include the development of State Groundwater and State Weirs Policies, a review of Total Catchment Management and the commissioning of a Water Conservation Taskforce to develop a state-wide water conservation strategy.

In proposing reforms to the existing framework, the discussion paper documents eleven water sharing principles including:

- the environment and extractive users both have a legitimate claim on water;
- water sharing should ensure, as a prior right, the maintenance of the fundamental health of river and groundwater systems and processes;
- water sharing should allow ecologically sustainable development;
- rules governing the environment and extractive uses should be determined by government and users together;
- changes should clarify and wherever possible not act to diminish current water users' rights;
- water rights and land title should be separated;
- water rights should be clearly specified in terms of tenure, definition of water allocations, obligations of rights holders and compliance requirements;
- water rights should be based on a consistent licensing system based on volume and timing of access; and

- the market for water rights should maximise opportunities for productive use of water.

### Progress on reforms

The publication *New South Wales Progress on the Water Reforms, 1995 to 1998* (the progress report) outlined the progress on reform commitments as follows:

#### ***Goal 1: To better share the available water***

Environmental flow rules (EFR) on all regulated rivers and the Barwon-Darling River were negotiated by river management committees (RMC) and are presently being implemented. RMCs include water user (irrigator and non-irrigator), environment, government, community and aborigine representatives. Eleven river flow objectives developed for EFRs include protection and restoration of natural water levels and flows, mimicking of natural inundations, drying periods and stream flows, maintaining groundwater within natural levels and managing flows to provide means to address contingent environmental and water quality events. RMCs are also to have regard to the needs of extractive users and the environment. EFRs cannot exceed a 10 per cent reduction in the average long-term diversions under the Murray Darling Basin Cap. EFRs provide an initial five year period of resource security.

It was noted that EFRs implemented in the Macquarie Marshes and Gwydir Wetlands in 1995 had demonstrably improved water bird breeding conditions. The long term impact of EFRs on other rivers is currently estimated at about 7 per cent (i.e., without the rules diversions would be about 7 per cent higher).

The Namoi EFRs provide for a limit on the maximum annual off-allocation diversions of water to 11 000 ML and provide for a sharing of off-allocation water between users and the environment. The Lachlan EFRs provide for releases of selected inflows, provide for a high security environmental contingency allocation of 20 000 ML at the time of critical environmental events to support bird and fish breeding, limit off-allocation extractions and provide for a minimum flow at the end of the river. The Barwon-Darling EFRs provided for setting a threshold at 60 per cent natural flow above the Namoi junction and raising the threshold for 'B class licences' below the Namoi junction. It was estimated that these EFRs would reduce current use by about 5 per cent.

Implementation of the Murray Darling Basin Cap. The cap is defined in any valley as that amount of water that would have been extracted had development levels not grown beyond those which existed up to and including the 1993-4 season.<sup>96</sup> The cap is incorporated into EFRs.<sup>97</sup> In this respect it is noted that the Independent Audit Group (IAG) 1997-1998 report identified four New South Wales valleys where the cap was considered to be breached: the Murrumbidgee, Lachlan, Barwon-Darling and Border rivers. It was noted that the EFRs are expected to rectify the problems with Cap

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<sup>96</sup> The Cap – A basis for the Evolution of Water Management DLWC December 1998.

<sup>97</sup> New South Wales Annual Report on the application of National Competition Policy for the year ending December 1997.

compliance in all but one of these valleys. The exception is the Barwon-Darling where further work is needed.

The *Draft Five Year Strategy for Water Management in New South Wales – 1999 to 2003* (DLWC, December 1998) (the five year strategy) notes that during 1999 RMCs will prepare water quality plans and from the year 2000 have locally agreed water quality strategies for implementation. Flow rules, monitoring, water quality plans and socio-economic studies will be integrated into comprehensive river management plans by the year 2003. The five year strategy noted the commitment of New South Wales to the cap although negotiations will be sought as regards auditing, implementation of volumetric conversions for unregulated rivers and implementation of the farm dams policy.

Management of unregulated rivers. Action taken includes the categorisation of rivers according to their stress and the establishment of water management committees to develop management plans by 2000-2001. The *New South Wales State Summary – Stressed Rivers Assessment report* (April 1998) noted that the classification of stressed rivers has proceeded on a subcatchment basis (680 subcatchments). Rivers were divided into nine categories on the basis of high, medium or low water extraction and high, medium or low environmental stress. Estimates were based on current water usage (full development of all existing entitlements) and environmental health of the rivers. A special high conservation rivers classification was also developed where, for example, high value species or wetlands, high biodiversity or the pristine condition of the river indicated special conservation value.

The classification influenced decisions concerning:

- the development of and issues to be addressed by River Management Plans (RMPs). RMCs would develop RMPs on high priority subcatchments first;
- the volume of water that can be extracted;
- review of licence embargoes;
- introduction of interim trading rules; and
- protection of high conservation value rivers.

Some 25 per cent of the rivers classified were identified as high priority for the development of river management plans with an additional 60 subcatchments being so classified on the basis of potential future water use development. 100 subcatchments were also identified as having high conservation values. The classification of all rivers would be reviewed every five years.

The progress report noted that water management committees are progressively being established for unregulated rivers and EFRs will be developed. RMPs for the most highly stressed and some high conservation value rivers will be prepared by the year

2001, other stressed and high conservation rivers by the year 2003 and all major unregulated rivers by the year 2005.<sup>98</sup>

Managing groundwater. The New South Wales State Groundwater Policy Framework Document (the framework) (DLWC, August 1997) outlines the goal for management of groundwater as: to manage the State's groundwater resources so that they can sustain environmental, social and economic uses for the people of New South Wales. The framework seeks to encourage sustainable development of groundwater resources so as to: slow, halt or reverse any degradation; ensure long term ecological sustainability; maintain the full range of beneficial uses of groundwater; and maximise the economic benefits of groundwater. The framework outlines three component policies covering groundwater quality protection, quantity management<sup>99</sup> and dependent ecosystems.<sup>100</sup> The quality protection policy,<sup>101</sup> the only one presently completed, outlines management principles including:

- that all groundwater systems should be managed such that their most sensitive identified beneficial use is maintained;
- that town water supplies should be granted special protection against contamination;
- groundwater pollution should be prevented so as future remediation is not required;
- the pumper of groundwater bears responsibility for environmental damage or degradation caused by using groundwater in a manner that is incompatible with soil, vegetation or receiving waters;
- groundwater dependent ecosystems will be afforded special protection;
- groundwater quality protection should be integrated with management of groundwater quantity; and
- degraded areas should be rehabilitated wherever possible.

Resource management principles included in the framework cover such matters as: the phasing out of non-sustainable uses; the protection of significant environmental and/or social values dependent on groundwater; rehabilitation of degraded areas; and integration of groundwater management with surface water and wider environmental and resources management. The range of management tools include the formulation of groundwater management plans (GMP) by groundwater management committees (GMC) where necessary and the use of legislative mechanisms, licensing tools and economic instruments. GMPs will be reviewed every five years.

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<sup>98</sup> The five year strategy.

<sup>99</sup> New South Wales has noted that this will be released in 1999.

<sup>100</sup> The five year strategy notes that the Groundwater Quality Management Policy and Groundwater Dependent Ecosystems Policy will be finalised in 1999.

<sup>101</sup> *New South Wales Groundwater Quality Protection Policy* DLWC December 1998.

As the framework foreshadows, aquifers have be assessed as either high, medium or low risk from over extraction and contamination.<sup>102</sup> Eight weighted criteria were used including the relationship between licensed water entitlements and sustainable yield, land use threats and the dependence of surface ecosystems on groundwater flows. Thirty-six of ninety aquifers were identified as at high risk, thirty-two of these from overallocation and four from contamination. GMPs are to be developed by the end of 1999 for aquifers at risk of over-extraction and by the year 2001 for aquifers at risk from water quality decline. By the year 2005 there will be a comprehensive set of management plans for at risk groundwater systems.<sup>103</sup> Each aquifer will be re-assessed on a five year basis.

The *Groundwater Management – Where to now* pamphlet (DLWC, December 1998) provides a case study of the Namoi Groundwater System. The system has groundwater allocated at more than double the amount that is sustainable. The GMP provides for the phasing in of allocation reductions. Subsequent investigations of the social impact and ways in which issues of unused allocations could be addressed were undertaken. The GMC is presently consulting with the community concerning the findings of the investigations.

The progress report notes that DLWC, the Great Artesian Basin Advisory Council and Consultative Council have developed a management plan for the entire Basin. A discussion paper on the embargoed intake beds has been published, a hydrological flow model developed and the bore monitoring network reviewed to improve efficiency. The plan will be completed by 1999.<sup>104</sup>

### ***Goal 2. To enhance support to the rural water sector***

The progress report notes the reforms proposed in *Water sharing in New South Wales – access and use. A discussion paper*. The farm dam policy is cited. The progress report also notes that a Water Conservation Strategy was completed in December 1998.

*Socio-economic Assessment Guidelines for River, Groundwater and Water Management Committees* (Independent Advisory Committee on Socio-economic Analysis, 1998) have been developed to assist management committees in water management decisions by providing methodological advice information collection, assessment and audit. The guidelines outline a community based socio-economic assessment that includes the following steps:

- documentation of the biophysical, social and economic conditions of the catchment and identification of communities' water resource management issues;
- goal setting;
- generation of options for water management;

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<sup>102</sup> *Aquifer Risk Assessment Report* DLWC August 1998.

<sup>103</sup> The five year strategy.

<sup>104</sup> The five year strategy.

- identification of positive and negative effects of management options on the community;
- assessment of social and economic effects of changes;
- determination of preferred options;
- development of appropriate impact management strategies which enhance positive impacts and minimise negative impacts;
- incorporation of socio-economic assessment into the management plan; and
- monitoring effects, evaluation and adjustment of the plan as required.

### ***Goal 3: To reshape how water management is delivered***

The progress report highlights the establishment of community-based decision making such as river management committees in regulated and some unregulated systems, including support staff and information packages. The committees' roles include assisting the development of EFRs, preparing action plans to achieve environmental objectives and reviewing overall river management to assess the impact on environmental objectives.<sup>105</sup>

Consultation mechanisms have included the creation of water management committees, the Water Advisory Council (WAC), intergovernmental agency committees and detailed public meetings and information sessions on reform obligations.

Institutional reform includes the establishment of State Water. Licensing HWC and SWC, a review of metering of water extractions are other examples of the implementation of water management reform. The Water Amnesty was an undertaking not to prosecute unlicensed or excessive water users for past illegalities. The scheme also provided for an opportunity to apply for a licence if this was appropriate or necessary. Four thousand six hundred and twelve registrations have been received.<sup>106</sup>

### **Future strategy**

*A Draft Five Year Strategy for Water Management in New South Wales – 1999 to 2003* (DLWC, December 1998) (the five year strategy) notes that the guiding principles for water quality and flow management are to:

- adapt environmental objectives and river management over time to provide for adjustments based on expanding knowledge, river health monitoring and changing community and economic values;

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<sup>105</sup> *Role of community based committees* DLWC July 1997.

<sup>106</sup> *New South Wales Water Amnesty and other Water Licensing Issues* DLWC December 1998.

- ensuring a catchment focus by tailoring river health provisions to provide cost-effective and practical solutions to meet individual needs;
- recognising the link between river flows and water quality;
- monitoring social and economic impacts;
- providing water for the environment to mimic natural flows as much as possible;
- protect systems not seriously affected by human activities;
- rehabilitate highly stressed rivers;
- consider ground and surface water interactions; and
- proposals for instream structures are to show clear benefits outweighing environmental effects and that there are no alternatives.

### **Other information**

New South Wales noted that a number of measures had been taken to ensure rigour in the development of research information and its transfer to management decision making including:

- the whole of government group co-ordinating the implementation of water reforms established a multi-agency Policy and Technical Committee to ensure peer review of data management and use;
- in December 1997 the Co-operative Research Centre for Freshwater Ecology (CRCFE) hosted a forum which examined the science being used to determine river flow objectives and associated environmental flow rules. The chair of the forum concluded that there was strong scientific support for the New South Wales' approach; and
- a technical advisory committee, with university and CSIRO membership, has been established to review and refine the Integrated Monitoring of Environmental Flows program.

The New South Wales' allocation and trading implementation program is outlined in attachments 3 (for all systems), 4 (unregulated catchments) and 5 (groundwater systems). New South Wales has noted:

- for regulated rivers EFRs are in place and the reform requirements have been met; and
- for groundwater systems the conversion of remaining area licences to a volume basis is expected to be completed by December 2000.

### **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.***

In respect of reforms in place and proposed for regulated and unregulated rivers and groundwater aquifers, there is clear recognition of the potential and actual impact of regulation and extraction of water on ecological values including the riverine environment, aquifers and associated ecological systems.

***Principle 2 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 features of New South Wales reforms including:

- the assessment of unregulated rivers and groundwater aquifers takes into account scientific information (for example, hydrological information in determining subcatchments) concerning the particular system;
- EFRs have taken into account scientific information concerning natural flow events in their development;
- RMPs and GMPs have regard to information concerning affected ecosystems in their development;
- the creation of a management plan for the Great Artesian Basin will incorporate hydrological information;
- ongoing management of all systems includes continuing assessment and use of assessment tools such as photographic assessment of existing irrigation developments (stressed rivers); and
- New South Wales has utilised the expertise of the CRCFE to examine the science underpinning river flow objectives and environmental flow rules.

The Council is satisfied that the policies and procedures in New South Wales provide for consideration of current scientific information.

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

EFRs provide explicit recognition for flow events to be provided to the environment. In addition, it would appear that both GMPs and RMPs will provide explicit recognition for water and flows that belong to the environment.

The Council notes the stated commitment of New South Wales to a comprehensive overhaul of water legislation including the recognition of flows needed to restore adequate river health as a prior right over consumptive use.

***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.***

The Council notes that EFRs have provided improved flow outcomes that are to specifically benefit the environment. These benefits are at the expense of possible diversions from the rivers. The Council also notes that the MDBC cap has resulted in an effective embargo in diversions in all inland rivers, to the benefit of the water ecosystems. In addition, the Namoi GMP provides evidence of the reduction in water ~~allocation to consumptive uses~~ ***allocation to consumptive uses cannot be met due to***

The Council notes that consultative mechanisms such as RMCs/GMCs and formalisation of socio-economic assessments will ensure that the existing rights of users are considered in decisions regarding making water available for ecosystems. In addition, the water sharing principles recognise the legitimate claims of extractive users on water and that rules governing both environmental and extractive uses of water should be determined by the government and users together.

The Council is satisfied that the policies are in place to permit extractive users rights to be recognised while ensuring water is allocated to sustain ecological values.

***Principle 5***

***existing uses, action (including reallocation) should be taken to meet environmental needs.***

The Council notes that there are many overallocated systems in New South Wales. In addition, the Council notes that some action (e.g., EFRs) has been taken to recognise environmental needs. RMPs and GMPs will contribute to a reallocation of some water to the environment, including by trading mechanisms.

It is unclear from the reform proposals the precise nature of the mechanism that will be used to meet environmental water requirements in overallocated systems. The Council does note, however, the commitment of New South Wales to recognise legislatively the prior right of water for the flows needed to restore adequate river health. The Council notes its view that this is a matter of considerable importance.

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

The Council notes the present embargoes on new allocations for many New South Wales water systems. The Council also notes that processes outlined by New South Wales will provide for an assessment prior to new allocations being made and that this assessment will include environmental considerations.

***Other matters***

New South Wales has achieved reform by: the establishment of EFRs for regulated rivers; the assessment of classification of regulated and unregulated rivers and aquifers; and the development of policies and future strategies to deal with issues surrounding allocation of water to its various consumptive uses.

In reviewing the information on progress the Council notes again that the reforms in New South Wales has not as yet overhauled its water legislation and that a

supplementary assessment on progress in enacting this legislation will be undertaken in June 2000. The Council considers that this passage of reforming legislation is critical to the further progress of the reforms outlined by New South Wales. In this respect the Council notes that:

- For regulated systems, EFRs were the first step in a process that included licence reviews. It is noted that EFRs for the Barwon-Darling River do not appear to meet the MDBC cap.
- For unregulated systems, although the roll-out for RMPs will appear to address the high stressed systems by the end of June 2001, this is presumably dependant on the implementation of water licensing reform that is still in the development phase. In addition, some systems' reviews are not to be completed until the year 2003.
- As regards groundwater, policies for quantity management and dependent ecosystems are still in development. The Council notes that GMPs for stressed aquifers should be completed by 1999, but is unclear how any new regime will fit in with modifications proposed for water title rights.

The Council has reviewed the implementation programs for New South Wales regulated rivers, unregulated catchments and groundwater systems. The Council is of the view that the implementation of EFRs on regulated rivers substantially meets the reform commitment.

The Council has reviewed and discussed with New South Wales the programs provided for unregulated rivers and groundwater systems.

The Council agrees to the implementation programs provided by New South Wales. In doing so, it notes the following relevant matters:

- the National Land and Water Resource 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
- the implementation programs, by their nature, may need to be amended depending on many factors including proposed new developments and other significant events. In particular the ongoing assessment of unregulated subcatchments may result in additional High Stressed Catchments being included in the timetable.

The Council is therefore of the view that the implementation programs may change over time, provided there is agreement between New South Wales and the Council.

### 10.2.4.3

#### **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.

#### **NSW arrangements**

##### **Present trading arrangements**

Part 2, Division 4C of the Water Act provides for the temporary or unlimited transfer of water allocations where these are measured volumetrically. The applications for transfer are subject to approval by the Ministerial Corporation which must be satisfied that the transfer '*would not result in the transferee's scheme being subjected to an unacceptable commitment*'; section 20AH. For transfers exceeding in total three years a farm water management plan outlining information such as previous water consumption, groundwater levels, soil type, existing and proposed irrigation must be approved by the Ministerial Corporation. The farm water management plan then becomes a condition on the licence permitting the transferee to take the traded water.

Part 5 of the Water Act deals with groundwater and permits temporary and permanent transfer of licences on the approval of the Minister and after having regards to matters such as the social and economic effect of the transfer if approved.

*Enhancing and extending water trading in New South Wales* (DLWC, December 1998) (the enhancing trade paper) notes that there are currently differing trading rules for each of the regulated rivers and the Barwon Darling. For example, in the Macquarie River there are no temporary or permanent trades permitted into Crooked Creek and volumetric trades constrained on Duck and Gunningbar Creeks and Cudgeong River. A conversion factor of 0.7 is applied for trades past Fairview dam. In the Barwon Darling River there are no temporary trading rules and interim permanent trading rules. In the Namoi and Border Rivers there are no restriction on

either permanent or temporary trades. Trades between 200 000 and 700 000 ML have been made annually, although permanent trades represent only a small proportion of this (10 000-50 000ML). The annual value of trade on regulated rivers is estimated at between \$5 million in a wet year to \$40 million in a dry year.

### **Proposed reforms and progress**

*Water Trading on Regulated Rivers – Benefits of Separation of Access and Use Rights* (undated, DLWC) notes that the present trading regime under the Water Act restricts water purchases to those who own land. It notes that the splitting of water licences into access and use rights would:

- provide for better definition of rights in that trading in access rights would be independent of the use to which the water is put;
- greater homogeneity in the right being traded; and
- prior approval (via a usage right) would speed up the processing of transfers and third party objections.

The enhancing trade paper notes that reforms in 1998 were designed to extend markets and improve their operation, including trading beyond irrigators to industrial and mining users, participating in the MDBC Pilot Interstate trading project and commencing trade on unregulated rivers. A consultancy<sup>107</sup> on water trading (due to report in 1999) had made the preliminary findings including:

- water trading offers substantial potential benefits to individual water users and the New South Wales economy but is currently operating less than optimally, particularly as regards permanent transfers. This favours incumbent annual crop growers and disadvantages potential new users;
- trading rules need to reflect environmental and river health objectives and a precautionary stance must be operated at least until flow regimes have been specified;
- individual permanent trading rules can take 6-12 months to approve due to required environmental assessment. More efficient trading rules requires the development of explicit trading rules, which are linked to flow management rules, and a prior approval mechanism covering land use requirements. This could occur with the separation of access and use rights; and
- transfer rules should reflect physical characteristics of water delivery (such as transmission losses) and explicitly state their objectives or interactions.

Following the review of trading arrangements, the next step identified is the specification of access rights to facilitate efficient water trading. The third step requires the development of state-wide trading principles to support consistent market

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<sup>107</sup> Marsden Jacobs.

development and local rules, developed by water management committees, addressing specific regional concerns. Two further steps identified are:

- efficient processing of transfer applications; and
- creating a more fully informed market. A consultancy in conjunction with the MDBC to establish a water trading information system on the internet is to be trialled and will provide information concerning trading rules, contact details for buyers/sellers and prevailing reported market prices.

*Water Trading on Unregulated Rivers* (DLWC, December 1998) notes that trading in unregulated rivers is in its infancy and cannot develop to its full extent until river management plans<sup>108</sup> are in place. Interim trade rules, to be finalised following the completion of risk assessments, volumetric conversions of water rights and development of river management plans, have been developed. The interim rules apply to permanent trades only. The interim rules:

- confine trades generally within subcatchments and provide that trades are available to active irrigator and industrial water users only;
- require a farm water management plan to be submitted with the application; and
- permit trading for licences on the basis of an equivalent area until volumetric conversion has taken place.

Transfers require the buyer to apply for a new water licence and may require an Environmental Impact Statement or detailed Review of Environmental Factors depending on the scale of the proposed development.

The Council has been advised that trials on intervalley trades will commence shortly. Principles for trading groundwater will be established in 1999 and markets introduced following resource assessment, determination of primary allocations and establishment of local trading rules.<sup>109</sup>

The Council has also been advised that 75 per cent of the water used in New South Wales is now subject to a mature market approach and that the value of market transactions handled by DLWC is over \$40 million per annum.<sup>110</sup>

The consultant's draft final report recommends the separation of water rights into an access and a use right. It is noted that many of the proposed efficiency improvements are based on 'prior approvals' bedded into comprehensive planning scenarios for both types of rights. The response notes that the new framework will provide for significantly shorter periods of time to complete permanent transfers and the basis for more comprehensive trading regimes on unregulated rivers and aquifers.

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<sup>108</sup> RMPs will clarify water access rights, conditions under which water can be taken from rivers and detailed trading rules.

<sup>109</sup> Meeting, Council Secretariat and New South Wales Officials, 25/11/98.

<sup>110</sup> Not including the value of trade in irrigation areas and districts and interstate trade.

### **Interstate water trading**

As regards interstate trade, 5 000 ML of excess environmental water was sold by Victoria to New South Wales in 1994. The sale was effected after consultation with possible Victorian users.

New South Wales is a participant in the pilot interstate water trading project in the Mallee border region of the Murray-Darling Basin.<sup>111</sup> The project is limited to permanent transfer of high security water entitlements held by private diverters. Each trade must be approved by respective state authorities. The scheme provides for the registration of the trades and exchange rates to limit the impact of trades on the security of others' water entitlements and the environment. Environmental clearances are integral to the pilot, as is the maintenance of the Salinity and Drainage strategy.

The Council has been advised by the MDBC that the first water trade under the project occurred in September 1998 and that as at 15 February 1999, 248 ML had been transferred from New South Wales to Victoria, 600 ML from Victoria to South Australia and 528 ML from New South Wales to South Australia. The present price for trades is about \$1 000 per ML. The MDBC is presently reviewing the project.

New South Wales has advised that interstate trade between New South Wales and Queensland cannot occur until Queensland has completed '*capping*' entitlements, and that there are at present no formal arrangements for trade.<sup>112</sup>

### **Council Comment**

The Council notes that there is at present significant trade occurring in New South Wales, and that this is having a significant and positive net effect on rural outputs.

The Council is of the view that the present trading systems have some shortfalls, including long time periods between proposed trading and approval and a lack of flexibility in the present water licensing system. It cannot be said that the current trading rules remove impediments to trade. For example, some proposed transfers require extensive and expensive information and take two or more farming seasons before they are approved, which is hardly conducive to efficient farm water management.

The Council notes the present trading arrangements are being reviewed. In this respect:

- the proposed new system of water licensing outlined above is said to have significant advantages in facilitating water trade;
- a consultancy has completed a review of present trading arrangements;
- pilot projects are in place for interstate and unregulated river water trading; and

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<sup>111</sup> The Pilot Interstate Water Trading Project information sheets; MDBC, 1998.

<sup>112</sup> New South Wales Annual Report in the Application of National Competition Policy for the year ending December 1997.

- principles for groundwater trade are being developed.

All of these will contribute to creating a more efficient system of trading.

The Council is not satisfied that present trading arrangements meet the framework commitments. Considerable work in finalising new licensing regimes for water access, completing pilot trading projects and trading rule reviews and implementing recommendations to streamline present trading arrangements is required.

New South Wales has advised that there will be a comprehensive overhaul of water legislation by the end of 1999. The Council will undertake a supplementary assessment of these matters in June 2000.

The infancy of interstate trade is acknowledged by the careful progress of the MDBC pilot project. Nevertheless, some trading has occurred, and the project is presently being reviewed. This should provide an opportunity for problems to be identified and solutions jointly created by member states.

The Council is concerned at the lack of progress in New South Wales/Queensland cross-border trading and will pursue this matter with both jurisdictions prior to the third tranche assessment.

## **B10.2.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.2.5.1**

**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.

### **NSW arrangements**

#### **Catchment Management**

The *New South Wales Annual Report in the Application of National Competition Policy for the year ending Dec '97* notes that Total Catchment Management was endorsed as New South Wales Government Policy in 1987 and *the Catchment Management Act* (CM Act) put in place in 1989.

The CM Act provides for the establishment of a State Catchment Management Co-ordinating Committee and Catchment Management Committees and Catchment Management Trusts to implement total catchment management of natural resources. Total catchment management (TCM) is defined as the co-ordinated and sustainable use and management of land, water, vegetation and other natural resources on a water catchment basis so as to balance resource utilisation and conservation.<sup>113</sup> The objects of the Act include:

- to co-ordinate policies, programs and activities as they relate to total catchment management;
- to achieve active community participation in natural resource management;
- to identify and rectify natural resource degradation;
- to promote the sustainable use of natural resources; and

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<sup>113</sup> Section 4 CM Act.

- to provide stable and productive soil, high quality water and protective and productive vegetation cover within each of the State's water catchments.

In order to give effect to the objects, the CM Act provides for a network of Catchment Management Committees (CMC), co-ordinated by a Co-ordinating Committee, and Catchment Management Trusts (CMT). These link the Government and community to achieve the objectives of total catchment management. In addition, the CM Act provides for Catchment Management Trusts to raise revenue for particular total catchment management purposes.

The Co-ordinating Committee<sup>114</sup> consists of twenty members including government officers, environmental representatives, persons nominated by the Shires Association, and persons nominated jointly by the Catchment Management Committees. The objective of the Co-ordinating Committee is to provide a central co mechanism for the purpose of total catchment management throughout New South Wales and its functions include co-ordination of the implementation of total catchment management strategies, monitoring and evaluating the effectiveness of total catchment management strategies and co-ordinating the functioning of Catchment Management Committees.

CMCs<sup>115</sup> are created by the Minister. Membership of CMCs includes persons who are land holders or land users within the catchment area (who are to constitute the majority of the members), environmental representatives, local government nominees and government officers with responsibility for natural resource use or management within the catchment area. CMCs have functions including to promote and co-ordinate the implementation of total catchment management policies and programs, to advise on and co-ordinate the natural resource management activities, to identify catchment needs and prepare strategies for implementation, to co-ordinate the preparation of programs for funding and to monitor, evaluate and report on progress and performance of TCM strategies and programs. New South Wales has advised that some forty CMCs are presently in operation.<sup>116</sup>

CMTs<sup>117</sup> are created after consideration of matters such as whether: the degradation of natural resources within the area concerned is adversely affecting the community; the land holders, land users and the community who utilise and derive benefit from those resources have a joint responsibility to deal with the degradation; the formation of a CMT is the most appropriate means of achieving equitable cost sharing; and there is clear support by the land holders, land users and the community for the formation of a CMT.

CMTs consist of trustees including land users or land holders within the CMT area, (who are to constitute the majority of the trustees), environmental representatives and persons nominated by local government authorities. A CMT may:

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<sup>114</sup> Part 2, Division 1 CM Act.

<sup>115</sup> Part 2, Division 2 CM Act.

<sup>116</sup> New South Wales Annual Report in the Application of National Competition Policy for the year ending December 1997.

<sup>117</sup> Part 3 CM Act.

- provide, construct, operate, manage and maintain works and buildings;
- purchase, exchange, take on hire or lease, hold, dispose of, manage, use or otherwise deal with real or personal property;
- enter into cost-sharing or other arrangements in connection with the carrying out of works;
- generate revenue by levying and recovering catchment contributions; and
- provide assistance to mitigate the effects of flood, drought, fire or other emergency, including assistance with funds, personnel or equipment;

A CMT levy is a catchment contribution on any land within the CMT area declared to be a catchment contribution area. A catchment contribution may only be levied to fund the programs in the CMT's corporate plan as approved by the responsible Minister. So far three CMTs have been established: the Hawkesbury-Nepean Catchment Management Trust; Hunter Catchment Management Trust; and Upper Parramatta River Catchment Management Trust.

The New South Wales 1998 annual report notes that a review of TCM was nearing completion. It is also noted that a Natural Resources Directions Statement which is likely to incorporate a vision for natural resource management in New South Wales and a range of key policy principles for natural resource management is being developed for consideration by Cabinet in 1999. The policy will include integration of resource management across resource, social and ecosystems boundaries and linking community and government efforts in natural resource management.

### **Other information**

A range of New South Wales initiatives have regard to integrated catchment management in decisions concerning classification, planning and/or intervention. These include:

- the creation of the SCA;
- the farm dams policy;
- the Stressed Rivers Assessment Report;
- the groundwater quality protection policy and resource management principles;
- the Socio-economic Assessment Guidelines for River, Groundwater and Water Management Committees; and
- the Draft Five Year Strategy for Water Management.

Additional reforms in this area cited by New South Wales<sup>118</sup> include development of catchment based environmental objectives for each river and estuary and detailed

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<sup>118</sup> *New South Wales Progress on the Water reforms, 1995 to 1998* (DLWC, December 1998) [To better share the water available].

inquiries into specific catchments by the Healthy Rivers Commission (HRC). The HRC has completed an inquiry into the Williams River and the recommendations are being implemented by HWC.<sup>119</sup> The five year strategy noted that inquiries or reports are being completed on the Hawkesbury-Nepean, Hunter, Bega, Shoalhaven, Clarence, Woronora and Tweed rivers.

Implementation of the New South Wales Wetlands Management Policy has resulted in a more natural flow regime for riverine wetlands and protecting wetland vegetation. As noted previously, the New South Wales Weirs Policy has as its goal to halt and, where possible, reduce and remediate the environmental impact of weirs.<sup>120</sup> Principles adapted in support of this goal include:

- the construction of new weirs, or enlargement of existing weirs, shall be discouraged. In this respect notes that a proposal will not be approved unless it maintains the essential social and economic needs of the affected community;
- weirs no longer providing a significant benefit shall be removed;
- where weirs are retained, owners will be: encouraged to undertake structural changes to reduce their environmental impact; required to prepare operational plans to reduce their environmental impact; and expected to maintain them in good working order; and
- the protection of wetlands and riparian vegetation from permanent inundation and rehabilitation of damaged environment.

The Policy requires the development of a weir inventory and a review of all existing weirs to determine their current acceptability. A Weir Review Committee (which first met in November 1998) including departmental, local governmental, farming and environmental representatives was established to advise and assist on priorities and procedures.

Land and Water Management Plans (LWMP) are large sub-catchment action plans to achieve better integrated management of natural resources and provide for longer term sustainability of rural industries. LWMPs are developed by community working groups, reviewed by a government assessment team and then endorsed by government and implemented through government-community agreements. Four LWMPs have been completed and the likely cost of implementation of these plans some \$500 million, funded by governments and the local community. Another four LWMPs are either drafted or in progress.

### **Council Comment**

The Council notes the pioneering work of New South Wales in catchment management, and the continuing development of strategies to address catchment issues. The Council is satisfied that:

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<sup>119</sup> New South Wales Annual report on the Application of National Competition Policy for the year ending December 1997.

<sup>120</sup> *New South Wales Weirs Policy* DLWC August 1997.

- New South Wales has demonstrated arrangements that ensure an integrated approach to resource and catchment management. The Council also notes that this process is ongoing and improves on what is already a comprehensive system;
- that the process included in the CM Act provide for consultation with relevant stakeholders including local government, landholders and environmental representatives;
- that there is provision for the funding of specific initiatives in some circumstances through a trust mechanism; and
- that ongoing initiatives such as the HRC and development of LWMP will ensure continuing development of catchment management that addresses new circumstances and the multiple uses of catchments and the water that is captured.

The Council notes that reforms outlined by New South Wales will contribute further to TCM, and will continue to monitor these matters prior to the third tranche assessment. The Council is satisfied that, for the second tranche this aspect of the strategic framework is met.

**10.2.5.2 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.

**NSW arrangements**

The Council notes the information outlined above including:

- the work of the HRC;
- EFRs;
- the work of the Sydney Water Inquiry including the recommended proposed review of licence conditions for SWC;
- the work done on stressed unregulated rivers including the proposed development of WQAPs; and
- the groundwater quality protection policy.

**The Sydney Water Inquiry**

In his second report, McClellan noted that the current OL for SWC required water for drinking purposes to meet 1980 National Health and Medical Research Council (NHMRC) Guidelines, and that an agreed timetable for meeting the 1987 Guidelines be negotiated with New South Wales Health in accordance with the MoU. It was noted that SWC presently endeavoured to comply with the NHMRC's 1996 Guideline.

In his fifth report McClellan noted that the New South Wales Government has requested NHMRC to review its guidelines with a view to an improved operational water quality standard being imposed on SWC by the end of 1999.

### **Other information**

WSAA Facts '98 notes for SWC, 99.75 per cent compliance with bacteriology quality and 99.53 per cent compliance with Physico/Chemical (turbidity/colour/pH) as set out in the 1980 NHMRC Guidelines. HWC's results were 98.7 per cent and 99 per cent respectively (NHMRC 1996) and GCC's 100 per cent and 100 per cent (NHMRC 1996). As regards Wastewater effluent, SWC and GCC are noted to be 100 per cent compliant with overall effluent discharge standards (HWC 99.5 per cent compliant), most treatment plants<sup>121</sup> being compliant with Licence conditions at all times.

The Council notes that the DLWC Performance Comparison for NMU Water Supply and Sewerage (1995-1996) reported that 87 per cent of councils complied with 1987 NHMRC Guidelines although 16 per cent of councils did not report. It was noted that all councils should carry to the necessary water quality sampling and report thereon in the future. New South Wales has noted that there has been a progressive increase in performance requirements with an emphasis on nutrient removal, and that many NMUs have nutrient removal in place. The report also noted significant failure to meet EPA licence conditions for wastewater, and that the major cause for non-compliance is due to the growth of algae in maturation ponds. The report noted the negotiations between local governments and the EPA concerning licensing methods. The report also noted that in excess of 10 per cent of councils did not report on effluent.

The New South Wales Annual Report in the Application of National Competition Policy for the year ending Dec '97 noted that New South Wales contributed to the National Water Quality Management Strategy, and cited, for example, pilot projects as regards wastewater disposal.

New South Wales has advised of the implementation of a Load Based Licensing scheme which provides economic incentives to some 3 500 pollution licences held by large enterprises with the greatest potential to cause environmental harm (sewage treatment plants, feedlots, manufacturing industries) from nutrient and other point source pollution.

### **Council Comment**

The Council notes the contribution of New South Wales to NWQMS. In particular it notes the work completed and proposed for Sydney's potable water supplies. The Council will continue to monitor the implementation of the recommendations of the Sydney Water Inquiry recommendations prior to the third tranche assessment.

While there has been significant non-compliance with water and wastewater quality standards for NMUs, New South Wales has focussed on increasing the performance requirements required of local government.

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<sup>121</sup> Except 5 of 21 HWC treatment plants.

The Council, while satisfied that New South Wales has met this reform commitment for the second tranche, will continue to monitor the implementation of the NWQMS guidelines prior to the third tranche assessment. The Council will focus on issues concerning implementation, monitoring and compliance with guidelines.

## **B10.2.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

### **10.2.6.1**

**(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.

#### **NSW arrangements**

The New South Wales Annual Report in the Application of National Competition Policy for the year ending Dec '97 noted the following public consultation initiatives:

- the WAC to advise the Minister for Land and Water Conservation on water issues;
- State working groups involved in the development of water policies;
- Catchment Management Committees;
- stakeholder surveys;
- River and Groundwater Management Committees; and
- extensive consultation concerning the proposed water reform package.

The Council has been provided with many examples of the information provided to persons involved in the reform process.

IPART pricing determinations are public processes which provide for open hearings, representations and written submissions. The HRC conducts public hearings inquiries including hearings, discussions with interests groups and provision for written submissions. Reports of both bodies are publicly available.

Examples of public education programs cited in the New South Wales Annual Report in the Application of National Competition Policy for the year ending Dec '97 include: *Streamwatch*, which involves schools, community groups and councils in environmental auditing; *Waterwise* National Water Week; *Exploring the Nardoo*, a CD Rom for secondary/tertiary students focusing on water management within a catchment; and a water web site.

In addition, it is noted that SWC and HWC have advertising campaigns designed to attribute value to water and encourage conservation and SWC regional officers have education officers who visit schools.

#### **Council Comment**

New South Wales has undertaken extensive consultation on proposed water reforms. The Council commends this and the open and accountable method of price

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determination by IPART; this is an important aspect of consultation regarding price reforms. The Council notes the extensive education programs and is of the view that these initiatives meet the requirements of the strategic framework.

The Council considers that there is an inherent conflict in the service provider supplying this ongoing public education on water conservation when it has a financial interest in increased water consumption. The Council notes its preliminary view that the most appropriate body to undertake this type of activity is the resource manager and not the service provider. The service provider is, however, well placed to provide information concerning water price and service conditions. The Council will review this matter with New South Wales prior to the third tranche assessment.

## ATTACHMENT 1

TABLE 10.2.4 COST RECOVERY FOR NMUs WITH MORE THAN 10 000 CONNECTIONS<sup>122</sup>

UTILITY	WATER ASSETS <sup>123</sup>	REVENUE	OMA <sup>124</sup>	ECONOMIC RoR <sup>125</sup>	SEWERAGE ASSETS	REVENUE	OMA	ECONOMIC RoR
ALBURY	91 226	6 171	4 909	-0.6%	109 566	11 176	3 372	7.1%
BALLINA	44 842	3 378	2 513	1.1%	85	6 352	2 382	3.7%
BATHURST	99 476	7 516	2 921	2.9%	79 712	4 587	2 415	0.6%
BEGA VALLEY	95 800	6 159	2 783	2.7%	68 649	5 565	2 367	2.3%
BROKEN HILL	82 000	10 471	7 439	0.7%	35 000	2 307	1 617	-1.1%
COFFS HARBOUR	112 388	10 961	3 556	4.8%	120 103	13 556	4 408	5.0%

<sup>122</sup> 18 May 1999.

<sup>123</sup> Current replacement cost (\$,000).

<sup>124</sup> Total operations, maintenance and administration costs (includes allocation of overheads) (\$,000).

<sup>125</sup> Revenue from operations less (replacement cost depreciation + operation, maintenance and administration costs) divided by written down replacement cost of operational assets.

<b>UTILITY</b>	<b>WATER ASSETS</b> 123	<b>REVENUE</b>	<b>OMA</b> <sup>124</sup>	<b>ECONOMIC RoR</b> <sup>125</sup>	<b>SEWERAGE ASSETS</b>	<b>REVENUE</b>	<b>OMA</b>	<b>ECONOMIC RoR</b>
DUBBO	89 211	7 601	4 159	2.1%	98 139	7 136	2 482	4.4%
EUROBODALLA	136 269	6 774	3 312	1.1%	110 849	7 995	3 923	1.8%
GOLDENFIELDS (water retailer)	80 851	7 336	6 262	-0.8%	N/A	N/A	N/A	N/A
HASTINGS	149 882	12 434	3 448	2.7%	118 587	11 464	3 691	4.9%
LISMORE	35 070	4 740	2 975	3.6%	92 063	8 702	2 695	0.1%
MIDCOAST	142 200	14 325	6 482	3.2%	170 000	22 794	5 999	3.8%
ORANGE	84 392	7 237	2 580	4.7%	95 340	8 935	1 564	6.5%
QUEANBEYAN	32 300	5 904	7 356	3.0%	43 651	6 167	2 318	6.0%
RIVERINA (water)	161 467	12 946	5 512	4.5%	N/A	N/A	N/A	N/A
SHOALHAVEN	203 308	18 371	6 732	4.2%	199 849	21 608	8 140	5.1%
TAMWORTH	139 592	7 607	2 603	3.3%	97 312	5 697	2 293	1.9%
TWEED	157 484	12 170	4 121	3.3%	166 545	14 613	4 096	6.0%
WAGGA WAGGA (sewerage)	N/A	N/A	N/A	N/A	not provided	6 326	2 257	not provided

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<b>UTILITY</b>	<b>WATER ASSETS 123</b>	<b>REVENUE</b>	<b>OMA<sup>124</sup></b>	<b>ECONOMIC RoR<sup>125</sup></b>	<b>SEWERAGE ASSETS</b>	<b>REVENUE</b>	<b>OMA</b>	<b>ECONOMIC RoR</b>
WINGECARRIBEEE	103 457	8 607	3 185	5.1%	83 276	6 093	2 059	3.8%

## ATTACHMENT 2

TABLE 10.2.5 TARIFF STRUCTURES FOR NMUs WITH MORE THAN 10 000 CONNECTIONS<sup>126</sup>

UTILITY	ASSESSMENT/ POPULATION	WATER ACCESS	WATER USAGE	AV. WATER SUPPLY COST	WASTEWATER ACCESS
ALBURY	17 000/ 43 000	Standard fee: \$150	0-450Kl: 10c/Kl >450Kl: 40c/Kl	\$301	Standard fee: \$220
BALLINA	13 000/ 36 000	Standard fee: \$140 Includes 75Kl allowance	75-325Kl: 30c/Kl >325Kl: 95c/Kl	\$163	Standard fee: \$370
BATHURST	11 000/ 30 000	Property Value based Includes 400Kl allowance	400-700Kl: 86c/Kl >700Kl: 61c/Kl	\$425	Property Value based
BEGA VALLEY	12 000/ 20 000	Standard fee: \$210	0-75Kl: 82c/Kl 72-130Kl: 60c/Kl >130Kl: 126c/Kl	\$430	\$500
BROKEN HILL	10 000/ 22 000	Standard fee: \$152	0-200kL: 15c/Kl 200-500Kl: 90c/Kl >500Kl: 130c/Kl	\$313	Property Value based
COFFS HARBOUR	21 000/ 57 000	Standard fee: \$143	Residential: 97c/Kl Commercial: 112c/Kl	\$309	\$460
DUBBO	13 000/ 38 000	Standard fee: \$210	52c/Kl	\$489	Property Value based

<sup>126</sup> Provided 18 May 1999.

<b>UTILITY</b>	<b>ASSESSMENT/ POPULATION</b>	<b>WATER ACCESS</b>	<b>WATER USAGE</b>	<b>AV. WATER SUPPLY COST</b>	<b>WASTEWATER ACCESS</b>
EUROBODALLA	18 000/ 31 000	Standard fee: \$245	40c/Kl	\$329	Standard fee: \$430
GOLDENFIELDS (water retailer)	9 000/ 25 000	Standard fee: \$192	101c/Kl	\$784	N/A
HASTINGS	22 000/ 51 000	Standard fee: \$190	69c/Kl	\$344	Standard fee: \$410
LISMORE	14 000/ 27 000	Standard fee: \$88	85c/Kl	\$218	Standard fee: \$295
MIDCOAST	30 000/ 94 000	Standard fee: \$168	0-50Kl: 28c/Kl >50Kl: 53c/Kl	\$274	Standard fee: \$450
ORANGE	13 000/ 31 000	Property Value based Includes 455Kl base allowance	>455Kl: 110c/Kl	\$295	Property Value based
QUEANBEYAN	13 000/ 29 000	Standard fee: \$200	0-350Kl: 42c/Kl 350-400Kl: 74c/Kl >400Kl: 105c/Kl	\$407	Property Value based
RIVERINA (water)	26 000/ 58 000	Standard fee: \$80	0-125Kl: 55c/Kl >125Kl: 70c/Kl (Non residential >500Kl: 65c/Kl)	\$314	N/A
SHOALHAVEN	44 000/ 83 000	Standard fee: \$260 Includes 250Kl base allowance	>250Kl: 70c/Kl	\$288	Standard fee: \$470
TAMWORTH	15 000/ 37 000	Standard fee: \$135	60c/Kl	\$389	Standard fee: \$276

<b>UTILITY</b>	<b>ASSESSMENT/ POPULATION</b>	<b>WATER ACCESS</b>	<b>WATER USAGE</b>	<b>AV. WATER SUPPLY COST</b>	<b>WASTEWATER ACCESS</b>
TWEED	25 000/ 58 000	Property Value based Includes 265Kl base allowance	>265Kl: 70/Kl	\$193	Property Value based
WAGGA WAGGA (sewerage)	N/A	N/A	N/A	N/A	Standard fee: \$198
WINGECARRIBEEE	15 000/ 30 000	Standard fee: \$197	0-150Kl: 52c/Kl 150-500Kl: 140c/Kl >500Kl: 166c/Kl	\$405	Standard fee: \$365 and volumetric charge

## ATTACHMENT 3: NEW SOUTH WALES ALLOCATION AND TRADING IMPLEMENTATION PROGRAM

### Requirement

The requirement for comprehensive systems of water allocations and trade, including provision of water allocations for the environment, has been achieved for the **regulated rivers** in New South Wales, excluding the Murray and Border Rivers for which environmental flow provisions are subject to inter-State negotiations. The regulated rivers account for about 80 per cent of water use in the State and include the following major river systems:

- Dumaresq/Barwon/Macintyre Rivers\*;
- Gwydir River;
- Namoi River;
- Peel River;
- Macquarie River;
- Cudgegong River;
- Lachlan River;
- Belubula River;
- Murrumbidgee River;
- Murray River\*;
- Hunter River;
- Bega River; and
- Barwon-Darling River (although this is not a regulated river it is significantly influenced by tributary regulation).

*\*environmental component subject to inter-government negotiations.*

These rivers are mature systems and can be characterised by:

- long-term embargoes on the issue of any additional entitlements, thereby protecting existing rights;
- a sound technical information base for these rivers and a sophisticated model of river operations;
- a strong and long-term understanding by the water using community of water availability; system reliability, river operations, water management framework and cost implications;

- environmental flow rules, which have been in place since last year for all the regulated river systems and in some areas for much longer. For instance, environmental allocations for the Macquarie have been in place since 1986;
- water trading on the regulated river systems has been in place since the 1980s – a mature market exists; and
- water trading rules are now being revised to examine how greater flexibility can be provided.

For the regulated cross-border systems, environmental requirements are being developed through the Border Rivers Commission in the north and the Murray-Darling Basin Commission in the south.

For the **unregulated rivers** work to achieve this outcome is now well underway. However, it must be recognised that water management of these rivers, and the understanding of water resource management issues and responses by the communities of these rivers, is at a much less mature phase.

Historically, New South Wales water management effort concentrated on the regulated systems (accounting for almost 80 per cent of water use), and water supply for major cities and towns such as Sydney and Newcastle, with little attention to individual users on unregulated rivers. The bulk of licenses are still on an area basis and little consideration has been given to environmental requirements.

However, New South Wales recognises the need to move quickly to place the management of unregulated rivers on a more sustainable footing, and this was a feature of the 1997 New South Wales Water Reforms which included:

- provision for conversion of licenses to a volume basis;
- classifying unregulated rivers according to their stress levels as a basis for prioritising action – the changes required are so great that it is impossible to deal with all rivers at once;
- introducing and maintaining embargoes on the issue of further licenses for the stressed rivers;
- establishing community-based committees to participate in river management decisions;
- introducing flow conditions to provide for environmental requirements; and
- introducing interim trading measures.

The interim trading rules for the unregulated rivers allowing trading for irrigation on an area basis was introduced in 1998. This has had to be on a fairly limited basis until New South Wales completes the process of converting all area licenses for irrigation to a volume basis. The steps and timing for the volumetric conversion process are shown in Attachment 1, which is a copy of the project plan for this work.

The process of volumetric conversion involves changing the way the entitlement is specified to incorporate two critical components – a volume of water that can be extracted in a year, and a share of the river flows on a daily basis. The latter will explicitly set aside shares of the daily flows for environmental requirements. In the unregulated river systems protection of the low flow periods is seen as the major requirement for safeguarding environmental needs.

It is planned that annual volume limits will be placed on all unregulated licences (around 12 000) by December 2000. Development of the daily access conditions will be a more difficult process and it is planned that for all unregulated rivers this will be completed by July 2001. However, for the high stressed sub-catchments (of which there are eighty-six in total and which are listed in the Attachment 4) it is proposed that the timing of these will coincide with the volumetric conversions.

As the annual and daily shares are determined and issued, the water market arrangements for unregulated rivers can be more clearly defined and the interim arrangements relaxed. New market conditions will be put in place, based on the outcomes of the Marsden Jacobs water trading report (a copy has been provided to the Council).

The **groundwater process** is outlined in Attachment 5.

## NEW SOUTH WALES ALLOCATION AND TRADING IMPLEMENTATION PROGRAM

### ATTACHMENT 4: Unregulated Catchments

#### List of High Stressed Unregulated Catchments

Barwon	Inverell Glen Innes Upper Horton Lower Peel Myall Creek Warialda Creek Phillips Quirindi Mooki
Hunter	Wollombi Black Hunter Residual Bylong Goulburn & Residual Wybong Halls Dart Pages Jilliby Jilliby
Central West	Lachlan River above Reid's Flat Mandadgery Creek Goonigal Creek Burrangong Creek Crowther Creek Castlereagh above Binnaway
	Queen Charlottes Vale Creek/Evans Plains Creek
	Summerhill Creek Lawsons Creek Bell River Molong Creek and Tributaries Unregulated Lower Macquarie System

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REGION	SUBCATCHMENT NAME
Murray	Billabong 2
Murrumbidgee	Murrumbidgee II Yass Upper
North Coast	Sheens Creek Duroby Creek Cobaki Creek Upper Brunswick River Tyagarah Creek

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Myrtle Creek  
 Tuckean Area

Alstonville Area  
 Kyogle Area  
 Terania Creek  
 Peacock Creek  
 Upper Duck Creek  
 Acacia Creek  
 Bonville Creek  
 Boambee Creek  
 Coffs Harbour Creek  
 KoRoRa Basin  
 Woolgoolga Creek  
 South Creek – South Arm  
 Missabotti Creek  
 Apsley River  
 Hickeys Creek  
 Gara River

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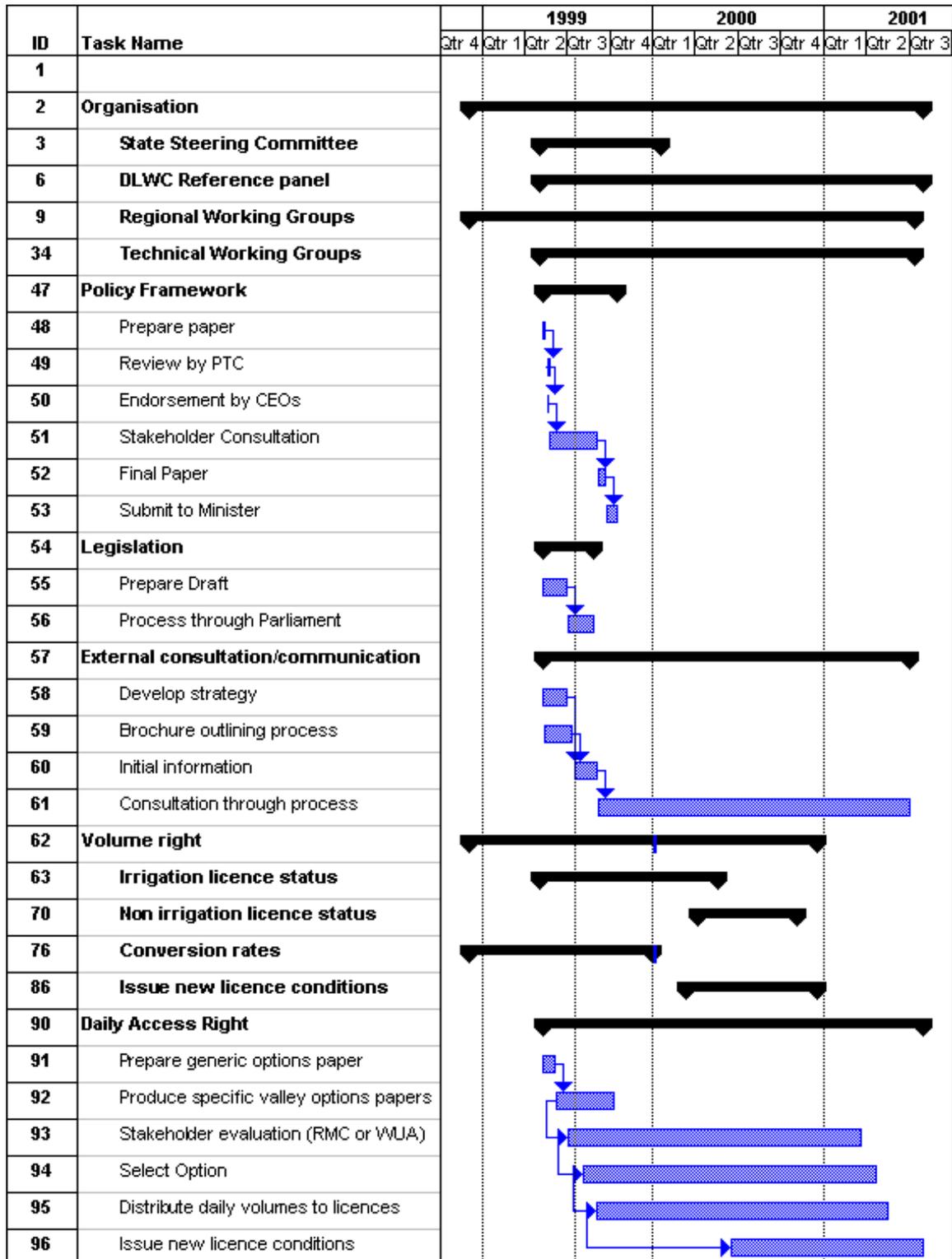
Commissioners Waters  
 Malpas Dam  
 Wilson River

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<b>REGION</b>	<b>SUBCATCHMENT NAME</b>
Sydney South Coast	Cattai Creek
	South Creek
	Nepean River
	Upper Nepean River
	Lake Burragorang
	Monkey Creek
	Lower Coxs River
	Capertree River
	Mid Coxs River***
	Upper Coxs River
	Wingecarrabee River
	Upper Wollondilly
	Flat Rock Creek
	Yalwal Creek
	Lower Shoalhaven River
	Kangaroo River
	Bungonia
	Currumbene Creek
	Wolumla Creek
	Candelo Creek
Upper Murrumbidgee River	
Narira Creek	
Dignams Creek	
Maclaughlin River	

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Bombala River  
Coolumbooka River



ID	Task Name	1999				2000				2001			
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
107	Metering												
111	Gauging Stations												
114	Compliance												
119	Data collection												
122	Information Systems												
126	Rostering												

## NEW SOUTH WALES ALLOCATION AND TRADING IMPLEMENTATION PROGRAM

### ATTACHMENT 5: Groundwater systems

#### Implementation Program for a “*Comprehensive System of Water Allocations and Trade, including Provision of Water for the Environment*” New South Wales Groundwater

- **Priority List of Groundwater Systems**

An “*Aquifer Risk Classification Report*” was released publicly in April 1998. The Report classifies the State’s aquifers in terms of risk in relation to quantity and quality threats, rating them as high, medium or low. The following eight criteria were used to define the total risk to an aquifer system:

1. relationship between amount of water allocated and sustainable yield;
2. local interference caused by pumping;
3. large or small flow system;
4. vulnerability of aquifer to pollution;
5. landuse threats;
6. proximity to poor quality water that could be drawn into aquifer by over pumping;
7. water level rise and salinity trends; and
8. dependence of ecosystems on groundwater flow.

The results of the assessment and classification are shown in Appendix 1.

- **Implementation Actions**

Sustainable yields have been assigned to all the State’s high risk aquifers. Sustainable yields will be assigned to all other aquifers by June 2000. The sustainable yield is that proportion of the long term average annual recharge to a groundwater system available for consumptive use. Sustainable yield calculations have built in an explicit proportion of recharge to be set aside as an environmental provision. This proportion ranges from 50 per cent to 90 per cent, but has been set, for most systems, at 70 per cent of recharge.

The risk assessment identified fourteen groundwater systems where it is clear that current allocations exceed the sustainable yield of the system. Groundwater Management Committees have been, or are being, established in these systems to advise on mechanisms and timeframes to reduce allocations to within sustainable yields. These advisory process are to be completed by December 2000, and allocation adjustments implemented subsequently. Identified over-allocated systems are listed in the table below.

Upper and Lower Namoi Valleys	Hunter Valley Alluvium
Lower Macquarie Valley	Upper Lachlan (part)
Murrumbidgee Valley	Belubula River Alluvium
Gwydir Valley	Cudgegong
Great Artesian Basin	Halls Creek
Lower Lachlan	Kingdom Ponds
Lower Murray Alluvium	Alstonville Plateau Basalt

3. While all bores in New South Wales are required to be licensed, not all high yielding bores have a volumetric allocation. The Coastal and Hunter region systems have a mix of volumetric, area based and unrestricted licences. A comprehensive program of conversion of all groundwater licences is to be undertaken in the 1999-2000 financial year, resulting in a State-wide, comprehensive and consistent system of volumetric groundwater allocations in New South Wales.
4. Until such time as implementation actions 2 and 3 are completed, trading of groundwater entitlements will be necessarily limited. A set of interim trading rules has been developed which provides limited opportunities for new or expanding users, while not compromising the outcomes of the allocation adjustment processes. These interim trading rules are expected to be released in July 1999.
5. A more comprehensive and flexible trading system will be available once a consistent "currency" has been established, and volumetric allocations are within sustainable yields.

## ATTACHMENT 5, APPENDIX 1: CLASSIFICATION

### *Sydney South Coast Region*

<b>High Risk Aquifers</b>
Botany Sandbeds (GWMA 018) Maroota Alluvium and Sandstone Araluen Alluvium
<b>Medium Risk Aquifers</b>
Southern Coastal Sands Blue Mountains Sandstone Southern Highlands Fractured Rock (approximately Wingecarribee Shire LGA boundary) Sydney Basin Sandstone (GWMA 603) Hawkesbury-Nepean Alluvium Bega Valley Alluvium Miscellaneous South Coast Alluvium
<b>Low Risk Aquifers</b>
Southern Tablelands Granites South Coast Fractured Rock Aquifers

### *Hunter Region*

<b>High Risk Aquifers</b>
Hunter River Alluvium (regulated river reaches) Wollombi Alluvium Goulburn River Alluvium Kingdom Ponds Alluvium Tomago Sandbeds Viney Creek Alluvium Karuah/Myall Alluvium Williams & Patterson Rivers Alluvium Mangrove Mountain/Kulnura Fractured Rocks
<b>Medium Risk Aquifers</b>
Hunter Coastal Sands Hunter Miscellaneous Tributaries Alluvium North West Hunter Basalts Manning River Alluvium
<b>Low Risk Aquifers</b>
Wollombi Sandstone North East Hunter Fractured Rocks

Hunter Coal-Associated Fractured Rocks
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***North Coast Region*****High Risk Aquifers**

Alstonville Basalt (GWMA 804) Macleay Coastal Sands Richmond River Alluvium Richmond Coastal Sands Hastings River Alluvium North Coast Fractured Rocks Macleay Alluvium Bellinger Coastal Sands
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**Medium Risk Aquifers**

Tweed Coastal Sands Brunswick Alluvium Dorrigo Basalt North Coast Metasediments North Coast Miscellaneous Alluvium Clarence Coastal Sands Clarence Alluvium
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**Low Risk Aquifers**

North Coast Sedimentary Rocks
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***Murray Region*****High Risk Aquifers**

Lower Murray Alluvium (GWMA 016) Billabong Creek Alluvium (GWMA 014)
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**Medium Risk Aquifers**

Upper Murray Alluvium (GWMA 015)
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**Low Risk Aquifers**

Murray Fractured Rocks – East Murray Fractured Rocks - West
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***Murrumbidgee Region*****High Risk Aquifers**

Lower Murrumbidgee Alluvium (GWMA 002) Upper Murrumbidgee Alluvium (GWMA 013) Murrumbateman Fractured Rocks
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<b>Medium Risk Aquifers</b>
Muttama Creek Alluvium (part of GWMA 013) Lake George Alluvium
<b>Low Risk Aquifers</b>
Murrumbidgee Fractured Rocks
<i>Central West Region (including parts of Far West Region)</i>
<b>High Risk Aquifers</b>
Upper Lachlan (GWMA 011) Belubula River (GWMA 021) Lower Macquarie (GWMA 016) Cudgegong Valley (GWMA 010) Molong Limestone Young Granites (GWMA 802) Dubbo (within GWMA 009)
<b>Medium Risk Aquifers</b>
Bell River (GWMA 020) Orange Basalts (GWMA 801) GAB – Main (within GWMA 601) Darling River Anabranh Upper Macquarie (GWMA 009) Lower Lachlan (GWMA 012) Talbragar-Coolaburragundy (GWMA 019)
<b>Low Risk Aquifers</b>
Murray River d/s of Murrumbidgee junction Castlereagh Alluvium Lachlan Fold Belt Metasediments Upper Tributaries Alluvium Macquarie Marshes Darling River – South of Menindee Castlereagh Basalts GAB – Shallow (part of GWMA 601) Darling River – North of Menindee Macquarie-Lachlan Granites Crookwell Basalts Broken Hill Far West
<i>Barwon Region (including parts of Far West Region)</i>
<b>High Risk Aquifers</b>
Upper Namoi Alluvium (GWMA 004) Peel Valley Alluvium (GWMA 005) Border Rivers Alluvium (GWMA 022) Lower Gwydir Alluvium (GWMA 003)

Lower Namoi Alluvium (GWMA 001)  
 GAB Intake Beds (GWMA 601)  
 GAB Main (GWMA 601)

### **Medium Risk Aquifers**

Namoi Fractured Rocks  
 Maules Creek Alluvium (GWMA 006)  
 Namoi Miscellaneous Tributaries Alluvium (GWMA 007)

### **Low Risk Aquifers**

Inverall Basalt (GWMA 803)  
 Miscellaneous Fractured Rocks

### ***State-wide Situation***

#### **Inland High Risk Aquifers**

Upper Namoi Alluvium (GWMA 004)  
 Lower Murray Alluvium (GWMA 016)  
 Lower Murrumbidgee Alluvium (GWMA 002)  
 Belubula River (GWMA 021)  
 Upper Lachlan (GWMA 011)  
 Peel Valley Alluvium (GWMA 005)  
 Upper Murrumbidgee Alluvium (GWMA 013)  
 Lower Macquarie (GWMA 016)  
 Molong Limestone  
 Young Granites (GWMA 802)  
 Murrumbateman Fractured Rocks  
 Dubbo (within GWMA 009)  
 Border Rivers Alluvium (GWMA 022)  
 Lower Namoi Alluvium (GWMA 001)  
 Lower Gwydir Alluvium (GWMA 003)  
 Billabong Creek Alluvium (GWMA 014)  
 Cudgegong Valley (GWMA 010)  
 GAB Intake Beds (GWMA 601)  
 GAB Main (GWMA 601)

### ***State-wide Situation***

#### **Coastal High Risk Aquifers**

Hunter River Alluvium (regulated river reaches)  
 Goulburn River Alluvium  
 Wollombi Alluvium  
 Kingdom Ponds Alluvium  
 Tomago Sandbeds  
 Macleay Coastal Sands  
 Williams & Patterson Rivers Alluvium  
 Viney Creek Alluvium  
 Karuah/Myall Alluvium  
 Alstonville Basalt (GWMA 804)

Hastings River Alluvium  
Richmond River Alluvium  
Maroota Alluvium & Sandstone  
Araluen Alluvium  
Richmond Coastal Sands  
Mangrove Mountain/Kulnura Fractured Rocks  
Botany Sandbeds (GWMA 018)

## ATTACHMENT 3: NEW SOUTH WALES ALLOCATION AND TRADING IMPLEMENTATION PROGRAM

### Requirement

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These rivers are mature systems and can be characterised by:

- long-term embargoes on the issue of any additional entitlements, thereby protecting existing rights;
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## NEW SOUTH WALES ALLOCATION AND TRADING IMPLEMENTATION PROGRAM

### ATTACHMENT 4: Unregulated Catchments

#### List of High Stressed Unregulated Catchments

Barwon	Inverell Glen Innes Upper Horton Lower Peel Myall Creek Warialda Creek Phillips Quirindi Mooki
Hunter	Wollombi Black Hunter Residual Bylong Goulburn & Residual Wybong Halls Dart Pages Jilliby Jilliby
Central West	Lachlan River above Reid's Flat Mandadgery Creek Goonigal Creek Burrangong Creek Crowther Creek Castlereagh above Binnaway
	Queen Charlottes Vale Creek/Evans Plains Creek
	Summerhill Creek Lawsons Creek Bell River Molong Creek and Tributaries Unregulated Lower Macquarie System

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REGION	SUBCATCHMENT NAME
Murray	Billabong 2
Murrumbidgee	Murrumbidgee II Yass Upper
North Coast	Sheens Creek Duroby Creek Cobaki Creek Upper Brunswick River Tyagarah Creek

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Myrtle Creek  
 Tuckean Area

Alstonville Area  
 Kyogle Area  
 Terania Creek  
 Peacock Creek  
 Upper Duck Creek  
 Acacia Creek  
 Bonville Creek  
 Boambee Creek  
 Coffs Harbour Creek  
 KoRoRa Basin  
 Woolgoolga Creek  
 South Creek – South Arm  
 Missabotti Creek  
 Apsley River  
 Hickeys Creek  
 Gara River

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Commissioners Waters  
 Malpas Dam  
 Wilson River

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<b>REGION</b>	<b>SUBCATCHMENT NAME</b>
Sydney South Coast	Cattai Creek
	South Creek
	Nepean River
	Upper Nepean River
	Lake Burragorang
	Monkey Creek
	Lower Coxs River
	Capertree River
	Mid Coxs River***
	Upper Coxs River
	Wingecarrabee River
	Upper Wollondilly
	Flat Rock Creek
	Yalwal Creek
	Lower Shoalhaven River
	Kangaroo River
	Bungonia
	Currumbene Creek
	Wolumla Creek
	Candelo Creek
Upper Murrumbidgee River	
Narira Creek	
Dignams Creek	
Maclaughlin River	

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Bombala River  
Coolumbooka River

ID	Task Name	1999				2000				2001			
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
1													
2	<b>Organisation</b>	[Solid black bar spanning from Qtr 4 1999 to Qtr 3 2001]											
3	<b>State Steering Committee</b>												
6	<b>DLWC Reference panel</b>												
9	<b>Regional Working Groups</b>	[Solid black bar spanning from Qtr 4 1999 to Qtr 3 2001]											
34	<b>Technical Working Groups</b>												
47	<b>Policy Framework</b>												
48	Prepare paper												
49	Review by PTC												
50	Endorsement by CEOs												
51	Stakeholder Consultation												
52	Final Paper												
53	Submit to Minister												
54	<b>Legislation</b>												
55	Prepare Draft												
56	Process through Parliament												
57	<b>External consultation/communication</b>	[Solid black bar spanning from Qtr 4 1999 to Qtr 3 2001]											
58	Develop strategy												
59	Brochure outlining process												
60	Initial information												
61	Consultation through process												
62	<b>Volume right</b>	[Solid black bar spanning from Qtr 4 1999 to Qtr 3 2001]											
63	<b>Irrigation licence status</b>												
70	<b>Non irrigation licence status</b>												
76	<b>Conversion rates</b>	[Solid black bar spanning from Qtr 4 1999 to Qtr 3 2001]											
86	<b>Issue new licence conditions</b>												
90	<b>Daily Access Right</b>	[Solid black bar spanning from Qtr 4 1999 to Qtr 3 2001]											
91	Prepare generic options paper												
92	Produce specific valley options papers												
93	Stakeholder evaluation (RMC or WUA)												
94	Select Option												
95	Distribute daily volumes to licences												
96	Issue new licence conditions												

ID	Task Name	1999				2000				2001			
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
107	Metering												
111	Gauging Stations												
114	Compliance												
119	Data collection												
122	Information Systems												
126	Rostering												

## NEW SOUTH WALES ALLOCATION AND TRADING IMPLEMENTATION PROGRAM

### ATTACHMENT 5: Groundwater systems

#### Implementation Program for a “*Comprehensive System of Water Allocations and Trade, including Provision of Water for the Environment*” New South Wales Groundwater

- **Priority List of Groundwater Systems**

An “*Aquifer Risk Classification Report*” was released publicly in April 1998. The Report classifies the State’s aquifers in terms of risk in relation to quantity and quality threats, rating them as high, medium or low. The following eight criteria were used to define the total risk to an aquifer system:

1. relationship between amount of water allocated and sustainable yield;
2. local interference caused by pumping;
3. large or small flow system;
4. vulnerability of aquifer to pollution;
5. landuse threats;
6. proximity to poor quality water that could be drawn into aquifer by over pumping;
7. water level rise and salinity trends; and
8. dependence of ecosystems on groundwater flow.

The results of the assessment and classification are shown in Appendix 1.

- **Implementation Actions**

Sustainable yields have been assigned to all the State’s high risk aquifers. Sustainable yields will be assigned to all other aquifers by June 2000. The sustainable yield is that proportion of the long term average annual recharge to a groundwater system available for consumptive use. Sustainable yield calculations have built in an explicit proportion of recharge to be set aside as an environmental provision. This proportion ranges from 50 per cent to 90 per cent, but has been set, for most systems, at 70 per cent of recharge.

The risk assessment identified fourteen groundwater systems where it is clear that current allocations exceed the sustainable yield of the system. Groundwater Management Committees have been, or are being, established in these systems to advise on mechanisms and timeframes to reduce allocations to within sustainable yields. These advisory process are to be completed by December 2000, and allocation adjustments implemented subsequently. Identified over-allocated systems are listed in the table below.

Upper and Lower Namoi Valleys	Hunter Valley Alluvium
Lower Macquarie Valley	Upper Lachlan (part)
Murrumbidgee Valley	Belubula River Alluvium
Gwydir Valley	Cudgegong
Great Artesian Basin	Halls Creek
Lower Lachlan	Kingdom Ponds
Lower Murray Alluvium	Alstonville Plateau Basalt

3. While all bores in New South Wales are required to be licensed, not all high yielding bores have a volumetric allocation. The Coastal and Hunter region systems have a mix of volumetric, area based and unrestricted licences. A comprehensive program of conversion of all groundwater licences is to be undertaken in the 1999-2000 financial year, resulting in a State-wide, comprehensive and consistent system of volumetric groundwater allocations in New South Wales.
4. Until such time as implementation actions 2 and 3 are completed, trading of groundwater entitlements will be necessarily limited. A set of interim trading rules has been developed which provides limited opportunities for new or expanding users, while not compromising the outcomes of the allocation adjustment processes. These interim trading rules are expected to be released in July 1999.
5. A more comprehensive and flexible trading system will be available once a consistent "currency" has been established, and volumetric allocations are within sustainable yields.

## ATTACHMENT 5, APPENDIX 1: CLASSIFICATION

### *Sydney South Coast Region*

<b>High Risk Aquifers</b>
Botany Sandbeds (GWMA 018) Maroota Alluvium and Sandstone Araluen Alluvium
<b>Medium Risk Aquifers</b>
Southern Coastal Sands Blue Mountains Sandstone Southern Highlands Fractured Rock (approximately Wingecarribee Shire LGA boundary) Sydney Basin Sandstone (GWMA 603) Hawkesbury-Nepean Alluvium Bega Valley Alluvium Miscellaneous South Coast Alluvium
<b>Low Risk Aquifers</b>
Southern Tablelands Granites South Coast Fractured Rock Aquifers

### *Hunter Region*

<b>High Risk Aquifers</b>
Hunter River Alluvium (regulated river reaches) Wollombi Alluvium Goulburn River Alluvium Kingdom Ponds Alluvium Tomago Sandbeds Viney Creek Alluvium Karuah/Myall Alluvium Williams & Patterson Rivers Alluvium Mangrove Mountain/Kulnura Fractured Rocks
<b>Medium Risk Aquifers</b>
Hunter Coastal Sands Hunter Miscellaneous Tributaries Alluvium North West Hunter Basalts Manning River Alluvium
<b>Low Risk Aquifers</b>
Wollombi Sandstone North East Hunter Fractured Rocks

Hunter Coal-Associated Fractured Rocks
--

***North Coast Region*****High Risk Aquifers**

Alstonville Basalt (GWMA 804) Macleay Coastal Sands Richmond River Alluvium Richmond Coastal Sands Hastings River Alluvium North Coast Fractured Rocks Macleay Alluvium Bellinger Coastal Sands
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**Medium Risk Aquifers**

Tweed Coastal Sands Brunswick Alluvium Dorrigo Basalt North Coast Metasediments North Coast Miscellaneous Alluvium Clarence Coastal Sands Clarence Alluvium
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**Low Risk Aquifers**

North Coast Sedimentary Rocks
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***Murray Region*****High Risk Aquifers**

Lower Murray Alluvium (GWMA 016) Billabong Creek Alluvium (GWMA 014)
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**Medium Risk Aquifers**

Upper Murray Alluvium (GWMA 015)
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**Low Risk Aquifers**

Murray Fractured Rocks – East Murray Fractured Rocks - West
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***Murrumbidgee Region*****High Risk Aquifers**

Lower Murrumbidgee Alluvium (GWMA 002) Upper Murrumbidgee Alluvium (GWMA 013) Murrumbateman Fractured Rocks
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<b>Medium Risk Aquifers</b>
Muttama Creek Alluvium (part of GWMA 013) Lake George Alluvium
<b>Low Risk Aquifers</b>
Murrumbidgee Fractured Rocks
<i>Central West Region (including parts of Far West Region)</i>
<b>High Risk Aquifers</b>
Upper Lachlan (GWMA 011) Belubula River (GWMA 021) Lower Macquarie (GWMA 016) Cudgegong Valley (GWMA 010) Molong Limestone Young Granites (GWMA 802) Dubbo (within GWMA 009)
<b>Medium Risk Aquifers</b>
Bell River (GWMA 020) Orange Basalts (GWMA 801) GAB – Main (within GWMA 601) Darling River Anabranh Upper Macquarie (GWMA 009) Lower Lachlan (GWMA 012) Talbragar-Coolaburragundy (GWMA 019)
<b>Low Risk Aquifers</b>
Murray River d/s of Murrumbidgee junction Castlereagh Alluvium Lachlan Fold Belt Metasediments Upper Tributaries Alluvium Macquarie Marshes Darling River – South of Menindee Castlereagh Basalts GAB – Shallow (part of GWMA 601) Darling River – North of Menindee Macquarie-Lachlan Granites Crookwell Basalts Broken Hill Far West
<i>Barwon Region (including parts of Far West Region)</i>
<b>High Risk Aquifers</b>
Upper Namoi Alluvium (GWMA 004) Peel Valley Alluvium (GWMA 005) Border Rivers Alluvium (GWMA 022) Lower Gwydir Alluvium (GWMA 003)

Lower Namoi Alluvium (GWMA 001)  
 GAB Intake Beds (GWMA 601)  
 GAB Main (GWMA 601)

### **Medium Risk Aquifers**

Namoi Fractured Rocks  
 Maules Creek Alluvium (GWMA 006)  
 Namoi Miscellaneous Tributaries Alluvium (GWMA 007)

### **Low Risk Aquifers**

Inverall Basalt (GWMA 803)  
 Miscellaneous Fractured Rocks

### ***State-wide Situation***

#### **Inland High Risk Aquifers**

Upper Namoi Alluvium (GWMA 004)  
 Lower Murray Alluvium (GWMA 016)  
 Lower Murrumbidgee Alluvium (GWMA 002)  
 Belubula River (GWMA 021)  
 Upper Lachlan (GWMA 011)  
 Peel Valley Alluvium (GWMA 005)  
 Upper Murrumbidgee Alluvium (GWMA 013)  
 Lower Macquarie (GWMA 016)  
 Molong Limestone  
 Young Granites (GWMA 802)  
 Murrumbateman Fractured Rocks  
 Dubbo (within GWMA 009)  
 Border Rivers Alluvium (GWMA 022)  
 Lower Namoi Alluvium (GWMA 001)  
 Lower Gwydir Alluvium (GWMA 003)  
 Billabong Creek Alluvium (GWMA 014)  
 Cudgegong Valley (GWMA 010)  
 GAB Intake Beds (GWMA 601)  
 GAB Main (GWMA 601)

### ***State-wide Situation***

#### **Coastal High Risk Aquifers**

Hunter River Alluvium (regulated river reaches)  
 Goulburn River Alluvium  
 Wollombi Alluvium  
 Kingdom Ponds Alluvium  
 Tomago Sandbeds  
 Macleay Coastal Sands  
 Williams & Patterson Rivers Alluvium  
 Viney Creek Alluvium  
 Karuah/Myall Alluvium  
 Alstonville Basalt (GWMA 804)

Hastings River Alluvium  
Richmond River Alluvium  
Maroota Alluvium & Sandstone  
Araluen Alluvium  
Richmond Coastal Sands  
Mangrove Mountain/Kulnura Fractured Rocks  
Botany Sandbeds (GWMA 018)

## **B10.3 WATER REFORM, VICTORIA**

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Attachment 3: Regulatory framework rural water services

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Attachment 4: Bulk entitlement program

Attachment 5: Groundwater management plans

Attachment 6: Streamflow management plans and stressed rivers

## Table of Abbreviations

ACCC	Australian Consumer and Competition Commission
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ANZECC	Australian and New Zealand Environment and Conservation Council
BE	Bulk Entitlement
BOO/BOOT	Build, Own, Operate and/or Transfer
CALP Act	Catchment and Land Protection Act 1994
CALPB	Catchment and Land Protection Board
CALPC	Catchment and Land Protection Council
CMA	Catchment Management Authority
COAG	Council of Australian Governments
CPA	Competition Policy Agreements
CSO	Community Service Obligation
DNRE	Department of Natural Resources and the Environment
EBIT	Earnings before Interest and Tax
EPA	Environment Protection Agency
GBE	Government Business Enterprise
GMA	Groundwater Management Area
GMP	Groundwater Management Plan
GSPA	Groundwater Supply Protection Area
IC	Implementation Committee
kL	Kilolitre (1000 L)
LRMC	Long Run Marginal Cost
MoU	Memorandum of Understanding
MDBC	Murray Darling Basin Commission

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ML	Megalitre (1000 kL)
MWC	Melbourne Water Corporation
NCC	National Competition Council
NERA	National Economic Research Associates
NHMRC	National Health and Medical Research Council
NMU	Non-metropolitan Urban Water Authority/Supplier
NTER	National Tax Equivalent Regime
NWQMS	National Water Quality Management Strategy
ORG	Office of the Regulator General
PAV	Permissible Annual Volume
RCS	Regional Catchment Strategy
REALM	Resource Allocation Model
RMP	Regional Management Plan
RRP	River Restoration Plan
RWA	Rural Water Authority
SCARM	Standing Committee on Agriculture and Resource Management
SEPP	State Environmental Protection Policies
SGC	State Groundwater Council
SMP	Stream Management Plan
SRP	Stressed Rivers Program
STER	State Tax Equivalent Regime
TER	Tax Equivalent Regime
TUL	Take and use licence
VWIA	Victorian Water Industry Association
WACC	Weighted Average Cost of Capital
WSAA	Water Services Association of Australia

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WSA Water Services Agreement

WSC Water Services Committee

## B10 Water Reform

### B10.3 Victoria

#### B10.3.1 EXECUTIVE SUMMARY

This is an assessment of Victoria'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*

- Both non-metropolitan urban service providers (NMUs) and metropolitan service providers have substantially achieved full cost pricing. The Council notes that it will continue to monitor the implementation of a Tax Equivalent Regime for NMUs prior to the third tranche assessment.
- Metropolitan service providers and NMUs have implemented two part tariff regimes. The information provided as regards the method of calculation of each part of the NMU tariff is inconclusive.
- Metropolitan bulk water and wastewater is charged on a volumetric basis.
- Cross-subsidies have on the whole been removed from metropolitan and NMU pricing regimes.
- Victoria has a clearly defined and well targeted Community Service Obligation (CSO) regime.
- Metropolitan and NMU service providers have a positive real rate of return on assets as required by the strategic framework. However, the Council notes its concerns regarding the asset base used in the calculation of rates of return for metropolitan service providers.
- New investments are the subject of robust appraisals regarding economic viability and ecological sustainability.
- Although operational responsibility for the management of irrigation areas has not been devolved to irrigation customers, irrigators are involved in major aspects of decision making through Water Services Committees (WSCs). Having examined the structure of these schemes, the Council is satisfied that Victoria has met this aspect of the strategic framework.

The Council is satisfied that Victoria has generally met reform commitments in respect of cost reform and pricing.

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### ***Institutional reform***

- The Council is not satisfied that the institutional arrangements for separation of water service provision from functions of standard setting, regulatory enforcement and water resource management in respect of either metropolitan service providers or NMUs is sufficient. As regards metropolitan service providers, the Council notes that the roles of the Treasurer and Treasury in setting prices of the monopoly service providers and additionally determining dividends and overseeing business planning and borrowings is problematic. The Council is of the view that the concerns regarding the current arrangements may be addressed through independent price regulation of metropolitan service providers.
- Similar considerations are relevant in respect of NMUs. The Minister for Agriculture and Resources appoints directors to respective authorities, controls prices charged by authorities, supervises business plans and the allocation of water to NMUs. Unlike metropolitan water suppliers, NMUs are not regulated by ORG in respect of their service provision. Independent price regulation and devolution of regulatory functions to another body would in large part resolve the Council's concerns.
- As regards Rural Water Authorities (RWAs), the Council is satisfied with arrangements for separation of service provision functions from standard setting, resource management and regulatory matters. The Council in particular notes the roles of WSCs as regards setting of standards including price and delivery standards.
- The Council notes Victoria's commitment to further review of institutional arrangements in the water industry. Given this commitment the Council is of the view that second tranche commitments have been met and a path to resolving concerns has been identified.
- Metropolitan service providers conduct their businesses with a commercial focus.
- Victoria has met reform commitments concerning performance monitoring and benchmarking arrangements.

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

- The Council commends Victoria on its implementation of a comprehensive system of water entitlements backed by separation of water property rights from land title and a clear specification of entitlements in terms of volume, reliability or transferability. The Council is satisfied that the system meets the requirements of the strategic framework.
- Victoria has in place detailed procedures and policies that will permit allocations to be developed for the environment. The Council is also satisfied that the policies have regard to relevant scientific information. The Council will monitor the continued implementation of processes to provide water to the environment prior to the third tranche assessment. The Council will carefully assess environmental outcomes including in particular the creation of water rights to satisfy the needs of the environment. Where outcomes do not satisfy environmental requirements the Council would look to evidence that mechanisms (such as trading rules and the

environment manager entering the water market) are used to improve environmental outcomes.

- The Council has agreed to the implementation program for allocations as outlined in Attachments 4, 5 and 6. In doing so, the Council notes that the implementation programs may change over time provided there is agreement between Victoria and the Council.
- Victoria has implemented a legislative and regulatory system for trading in water that permits trading in the spectrum of water rights. The Council notes that trading rules are being developed over time. In addition, Victorian authorities have supported the development of trade through providing a voluntary exchange that informs the water market. Interstate trade is developing carefully and the Council notes that the present trading project is being reviewed. The Council will continue to monitor the development of trading rules prior to the third tranche assessment.

The Council is satisfied that Victoria has met its reform commitments concerning allocations and trading.

#### ***Environment and water quality***

- Victoria has in place comprehensive integrated resource management structures, policies and practices to satisfy the strategic framework.
- Victoria has made significant progress in implementing NWQMS Guidelines. The Council will continue to monitor this matter prior to the third tranche assessment.

The Council is satisfied that Victoria has met its commitments in respect of this aspect of the framework.

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

- Victoria has generally undertaken extensive public consultation and education regarding water reform; the Council is satisfied that this reform commitment has been met.
- The Council notes in 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, Victoria has met major reform commitments for the purposes of the second tranche. The Council has been impressed with the progress of many reform initiatives in Victoria.

The Council has now built up a considerable amount of information concerning Victorian 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.

## **B10.3.2 REFORM COMMITMENT: COST REFORM AND PRICING**

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

#### **10.3.2.1 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.

### **Victorian Arrangements**

#### **Metropolitan Background**

Victoria's metropolitan area has a bulk water and wastewater service provider (Melbourne Water Corporation) and three retail providers CityWest Water, South East Water and Yarra Valley Water. In total, these providers supply water and wastewater services to in excess of 3.5 million people, with about 1.3 million properties serviced.<sup>177</sup>

Melbourne previously had a system where property value based rates accounted for 70 percent of revenues. In effect, this meant that average prices for water (per kL) ranged from 65c for some large industrial users to \$35 for commercial offices in the CBD. This gave rise to large cross-subsidies between customers. Commercial and industrial customers had a "free water allowance" incorporated into their property-based service charges, although water used in excess of the allowance was charged at a uniform volumetric rate of 65c per kL. There was no sewage disposal charge for non-domestics. Government organisations were also exempt from water charges.

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<sup>177</sup> WSAA Facts '98.

Disaggregation of the three retailers (to become South East Water, City West Water and Yarra Valley Water) from Melbourne Water (which became the supplier of bulk water to the retailers) in 1995 had exposed pricing distortions.

In October 1997, Victoria instituted marginal cost pricing with residual revenue allocated such that each customer class contributes at least incremental costs but no more than stand alone costs. The reforms apply from 1 January 1998. In summary, the reforms included:

- abolition of water and sewerage property rates;
- introduction of fixed service charges for connected properties;
- introduction of differentiated service and usage charges for each retailer;
- significant increases in the sewage disposal charge and a small increase in the water usage charge;
- introduction of sewage disposal charges to the non-domestic sector;
- abolition of “free allowance” for non-domestic customers; and
- abolition of all legislated exemptions and introduction of a new CSO scheme of rebates for not-for-profit organisations.

### **Full Cost Recovery – the Upper Band**

The principle issue in pricing for metropolitan areas is whether the prices charged to customers fall above the upper band of pricing.

Victoria has advised that prices for water services provided by metropolitan water authorities fall within a range bounded by the floor price and a ceiling price of either the by-pass price or the price where the sum of discounted cash flows equals the replacement cost. The Melbourne metropolitan retail businesses operate at the upper end of the band that is where economic value is close to replacement cost.

The Water Services Association of Australia annual performance data 1996-1997 (WSAA Facts) and the comments from Treasury indicate that prior to reform, Melbourne has a history of high water bills by Australian standards and that this was not due to higher costs but higher profits before interest and tax, where the rate of return on assets in Melbourne was approximately double the industry average. The Council was advised that as a result of developments during the 1980s, substantial dividends (above the current benchmark of 65 per cent pre-tax profit) were required whilst the metropolitan providers had to internally pay for a substantial capital program. This led to high debt, with the four businesses holding \$2.9 billion in debt by mid 1997.

Victoria has advised that prices for the wholesale and retail water businesses are no longer above the ceiling price. Victoria stated that industry revenues were close to or even above the upper bound, but that the price reforms brought it below the upper bound. The evidence suggested as proof of this claim is a test of reasonableness by comparing water rates of return with the gas industry. Victoria estimates earnings before interest and tax (EBIT) for 1998-1999 of \$500 million. This represents a reduction of

\$490 million on the 1996-1997 result (\$200 million on the 1997-1998 result of \$700 million), the last financial year prior to the price reforms.

When applied to the industry's latest estimate of \$10 billion for the depreciated replacement cost of assets, this EBIT results in a rate of return of 5 per cent (the Australia wide urban industry average for 1996-1997 was 4.9 per cent). Victoria argued that even if the industry underestimated the extent to which the system could be optimised and this was reduced by a further 20 per cent, the forecast rate of return would rise to around 6.25 percent. Victoria therefore concluded that, on the basis of a test of reasonableness, the rates of return generated would be within the band. Furthermore, Victoria's budget papers show that dividend receipts from the metropolitan providers are planned to fall from \$250 million to \$113 million.

However, there is no independent verification of the amount used to represent stand alone costs. The proxy for stand alone costs is the optimised depreciated replacement cost of current assets. As no optimised values were calculated, the rate of optimisation experienced in the Coliban Water exercise was taken as a benchmark for optimisation purposes. This led to a reduction of 10 per cent.

WACC values of 8 per cent and 6 per cent have been used to calculate the upper bound based on recent determinations made by the Office of the Regulator General (ORG) and the Australian Competition and Consumer Commission (ACCC) on Victoria's gas access arrangements. Some preliminary work on the metropolitan providers also suggests that an appropriate WACC is around 7 to 8 per cent.

## NMUs

NMUs in Victoria are comprised of fifteen Water Authorities;

Barwon, Central Gippsland, Central Highlands, Coliban, East Gippsland, Glenelg, Goulburn Valley, Grampians, Lower Murray, North East, Portland Coast, South Gippsland, South West, Western, Westernport.

According to estimates for 1998-1999 (summaries of information from the 1997-1998 NMU corporate plans were provided to the Council) NMUs serve about 1.1 million Victorians with customer populations from 10 000 (Westernport) and 210 000 (Barwon). The total asset value is \$3.8 billion and total revenue \$335 million.

## Full Cost Recovery

Information provided by Victoria in relation to full cost recovery is in attachment 1.<sup>178</sup>

As regards the valuation of assets, the *Request for Tender* Consultancy Brief (report due mid 1999) for asset valuation of the Victorian water industry noted that while NMUs had revalued assets using a replacement cost methodology, the Department of Finance policy had been interpreted in a variety of ways leading to inconsistencies in financial reporting.

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<sup>178</sup> This additional information was provided to the Council on 17 June 1999.

Improvements from a consistent approach to asset valuation have been identified to include a degree of consistency of depreciation rates between NMUs for like or similar assets and ensuring that assets are fairly valued to reflect the net present value of income streams. This would reduce fluctuations in operating results between authorities as a result of inconsistencies in asset valuation methods and variations in depreciation rates.

The aim of the process is to develop a robust and consistent basis for valuing infrastructure assets for financial reporting and dividend determination across the Victorian water industry.

### **Taxation**

Although the NMUs are State owned enterprises, they are not subjected to tax equivalent payments (Urban Water Review).

Victoria has noted that in 1998 the Government commissioned a consultancy to investigate the implications of introducing a State based TER for NMUs and Rural Water Authorities (RWA). The consultancy concluded that all NMUs and RWAs would be in a tax loss position for a number of years and there would be no significant medium term price impacts.

The response also noted that Victoria is awaiting the release of the National TER (NTER) operating principles before it decides whether to implement a State TER (STER) or proceed to the NTER.

### **Dividends**

A Victorian Water Industry Association report<sup>179</sup> (the VWIA report) indicates that all NMUs paid a dividend to government, ranging from \$8 000 (Central Highlands) to \$2 194 000 (Central Gippsland). The level of dividend in 1996-1997 for NMUs was \$24/residential assessment (total of \$20.68 million). In February 1998 the Minister and Treasurer advised that NMUs should move on to a commercial dividend over a period of three years in the following manner:

- 1997-1998 The lower of \$24/residential assessment or 50 per cent of 1996-1997 adjusted profit (expected to be approximately \$16 million)
- 1998-1999 30-50 per cent of 1997-1998 profits with a benchmark of 50 per cent
- 1999-2000 A benchmark of 65 per cent of the previous years pre-tax profit, with adjustments to the benchmark subject to the Treasurer's and Minister's approval

The VWIA report made recommendations to the Treasurer and the Minister for Agriculture to assist in setting a framework for the implementation of Government Business Enterprise dividend policy (the policy). Included in the recommendations was that:

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<sup>179</sup> Prepared by the Dividend Policy Implementation Task Group, 30 June 1998.

1. the application of the policy needs to take account of the diverse nature of NMUs, their historical difference with metropolitan urban water suppliers and present obligations. A transition period for the implementation of the policy until 2000-2001 was required, particularly given obligations arising from the \$410 million subsidy paid to NMUs in 1997;
2. a consistent method of asset valuation should be employed by NMUs;
3. Boards respond to dividend proposals by the Minister and Treasurer by providing information concerning relevant financial, political, social and regional development factors that should be taken into account; and
4. consultations should take place to try and determine an agreed position.

### **Other information**

Victoria has advised that NMUs recover natural resource management costs attributable to and incurred by water businesses.

In further information provided to the Council<sup>180</sup>, it was noted that NMUs earnings before interest and taxation are estimated to be \$54.7 million for 1998-1999. When this is applied to latest estimates of the value of assets (\$3.33 billion optimised depreciation cost) a rate of return of 2 per cent is achieved.

The further information also noted that NMUs have had their assets revalued by independent consultants and the Auditor-General has agreed to these valuations. Although there may be some inconsistencies in relation to the asset valuations, the audited and independent revalued figures present the best available information at this time. When used to estimate the upper bound, it was stated that the figures can be used to assess consistency with the strategic framework.

### **Council Comment**

#### **Metropolitans**

The Council is largely satisfied that metropolitan water pricing meets the requirements for full cost recovery. That is, metropolitan pricing is within the band prescribed by the COAG full cost recovery guidelines for water pricing. Certainly, the underlying principles are consistent with the strategic framework direction.

However, the Council does have concerns regarding the failure to independently value assets, and notes that this reflects on levels of depreciation, return on capital, levels of dividends and therefore the pricing of water. The Council notes that where prices are set by an independent regulator, issues concerning the components of pricing, asset valuation and possible conflicts of interest can be addressed.

#### **NMUs**

The information provided indicates that all NMUs:

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<sup>180</sup> Letter to Council dated 17 June 1999.

1. meet operating, maintenance and administration costs;
2. meet interest costs;
3. pay a dividend to government; and
4. cover the cost of externalities.

NMUs do not pay federal taxes and are not subject to tax equivalent regimes. The Council notes the advice on the process proposed by Victoria to resolve this issue. The Council considers this to be a matter of some importance and would expect finalisation prior to the third tranche assessment.

While the asset valuations of NMUs have been agreed to by the Auditor-General. Asset valuation will be further refined by the finalisation of a consistent methodology and uniform application of the methodology in valuing assets.

The Council again notes that where prices are set by an independent regulator, issues concerning the components of pricing, asset valuation and possible conflicts of interest can be addressed. The Council considers these matters further in the section *Institutional Reform*.

For the purposes of the second tranche, the Council is satisfied that NMUs have met reform commitments. The Council will continue to monitor the implementation of full cost recovery prior to the third tranche assessment focusing in particular on issues of asset valuation and the institution of a TER.

**10.3.2.2 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 external charges to include a volumetric component or two part tariff with an emphasis on the volumetric component to recover costs (for example, long run marginal costs) and earn a positive real rate of return.

### **Victorian arrangements**

#### **Metropolitan**

Melbourne Water delivers water to the three retailers through a two-part tariff arrangement. The second tranche report<sup>181</sup> noted that a cost allocation model is used to allocate Melbourne Water's overall revenue requirement between the three retail companies which is broadly in proportion of assets used to service each retailer and the operating expenditure attributable to each retailer. A long run marginal cost calculation

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<sup>181</sup> March 1999, page 70.

is used to determine the volumetric component of the tariffs paid by each retailer and a fixed charge makes up the residual revenue requirement.

The three retail companies charge customers two part tariffs for water and Victoria has advised that the volumetric component is based on long run marginal cost. Melbourne has no groundwater provision. In relation to wastewater, the major urbans have introduced a sewage disposal charge for business and other non-domestic customers.

The volumetric component of water charges for the metropolitan providers has increased to about 70 per cent of the average bill providing an incentive for water conservation and associated environmental benefits.

## NMUs

In respect of water provision by each of the NMUs, the information provided indicates:

- all NMUs charge a two part tariff for water consisting of a service charge (between \$54-\$280) and volume charge at either a flat rate per kL (between 30-80c per kL) or an increasing rate per kL above certain volumes (for example, Lower Murray) or in certain seasons (Westernport). None of the tariffs include a free allocation with the service charge;
- NMUs recover 28-80 per cent of their residential water charges by volumetric tariffs, and 11 of the 15 recover more than 50 per cent;<sup>182</sup> and
- as a percentage of total water tariff revenue, NMUs recover 29.6-76.3 per cent of tariffs via usage charges. Total usage charges account for 61 per cent of total tariff revenue.<sup>183</sup>

The Council has not been provided with the particular reasons for the various two part tariffs, and has no information as to either the costs of providing access or long run marginal costs. Victoria's stated intention is that at least 50 per cent of tariff be raised by a volumetric component.

The Council has been provided with a case-study on the application of guidelines for identifying and measuring cross-subsidies to an NMU.<sup>184</sup> The study applies methodology developed in the Queensland water industry to the service provider. The study concludes that although there is some price discrimination between customer classes, there are no customer groups paying less than the long run marginal cost of water supply.

Victoria advised that NMUs have now progressed to fixed, or in some cases volumetric, sewerage charges.<sup>185</sup> Trade wastewater tariffs vary between the NMUs, although

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<sup>182</sup> Based on a 300 kL residential consumption and using the estimates provided.

<sup>183</sup> Second tranche report.

<sup>184</sup> Marsden Jacobs, February 1999.

<sup>185</sup> Second tranche report.

common features include fixed and/or volumetric charges.<sup>186</sup> The information provided indicates that none of the tariffs are based on property valuations.

### **Council Comment**

#### **Metropolitan**

The Council is satisfied that both bulk and retail metropolitan water supply is charged on a consumption basis. Acknowledging the reservations regarding the manner in which assets are priced, the Council is satisfied that the volumetric component recovers costs and provides a water conservation incentive.

The Council is also satisfied that bulk wastewater charges are consistent with the strategic framework commitments.

#### **NMUs**

Information provided to the Council confirms that all water supply services are charged using a two part tariff, comprising access and volumetric components. The extent that they reflect the cost of access and long run marginal costs respectively cannot be taken further without additional information, although the Council notes the finding of the case study for one of the service providers.

Wastewater charging varies between NMUs and includes full volumetric charging for all customers, access fee and volumetric tariffs, partial volumetric and qualitative tariffs, volumetric charging based on presumed usage and fixed tariffs only.

The Council is satisfied that NMU reform has in large part met the reform commitment.

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

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.

#### **Metropolitan**

Prior to reform, NERA had estimated cross-subsidies between domestic and non-domestic customers of \$70 million per annum under the previous property rates based system. Under the old system, average unit water charges ranged from \$0 to \$100 per

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<sup>186</sup> The Council has reviewed information from NMU service providers.

kL. By implication, some customers (notably government) paid less than incremental cost, and some customers paid more than stand-alone cost.

As a result of the October 1997 reforms, Victoria has removed the majority of cross subsidies and improved pricing equity, through the abolition of property-value based charges replaced by fixed service charges as set by two part tariffs for all customers with the volumetric component equal to long run marginal cost (LRMC). Furthermore, Victorian non-residential customers have benefited through significant reductions in non-domestic water bills with the average bill falling by \$2 000 per annum.

With the abolition of property-value based pricing, there is less variation in average prices paid by different customers, and hence it is unlikely customers are paying above stand-alone costs of supply.

### **NMUs**

The two-part tariffs have been previously canvassed. Victoria has advised that a consultancy by Marsden Jacob examining cross-subsidies in three NMUs is overdue and that the results of the consultancy will be forwarded to the Council when received. The Council has outlined the findings of one of the studies thusfar completed.

The issues to be addressed include: revenue level, two part tariff, infrastructure (developer) charges, CSO's, subsidies and grants, balance and consistency of revenue sources and the test of cross-subsidies.

### **Council Comment**

#### **Metropolitans**

The Council is satisfied that with the abolition of property value based charging and the setting of the volumetric component on the basis of long run marginal costs that cross-subsidies for the metropolitan sector have been substantially removed and that Victoria meets this aspect of the Framework.

### **NMUs**

The Council is satisfied that with the abolition of property value based charging and the setting of the volumetric component cross-subsidies have been substantially reduced. Until the report is finalised, and the level of remaining cross-subsidies between customers is known, it is difficult to take this matter further. The Council will continue to monitor this matter prior to the third tranche assessment.

#### **10.3.2.4 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.

## Metropolitan

In the following circumstances services are delivered at less than full cost:

- a rebate of up to \$260 on fixed water and sewerage charges for not-for-profit organisations (education, hospitals and nursing care, religion, charities, sporting activities and war veterans' organisations) and low-income earners. Rebates are explicit on the customer's bills. The water authorities are reimbursed for the rebates by the Government, and the Government, not the authorities, determine eligibility for the rebate;
- pensioner concessions of up to 50 per cent of service and usage charges;
- water Relief Grant Scheme, administered by the Department of Health, provides one-off assistance to eligible customers for temporary financial problems; and
- water for fire-fighting is provided for no charge.

The Government funds these CSOs, which are published by the respective retail companies.

## NMUs

Water rebates, concessions, grants and services for fire fighting are delivered at less than full cost as identified above. NMUs report all subsidies in their annual reports.

A breakdown of the distribution of the \$410 million subsidy for the NMUs announced in 1997 (to improve water quality and upgrade waste management systems) has also been publicly released.

## Council Comment

Victoria has clearly defined and well targeted CSOs for pensioner rebates, and targeted rebates for the fixed access component for not-for-profit organisations such as schools, churches, hospitals, charity bodies and sporting facilities.

In addition, the one off subsidy to NMUs was clearly defined, explicit and transparent.

### **10.3.2.5 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

### Metropolitans

The financial performance of metropolitan water providers has been canvassed above. Having regard to the reservations noted above regarding price setting, in particular the costing of assets, the Council is otherwise satisfied that the Melbourne metropolitans are

all earning positive real rates of return on the written down replacement cost of assets for urban water and wastewater.

## NMUs

The financial performance of NMUs has been canvassed above. The Council notes the advice that a rate of return of 2 per cent on assets. The Council is satisfied that, for the purposes of the second tranche, this reform commitment has been met.

## Rural Water Supply and Irrigation Services

**10.3.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater),<sup>187</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.

## Victorian arrangements

The second tranche report noted that Rural Water Authorities will recover operational, maintenance and administrative costs, finance charges and renewals annuities for all districts by 2001.

## Council Comment

The Council notes the information provided. This matter will be further assessed prior to the third tranche assessment.

**10.3.2.7 Jurisdictions are to conduct robust independent appraisal processes to determine economic viability and ecological sustainability prior to investment in**

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<sup>187</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.

**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.

### **Victorian arrangements**

The *Water Act 1989* (the Water Act) provides that a bulk entitlement (BE)<sup>188</sup> and Take and Use Licences (TULs) application or amendment will not be approved unless it is considered that it is unlikely that the BE will have a significant adverse effect on the environment, including the riverine and riparian environment, the need to protect the environment and relevant conservation and management plans (sections 40, 42, 44, 53). The second tranche report notes that since bulk entitlement orders are affected by changes to rural schemes and dam construction, any new investment must prove its ecological sustainability before a new bulk entitlement or the necessary amendments to the existing bulk entitlement will be approved.

The *Investment Evaluation Policy and Guidelines* (1996) and *Infrastructure Investment Policy for Victoria* (1994) require that all new investments must be economically viable and earn rates of return which lie between the floor and ceiling prices required by the strategic framework.

The Council was provided with a copy of the *Deakin Irrigation Development Pre-Feasibility Study* (July 1998), a publicly available document which examined the potential for developing large areas of the Mallee dryland for irrigated horticulture. The study notes that the water for the development of the scheme was expected to become available on the transferable Water Entitlement market at a rate of between 2 000 ML per year and 20 000 ML per year for the next twenty years.

The study examines issues such as the effect of the development on groundwater tables, the method of land acquisition, projected returns on the basis of various crop and yield scenarios and various methods of supplying water to the proposed area. The study concludes that the proposal appears to be feasible and recommends further consideration of issues such as groundwater impacts, the availability of water on the water markets, an economic analysis indicating costs and benefits to the wider community and land capability surveys.

### **Council Comment**

The Council is satisfied that the Water Act, other initiatives in the rural water industry (outlined in full later) and relevant Treasury policies and procedures ensure the appraisal of both the economic viability and ecological sustainability of new investments in rural

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<sup>188</sup> The *Allocations and Trading* section of this report deals with BEs.

schemes. The Deakin study shows a clear example of the application of these principles. The study is publicly available.

The Council notes advice provided by Victoria<sup>189</sup> that there has been no direct water infrastructure development for some time.

The Council is satisfied that this aspect of the strategic framework has been achieved.

### **10.3.2.8 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.

#### **Victorian arrangements**

The second tranche report notes the implementation of Water Services Committees (WSC) for all RWAs to negotiate district Corporate Plans and to provide local input into the management of irrigation areas; WSCs are further discussed under *Institutional Separation*. The second tranche report notes that WSC members represent customers whose voting rights are weighted in proportion to water rights. The Water Services Agreement negotiated by the RWAs and WSCs covers pricing, service availability, performance standards for each service delivered and mutual expectations. WSCs provide a vital communication link between authorities and customers. WSCs produce newsletters, hold information sessions, perform customer service reviews, produce irrigation handbooks and provide induction programs for new customers.

#### **Council Comment**

The Council notes that rather than devolving operational responsibility for management of irrigation areas, Victoria has involved water customers in decision making processes and negotiates contracts with the customers through WSCs. The approach differs from solutions such as corporatisation, privatisation or mutualisation.

The Council is satisfied, however, that local water consumers are intimately involved in the setting of performance standards, prices and other matters of concern to irrigators. Further, the Council is satisfied that the approach involves customers in sharing the operational responsibility of irrigation areas. Although the regulatory framework may be more prescriptive than other approaches, there is encouragement and support for WSCs and their members.

The Council is satisfied that the reforms are within the spirit of the strategic framework reforms, and that Victoria has satisfactorily met this aspect of the framework.

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<sup>189</sup> Meeting, 18 February 1999.

### **B10.3.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

#### **Institutional Role Separation**

**10.3.3.1 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 NCC 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.

#### **Victorian arrangements**

##### **Generally**

Attached to the assessment is the *Policy and Regulatory Framework*<sup>190</sup> (attachment 2) explaining in diagrammatic form the present institutional framework in Victoria.

##### **Metropolitan**

In 1995, Melbourne Water was horizontally separated into a wholesaler – Melbourne Water, three retailers - City West Water, South East Water, and Yarra Valley Water, and Melbourne Parkways and Waterways.

Melbourne Water as wholesaler supplies bulk water and wastewater services to the three retail companies and controls headworks and major wastewater treatment plants.

Information provided to the Council in July 1998 identified the following Ministerial responsibilities in relation to the metropolitan water industry:

- Minister for Agriculture and Resources: service provision (via the Melbourne Water Corporation and three retailers), water resource and asset management, drinking water quality (through licence conditions);
- Treasurer: appoints Directors to Boards, submits pricing to Cabinet (pricing is set by the Governor in Council) and monitors business performance;
- Minister for Finance: responsible for ORG, which sets minimum standards for customer service (for example customer contracts, compliance with licence conditions concerning water quality management);
- Minister for Health: drinking water quality; and
- Minister for Conservation and the Environment: Environment Protection Agency (EPA) which sets environmental standards such as effluent discharge standards.

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<sup>190</sup> Urban Water Review, 1996.

The second tranche report notes that the service provision is provided by state owned corporations with an explicit commercial focus. Bulk water is supplied following negotiation between Melbourne Water and the three corporations. As regards the roles of the Treasurer in regulating both metropolitan pricing and overseeing the financial performance of the businesses, it is noted that these activities are separated in terms of departmental arrangements.

The Council was advised that service provision was the responsibility of the metropolitan water businesses, although key standards of customer service, drinking water quality and the environment are set elsewhere. In addition, the retailers consult with their respective customer consultative committees on customer matters, and to set the terms of the customer contract within the framework of the ORG. The same Minister sets both metropolitan pricing and oversees the financial performance of the water businesses.

Retail businesses are limited in the following ways in their operations by the present arrangements:

- the Government has the ability to regulate wholesale prices, although current prices were negotiated by the businesses and are spelt out in agreements between Melbourne Water Corporation and the retailers;
- TERs and dividends accounting for over 40 per cent of operating profit are calculated by Treasury; and
- borrowing costs are not negotiable.

### NMUs

NMUs are statutory authorities under the *Water Act 1989* (the Act). The Minister for Natural Resources/Minister for Agriculture and Resources (referred to in this section as the Minister) appoints directors to the NMUs following consideration of a shortlist prepared by a selections panel appointed by the Minister (see *Expressions of Interest, Directors (Board Membership) of Regional Urban Water Authorities*).

The determination of dividends for NMUs has been explained above.

Functions of NMUs, provided for under the Act, include to provide, manage, operate and protect water supply systems (Part 8) and to provide, manage, and operate systems for conveyance, treatment and disposal of sewage and trade waste (Part 9).

NMUs are required to prepare business plans and submit them to the Minister. The Minister may direct that the plans be varied after consultation with the relevant NMU authority (including, for example, a pricing veto), and authorities are not permitted to make major deviations from the plan or key decisions unless the decision is submitted to the Minister who may issue guidelines (section 247).

In addition, the Minister may give directions to an Authority in relation to the performance of any of its functions and the exercise of any of its powers (section 307).

Authorities are permitted to borrow at rates of interest approved by the Minister and on terms and conditions imposed by the Minister. The Minister has the power to set the

limit of financial accommodation permitted in any year (section 254). Authorities set tariffs by resolution (section 260). Individual tariffs are reviewable by the Victorian Civil and Administrative Tribunal (section 266).

The Department of Natural Resources and the Environment, the Minister's Department, also has additional roles in administering the Act, setting NMU policy, resource allocation, reform implementation and water licences.

The second tranche report notes that while the Minister is responsible for both service delivery and water resource management, these activities are separated in terms of departmental arrangements, and there is significant involvement from the Department of Treasury and Finance. The Department of Human Services and the EPA are also responsible for quality regulation. These arrangements ensure no conflicts of interest exist.

The Department of Human Services is responsible for monitoring drinking water quality and the Environmental Protection Agency monitors effluent standards.

The Council received information concerning the refusal of some NMUs to permit customers to opt out of compulsory connection to reticulated sewerage systems and instead use waste sewerage systems that use alternative waste water treatment systems endorsed by health and environmental regulators. The matter was investigated by the Victorian Competitive Neutrality Complaints Unit in July 1998, which recommended that '*the business and regulatory functions of water authorities should be separated to reduce perceptions that water authorities are exercising an unfair advantages over potential competitors*'.<sup>191</sup> The Unit, while accepting that there was a strong case for separation of regulatory and commercial functions of NMUs, identified this matter as one of '*regulatory gap*'. It was noted that the Environmental Protection Agency established a working party to identify a body which could take on this role.

## **RWAs**

The rural water authorities have been amalgamated into five Rural Water Authorities (RWAs) supplying irrigation, domestic and stock and other rural water services. Goulburn Murray is the largest RWA utilising some 70 per cent of Victoria's total water requirements. RWAs are statutory authorities under the *Water Act 1989*. RWAs are responsible in terms of policy settings to the Department of Natural Resources and the Environment (DNRE) which has the power of veto on pricing.

## ***Water Services Committees***

Water Services Committees (WSC) are integral to the service provision by RWAs. The Council was advised that these provide a degree of institutional separation in service provision. The functions of WSCs include: negotiation of a district corporate plan and water services agreement (WSA); prioritisation of local investment and replacement programs; involvement in local salinity management plans; and advising on service delivery issues. Issues covered in WSAs include pricing, service availability, performance standards and mutual expectations of customers and the RWA. Attached is

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<sup>191</sup> Letter, Jamie Carstairs, Dept. of Premier and Cabinet, 14/12/98.

a Regulatory framework for RWAs (attachment 3). The Council has been advised that each of the RWAs (excluding First Mildura Irrigation Trust, where the board members are elected) has WSCs in operation.

The Council was advised that although pricing of water to rural customers was set by the Minister for Agriculture and Resources or delegate, prices would not be signed-off until the relevant WSC had agreed to the price. Occasionally intervention had resulted in lower prices to customers. This process provided a degree of institutional separation through such features as consultation, joint decision making and transparency.

The Council was provided with the Customer Services Agreement between the Central Goulburn Area WSC and Goulburn Murray Rural Water Authority. The agreement provides for the expectations of both parties and provisions concerning irrigation water supply, surface drainage, diversion from surface drains and sub-surface drainage services, a water pricing, vermin and noxious weeds control and stock damage policies. The irrigation water supply schedule specifies such matters as delivery targets (including flow rates, water ordering, water quality and water transfers) tariff structures (two part tariff comprised of a fixed water allocation at agreed price component and variable sales water component), price (\$22.10 per ML), billing arrangements and asset management, replacement and maintenance programs.

### ***Catchment Management Authorities (CMA)***

The second tranche report notes the responsibility of CMAs to perform resource management duties, working closely with the RWAs to develop agreement on the management of the catchment.

### ***Groundwater***

The Victorian Groundwater Policy Framework provides for the following institutional arrangements and responsibilities:

- Minister for Agriculture and Resources: to ensure the resource is properly managed at a sustainable level including: assessment; allocation; establishment of Groundwater Supply Protections Areas (GSPA); and, qualification of rights during shortages;
- DNRE: policy, planning, regulation and management of water resources. Oversight of government expenditure;
- RWAs: provide retail level services including licensing, setting of prices and implementation of Groundwater Management Plans (GMP). RWAs are to develop performance indicators and benchmarks, establish consultative mechanisms and make publicly available information; and
- State Groundwater Council (SGC): policy advice.

### ***Other information***

Victoria has noted the following additional information concerning metropolitan and NMU arrangements:

- The responsibility for setting the level of metropolitan retail prices cannot be said to rest exclusively with the Treasurer. Prices are submitted to Cabinet and Governor in Council and documentation is signed off by the Minister for Natural Resources. In addition different parts of the Department of Treasury and Finance provide advice on the level of prices and the level of dividends.
- NMU Boards are skills based and neither the Minister nor DNRE are involved day to day operations. Other than legislative rights to determine appropriate methods of wastewater reticulation, NMUs perform no resource management (CMAs have this responsibility), standard setting or regulatory enforcement functions.
- Where conflicts exist departmental arrangements ensure that they are minimised. For example, the Minister for Natural Resources' responsibilities in relation to borrowing and interest rates have been or are being transferred to the Minister for Finance.
- Public health issues are regulated by the Department of Human Services. Environmental standards are regulated by the EPA.
- It is premature for the NMU sector to have independent price regulation applied when they are not producing drinking water that complies with health standards or effluent that complies with EPA licences.
- Memorandum of Understandings provide detailed lists of outputs required by NMUs after receiving significant capital contributions to upgrade drinking water quality and effluent treatment.

The Council was also provided with the direction by the Minister for Agriculture and Resources (29/6/98) requiring NMUs and RWAs to separately report the financial performance of retail and wholesale operations.

The Premier of Victoria has advised the President of the Council that Victoria will undertake a further review of the water industry's regulatory arrangements and it is expected that this will be completed prior to the third tranche assessment<sup>192</sup>.

### **Council Comment**

The Council has a number of concerns regarding institutional arrangements in Victoria:

1. As regards metropolitan water providers, the Council is particularly concerned about the various roles of the Treasurer. The Treasurer, for example, appoints a Board of Directors, approves business plans, submits prices to Cabinet and sets dividends, and regulates the amount and terms of borrowings. There is no effective structural separation between price setting, dividend setting and price regulation and there is difficulty in obtaining independent verification of levels of full cost recovery (to ascertain that full cost recovery has not resulted from increases in asset values).

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<sup>192</sup> Letter dated 29 June 1999

NERA as consultants to the Victorian Government on water pricing reform stated that:

*Government is not as well placed to make efficient pricing decisions as market agents. The fact that pricing decisions, arguably the most important aspect of the retailer/customer relationship, are set elsewhere, also undermines the principle of having corporate, though Government-owned, enterprises, operating on a quasi-commercial basis at arms length from the State. The role of government should be limited to a regulatory pricing framework which limits the abuse of monopoly power.*<sup>193</sup>  
(p27)

One way of addressing these concerns would be a move to independent economic regulation by the ORG. This would also in large part address the reservations as regards pricing identified previously. It would make pricing decisions both more transparent and accountable.

2. The Council also has concerns regarding the various roles of the Minister for Agriculture and Resources, DNRE and NMUs and their respective water management functions. The Minister, for example, appoints directors to NMU boards, fixes dividends in consultation with the Treasurer, has oversight powers in respect of business plans including tariffs and may determine the amount of money that can be borrowed by the NMUs and the rate at which it can be borrowed. It is the Council's view that the Minister effectively controls or oversees all aspects of NMU service delivery. In addition, the Minister and his Department have responsibilities in relation to water resource allocation, including environmental allocations. The nature of the concerns with this arrangement mirror the concerns reflected for metropolitan providers;
3. In addition, the role of NMUs in respect of determining appropriate methods of wastewater reticulation, and then providing a monopoly service in respect of this function clearly exhibits a conflict between service provider and regulator;
4. It is difficult to see the NMU structure as consistent with the strategic framework requirements concerning separation of water service provision from functions of water resource management, standard setting and regulatory enforcement. At best it provides some dissolution of the various roles between the respective parties. The conflicts of interest, particularly for the Minister, but also for the NMUs as service providers, standard setters and partial regulators, are apparent; and
5. As regards RWAs, the conflicts of interest between service provision and other functions are addressed in large part by the following considerations:

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<sup>193</sup> It is noted that this report is not endorsed by the State Government and has no status as government policy

- the implementation of WSCs that enter into agreements with RWAs concerning the provision of water and include significant consultation as regards pricing and other aspects of service delivery;
- WSCs are armed with relevant information to permit a meaningful negotiation prior to making agreements;
- ring-fencing of the wholesale and retail functions of RWAs provides further institutional separation and better information to WSCs;
- the Minister will generally not sign off on pricing recommendation of RWAs without agreement to pricing by the relevant WSCs; and
- CMAs perform resource management functions.

The contrast between this structure and the metropolitan/NMU structure is readily apparent.

The Council notes that these arrangements provide a substantial degree of separation, particularly as between service provision, standard setting and to some extent water resource management. The distinction between regulation and service provision has not, however, been clearly explained to the Council. The Council would expect that any review of institutional arrangements in Victoria should include an examination of the present arrangements for rural water to ensure that those structures are consistent with both the strategic framework and other arrangements.

The Council is of the view that institutional arrangements are not sufficient to meet framework requirements.

The Council notes Victoria's commitment to further review of institutional arrangements in the water industry. Given this commitment the Council accepts that second tranche commitments have been met and a path to resolving concerns has been identified.

### **10.3.3.2 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.

## **Victorian arrangements**

### **Metropolitan**

Melbourne Water and the 3 retailer companies are all corporatised under the *State Owned Enterprises Act 1992*, and the 3 retailers come under the Corporations Law. Melbourne Water is a statutory corporation. All have skills-based boards and pay dividends and tax equivalents. Melbourne Water has a statutory charter to act in a commercial manner. The three metropolitan retail water companies supply water and wastewater services under exclusive operating licences that are overseen by the ORG. The three retailers compete with each other by comparison. The ORG collects data on

service delivery performance and publishes comparative reports that have been independently audited on an annual basis.

### **Other matters**

Legislation Review: Victoria will undertake a review of all water related legislation, including the *Water Act 1989*, *Water Industry Act 1994*, *MMBW Act 1958*, and *Melbourne Water Corporation Act 1992*. The consultancy will commence early in 1999.

Implementation of Competitive Neutrality: The main provisions of Victoria's policy on application of competitive neutrality to water are to establish a TER covering income tax (including capital gains tax) and wholesales tax, payments of State and Local Government taxes and charges, and debt guarantee fees to be imposed as a financial accommodation levy to offset advantages to GBEs in obtaining cheap debt. Metropolitan service providers comply with competitive neutrality requirements.

### **Council Comment**

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

### **Performance Monitoring and Best Practice**

#### **10.3.3.3 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.

### **Victorian arrangements**

Barwon, Central Gippsland, Central Highlands, City West, Coliban, Melbourne, South East and Yarra Valley water businesses all participate in WSAA Facts.<sup>194</sup>

WSAA Facts also compiles a benchmarking report for the Victorian Water Industry Association (VWIA) that includes all metropolitan and NMU water service providers.

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<sup>194</sup> WSAA Facts 1998.

ORG publishes an annual report on information collected from metropolitan service providers in respect of licence conditions, the information being independently audited when being provided to ORG.

The second tranche report notes that Victoria is involved in the performance monitoring and benchmarking pilot study for RWAs being undertaken by Barraclough & Co for the High Level Steering Group.

### **Council Comment**

The Council notes that it is aware of the participation of NMUs in the ARMCANZ performance monitoring project, being co-ordinated by WSAA. The Council is satisfied that Victoria participates in interagency benchmarking through WSAA facts, the VWIA report and participation in the pilot RWA benchmarking study. The Council will continue to monitor the development of these initiatives prior to the third tranche assessment. The Council is satisfied that Victoria has met its second tranche commitment for this aspect of the strategic framework.

## **B10.3.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

**10.3.4.1 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 to 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 progress towards achieving legislative change during its assessment of compliance.

### **Victorian arrangements**

#### **Bulk Entitlements**

The *Water Act 1989* (the Act) provides that the Crown has the right to the use, flow and control of all water in a waterway<sup>195</sup> and all groundwater (section 7). The Act continues the private right to take water for domestic and stock use (section 8). The Act permits the granting of bulk entitlements (BE) by the Crown to water authorities and other specified users.

BEs include source entitlements (the right to harvest water directly from a waterway), delivery entitlements (the right to divert water from a regulated waterway operated by another Authority) and hybrid entitlements (such as the Murray BEs) which are adapted to take into account special circumstances.

*The Bulk Entitlement Conversion Process* (November 1995), a report prepared by DNRE (the conversion report), outlines the objectives of the BE program; these include clearly defining authorities' property rights to water and providing authorities' flexibility to manage within entitlements. The report notes that the BE program provides a basis for sharing limited water resources, protecting the entitlements of other users and protecting instream values. It facilitates water trading and the appropriate redistribution of water resources over time and allows specific entitlements for environmental purposes.

The Act provides for the conversion of existing entitlements to water to BEs (section 47). Victoria has advised that this process of conversion is the first of a two phase process to clarify water rights. The second phase involves the better specification

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<sup>195</sup> Including a river, creek, streamwater, watercourse, natural channel into which water regularly flows (whether or not continuous), lake, lagoon, swamp, marsh etcetera: section 3.

of the rights of the environment and the rights of private diverters on unregulated waterways.

The conversion report notes the following general principles for specifying BEs:

- BEs are generally held by water authorities with a retail function;
- existing legal rights to water will be converted;
- the process of conversion of entitlements will not result in new resource commitments;
- total BEs for a basin will not exceed 100 per cent of the available resources at an agreed level of security;
- conversion should be fair to all claimants and give due consideration to the environment; and
- an open and participatory conversion process will be used.

The BE may specify matters such as:<sup>196</sup>

- the means of quantifying the amount of water such as by volume, reference to the measure of flow at any point or reference to a share of flow or storage;
- various obligations including financial obligations and obligations of the storage operator and resource manager;
- whether and to what extent the water supply is transferable; and
- the protection of the environment including the riverine and riparian environment.

The conversion report outlines the process of defining a Rural Water Authority's (RWA) BE, which will contain an explicit list of irrigation retail entitlements and other commitments which the RWA must supply. Initially the entitlement will represent the sum of retail entitlements for all user group categories supplied by the RWA. Irrigation entitlements (allocations/security) are quantified using a simulated computer model incorporating existing irrigation infrastructure, operating rules, allocations policies and irrigation demands.

The conversion report also provides principles for defining BEs of urban water systems including: delivery entitlements from regulated waterways (including for example, daily and annual amounts of water to be extracted, supply security and financial obligations); delivery entitlements from RWAs; and, source entitlement from unregulated waterways (defining such matters as share of flow, storage capacity and limits on daily and annual amounts of water).

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<sup>196</sup> Section 42, Water Act.

In order to manage environmental effects, each BE application is categorised in to one of three types depending on the potential environmental impact or impact on other water users:

- *Category 1* applications involving water entitlements in systems that are operating near capacity and environmental values and the interests of downstream users are not at risk. These can be converted without further consultation.
- *Category 2* applications where water supplies can be converted following confirmation with NRE and RWAs that existing and proposed operating arrangements are satisfactory.
- *Category 3* applications where water supplies cannot be converted without further assessment of the impact of higher extractions on flow regimes. This category is relevant where, for example, utilisation of resources at design intent will cause significant risk to downstream water user rights and/or environmental values.

Categorisation is made following the development of hydrological information for the BE Assessment Report.

The Council was provided with the Scientific Panel Environmental Flow Assessment of the sections of the Coliban and Campaspe Rivers, Bulk Entitlement Conversion Orders for Latrobe-Southern Rural (Latrobe order) and River Murray-Goulburn Murray Water (GMW order) (draft).

The Coliban and Campaspe Rivers Assessment assessed and made recommendations relating to the environmental health of the rivers and minimum flow requirements for specific reaches were developed.

The GMW order provides that all of GMW's entitlement to take water from the River Murray is converted to a bulk entitlement on the conditions set out in the order. The order sets out the BE, including definition of the "water available" and also the requirement to supply primary entitlements (domestic and stock allowances, take and use water licences (TUL), BEs to urban and other water authorities and the environment) to water users. GMW is required to propose and implement a metering program approved by the Minister responsible for the Act and report on matters such as the amount of water extracted and other specified particulars. The GMW order provides for financial arrangements concerning water storage and supply costs (operator costs) and the costs of the resource manager.

The Latrobe order also provides for the conversion of BEs and requires the supply of primary entitlements to licence holders. The order provides the authority with a share of capacity at particular reservoirs, a share of flows at specified points and minimum passing flows. The order requires the authority to agree on operational arrangements with the storage operator. The authority is required to propose a program to manage the environmental effects of harvesting water.

In addition, the Council was provided with '*Source Bulk Entitlements - Summary to June 1998*' which provides information concerning Source BEs granted to June 1998. The report provides a summary of the BE conversion process and notes that an Area Review Group was established in respect of each BE application which included the Flora,

Fauna and Fisheries manager, the Waterways unit, fisheries, flora and fauna expertise, the National Parks Service and RWAs (representing TULs).

The Act provides for applications for the grant of new BEs. In determining an application the Minister/Governor in Council/delegated person is to have regard to matters including:<sup>197</sup>

- any report prepared by a panel convened to consider a BE entitlement;
- the existing and projected availability and quality of water in the area;
- any adverse effect that the allocation or use of water under the BE is likely to have on existing authorised water users, waterways or aquifers and the environment including the riverine and riparian environment;
- the need to protect the environment, including the riverine and riparian environment; and
- the approved management plan for any relevant groundwater supply protection areas.

BEs are recorded in a register of entitlements maintained by the Director-General.

Information provided by Victoria as regards the progress of BE conversions as at February 1999 indicates:

- for urban water systems, the BEs of three authorities (Southern Gippsland, Westernport and South West) are completed, six authorities' BEs are 90 per cent completed, three authorities are 50 per cent or more completed and the remaining two (including Melbourne Water) are less than 50 per cent. In respect of Melbourne Water, development of a regime of tradeable entitlements requires significant new reform initiatives;
- for Rural Water Authorities (RWA), Gippsland and Southern Rural RWA is 90-100 per cent completed on major river systems, GMW is 95-100 per cent completed on some systems (Goulburn, Murray and Campaspe Rivers) and 10-20 per cent on others (Ovens, Broken and Loddin Rivers), Sunraysia is 95 per cent completed and the Wimmera-Mallee RWA BEs are 10 per cent completed; and
- the present expectation is that the BE conversion process should be completed by the year 2002.

In addition, the second tranche report notes that the BE conversion program has reached the stage where flow sharing arrangements at approximately 70 per cent of diversions across the State have been negotiated and agreed with stakeholders'. The report provides completion and progression dates for the bulk entitlement process and advises that a new database will be completed and populated and basin accounts published by 1999.

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<sup>197</sup> Section 40, Water Act.

## Take and Use Water Licences

The Act also provides for TULs<sup>198</sup> and their transfer (permanent or temporary). TULs are described in the conversion report as '*a retail right to water*'. TULs can be converted into notional delivery BEs on regulated waterways. TULs on unregulated waterways are managed by such tools as performance contracts that specify resource commitments and Streamflow Management Plans (SMPs) for priority waterways (determined by scarcity, environmental values and other issues). SMPs include a description of the total resource commitments, trading rules, minimum flow sharing arrangements and consultative mechanisms.

## Protection of the environment

The conversion report notes that water allocations need to take into account the ecological values of the State's water resources and that the BE process is designed to provide long term protection for existing aquatic values. Protection of environmental values occurs through:

- environmental impact assessment including: assessing environmental impacts of proposals to convert existing rights to water to BEs; assessing environmental impacts of TULs via SMPs; assessing the impacts of proposed new BEs or water developments; and
- providing environmental BEs by conversion of the environment's few existing legal rights to water to bulk entitlements and issuing new BEs for priority rivers following applications made by environmental managers.

The major advances to the management of environmental values identified in the conversion report include the setting of baselines, that future growth will occur via water trading rather than building new dams, the ability of environmental managers to participate in the water market to provide additional water to meet environmental needs and the development of guidelines to review the environmental implications of applications for new water developments.

## Institutional arrangements

The Act provides<sup>199</sup> for the appointment of a system operator (operation of headworks/management of TULs) and resource manager (monitoring compliance with BE conditions, investigating and mediating disputes, preparing basin Water Accounts, supervising qualification of water rights during periods of water shortage, directing releases of water to maintain water quality, investigating and controlling significant unauthorised use of water) in respect of each BE.

## Consultation

The conversion report notes that consultation is required with key stakeholders (for example the Victorian Farmers Federation) and regional groups involved in the

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<sup>198</sup> The second tranche report notes that the power to issue TULs has been delegated to RWAs.

<sup>199</sup> Section 43A, Water Act.

conversion process to ensure that water authorities and other water users are confident that existing rights to water are being fairly converted.

An example of the consultation undertaken to progress allocation and trading of water (including BEs), *Sharing the Murray*, was provided to the Council. This document explains the challenges in managing finite resources, outlines needs for the environment, provides an explanation of the BE allocation system and the benefits and costs to users of water (including rural water users and the environment). Stakeholders are provided with the opportunity to make comment on the fairness of the proposal, matters not properly taken into account and any way in which the proposal could be improved.

### **Other water rights**

The conversion report notes that other water rights are issued from BEs. For example, in irrigation districts, water authorities are required to make available to owners of irrigation holdings the amount of water for irrigation that is specified in the register in relation to that holding. Authorities are required to keep registers in irrigation districts showing all holdings of land in the district and the volume of water rights attached to the holdings. The register must be revised to reflect transfer of water rights.

### **Groundwater**

The Water Act provides for groundwater management in the following manner:

- defining the rights of the Crown and individuals to groundwater;
- providing for BEs and TULs in respect of groundwater;
- providing for the management of groundwater via investigation and monitoring of groundwater supplies; and
- providing for the establishment of Groundwater Supply Protection Areas (GSPA) in appropriate circumstances.

The present *Victorian Groundwater Policy Framework* provides that the aims of groundwater management includes:

- encouraging the efficient and sustainable development of groundwater resources;
- equitable allocation of groundwater;
- encouraging the use of groundwater for high value development;
- production of groundwater management plans; and
- provision of allocation and pricing mechanisms to better integrate surface and groundwater resource management.

The policy notes that Groundwater Management Areas (GMAs) have been established in areas where the groundwater resource is developed or where there is potential for development. Permissible Annual Volumes (PAV) reflecting the optimum level of allocation for the sustainable yield of the aquifer have been set, and when allocations

reach 70 per cent a GSPA is established (Part 3, Division 3 of the Act). Groundwater management plans are developed via a consultative committee comprising mainly landholders/farmers and including all relevant interests. The plans address issues such as metering and monitoring, allocations and transfer arrangements and costs associated with implementing the plan. The relevant RWA is responsible for administering the plan.

The *Groundwater Management – Victorian Overview* paper notes that to date eleven GSPAs have been established, GMPs prepared for two of these and consultative mechanisms commenced in the remaining nine; all have a December 2001 target date for completion of GMPs.<sup>200</sup> Five further applications to establish GSPAs are presently being (a decision is expected by December 1999),<sup>201</sup> with a further ten GSPAs to cover all areas in the State where allocation is greater than the PAV to be established in the next three years. Those areas where PAV exceeds 70 per cent will then be prioritised.

The conversion report provides that specification of groundwater BEs is to occur following specification of surface water BEs.

### **Council Comment**

On the information provided to the Council, Victoria has implemented a comprehensive scheme for implementing a system of water entitlements. Attributes of the scheme include:

- a clear definition of the rights of the Crown to the State's water, and a clear separation of water rights from land title;
- a clear system of distributing those rights to users through BEs, TULs and water rights separate from land title;
- entitlements that specify in detail rights (including for example rights to specified volumes or flow of water) and responsibilities (such as financial and environmental responsibilities);
- entitlements that can be transferred by holders;
- classification of BE conversion applications according to the impact on the environment. This process provides for further assessment of the particular water supplies as required;
- a roll-out program for converting existing water rights into BEs with an estimated completion date of 2002 for all BE conversions; and
- provision for public education and consultation regarding the BE process and management of applications.

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<sup>200</sup> Second tranche report.

<sup>201</sup> Second tranche report.

The program outlined to the Council and evidenced in the various reports, policies and legislation is comprehensive in its coverage of the various regulated and unregulated surface water systems and groundwater supplies. It deals with the variety of existing rights, makes specific provision for the requirements of the environment and provides for timeframes in which the various processes are to occur.

**10.3.4.2 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 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 Council 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 2005, allocations and trading must be substantially completed for all river systems and groundwater resources identified in the agreed and endorsed individual implementation programs.

## **Victorian arrangements**

### **Environmental flow programs**

As regards the environmental flow program, the Council was informed that the objective of the program is to provide water to maintain and, where possible, restore the environmental values of rivers and wetlands. The approach is staged to provide environmental water including:

- the BE conversion process;
- streamflow management plans (SMP);
- specific BEs for the environment.
- integrate management of stressed systems including stressed river plans;
- making effective use of environmental allocations; and
- the fish program.

The conversion report (outlined above) notes that the BE framework maintains current environmental values of rivers, allows for the reallocation of water for environmental purposes through market mechanisms and ensures that future water developments are subject to assessments that ensure that environmental requirements of river systems are met. The BE process, however, will not be reducing water allocations to current users to reallocate to environmental uses.

A summary of the BE process<sup>202</sup> as at June 1998 noted that of the seventy-three systems where BE allocation had occurred: 27 of the systems had current flow regimes sufficient to meet environmental requirements, and these had been codified in a BE; negotiation in 4 systems resulted in environmental BEs that met all environmental requirements; 30 systems (50 per cent) where BE conversion had taken place resulted in a '*current flow regime [which] does not meet environmental however improvements negotiated through BE process*'; a further 6 systems where the current flow regime did not meet environmental requirements and there was no improvement negotiated through the BE process.

The NRE publication '*Victoria's Environmental Flow Program*' outlines some environmental achievements for the BE conversion process including:

- in the lower Thomson River, environmental flows were increased from 25 to 125 ML per day; and
- in the Goulburn River, environmental flows from Lake Eildon have increased from 120 to 250 ML per day and an 80 000 ML flush in November provides water for wetlands.

Further documentation<sup>203</sup> concerning the Murray Bulk Water Entitlement Process noted the representation of the environment throughout the process and documented provisions for the environment including: Barmah-Millewa Forest; allocations for Murray wetlands; and increase in flows on the basis of recommendations<sup>204</sup> of the Murray Scientific Panel. The information noted management processes for environmental water

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<sup>202</sup> Source Bulk Entitlements, Summary to June 1998.

<sup>203</sup> Victorian Murray River Environmental Flow Process, NRE, 1999.

<sup>204</sup> Not final recommendations.

including works to be completed to ensure environmental water reached and remained in priority floodplain areas.

### **Streamflow Management Plans**

SMPs are developed to define competing uses of water in unregulated streams. SMPs define rules and agreements that allow water to be transferred, provide certainty for new developments and introduce a clear understanding of flow sharing rules in times of drought. The aim is to provide a long term management plan for TULs that has provisions to protect and where necessary restore environmental values in a river; *Procedure for preparing SMPs* (draft, 14 October 1998) (the SMP procedure draft). SMPs are to be developed by the relevant water authorities.<sup>205</sup>

The SMP procedure draft provides for: certain matters to be included in SMPs; roles and responsibilities of the project manager and project group, which includes local, authority, departmental, environmental and other representatives; and consultation upon and endorsement of SMPs. Key issues that need to be considered include:

- environmental flow provisions. The SMP procedure draft notes that when formulating a SMP for over committed systems, a process of negotiation may lead to an agreed environmental flow provision which is below that required to maintain the long term health of the river system. It recommends mechanisms such as establishing trading rules that benefit the environment and restricting when trades can occur, as ways that environmental flows may be increased;
- system operation and assessing the impacts of change. The SMP draft notes that the development of a hydrological model creates a structured tool for ordering processes required to develop a SMP and to assist the project group to make judgements of the effect of different flow sharing options, including the impacts on river flows, supply security and environmental flows. The preferred model for water quantity simulation is the Resource Allocation Model (REALM);
- existing licences;
- new licences;
- water trading;
- metering;
- tariffs; and
- monitoring and compliance.

The criteria for selecting waterways for SMPs includes matters such as level of consumptive use, demand for new licences, frequency of rosters/restrictions, history of management problems and conservation and recreational values.

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<sup>205</sup> Second tranche report.

The Council was provided with the SMPs for the Merri and Gellibrand Rivers. The Merri River SMP addressed the issues identified in the SMP procedure draft. Recommendations included: an environmental flow of 12ML per day be maintained; new TULs be updated to reflect the SMP and no new summer licences be granted to increase existing water entitlements commitments; water trading not to be permitted upstream in some circumstances. The Gellibrand River SMP similarly has regard to the relevant matters identified in the SMP draft procedure, and recommendations include: detailed flow shares including shares for the environment; restrictions on the types of new licences that can be issued until thorough environmental flow studies are undertaken and provided the licences do not affect water security or environmental flows; and trading in water conditional on maintaining agreed environmental flows.

The Council has been informed that seven SMPs are presently being developed (first to be completed in December 1999) and thirty priority streams nominated for SMPs, to be completed at the rate of five or six per year. The second tranche report provides that four further SMPs will be commenced in 1999, five in 2000, five in 2001 and seventeen will be commenced by 2001, although the priorities as regards these rivers have not been determined.

### **Groundwater Management Plans**

The *Groundwater Management Structure and Cost Sharing Arrangements* report produced by the State Groundwater Council (SGC) (April 1997) notes the present light management of groundwater.

The report proposes 49 Groundwater Management Areas (GMA) and in those areas where the licence allocations exceed 70 per cent of Permissible Annual Volume (PAV), a Groundwater Supply Protection Area (GSPA) is to be established (Water Act, Part 3, Division 3). GMAs require the collection of usage data and metering of bores extracting significant quantities. Where the PAV is reached new licence allocations will and transferable water entitlements will be introduced where appropriate to ensure water can be used to its highest economic benefit. The report outlines principles of cost sharing.

The Council was provided with the *Terms of Reference for the Consultative Committee for the Katunga GSPA*. The Consultative Committee was instituted to produce a basic Groundwater Management Plan (GMP) and the terms of reference reflect the principles in the report. The objective of the Plan is to ensure that the groundwater resources of the GSPA are managed in an equitable manner so as to ensure the long-term sustainability of the resources during normal and drought seasons. The terms of reference include consideration of: the severity of the threat to sustainability; metering and monitoring programs; restrictions or prohibitions on the issuing of licences (that is an allocation policy for unallocated water); transferability of licences; and the proportion of costs born by users. The GMP must take into account both the report and the ARMCANZ paper '*Allocation and use of groundwater*'. The terms of reference require public consultation.

### **Stressed Rivers Program**

The Victorian Stressed Rivers Program (SRP) is defined (in the *Priority Rivers for Restoration Plans; findings of the Stressed Rivers Scientific Reference Panel*, July 1998

(the Reference Panel report)) as involving the identification of rivers which are stressed due to inadequate flow regimes and the development and implementation of comprehensive work plans to improve their condition. The Reference Panel report identified eight priority rivers to receive funding for restoration plans from the Rural Water Reform Package<sup>206</sup> and further rivers were identified should additional funding become available. The criteria for identifying rivers included hydrological information (total annual flow, seasonality of flow, variation of flow, flooding, low flow periods and zero flow periods), environmental significance, potential for and feasibility of restoration and cost/benefit analysis. The Reference Panel report noted that plans should focus on habitat protection as well as habitat restoration and monitoring must be built into each plan.

The Council has been advised that two case studies (Thomson and Avoca rivers) are presently being undertaken (July 1999 – September 2000) and the remaining six river systems identified to be the subject of restoration plans between January 2001 and June 2002.

The Council was provided with a copy of the *Snowy River Rehabilitation Concept Plan* (November 1998) (the rehabilitation plan), noted in the Reference Panel report to be a case study for the development of restoration plans around Victoria. The rehabilitation plan includes a stocktake of the existing condition of the Snowy River including: exotic weed invasion; loss of pools; reduction in fish habitat; deteriorating wetland values; and upstream migration of the saline wedge. The rehabilitation plan identifies desirable riverine features (habitat, fish passage, floodplain inundation, sediment transport, aesthetic appeal, recreational and resource use), key issues (habitat requirements of aquatic fauna, environmental flow requirements, pool formation) and rehabilitation strategies (reinstatement of environmental flows, reinstatement of pools, wetlands and riparian vegetation rehabilitation). The project costs (about \$26 million), a cost benefit analysis (based on various increases to value of wetland and tourism and at different discount rates) project schedule and implementation and monitoring procedures are also canvassed.

### **Other information**

The Council has been provided with a copy of the implementation program for BEs, SMPs and GMPs. These are at attachments 4, 5 and 6. The Council secretariat has discussed with Victorian officials aspects of the program to clarify priorities and timeframes.

In providing the program, Victoria noted that timetable are heavily dependant on participatory processes. While it was possible to indicate starting times, intimate involvement of the community in the planning processes makes it virtually impossible to manage tight deadlines.

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<sup>206</sup> On 9 October 1997 the Victorian Government announced a \$40 million commitment to 'improve service quality and environmental performance of rural water' which included dam improvement projects, SMPs and increased monitoring of water use.

## 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.***

In respect of BEs, SMPs, GMPs and the SRP there is clear recognition of the impact of both river regulation and extraction of water as both potentially and actually impacting on ecological values, in terms of the riverine environment and associated ecological systems (for example, wetlands and floodplains).

***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 BE conversion process involves a hydrological assessment of the particular system prior to conversion, and further assessment of the impact of extractions on flow regimes where there is significant risk to downstream environmental values;
- SMPs use a preferred REALM model to simulate water flows which assist in judging the effect of different flow sharing options. These are used in managing the resource including determining environmental flows, allocations and trading of water;
- GMPs have regard to information collected in order to determine both present and future management of groundwater resources; and
- SRPs have used scientific panels to determine a priority of rivers to be restored. In addition they provide guidance for restoration plans and propose the use case studies to assist in further development of restoration.

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

Explicit recognition of existing environmental rights to water are provided through the BE conversion process. New BEs may also be granted or purchased. These have explicit legal recognition under the Water Act. Flow provisions are provided for in BEs for various authorities.

SMPs, GMAs and SRPs will provide for environmental allocations, either by limiting extractions to PAV (GMAs) or providing for particular flow provisions that simulate natural flows or provide for long term river health. Given that, in many respects, programs are still in their infancy, there is considerable reliance on the implementation of environmental flows and other provision for water ecosystems following any review.

***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.***

The BE conversion report makes clear that the BE process will not reduce water allocations to current users in order to reallocate water to the environment. In addition, the SMP procedure notes that negotiation with users in an overcommitted system may lead to an agreed flow regime that is below that required to maintain long term environmental health.

Nevertheless, Victoria has advised that in 31 of the 73 systems where BE allocation has occurred, the current flows meet environmental requirements. In a further thirty-six there was an improvement in the environmental flows. In only six was there no improvement. It is clear from this information that the BE conversion process resulted in an improvement to the water supply to the environment, and clear recognition of existing user rights.

Similarly, GMPs recognise existing rights, seek to intervene where extractions approach or exceed sustainable amounts, impose a regime that preserves the current situation and review that management within a defined period.

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

The SMP procedure proposes that trading be used as a device for improving environmental outcomes to increase flows. This is reflected also in trading rules for BEs and other water rights. The suspension of issuing of TULs for groundwater where the PAV is reached or exceeded provides a further mechanism to preserve and improve environmental outcomes. In addition, the ability of the environmental managers to participate in the water market and purchase water to meet needs provides a further mechanism to augment environmental water.

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

In relation to new BEs and groundwater, the existing availability of water and effects of additional allocations on the environment are integral to the future management of the respective resources. In addition, SMPs and GMPs provide for the future allocation (or otherwise) of TULs based on the assessment of the stream or aquifer.

***Other matters***

The SMPs draft procedures provide for a review of the plans with a set period to ensure objectives are being met. Amendments are expected if the SMP is not meeting its management objectives or a stakeholder raises concerns. The Merri and Gellibrand SMPs include review provisions within five years of implementation. The Snowy River rehabilitation plan (the SRP case study) provides for ongoing monitoring to assess outcomes.

SMPs also provide for the reallocation of sleeper licences, reflected in the Merri and Gellibrand SMPs.

Victoria has provided clear evidence of the process used to identify stressed rivers and the program to undertaken assessment and create management plans for these systems. It has provided detailed information concerning the management of unregulated and regulated systems, including present and future allocations to users and the environment.

The Council will monitor the continued implementation of processes to provide water to the environment prior to the third tranche assessment. The Council will carefully assess environmental outcomes including in particular the creation of water rights to satisfy the needs of the environment. Where outcomes do not satisfy environmental requirements the Council would look to evidence of mechanisms (such as trading rules and the environment manager entering the water market) are used to improve environmental outcomes.

The Council agrees to the implementation programs provided by Victoria. In doing so, it notes the following relevant matters:

- the National Land and Water Resource 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
- the 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 over time, provided there is agreement between Victoria and the Council.

#### **10.3.4.3 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.

## **Victorian arrangements**

### **Statutory Scheme**

The Water Act permits the permanent or temporary trading of BEs<sup>207</sup> between authorities by auction, tender or in any other manner with the approval of the Minister. Sale of BEs in these circumstances must be advertised. The Act also provides for the trading of BEs between the authorities and landholders in irrigation districts or TUL holders, permanent transfers requiring advertisement and the approval of the Minister. The Act permits the temporary inter-state trade of a BE with the approval of the Minister. In addition the Act provides for the sale of unallocated water by the Minister in certain circumstances. The Act provides that amendments or transfers of BEs must be entered into the Register of Entitlements kept by the Director General.

As regards TULs, the Act provides<sup>208</sup> for the sale of TULs by the Minister and the permanent or temporary transfer inter or intrastate of a licence.

The Act permits the permanent and temporary transfer of water rights intrastate with the approval of the RWA responsible for delivering the water and, in the case of permanent trades, with the approval of both RWAs. It also provides for the permanent and temporary transfers of water rights (other than sales water) interstate with the approval of the Victorian RWA (for temporary trades) and the receiving authority. In addition, the Act permits the Governor in Council to make regulations for the transfer of water rights including setting maximum and minimum amounts of water that may be held by land owners (having regard to salinity and the need to protect the water rights of other users) and setting limits on the amount of water that can be transferred out of districts. Authorities must review the water rights register to reflect permanent interstate transfers of water rights (section 230).

### **Trading to date**

At the presentation by Victorian representatives, it was noted that all intrastate trades occurred in irrigators' rights and licences. Some figures were provided indicating the extent of interstate trading:

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<sup>207</sup> Section 46-46B, Water Act.

<sup>208</sup> Section 57-63, Water Act.

**Table 10.3.1 Water trading in Victoria, 1991-1997**

Type of trade	February 1991	May 1995	August 1997
<b>Permanent</b>	50 trades totalling 2000 ML	190 transfers averaging 75 ML (total 14 369 ML or 0.6 per cent of water rights)	250 trades totalling 17 000 ML at \$800-\$1200 per ML
<b>Temporary</b>			up to 250 000 ML at > \$90 per ML.

The rules for trading of water entitlements are fairly rudimentary<sup>209</sup> and include:

- a 1:1 exchange rate and same security at destination as for source;
- 2 per cent limit on permanent trades out of respective water systems each year (the 2 per cent rule);
- no increase in saline drainage to the River Murray;
- channel capacity constraints must be considered;<sup>210</sup> and
- certain statutory requirements (for example, the seller must advertise 28 days in advance) for less frequent, more expensive permanent trades.<sup>211</sup>

The second tranche report notes that the 2 per cent rule, the only trade-restricting rule, was introduced to allay fears that increased permanent trade could cause rapid structural adjustment which may have undesirable social impacts on a particular region. At this stage, trades out of any of the systems have not reached the 2 per cent per annum limit. However, the Victorian Government will consider removing the rule as it develops more sophisticated trading rules.

The regulations prescribe forms, outline the procedure including the obtaining of consents from RWAs, minimum and maximum amounts of water rights that can attach to a property and limits on transfers into and out of districts. The Council was advised that work in trading rules is needed in the following areas:

- limiting trades in sales water;
- limiting trade out of upper tributaries;

<sup>209</sup> Found in Water (Permanent Transfer of Water Rights) Regulations 1991 (the regulations) and in authority bylaws (temporary).

<sup>210</sup> Second tranche report.

<sup>211</sup> Second tranche report.

- distinguishing between winter and summer use;
- accounting for flow and financial adjustments; and
- fraud prevention measures.

The Council has been provided with information concerning the Northern Victorian Water Exchange, operated by Goulburn Murray Rural Water Authority, as an example of the market in temporary water trades. The role of the exchange is to facilitate and encourage temporary (annual) water trading by establishing a transparent process that will provide market information on prices and volumes.

Private trading continues<sup>212</sup> in addition to trading on the exchange. The exchange commenced in September 1998, is operated on a weekly basis and provides for buyers and sellers of water to make offers. An exchange does not occur unless traders can obtain the prices offered or better. Buyers only pay the maximum price they have offered or lower. Sellers receive the minimum price they have offered water for or higher. An example of the exchange's operation on 4 February 1999 is summarised below.

**Table 10.3.2 Water Exchange, Goulburn Murray RWA, 4 February 1999**

Pool price established	\$92.50 per ML
ML traded	655
Offers to sell unsatisfied (ML)	2740 (\$92-\$120 per ML)
Offers to buy unsatisfied (ML)	235.6 (\$90 per ML)

The second tranche report notes that the pool price on the Goulburn river has now reached \$200/ML and \$80/ML on the Murray River. The volume traded at the weekly exchange has varied between 400-1400 ML.

### Groundwater

The *Groundwater management – Victorian Overview* document notes that the development of groundwater trading markets is at an early stage because until the establishment of GMAs and the quantification of the sustainable yield of the resource, groundwater entitlements were generally freely available.

The report notes that isolated trades have occurred and will be an important feature of GSPA management regimes.

<sup>212</sup> The exchange accounts for about 10 per cent of water traded; second tranche report.

### **Interstate water trading**

As regards interstate trade, a 5000 ML of excess environmental water was sold to New South Wales in 1994. The sale was effected after consultation with possible Victorian users.

Victoria is also a participant in the pilot interstate water trading project in the Mallee border region of the Murray-Darling Basin.<sup>213</sup> The project is limited to permanent transfer of high security water entitlements held by private diverters. Each trade must be approved by respective state authorities. The scheme provides for the registration of the trades and exchange rates to limit the impact of trades on the security of others' water entitlements and the environment. Environmental clearances are integral to the pilot, as is the maintenance of the Salinity and Drainage strategy.

The Council has been advised by the MDBC that the first water trade under the project occurred in September 1998 and that as at 15 February 1999, 248 ML had been transferred from New South Wales to Victoria, 600 ML from Victoria to South Australia and 528 ML from New South Wales to South Australia. The present price for trades is about \$1000 per ML. The MDBC is presently reviewing the project.

The second tranche report notes that Victoria is currently working with other scheme participants to resolve cost recovery and security of supply issues which need to be addressed before the project can be extended.

### **Council Comment**

Victoria has implemented a system for trading of water entitlements that:

- provides for the trading of the spectrum of water rights (including groundwater) both interstate and intrastate;
- has now been operating for some considerable time in both temporary and permanent intrastate trading of water rights;
- includes legislative provisions enabling transfer of water rights;
- provides for regulations and bylaws to govern water trading;
- incorporates voluntary markets run by an RWA providing information and support to water traders; and
- protects the environment through such mechanisms as the prohibition on water trades from high impact zone areas to non-high impact zone areas.

The Council will continue to monitor the development of trading rules prior to the third tranche assessment with a view to see identified weaknesses addressed and the further development of interstate trade.

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<sup>213</sup> The Pilot Interstate Water Trading Project information sheets; MDBC, 1998.

The infancy of interstate trade is acknowledged by the careful progress of the MDBC pilot project. Nevertheless, some trading has occurred, and the project is presently being reviewed. This should provide an opportunity for problems to be identified and solutions jointly created by member states.

### **10.3.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

#### **10.3.5.1 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.

#### **Victorian arrangements**

The 1997 publication, *Managing Victoria's Catchments – Partnerships in Action*, outlines the framework for implementation of the Regional Catchment Strategies (RCS) for each of the 10 Catchment and Land Protection regions established under the *Catchment and Land Protection Act 1994* (CALP Act). It provides for the roles and responsibilities of the relevant participants (including farmers, Government at Local, State and Federal levels, Landcare groups, Catchment and Land Protection Boards (CALPB) and the Council (CALPC)), outlines arrangements for the implementation of State-wide and Regional Catchment Strategies and identifies policies and priorities. The primary goal is identified as: To ensure the sustainable development of natural resource-based industries, the protection of land and water resources and the consideration of natural and cultural heritage.

The document outlines the priority of issues (developed by the CALPC, CALPBs and Regional Assessment Panels) and includes as high priorities pest plants and animals;, eutrophication, irrigation and dryland and waterways salinity. The objectives and performance measures for the program include assessment of: waterway management; floodplain management; salinity and drainage management; groundwater management; water allocation and managing water entitlements; sustainable agriculture; soil conservation and land management; landcare support and property management planning; vegetation management and environmental planning; sustainable regional communities; regional development; private forestry; and pest plants and animals.

The *Review of Catchment Management Structures in Victoria* (February 1997) considered catchment management advisory and service delivery arrangements and recommended that existing CALPBs and other community advisory groups be integrated into Catchment Management Authorities (CMA) which combine an integrated planning

role (for example, development and co-ordination of implementation of the RCS) with service delivery for waterway management including floodplain and rural drainage management. The structure proposed included a Board (with more than one half of the members being primary producers and other members appointed having regard to their experience and knowledge of matters such as land protection, water resource management and environmental conservation) and Implementation Committees (IC) responsible for the development of detailed work programs and their delivery. CMAs would report directly to the Minister. It was recommended that the CALPC, which previously had a state-wide role in overseeing CALPs in addition to advising the Minister on matters concerning catchment management and land protection, would now provide advice to the Minister without an overseeing role. The structure proposed by the review was adopted by the Victorian Government (*Future arrangements for Catchment Management in Victoria - Response by the Victorian Government*).

The Council was supplied with the *Operating Guidelines* for CMAs outlining the respective roles of the Boards and Implementation Committees and outlining such matters as the structure and functions of CMAs and partnerships between CMAs and other stakeholder organisations such as RWAs, DNRE, Landcare groups and Local Government.

The Council has been assisted, in assessing the approach of Victoria to integrated resource and catchment management, by information provided by Victoria including:

- Regional Management Plan (RMP) Guidelines (November 1998). An RMP guides the implementation of the RCS. The guidelines outline the various responsibilities of CMAs, ICs and other parties. The Guidelines provide for CMA projects to be subject to merit-based funding which involves both a retrospective assessment of performance and assessment of proposed projects by CMAs;
- the RCSs for each of the Catchment and Land Protection Regions. Each RCS outlines objectives and actions in respect of regional issues. For example, the Glenelg RCS provides for issues-based and structural programs. The Water quality and quantity management strategy notes the objectives of maintaining water quality standards within agreed parameters for the maintenance of biological processes, geomorphic systems, natural features and consumptive needs and providing for the development and implementation of an equitable balance in flow volumes and diversity for the maintenance of biological systems, geomorphic systems, natural features and consumptive needs.

The actions include preparation of catchment-based water quality management strategies, implementation of key activities and works to reduce nutrient loads and impacts in waterways and riparian environments and preparation of environmental and stream flow management plans for priority rivers. The Waterway and Water Resources strategies include planning for waterway and drainage management, floodplain management and groundwater management; and

- *Working together in catchment management*, a document that outlines the reasons for co-operation between local government and CMAs, their respective responsibilities and opportunities for co-operation.

### **Council Comment**

The information provided by Victoria evidences the following matters:

- there has been comprehensive reviews of water resource management practices in Victoria;
- the reviews have resulted in the creation of CMAs with advisory and service delivery functions. Service delivery functions (for example, responsibility for drainage) are in part the result of identified gaps in integrated management of catchments;
- catchment and other resource management is co-ordinated through an RCS which identifies priorities and an RMP that guides its implementation of the strategy;
- CMAs are charged with RCS implementation and the success of this arrangement is premised on the co-operation of CMAs with other local bodies including local government and landcare groups;
- CMAs are statutory bodies representing a cross-section of interests, providing strategic direction for ICs and accountable for both function performance and financial management; and
- state-wide advice on integrated catchment management is provided by the CALPC.

Plans and other information provided to the Council evidence the approach outlined in the reviews in terms of implementation of RCSs and co-ordination with local authorities.

#### **10.3.5.2 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.

### **Victorian arrangements**

The second tranche report notes the implementation of NWQMS through catchment management strategies and in regional schedules to the State Environmental Protection Policies (SEPP). In areas where it is considered a priority to develop water quality and nutrient management actions plans, there are included as regional schedules in the SEPP *Waters of Victoria*. The ANZECC Australian Water Quality Guidelines for Fresh and Marine Waters are adopted as the minimum standard.

Victoria provided the Council with information concerning two initiatives, Nutrient Management and Water Quality, which are outlined in further detail below.

### ***Nutrient Management***

The Council has been provided with the Nutrient Management Strategy for Victorian Inland Waters (1995) which notes the objective of providing a policy and planning

framework to assist local communities and the state government manage nutrient levels in waterbodies to minimise the potential for the development of algal blooms, particularly blue-green algae.

The range of actions identified includes wastewater treatment options, best management practice, development of nutrient guidelines, lowering nutrient levels in stormwater runoff, studying options for irrigation drainage and community education and participation. The strategy noted the NWQMS guidelines form the basis for state and local plans and guidelines. The strategy reviews the then current arrangements for nutrient management and outlines the responsible agency for identified action. The plan also outlines the cost-sharing principles reflecting polluter and beneficiary pays principles.

Overall responsibility for implementing the strategy was placed with the CALPC, which established the Nutrient Management Strategy Implementation Committee to support this work.

The Review of Catchment Management Structures in Victoria recommended integration of water quality working groups with CMAs, which has since been implemented. The 1996-1997 Nutrient Management Strategy Implementation Committee Annual Report noted that the lead role of the CMAs in overseeing the development and implementation of nutrient management plans permits integration of this work with other waterway management functions. A review of the strategy (published October 1998) noted that since 1995, 16 catchment based management nutrient plans identifying priority areas and activities within catchments and addressing nutrient problems had been developed and implemented. The review includes a number of case studies regarding work in getting to the source of the problem, research, improved management practice and identifying the costs and benefits of algal blooms and interventions.

The Council was provided with a copy of the Draft Ovens Basin Water Quality Strategy (June 1998) which: identifies the need for a water quality strategy; identifies the nutrient loads in the Ovens basin; develops strategy objectives and basic principles; outlines strategy programs and actions; models outcomes; and provides a costs and benefits analysis.

### ***Water Quality***

The SCARM taskforce review<sup>214</sup> noted the three tier strategy to achieve 1996 Australian Drinking Water Guidelines: drinking water standards to be incorporated into operating licences; directors of water corporations to be exposed to duty of care requirements; and aesthetic parameters to be negotiated with customers.

In relation to metropolitan water retailers, a condition of their water licences is compliance with NHMRC water quality guidelines (99.8 per cent) reported.<sup>215</sup> The

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<sup>214</sup> Finalised December 1997.

<sup>215</sup> *Water industry reform in Victoria: emerging benefits*; Hon A R Stockdale, Treasurer of Victoria, 1997.

Yarra Valley Water annual report (1996-1997) noted compliance for two parameters in excess of those set out in the licence.

As regards NMUs, the Council was advised of the October 1997 reform package which included \$450 million to reduce debt and accelerate capital work projects to improve water and environmental quality.<sup>216</sup> The Council was provided with documents entitled *Improved Wastewater Management in Small Towns* (May 1997) and *Low Costs Water Treatment for Small Towns* (March 1997). The wastewater publication: canvasses the problems in rural areas not adequately serviced with appropriate sewerage services; canvasses options for improvements to services; and provides consultation processes to address the needs of small communities. The water treatment report: provides a guide for NMU authorities to assess a range of water quality improvement measures; canvasses the options and their various costs; and provides options for implementation of choices made.

The Council has been provided with the DNRE publication *Biological Quality of Drinking Water; Questions and Answers* (June 1996) which canvasses the effects and causes of and controls for poor quality water.

### **WSAA Facts**

WSAA Facts '98 noted, as regards water quality compliance, Melbourne Water's 99.4 per cent compliance with bacteriology quality and 99.5 per cent compliance with Physico/Chemical (turbidity/colour/pH) as set out in the 1987 NHMRC Guidelines. CityWest Water's results were 99.7 per cent and 97.8 per cent respectively (NHMRC 1987), South East Water's results were 97.4 per cent and 97.5 per cent respectively (NHMRC 1987) and Yarra Valley Water's results were 99.9 per cent and 96.4 per cent respectively (NHMRC 1987). As regards wastewater effluent, all providers listed above are 99.9 or 100 per cent compliant with overall discharge standards.

### **Council Comment**

The information provided to the Council exhibits progress by Victoria in the following respects:

- a co-ordinated approach to nutrient management with formulation of a strategy, identification of a responsible bodies (CMAs) and how the interventions are to be funded;
- progress on improvement of metropolitan drinking water in accordance with NHMRC guidelines through urban water licensing requirements and reporting of results.
- active measures to improve NMU water quality, including water and wastewater treatment; and
- funds have been set aside for improving NMU water quality and involving local communities in the choices made.

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<sup>216</sup> Press Release, Office of the Premier, 9 October 1997.

The Council is satisfied, on the information provided that the work of the NWQMS is supported. The Council will continue to monitor the development of programs that seek to implement the various NWQMS prior to the third tranche assessment.

## **B10.3.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**10.3.6.1 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.

### **Victorian arrangements**

The second tranche report notes that:

*Victoria has widespread public consultation and education throughout its water industry. Customer consultative committees in the urban sector and water services committees in the rural sector ensure adequate consultation takes place. Substantial stakeholder involvement is also a key part of the process to develop bulk water entitlements and environmental flows.(p93)*

As regards the urban water industry, each is required to have a customer consultative committee as required by its operating licence. The customer contract sets out basic consumer rights and obligations and the ORG determines benchmark terms in consultation with the consultative committee.

The second tranche report notes that although NMUs are not governed by licensing arrangements, each has developed its own Customer Participation Strategy, which includes mechanisms for public consultation and education. Although only minimal consultation took place in implementing two part tariffs, once the reforms were announced, the Government, with assistance from the retail water authorities, undertook an extensive media campaign to ensure customers understood the implications of the reforms.

WSCs play an important role in the implementation of full cost recovery in rural and irrigation services, and the second tranche report notes that RWAs use WSCs to communicate the objectives of reform and to assist by negotiating the necessary pricing and service requirements to meet the 2001 deadline.

The public education programs cited in the second tranche report include: National Water Week; Waterwise program (covering 75 per cent of water customers); Waterwatch; school education programs run by urban water authorities as part of their water conservation plans, and included as a condition of the operating licence; and internet sites are provided by water retailers for education purposes. In addition both urban water authorities and NMUs produce television commercials to educate the public about the importance of water resources, and RWAs have radio spots and media releases to announce water allocation and trading information.

**Council Comment**

The Council is generally satisfied that the reforms to the water industry implemented by Victoria has been the subject of considerable consultation. This is particularly true of the rural water reforms in converting existing water rights to bulk entitlements.

The Council has reservations concerning the admitted failure to consult as regards reforms of urban water pricing. This extends beyond the NMUs and includes changes made to urban water service pricing. The failure to consult as regards NMU pricing reforms is magnified by less rigorous ongoing consultation requirements.

However, having regard to the success at implementing reform, subsequent education provided to NMU customers and consultation regarding reforms across the water industry the Council that Victoria has met this reform commitment.

The Council considers that there is an inherent conflict in the service provider supplying this ongoing public education on water conservation when it has a financial interest in increased water consumption. The Council notes its preliminary view that the most appropriate body to undertake this type of activity is the resource manager and not the service provider. The service provider is, however, well placed to provide information concerning water price and service conditions. The Council will continue to review this matter prior to the third tranche assessment.

## Attachment 1

Table 10.3.3 NMU Cost recovery

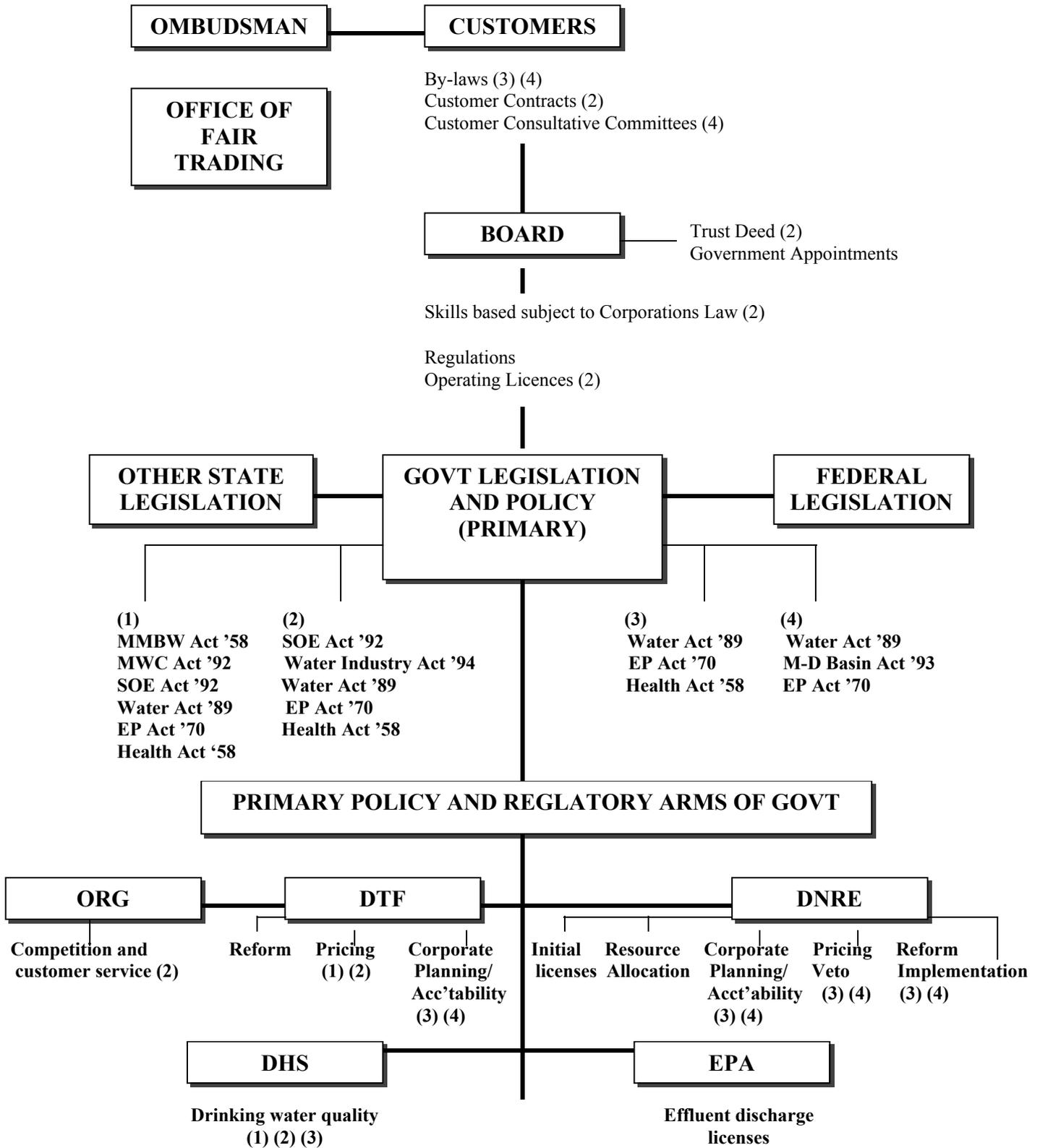
<b>Water Supplier</b>	Upper bound <sup>2</sup>	Actual revenue	Lower Bound A (3,4)	Lower Bound C (5)
<b>Barwon</b>	126 629	<b>77 043</b>	72 755	60 956
<b>Central Gippsland</b>	66 333	<b>44 705</b>	34 154	29 108
<b>Central Highlands</b>	64 715	<b>44 603</b>	32 360	24 401
<b>Coliban</b>	75 610	<b>37 411</b>	34 129	25 874
<b>East Gippsland</b>	17 767	<b>14 517</b>	9 105	10 253
<b>Glenelg</b>	10 586	<b>5 098</b>	4 774	3 756
<b>Goulburn Valley</b>	47 369	<b>35 005</b>	25 092	20 365
<b>Grampians</b>	26 800	<b>21 342</b>	16 538	14 165
<b>Lower Murray</b>	26 207	<b>19 495</b>	13 344	11 246
<b>North East</b>	38 623	<b>24 794</b>	20 148	17 697
<b>Portland</b>	7 779	<b>5 923</b>	3 715	4 711
<b>South Gippsland</b>	15 620	<b>10 842</b>	7 928	6 099
<b>South West Water</b>	21 985	<b>18 523</b>	11 160	9 101
<b>Western</b>	36 406	<b>30 880</b>	23 036	19 616

<b>Water Supplier</b>	Upper bound <sup>2</sup>	Actual revenue	Lower Bound A (3,4)	Lower Bound C (5)
<b>Westernport</b>	11 983	<b>9 799</b>	7 705	6 342

- 1 All figures expressed in '000's, 1997-1998.
- 2 For the purposes of calculating the upper band, the following costs are included: operations and maintenance costs, administration expense, depreciation expense and per cent WACC.
- 3 For the purposes of calculating the lower band, the following costs are included: operations and maintenance costs, administration expense, dividends, interest. For the purposes of calculating the lower band no cost of capital is included.
- 4 Renewals estimate 2 per cent of written down replacement cost of fixed and leasehold assets.
- 5 Average of "capital expenditure on asset replacements" forecasts for the next five years, expressed in 1997/8 dollars .

ATTACHMENT 2

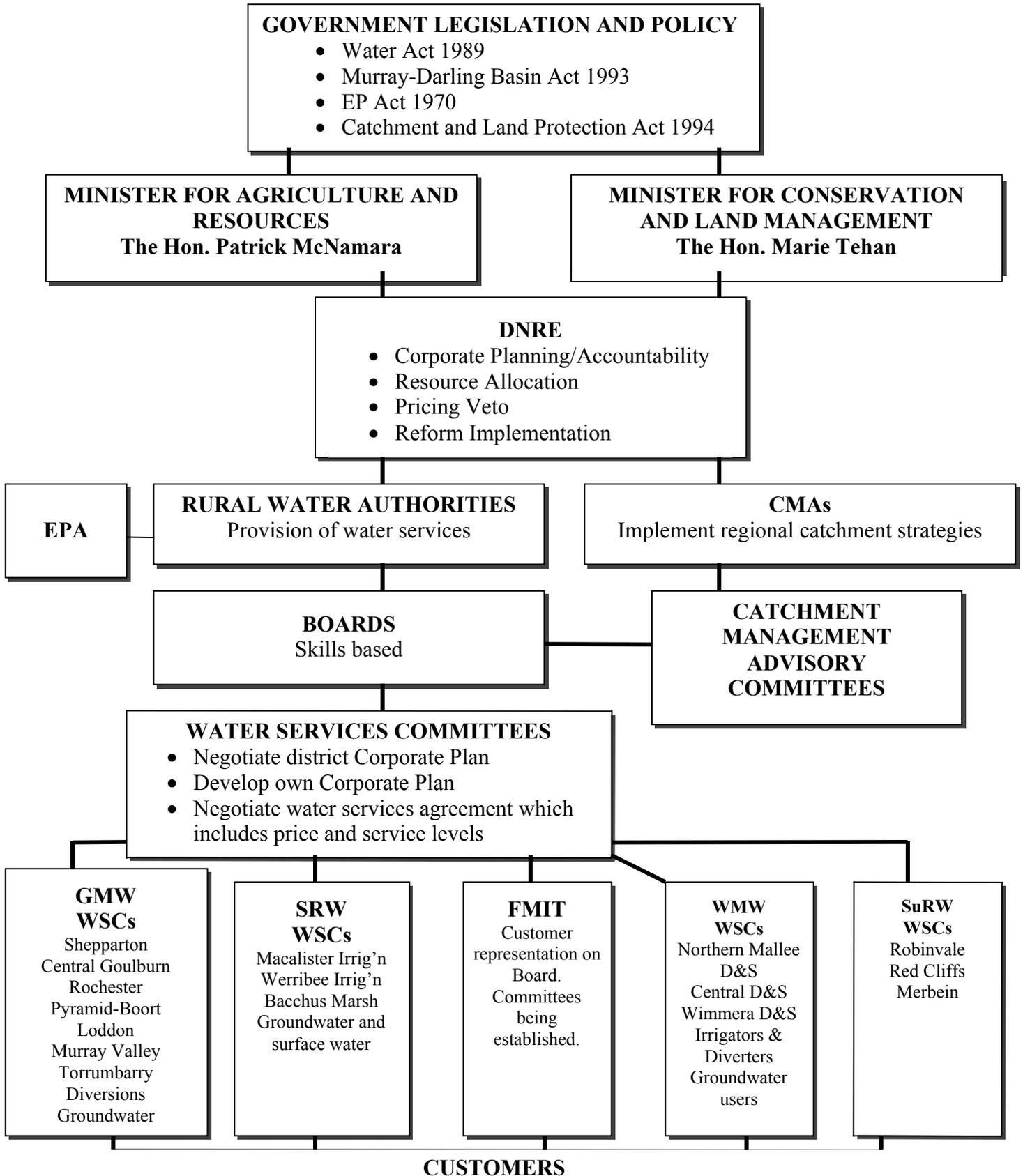
Figure 10.3.1 Victorian Regulatory Profile



Key (1) Melbourne Water Corporation (2) Metropolitan Retailers (3) NMUs (4) Rural Water Authorities

**ATTACHMENT 3**

**Figure 10.3.2 Regulatory Framework Rural Water Services**



## **Attachment 4**

### **Victorian Programs for Implementation of COAG Water Resource Reforms**

#### **WATER ALLOCATION AND TRADING FRAMEWORK**

##### **Bulk Entitlement Program**

###### **Water Allocation Framework**

The Victorian 1989 Water Act established the legislative framework to enable water entitlements to be clearly defined and provided the statutory basis for environmental allocations.

The bulk entitlement program directly deals with the allocation of water to authorities and the environment and provides a comprehensive framework for the trading of surface water entitlements.

When complete, bulk entitlements will cover approximately 98% of the State's allocated resources, covering nearly 500 diversion sites within approximately 160 separate bulk entitlement orders.

###### **Process to Establish Bulk Entitlements**

The process to establish bulk entitlements requires:

- extensive consultation with all stakeholder groups to gain ownership of the process and acceptance of the outcomes where trade-offs between competing users are required;
- a good understanding of the environmental flow issues within each river valley;
- hydrologic modelling of each river system to examine the implications of trade-off options, establish security of supply and provide the means to monitor resource use and regulate future trading of entitlements.

There are a number of defined steps (milestones) in the process of establishing bulk entitlements. Depending on the complexity of the system these can include all or some of the following –

- Establish a Project/consultative Group of key stakeholders
  - Develop REALM simulation model
  - Undertake preliminary assessment of sharing arrangements/system yield
  - Undertake preliminary assessment of environmental requirements
-

- Propose initial water shares/ identify issues
- Agree on water shares and where appropriate financial obligations
- Finalise bulk entitlement Orders

The timetable to complete this process for each system is heavily dependent on the level of understanding of all stakeholders on Project Groups and the amount of effort required to work through issues identified through the consultative process. A high level of Cupertino is also required with water authorities in the timing and input of resources.

Experience to date has shown that on complex systems the full process can take up to three years to complete. As a general rule, less complex would require approximately two years. It should also be noted that relatively small systems in terms of total amount of water could be complex to resolve, particularly where the water resources are heavily committed.

### **Progress to Date and Future Program**

The program has now reached the stage where flow sharing arrangements at approximately 70% of the diversion sites across the State have been negotiated and agreed with stakeholders. At the vast majority of sites this has resulted in improved environmental outcomes. As at June 1999, 115 bulk entitlements have been granted covering 75% of the State's water resources that are to be allocated as tradeable bulk entitlements. Regulatory systems, to monitor and manage the entitlement system including water trading, are being progressively implemented with the granting of entitlements.

The timetable to implement the remainder of the bulk entitlement program is outlined below. It has been developed in conjunction with water authorities, and will be subject to the constraints of the consultation processes necessary to ensure that the community accepts the outcomes. This may result in variations within the program and to the final completion date.

### **Year 1999**

#### ***Bulk Entitlements finalised and granted***

- All Murray Bulk Entitlements to Urban and Rural Water Authorities
- Campaspe System Bulk Entitlements
- Maribyrnong
- Central Highland urbans

#### ***Conversion processes actively progressed***

- Thomson/Macalister Bulk Entitlements
  - Melbourne
  - Tarago System
  - Barwon River
-

- Ovens River
- Broken River

### ***Management of Entitlements***

- New data base completed and populated
- Basin accounts published (for completed systems)
- Progress documentation of model runs

### **Year 2000**

#### ***Bulk Entitlements finalised and granted***

- Thomson/Macalister Bulk Entitlements
- Melbourne
- Tarago System
- Barwon River

#### ***Conversion process actively progressed***

- Ovens River
- Broken River
- Loddon River
- Birch Creek
- Wimmera-Mallee D&S System
- Grampians urbans

### ***Management of Entitlements***

- Basin accounts published (for completed systems)
- Resource Management arrangements reviewed
- Progress documentation of model runs

### **Year 2001**

#### ***Bulk Entitlements finalised and granted***

- Ovens River
  - Broken River
-

- Loddon River
- Birch Creek
- Wimmera-Mallee D&S System
- Grampians urbans

***Management of Entitlements***

- Basin accounts published (for completed systems)
- Resource Management arrangements reviewed
- Progress documentation of model runs

**Year 2002**

***Bulk Entitlements finalised and granted***

- Loddon River
- Any outstanding supply systems

***Management of Entitlements***

- Basin accounts published (for completed systems)
  - Resource Management arrangements reviewed
  - Progress documentation of model runs
-

## ATTACHMENT 5

### GROUNDWATER MANAGEMENT

#### Groundwater Management Plans

**When allocations reach 70% of the sustainable yield of the aquifer (expressed as the Permissible Annual Volume or PAV), a mechanism to establish a Groundwater Supply Protection Area (GSPA) is triggered and a Groundwater Management Plan developed.**

A consultative committee, comprising mainly farmers but representing all relevant interests, is responsible for developing the management plan.

The management plan must address issues such as metering and monitoring, allocation arrangements including transferable water entitlements, and costs associated with implementing the plan.

The objective of a management plan is to make sure that the groundwater resources of the relevant groundwater supply protection area are managed in an equitable manner and so as to ensure the long-term sustainability of the resources.

#### *Progress to date*

Eleven GSPAs have been established to date. Groundwater Management Plans have been prepared for two of these areas. The remaining nine GSPA were established in late 1998 early 1999. Target dates for establishment of and Consultative Committees, which have the responsibility to develop Management Plans, are shown in Table 1. The steps (key milestones) necessary to identify and achieve management objectives are identified.

#### *Future Targets*

Over the next three years it is proposed to establish a further fifteen GSPAs to cover all areas in the State where allocation is greater than the PAV. Five areas are at the initial stage of GSPA set up whereby the first rounds of community consultation takes place, refer Table 2. An additional ten areas are planned to be dealt with within the timeframe as listed in Table 3.

---

**Table 1**  
**Declared Groundwater Supply Protection Areas**

Groundwater Supply Protection Areas	Establish Consultative Committees	Steps necessary to achieve objectives	Management Plan (Target)
Kooweerup Dalmore	NSW arrangements		NA In place
Shepparton Irrigation Area	NSW arrangements		NA In place
Campaspe Deep Lead (incorporates Echuca South, Diggora)	June 1999	<ul style="list-style-type: none"> <li>• Identify Groundwater Management Issues</li> <li>• Address technical issues <ul style="list-style-type: none"> <li>▪ Construction of observation bores</li> <li>▪ Determine monitoring arrangements</li> <li>▪ Environmental water requirements</li> </ul> </li> <li>• Develop groundwater allocation options</li> <li>• Determine future management arrangements</li> <li>• Address pricing issues</li> <li>• Produce draft groundwater management plan</li> <li>• Consult with users</li> <li>• Amend groundwater management plan following consultation and submit for approval</li> <li>• Implement plan</li> <li>• Establish ongoing consultative arrangements</li> <li>• Undertake monitoring – over 5 years</li> <li>• Collect usage data – over 5 years</li> <li>• Review management arrangements after 5 years</li> </ul>	Dec 2001
Katunga			
Spring Hill			
Murrayville			
Neuarpur			
Yangery			
Nullawarre			
Denison			

**Table 2****Initial Steps taken for Groundwater Supply Protection Areas**

<b>Groundwater Supply Protection Areas – Initial Steps</b>	<b>Initial Consultation (Target)</b>	<b>Decision on Declaration</b>
Avenel/Nagambie	June 1999	December 1999
Bungaree	April 1999	December 1999
Sale	April 1999	December 1999
Wy-Yung	April 1999	December 1999
Deutgam	May 1999	December 1999

**Table 3**  
**Future Groundwater Supply Protection Areas – 3 years**

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**Groundwater Management Areas**

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Warrion

Ascot

Merrimu

Wandin Yallock

Bridgewater

Lancefield

Seacombe

Lang Lang

Balrootan

Gerangamete

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## ATTACHMENT 6

### STREAMFLOW MANAGEMENT PLANS AND STRESSED RIVERS

#### Streamflow Management Plans

On unregulated rivers, not covered under the bulk entitlement program, the management of diversions will be undertaken through the development and implementation of streamflow management plans (SMPs). SMPs will establish environmental objectives, immediate and, where necessary, long term environmental flow provisions, mechanisms to achieve long term environmental flows provisions, rostering rules, trading rules, and rules covering the granting of any new licences. In addition, they will include provisions for monitoring and compliance and plan review. SMPs are developed under the auspices of the RWAs, in consultation with the relevant group of stakeholders with a general public consultation phase. The process has been designed to ensure that there is stakeholder ownership of the planning process and general acceptance of the plan. It must be recognised that it takes time to foster community understanding and achieve general consensus on key aspects of a plan which may change available options, practices or opportunities for some stakeholders. These community-driven processes can take up to three years to develop a draft plan. However, this time is necessary if there is to be widespread acceptance of the outcome. Key milestones in the development of a SMP and the indicative time taken for each are given below:

- Development of background report from collation of existing information on environmental values, hydrology and water use (3 months).
- Commencement of environmental flow study (6-12 months depending on season and river flows).
- Establishment of steering committee from key water use, environmental and recreational stakeholders (2 months).
- Development of hydrologic model (6-12 months depending on complexity).
- Development of draft plan (12-24 months).
- Release of draft plan for public comment (3 months).
- Submission of final plan to Government (3-12 months depending on input from public consultation program).

In developing the work program for the development of SMPs, the following criteria were used to set priorities:

- level of consumptive use (i.e. ecological impact due to changed flow regimes);
  - conservation value;
  - demand for new licences;
  - frequency of rosters/restrictions;
-

- history of management problems;
- recreational value; and
- community expectation of the need for a SMP.

An indicative timetable for work over the next two years is provided in Table 4. It should be noted that this timeframe is indicative and will change depending on the nature of the environmental study involved, the complexity of the model required and the community processes as they develop.

### **Stressed Rivers**

River Restoration Plans (RRPs) will be developed for rivers where the environmental provisions made through the Bulk Entitlement process are considered to be insufficient to meet environment objectives. RRP will build on the current environmental provisions. They will set clear environmental objectives, set priorities for any additional water, identify mechanisms to provide additional water, identify complementary instream and riparian habitat works that will maximise environmental gains and establish agreed cost-sharing for implementation. The points made above in relation to community-driven processes apply particularly to RRP since, in general, they will be starting at a point where any flexibility in operating systems has already been identified and negotiated within the BE conversion process. In RRP, stakeholders and their communities will need to examine innovative solutions for improving flow regimes as well as the potential for complementary habitat works. To assist in developing guidelines for the development of RRP, two case studies are currently being undertaken. These case studies will examine the extent of information required on environmental needs, water usage, water systems efficiency etc., the stakeholder participation processes that will be required, the level of innovative scientific input required as well as identifying a number of possible solutions that may be more generically applied. RRP for other rivers will not commence until substantial progress has been made on the case study RRP.

Key milestones in the development of a RRP are anticipated to include:

- Collation of existing information on environmental values, hydrology and water use (3 months).
  - Commencement of environmental flow study (6-12 months depending on season and river flows).
  - Establishment of Steering Committee from key water use, environmental and recreational stakeholders (2 months).
  - Development of draft plan (12 -24 months).
  - Release of draft plan for public comment (3 months).
  - Submission of final plan to Government.
-

The indicative timeframe for work over the next two years is provided in Table 5. It should be noted that this timeframe is indicative and will change as information from the case studies assist in developing the process.

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**TABLE 4: PROGRAM FOR STREAMFLOW MANAGEMENT PLANS**

<b>Work Program for River Restoration Plans</b>																														
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Thomson R d/s Cowwarr Weir																														
Avoca R																														
Loddon R																														
Glenelg R																														
Broken R																														
Lerderderg R																														
Badger Ck																														
Maribyrnong R																														

TABLE 5 Work Program for River Restoration Plans

River	June - December 1999						December - June 2000						June - December 2000						December - June 2001						June - December 2001					
	Milestones						Milestones						Milestones						Milestones						Milestones					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Thomson R d/s Cowwarr Weir																														
Avoca R																														
Loddon R																														
Glenelg R																														
Broken R																														
Lerderberg R																														
Badger Ck																														
Maribyrnong R																														

## **B10.4 WATER REFORM, QUEENSLAND**

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Attachment 1: Cost recovery of local government water and sewerage providers,  
1996-1997

Attachment 2: CSOs provided by local government water and sewerage activities

Attachment 3: WAMP/WMP Timetable

## Table of Abbreviations

ACF	Australian Conservation Foundation
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ANZECC	Australian and New Zealand Environment and Conservation Council
BW	Brisbane Water
CC	City Council
CCC	Catchment Co-ordinating Committee
CN	Competitive Neutrality
COAG	Council of Australian Governments
CPA	Competition Policy Agreements
CSO	Community Service Obligation
DIS	Development Incentive Scheme
DOA	Diversion Operating Authority
DNR	Department of Natural Resources
EBIT	Earnings before Interest and Tax
EMP	Environmental Management Plan
EPP (water)	Environmental Protection (Water) Policy 1997
EWAQ	Ecological Water Alliance of Queensland
GAWB	Gladstone Area Water Board
GCW	Gold Coast Water
GTE	Government Trading Enterprise
IAG	Independent Audit Group
IAS	Impact of Assessment Study
IDAS	Integrated Development Assessment System
ILMC	Interim Local Management Committee

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IP Act	Integrated Planning Act 1997
kL	Kilolitre (1000 L)
LG Act	Local Government Act 1993
LGAQ	Local Government Association of Queensland
LGFS	Local Government Finance Standard 1994
LRMC	Long Run Marginal Cost
MDBC	Murray Darling Basin Commission
ML	Megalitre (1000 kL)
MIWB	Mt Isa Water Board
MoU	Memorandum of Understanding
NCC	National Competition Council
NCP	National Competition Policy
NHMRC	National Health and Medical Research Council
NMU	Non-metropolitan Urban Water Authority/Supplier
NRM	Natural Resource Management
NWQMS	National Water Quality Management Strategy
OMA	Operating, Maintenance and Administration expenses
QCA	Queensland Competition Authority
QCA Act	Queensland Competition Authority Act 1997
QCC	Queensland Conservation Council
RID	Regional Infrastructure Development division, DNR
RoR	Rate of Return
ROA	Resource Operating Authority
ROL	River Operating Licence
ROMP	Resource Operations Management Plan
ROP	Resource Operating Plan

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SCARM	Standing Committee on Agriculture and Resource Management
SEQWB	South East Queensland Water Board
SIIP	Sugar Industry Infrastructure Package
SWC	Sydney Water Corporation
SWP	State Water Projects
TER	Tax Equivalent Regime
TTWB	Townsville-Thuringowa Water Board
WACC	Weighted Average Cost of Capital
WAMP	Water Allocation and Management Plan
WMP	Water Management Plan
WR Act	Water Resources Act 1989
WSAA	Water Services Association of Australia

## B10 Water Reform

### B10.4 Queensland

#### B10.4.1 EXECUTIVE SUMMARY

This is an assessment of Queensland'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*

- Queensland is not in a position to advise as to the level of urban full cost pricing across providers. The Council notes, however, that all large local government service providers have adopted resolutions that should lead to full cost recovery. The information provided indicates that some providers may be meeting many of the elements of cost recovery.
- The Council notes the constructive offer of Queensland to provide the Council with information collected and analysis performed by the QCA. This information will not be available until 30 November 1999. This approach is, in the Council's view, the most appropriate way to advance the Council's assessment of this aspect of reform commitments. The Council will require relevant information to be provided by Queensland by December 1999. This information should address the question of cost recovery not only for the *big 17* local governments but also for other significant water and sewerage businesses. While the big 17 businesses may include 85 per cent of water provided, the Council notes that the next 10 local governments bring this figure to 92 per cent. Information in respect of at least these local governments is requested. The Council will also look for a program and timetable to address any failures to meet reform commitments at this time.
- As regards two part tariffs, guidelines for local government evaluation and implementation have been finalised, and assessments by local government are largely completed. The Council notes that the majority of large local governments have adopted two part tariffs. However, some of the pricing regimes include two part tariffs with large base allowances. The Council is of the view that such a pricing structure is not consistent with the reform commitment. Significant further information concerning tariff structures and projected elimination of base allowances is required. The Council notes that this process will be facilitated by the process outlined above in respect of the provision of information by the QCA.
- In respect of the four local governments which have not implemented two part tariff regimes when this was recommended, it is the Council's view is that where

such a recommendation is made, local governments must show a convincing net public benefit if they determine not to implement the review recommendations. In respect of Thuringowa and Townsville City Councils, the final recommendation appears to be that a cost effectiveness study encompassing both Councils and Townsville Thuringowa Water Board be conducted. The Council would look to implementation of this recommendation by December 1999. In respect of Rockhampton and Pine Rivers Shire Councils, the Council will require, by December 1999: implementation of the recommendations; a further cost-benefit analysis to be completed and its recommendations adopted and implementation commenced; or demonstration of a convincing net public benefits such that the review recommendations are rejected. The Council will also undertake a further assessment of these matters in December 1999.

- As regards removal of cross-subsidies, guidelines to identify and measure cross-subsidies have been finalised, and are to be applied by December 1998, this process to be finalised for large local government water and sewerage providers by 1 July 2000. The Council is of the view that the present pricing structures, which include significant base allowances and some property based charges, have many of the indices of cross-subsidisation. The Council will further review this reform commitment in December 1999.
- The Council has not been provided with sufficient information to determine whether the application of the Community Service Obligation (CSO) scheme in Queensland meets the reform commitments. The Council notes the Local Government Act 1993 provides a framework for local government to identify and cost CSOs. For those local governments where information has been provided the CSOs seem on the whole well targeted and consistent with reform commitments. CSO information should be provided to the QCA for local government water and wastewater providers. The Council will undertake a further assessment of reforms in December 1999.
- Although it appears that some service providers (for example Brisbane Water, Gold Coast Water) earn a positive rate of return, the information provided in respect of other service providers does not lend itself to any conclusion. The Council also notes that the asset valuations used to arrive at these rates of return is unclear, although by 30 June 1999 all asset valuations will be on the basis of deprival value. Again, the information should be provided to the QCA in respect rates of return of local government water and wastewater providers. The Council will undertake a further assessment of reforms in December 1999.
- The Council has significant concerns regarding appraisals of economic viability and ecological sustainability of new rural schemes. These have been outlined in detail in the assessment. The Council is of the view that it may be appropriate to recommend a significant financial penalty in respect of some projects. The Council notes that it will adopt the following process to progress discussion with Queensland:
  - the Council will seek further information from Queensland concerning these projects and attempt to identify a path forward on resolving the concerns;

- the Council recommends a suspension of 25 percent of competition payments until December 1999; and
- at that time the Council will make a final recommendation on any penalty that should be imposed for schemes that the Council is not satisfied have proceeded in a manner consistent with this reform commitment.
- Operational responsibility for the management of irrigation areas has not been devolved, although Queensland has developed Interim Local Management Committees. The Council notes that it will undertake a further assessment of progress against this reform commitment in December 1999. By this time the Council would look to development and some implementation of further local management in irrigation areas, with a firm timetable identified to complete this process.

### *Institutional reform*

- The Council has concerns regarding the institutional arrangements in place for urban water, and in particular the failure to separate important regulatory (for example, price setting, water quality, plumbing), standard setting (for example, water quality, customer service requirements) and resource management (for example, catchment management) functions. There has been significant progress in respect of some of these matters, including the commercialisation of some service providers and the development of discussion papers in respect of, for example, licensing water service providers. However, there is a considerable amount of reform to occur if the arrangements are to satisfy the strategic framework. The Council will undertake a further assessment of progress against this reform commitment on 31 December 1999. By this time the Council would look to development and some implementation of new institutional arrangements.
- Queensland has made considerable progress in developing appropriate institutional arrangements for bulk water service providers and the Council will look to completion of the proposed reforms prior to the third tranche assessment.
- The Local Government Act 1993 provides a framework for metropolitan service providers to achieve a commercial focus. The Council also notes that Brisbane City Council has implemented commercialisation. The Council is satisfied that this reform commitment has been met.
- Performance monitoring and benchmarking practices in Queensland at this time meet the reform commitments.

### *Allocations and trading*

- Queensland does not at present have in place a comprehensive system of water entitlements backed by separation of water property rights from land title and a clear specification of entitlements in terms of volume, reliability or transferability. Proposed legislation will substantially address the reform commitment. The Council will undertake a supplementary assessment in June 2000 to review progress of the legislation.

- Allocations have not as yet been developed for the environment. The Council, while recognising the development of Water Allocation and Management Plans (WAMP) and Water Management Plans (WMP), notes that WAMPs have no legislative basis at present, and no WMPs or WAMPs have yet been finalised. The Council will undertake a supplementary assessment in June 2000 to review this reform commitment.
- The Council has agreed to the implementation program for allocations as outlined in Attachment 3 to the assessment. In doing so, the Council notes that the implementation programs may be amended over time provided there is agreement between Queensland and the Council.
- While some trading in water is occurring in Queensland, the existing statutory provisions are insufficient to permit widespread trade of permanent and temporary rights in water. The proposed reforms will provide a basis for trade substantially consistent with reform commitments. The Council will undertake a supplementary assessment in June 2000 to review this reform commitment.

#### ***Environment and water quality***

- Queensland has established a Council to advise the Minister on integrated catchment management and natural resource management. In addition, Queensland has created Catchment Co-ordination Committees and developed action management plans to plan, implement and evaluate integrated catchment management and NRM initiatives. The current community based arrangements are under review and following this Queensland will consider changes to the existing arrangements. The Council is satisfied that Queensland has met its reform commitments for the second tranche. It will monitor the review of current arrangements and any subsequent initiatives by Queensland prior to the third tranche assessment.
- Queensland has met its reform commitments as regards National Water Quality Management Strategy guidelines for the purposes of the second tranche assessment.

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

- Extensive public consultation and education programs have been embarked on by Queensland as part of reform initiatives and ongoing work. The Council has concluded that Queensland has met its second tranche commitments in this area.

### **ASSESSMENT**

The Council is of the view that Queensland has not made sufficient progress on major reform commitments for the purposes of the second tranche.

The Council has therefore recommended that a supplementary assessment be undertaken in December 1999. It has outlined both the further information required and expectations of further reforms and commitments that will be required by this time. This includes cost recovery and pricing commitments and institutional arrangements.

During this time the Council will also seek to work through outstanding assessment issues regarding the assessment of economic viability and ecological sustainability of new investment in rural schemes. In respect of this matter the Council has recommended a 25 per cent suspension of competition payments until December 1999. The Council may recommend a penalty if these issues are not resolved.

The Council will also undertake a supplementary assessment on 30 June 2000 to assess whether legislation to give effect to water allocation and trading reform commitments has been passed by the Queensland Parliament. Failing to pass the legislation may have implications as to the Council's recommendation concerning the second part of tranche payments.

The Council has now built up a considerable amount of information concerning Queensland 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.

## **B10.4.2 REFORM COMMITMENT: COST REFORM AND PRICING**

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

#### **10.4.2.1 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.

### **Queensland arrangements**

The second tranche report notes that water supply in Queensland is provided by such diverse entities as the State Government, 124 local governments, four urban water boards, two joint local governments authorities and 55 rural water and drainage boards. In addition, private sector providers are operating in the industry.

Local governments provide domestic water supply services to in excess of three million persons as well as commercial and industrial users. The asset base for water and sewerage is in excess of \$15 billion. Local government service providers vary in size from Brisbane (the largest local government body in Australia) to councils with extremely small and dispersed populations.

The second tranche report notes that reforms to date have focussed on the *big 17*<sup>217</sup> local government water service providers: Brisbane, Caboolture, Cairns, Caloundra, Gold Coast, Hervey Bay, Ipswich, Logan, Maroochydore, Mackay, Noosa, Pine Rivers, Redlands, Rockhampton, Thuringowa, Toowoomba and Townsville City

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<sup>217</sup> These appear to be councils whose water businesses are Type 1 or Type 2 activities. Type 1 activities are those businesses with a turnover in excess of \$10 million per annum, while Type 2 activities are those with a turnover in excess of \$7.5 million per annum.

Councils (CC). Collectively, revenue from the big 17 local governments' water supply and sewerage services equates to approximately 85 per cent of total revenue from local government. Other local councils are being encouraged to implement water reforms through a Code of Competitive Conduct and Local Government NCP Financial Incentive Policy. Seventy-six smaller local councils have nominated water and sewerage businesses for application of competitive neutrality reforms including the application of full cost pricing over the four years to the year 2003.

The second tranche report notes that the *Local Government Act 1993* (the LG Act) requires local governments with *Type 1* and *Type 2* water and sewerage services to consider the application of full cost pricing.<sup>218</sup> It is noted that on 1 July 1998 eleven of the *big 17* implemented commercialisation with the six remaining implementing full cost pricing. From 1998-1999 annual reports prepared by the *big 17* will detail performance of water and sewerage activities while 1997-1998 *'reflects a transitional period where financial information regarding pricing arrangements is not readily available. Accordingly, full financial information for all 17 local government water businesses will be reported in next year's Annual Report to the Council'*.(p39) From 1998-1999, the Queensland Competition Authority (QCA) will assess the effectiveness of full cost recovery.

### WSAA Facts

WSAA Facts '97-98 includes Brisbane Water (BW) and Gold Coast Water (GCW) in its performance comparisons.<sup>219</sup> BW's water is obtained from impounding reservoirs and direct river extractions and GCW's from bulk supplies. Both provide bulk transfer, water treatment and reticulation and wastewater treatment and reticulation services, and GCW provides bulk storage facilities. BW provides water supply and sewerage services to 820 000 persons through 339 000 connections (including 31 000 non-domestic connections).<sup>220</sup> GCW provides water and sewerage services to 384 000 persons through 175 000 connections.<sup>221</sup>

BW supplied 159 810 ML of water (471.42 kL per property) and collected 114 234 ML of wastewater (347.22 kL per property). GCW supplied some 62 979 ML of water (359.18 kL per property) and collected 43 351 ML of wastewater (263.34 kL per property).

As regards financial performance measures, WSAA Facts notes that BW's written down replacement cost of assets is about \$4 518 million. The Economic Real Rate of Return in 1997-1998 was 2.59 per cent (down from 2.72 per cent the previous year). For GCW, the written down replacement cost of assets is about \$963 million. The Economic Real Rate of Return in 1997-1998 was 9.1 per cent (up from 8.96 per cent the previous year). The financial information is provided in the table below.

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<sup>218</sup> In accordance with the ceiling price, see Local Government Finance Standards 1994.

<sup>219</sup> South West Queensland Water Board (SEQWB) is also included.

<sup>220</sup> 329 000 (including 29 000 commercial) sewerage connections.

<sup>221</sup> 165 000 sewerage connections.

**Table 10.4.1 Financial performance of Brisbane Water and Gold Coast Water, 1997-1998**

	BW (‘000)	GCW (‘000)
Turnover	303 194	123 360
<b>Total income</b>	<b>303 194</b>	<b>124 177</b>
Operating, maintenance and administration(OA)	117 277	41 396
Other operating costs	25 421	nil
Depreciation	66 622	25 256
<b>Total Operating Costs</b>	<b>209 320</b>	<b>66 672</b>
<b>Operating Profit</b>	<b>93 874</b>	<b>57 505</b>
Net Interest	32 811	24 515
<b>Profit before Tax</b>	<b>61 603</b>	<b>63 652<sup>222</sup></b>
Tax	nil	nil
<b>Profits after tax</b>	<b>61 603</b>	<b>63 652</b>
Dividends	24 306	nil

### Local Government Act 1993 and Local Government Finance Standard 1994

The LG Act provides, at chapter 10, for the assessment by Councils of the cost-effectiveness of introducing two-part tariffs with charges for water services to be based on consumption. The LG Act also provides for full cost recovery for water and sewerage services with the identification and disclosure of cross-subsidies and CSOs.<sup>223</sup>

The Local Government Finance Standard 1994 (LGFS) provides for the requirements of full cost pricing and includes:

- that in deciding charges to implement full cost pricing, operations, administration, resource, depreciation, TER, debt guarantee fees and return on capital costs are to be included;
- depreciation must be based on the deprival value of the asset allocated over its useful life or another amount determined appropriate by the local government; and

<sup>222</sup> Adjustments of \$30 662 000.

<sup>223</sup> Section 769.

- return on capital must be decided on a rate that, in the opinion of the local government, a comparable private sector entity carrying on the activity would be able to obtain in the market, having regard to the split which the local government considers appropriate, for the type of business, between equity and loan capital and the return appropriate for each.

For the first year the rate may be the amount the local government decides.

### **Other information**

The discussion paper *A proposal for prices oversight in the water industry* (Queensland Treasury, January 1999) (the pricing paper) canvasses the option of the QCA administering a prices oversight regime in the context of third party access to services provided by private water industry infrastructure. The pricing paper notes that the Government can declare government monopoly business activities so that their pricing is subject to QCA investigation. QCA makes recommendations which are either accepted or rejected by the relevant Minister. The pricing paper continues:

*'It should be noted that the monopoly prices oversight regime currently applies to State Government owned businesses. It is expected that, subject to the Government approval, the State based monopoly prices oversight regime would also apply to businesses owned by local government'.(p4)*

### **Guidelines for Identification and Measurement of Two Part Tariffs, draft Marsden Jacobs report.**

The Council was provided with a copy of the *Guidelines for the Introduction and Improvement of Two Part Tariffs*, draft Marsden Jacobs report (March 1998) (the draft guidelines report) which includes case studies of three water supply services.

In one case, the case study indicated that existing revenue levels were sufficient to provide an 8 per cent return on equity,<sup>224</sup> that a two part tariff<sup>225</sup> was in place and provided appropriate signals and that the revenue balance from the pricing structure ensured revenue was not volatile. Given the proposed commercialisation of the water business the only cross-subsidisation (water for Council properties, parks etcetera.) would be received as a CSO.

In the second case the study found that revenue levels were sufficient to provide about a 6 per cent return on equity. The Local Council operated a number of tariff categories structure, with a large base allowance in residential tariffs and industrial customers paying twice the volumetric component of residential customers. Significant cross-subsidies were noted, with commercial and industrial users paying the costs of residential and other (for example, sports grounds etcetera.) users.

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<sup>224</sup> Any higher level of revenue would suggest monopoly exploitation.

<sup>225</sup> Access fee and volumetric component accounting for above 55 per cent of water supply revenue.

The third study, of a bulk water provider, found that revenue levels were sufficient to return a 1.3 per cent return on equity although substantial new augmentations meant that current revenue levels fell below the lower bound set by the minimum requirement for on-going commercial viability. Although all customers were charged volumetrically, each was paying less than long run marginal cost (LRMC) and there was price discrimination between customers classes.

### **The Road to Commercialisation – Identifying the Obstacles**

The Road to Commercialisation – Identifying the Obstacles (Local Government Association of Queensland (LGAQ), Study Tour, 29 & 30 April 1998) notes, in respect of Redland CC's water business (Redland Water), that presently full cost pricing has been achieved with a real RoR of 7.22 per cent for the water supply business and 7.34 per cent for the sewerage business. In respect of Ipswich CC's RoR on assets, this is estimated as 3.3 per cent for water services, 1.2 per cent for sewerage services and 2.2 per cent combined.

### **Bulk water supplies**

The second tranche report notes that South East Queensland Water Board (SEQWB), Townsville Thuringowa Water Supply Board (TTWSB), Gladstone Area Water Board (GAWB) and Mount Isa Water Board (MIWB) provide water to seventeen councils, industrial customers and power stations. Implementation of full cost pricing is to occur from 1 July 1999 onwards.<sup>226</sup> It is noted that the asset base of these suppliers is some \$700 million, that each charge on a full cost recovery basis with volumetric charging and that the bulk water boards have traditionally operated with no ongoing financial assistance. Charging structures are being examined as part of the implementation of competitive neutrality. The financial information is outlined in the table below.

**Table 10.4.2 Financial information for bulk water suppliers**

<b>Provider</b>	<b>Revenue (‘000)</b>	<b>Expenditure (‘000)</b>	<b>EBIT (‘000)</b>	<b>Assets (‘000)</b>	<b>ROA per cent</b>
<b>SEQWB</b>	28 342	19 303	9 289	398 971	2.33
<b>TTSWB</b>	16 748	9 681	7 067	145 674	4.85
<b>GAWB</b>	12 853	9 849	3 649	165 421	2.21
<b>MIWB</b>	4 932	3 644	1 288	26 204	4.92

WSAA Facts '98 notes an economic real rate of return for SEQWB of 3.75 per cent in 1997-1998. Assets were valued at about \$387 million, the operating profit was said to be \$14 532 000, the profit after interest (\$5 493 000) and tax (nil). No dividends were paid from the \$9 039 000 after interest profit.

<sup>226</sup> The second tranche report notes that, consistent with the application of competitive neutrality reforms, urban water boards will in future be required to price water to reflect the cost of TERs, a return on assets and debt guarantee fees. CSOs and cross-subsidies are to be transparent.

### Other information

Queensland provided the Council with the results of public benefit assessments indicating that all of the *big 17* local governments are at least achieving the lower bound for cost recovery. It was noted that the quality of this information varied substantially and should not be used as a basis for comparison between water businesses. A summary of the information provided is at Attachment 1.

Queensland noted that its approach to implementing full cost recovery has focussed on the *big 17* and smaller councils have been encouraged to consider reforms through the development of a full cost pricing framework, considerable training and technical assistance and a financial incentive package.

Queensland also advised that urban water boards do not presently pay tax equivalents although these will be payable on commercialisation.

At a bilateral meeting between Queensland officials and the Council secretariat<sup>227</sup> the Council was advised that Brisbane, Caboolture, Caloundra, Gold Coast, Hervey Bay, Ipswich, Logan, Maroochydore, Mackay, Redlands, Rockhampton and Townsville CCs will be subject to the Local Government Tax Equivalent Regime from 1 July 1999.

Following a bilateral meeting further information provided by Queensland noted that in order to qualify for payments under the *Local Government NCP Financial Incentive Package*, local governments are required to provide information to the QCA regarding, full cost recovery, implementation of two part tariffs, levels of cross-subsidies (from 1 July 2000), CSOs (identification, costing and funding) and rates of return. On 30 November each year the QCA makes a recommendation as to whether individual local governments have satisfied necessary reform requirements or made sufficient progress towards implementation.

The Queensland Government has advised that it will make available to the Council the findings of the QCA following the QCA's assessment of reform, and provide a program and timetable for implementation of the various reforms specified by local government in the event that reform commitments have not been achieved.

### Council Comment

The Council notes that major local government water and wastewater suppliers are required to consider either commercialisation or full cost pricing in respect of water services, and that all of the *big 17* have adopted relevant resolutions from 1 July 1998. However, Queensland is not presently in a position to advise as to the progress of reform as Councils will be unable to provide relevant information until after 30 June 1999. The information provided to the Council suggests that there may be cost recovery to the lower bound, although the Council has no great confidence in this information given the concerns noted by Queensland in respect of it.

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<sup>227</sup> 11 June 1999.

The relevant guidelines provided for in the LG Act and LGFS are consistent with the requirements for full cost recovery, and if implemented would ensure that this aspect of the strategic framework is satisfied.

The Council is in a position to provide comments in respect of some providers:

- WSAA Facts indicates that BW: meets OMA costs; meets interest costs; pays a dividend; and earns a RoR of about 2.6 per cent. WSAA Facts also indicates that GCW: meets OMA costs; meets interest costs; and earns a RoR of about 9 per cent. Finally, WSAA Facts and the information provided by Queensland indicates SEQWB: meets OMA costs; meets interest costs; and earns a rate of return between 2 and 4 per cent.
- information provided by Queensland in respect of TTSWB, GAWB and MIWB indicates that at least OMA costs are met, and indeed that a RoR on assets is obtained; and
- information provided in the Road to Commercialisation – Identifying the Obstacles suggests that both Redland CC and Ipswich CC have a RoR on assets and by implication that OMA's and interest costs are met.

The Council is not, however, in a position to arrive at any conclusion as regards cost recovery across the urban Queensland water industry as Queensland is unable to provide information at present.

For example, the Council has no substantial information on the valuation of assets for those of water service providers where information has been obtained. Also, their method of determining prices is not transparent. In respect of most service providers there is no information on the level of cost recovery at all.

From the information provided, the Council is not satisfied that this reform commitment has been met.

The Council notes the constructive offer of Queensland to provide it with the information collected and analysis performed by the QCA. This information will not be available until 30 November 1999. This approach is, in the Council's view, the most appropriate way to advance the Council's assessment of this aspect of reform commitments.

The Council will require relevant information by December 1999. The Council notes that this information should address the question of cost recovery not only for the *big 17* local governments but also for other significant water and sewerage businesses. While the big 17 businesses may include 85 per cent of water provided, the Council notes that the next 10 local governments bring this figure to 92 per cent. Information in respect of at least these local governments will also be requested. The Council will also look to a program and timetable to address any failures to meet reform commitments at this time.

The Council will undertake a supplementary assessment in December 1999, at which time it will review Queensland's progress on this reform commitment.

**10.4.2.2 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.

**Queensland arrangements**

The second tranche report notes that the LG Act required the *big 17* to undertake an economic/financial cost benefit assessment of the effectiveness of introducing two-part tariffs for water supply by 31 December 1998.<sup>228</sup> The *Guidelines for Evaluation of Introduction and Improving Two Part Tariffs* (Department of Natural Resources (DNR), 1997) (the tariff guidelines) outlined the methodology for the assessment and approach to structuring the tariff. Information provided indicates:

- ten CC's have resolved to implement two part tariffs;
- GCW resolved a managed transition to two part tariffs over three years; and
- Rockhampton CC, where less than 1 per cent of the 20 000 domestic water connections are metered, estimated the cost of installing meters at \$3 million.

*Net present value analysis over a twenty year period of the 'with' and 'without' cases under the range of feasible scenarios did not indicate significant benefits from the adoption of two-part tariffs. (p40)*

The Council is committed to metering commercial and industrial consumers and increasing non-price demand management. Another assessment will take place in June 2000; and

- of the Councils that requested an extension beyond the 31 December 1998 date for review of tariffs: Brisbane CC has applied a two part tariff structure since 1996-1997 and required an extension of time simply to permit comprehensive review and refinement of its two part tariff structure. The Council notes that it appears Brisbane CC has since identified a program to eliminate property based charges that appears to be in accordance with recommendations of its independent review.<sup>229</sup> Townsville and Thuringowa CCs have not resolved to adopt two part tariffs for domestic supply although tariffs for commercial and residential properties are more closely aligned with consumption. Pine Rivers Shire Councils

<sup>228</sup> 12 of the councils completed this assessment, with a further 5 granted an extension to 31 March 1999.

<sup>229</sup> *Courier Mail*, 4 June 1999.

have resolved not to apply two part tariffs for domestic consumption but commercial and industrial premises are charged by two part tariffs.

The second tranche report notes that of the one hundred and twenty-one councils that levy water rates:

*there would be only a few where water charges do not relate to consumption in some respect. The majority apply a charge per unit, and most apply an excess water charge. For example, a domestic dwelling could be charged for four units of consumption (a unit representing some volume of water), with a charge per kilolitre for excess consumption. By comparison, a hotel may be charged for twenty units, with excess water charges. (p41)*

Where dwellings are not metered,<sup>230</sup> the charge is generally based on estimated consumption for the particular type of dwelling. Two part tariffs apply to at least 54 per cent of the population with the recent adoption by major local councils making this figure appreciably higher.

Attachment 8 to the second tranche report provides information concerning the application of two part tariffs to the *big 17*. Of note are the following matters:

- commercial and industrial customers of BW have an access charge that depends upon meter size and a usage charge;
- Caboolture CC provides for an annual charge that includes a base allowance of up to 350 kL; a refund is given if the full base allowance is not taken up;
- Cairns CC has a set fee for unmetered properties (units) and an access and usage charge for metered properties. Commercial properties are charged an access and unit fee and consumption is charged at a higher rate than domestic properties;
- Caloundra CC, Hervey Bay CC, Maroochydore CC, Noosa CC, Redland CC and Toowoomba CC have a two part tariff without base allowance. Maroochydore CC, Noosa CC, Redland CC and Toowoomba CC has an varying access charge for industrial and commercial users. Caloundra CC has no access charge for commercial/industrial users;
- Ipswich CC has an access and increasing block usage charge for metered properties, a fixed charge for domestic unmetered properties and a fixed charge in accordance with property area for unmetered commercial property;
- GCW, Mackay CC, Thuringowa CC and Townsville CC have an access charge that includes a base allowance. Mackay CC charges commercial/industrial users a factor based (1-120) access and usage charge. Thuringowa CC charges

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<sup>230</sup> The second tranche report notes that at most a dozen councils do not read meters and apply an excess water charge.

industrial/customer users on a unit basis. Townsville CC charges industrial customers on a consumption basis;

- Logan CC has an access fee dependent upon meter size and a consumption charge (no base allowance) for domestic users and a charge dependent upon meter size (greater than domestic access charge) for commercials/industrials;
- Pine Rivers CC has an access charge dependant on meter size for domestic users (without a consumption charge although a charge may be levied if the Local Council considers that water is being wasted) and a varying access and consumption charges for industrial/commercial customers; and
- Rockhampton CC has a fixed annual charge for domestic customers and a unit based charge for industrial customers.

### WSAA Facts

WSAA Facts 1997-1998 notes the following relevant tariff structures:

**Table 10.4.3 Tariff structures for Brisbane Water and Gold Coast Water**

Water Business	Supply Access	Supply Usage	Sewerage Access	Average annual bill	Proportion of income from usage charges
BW	\$100.00	65c per kL	\$192.72	\$520.72	71.4 per cent
GCW	\$274.00	Nil to 340kL 99c per kL > 340kL	\$345.00	\$619.00	8.8 per cent

WSAA Facts notes that the volumetric component of BW water supply constituted \$228 (or 70 per cent) of the \$328 average water supply component of the bill; the average annual BW water bill has risen 4.78 per cent between 1996-1997 and 1997-1998. For GCW, WSAA Facts notes that the average annual water supply bill in 1997-1998 was \$274 (nil volumetric component); the average annual GCW water bill has risen 0.16 per cent between 1996-1997 and 1997-1998.

### Local Government Act

As was noted previously, the LG Act provides, at chapter 10, for the objectives of assessment by Councils of the cost-effectiveness of introducing two part tariffs. The LG Act notes that a two part tariff report must be prepared and if the report recommends that a two part tariff be adopted by the Council and the Council does not apply the tariff to the extent recommended, a fresh assessment must be undertaken within three years. Councils are required to have implemented two part tariffs within two years of having resolved to do so.

### Reports on the introduction of pricing reforms

*Two part tariffs: Economic Evaluation of Effectiveness* (Marsden Jacob for the Local Government Association of Queensland, October 1997) (the two part tariff report)

examined the objectives, principles and application of full cost pricing in water services. It was noted that the criteria for credible and efficient pricing mechanisms require prices that provides incentives and encourages behaviour modification, are cost based, give income stability to water service providers and are transparent.

The two part tariff report acknowledges the use of an access charge to cover fixed costs of supplying the customer including the costs of providing and maintaining the system and a volumetric charge that reflects the long run marginal cost (LRMC) of supplying an additional unit of water (for example, chemicals, water purchases, additional capacity, external and congestion costs). The two part tariff report notes that, for residential sewerage services, a uniform access charge and zero volumetric charge is economically efficient, while for industrial users a consumption charge (by proxy, meter size, measurement of discharge) is appropriate.

The *Guidelines of the Introduction and Improvement of Two Part Tariffs* provides a framework for Councils to evaluate the introduction of or improvement to two part tariff regimes. The framework gives guidance on the evaluation of the costs and benefits of two part tariffs by comparing costs with and without two part tariffs and includes consideration of demand trends, augmentation costs, operating and maintenance costs, implementation costs and relevant financial matters.

### **Wastewater and Bulk Water Charges**

Brisbane, the major metropolitan area, it provided with bulk water by SEQEB; a single volumetric charge (\$110 per ML) applies.

In further information provided to the Council, it was noted that Brisbane Water tradewaste charges are made of quantity and additional quality charges. Traders with discharge in excess of 250 kL are charged between 37-72c per kL depending on total volume.

Queensland also advised that none of the big 17 local governments levy property based sewerage charges. Tariffs vary from flat rates for residential premises to varying pedestal/urinal charges, specific charges for group titles or specific businesses/services (childcare centres/sporting and community organisations). With the exception of some charges in Brisbane, the tariffs do not appear to be based on land values.

The Council was also provided with information concerning the next 27 local government water and sewerage businesses. In summary, this information indicates that seven local governments have implemented two part tariffs, 17 have a tariff structure that includes a base allowance (250-1040 kL), one local government has a fixed tariff and one local government has a property value based access fee. Sewerage tariffs vary from fixed charges to unit and pedestal charges.

The Council was also provided with independent reviews on the implementation of two part tariffs for four of the *big 17* local governments. A cost benefit analysis suggested that such a tariff should be implemented. The local governments determined not to implement the review recommendations. In respect of two of these local governments, the consultants recommended that a further joint study be undertaken.

## Council Comment

The information provided to the Council raises some significant concerns regarding the implementation of consumption based pricing. The Council notes, by way of preliminary comment, that the Marsden Jacobs *Two part tariffs: Economic Evaluation of Effectiveness* study produced for the Local Government Association of Queensland provides a model for local governments to consider in adopting two part tariffs. The work done by Queensland in this respect shows a strong commitment to implementing tariff reform.

The Council notes the achievements of Queensland in the following respects:

- the removal of property based tariffs for sewerage services (with the exception of some pricing of Brisbane City Council sewerage services);
- the volumetric pricing of bulk water provided to Brisbane City Council; and
- the pay for use tariffs for wastewater services provided by Brisbane City Council.

These achievements also show significant progress on the implementation of tariff reform.

However, four of the *big 17* councils appear not to have completed reviews of its full implementation. Four local governments have not adopted a two part tariff regimes despite the recommendations of independent reviews. The Council notes that a further joint review in respect of two local governments was recommended.

Queensland has also indicated that at least 54 per cent (although this figure is likely to be significantly higher) of the population have two part tariffs, but by implication a significant number of the population do not.

Many Councils, including those outside the *big 17*, have retained significant base allowances that effectively mean that there is a single charge for the majority of water users that is not reflective of consumption and provides no price signal until water usage is well above normal use. The pricing structure could hardly be said to include a volumetric component consistent with strategic framework.

The Council has not been provided with the basis of calculations of sewerage tariffs, nor has a timetable been identified for the removal of remaining Brisbane City Council property based sewerage tariffs.

On the basis of the information provided, the Council is not satisfied that this reform commitment has been met. Significant further information concerning tariff structures and projected elimination of base allowances is required.

The Council notes that this process will be facilitated by the provision of information through the QCA. The Council will require relevant information by December 1999.

The Council notes that this information should address the question of tariff structures not only for the *big 17* local governments but also for other significant water and sewerage businesses. The Council will also look to a program and timetable to address any failures to meet reform commitments at this time.

In respect of the four local governments which have not implemented two-part tariff regimes when this was recommended, it is the Council's view is that where such a recommendation is made, local governments must show a convincing net public benefit if they determine not to implement the review recommendations.

In respect of Thuringowa and Townsville City Councils, the final recommendation appears to be that a cost effectiveness study encompassing both Councils and TTWB be conducted. The Council would look to implementation of this recommendation by December 1999.

In respect of Rockhampton and Pine Rivers Shire Councils, the Council will require, by December 1999, one of the following: implementation of the recommendations; a further cost-benefit analysis to be completed and its recommendations adopted and implementation commenced; or demonstration of convincing net public benefits such that the review recommendations are rejected.

The Council will undertake a further assessment of reforms in December 1999.

#### **10.4.2.3 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.

#### **Queensland arrangements**

The second tranche report notes the requirement under the LG Act for Councils with Type 1 and Type 2 businesses to disclose cross-subsidies and CSOs. Sections 783 and 785 of the LG Act provide that Councils with Type 1 and Type 2 activities to identify and disclose cross-subsidies and CSOs on or before 1 July 2000 (or within two years of being identified as such a activity) and have commenced this process by 31 December 1998.

The second tranche report notes that by December 1998 each of the seventeen local governments had approved and commenced to implement strategies for the disclosure of cross-subsidies and CSOs and that '*due to the transitional nature of financial information available at the time, initial disclosure will occur in Local Government's annual reports for 1999/2000*'.(p40)

The *Guidelines for identification and measurement of cross-subsidies* (DNR, September 1998) (the cross-subsidy guidelines) provide that a cross-subsidy potentially exists when a class of consumers pay less than the LRMC of providing the

water service, while another consumer class pays more in charges than the LRMC of providing the water service. The cross-subsidy guidelines: provide a mechanism for determining the amount of cross-subsidy by determining LRMC and revenue from customer classes. The second tranche report notes that the LGFS makes the cross-subsidy guidelines mandatory.

The *Project report and case studies for cross-subsidies and inefficient water pricing: identification and reporting to achieve better outcomes* (Marsden Jacobs Associates, October 1998) (the project report) provides further explanation of both efficient pricing and identification of cross-subsidies. The project report provides for the identification and quantification of cross-subsidies and guidelines for subsequent evaluation of the cross-subsidy, so that it is either reported or removed. The evaluation focuses on matters such the divergence in costs between customer classes and whether the pricing is uniform or if it is not the reasons for this (for example, different pricing based on consumers' demand elasticity).

### **Council Comment**

The Council considers that the *Guidelines for identification and measurement of cross-subsidies* provides a consistent basis for local Government to assess and evaluate cross-subsidies.

It is clear however, that although the process has commenced, it is in its infancy and the results are unlikely to become clear for some considerable time. Local governments are not required to report on cross-subsidies and CSOs until 1 July 2000.

The Council notes the following concerns on the information that has been provided:

- the failure to implement two part tariffs suggest that some significant cross-subsidies may exist in particular local government areas;
- significant base allowances in water tariff structures would also suggest the existence of cross-subsidies between low water users and other customers; and
- the information provided gives little indication of the level (if any) of cross-subsidisation between water supply and sewerage services.

On the information provided, the Council is not satisfied that this reform commitment has been met.

The Council notes that although there is no requirement for local government to report on this matter to the QCA prior to 30 June 2000, significant information should be available to the QCA when information is provided and it reports to the Queensland Government.

The Council will undertake a further assessment of reforms in December 1999.

**10.4.2.4 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.

**Queensland arrangements**

Queensland provided information concerning the payment of CSOs as set out in Attachment 2. It was noted that decisions concerning CSOs are a matter for local governments. Queensland also noted the following provisions of the LG Act:

- section 577 defines CSOs as obligations on a commercialised business unit to do anything the local government is satisfied is not in the unit's commercial interests to perform, and arise because of requirements to comply with the principles of accountability for performance or competitive neutrality; and
- section 576 provides for transparency of the funding and local government direction.

**Council Comment**

The Council notes the provision of the LG Act provide a framework for local government to identify and cost of CSOs. For those local governments where information the Council has been provided with the CSOs objectives, these seem on the whole consistent with reform commitments. However, the Council has been provided with very little information on the application of the CSO policy.

The Council notes that information should be provided to the QCA in respect CSOs paid to local government water and wastewater providers.

The Council will undertake a further assessment of reforms in December 1999.

**10.4.2.5 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.

## Queensland arrangements

The second tranche report notes that a study conducted by DNR indicated that urban and industrial sectors of rural water schemes achieved 107 per cent and 108 per cent of the lower bound<sup>231</sup> cost recovery requirements.

In addition information provided to the Council Queensland noted that the LGFS requires all local governments to revalue non-current assets on a deprival basis. A transitional period (until 30 June 1999) was provided.

In addition the urban water boards' (including MIWB from 1998-1999) assets are valued in accordance with deprival value.

## Council Comment

The Council notes the above information. Although it appears that some service providers (for example BW, GCW, SEQWB) earn a positive rate of return, the information provided on other service providers does not lend itself to any conclusion.

The basis of asset valuations to arrive at these rates of return is unclear, although by 30 June 1999 all asset valuations will be on the basis of deprival value.

The Council notes that information in respect of rates of return of local government water and wastewater providers should be provided to the QCA.

The Council will undertake a further assessment of reforms in December 1999.

## Rural Water Supply and Irrigation Services

**10.4.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater),<sup>232</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

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<sup>231</sup> OMA, externalities taxes or TERs, dividends and provision for future asset replacement/refurbishment.

<sup>232</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.

- 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.

### Queensland arrangements

The second tranche report notes that water infrastructure in Queensland was provided to fulfil a range of needs including regional development, agriculture support and soldier settlement. Schemes were established to cover operating and maintenance costs:

*'however, over time, with both the effects of inflation and changing cost structures, prices have shifted away from bearing a resemblance to the cost of service provision. As a result, the level of cost recovery across State-owned irrigation schemes, and between sectors within schemes, varies significantly, with some schemes covering above cost recovery, but with others well below covering the costs necessary to ensure ongoing financial viability'.(p43)*

A comprehensive DNR assessment, based on 1996-1997 cost and revenues, found that 78 per cent of schemes meet to the lower bound requirement.<sup>233</sup> The second tranche report notes the three-tier approach to implementation of COAG water price targets:

- category 1 schemes (84 per cent of the total nominal area of Queensland and including the Burdekin Scheme where prices are already above the lower bound) will achieve or exceed the lower bound on or before the year 2001;
- category 2 schemes (11 per cent of the total nominal area of Queensland) will achieve the lower bound, with transitional subsidies made transparent, by the year 2004; and
- category 3 schemes (the remaining 5 per cent of schemes) will require transparent financial assistance over the longer term.

Strategies include a five year price path for all schemes from July 2000 including economic impact studies to determine social and economic impacts of proposed price adjustments, a benchmarking study for State Water Projects and the development of principles for determining and implementing resource management cost recovery during 1999.

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<sup>233</sup> Information provided to the Council at the March Bilateral meeting indicated that 4 schemes and some segments of other schemes make some return on capital.

## Council Comment

As this commitment is not required to be met in the third tranche the Council notes the information provided. This matter will be further assessed in the third tranche.

### **10.4.2.7 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.

## Queensland arrangements

The second tranche report notes that all major infrastructure projects are subjected to comprehensive assessment studies and comply with legislation including: the *State Development and Public Works Organisation Act 1971*; the *Environment Protection Act 1994*; the *Integrated Planning Act 1997* (IP Act); and the *Financial Management Standard 1997*.

Through the IP Act, Queensland proposes to streamline its planning and development process by the introduction of new planning processes and an integrated development assessment system (IDAS). The intention of the IP Act is to allow better co-ordination of local, regional and State land-use policies, and to enhance the role of local government in co-ordinating planning and development. The IP Act has replaced the Local Government (Planning and Environment) Act 1990 and to date only the Environment Protection Act 1994 has been assimilated into the IDAS system. It is intended that the Water Resources Act 1989 will also come under the IDAS system.

Under the *State Development and Public Works Organisation Act 1971* proposed infrastructure developments of a major nature are subject to assessment of impact studies before coming under the IP Act 1997 and being subject to IDAS approvals. Minor developments come immediately under the IDAS system of the IP Act for approval by Government. Where a major infrastructure development such as a dam is proposed for a river the development proponent is required to do an Impact of Assessment Study (IAS), usually through contracting an independent consultant. The IAS is required to provide among other items: a description of the existing environment and development proposal; definition and analysis of the likely impact on the environment of the development (Environmental Impact Statement); description of measures proposed to mitigate against possible impacts through a draft Environmental Management Plan to monitor impacts of the development.

The second tranche report notes that economic assessments are carried out in accordance with Queensland Treasury's *Project Evaluation Guidelines* and projects only proceed where they are demonstrated to be economically viable.

The second tranche report also notes, as regards concerns that new infrastructure projects are proceeding prior to finalisation of a Water Allocation and Management Plan (WAMP) (discussed further below), that '*allowances for environmental flows are built into the project to ensure that environmental values can be satisfied in the longer term*'.(p45)

The Council was provided with information concerning the following infrastructure projects completed/commenced between 1994-98:

**Temburra Creek Dam**<sup>234</sup> (completed, final approval November 1994). The report as regards this project, completed in 1993, included independent economic and environmental analysis. The report noted that the Government contribution to the \$59.3 million capital costs was between 65 and 75 per cent. As regards the economic rate of return, it was noted that:

*'the economic rate of return on the project would justify investment in the dam, provided the implementing bodies are able to ensure the water would be used in the most economically efficient manner. The returns to this investment are highly sensitive to the manner in which the water is allocated among and used by the potential users...'*(p40)

**Walla Weir**<sup>235</sup> (completed, final approval November 1996). The Impact Assessment Study (April 1995) conducted by consultants on the basis of information provided by DNR, found potential impacts on flora and developed an environmental management plan. It was noted that:

*'While the proposed weir will have some impacts on the environment, these are seen to be acceptable, and recommended measures will limit the overall impact. The Department of Primary Industries is committed to implementation of measures to minimise the environmental impact of the weir and of these are implemented, it is concluded that there are no environmental constraints preventing construction of the weir'*.(p4)

The Benefit Cost Analysis (August 1993) indicated positive benefits for the scheme. Cost recovery for the scheme does not appear to have been figured into the cost-benefit analysis. The second tranche report indicates that Walla Weir was one of twelve projects funded under the Sugar Industry Infrastructure Package (SIIP). The project cost was \$14 million.

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<sup>234</sup> State and Federal funding was provided for this project through the Queensland Sugar Industry Infrastructure Program.

<sup>235</sup> State and Federal funding was provided for this project through the Queensland Sugar Industry Infrastructure Program.

The second tranche report notes that an allowance for environmental flows has been made in anticipation of the Burnett WAMP.

**Borumba Dam Stage II** (completed). The Council has received the Initial Advice Statement (IAS) (DNR, 1997), which reviewed existing information and noted that the Environmental Management Plan (EMP) would: provide a framework to control impacts associated with construction and operational phases of the access track and dam modification; provide authorities with a tool to evaluate compliance with policies, guidelines and requirements; provide the community with an assurance that management of the project would be environmentally acceptable. The Council has reviewed the Review of Environmental Factors (Review) (DNR, June 1998), an addendum to the IAS. The economic analysis (DNR) found the project *soundly viable* and concludes that the development could be expected to recover capital costs from the sale of water allocations. The General Environmental Condition report found that the initial arbitrary allowance was inadequate and recommended the development of an environmental flow strategy.

The Council has received the EMP for construction of the dam (DNR, August 1997). Elements of the plan include aquatic flora and fauna management; erosion mitigation and sediment control; water quality management; and rehabilitation of disturbed areas. The EMP for the operational phase (DNR, July 1998) includes some similar elements and additional matters (for example, irrigation management). Each element includes a policy, performance requirements, monitoring, reporting and corrective action. The environmental release management element notes the policy *'To develop an environmental release strategy taking into consideration current operation policies and environmental studies prior to and then in association with the WAMP initiative'*.(p19)

**St George Off Stream Storage** (IAS completed. Planning and design well advanced. Negotiations for land resumption proceeding). The second tranche report notes that the Queensland Government has a commitment to *'redress the relatively low level of reliability of existing allocations since 1994 due to siltation of Beardmore Dam and revision of storage volume calculation'*.(attachment 9) This has led to the development of a 25 000 ML off-stream cell (the SGIP cell) to supplement existing allocations and a 30 000 ML cell (the compensation cell) *'to supplement natural flows (primarily for stock and domestic purposes'*.(p20) The second tranche report notes that although the SGIP cell was economically viable, the compensation cell was *'not justified on purely economic grounds, but may be justified on the basis of other non-economic criteria'*.(attachment 9)

The draft IAS provided to the Council, conducted by consultants<sup>236</sup>, noted that Beardmore Dam was originally assumed to have a volume of 100 600 ML but current surveys indicated that the storage was 81 900 ML. Thus, the fact that more water was allocated than the total proposed by DNR and an increased *draft* on the system formed the basis for the need for the additional storage. As regards the compensation cell this was *'to improve the reliability of the compensation flows ... due to the gradual*

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<sup>236</sup> St George Offstream Storage Impact Assessment Study, SMEC Australia Pty Ltd, 1996

*formalisation of the management of these flows and the desire to improve the reliability and penetration of the releases of September compensation flows<sup>237</sup>.(pS3)*

The IAS considers matters such as hydrology and climate, water quality, aquatic ecology, terrestrial ecology (including water birds) geology and social impacts, including existing conditions and impacts of the various options of development. The summary of the IAS conclusions is as follows:

- the economic analysis indicates that generally small storage cells are preferred. For the SGIP cell 25 000 ML is the preferred size. Although the compensation cell cannot be justified on economic grounds, 10 000 ML represents the least economic disbenefit;
- the social analysis tends to indicate that a large offstream storage will widen the rift between affected groups;
- the environmental assessment suggests that detailed knowledge of the impact is not high and the precautionary principle might suggest that if anything is built it should be smaller rather than larger; and
- that although it could be concluded that the smaller storage cells would be preferred,

*'a more substantial SGIP cell<sup>238</sup> ... and a larger Compensation cell (i.e. 20 000 ML)<sup>239</sup> could be considered subject to the agreement of downstream stakeholders. Any decision on the proposal should be made conditionally with regard to a verification of the impacts in relation to the outcomes of the WAMP'.(pS20)*

The Economic Study indicates that of all the cases modelled, the 25 000 ML SGIP and 30 000 ML Compensation cell combination showed the greatest disbenefit (-\$17.03 million).

In further information provided to the Council, Queensland has detailed considerations take into account concerning the project including: environmental factors such as improved water quality downstream not attributed in the economic analysis; additional community consultation undertaken following assessment of the project; and considerations taken into account in the Water Allocation and Management Planning process. Queensland has estimated that the project cost is \$15 million.

The Environmental Assessment of **Moura Off-stream storage** (project appears to be completed) was completed by State Water Projects, the rural water service provider.

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<sup>237</sup> The IAS and Economic study also consider a water harvesting cell but the information provided by Queensland indicates that this was not proceeded with.

<sup>238</sup> 25 000 ML.

<sup>239</sup> This was the largest cell size that was consistently modelled in the study.

No economic analysis was carried out although Queensland has advised that the project was implemented on a fully commercial basis. There is no cost identified in the material provided to the Council.

In respect of **Dumbleton Weir Stage III** (completed in 1997) the impact assessment statement was completed by DNR in July 1996. The economic analysis is included in the report, and found the project to be a viable proposition. It is unclear from the analysis whether recovery of the capital costs of the project was considered in the analysis. Queensland's contribution to the cost of \$2.9 million is \$1.59 million.

In respect of **Bedford Weir Stage II** (assessed in 1995, current status unknown) the impact assessment statement was carried out by the Department of Primary Industries in December 1995. The economic evaluation notes that the capital costs are estimated to be \$4.73 million. Water charges are assumed to cover local OMA costs. The analysis found the project clearly viable.

### **The Development Incentive Scheme**

The second tranche report notes the Development Incentive Scheme (DIS) was introduced by Queensland to encourage agriculture producers to invest in new water storage for irrigation where commercially and ecologically sustainable. DIS provides for a subsidy of 22.5 per cent (up to \$150 000) of eligible costs of construction for new water storages for irrigation costing more than \$200 000. It is noted that a Land and Water Management Plan and cash flow budget demonstrating financial viability must be submitted. Eligibility requires demonstration of an improvement to the existing farm situation, a positive net present value and improved internal rate of return. Sixteen applications totalling \$800 000 have been approved. It was noted at the bilateral meeting in March 1999 that the DIS is presently the subject of a review.

### **The Independent Audit Group**

Queensland has not committed to determination of its cap on diversion from the Murray-Darling Basin until completion of its relevant WAMPs. The Independent Audit Group (IAG), in its annual review *Striking the Balance* for 1997-1998 noted that the cap is expected to be in terms of end-of-valley flows. Diversions of a record 611 GL were recorded following a growth in on-farm storage and high flows. It was noted that the Condamine-Balonne WAMP was unlikely to be completed before June 1999 and the Border Rivers WAMP draft before December 1999. Water Management Plans (WMP) for Warrego, Paroo, Nebine and Moonie rivers were unlikely before June 1999. It was also noted that legislation to provide a statutory basis for WAMPs was expected to be introduced into the Queensland Parliament in March 1999. IAG recommended that the legislation include management of floodplain harvesting. IAG also recommended capping of diversions at 1997-1998 levels until WAMPs and WMPs were completed. It was noted that Queensland was committed to providing the Murray Darling Basin Commission and Ministerial Council an opportunity to review WAMP/WMP outcomes before committing to a balance between extractive and instream uses.

## **Other matters**

The Council has received considerable information/comments/submissions concerning proposed dam projects in Queensland<sup>240</sup>. This information has been provided by concerned environment and community groups. In addition, the Implementation Plan for water infrastructure planning and development outlined priority schemes where the Government and Private Sector would contribute \$2 billion over a 15 year period.

Much of the information provided to the Council relates to the Dawson and Comet Dam proposals on the Fitzroy River and projects on the Mary River. The Council notes that these projects are either still being assessed or have been assessed and will not be proceeded with.

The Council notes that the implementation plan identifies the Dumbleton Weir Stage 3, Warrill Creek Diversion Weir and Mareeba-Dimbulah Irrigation Area Water Augmentation as additional projects; the Council has received no or insufficient information concerning these projects.

## **Council Comment**

### **General Comments**

Queensland has proposed a regime that provides for both an economic and environmental assessment of projects, and the progress of developments prior to the completion of relevant WAMPs. As regards this, the Council notes as a preliminary comment that the simultaneous conduct of an IAS and WAMP may lead to confusion as to the roles of each process in addressing impacts of changed flow regimes downstream of the proposed dam.

For example, the IAS for the St. George offstream storage was undertaken while the Condamine-Balonne WAMP, which is not yet at draft stage, is to be used address downstream impacts of the proposed storage.

This approach has possible implications for the environmental impact assessment of any proposed development involving water resources where a WAMP and presumably a WMP is in progress or proposed. Given the current rate of actual progress in finalising WAMPs and WMPs, infrastructure developments may be approved before there is a detailed appreciation of likely downstream impacts of reduced flows. If these projects are commenced without an adequate environmental assessment then the Council would need to address this as part of its assessment of the implementation of water reform.

The Council will further review any amendments to the DIS prior to the third tranche assessment.

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<sup>240</sup> Australian Conservation Foundation, Queensland Conservation Council, Ecological Water Alliance of Queensland and Mary River Community Alliance.

## Specific projects

Before detailing concerns regarding specific projects, the Council notes that it will adopt the following process to progress discussion with Queensland:

- the Council will seek further information from Queensland concerning these projects and attempt to identify a path forward on resolving the concerns;
- the Council recommends a suspension of 25 percent of competition payments until December 1999 or until the matters are resolved; and
- at that time the Council will make a final recommendation on the penalty that should be imposed for any schemes that the Council is not satisfied have proceeded in a manner consistent with this reform commitment.

The Council's concerns focus on the following projects:

The **St George Off Stream Storage** raises the most significant concerns for the Council. The Council notes that the preferred option was that which provided the greatest economic disbenefit of all modelled. This option also appears to have had the least environmental support. Indeed, the independent analysis hardly considered the 30 000 ML compensation cell scenario.

The Council notes the consultation with stakeholders but is unaware of any agreement struck with downstream users concerning the storage. On almost any analysis of the information provided to the Council, and having regard to the IAG review, the decision to proceed with this project was neither economically viable nor ecologically sustainable.

The Council is of the view that where a decision is made that appears to diverge substantially from, or has not been considered by, the recommendations of an independent review there would be need to be a credible and convincing net benefit to the community for that decision. The Council is unaware of this benefit in respect of the St George Off Stream Storage. Even accepting that the SGIP cell was developed to account for reduced dam capacity at Beardmore, and this provided a justification, no such argument is relevant in respect of the compensation cell.

The additional information provided by Queensland does not, in the Council's views, provide an explanation for the failure to comply with the reform commitment.

The **Moura off-stream storage** raises concerns primarily because the environmental assessment was carried out by the provider of the service. This is not consistent with a requirement for independent appraisal. The Council is concerned that State Water Projects (SWP), a commercialised service provider, has a serious conflict of interests in carrying out such an assessment of a resource it will then reap financial benefits from.

The apparent failure to figure cost recovery in to the economic assessment of **Walla Weir** is, in the Council's view, a fundamental flaw in the analysis of the economic viability of this scheme. Such a project could not be said to be recovering costs consistent with reform commitments to achieve full cost recovery. The Council's

view is that this approach to economic assessment is not consistent with framework commitments.

Similar reasoning would lead the Council to consider recommending penalties for non-compliance with the reform commitment of carrying out robust analyses in respect of **Dumbleton Weir Stage III** and **Bedford Weir Stage II**. The Council further notes in respect of both these projects that they were conducted by the water service provider (that is, before the commercialisation of SWP) and that this reflects on the independence of the ecological analyses.

The Council has not received information concerning **Bingegang Weir Stage II**, **Warrill Creek Diversion Weir** and **Mareeba-Dimbulah Irrigation Area** and will review this information prior to finalising the supplementary assessment.

The **Temburra Creek Project** indicated that the project would proceed without a Government contribution of some 65 per cent to 75 per cent of the \$59.3 million capital costs. This level of Government contribution does not seem consistent with the reform commitment that the rural scheme be financially viable. The Council notes in this respect the economic analysis contained significant caveats as to investment in the dam. However, as the project obtained final approval prior to Queensland becoming a signatory to the National Competition Policy agreements in April 1995. Given this the Council does not consider recommend a penalty in this case.

As regards **Borumba Dam Stage II** the information provided to the Council indicates that the project was subjected to appraisals to determine economic viability that figured in recovery of capital costs. The ecological assessment also indicated that the project could proceed. Although the assessment was conducted by DNR, and the Council has noted concerns regarding this, the Council does not consider that this project should attract a penalty recommendation.

### **Assessment**

The Council is of the view that, in finalising its recommendations in respect of the above projects, it may be appropriate to recommend a penalty for non-compliance with reform commitments. The penalty recommended would depend on many factors, and the Council is not presently in a position to finalise the assessment of these matters. The Council has regard to the significant capital cost of these projects. It also has regard to the importance of this reform commitment, encapsulating as it does the twin objectives of economic viability and ecological sustainability that form the basis of the strategic framework.

The Council will therefore recommend the suspension of 25 percent of Queensland's competition payment until these matters are finalised, or until December 1999, at which time the Council will make a final recommendation.

#### **10.4.2.8 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.

#### **Queensland arrangements**

The second tranche report notes that twenty-eight scheme advisory committees<sup>241</sup> have operated in State Water Projects' irrigation areas and projects for a number of years. The Committees comprise a SWP representative and elected irrigator-customers. They provide users with a vehicle for input and also review wider policy issues. The committees also advise on improvements to scheme operations and water supply priorities.

Interim Local Management Committees (ILMCs) were established by DNR in most larger irrigation area and projects in 1998, comprising water users including local government, irrigators and industry. The ILMCs have a broader role including a role in water pricing, local management and transferable water entitlements. It is noted that ILMCs will be developed through 1999 as part of wider water industry reforms with formal consideration of local management arrangements to occur in early 2000.

It was noted at the March bilateral meeting<sup>242</sup> that the present approach was to create price paths based on efficient pricing (end of 1999) a then consider local management.

The Queensland Government has noted to the Council that it is not appropriate to consider devolving its assets to local management until a robust regulatory framework is in place to ensure resource management protection, asset maintenance, dam safety, customer protection and the like. Queensland has advised that it is taking a considered approach to determining the best long term combination of state control and local management to ensure rural water supply assets are operated in the best long term structure. Local management will only be adopted where there is a mutually beneficial arrangement for the state and local users.

During 1999 the Water Reform Unit will be undertaking comprehensive financial modelling in order to assess the best institutional arrangements for consideration by the Government and users by late 1999/early 2000. In the meantime ILMCs are being heavily consulted both with respect to pricing arrangements and possible future institutional arrangements.

In further information provided to the Council<sup>243</sup> it was noted that the Government is investigating new institutional arrangements and the major alternative options to be analysed, are the corporatisation of SWP and the local management of irrigation schemes (whether through regional customer councils, local control or other

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<sup>241</sup> Presumably set up under Part 3 Division 3 of the Water Resources Act 1989.

<sup>242</sup> Meeting between Queensland representatives and Council Secretariat, 17 March 1999.

<sup>243</sup> 22 June 1999.

arrangements). The process of investigation will include a full public benefit assessment and public consultation process; ensuring adequate time is provided for consultation, the target date for new institutional arrangements is 1 July 2000.

### **Council Comment**

The Council notes the evolution of present advisory committees and the trialling of ILMCs. The ILMCs have a broader role than the present committees.

However, the formal consideration of these schemes will not occur until late 1999 or early in the year 2000. It could not be said that the present advisory or interim arrangements provide for devolution of operational management other than to a small extent. While the gradual nature of change will ensure that any transition is smooth and has been the subject of consultation, the Council notes that this is a second tranche commitment and little real progress has been made to implement reforms. The Council is therefore of the view that the matter requires further assessment within a short time.

The Council will undertake a further assessment of progress against this reform commitment in December 1999. By this time the Council would look to development and some implementation of further local management in irrigation areas, with a firm timetable identified to complete this process.

The Council emphasises that the framework does not indicate that any particular form of devolution of irrigation management is required. It has no particular view as to the appropriate form of devolution and sees this as a matter for each Government. In particular, although some jurisdictions have privatised irrigation assets, this is not a requirement of the framework and is only one method of achieving reform.

### **B10.4.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

#### **Institutional Role Separation**

**10.4.3.1 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.

#### **Queensland arrangements**

The second tranche report notes that the Department of Natural Resource (DNR) has primary responsibility for regulation and licensing of water use, industry policy and strategic planning of water requirements. The Resource Management division is responsible for water, land and forest resource management including water allocation, defining environmental water requirements and water trading. The Regional Infrastructure Development division (RID) plans and manages infrastructure, identifying and developing plans to enhance the competitiveness of natural resource based industries and communities, undertaking regional planning studies and administering capital works for new infrastructure. Under proposed new regulatory arrangements RID will also become the technical/operational regulator of the industry, ensuring that public health and safety and customer protection is guaranteed.

QCA will, in future, undertake economic regulation of the water industry, including prices oversight, third party access and competitive neutrality complaints. The EPA (environmental standards and guidelines), Department of Local Government and Planning (integrated planning – managing effects of development on the environment) and Department of Health (drinking water quality) provide further regulation.

Local Governments, Urban Water Boards, SWP and other providers are identified as water service providers.

An overhaul of the *Water Resources Act 1989* (the WR Act), is proposed to be enacted by the end of 1999, Queensland has said that it will provide the new regulatory framework.

#### **Commercialisation**

The second tranche report notes the commercialisation on 1 July 1997 of SWP as a ring-fenced commercialised business unit within DNR in accordance with *Commercialisation of Government Functions in Queensland*. The Executive Director is directly accountable to the Director General of DNR.

The DNR Customer Information Kit regarding SWP notes that it operates within a commercial framework with clear objectives linked to performance, management authority and autonomy to pursue commercial goals, strict accountability for

performance and removal of any special competitive advantages or disadvantages compared to the private sector.

SWP customers include 6 300 irrigators, fifty urban centres (bulk water), power stations and mining and industrial companies. The information brochure notes there are four distinct groups:

- the Engineering Services group provides consulting services for planning, design and construction management of bulk water and rural reticulation infrastructure;
- the Operating and Maintenance Services group manages infrastructure;
- the Water Business Management group manages overall water supply service and new commercial opportunities including determining water products, water accounting, pricing and billing and implementation of environmental management plans and procedures; and
- the Asset Development group manages creation of new infrastructure including, for example, land acquisitions and infrastructure relocations.

The Council was provided with the Customer Standards of Service for Bundaberg Irrigation Area (the customer standards). The customer standards are to: identify existing roles and responsibilities; estimate current service arrangements; and provide a basis, in association with the Surface Water Advisory Executive Committee and Groundwater Advisory Committee, to move forward. The customer standards provide for matters such as: water delivery; supply rates; metering of supplies (all off takes are to be metered); water quality; billing arrangements; and administrative response times.

The second tranche report of the four urban water boards notes that a public benefit tests in 1997 supported commercialisation. Delays have occurred in the commercialisation of SEQWB<sup>244</sup> because of tax concerns and blurred existing ownership arrangements. TTWB is proposed to become a joint local government body requiring amendments to the LG Act; the date for the new structure and commercialisation is 1 July 1999. GAWB's key stakeholders differ on the preferred model of commercialisation (councils wish to have a joint local government body while industry users would prefer a commercialised statutory authority); interim commercialisation should commence on 1 July 1999 and full commercialisation (following investigation of both models) by 31 December 1999. MIWB is currently the furthest behind in terms of having in place readily transferable commercial arrangements on which commercialisation arrangements can be built. Interim structures, including full cost price path, implementation of a commercial rate of return and the requirement to pay TERs will be implemented from 1 July 1999.

The commercialisation of the big 17 Local Councils was discussed above. In summary, all local governments conducted public benefit assessments as to the implementation of competitive neutrality reforms, ten of the councils implemented commercialisation of water and sewerage services on 1 July 1998 and the remainder

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<sup>244</sup> Where consideration has focussed on a state and local government owned corporation.

implemented full cost pricing on 1 July 1998 with some to commercialise from 1 July 1999 and beyond.

The LG Act<sup>245</sup> provides for the commercialisation of significant business enterprises (sections 571-583) and that the key objectives<sup>246</sup> of commercial business units under commercialisation are to be commercially successful in carrying out activities and efficient in the delivery of services (including CSOs). Commercialisation involves: a commercial business unit of local government that is not a separate legal entity; provision of services on a commercial and full cost pricing basis; and subsidies for CSOs. Commercialisation includes retention by local governments of TERs and debt guarantee fees and compliance with Commonwealth, State and local council requirements.

The principles of commercialisation include clarity of objectives, management autonomy and authority, accountability for performance and competitive neutrality. As regards clarity of objectives, it is noted that any activities of local government policy formulation or regulatory activities will, whenever possible, be kept separate from the commercialised entity.

#### **Draft Policy Papers: April 1999**

The Council has been provided with two April 1999 policy papers of the Queensland Water Reform Unit, *A Regulatory Framework for the Provision of Water Services in Queensland* (the regulation paper) and *Governance Requirements for Public Sector Water Service Providers* (the governance paper). Neither are government policy but instead intended as a basis for public consultation.

The regulation paper does not specifically canvass issues of allocation, economic and environmental regulation, drinking water quality or planning and development. The primary objective of the regulatory framework is '*to ensure that water infrastructure is properly managed to enable continuity of supply of an essential service and to protect the interests of customers through mechanisms such as customer service standards*'.(p3) In its consideration of current regulatory arrangements it is noted that, as regards regulation of drinking water at an operational level '*much of the responsibility for maintaining public health standards rests with the drinking water providers*'.(p16) The paper also notes the proposed regulation of building-related activities (for example, plumbing) under the Building Act instead of by water service providers.

The proposed regulatory arrangements would provide for the licensing of water service providers in relation to activities such as operation of headworks, works to implement groundwater supply, water treatment systems, bulk water distribution systems, sewerage infrastructure wastewater and storm water disposal and drainage services. It is noted that:

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<sup>245</sup> See also *Commercialisation Guidelines*, Qld Treasury, December 1998.

<sup>246</sup> Measured against financial and non-financial performance targets.

*Where local government water service providers already meet specific licensing responsibilities through existing mechanisms, those mechanisms will be recognised and local governments will be deemed to have complied with relevant licensing responsibilities.(p20)*

Responsibilities will include: maintaining ongoing service quality standards; dam safety; flood mitigation; reporting for monitoring purposes; and complying with technical standards. DNR is proposed as the licensing agency. The Council notes that consultation concerning this paper is expected to be completed at the end of June 1999.

The governance paper canvasses governance operations and accountability mechanisms for public sector water service providers, including rural water boards (drainage, water supply (irrigation and stockwater) and urban bulk water suppliers (for example, MIWB)). It does not include Local Council water suppliers. The governance paper proposes clarification of the boards' roles, management and accountability.

### **The Road to Commercialisation – Identifying the Obstacles**

The Road to Commercialisation – Identifying the Obstacles (LGAQ, Study Tour, 29 & 30 April 1998) provides case studies of the commercialisation of certain Local Government businesses. For the GCW, the path to commercialisation identified issues concerning the regulatory framework including price regulation, water quality, customer interests and environmental regulation. Questions about the costs of independent regulation of some of these functions are raised. Possible price regulation by QCA includes a recommendatory power with the ultimate responsibility lying with the Local Council. It is proposed that GCW primarily self-regulate on water quality issues and noted that no significant progress has been made as regards customer standards. Under GCW's present structure identifies catchment management and other treatment services as within GCW.

In respect of Redland CC, it is noted that Redland Water is commercialised and presently the following are being drafted: an Establishment Agreement; an Operating Licence which sets out the terms under which Redland Water may conduct a water and sewerage business in the area permitted; a Customer Service Charter that articulates the service standards to be provided to customers; a Business Charter; and an Annual Operating Agreement.

In respect of Ipswich CC, the preferred organisational structure (proposed for June 1999) is for a Water and Sewerage Provider Commercial Business Unit with Annual Operating Agreements with Service Delivery Purchaser/Provider Departments. Ipswich CC will develop a Customer Charter.

### **Other information**

In additional information provided to the Council it was noted that under proposed new regulatory arrangements, water service providers, regardless of ownership, will be required to hold a water service provider licence. The framework will be outcomes focused and require service providers to meet service quality standards, scrutinised by

a regulator, although individual standards will be established by providers. This approach is said to recognise the difficulty of prescribing a minimum level of service applicable across Queensland and that it is intended that providers become proactive in delivering services that meet customer standards.

In respect of price regulation, further information provided to the Council notes that the Government has approved the drafting of amending legislation to the Queensland Competition Authority Act 1997<sup>247</sup> (QCA Act) to permit the QCA to oversight prices charged by monopoly local government business activities. Queensland indicated that significant local government business activities (including water and wastewater services) may be subject to prices oversight where those businesses are declared as government monopoly business activities. These businesses are then subject to investigation by the QCA as to their pricing policy and practices.

The proposals for pricing oversight include that the QCA or local government may request that the QCA Minister<sup>248</sup> declare a business, and that the QCA's report is to be provided to the Minister for Local Government and the relevant local government at the time it is provided to the QCA Minister. Also, the Local Government in question must, by resolution, accept or reject the recommendations within three months of receiving the report. Implementation of recommendations that have been accepted is the responsibility of the Local Government.

There is no timetable for declarations, but instead declarations are more likely be made in response to complaints about a specific business.

In addition, Queensland noted that all water service providers must meet drinking water standards; this is regulated by the Department of Health. Further information provided to the Council notes that the Health Act 1937 gives Queensland Health powers to deal with health-related problems arising from contaminated drinking water. Queensland Health has ultimate responsibility for issuing advice to the public regarding measures available to minimise risk from disease, including water borne disease. The Minister has extensive powers to take any necessary action in the event of an emergency. The Health Act also provides for standards to be prescribed by regulation for potable water, including measures for the protection and purification of water.

It is noted that much of the responsibility for maintaining public health standards rests with drinking water providers. The Department of Health encourages water service providers to incorporate a risk management based approach based on the 1996 NHMRC/ARMCANZ *Australian Drinking Water Guidelines*. It also provides free water sampling and testing of compliance for water providers who do not have their own water testing facilities.<sup>249</sup> An Expert Group, with the function of advising the State Manager, Public Health Services in respect of decisions regarding public health aspects of water use in Queensland, has issued an interim protocol for dealing with positive findings of the presence of *Giardia* or *Cryptosporidium* in drinking water.

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<sup>247</sup> Unlikely to be passed before October 1999.

<sup>248</sup> The Premier or Treasurer.

<sup>249</sup> Brisbane water and some other service providers operate their own testing facilities.

Other information provided includes:

- the Building Act, 1975 will be amended to reflect that plumbing and sanitary drainage on premises is no longer a responsibility of water service providers; and
- urban water boards are regulated by DNR and, with the exception of some catchment management legislative powers, have no regulatory powers. Any residual regulatory powers are being removed as part of the review of the Water Resources Act 1989 and the implementation of commercial arrangements.

### **Council Comment**

The Council has had the opportunity to observe many institutional structures in the water and other industries. Structures with rigorous institutional separation may include:

- an independent price regulator;
- a resource manager with catchment management functions;
- a licensed water service provider independently regulated by an auditing body;
- an independent mechanism to resolve complaints that cannot be dealt with locally;
- a customer charter and consultative committee;
- an independent water quality regulator; and
- transparency in the above arrangements.

It is these types of features that the Council would look to in the institutional arrangements to be put in place for urban water providers in Queensland.

In respect of urban water providers, the principles outlined in the LG Act are on the whole consistent with the requirements of the strategic framework as regards separation of service provision functions from standard setting, regulatory and resource management functions.

The following initiatives by Queensland show considerable commitment to this aspect of the strategic framework:

- the proposed amendments to the QCA Act, which will provide oversight of water prices for some local government service providers;
- the proposed licensing regime for local government service providers. Although the Council has some concerns at service providers setting their own standards, the Council will wait to see the final form of licensing and regulation before forming a view on the proposed reforms;
- the use of customer charters and customer committees by some water and sewerage providers;

- the reviews of governance of water boards; and
- the proposed reforms to remove plumbing and drainage regulation from service providers.

The Council notes the information provided as regards the role of Queensland Health in regulating water quality. A preferred arrangement for a large provider, such as Brisbane City Council, may be that there be independent water quality testing.

In respect of bulk water provision, there have been significant efforts in reforming providers but some very difficult issues remain to be resolved. The Council would look the resolution of all matters and the completion of reforms prior to the third tranche assessment.

In respect of rural water services, the Council remains concerned about some matters:

- the devolution of irrigation management, as discussed previously; and
- all matters concerning rural water ultimately fall not only to the same Minister, but also the same Department Head. SWP answers to the Director General, who also is in charge of resource management, standard setting and regulation matters.

However, Queensland is considering further the structure of SWP in conjunction with a review of irrigation management options.

The Council is concerned that viewed as a whole, the Queensland water industry presently falls well short of the strategic framework requirements to separate service providers from regulatory, standard setting and resource management functions.

In the metropolitan sector, for example, currently the service provider still appears to have standard setting (for example, service standards) and regulatory (for example, pricing) control. Information concerning this separation has not identified the type of rigorous structures evident in other major metropolitan areas in Australia.

The Council notes the policy development work and proposed reforms to meet commitments. These will provide a solid basis to progress institutional arrangements. In recognition of the considerable policy work undertaken by Queensland, but to ensure that reforms progress as identified, the Council will undertake a further assessment of reforms in December 1999. At that time, the Council will in particular look to progress on the following aspects of reform:

- amendments to the QCA Act to provide for the oversight of prices charged by local government water and wastewater providers;
- significant legislative or administrative progress on the implementation of licensing or other standard setting mechanisms; and
- significant progress on the review and implementation of new institutional arrangements for State Water Projects.

**10.4.3.2 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.

**Queensland arrangements**

Brisbane City Council (in addition to another ten of the *big 17*) commercialised on 1 July 1998 and corporatisation may be considered some time in the future.

**Council Comment**

The Council is of the view that the provisions of the LG Act as they relate to commercialisation provide a framework to achieve this aspect of the framework.

With the commercialisation of BW the Council is satisfied that this reform commitment has been met.

**Performance Monitoring and Best Practice**

**10.4.3.3 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.

**Queensland arrangements**

The second tranche report notes that Queensland has twenty-two participants in the WSAA performance monitoring and benchmarking for NMUs and two rural water boards and eight SWP irrigation schemes are participants in WSAA benchmarking for rural water service providers.

**Council Comment**

Queensland is participating in WSAA monitoring for BW, GCW and SEQWB has been noted above. The Council notes that WSAA is not presently benchmarking rural water services. As Queensland is participating in the ARMCANZ rural benchmarking program, and WSAA monitoring and benchmarking work, the Council is satisfied that there is performance monitoring and comparison of relevant water agencies.

## **B10.4.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

### **10.4.4.1 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.

### **Queensland arrangements**

#### **The Water Resources Act, 1989**

The WR Act provides for the right to the use and flow of water<sup>250</sup> to vest in the Crown. The Act also vests beds and banks in the Crown. Riparian rights (water for domestic purposes and watering stock) are retained.

The WR Act prohibits<sup>251</sup> actions such as construction of referable dams,<sup>252</sup> construction of levee banks, construction of artesian bores or the taking of water<sup>253</sup> without a licence. Section 44 of the WR Act provides for licences that entitle the licensee to a nominal allocation of water.<sup>254</sup> Section 56 provides for limited application short term water permits to be issued. Part 5 of the Act provides for the sale of water licences '*to allow recovery of costs incurred by the State in providing works*'.<sup>255</sup>

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<sup>250</sup> Water in a watercourse that flows past, or a lake or spring within or abutting the land of, two or more owners, water conserved by a weir or dam on such a watercourse, lake or dam or groundwater. A watercourse is defined as including a river, creek or stream in which water flows permanently or intermittently: a natural channel; a natural channel artificially improved; and an artificial channel that has changed the course of the watercourse.

<sup>251</sup> Section 38.

<sup>252</sup> Generally, works or proposed works that impound, divert or control water and: is more than 10m high with a storage capacity of 20 000 m<sup>3</sup> or 5 m high with a storage capacity of 50 000 m<sup>3</sup>.

<sup>253</sup> For example, from a weir in a watercourse.

<sup>254</sup> Part 9 of the Act also provides for the allocation of a nominal allocation in respect of land in an irrigation district.

<sup>255</sup> There are some 83 000 licences or permits in force in Queensland (draft policy paper).

Part 4, Division 4 of the WR Act provides that licensees and permittees may be notified of the times during which water may be taken, the quantity of water that may be taken and the area of land/type of crop that may be irrigated.

### **Proposed reform**

Shortcomings with the existing system identified in the *Improving the Water Allocation and Management System in Queensland* draft policy paper (Water Reform Unit, December 1998) (the draft policy paper)<sup>256</sup> include:

- there is no power to provide for allocation of water on an environmentally sustainable basis;
- there is no strong basis to consider the cumulative effects of additional licences on the whole basin;
- licences tie water allocation to land and works; and
- there is no process for basin wide environmentally sound water planning.

Recent changes identified in the draft policy paper include the commencement of the WAMP process, best practice Land and Water Management Plans in the agriculture sector, the implementation of permanent transfers of existing water rights and commencement of a Water Entitlements Registration Database.

Proposed elements of the new system outlined in the draft policy paper include:

- the system would provide for ecologically sustainable development;
- resource security would be provided to entitlement holders and no new allocations would be granted in a manner inconsistent with the WAMP;
- water entitlements would be held separately from land and be transferable at the entitlement holder's discretion and in accordance with rules that avoid unacceptable impacts on the environment and other entitlement holders;
- unallocated water would be reserved by the state for future use;
- the system would be generic, and accommodate private, rural, urban and industrial supply systems; and
- all water entitlement issued under the new system would be registered.

The authorisations proposed include a water allocation (volumetric share of the water resource), operating authority (explained under WAMPs section), water entitlement (that is, the water allocation plus operating authority) and use approvals (site specific water management plans or bore construction approvals). Water entitlements would be specified in terms of location (for example, for groundwater, in terms of an areal

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<sup>256</sup> This policy is not Government policy but instead the basis for public consultation.

location and possibly an underlying aquifer) and tenure (may be redefined every ten years).

The proposed water allocation and management system would be implemented gradually and on completion of the WAMP processes. It is noted that *'it is likely that there would be areas of the State, such as the small unregulated coastal catchments, many of the western streams and certain groundwater systems, where the current licensing system would be adequate for many years.'*(p33)

The second tranche report notes that the new allocation and management framework is being applied, as a priority, on the basis of planned new developments and where water for consumptive use is approaching supply constraints. It is stated that this will capture most of the water demand in the state although, in a geographical sense, much of Queensland is unlikely to be covered in the future given resource distribution and low levels of demand.

It is noted that the *Rural Water Pricing and Management* document (DNR, 1996) canvassed changes to the existing water legal framework including WAMPs, water allocations in terms of quantity, reliability, and trading of those allocations. The aim at that time was to have legislation before the Parliament in 1997. The second tranche report notes that legislation to implement the proposed changes is scheduled for the second half of 1999, with new arrangements to be implemented as WAMPs are completed.

### **Water Management Plans**

Part 3A of the WR Act provides for the creation of Water Management Plans (WMP) as subordinate legislation.<sup>257</sup> In drafting a WMP the Minister is to have regard to matters including: existing entitlements; the provision of water for ecosystems; the extent of beneficial flooding currently enjoyed by landowners; water flows; and underground water levels. Part 3A provides for public consultation in creating or amending the plan. The WR Act also provides that the majority of new applications for licences etc are not to be dealt with while the WMP is being prepared<sup>258</sup>. Decisions made as regards new water licences or extractions etc must not be inconsistent with the WMP.

Preparation of a WMP involves the collection and modelling of hydrological data, identification of environmental and social issues and receiving input from a community based advisory body.<sup>259</sup>

The WR Act provides that WMPs can be amended to change the boundaries, principles or policies of the plan. New information which may trigger a review

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<sup>257</sup> The Statutory Instruments Act 1992 provides that subordinate legislation expires ten years after approval.

<sup>258</sup> With exceptions such as construction of bores for domestic works or an application to construct a levee.

<sup>259</sup> *Water Management Planning*, DNR, September 1997.

includes increased knowledge concerning the response of the ecosystem to streamflow alteration or a change in the values a community places on water.<sup>260</sup>

### **Water Allocation and Management Plans**

The framework for the WAMP has been outlined in the draft policy paper. WAMPs are described as the:

*'cornerstone of the new water allocations and management system. The WAMP process is an integrated and consultative whole-of-basin planning process. It addresses scientific, environmental, social and economic considerations in determining the appropriate balance between water that can be withdrawn ... and water that should be left to maintain the health of the water basin in accordance with the principles of ecologically sustainable development'.(p iii)*

The WAMP provides a framework for establishing water allocations including allocations to the environment and the resource management conditions under which trading can occur<sup>261</sup>. The second tranche report notes that WAMPs:

- describe the total water resources within each basin/catchment;
- define all existing entitlements;
- define environmental water provisions with the key objective to maintain and, where possible, improve instream ecosystems;
- reserve priority future water requirements;
- define water available for further allocation; and
- describe rules for further allocation, flow and aquifer management.

It is proposed that the implementation of the WAMP will occur by via operating authorities which allow the operation of works that impact upon natural flows or groundwater resources, conditional on meeting the requirements of the WAMP. There is no indication as yet if a WAMP will regulate floodplain harvesting.

The two types of authorities proposed are the Resource Operating Authority (ROA) and the Diversion Operating Authority (DOA). Water users are required to hold a DOA when pumping from a bore or unregulated watercourse, or harvesting from a regulated or unregulated watercourse. An ROA will be required where a water user alters the flow characteristics in a watercourse or enhances a groundwater system.

The DOA will be specified in terms of location and relates to the diverting of water from a watercourse or the extraction of water from a groundwater system. For

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<sup>260</sup> Draft Water Management Plan for Cooper Creek, DNR April 1998.

<sup>261</sup> Second tranche report.

example, in unregulated surface watercourses the DOA will set the rate at which water can be diverted from the water course and any precedent flow conditions which must be met before diversion occurs.

Holders of a ROA will be required to prepare a Resource Operations Management Plan (ROMP)<sup>262</sup>. The ROMP will require approval from the water resource regulator. No ROMPs have yet been developed but it is anticipated that existing and new projects will be specified in terms of their required management regime and public comment will be sought on the draft ROMP.

The second tranche report notes that the WAMP process emphasises community involvement through the establishment of community reference panels. Diverse community representation on the panel will assist in striking a balance between water that can be withdrawn for consumptive uses and water left to maintain the health of the river basin in accordance with the principle of ecologically sustainable development. The ecological assessment process used in the WAMP has to date been based on the expert panel process, relying on the expertise of members of a technical reference panel.

It is proposed that an approved WAMP will be in force for ten years, after which a revised WAMP will be complete.

### **Other information**

Queensland has informed the Council that some 300 response have been received to the draft policy paper, and a refined version of this will form the basis of drafting instructions for the new Water (Management and Allocation) Bill (the Bill). The timetable for introduction of the Bill is the second half of 1999.

The Bill will provide for the Director General of DNR to recommend to the Minister that a WAMP/WMP for a particular basin be prepared. In making the recommendation the Director General would have regard to the objectives of the Bill and would take a common-sense approach to making the recommendation. The Director General would be guided by the principle that scarcity is a fundamental requirement for a well described system of property rights; where a natural resource is so plentiful that there is limited or no competition for a resource, there is little or no need for a legislative framework to describe property rights. The catchments where there is limited or no demand for water allocations will not be covered by WAMPs or WMPs. Instead, the Bill will provide a system similar to the existing licensing approach for water allocations.

The response notes that water users in regulated areas will hold a water allocation (specified as a volumetric share of the allocatable water resource) and a water supply contract with the ROA holder to provide storage and delivery services for their water allocation.

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<sup>262</sup> Now called Resource Operating Licences and Plans, see 10.4.4.2.

### **Council Comment**

The Council notes that the existing system of water allocations in Queensland falls short of the requirements of the strategic framework. In particular, it fails to clearly separate water titles from land title and recognise the environment's right to water. These matters are fundamental to the reform commitment as regards a comprehensive system of water entitlements.

However, there has been substantial policy work completed by Queensland, and indeed there is progress on preparing WAMPs despite the lack of a clear legislative base for this initiative. These matters indicate the strong commitment of Queensland to the reforms.

The Council notes that proposed reforms will provide, at least for some water systems:

- clear separation of water rights from other property rights including land title;
- specification of the location and amount of water that can be diverted/extracted;
- definition of the environment's water needs; and
- a framework, through particularly the WAMP process, of determining existing and future allocations.

Legislation to give effect to reforms proposed has not as yet been drafted. The Council notes the advice of Queensland that this legislation should be prepared for consideration by Parliament in the near future.

The Council will undertake a supplementary assessment 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.

#### **10.4.4.2 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 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 Council 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.

### **Queensland arrangements**

The WMPs/WAMPs and economically sustainable development process is discussed above. A timetable for the completion of WMPs/WAMPs is attachment three to the assessment.

#### **WMPs**

The development of nine WMPs is in progress or planned for: Cooper Creek; Warrego, Paroo, Nebine and Bulloo Rivers; Moonie River; Calliope and Boyne Rivers; Mitchell River; Herbert River; Flinders River; Georgina and Diamantina Rivers; and the Atherton Basalts groundwater system. Queensland has indicated that two of the WMPs are to be finalised in 1999-2000 and a further three finalised and two drafts released in 2000-2001.

To date only one WMP (draft Cooper Creek WMP) has been developed to the stage where it has been released for public comment (in April 1998). The Cooper Creek catchment covers an area of 306 000 square kilometres making it one of Australia's largest desert river systems. Cooper Creek is recognised as one of the few remaining large river systems in the world still relatively unregulated. In recent years major agricultural developments with a requirement of water allocations have been proposed for the central area of the catchment.

#### **WAMPs**

The proposed development of thirteen WAMPs is in progress or planned for: Fitzroy River; Condamine-Balonne Rivers; Border Rivers; Barron River; Logan River; Burnett River; Pioneer River; Burdekin River; Mary River; Brisbane River; Bundaberg groundwater; Pioneer groundwater; and Burdekin groundwater. Queensland has indicated that two of the WAMPs are to be finalised in 1999-2000. By 2000-2001, three more will be finalised, five drafts will be released and three WAMP processes

will commence. To date only one WAMP (draft Fitzroy River Basin WAMP) has been developed to the stage where it has been released for public comment (in September 1998).

The Fitzroy Basin is the largest coastal flowing river basin in Queensland with an area of 142 600 square kilometres. Three major dams and twelve weirs currently regulate the flows in the Basin and provide water resources for stock and domestic use, agricultural and irrigation developments and industrial and urban uses. A further two major projects (Dawson River and Comet River dams) and several smaller projects (for example Baroondah, Duaringa and Riverslea Weirs) had been proposed for the Fitzroy Basin,<sup>263</sup> a decision has been made not to proceed with the Comet Dam.

### Other information

Queensland has noted that where WAMPs are implemented or reviewed, water entitlements may need to be adjusted to take into account environmental objectives.

The Queensland Government has committed to completing WAMPs in a timely manner<sup>264</sup>. However, it was also noted that *'implementing a robust planning framework that has the confidence of the community (which is a fundamental prerequisite if it is to form the basis for describing individual property rights) takes time and an appropriate amount of community consultation. The Queensland Government does not intend to compromise in these areas'*.

It is noted that a ten year review process has been adopted to provide a balance between ensuring environmental flows are based on the best available information and providing planning certainty to water infrastructure owners and water entitlement holders. Comprehensive reviews will take three years and therefore must commence no later than seven years following WAMP implementation.

In addition to the implementation program (Attachment 3), the Council was provided with the following further information<sup>265</sup>:

*'Under the proposed Water (Management and Allocation) Bill, the term River Operation Management Plan (ROMP) will be replaced with the terms River Operation Licence (ROL) for regulated reaches and River Operating Plan (ROP) for unregulated reaches of a catchment.*

*Where a WAMP is completed, the new bill will require that River Operating Licences be developed for all regulated areas within 12 months of completion of the WAMP. The implementation of a River Operating Licence will include the*

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<sup>263</sup> Water Infrastructure Planning and Development 1997-8 to 2001-2, Implementation Plan (DNR, July 1997).

<sup>264</sup> 8 June 1999.

<sup>265</sup> 22 June 1999.

*conversion of individual water entitlements under the old licensing system to new water allocations under the new Bill. The River Operating Licence will also include the trading rules for the area covered by the Licence.*

*However, it is noted that a River Operating Licence has not previously been developed, and indeed is a developing science. In this regard, while every endeavour will be made to complete the first River Operating Licence within the twelve month period, it is possible that unforeseen circumstances may slow the progress of implementation.*

*River Operation Plans (for unregulated reaches) will be developed as required'.*

### **Council Comment**

The Council is aware that the water management and allocation processes embarked upon by Queensland in developing their WMPs and WAMPs are complex and likely to be very comprehensive particularly with regard to hydrological modelling. The Council sees the development of WAMPs as evidence of very substantial commitment by Queensland to implementing fundamental reforms in water allocation management.

### **National Principles of the Provision of Water for Ecosystems**

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 is of the view that the WAMP and WMP process explicitly recognised that river regulation and consumptive use impact on ecological values. The WAMP process seeks to strike a balance between consumptive and ecological uses.

***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 WMP process is based on the collection and modelling of hydrological data; and
- the WAMP process is based on a whole of basin approach and addresses scientific, environmental and other considerations.

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

The WAMP process will define environmental water provisions and water available for future extraction. The ROL, ROP and DOAs will be consistent with the WAMP. Similarly, WMPs will define the water provision for ecosystems and require new water extractions to be consistent with the WMP.

***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.***

The WAMP process seeks to strike a balance between consumptive uses. Further allocations after determination of the environmental water provision will be defined and those allocation will be consistent with the WAMP. This is also the case for WMPs.

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

Queensland has advised that where WAMPs are implemented or reviewed water entitlements may need to be adjusted to take into account environmental objectives. The Council is not aware of the precise mechanism to permit reallocation of water to the environment. This is a matter the Council will review when the legislation for WAMPs is provided.

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

The Council is satisfied that the WMP provides that further allocations will have proper regard to the water needs of the environment. The WAMP process will also have regard to the environment's water needs.

***Other matters***

The legislation to implement the WAMP process has not been put before the Queensland Parliament. The Council will undertake a supplementary assessment of on 30 June 2000 to assess whether there has been passage of the legislation.

Many of the Council's concerns have been addressed in additional information provided by Queensland. However, there are two remaining concerns.

First, it is unclear whether the proposed legislation will cover the issue of water harvesting from floodplains or on farm storages other than *referable dams*. This matter was highlighted by the IAG. The Council is of the view that it is a matter that ought also be included both in the setting of environmental allocations and any planning processes. The Council considers that both matters would need to be included in any proposed legislation; and

Second, there are considerable delays in the preparation of WAMPs or completion of the WMPs and WAMPs currently at a draft stage. This concern is magnified

particularly where there is ongoing water resource development or the allocation of water resources to a development.

For example, the Impact Assessment Statement for Bedford Weir Stage II notes that the draft Fitzroy WAMP was to be completed in July 1996. The draft was not released until for public comment until September 1998.

Another example of this is the failure to complete the Condamine-Balonne WAMP. The IAS for the St George Off Stream Storage cautioned that any decision on the proposal should be made conditional awaiting the WAMP. The IAG notes that the setting of the cap for diversions from the Murray-Darling Basin awaits this WAMP. The IAG has recommended that diversions be frozen but the Council is not aware that this invitation has been taken up. On the contrary, it appears that diversion have increased. The reference panel for the WAMP was set up in March 1996, the draft plan scheduled for release in March 1999 and for finalisation in September 1999.<sup>266</sup> The information provided in the second tranche report indicates that the WAMP is now scheduled for release somewhere between 1999 and 2000.

The Council agrees to the implementation programs provided by Queensland. In doing so, it notes the following relevant matters:

- the National Land and Water Resource 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 Council understands that 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
- the implementation programs, by their nature, may change depending on many factors including proposed new developments and other significant events.

The Council is therefore of the view that the implementation programs may need to be altered over time provided there is agreement between Queensland and the Council.

The Council notes the following further matters:

- while it would look to completion of River Operating Licences within 12 months of WAMP finalisation; and
- while it commends the emphasis placed on Queensland as regards public consultation, and every matter would be considered individually, the Council is not of the presently of the view that this alone would provide a sufficient reason for slippage in the implementation program.

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<sup>266</sup> Overhead from bilateral meeting.

#### **10.4.4.3 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.

#### **Queensland arrangements**

The second tranche report notes that section 231 WR Act has permitted temporary transfers for approximately ten years, this proving a useful tool in balancing annual fluctuations in water availability and demand. Section 231 permits the owner of land to which a water allocation has been granted to enter into an agreement allowing another land owner to use the water. Relevant approval is required and regard may be had to the capability of the system to supply the additional water or other matters.

The draft policy paper notes the proposal to enable the holder of a water entitlement to transfer or lease it to any other person in accordance with transfer rules. The policy paper canvasses issues such as exchange rates, transfers between catchments and rules for social and economic purposes (that is, limiting the amount of water transferred from an area in any one year). The policy also considers the process of transferring water entitlements including registration, transfer fees and requirements such as best practice water management plan approvals.

The second tranche report notes that interim permanent trading arrangements are progressively being implemented across larger irrigation districts. For example, in the Mareeba-Dimbulah Irrigation Area interim arrangements will facilitate structural adjustment from tobacco growing to higher-valued horticultural and sugar production. By the end of 1999 interim permanent trading arrangements should be in place for six of the State's eight largest irrigation schemes.

The Bundaberg Irrigation Area Temporary Transfer service guideline sheet includes the following local rules:

- transfers apply within the water year;
- the seller can only sell their available announced allocation;
- transfers cannot be arranged in arrears to cover circumstances where customers are subject to excess water charges;
- transfers are not permitted between surface and groundwater supplies; and
- transfers between particular areas are not permitted.

Queensland has not provided information to the Council concerning interstate trade with New South Wales. New South Wales has advised the Council that interstate trade between New South Wales and Queensland cannot occur until Queensland has completed '*capping*' entitlements, and that there are at present no formal arrangements for trade.<sup>267</sup>

### **Council Comment**

Queensland's commitment to water trading reform is illustrated by the implementation of interim permanent trading arrangements to facilitate structural reform in the tobacco industry. The present legislation, however, does not permit more than temporary transfers of water on a yearly basis.

The Council is not satisfied, however, that the existing trading arrangements constitute an adequate substitute for reform proposed in the draft policy and required by the strategic framework.

The draft policy proposal to permit temporary and permanent water trades is as yet not in legislative form. While the proposal appears to be consistent with the strategic framework, the Council cannot form a firm view on the trading arrangements until the detail of the legislation is known.

As previously noted, the Council will undertake a supplementary assessment of on 30 June 2000 to assess whether there has been passage of the legislation.

The Council is also concerned at the lack of progress in NSW/Queensland cross-border trading. The Council will pursue this matter with both jurisdictions prior to the third tranche assessment.

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<sup>267</sup> NSW Annual Report in the Application of National Competition Policy for the year ending December 1997.

## **B10.4.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.4.5.1 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.

### **Queensland arrangements**

The second tranche report notes that DNR is the lead agency for Landcare and Integrated Catchment Management. The Minister receives strategic advice from the Landcare and Catchment Management Council on landcare, integrated catchment management and the implementation of Natural Heritage Trust projects. The Landcare and Catchment Management Council is a representational body including representatives from landcare and catchment management groups, industry, State and Local Government, Queensland Conservation Council, Greening Australia and the Great Barrier Reef Marine Park Authority.

It is noted that in 1997-1998 DNR supported twenty-three integrated catchment management committees and fifteen action plans were implemented. The Queensland Murray-Darling Basin Co-ordinating Committee prepared a Natural Resource Management Strategy and catchment strategies for the Maranoa-Balonne and Border Rivers catchments were also prepared.

*Major Actions*, a paper by Bill Eastgate, Executive Director (Regional Infrastructure Development) DNR identified under the heading *Integrated Resource Management* that:

*the Natural Resource Management (NRM) Act will establish a legislative framework for the integrated management of Queensland's land, water, forest and vegetation resources. It will also provide the statutory basis for property rights in water and forestry. The Integrated Planning Act will provide a co-ordinated and integrated approach to local, regional and*

*State level planning and development assessment. The NRM Act is in preparation and a draft Bill is expected to be available before the end of 1998'.(p5)*

It is also noted that WAMPs will contribute significantly to this process.

The *Queensland Murray-Darling Basin Catchment Co-ordinating Committees - Natural Resource Management Strategy* (DNR and Department of Environment, April 1998) (the NRM strategy) notes that Queensland has developed a State planning process with approaches to implement State and National plans and strategies. Integrated regional strategies are developed which oversee a hierarchy of: issue based regional plans and strategies; regional agency programs; local government plans and strategies; integrated catchment management strategies; issue based catchment plans; and integrated sub-catchment and local plans and issue based plans or projects.

The NRM strategy provides for the vision of an equitable, efficient and sustainable use of water, land and other environmental resources of the Queensland Murray-Darling Basin. The values that the strategy seeks to protect or improve include: integrity of ecological processes and ecosystems; integrity of human social conditions; integrity of economic conditions and economic benefits to the community; and integrity of places and the broader landscape.

The NRM strategy identifies regional issues including NRM planning and co-ordination, economic sustainability, education and awareness, empowerment, cultural heritage, floodplains, wetlands and rivers, water allocation and quality, land use and management, nature conservation, forest management, weeds and pest animals and waste management.

For each issue, principles for action, strategic objectives, essential/desirable strategies, outcomes, performance indicators and related strategies are identified. For the regional issue of *Land Use and Management*:

- a principle for action is land is a finite resource that must be conserved and managed for long term health and use;
- a strategic objective is healthy and productive land-use systems managed for sustainable natural resource;
- essential strategies include supporting the investigation and extension of practical tools, management practices, training and information which address land degradation, climate variability and sustainable production;
- an identified outcome is land productivity to be sustained or enhanced over the long term; and
- a relevant performance indicator is the percentage of land-holders adopting an integrated planning approach to the management of their land and vegetation resources.

Queensland noted<sup>268</sup> that although at one stage it was considering the development of a NRM Bill, alternative legislative arrangements including the Water (Management and Allocation) Bill are being progressed.

Queensland noted that integrated catchment management in Queensland is presently being delivered by Catchment Co-ordinating Committees (CCC), which are based in whole river catchments, basins or groups of smaller catchments. CCCs are formed and formally endorsed or recognised in accordance with the operational policy and guidelines developed by the Landcare and Catchment Management Council. CCCs include local government, community groups, relevant industries and agency representatives. They are community based and co-ordinate the efforts of key stakeholders to implement negotiated and agreed actions and outcomes. They develop community based strategies for catchment management and guide implementation through business and action plans for key issues. CCCs are provided operating grants (up to \$10 000) and may apply for project grants from the State and Natural Heritage Trust.

About 80 per cent of Queensland is covered by CCCs. Thirty have been endorsed and another six are at the steering committee stage.

The main area not covered is the Cape York Peninsula; the Cape York Natural Heritage Plan and CYPLUS provide the overall strategic direction for natural resource management at a regional level. Some CCCs (for example the Weipa Catchment Co-ordinating Group) are in place.

*A Guide to Integrated Catchment Management in Queensland* (DNR, January 1999) provides a summary of catchment management issues and activities in Queensland. The guide notes that the Government's integrated catchment management program was introduced in 1990. It provides brief details on some activities. For example, in the Fitzroy catchment two catchment groups (the Fitzroy Basin Association and Dawson Catchment Co-ordination Association) note issues such as water quality, water allocation and remnant and riparian vegetation management. Achievements include developments of catchment strategies and establishing partnerships with stakeholders. Future directions include implementation of strategies and enhancing linkages between the community and government.

Queensland also advised that CCCs and landcare groups, although separate, work closely together. Programs have been combined at a state level to through the Landcare and Catchment Management Council.

Queensland noted that community based arrangements are presently being reviewed and a series of workshops in July/August 1999 is planned to consult key community stakeholders and develop options for wider consideration. Any changes to existing arrangement will be considered following this review.

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<sup>268</sup> 8 June 1999.

### **Council Comment**

The Council notes the achievements of Queensland in setting up a Council to advise the Minister on integrated catchment management and NRM. In addition, the creation of CCCs and development of action management plans is a solid basis on which to plan, implement and evaluate integrated catchment management and NRM initiatives.

The membership of CCCs includes community, government and industry and Queensland has advised that the present arrangements cover 80 per cent of Queensland and other areas are covered by alternative arrangements.

The current community based arrangements are under review and following this Queensland will consider changes to the existing arrangements.

The Council is satisfied that Queensland has met its reform commitments for the second tranche. It will monitor the review of current arrangements and any subsequent initiatives by Queensland prior to the third tranche assessment.

#### **10.4.5.2 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.

### **Queensland arrangements**

The second tranche report notes that the policies and principles of NWQMS have been incorporated into legislation via the *Environment Protection (Water) Policy 1997* (EPP (water)). The EPP (water) provides a pathway for setting and formalising environmental values and water quality objectives for a specific waterway in accordance with the NWQMS. The EPP (water) requires the development and implementation of environmental plans about protecting ground waters.

For example, sections 9.(2) and 9.(3) of the EPP (water) provide that documents including site specific documents, AWQ<sup>269</sup> guidelines, and documents published by a recognised entity<sup>270</sup> are used to decide the water quality guidelines for an environmental value for a water, and that to the extent of any inconsistency between the documents for a particular water quality guideline, the documents are to be used in the order in which they are listed. A similar approach to establishing priority of documents is used in Section 10. (2) and 10.(3) of the EPP (water) which provides for protocols (for example, making tests and measures).

Queensland has advised the Council that Australian drinking water guidelines have been incorporated into the Queensland guidelines for the design of water supply

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<sup>269</sup> Australian Water Quality Guidelines for Fresh and Marine Waters published by ANZECC in 1992.

<sup>270</sup> This includes the NWQMS guidelines published by ANZECC and ARMCANZ.

schemes. In response to implementing guidelines for sewage systems Queensland has produced a set of standard sewage laws and a document on treatment and management of sewage.

**WSAA Facts**

WSAA Facts noted that BW had 100 per cent compliance with 1996 NHMRC bacteriology quality and physico-chemical guidelines. GCW's compliance was 99.6 per cent and 99.1 per cent respectively.

**Council Comment**

Queensland has contributed to NWQMS and developed integrated guidelines in the EPP (water). The Council considers this and the performance of the water suppliers as regards NHRMC guidelines shows substantial commitment in respect of this reform area.

The Council, while satisfied that Queensland has met this reform commitment for the second tranche, will continue to monitor the implementation of the NWQMS guidelines prior to the third tranche assessment. The Council will focus on issues concerning implementation, monitoring and compliance with guidelines.

## **B10.4.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**10.4.6.1 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.

### **Queensland arrangements**

The second tranche report notes that community consultation on water reform is actively encouraged. For example:

- changes to rural water pricing have been discussed widely since 1993; the consultation strategy for the 1999 price increments is currently being devised and will focus in heightening awareness of revenue shortfalls and pricing issues in relevant irrigation schemes;
- community reference panels are actively involved in the development of WAMPs; and
- the draft policy on water allocations has been circulated for consultation with key stakeholder groups and will form the basis for wider consultation.

As regards public education, the second tranche report highlighted the sponsorship of Waterwise, which includes a comprehensive schools program, resources to teachers and the creation of the first Waterwise school which resulted in water use and bills falling 50 per cent.

The Council has been provided with and reviewed a range of *Waterwise* material provided with the second tranche report including the *Waterwise in the Home* series, *Waterwise Gardens*, and the *Waterwise school*.

### **Council Comment**

The Council has reviewed the information provided by Queensland and notes the consultations by DNR and others in respect of proposed reforms and the innovative work of the *Waterwise school* program.

The Council is satisfied that Queensland has met this reform commitment.

## ATTACHMENT 1

**Table 10.4.4 Cost recovery of local government water and sewerage providers, 1996-1997**

<b>Council Business</b>	<b>Public Benefit Assessment Findings</b>
Brisbane City Council	Trading profit for 30/6/98 of \$60.92 million with overall result (including interest, depreciation and other charges) \$4.572 million.
Caboolture Shire Council	Operating surplus of \$4.5 million (water) and \$6.084 million (sewerage).
Cairns City Council	Not stated.
Caloundra City Council	Revenue Surplus of \$5 069 662 over operating costs for water supply and sewerage.
Gold Coast Water	Revenue surplus of \$36.4 million (water) and \$34 million (sewerage).
Hervey Bay City Council	Water and Sewerage Services have an operating surplus of \$5-6 million (for years 1995-1996, 1996-1997 and 1997-1998).
Ipswich City Council	Operating surplus for water and sewerage services of \$13.566 million.
Logan City Council	Net operating profit before interest, depreciation and taxation \$4.9 million.
Mackay City Council	Revenue surplus: EBIT \$6 242 159; net profit \$3.1 million.
Maroochy Shire Council	Revenue surplus of \$14.214 million.
Noosa Council	Current charging strategy provides return on assets of 1.1 per cent for water and 0.87 per cent for sewerage.
Pine Rivers Shire Council	Operating profit for water \$2.829 million, for sewerage \$4.666 million.
Redlands Shire Council	Water and sewerage business generates a surplus on its operations sufficient to cover full-cost pricing initiatives.
Rockhampton City Council	Revenue received covers capital works and operation expenditure including depreciation allowances.
Thuringowa City Council	Water supply service generated a net cash operating surplus of \$2.104 million.

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<b>Council Business</b>	<b>Public Benefit Assessment Findings</b>
Toowoomba City Council	Water and wastewater businesses generate surpluses on their operations.
Townsville City Council	Net profit \$12.5 million (and return on assets of 3.5 per cent).

## ATTACHMENT 2

Table 10.4.5 CSOs provided by local government water and sewerage activities

Local Government	CSO amount, 1998-1999	Stated objective
Brisbane City Council	\$8 928 000	Not stated
Caboolture Shire Council	\$7 322 038	Eliminate impacts of reform on prices to consumers of water and sewerage services and given that these services are essential services
Cairns City Council	\$602 632	Provision of unmetered supply of water to Council parklands and provision of unmetered wastewater services to Council facilities
Caloundra City Council	Not available	Not available
Gold Coast Water	\$1 099 000	Not stated
Hervey Bay City Council	\$45 000	Not stated
Ipswich City Council	\$64 333	Not stated
Logan City Council	\$88 7000	Combined subsidy on water and sewerage charges to sporting bodies
Mackay City Council	\$1 706 000	Not stated
Maroochy Shire Council	\$4 600 000	\$4.03 million pensioner discounts, balance for fire services, services to remote regions, and the like
Noosa Council	\$0	Not applicable
Pine Rivers Shire Council	\$0	Not applicable
Redlands Shire Council	\$716 470	Not stated
Rockhampton City Council	\$509 030	Not stated

<b>Local Government</b>	<b>CSO amount, 1998-1999</b>	<b>Stated objective</b>
Thuringowa City Council	\$113 000	Environmental services
Toowoomba City Council	\$0	Not applicable
Townsville City Council	\$969 662	Subsidies to sporting, charitable, welfare, non-profit, aged homes

## ATTACHMENT 3

Table 10.4.6 WAMP/WMP Timetable

Action	1999-2000	2000-2001
<b>Submit Final WAMP**</b>	Fitzroy Condamine-Balonne	Border Rivers Barron Logan
<b>Release Draft WAMP</b>	Condamine-Balonne Border Rivers* Barron Logan	Burnett Pioneer Burdekin Pioneer Groundwater Burdekin Groundwater
<b>Development of WAMP</b>	Burnett Pioneer Burdekin Brisbane Bundaberg Groundwater Pioneer Groundwater Burdekin Groundwater	Brisbane Bundaberg Groundwater Mary
<b>Submit Final WMP</b>	Cooper Atherton Basalts Groundwater	Warrego/Paroo/Nebine/Bulloo Moonie Calliope/Boyne
<b>Release Draft WMP</b>	Warrego/Paroo/Nebine/Bulloo Moonie Calliope/Boyne	Herbert Mitchell
<b>Development of WMP</b>	Herbert Mitchell	Georgia/Diamintine Flinders

\*Subject to resolution of interstate policy

\*\*Subject to satisfactory completion of public consultation process



## **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.

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<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**

Service Providers	Regulators	Water Resources Manager
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 than 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 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			
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 licensed 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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## 10.6 WATER REFORM, South Australia

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Attachment 1: Prescribed Water Resources Areas for which Water Allocation Plans are being prepared under the <i>Water Resources Act 1997</i>	
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**Abbreviations**

ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
BOT	Build Operate and Transfer
COAG	Council of Australian Governments
CPA	Competition Principles Agreement
CSO	Community Service Obligation
DEHAA	Department for Environment, Heritage and Aboriginal Affairs
EPA	Environmental Protection Authority
GL	Gigalitre
IPART	Independent Pricing and Regulatory Tribunal
kL	Kilolitre
ML	Megalitre
NCC	National Competition Council
NMU	Non-Metropolitan Urban
NWQMS	National Water Quality Management Strategy
TER	Tax Equivalent Regime
WACC	Weighted Average Cost of Capital
WSAA	Water Services Association of Australia

# B10 Water Reform

## B10.6 South Australia

### B10.6.1 EXECUTIVE SUMMARY

This is an assessment of South 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*

- The South Australian Water Corporation (SA Water) is South Australia's primary provider of water and wastewater services and is currently operating on a full cost recovery basis once community service obligations (CSOs) are taken into account.
- South Australia has introduced two part tariffs to urban water supply. However, commercial water prices (which represent around 4 per cent of SA Water's customer base) still contain a free water allowance and are based on property values as are wastewater charges. Volumetric charges have not been introduced to bulk water supply.
- Current pricing arrangements would appear to provide scope for potentially substantial cross-subsidies in some areas.
- Transparent, separately funded, CSO payments are made to SA Water for a number of purposes the most significant of which is to implement the State's uniform price policy for urban water and wastewater services.
- SA Water earns a positive rate of return once CSOs are taken into account.
- South Australia has a process for devolving operational responsibility for the management of irrigation areas. The Council will consider devolution in more detail in its third tranche assessment.
- New investments are subject to appraisals of economic viability and ecological sustainability.

Therefore, South Australia has achieved progress with pricing reform but the Council is concerned with the inclusion of free water allowances and property values in commercial water prices. South Australia has undertaken to announce its position in relation to this matter by December 1999. The Council will revisit this matter in light of the State's announced position. The Council is also concerned at the use of property values to set wastewater charges and the fact that that bulk water charges

have also not been developed. However, South Australia has undertaken to take action in relation to each of these issues.

### ***Institutional reform***

- Council is satisfied that current South Australian arrangements provide sufficient institutional separation between the roles of water resource management, standard setting and regulatory enforcement and service provision.
- Water and wastewater activities have a commercial focus consistent with Council of Australian Governments (COAG) commitments.
- South Australian water businesses are participating in benchmarking and performance monitoring programs.

Therefore, the Council is satisfied with progress as regards institutional separation commercial focus, benchmarking and performance monitoring.

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

- South Australia has developed a legislative framework that will promote the establishment of a comprehensive system of water entitlements backed by separation of water property rights from land title and a clear specification of entitlements in terms of volume, reliability or transferability.
- Arrangements have been put in place that will ensure that environmental requirements are identified and protected.
- The Council has agreed to the implementation program for allocations as outlined in Attachment 1. In doing so, the Council notes that the implementation programs may change over time provided there is agreement between South Australia and the Council.
- South Australia has removed all impediments to intrastate trade and is participating in a trial of interstate trade being coordinated by the Murray Darling Basin Commission.

The Council is satisfied that South Australia has complied with tranche two requirements but will look for continued progress in its third tranche assessment.

### ***Environment and water quality***

- South Australia has established integrated resource management structures, policies and practices that satisfy tranche two commitments.
- South Australia has made progress in implementing National Water Quality Management Strategy Guidelines.

The Council is satisfied that South Australia has complied with this aspect of the framework for the purposes of tranche two.

***Public consultation and education***

The Council is satisfied that South Australia has engaged in appropriate public consultation and education regarding water reform.

**Assessment**

The Council is satisfied that South Australia has complied with most of its tranche two water reform commitments. However, while sound progress has been achieved in many areas of pricing reform a number of outstanding issues remain, although South Australia has identified a possible way forward on each of these matters. Consequently, the Council will revisit the issue of commercial water pricing in December 1999 following the release of the State's retail water policy. The Council will also review progress in relation to bulk water charges, commercial and wastewater pricing as part of a supplementary assessment in June 2000.

## **10.6.2 REFORM COMMITMENT: COST REFORM AND PRICING**

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

#### **10.6.2.1 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
- 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.

#### **South Australian arrangements**

The South Australian Water Corporation (SA Water) provides much of the State's urban water and wastewater services. Local governments are responsible for urban stormwater and over 90 septic tank effluent disposal schemes in country towns. Those not covered by the above services must rely on private arrangements such as rainwater tanks, bores, septic tanks etc.

The *South Australian Water Corporation Act 1994* lists the main functions of the Corporation as:

- the supply of water by means of reticulated systems;
- the storage, treatment and supply of bulk water; and
- the removal and treatment of wastewater by means of sewerage systems.

SA Water provides water and sewerage services to both metropolitan Adelaide and country customers. The latest report by the Steering Committee for the Performance Monitoring of Government Trading Enterprises states that SA Water supplied 442 000 metropolitan properties approximately 172 000 ML of water in 1996-97. SA Water also supplied wastewater services to 420 000 metropolitan properties and treated

90 000 ML of sewage. In addition, SA Water supplied 168 000 country properties a total of 76 000 ML, while 56 000 properties were supplied with wastewater services which resulted in treatment of 11 000 ML of sewage.

Over the last ten years property values and water allowances have been phased out of the prices charged to residential and non-commercial water customers. Prices for this group are now based on a fixed charge together with a two tier usage charge. However, prices charged to commercial customers are still based on property values as are all sewerage charges. It is also government policy that both metropolitan and country residential users pay the same price for water services.

The SA Water's 1998 Annual Report states that for the year ended 30 June 1998 after tax profits were \$116.5 million. This figure includes operational, maintenance and administration costs, and interest costs on debt. Also included is a dividend to the South Australian government of almost \$106 million. *WSAA facts '98* reported SA Water provided a dividend payout of around 90 per cent in 1997-98, the fifth highest of the 17 utilities reporting an after tax profit. When SA Water's total contributions to government (around \$116 million) are considered their ranking increases to third. CSOs totaling more than \$74 million are also included in the above profit calculation as is expenditure on behalf of government of almost \$4 million.

South Australia's 1999 Annual Report to the Council notes that in 1995 a water resources charge was introduced to SA Water customers and River Murray users under an amendment to the *Water Resources Act 1990*. Provision for the charge was also included in the *Water Resources Act 1997* that repealed the 1990 Act. A 10 per cent environmental levy is included in sewer rates as is a 1.5 per cent levy to assist the work done by the Environmental Protection Authority.

Asset values for land, building and infrastructure assets were reported at their optimised deprival values. Plant and equipment and other assets are reported at cost but represent only a small proportion of the reported total value of assets.

South Australia's second tranche report notes that SA Water uses straight line depreciation rather than an annuity to make provision for asset consumption. South Australia states that this approach is consistent with commercial practice and yields a rate of return within the band provided by the ARMCANZ pricing guidelines.

In its second tranche report, South Australia projected a 1998-99 rate of return on assets equal to 4.7 per cent. South Australia's annual report also estimated a WACC of 8 per cent and noted SA Water's medium term target real rate on metropolitan assets of 6 per cent.

Supplementary information provided to Council by South Australian shows that while SA Water is currently recovering costs overall there is significant variation in the contributions of the Corporation's business areas (see Table 10.6.1). Significant factors behind this are the State Government's uniform price policy and differences in pricing methodologies.<sup>376</sup> The Council understands that, put simply, the uniform price is based on the metropolitan full cost recovery price with any short fall in

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<sup>376</sup> Some prices are based on property values while others are consumption based.

revenues arising from the greater costs of supplying country customers being made up through a government funded CSO.

**Table 10.6.1: Financial performance by business segment, 1997-98**

	Metro Water (\$m)	C'ntry Water (\$m)	Metro Sewer (\$m)	C'ntry Sewer (\$m)	Other (\$m)	TOTAL (\$m)
<b>Operating Revenue</b>						
Rates and charges	169.6	69.1	156.3	18.5		413.5
Community Service Obligations	1.7	61.4	1.6	9.7		74.4
Other revenue	9.5	6.4	7.4	1.9	17.0	42.2
Total Operating Revenue <sup>1</sup>	180.8	136.9	165.3	30.1	17.0	530.1
<b>Operating Expenses</b>						
Operations and services	65.6	42.8	39.6	9.5	21.5	179.0
Depreciation and amortisation	32.9	31.6	28.2	5.9		98.6
Interest	29.4	30.7	25.9	4.8		90.8
Total Operating Expenses	127.9	105.1	93.7	20.2	21.5	368.4
Expenditure on behalf of State Government	1.7	0.8			1.5	4.0
Total expenditure	129.6	105.8	93.7	20.2	23.0	372.3
Operating Profit before Income Tax	51.2	31.0	71.6	9.9	(5.9)	157.8
Assets	1824	1763	1584	297	44	5512
EBIT	80.4	61.7	97.5	14.7	(5.9)	248.4
Return on Assets	4.4%	3.5%	6.2%	4.9%		4.5%

<sup>1</sup> Revenues exclude contributed assets

Source: SA Water unpublished.

The above table suggests that metropolitan water supply services earn a significantly greater rate of return than country services but once CSOs are taken into account both earn a positive rate of return on assets.

The above table also shows that while there is a significant difference between the returns earned from metropolitan and country sewerage services both are positive and all costs are recovered. Returns earned on metropolitan sewerage services are significantly greater than those earned elsewhere but are less than SA Water's estimated WACC of 8 per cent.

## COUNCIL COMMENT

The available information suggests that SA Water overall earns a return within the bounds of commercial viability and monopoly profits as defined by the ARMCANZ pricing guidelines. Also, SA Water in its performance agreement with the Government, has set itself a target for moving closer towards a commercial rate of return in the medium term. The Council has not been advised of the time path that SA Water will adopt to achieve this target.

Attention is drawn to the fact that in 1997-98 SA Water undertook almost \$4 million worth of expenditure on behalf of the government. The Council notes that some of this expenditure may be justifiably paid by SA Water (for example the \$2.5 million contribution to the Murray River Catchment Board given that SA Water is a major user of the river). However, while the remainder is transparently reported, consideration should be given to funding these non-commercial activities through a separately funded CSO.

In response to the above issues South Australia note that the *Public Corporations Act 1994* provides for an annual review of public corporations' charter and performance agreement. It also notes that, to this end, further advice on SA Water's business targets will be available by the end of the year, and a review of CSO arrangements is expected to address the \$4 million on behalf of other agencies as an input to the 2000-01 budget process.

The returns earned by the metropolitan and country water and sewerage services vary significantly and in the country water prices are not commercially viable as defined by the ARMCANZ guidelines. However, this short fall is made up through a transparent and separately funded CSO. Consequently, the Council is satisfied that South Australia has met its tranche two requirements with regard to this element of the agreed framework.

**10.6.2.2 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 a two-part tariff with an emphasis on the volumetric component to recover costs and earn a positive real rate of return.

### **South Australian Arrangements**

#### **Metropolitan and NMU water**

For many years residential water prices were made up of a supply charge and a water use charge, however the composition of these two charges has been reformed over time (see Table 10.6.2). Today, property values and free water allowances have been removed from residential price calculations to see prices based on a fixed charge together with an inclining usage charge.

**Table 10.6.2: Residential water pricing, 1988-89 to 1997-98**

Year	Supply charge	Water use charges	
		Allowance kL	Usage charge
1988-89	\$96 plus \$1.88 per \$1000 property value above \$51 000	Supply charge / 71c/kL	71c/kL
1989-90	\$102 plus \$174 per \$1000 property value above \$58 600	Supply charge / 75c/kL	Supply charge / 75c/kL
1990-91	\$110 plus \$1.68 per \$1000 property value above \$65 400	Supply charge / 80c/kL	Supply charge / 8/Kl
1991-92	\$116 plus \$0.80 per \$1000 property value above \$117 000	136 kL	85c/kL
1992-93	\$120 plus \$0.80 per \$1000 property value above \$140 000	136 kL	88c/kL
1993-94	\$120	136 kL	88c/kL
1994-95	\$120	136 kL	88c/kL
1995-96	\$113	NA	0-136 kL at 20c/kL 137-500 kL at 88c/kL > 500 kL at 90c/kL
1996-97	\$118	NA	0-125 kL at 20c/kL 126-400 kL at 89c/kL 400 kL at 91c/kL
1997-98	\$131	NA	0-125 kL at 25c/kL 126-400 kL at 90c/kL > 400 kL at 92c/kL
1998-99	\$119		0-125 kL at 36 c/kL > 125 kL at 89 c/kL

Source: Water and Sewerage Pricing for SA Water Corporation.

The South Australian Competition Commissioner's 1997 report into SA Water's pricing policies noted that, over the five years to 1995-96, metropolitan water consumption has decreased by 14 per cent due to the move to usage based charging for residential customers and greater awareness of the water resource. Consumption by country areas remained relatively stable over the period.

In making his 1997 report the South Australian Competition Commissioner recommended that the three tier volumetric component converge to a single rate that approximates long run marginal cost and that the access charge would reflect residual costs once usage based costs had been taken into account. South Australia's second tranche report notes that over the period 1996-97 to 1998-99 the gap between the first and top-step water prices has narrowed consistent with a converging to a single water price approximating long run marginal cost in the medium term. However, no indication is given as to when and how convergence will occur.

While progress has been made in reforming most water prices, property values are still included in the calculation of the fixed component of commercial water charges. In 1997 the South Australian Competition Commissioner reported that this led to a significant imbalance in average costs where the average cost for commercial users is

over \$2/kL and less than \$1/kL for other users. The resulting cross-subsidy is estimated to be around \$10 million. South Australia's 1999 annual report to the Council noted that commercial water charges have been reduced by 2.5 per cent as a first step towards removing the cross subsidy paid by commercial customers.

### **Sewerage**

Sewage charges consist of a fixed access charge calculated by applying a rate per dollar to property values subject to a minimum charge. The rate for country towns includes a 25 per cent loading over the metropolitan area to compensate for the differences in property values. The same rate is applied to residential and non-residential properties.

The April 1997 report by the Competition Commissioner noted that current arrangements are likely to see commercial users subsidise other users as well as cross-subsidies within customer groups. The Competition Commissioner's report also noted that the efficient pricing of sewerage services should reflect the marginal costs of wastewater collection, treatment and disposal, and that there is no correlation between property values and these costs.

However, given the practical difficulties of applying this approach to the household sector, a common approach has been to adopt a uniform access charge which the Independent Pricing and Regulatory Tribunal (IPART) have concluded is an administratively efficient and equitable means of charging for sewerage services in the same service area. Other approaches include assuming there is a relationship between the amount of water used by a household and the amount returned to the sewerage system (as adopted by Hunter Water Corporation), and an annual access charge plus an additional charge based on the number of pedestals more than two (ACT Electricity and Water).

In South Australia industrial sewerage customers are treated the same as residential and commercial customers. In all other major cities industrial users must pay a trade waste charge. In responding to the Competition Commissioner's 1997 recommendations the South Australian Government agreed to consider introducing trade waste charging but did not indicate when it would make a decision.

### **Bulk water**

SA Water is divided into wholesale, distribution and retail divisions. The Council understands that bulk water pricing arrangements are yet to be determined. The 1999 South Australian report to the Council stated that when completed, bulk water prices are likely to be comprised of a two-part tariff with an appropriate emphasis on the consumptive component. Water transportation services are currently being provided by SA Water to a small number of clients with the prices for these services reflecting costs with respect to the pipelines and ancillary services used.

### **COUNCIL COMMENT**

South Australia has reformed much of its urban water supply pricing. However, it is the Council's view that while commercial customers make up only around 4 per cent of SA Water's customer base, free water allowances and using property values as a

basis for water charges is not consistent with the intent of the COAG framework. The Council does not have sufficient evidence to be convinced that the current arrangements do not lead to non-transparent cross-subsidies. The Council notes that South Australia's retail water pricing policy to be announced in December will address the future of commercial free water allowances and property based charges.

The Council notes, with some concern, the South Australian Government's rejection of the Competition Commissioner's recommendation that property values should be removed from sewerage price calculations. As noted above the Council is of the view that property values are not an appropriate basis for prices. Further, if the Government wishes to provide assistance to a sector of the community this would be more appropriately provided through alternative means, such as a separately funded CSO, rather than through the non transparent cross subsidy arising from prices based on property values.

The Council supports the South Australian Government's decision to consider introducing a trade waste charge for industrial sewerage services and notes that this matter will be considered as part of a review of wastewater charges. The Council will look for this review to be completed and a course of action determined before the Council conducts its supplementary assessment in June 2000.

South Australia has not met its commitment with respect to volumetric pricing of bulk water services. However, the Council understands that the process of identifying regional charges is underway and that an internal trial of bulk water pricing will be undertaken over 1999-00 with a view to finalising the pricing structure in 2000-01. Even though SA Water is a vertically integrated provider, the Council suggests that identifying the costs associated with different regions and separating bulk water costs from reticulation and retail costs will promote greater transparency, accountability and efficient provision of water services.

Overall South Australia has achieved progress towards its second tranche commitments with respect to water pricing reform. Given that commercial water customers represent only a small proportion of total water users, the Council concludes that appropriate two-part tariffs have been applied to virtually all urban water customers. South Australia has demonstrated a commitment to continue to address areas where the requirements of the second tranche have not yet been met. Consequently, in relation to outstanding issues the Council will:

- revisit commercial water pricing in December 1999 following the announcement the Government's of the retail water policy; and
- review progress in relation to bulk water, commercial and wastewater pricing as part of a June 2000 supplementary assessment.

#### **10.6.2.3 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;
- from a source other than other customer classes.

### **South Australian arrangements**

SA Water engages in a significant amount of differential pricing. For example, different pricing regimes are used for commercial and non-commercial water customers which results in commercial customers making a more than proportionate contribution to total revenues. In 1995-96 commercial users contributed 4 per cent of water sales but 9 per cent of revenues. High residential users also subsidise low use customers as a result of the three-tiered volumetric component in non-commercial prices.

However, the South Australian second tranche report notes that the amount of differential pricing has decreased in each of the above cases. Commercial water prices have been reduced by 2.5 per cent and the difference between the first and the top-step prices for non-commercial customers has been reduced.

The Competition Commissioner's April 1997 report noted that consumers of untreated, as opposed to treated, water are also likely to pay more than the costs of the services they receive. The April 1997 report also noted that commercial and other high property value users are likely to be subsidising other users of sewerage services.

The adoption of uniform rate for metropolitan and country users sees country water customers overall pay less than the cost of those services. In this instance the short fall is made up through a separately funded CSO rather than through charging metropolitan water users monopoly prices.

### **COUNCIL COMMENT**

The fact that SA Water engages in a significant amount of differential pricing does not necessarily mean that it also engages in high levels of cross-subsidies as defined by the agreed assessment framework. This will only occur where prices fall outside the band provided by the ARMCANZ pricing guidelines.

At the moment country water prices are assisted through a separately funded CSO and, when this is taken into account, country water services recover costs overall. The Council accepts that South Australia has also taken steps towards reducing the level of differential prices in other areas such as those between commercial and non commercial water users and between high and low volume users of water. However, as noted above, the Competition Commissioner's 1997 final report estimated that current pricing arrangements see an annual \$10 million cross subsidy paid by commercial to other water users. This potentially represents a significant distortion in consumption patterns and should be addressed as soon as practicable. The Council

understands that the State's retail water policy to be announced by December 1999 will address free water allowances and property based charges.

In some areas the Council does not have sufficient information to reach a conclusion as to whether current arrangements are outside the agreed guidelines. For example, the absence of information on bulk water costs means that cross subsidisation between SA Water's bulk and retail activities cannot be ruled out. However, the Council understands that SA Water is in the process of identifying bulk water charges.

While the Council is unable to comment on whether there is a significant cross-subsidy between wastewater customers, the basis on which wastewater prices are charged is not consistent with the intent of the COAG framework. Accurately identifying and reporting any significant cross-subsidies arising from current arrangements will be a very difficult task. Removing property values from the calculations of these prices would more closely relate prices to the cost of production and reduce any cross-subsidies that currently exist. Any potential equity concerns arising from these changes could be addressed through an appropriately funded CSO and/or through phasing their introduction over an acceptable timeframe. The Council notes that South Australia intends to review wastewater pricing and will consider progress on this matter as part of a supplementary assessment in June 2000.

**10.6.2.4 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.

**South Australian arrangements**

On 16 December 1996 the South Australian Government endorsed a Community Service Obligations Policy. The objectives of the policy are to:

- ensure that the Government's public policy and welfare programs are not put at risk by the corporatisation process;
- enable rigorous performance monitoring of the commercial performance of government businesses;
- ensure that a decisions on the appropriate level and quality of CSO services are made by the Government rather than public enterprises; and
- ensure that the undertaking of CSO activities does not conflict with competitive neutrality principles and that such activities can be recognised by the Competition Commissioner in recommending prices.

SA Water's CSOs are currently being reviewed against the above framework. SA Water currently provides CSOs through explicit purchase agreements between purchasing Ministers. SA Water's latest annual report noted that in 1997-98 CSOs totalled more than \$74 million. This figure includes non-commercial activities pursuant to the Government's CSO policy such as:

- provision for a uniform price for metropolitan and country customers;
- administration of the Pensioner Remissions Scheme for water supply, sewerage, irrigation, land tax and council rates;
- rate concessions to exempt properties (churches, councils, Festival Centre Trust etc); and
- provision of free water and wastewater for emergency services.

Other non-commercial activities include those for which funding is provided by other agencies. This includes the provision of free water to the Corporation of the City of Adelaide.

SA Water also undertakes non-commercial activities that will continue to be funded by the Corporation until transferred to other agencies. These include:

- the definition and administration of standards for plumbing through out the State;
- other flood mitigation schemes undertaken at government direction;
- dredging and desnagging the Murray river; and
- Waikerie, Woolpunda and Rufus River Salt interception schemes.

### **COUNCIL COMMENT**

Based on the information provided, it is the Council's view that the State's CSO policy and arrangements for the provision of CSOs by SA Water on behalf of the Government is consistent with the intent of the COAG Framework. Therefore, while the State's uniform price policy results in prices that often do not reflect the true cost of the service, this assistance is provided through a transparent, separately funded CSO.

The Council notes that in 1998 SA Water provided expenditure on behalf of government of almost \$4 million dollars. The Council acknowledges that payments to the River Murray Catchment Board may be justified. However, the Council suggests that South Australia considers transferring responsibility for the remaining activities to non-commercial agencies or fund their provision through an appropriate CSO.

With respect to non-commercial activities undertaken by SA Water that are awaiting transfer to other agencies, South Australia has advised that the transfer of any remaining non-commercial activities will be completed by June 2000.

### **10.6.2.5 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.

#### **South Australian Arrangements**

As noted above (see Table 1), SA Water achieved an overall rate of return on assets (excluding contributed assets) of 4.5 per cent in 1998. This compares to a medium term target of 6 per cent on metropolitan services and an estimated WACC of 8 per cent. SA Water has also earned a positive rate of return which is below a monopoly rate for individual service areas, namely metropolitan and country water and wastewater services once CSOs are taken into account.

Infrastructure, land and buildings are reported at their optimised deprival value. Plant and equipment and other assets are reported at cost but represent a very small proportion of total assets.

#### **COUNCIL COMMENT**

Based on the information provided the Council is satisfied that once CSOs are taken into account, South Australia has met its commitment to ensure that urban water and wastewater providers earn a positive real rate of return. However, as noted above, the Council has a number of concerns regarding the composition of the prices on which this return is earned.

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

### **10.6.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater<sup>377</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 NCC 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

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<sup>377</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 cooperative 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.

- with 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.

### South Australian arrangements

Ownership of the State's highland irrigation areas has been transferred to eight irrigation trusts on 30 June 1997. The 1999 SA Water Annual Report noted that in the Lower Murray Irrigation Areas full cost recovery of operations and maintenance costs of government-reclaimed swamps is expected by 30 June 1999.

In 'Navigating the South Australian Water Resources Act 1997', South Australia notes that the Act will enable the true costs of water management in prescribed areas, including environmental costs, to be collected directly from the major beneficiaries. Charges to water resources licensees may be attached to water allocation and/or use, via a levy set under Part 8 (Division 1). The Council understands that the levy will be set so as to recover the direct costs of managing a particular prescribed resource, as identified in the management plan of a catchment management board. Where no board is in place and management costs are significant they may be recovered through a levy set by the Minister on the basis of a report setting out the management costs of that resource.

Part 8 (Division 2) of the Act also provides for the raising of a land based levy by constituent councils on rateable properties (urban and rural) in catchment water management board areas. The rationale for this land based levy is that residents and other land users within a catchment:

- contribute to pollution loads of (and other impacts on) water resources; and
- benefit from the actions taken by a catchment water management board to improve the management of the catchment's water resources.

However, where the Act holds a person liable to pay a water based levy for water used then that person is not liable to also pay a land based levy for the property on which the water is used.

### COUNCIL COMMENT

South Australia has achieved progress towards pricing reform and cost recovery for rural water services, however the Council will consider this issue in greater detail as part of its third tranche assessment.

**10.6.2.7 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.

## South Australian arrangements

### Ecological sustainability

As discussed below, the *Water Resources Act 1997* states that the granting of new water licences or the transfer of existing licences is subject to Ministerial approval and must be consistent with the relevant water allocation plan. The Act also places controls on certain water affecting activities such as dam construction or other structures that will collect or divert water.

A licence is required to take water from a water resource declared as a prescribed resource under the *Water Resource Act 1997*. No licence is required to take water from other resources provided that it is taken in a manner consistent with the relevant water plan, where one exists.

The *Water Resources Act 1997* specifies that permits are required for a number of activities related to wells, for example the drilling of wells and discharging of water into a well. Permits for these well-related activities are issued by the Minister. The Act also specifies that the building or enlarging of dams in the Mount Lofty Ranges Watershed or prescribed water resources requires a permit. The permits for these activities are issued by:

- a catchment water management board where these activities take place within a board's catchment area and where a comprehensive catchment water management plan has been adopted by the Minister for the board's catchment area; or
- the Minister in any other case.

Decisions to grant a permit must not be inconsistent with the State Water Plan and any other water plan, which applies to the land on which the activity is to take place (ie catchment water management plan, water allocation plan and/or local water management plan).

In addition to these activities, the Act also allows a water plan to specify that certain water affecting activities must not be undertaken without a permit. Such activities include, for example, obstructions to a watercourse or lake, and the building or enlarging of a dam outside of the Mount Lofty Ranges Watershed or prescribed water resources. The relevant authority for issuing permits in these cases is the authority specified in the water plan.

The South Australian second tranche report notes that in an attempt to integrate and streamline regulatory requirements, permits are not required when the activity is authorised under other statutes including:

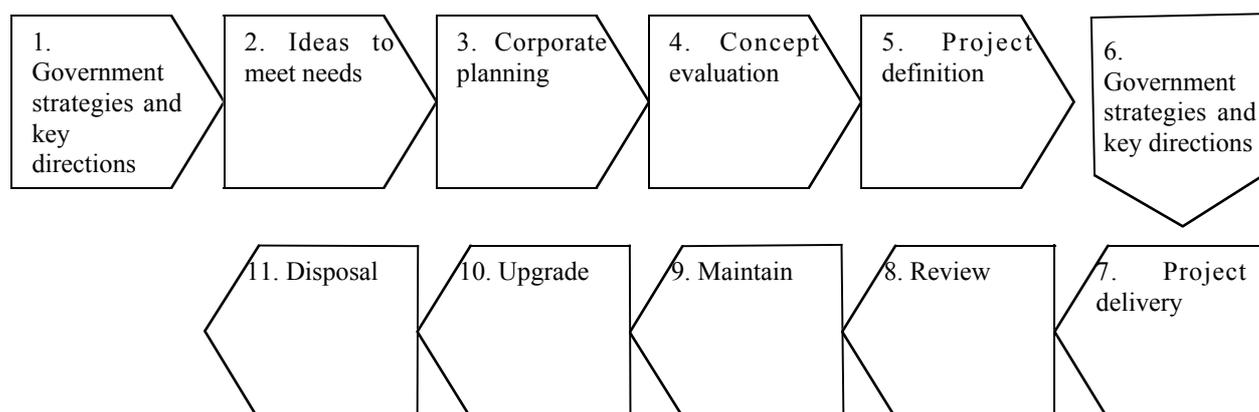
- *Development Act 1993*;
- *Environment Protection Act 1993*;

- *Pastoral Land Management and Conservation Act 1989;*
- *Soil Conservation and Land Care Act 1989;*
- *Animal and Plant Control (Agricultural Protection and Other Purposes) Act 1986;*
- *Native Vegetation Act 1991; and*
- *South Eastern Water Conservation and Drainage Act 1992.*

### **Economic viability**

The South Australian Government endorsed its Strategic Asset Management Framework in July 1995. Included as part of this is the Project Initiation Process. The South Australian Government states that this process emphasises the need for quality corporate planning and a robust evaluation prior to any firm decision being made to acquire or place assets. Key elements of the process are provided by Figure 10.6.1 below.

**Figure 10.6.1: Project Initiation Process**



In outlining the concept evaluation phase, South Australia note that the total impact on the community and government system should be evaluated and that economic evaluation should include a cost benefit analysis where the costs and benefits can be qualified, and a cost effectiveness analysis where they can not. Selection criteria also need to be identified to establish the most attractive options.

South Australia states that the benefits of the process include:

- a full needs based assessment of the proposed investment;
- a consistent process for ranking priorities on a state and agency basis; and
- consideration of innovative approaches such as market based solutions, no build strategies and ‘end use’ planing.

Under the Project Initiation Process, Cabinet approval is required for any project which has an estimated capital cost of \$4 million or more or greater than \$1 million where the expenditure is not part of a Cabinet approved budget. Information

technology projects costing more than \$500 000 also require Cabinet approval. Ministers are authorised to approve projects with an estimated capital cost of up to \$1 million and between \$1-4 million where the expenditure is part of a Cabinet approved budget. Ministers may delegate responsibility approval for projects up to \$500 000. However, while the general principles apply to all government agencies the details of the process only apply to non-residential building works of non-commercial sector agencies.

South Australia states in its 1999 annual report to the Council that SA Water is subject to commercial investment criteria for its capital expenditure program and have provided supplementary information to support this claim. The South Australian annual report also notes that it is reviewing its criteria for investment in new irrigation or rural water supply schemes, and for the extension of existing schemes. The aim of this review is ensure investments only be undertaken after thorough economic and environmental assessment.

### **COUNCIL COMMENT**

The Council understands that the *Water Resources Act 1997* facilitates prescription of resources where proposed developments may have a significant environmental impact and closer, ongoing management and monitoring is appropriate.

The Council understands that groundwater in the Dry Creek area and three tidal inlets were prescribed to ensure that Penrice Soda Products Pty Ltd has ongoing access to these resources. An exemption from the licensing and resource management requirements of the *Water Resources Act 1997* was also provided under the *Water Resources (Penrice Exemption) Regulations 1997*. The Council also understands that two prescribed groundwater resources in the State's Far North covered by the *Roxby Downs (Indenture Ratification) Act 1982* will not be subject to water allocation plans. However, in all of the above cases resource management arrangements are provided by regulations or licence conditions and include monitoring and annual reporting obligations. The impact of the Roxby Downs project on groundwater resources was considered as part of an environmental impact statement in 1983 and an amended environmental impact statement in 1995.

The Council also notes that for resources that are not prescribed, catchment water management plans and local water management plans can supplement the provisions of existing relevant legislation such as the *Development Act 1993* and the *Environment Protection Act 1993*.

The Project Initiation Process appears to provide a robust process for ensuring the economic viability for significant government expenditure by non-commercial activities. The Council notes SA Water's 6 per cent medium term rate of return target on metropolitan water assets and is satisfied with information provided on capital expenditure approval processes adopted by SA Water.

The Council also notes that South Australia's review of its criteria for ensuring the economic viability and ecological sustainability of new water investments is expected to be completed by June/July 1999. The Council is satisfied that tranche two commitments in relation to this aspect of the agreed framework have been met.

#### **10.6.2.8 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.

#### **South Australian arrangements**

On 1 July 1997 the South Australian Government transferred ownership of the Government Highland Irrigation District, which provided irrigation distribution systems to 8 500 hectares of land, to eight self-managing irrigation trusts. These bodies in turn created the Central Irrigation Trust to provide day-to-day management and operational services for each scheme. Headworks rehabilitation of all 8 schemes will be completed in 1999.

The remaining State Government irrigation schemes are those located along the lower reaches of the Murray and cover an area of 4 920 hectares. The transfer of these areas to self management is unlikely to occur before rehabilitation of the schemes has been completed.

The transfer to self management of the Loxton Irrigation District (a Commonwealth scheme) is also expected following headworks rehabilitation. Currently, the scheme is managed under contract by the Central Irrigation Trust on behalf of the State Government, which in turn is managing this on behalf of the Commonwealth. A rehabilitation proposal has been prepared and is currently being negotiated between the State and Commonwealth Governments.

#### **COUNCIL COMMENT**

Based on the information provided, the Council is satisfied that South Australia has met its tranche two commitments with respect to devolving the management responsibilities of government owned irrigation schemes. The Council will however consider this issue in detail as part of its third tranche assessment.

### **10.6.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

#### **Institutional Role Separation**

**10.6.3.1 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 NCC 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.

#### **South Australian arrangements**

##### **Resource management**

Resource management functions were separated from service provision responsibilities in January 1994 when water resource management was transferred to the Department of Environment and Natural Resources (now the Department for Environment, Heritage and Aboriginal Affairs (DEHAA)) from the Engineering and Water Supply Department (now SA Water). With the passage of the *Water Resources Act 1997* responsibility for resource management has been devolved somewhat with local government and communities playing a greater role through the various water planning process. The Council understands that DEHAA will work with these groups to ensure that all water plans are consistent with the Act and the State Water Plan. The Council also notes that all plans must be approved by the Minister.

##### **Service provision**

SA Water is responsible for the provision of water supply and sewerage services to metropolitan and country water uses. SA Water was corporatised on 1 July 1995 and reports to the Minister for Government Enterprises.

Ownership of the State's Government Highland Irrigation Districts was transferred to eight self-managing trusts in July 1997. South Australia anticipates that ownership of the remaining State owned irrigation services will be transferred to scheme participants upon completion of headworks rehabilitation programs. In the interim, SA Water will continue to manage supply and drainage systems in collaboration with scheme participants.

##### **Price regulation**

Under the *Government Business Enterprises (Competition) Act 1996* responsibility for providing advice on prices charged by declared government businesses falls to the State's Competition Commissioner. Under the Act, a Commissioner is not subject to ministerial direction about a recommendation, finding or report. However, the Minister may require that certain facts, policies or issues be taken into account in a particular investigation. Further, responsibility for setting prices remains with the Government.

The Competition Commissioner provided his first report on SA Water pricing policies in April 1997. The South Australian Competition Commissioner is also responsible for investigating and recommending solutions to competitive neutrality complaints.

### **Environmental regulation**

The Environmental Protection Authority (EPA) was established in 1994 and is responsible for water quality issues. The EPA is currently in the process of developing an Environmental Protection (Water Quality) Policy under the *Environmental Protection Act 1993*. The Policy was initiated in response to, among other things, the absence of consistent statewide protection for all water bodies including inland waters. The policy will also strive to ensure industries operate under uniform conditions and to improve water quality and encourage better use of wastewater. To this end the Policy will set out controls and requirements, the violation of which will be enforceable offences.

Water quantity issues are addressed primarily through the water planning processes provided by the *Water Resources Act 1997* (see discussion of water allocations and trading below). In addition the Act requires that users obtain a permit or licence for certain water effecting activities. There is also potential for Ministerial intervention to limit or prohibit water use where a water resource is under threat from overuse. Failure to comply with either of these provisions can incur a financial penalty.

### **COUNCIL COMMENT**

Based on the information provided the Council is satisfied that current South Australian arrangements provide sufficient separation between the roles of water resource management, standard setting and regulatory enforcement and service provision.

However, the Council notes that in responding to the Competition Commissioner's first investigation into SA Water's pricing policies the Government stated that the report represented a 'rational economic framework to which the government will add its judgements on social or equity concerns'. Limiting the Competition Commissioner's investigations to 'purely economic findings' may constrain the relevance of the resulting recommendations.

Enabling the Competition Commissioner to consider a broader range of factors (such as the potential social and environmental implications of the Commissioner's economic analysis) may assist future recommendations to be of greater relevance and usefulness to the government in identifying the most appropriate pricing arrangements. The Council therefore suggests that future investigations enable the Commissioner to take a broader range of matters into consideration to improve the decision usefulness of the resulting report.

SA Water is the State's primary service provider but is also responsible for definition and administration of plumbing standards throughout the State, although the Council understands that the latter role is in the process of being transferred to Planning SA. South Australia has provided the following timetable for the transfer of plumbing regulation.

- Issue to be considered by Planning SA's Strategy and Policy Committee in July 1999.
- Proposed amendments to relevant legislation and regulations to be put before the South Australian Parliament in October/November 1999.
- Agreed amendments to legislation and regulations to be made in January 2000, followed by the transfer of resources from SA Water to Planning SA.

The Council will revisit this issue as part of its third tranche assessment.

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

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

**South Australian arrangements**

The South Australian Water Corporation was corporatised on 1 July 1995 and is thus subject to the *Public Corporations Act 1993* which requires:

- provision of a charter and Performance Statement;
- separation of the commercial and non-commercial operations; and
- implementation of competitive neutrality provisions (through tax and rate equivalents and debt guarantee fees).

The Act also contains provisions relating to the duties and liabilities of the Board of Directors, the establishment of subsidiaries and miscellaneous provisions including dividends, internal audit, accounts and annual reports.

The South Australian Water Corporation has outsourced all water supply and sewerage services in the Adelaide metropolitan region and has entered into a build operate and transfer (BOT) contract for the construction of 10 water filtration plants in country areas.

**COUNCIL COMMENT**

Based on the information provided, the Council is satisfied that the State's metropolitan service provider has demonstrated an appropriate commercial focus.

**Performance Monitoring and Best Practice**

**10.6.3.3 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 NCC 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 NCC recognises the first reports for the NMU and rural sectors are likely to be a rough cut in the initial years.

### **South Australian arrangements**

The South Australian Water Corporation participates in WSAA Facts performance monitoring process. South Australia is also participating in the development of a similar national performance monitoring process being developed for non-major urban and rural services. When completed only two South Australian water supply areas will fall within the assessment band established for this process. However, for comparison purposes it is proposed that the State will also report on ‘Outer Metropolitan’ and ‘Total Country’

### **COUNCIL COMMENT**

The Council supports South Australia’s participation in the above processes and the inclusion of the ‘Outer Metropolitan’ and ‘Total Country’. The Council is of the view that South Australia complies with its second tranche requirements in relation to performance monitoring and best practice.

## **10.6.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

### **10.6.4.1 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 NCC will recognise the progress towards achieving legislative change during its assessment of compliance.

### **South Australian arrangements**

#### **Prescribed resources**

The *Water Resources Act 1997* provides a system of transferable property rights for those water resources (including water in a watercourse, groundwater, and surface run-off) that have been declared as prescribed water resources under the Act. Water resources are declared as prescribed by the Governor upon the recommendation of the Minister when the level of consumptive use and condition of the resource suggest that closer management is necessary. There are currently 23 prescribed water resources in South Australia.

Water licences are issued by the Minister and must be consistent with the relevant water allocation plan. Under the Act people may not take water from a prescribed resource, other than for stock and domestic use, unless licensed to do so or by notice published by the Minister in the Government Gazette (although the latter is generally only for a particular purpose and period of time). The right to water for stock and domestic use can be overridden by the regulation declaring the resource.

Under Part 5 of the Act, water licences are the owner’s personal property and are separated from land title. Licences also stay in force until they are terminated by or under the Act. While licences specify volume and conditions of use they do not specify reliability or quality. However, reliability and quality can be addressed through the relevant water allocation plan.

The *Water Resources Act 1997* also extends the coverage of previous legislation so that surface water flowing through an undefined channel is now treated the same as groundwater and water in a watercourse. Consequently, surface water run-off can now be included in water plans.

All diversions from the River Murray are fully licensed with irrigation being licensed for some time. Diversions by the South Australia Water Corporation for urban water

have also been recently established and comply with Murray-Darling Basin cap requirements.

### **Other water resources**

There are currently several stressed rivers that are not prescribed but are located in catchment management board areas. Although the above licence system does not apply to these resources, South Australian's 1999 Annual Report to the Council states that the needs of these systems are addressed as part of a broader catchment management plan.

For the State's remaining water resources, local councils are encouraged to prepare local water management plans which, like water allocation plans and catchment water management plans, are submitted for Ministerial approval. No licence is required for these unprescribed water resources but use should be consistent with a local water management plan where one exists. The Council understands that development of one local management plan will begin shortly with several local councils in adjacent catchments considering options for applying this process. South Australia have advised that they intend to appoint a local water management planning officer in 1999-00 to assist and promote the development of local water management plans.

### **COUNCIL COMMENT**

The Council supports the inclusion of the surface water run-off within the coverage of the *Water Resources Act 1997*. The Council believes that this will assist in achieving a more comprehensive system of water property rights.

The Council believes that the Act provides an effective legislative framework and the water allocation planning process provides an allocation system for prescribed water resources consistent with tranche two commitments.

The Council will review the effectiveness with which the State's allocation system is implemented in the lead up to its third tranche assessment. In particular, the Council will be interested in evidence of completed water plans that provide for sound management of prescribed resources based on robust assessments of environmental needs.

**10.6.4.2 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 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 2005, allocations and trading must be substantially completed for all river systems and groundwater resources identified in the agreed and endorsed individual implementation programs.

### **South Australian arrangements**

South Australia’s March 1999 status report on the implementation of the National Policy on the Provision of Water for Ecosystems states that the *Water Resources Act 1997* provides a range of water planning processes that may be implemented depending on the different requirements of the resource in question.

### **Prescribed resources**

South Australia’s 1998 Annual Report notes that the Act provides formal recognition and protection of environmental water provisions for prescribed resources. The primary vehicles for achieving this are the relevant water allocation plans. Responsibility for preparing water allocation plans rests with either a catchment water management board as part of its catchment water management plan or, where a board does not exist, by the relevant water resources planning committee. The Act requires that boards and committees collectively have skills in natural resource management, local government and community affairs. Attachment 1 provides a list of resources for which water allocation plans are currently being developed. While some of these plans are expected to be completed early in 2000, by regulation all must be completed by 1 July 2000.

Water allocation plans or catchment water management plans will not be developed for eight prescribed resources. Of these:

- four were prescribed for to ensure access by Penrice Soda Pty Ltd to one groundwater and three salt water tidal intakes;
- two are subject to the *Roxby Downs (Indenture Ratification) Act 1982*; and

- two are likely to be de-prescribed in the near future.

Once the resource becomes prescribed there is an interim period where water can still be taken without a licence (unless restricted or prohibited by the Minister, see below). During this time the Minister must prepare an assessment of the capacity of the resource, including consideration of environmental needs. At the end of the interim period any necessary allocation changes are made.

In preparing water allocations plans the relevant committee or board must:

- assess the water needs of dependant ecosystems located either within or downstream of the prescribed resource;
- set out how water will be allocated to licensed users in the form of a property right;
- describe how water trading will apply in the area;
- provide for monitoring arrangements; and
- provide for sustainable allocation and use of the available water.

For regulated systems operating rules for storage and regulatory structures are included in catchment water management plans while for unregulated surface and groundwater resources water sharing rules are being developed as part of water allocation planning process.

South Australia anticipates that each water allocation plan will take 18 months to two years to complete due to the amount of public consultation required. There are currently 15 water allocation plans being developed. Of these, one applies to a prescribed watercourse, two others apply to areas where all water resources have been prescribed (ie groundwater, surface water and watercourse water) and the remaining 12 water allocation plans apply to prescribed groundwater resources.

As noted above, the first round of water allocation plans are required by regulation to be complete by 1 July 2000. In the interim the resources in the associate areas are covered by allocation plans developed under the *Water Resources Act 1990*. While not as sophisticated, particularly in relation of environmental flows, these plans are still designed to provide for sustainable resource use.

A range of methodologies have been adopted in estimating environmental flows and have included the use of expert panels, identifying flow percentiles and undertaking habitat assessments.

In its latest report on compliance with the 1997 cap on water diversions from the Murray Darling Basin the Independent Audit Group note that:

- South Australia's Diversions from the Murray River are within the Cap;
- the State has a reliable measurement system of urban and irrigation use (rehabilitated areas); and

- proposals to further improve the reliability of measurement in the lower Murray and in non-rehabilitated areas are being considered.

### **Other water resources**

As noted above, a number of stressed rivers are not prescribed under the Act. However, they do fall within one of State's six catchment water management boards. As a result the environmental requirements of these systems will be addressed as part of the relevant catchment water management plan. Catchment water management plans are developed in areas where there are a broad range of resource management issues and are required to:

- describe the area's water resources;
- describe the health of water dependant ecosystems;
- assess the water needs of the ecosystem;
- describe the arrangements for monitoring ecosystem health; and
- describe methods for improving the health of the ecosystem.

Catchment water management plans are also able to provide for environmental requirements through their control over 'water affecting activities' such as dams and weirs. This is significant given that farm dams and small scale direct pumping or diversion are the major form of regulation and extraction in certain areas of South Australia.

While the six catchment water management boards are currently in various stages of the planning process, most expect to complete their catchment water management plans by mid 2000. The exception to this is the South East Catchment Water Management Board which is currently preparing five water allocation plans and thus does not expect to complete its catchment water management plan until late 2000 or early 2001.

While not required under the Act, local governments have been encouraged to prepare local water management plans. This process sets out how the local government will perform its functions and exercise its powers under the Act and other relevant legislation. While, responsibility for developing water plans has been significantly devolved to local communities, the Minister assesses all plans. Once approved, local water management plans become statutory instruments. All water plans must be consistent with the broad directions provided by the State Water Plan.

The State Water Plan is currently undergoing its five yearly review. Catchment water management plans are also to be reviewed every five years. While water allocation plans can be reviewed at any time the Council understands that the revised State Water Plan will contain a requirement for water allocation plans to be reviewed at least every five years.

## Other measures

In addition to the water planning processes discussed above, the Act provides for the Minister to intervene in emergency situations where the water resource is under threat from overuse irrespective of whether or not the resource is prescribed. Under section 16 of the Act, in the case of inadequate supply or overuse, the Minister may for a period of up to two years:

- prohibit or restrict water being taken from the resource; or
- direct dams, reservoirs, embankments, walls or other structures to be modified to allow water to pass over, under or through them.

Section 16(2) states that when determining the demands on available water resources the needs for ecosystems that depend on the resource must be taken into account. Under the Act, the above restrictions take effect seven days after notice is provided in the *Gazette* and a local newspaper or immediately where notice is served on an individual. The Minister may also require removal of the means by which water is being taken from the water resource. Failure to comply with a Ministerial notice can incur a fine (\$10 000 for a body corporate and \$5 000 for an individual) and Ministerial representatives may also enter the land to take the action specified on the notice with the target of the notice liable for any costs incurred.

South Australia notes that evidence of the effective application of Section 16 provisions is provided by the Minister recently applying restrictions to:

- surface water resources in the Clare Valley for a period of two years, commencing on 3 March 1999;
- groundwater resources in the Tintinara/Coonalpyn area for a period of 12 months, commencing on 13 January 1999; and
- surface water resources, watercourse water and groundwater resources in the Marne River catchment for a period of two years, commencing on 29 April 1999.

Section 37 of the Act also provides for the Minister to reduce water allocations stipulated on water licences:

- to prevent a reduction, or further reduction, in water quality;
- to prevent damage, or further damage, to dependant ecosystems;
- because there is insufficient water to meet existing or expected future water demands; or
- because there has been, or is to be a reduction in the quality of water available pursuant to the *Murray-Darling Basin Act 1993* or the *Groundwater (Border Agreement) Act 1985*.

In the absence of an alternative scheme set out in the regulations, allocations are reduced proportionately.

## 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 is satisfied that South Australia's water planning process acknowledge the potential impact of river regulation and/or consumptive use.

***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***

The Council accepts that a portfolio of scientific methods may be most appropriate for identifying the environmental flow requirements of the State's varied water resources. The Council is also cognisant that ongoing work on environmental flows will be needed. For example, South Australia's status report on the implementation of the National Policy on the Provision of Water for Ecosystems states that the ecological understanding of environmental water requirements for seasonal, episodic and ground water dependant streams is especially poor. The report also states that these types of aquatic systems predominate in South Australia.

Given the evolving nature of the scientific inquiry in this area, the Council notes the importance of ongoing assessment of resources and periodical review of water plans, as improved analysis and data collection techniques become available.

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

The environmental provisions included in water allocation plans and catchment water management plans are legally recognised. Local water management plans are also statutory instruments once approved by the Minister.

***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.***

The water planning processes adopted by South Australia appear to provide significant scope for existing users to participate in the planning process. Approval processes also appear to provide an adequate safeguard for ensuring that an appropriate balance is struck between the needs of existing users and the environment.

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

As noted above, the Minister may prohibit or restrict the use of a water resource where it is in danger of overuse. Further, Section 37 of the Act also provides for the Minister to reduce water allocations stipulated on water licences where environmental needs are not being met.

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

Under the Water Resources Act 1997, the Minister's decision to grant or vary a water licence must be consistent with the relevant water allocation plan.

Overall, the Council is of the view that the legislative framework provided by the *Water Resources Act 1997*, the various water allocation plans and the ability of the Minister to intervene when necessary provide an acceptable approach for ensuring provision for water for the environment consistent with tranche two commitments.

The Council notes that while no licensing arrangements exist for resources that are not prescribed, water use and provision for the environment is addressed through catchment management plans and local water management plans. Should a resource become stressed the Act provides for intervention by the Minister and declaration as a prescribed resource. The Council is satisfied with this approach for resources that are not in danger of becoming stressed. However, the Council believes that robust monitoring arrangements are crucial to ensuring the effectiveness of this approach. The Council supports South Australia's decision to promote the development of local water management plans by appointing a local water management planning officer.

The Council notes South Australia's decision not to prepare water allocation plans for a number of prescribed resources covered by the *Water Resources (Penrice Exemption) Regulations 1997* and the *Roxby Downs (Indenture Ratification) Act 1982*. Water management arrangements for these resources are provided by regulations or licence requirements and include annual reporting and monitoring obligations. These measures appear to be consistent with tranche two commitments.

The Council will review water allocation plans in the lead up to its third tranche assessment to ensure that they are based on a robust assessment of environmental needs.

The Council agrees to the implementation programs provided by South Australia. In doing so, it notes the following relevant matters:

- the National Land and Water Resource 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
- the 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 over time, provided there is agreement between South Australia and the Council.

### **10.6.4.3 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 NCC will assess the adequacy of trading rules to ensure no impediments. If legislation has not achieved final parliamentary passage, the NCC 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 NCC 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.

#### **South Australian arrangements**

##### **Intrastate trade**

While trade in water allocations has been possible since the early 1980's South Australia's 1999 Annual Report states that the *Water Resources Act 1997* has clarified and made transparent the legal basis for water allocations and both inter and intra state trading.

Temporary and permanent transfer of property rights was first introduced to South Australia in 1983 for private diverters from the River Murray and in 1984 for groundwater allocation in the Northern Adelaide Plans. Since that time trade has taken place in 7 prescribed areas, most of which have been groundwater resources. Trading rules are developed for individual prescribed resources in consultation with the community as part of the water allocation planning process.

Amendments to the *Irrigation Act 1994* have been made to enable trade by irrigation trusts on behalf of trust members. According to South Australia these amendments have removed significant barriers to trade.

The Act requires the Minister, in deciding on whether to permit a licence transfer, to consider whether the transfer is consistent with the relevant water allocation plan, the public interest and regulations made under the Act. The Minister must also not grant a transfer without the written permission of any person listed on the register of water licences as having an interest in the licence.

Before granting a licence the Minister may, at the applicant's expense, require an assessment of the effect of granting the licence by an expert appointed or approved by the Minister. The Minister may also reduce the amount transferred. For example, where water will not be taken from the same part of the water resource following the trade an adjustment may be made to ensure that the resulting withdrawal does not prejudice other licensees by exceeding the availability of water in that part of the resource. An adjustment may also be made for evaporation.

### **Interstate trade**

South Australia has participated in an interstate trading trial coordinated by the Murray Darling Basin Commission in the Mallee area of the Murray Darling basin. The Pilot project commenced on 1 January 1998 for a period of two years or until a net volume of 10 GL has been traded on from any jurisdictions.

### **COUNCIL COMMENT**

Consistent with their tranche two commitments South Australia has removed all legal or institutional barriers to water trading in prescribed areas. However, the Council notes that greater trading in these areas is unlikely to occur until demand for water increases and the resources become fully allocated.

The Council is satisfied that South Australia has met its tranche two commitments with respect to interstate trading.

## **10.6.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.6.5.1 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 NCC will examine the programs established by jurisdictions to address areas of inadequacy. Programs would desirably address such areas as government agency coordination, community involvement, coordinated 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.

#### **South Australian arrangements**

The *Water Resources Act 1997* covers all sources of water namely, surface water runoff, water in water courses, ground water, stormwater and wastewater. The Act also provides a hierarchical approach to water resource management. For each prescribed area, this involves the State Water Plan, the relevant water allocation plan and, where the resource lies within the catchment area of a catchment water management board, the relevant catchment water management plan. In addition, for water resources located within the area of a local council, a local water management plan may be prepared consistent with the broad direction provided by the State Water Plan.

South Australia's 1999 Annual Report to the Council notes that the State will be developing integrated regional strategies across the State in partnership with the Commonwealth Government under the National Heritage Trust. Preparation of these strategies began in 1998 and involved relevant stakeholders from the community and State and local government.

South Australia also noted that over the period 1994-97 DEHAA, in partnership with rural community groups and the Torrens Catchment Water Management Board, developed and implemented action plans aimed at improving riparian zone management in four Mount Lofty Catchments using National Landcare Program Funds. Three of the four catchments are critical for public water supply. Similar projects were conducted for the North Para and Marne catchment in 1997-98 using funds from a local government based Catchment Management Subsidy Scheme. Riparian Zone management and environmental flow plans will be developed for a further four catchments using National Heritage Trust funds over the period 1998-2000.

## COUNCIL COMMENT

Based on the information provided the Council is satisfied that South Australia has met its second tranche commitments in relation to adopting an integrated approach to resource management.

### **10.6.5.2 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.

#### **South Australian arrangements**

Under the *Environmental Protection Act 1993* the EPA is preparing an Environmental Protection (Water Quality) Policy. The 1999 South Australian Annual Report to the Council stated that the Policy will be consistent with the framework provided by the National Water Quality Management Strategy. The policy will apply to all inland, estuarine and marine waters and will provide a consistent framework for protecting the quality of all water bodies and ensure that all industries operate under uniform conditions with respect to water quality. South Australia states that the Policy will seek to not only protect and improve the quality of the State's water bodies, but also to encourage better use of wastewater. The Council understands that the Policy will undergo public consultation during Spring 1999.

South Australia has established six catchment water management boards which currently cover approximately 80 per cent of the State's populated area. In May 1999, the South Australian Government announced its intention to establish a seventh catchment water management board for the Arid Areas of the State. South Australia anticipates that the new Arid Areas Catchment Water Management Board will cover over 75 per cent of the State. A further board for the Eyre Region is also being considered.

The *Catchment Water Management Act 1995* established the State's first two catchment management boards. Under this Act, the Torrens and Patawalonga Catchment Water Management Boards focused on addressing major storm water pollution problems through the preparation and implementation of their respective catchment water management plans. The *Catchment Water Management Act 1995* has since been repealed by the *Water Resources Act 1997*, and while incorporating the 1995 Act's key principles, has significantly expanded on them. As a result, catchment water management boards now have a much broader focus and that is the sustainable and integrated management of all of each catchment's water resources, including wastewater.

Initiatives addressing urban water use have included the Spencer Region Strategic Water Management Plan and the Water Sustainability in Urban Areas project. The Bolivar–Virginia pipeline project will enable 30 000 ML of effluent (or approximately 35 per cent of Adelaide's total effluent) to be reused through irrigation. This figure could be increased to 48 000 ML with surface storage and/or aquifer storage and

recovery. The Government has also approved a private sector proposal to use effluent from the Christies Beach Wastewater Treatment Plant for irrigation in the Willunga Basin. Construction of the project began in September 1998 and it is anticipated that the scheme will be fully commissioned in August 1999.

#### **COUNCIL COMMENT**

Based on the information provided the Council is satisfied that South Australia has met its second tranche assessment commitments with respect to water quality.

## **10.6.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**10.6.6.1 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.

### **South Australian arrangements**

The South Australian Annual Report to the Council states that extensive communication and education was undertaken in developing the *Water Resources Act 1997*. The Act itself provides for a significant amount of community involvement in water management through the water allocation, catchment water management and local water management planning processes. All three types of plans are required to adopt the same consultation process. The first stage in this process requires community consultation before and after the preparation of a proposal statement. The proposal statement outlines the proposed content of the water allocation plan, specifies the investigations required prior to preparation of the plan and any additional consultation planned beyond that required by the Act. The public must also be invited to make written submissions before and after the preparation of draft water plan, and a public meeting must be held. In practice, however, many public meetings and workshops are held. South Australia's Annual Report states that initiatives to help ensure adequate community knowledge and understanding of key issues include newsletters, public meetings and displays.

Community consultation programs are also being implemented for the Statewide policies such as the Environment Protection (Water Quality) Policy.

The *Water Resources Act 1997* also requires the Minister to compile, maintain and update information on the State's water resources, and to keep a public register of water licences and permits.

Section 11 of the *Government Business Enterprises (Competition) Act 1996* states that at the beginning of a prices oversight investigation the Competition Commissioner must give public notice inviting interested parties to make a written representation on the matter being investigated. However, in his first investigation into SA Water prices the Competition Commissioner noted that future investigations include:

*'...a greater emphasis on public consultation than has been possible within the timeframe of this review.'* (p8)

In 1996-97 the development of the State Water Archive was initiated by DEHAA. The aim of the archive is to make information on the location, quantity, quality, use, allocation and management of the State's water resources more available to the

Government, the private sector, community groups and the general public. The water archives project involves the development of:

- a water licences and permits register;
- a water information directory;
- a water web-site; and
- a water resources information database enabling integration of water information across DEHAA and other agencies.

South Australia has also developed 'Watercare – A Curriculum for Schools'. The program provides curriculum information for Reception through to Year 12. Stage three of the program is an educational web-site providing case studies for secondary school students illustrating best practice water resource management. Stage three was developed to meet the requirements of South Australian Certificate of Education but is intended to become a community resource. The program was developed jointly by DEHAA and the Department of Education, Training and Employment.

South Australia has also participated in national initiatives such as Waterwatch and National Water Week.

#### **COUNCIL COMMENT**

The Council notes the recommendation made by the South Australian Competition Commissioner, as part of his April 1997 review of SA Water prices, that future investigations include a greater emphasis on public consultation. Consequently, the Council will review as part of its third tranche assessment the level of consultation undertaken when the Competition Commissioner next reviews the pricing policies of SA Water in 1999.

The devolution of water resources management to see a greater level of consultation and participation by the community is supported by the Council. Greater community involvement can be expected to lead to positive outcomes, for example, through local communities taking ownership of significant water management issues. However, the community must have a sound understanding of the relevant issue if the potential benefits of this devolution are to be realised. Based on the information provided, it is the Council's view that the educational and consultative measures taken by South Australia are sufficient to achieve this. It is the Council's view that South Australia has met its second tranche commitments in relation to education and consultation.

## **Attachment 1: Prescribed Water Resources Areas for which water allocation plans are being prepared under the *Water Resources Act 1997***

### **Groundwater Resources**

- County Musgrave Prescribed Wells Area (located on Eyre Peninsula) ERWRPC
- Southern Basins Prescribed Wells Area (located on Eyre Peninsula) ERWRPC
- Northern Adelaide Plains Prescribed Wells Area NABCWMB
- McLaren Vale Prescribed Wells Area OCWMB
- Mallee Prescribed Wells Area MWRPC
- Noora Prescribed Wells Area RMCWMB
- Angas Bremer Prescribed Wells Area RMCWMB
- Tatiara Prescribed Wells Area (located in the Sth East) SECWMB
- Padthaway Prescribed Wells Area (located in the Sth East) SECWMB
- Naracoorte Ranges Prescribed Wells Area (located in the Sth East) SECWMB
- Comaum-Caroline Prescribed Wells Area (located in the Sth East) SECWMB
- Lacepede-Kongorong Prescribed Wells Area (located in the Sth East) SECWMB

### **Groundwater Resources, Surface Water and Watercourses**

- Barossa Valley Prescribed Water Resources Area NABCWMB
- Clare Valley Prescribed Wells Area and Watercourses - (surfacewater resources in this area are currently under section 16 restrictions and will be prescribed in mid 1999) CVWRPC

### **Watercourses**

- River Murray Prescribed Watercourse RMCWMB

All of the of the above water allocation plans are required by regulation to be completed by 1 July 2000.

#### **Key**

ERWRPC	Eyre Region Water Resources Planning Committee
NABCWMB	Northern Adelaide and Barossa Catchment Water Management Board
OCWMB	Onkaparinga Catchment Water Management Board
MWRPC	Mallee Water Resources Planning Committee
RMCWMB	River Murray Catchment Water Management Board
SECWMB	South East Catchment Water Management Board
CVWRPC	Clare Valley Water Resources Planning Committee

## 10.7 WATER REFORM, Tasmania

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## Abbreviations

ABS	Australian Bureau of Statistics
ANZECC	Agriculture and Resource Management Council of Australia and New Zealand
ARMCANZ	Australian and New Zealand Environment and Conservation Council
AUSRIVAS	Australian River Assessment Scheme
COAG	Council of Australian Governments
CPA	Competition Principles Agreement
CSO	Community Service Obligation
DPIWE	Department of Primary Industries, Water and the Environment
EWA	Esk Water Authority
GBE	Government Business Enterprise
GPOC	Government Prices Oversight Commission
HEC	Hydro-Electric Corporation
HRWA	Hobart Regional Water Authority
ML	Megalitre
NCP	National Competition Policy
NMU	Non-Metropolitan Urban
NWQMS	National Water Quality Management Strategy
NWRWA	North West Regional Water Authority
OMA	Operational, Maintenance and Administration
PEV	Protected Environmental Value
RMPS	Resource Management Planning System
RWSC	Rivers and Water Supply Commission
SPWQM	State Policy on Water Quality Management
TER	Tax Equivalent Regime
WACC	Weighted Average Cost of Capital
WQO	Water Quality Objective
WSAA	Water Services Association of Australia

## B10 Water Reform

### B.10.7 TASMANIAN PROGRESS AGAINST COAG WATER REFORM COMMITMENTS

#### B10.7.1 EXECUTIVE SUMMARY

This is an assessment of Tasmania'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 full cost recovery, available evidence suggests the majority of urban water and wastewater services and all bulk water providers recover costs. Tasmania has developed guidelines to assist urban water and wastewater providers better account for assets renewals and maintenance. Tasmania has also undertaken to develop guidelines to promote greater levels of cost recovery and to improve urban water and wastewater reporting requirements. Independent advice on bulk water prices is provided by the Government Prices Oversight Commission.
- Tasmania has not met its commitment to introduce two part tariffs where cost effective by 1998. Guidelines to assist local governments identify the cost effectiveness of tariff reform have been developed and a process to apply and audit compliance with these guidelines will be completed by the end of October with a recommendation being made to the Premier by the end of November 1999. The Council acknowledges that progress in this area has been delayed by a range of factors such as the unsuccessful council amalgamation program. Tasmania has committed to implement two part tariffs where cost effective and to provide in December 1999 a timetable for the implementation of two part tariffs.
- Two of the State's three bulk water suppliers charge on a volumetric basis with the third adopting a two part price comprising of a fixed charge and a volumetric charge. Available information suggests that volumetric charging for industrial waste is limited.
- Cross-subsidies have been largely addressed by the State's bulk water providers. While the Council is potentially concerned with the use of property values in water and wastewater charges it appears that the potential distortions arising from property values are limited by extensive use of minimum fixed charges.
- The Council is satisfied that the State Government's community service obligation (CSO) framework meets COAG commitments. However, most of the State's

water supply and wastewater activities are local government responsibilities and there is currently no CSO framework for local government businesses. Tasmania has undertaken to work with local governments to develop an appropriate CSO framework.

- Bulk water providers earn positive rates of return and the State has undertaken to develop guidelines to assist a greater proportion of water and wastewater businesses to earn positive rates of return.
- New investments are subject to appraisals of economic viability and ecological sustainability.
- Operational responsibility for the management of irrigation areas has not been significantly devolved in Tasmania although participants are consulted periodically on key issues.

Therefore, while some commitments have been met, the Council is not satisfied that Tasmania has met its commitments with respect to two part tariffs but notes the extenuating circumstances faced by Tasmania and the State's commitment to introduce appropriate reform. The Council will therefore revisit this issue as part of a December 1999 assessment with failure to meet agreed timelines potentially incurring a deduction of competition payments. The Council will also look for progress on the devolution of management responsibility to irrigation scheme participants in its December 1999 assessment. The Council will review progress with CSO arrangements in a June 2000 supplementary assessment and look for improvements in urban water and wastewater rates of return as part of its third tranche.

### ***Institutional reform***

- Current institutional arrangements are not consistent with COAG commitments. However, measures contained in the Water Management Bill will address the Council's concerns. The Council notes that the passage of the Bill has been delayed by largely external factors and will look for appropriate arrangements to be in place within twelve months.
- Bulk, water and wastewater activities have a commercial focus consistent with COAG commitments.
- Tasmanian water businesses are participating in benchmarking and performance monitoring programs.

Therefore, the Council is satisfied with progress as regards commercial focus, benchmarking and performance monitoring but it will review progress towards achieving institutional separation consistent with COAG commitments as part of a June 2000 supplementary assessment.

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

- Current arrangements do not provide a comprehensive system of water entitlements backed by the separation of water property rights from land title and a clear specification of entitlements in terms of volume, reliability or transferability. However, the passage of the Water Management Bill will establish an appropriate

framework for a comprehensive entitlements system. Similarly, the water management planning process established by the Bill appears to provide an appropriate mechanism for making provision for environmental needs consistent with COAG commitments.

- Tasmania's implementation program for allocations is provided in Attachment 3. In doing so, the Council notes that the implementation programs may change over time provided there is agreement between Tasmania and the Council.
- Current arrangements for trading in regulated water appear consistent with COAG commitments while the passage of the Water Management Bill (which has been introduced into Parliament) will remove all regulatory barriers to trading unregulated water.

Therefore, the Council will be satisfied that Tasmania has complied with these aspects of the framework following passage of the Water Management Bill. The Council will look for the Bill to be passed by June 2000 and will consider progress in passing the Bill at that time.

#### ***Environment and water quality***

- Tasmania has established integrated resource management structures, policies and practices that satisfy tranche two commitments.
- Tasmania has made progress in implementing National Water Quality Management Strategy Guidelines.

The Council is satisfied that Tasmania has complied with this aspect of the framework.

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

The Council is satisfied that Tasmania has engaged in appropriate public consultation and education regarding water reform.

### **Assessment**

Tasmania has achieved progress towards many of its second tranche water commitments. However, some commitments in relation to institutional reform, and allocation and trading and some aspects of pricing reforms have not been met. Progress with urban pricing reform and the passage of the Water Management Bill have been delayed by factors such as the unsuccessful compulsory council amalgamation program and the Basslink project. The Council also notes that where commitments have not been met a process for achieving appropriate reform has been agreed.

Therefore, after considering all the above matters the Council has decided to reassess outstanding issues in supplementary assessments in December 1999 and June 2000. The Council will look for Tasmania to honour its commitment on two part tariffs and provide, by mid December 1999, an implementation timetable for those local governments where it is found that introducing two part tariffs is expected to be cost

effective. The Council will revisit this issue at that time. The Council will look for this timetable to see the implementation of two part tariffs, where appropriate, as soon as possible. Failure by Tasmania to provide the agreed timetable will see the Council revisit the appropriateness of recommending a deduction of competition payments. Progress with devolution of operational responsibility for the management of irrigation areas will also be considered as part of the December 1999 supplementary assessment.

Similarly, the Council will look for necessary legislation to be passed to met the State's commitments with respect to institutional separation, allocation and trading by June 2000. The Council will also assess progress with implementing appropriately structured two part tariffs and development of a framework for urban water and wastewater CSOs as part of a supplementary assessment at this time. Insufficient progress in relation to these issues may have implications for the second half of the State's tranche two competition payments.

## **10.7.2 REFORM COMMITMENT: COST REFORM AND PRICING**

### **10.7.2.1 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.

### **Tasmanian arrangements**

#### ***Urban and NMU service providers***

Urban water supply and wastewater are local government responsibilities in Tasmania. Bulk water for 18 of the State's 29 local councils is supplied by the State's three metropolitan bulk water providers, the Hobart Regional Water Authority (HRWA), the North West Regional Water Authority (NWRWA), and the Esk Water Authority (EWA). The remaining local governments take, treat and reticulate water themselves. The exceptions to this are the Tasman Council which does not provide urban water services and the Glamorgan/Spring Bay Council which operates the Prosser Water Supply Scheme under contract to the Rivers and Water Supply Commission (RWSC).

With the establishment of the HRWA and EWA as joint authorities under the *Local Government Act 1993* ownership of the relevant State Government assets and responsibility for bulk water provision have been passed to the authorities' customer councils. The NWRWA is currently a State owned, government business enterprise (GBE). However, legislation transferring ownership to its customer councils was passed in 1997 and will be proclaimed following the passage of the *Local Government Amendment Act 1999*. The Council has been advised that the NWRWA is expected to commence as a joint authority from 1 July 1999.

### ***Urban water supply and wastewater (metropolitan and NMU)***

Information on the costs, prices and revenues associated with urban water supply is included in annual operational plans submitted by local governments to the Local Government Office.<sup>378</sup> However, these plans do not report real rates of return.

The Council notes that the competitive neutrality timetable provided in Tasmania's second tranche report to the Council requires significant local government businesses (including water and wastewater businesses) to introduce full cost attribution by January 1999. As at 31 December 1998, 26 local governments had applied or were applying full cost attribution. In a number of cases full cost attribution will be achieved by 30 June 1999 and its application backdated to 1 January 1999. Treasury has undertaken to work with the three local governments yet to initiate the introduction of full cost attribution to ensure compliance.

The State's June 1997 guidelines for significant local government business introducing full cost attribution recommend provision for:

- direct and indirect operating costs;
- direct and indirect capital costs including depreciation and the opportunity cost of capital; and
- competitive neutrality costs such as provision for taxes and guarantee fees.

The 1997 guidelines also note that the opportunity cost of capital should be calculated on the written down current cost of assets and that from 1 July 1997 the Local Government Office will, on a biannual basis, provide the rates to be applied to particular types of significant business activity.

ABS Government Finance Statistics suggest that in 1996-97 (the most recent year for which data is available) more than two thirds of water supply and three quarters of sewerage services recovered costs. However, an April 1999 survey of the State's local governments suggests that only five local governments earned a positive rate of return with most of the remaining local governments stating that either cost recovery (rather than a target rate of return) was their immediate priority or that they were currently unable to provide rate of return information. Information provided to the Council suggests extensive use of the deprival approach for valuing water infrastructure assets.

In December 1998, the State Government commissioned Government Prices Oversight Commission (GPOC) to establish a set of principles to assist local governments meet the asset renewal and asset maintenance requirements provided by the ARMCANZ pricing guidelines. These guidelines have been completed and their appropriate application will be assessed by an audit committee comprised of representatives from the Department of Primary Industries, Water and Environment (DPIWE), Treasury, the Local Government Office and a peer group of local government representatives.

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**378** The Local Government Office is located within the Department of Premier and Cabinet.

The Council also understands that Tasmania intends to engage GPOC to determine pricing guidelines consistent COAG commitments and that local governments will then be required to include sufficient information in their operating plans to enable GPOC to assess compliance. Tasmania has also advised the Council that steps will be taken to require local governments to make operational reports available for public comment 42 days before setting prices. In addition, the Council notes that the Treasurer with the agreement of the portfolio Minister (in this case the Minister for Local Government) can declare non-complying water services as monopoly services under the *Government Prices Oversight Act 1995*. Declaration would result in a formal GPOC review and price determination by the Minister.

### ***Bulk water***

On 31 January 1998 the State's three metropolitan bulk water suppliers were declared monopoly services for the purposes of the *Government Prices Oversight Act 1995*. This was followed by a public GPOC investigation into the pricing policies of each of the three bulk water authorities.

The terms of reference for this investigation included a requirement to consider:

- the desirability and feasibility of uniform and consistent pricing principles being developed for, and applied by, the HRWA, the EWA and the NWRWA; and
- the need for the above pricing principles to be consistent with the water pricing principles and other related matters required by the COAG Agreement on the Efficient and Sustainable Reform of the Australian Water Industry and further work on pricing undertaken by the National Taskforce on COAG Water Reform.

GPOC's final report was handed to the Premier and the Minister for Primary Industries, Water and the Environment on 23 December 1998. As part of its analysis GPOC presented past and expected future financial performance indicator results for each of the authorities (see Table 10.7.1).

**Table 10.7.1: Past and projected financial performance indicators, 1992-93 to 2001-02, (per cent)**

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-002
<i>Debt to</i>										
<i>Equity Ratio</i>										
HRWA	47.9	44.8	41.3	37.6	25.7	27.6	27.2	26.8	26.5	26.1
NWRWA	152.0	57.4	44.9	39.2	40.8	76.1	68.3	62.6	57.3	53.1
EWA						15.1	15.1	14.0	12.8	10.5
<i>Return on</i>										
<i>Equity</i>										
HRWA	-0.9	0.5	0.6	1.2	1.4	1.6	1.5	1.4	1.3	1.3
NWRWA	-0.1	1.0	0.1	1.3	-0.02	2.3	4.0	4.2	9.4	10.2
EWA						1.7	1.4	1.6	1.7	1.7
<i>Return on</i>										
<i>Assets</i>										
HRWA	3.9	3.9	3.7	3.5	3.3	3.7	2.9	2.7	2.7	2.8
NWRWA	8.6	5.4	4.1	4.3	3.5	5.5	5.7	6.0	6.2	6.5
EWA						2.7	2.3	2.4	2.4	2.4
<i>Current Ratio</i>										
HRWA	195.1	67.2	68.1	79.6	14.2	40.9	48.2	63.7	81.1	91.6
NWRWA	164.8	102.7	49.5	60.3	37.7	39.4	52.0	79.9	107.9	121.8
EWA						503.1	294.7	294.3	218.7	222.2
<i>Interest Cover</i>										
HRWA	87.3	109.4	112.8	129.4	130.9	69.0	189.0	177.0	175.0	174.0
NWRWA	99.5	110.7	100.9	126.9	99.6	133.4	199.2	202.4	221.6	242.8
EWA						234.4	220.1	249.9	268.5	294.6
<i>Debt to Total</i>										
<i>Assets</i>										
HRWA						19.8	20.6	20.4	20.2	20.0
NWRWA						40.9	38.3	36.2	34.1	32.3
EWA						12.8	12.8	11.9	11.0	9.1

Source: GPOC Investigation in to the Pricing Policies of Hobart Water, North West Regional Water Authority and Esk Water, Final Report.

GPOC's final report also recommended target and maximum revenues (see Table 10.7.2). Maximum revenues are based on a commercial pre tax real rate of return (7 per cent). Target revenues are based on a real rate of return of 4.5 per cent on existing assets and 7 per cent rate on new capital. GPOC argued that a commercial rate of 7 per cent is consistent with those applied to other similar infrastructure domestically and overseas. GPOC also stated that a target rate of 4.5 per cent was appropriate given that it was equal to the national average for metropolitan water and wastewater services. The State Government endorsed the maximum prices and pricing principles recommended by GPOC and subsequently issued an Order (for NWRWA) and Determinations (for HRWA and EWA) requiring compliance with the endorsed principles.

**Table 10.7.2: Maximum, target and project revenues for metropolitan bulk water authorities**

	1999-00 (\$'000)	2000-01 (\$'000)	2001-02 (\$'000)
<b>Hobart Water</b>			
Recommended maximum revenue	20785	20732	20847
Target revenue	17493	17438	17540
Project sales revenue	17051	16894	16894
<b>EWA</b>			
Recommended maximum revenue	12458	12344	12233
Target revenue	10125	10010	9946
Project sales revenue	7728	7748	7633
<b>NWRA</b>			
Recommended maximum revenue	8996	9024	9051
Target revenue	7552	7571	7590
Project sales revenue	8050	8190	8331

*Source:* GPOC Investigation in to the Pricing Policies of Hobart Water, North West Regional Water Authority and Esk Water, Final Report.

In estimating operational, maintenance and administrative (OMA) costs, GPOC noted that, consistent with point six of the ARMCANZ guidelines, revenue should be based on efficient resource pricing and business costs. GPOC found that while the historically low returns earned by the authorities suggest that they are not earning monopoly profits there is insufficient benchmarking information to establish whether there are any inefficiencies in their pricing structures. However, GPOC was concerned over the absence of any reducing trend in OMA costs when other infrastructure industries have shown a real reduction of around 4 per cent per annum. GPOC intends to revisit this issue in future assessments when more performance information is available.

The HRWA, EWA and NWRWA currently account for asset consumption through straight line depreciation. In making its final report GPOC acknowledged the benefits of a renewals annuity approach but considered that the authorities are providing for maintenance of future service potential sufficiently in view of:

- the surplus cash which is being generated by each authority;
- the capacity of each authority to finance new capital expenditure by debt financing;
- the current debt redemption programs in each authority; and
- the absence of any indication from the authorities of the need for significant capital expenditure for the purposes of maintaining the service capacity of the existing systems.

Still, recognising that a renewals annuity approach represents sound management practice GPOC also recommended that by January 2001 each authority should prepare forecasts of water demand for the next 15 to 30 years and risk assessments relating to both water quality and supply reliability. Authorities are also required to prepare a 30 year asset management plan incorporating:

- a condition assessment of assets; and
- an estimation of the capital needs of system augmentation.

Each of the above programs are to be reviewed annually with major reviews every three to five years.

The GPOC final report shows dividends of \$268 000 or 25 per cent of pre tax profit being paid by the EWA in 1997-98. No dividend was paid by NWRWA in 1997-98 but annual dividends of around 43 per cent of pre tax profit have been included in the authority's financial plan spanning the period ending 2001-02. HRWA paid dividends of \$349 000 to the joint authority in 1997-98 and its dividends are expected to remain at around \$300 000 /year . All three authorities pay TERs. A water royalty of \$26/ML is also paid by each authority.

GPOC's final report recommended that all activities which are performed as a CSO be separately costed and that these activities and costs be made transparent in the financial reporting of each authority. GPOC also recommended that all cross-subsidies be made transparent in financial reports.

## **COUNCIL COMMENT**

### **Urban water and wastewater**

The Council is satisfied that Tasmania has met its second tranche commitments given:

- most water businesses are recovering costs;
- the effects of the now discontinued compulsory local government amalgamation program; and
- measures taken by Tasmania to ensure that all water businesses achieve cost recovery in the near future.

In conducting its third tranche assessment. The Council will be looking for Tasmania to compete the proposed pricing guidelines and for all urban water and wastewater providers and to be recovering at least the lower band of the agreed ARMCANZ guidelines.

### **Bulk water**

The low returns currently earned by the three metropolitan authorities relative to the maximum rates recommended by GPOC suggest that they are not earning monopoly profits. The available information also suggests that prices also recover all elements listed in the guideline's lower band.

The Council notes, however, GPOC's finding that there is insufficient benchmarking information to establish whether there are inefficiencies in the authorities' pricing structures. The Council also notes GPOC's concerns over the absence of any reducing trend in OMA costs. GPOC intends to revisit this issue in future assessments when more performance information is available on the two newly

established authorities. The Council will consider GPOC's findings in its third tranche assessment.

**10.7.2.2 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 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.

### **Tasmanian arrangements**

#### *Urban water*

Only one of Tasmania's 29 councils has fully introduced two part pricing. Two further councils apply two part tariffs to urban centres and five are considering implementation proposals. Ten local governments apply fixed charges together with a metered excess charge. Of the remainder the most common approach to price setting is a property value rating system with an excess and/or minimum charge. Supplementary information provided to the Council by Tasmania notes that in most cases free water allowances are within the 250 to 400 kL range which compares with typical indoor household use of around 200 kL. At least five local governments use property values to set excess water thresholds.

A factor affecting the introduction of two part tariffs is the degree to which water services are metered. Currently, 19 local governments have substantial water metering coverage. Of these ten are fully metered with unmetered installations in the remaining nine tending to be for either small users in CBD areas or small customers in isolated schemes. Of the local governments that do not have substantial metering seven are less than 30 per cent metered. Overall, almost 60 per cent of Tasmanian water installations are metered with relatively low coverage in Hobart's largest three local governments. At present, 17 per cent (or \$10.6 million) of total water revenues are raised through volumetric or excess water charges.

In December 1998, the State Government commissioned GPOC to develop guidelines providing a set of measurable criteria to assist local governments identify whether introducing two part pricing would be cost effective. Issues to be considered in developing these criteria include:

- the extent of excess capacity of urban water schemes;
- the extent to which metering is currently in place;
- the quality of water;
- charging arrangements applicable at the bulk water end (including the extent to which volumetric charging is imposed); and

- the projected future demand for urban water schemes.

Local governments are to apply these guidelines by mid September 1999. The appropriate application of these principles will then be assessed by the end of October 1999. This assessment will be undertaken by independent assessment panels comprised of representatives from DPIWE, Treasury, the Local Government Office and a peer group of council representatives. The independent assessment panels will then advise the Minister for Primary Industries, Water and the Environment who will provide a recommendation to the Premier as to the rigor and effectiveness with which the principles have been applied by the end of November. The Government has indicated that implementing two part tariffs will be mandatory where cost effective.

### ***Wastewater***

Some local governments apply volumetric charges for wastewater services to commercial and industrial customers. Fixed charges for wastewater are currently adopted by five local governments. With most of the remainder using property values together with a minimum fixed charge. The exception is Hobart City Council which uses property values and no fixed charge.

### ***Bulk water***

GPOC's December 1998 review recommended that all bulk water providers should apply two part tariffs comprising a fixed charge and a volumetric component reflecting long run marginal cost by 2001-01.

Where the volumetric component does not fully recover marginal cost the short fall should be recovered via the fixed charge. The fixed charge will be allocated according to the average volume of water supplied to each retailer over the last two or three years or an alternative measure.

Currently, only the HRWA imposes a two part pricing policy on its bulk water sales consistent with the GPOC approach. Though, the EWA and the NWRWA currently charge on a volumetric rate. The NWRWA is considering moving to a two part price.

## **COUNCIL COMMENT**

### ***Urban water***

The Council is concerned at the lack of progress achieved by Tasmania in respect of reforming urban water prices since signing the 1994 COAG agreement. The Council sees the introduction of two part tariffs as a key element of urban pricing reform. Further, the Council considers current arrangements for water and wastewater charges in most local governments as certainly not ideal. The Council's view is that property values bear no real relation to the cost of providing services and are not consistent with the intent of the COAG framework. Similarly, the use of free water allowances has the potential to introduce significant cross-subsidies and distort consumption patterns.

The Council acknowledges that Tasmania has committed to introduce two part tariffs where cost effective and that reform has been delayed largely by external factors such as the discontinued compulsory amalgamation program. The Council also

acknowledges the need for a rigorous assessment of the cost effectiveness of introducing two part tariffs. However, while Tasmania has committed to introducing two part tariffs it has provided no indication of when this will occur.

The Council is therefore concerned that Tasmania is currently unable to advise on when it will meet a commitment that was due under the agreed framework by the end of 1998. In response to this Tasmania have agreed to provide, by mid December 1999, an implementation timetable for each instance where two part tariffs are shown to be cost effective. Failure by Tasmania to provide the agreed timetable will see the Council revisit the appropriateness of recommending a deduction of competition payments. The Council will look for this timetable to see the implementation of two part tariffs, where appropriate, as soon as possible.

Progress against this timetable will be considered in a June 2000 supplementary assessment and the Council's third tranche assessment. The June 2000 supplementary assessment will also consider the composition of two part tariffs.

### ***Wastewater***

The Council accepts that volumetric charging for wastewater services may not be cost effective in many cases except in the case of trade waste for large industrial users. However, the Council considers that the use of property values is not consistent with the intent of the agreed COAG framework and provide the potential for significant non transparent cross-subsidies. The Council therefore views the fixed charge adopted by a number of local governments as a more appropriate basis for prices.

However, Tasmania has stated that for many local governments using a combined minimum charge and assessed annual value the majority of customers pay only the minimum fixed charge. This includes some of the State's larger local governments. For example, 95 per cent, 93 per cent and 80 per cent of ratepayers pay only the minimum fixed charge in the Burnie City Council, Devonport City Council and Launceston City Council's respectively. The Council also notes Tasmania's comment that the presence of minimum fixed charges constrains the variability of charges. Still one of the State's largest urban areas, Hobart City Council, relies solely on property values. Therefore, while the Council is satisfied that Tasmania has met its minimum tranche two requirement in relation wastewater pricing the Council will revisit this issue in its third tranche assessment.

### ***Bulk water***

The Council is satisfied that the metropolitan bulk water supply pricing structures are consistent with tranche two commitments.

#### **10.7.2.3 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 provided as a subsidy, a grant or CSO;
- arises from a source other than other customer classes.

### **Tasmanian arrangements**

#### ***Urban water and wastewater***

The use of property values and free water allowances in price calculations provides the potential for significant non transparent cross-subsidies between customers.

#### ***Bulk water***

As noted above the HRWA has introduced a two part tariff. The same marginal rate is charged to all consumers. HRWA is also reducing its subsidy to major industrial consumers to zero by 1999-00.

The EWA's charter states that it will introduce uniform pricing by 2002. The NWRWA currently charges a uniform rate but its customer service charter notes that it has reduced, as far as possible, any internal cross-subsidies and made transparent any that remain. NWRWA is considering moving towards:

- a differential pricing system, to reflect the different variable costs to each system; and
- headworks charges.

### **COUNCIL COMMENT**

#### ***Urban and wastewater***

The Council notes Tasmania's view that the presence of minimum fixed charges in most wastewater and some water charges, that also include property values, limits the variability of these charges. This suggests that these minimum charges may constrain the potential for cross-subsidies. This appears to be the case for prices charged by some local government wastewater services when most of the charge reflects the minimum fixed charge and only a small proportion reflects property values. However, the existence of property based charges raises the risk of cross-subsidies and it is difficult, if not impossible, to make these cross-subsidies transparent.

The Council also notes the use of free water allowances provides the potential for cross-subsidies between high and low use customers who's consumption does not exceed the threshold level. This is particularly the case where thresholds are set well in excess of average consumption.

Therefore, it is not clear to the Council that all cross-subsidies have been removed given the remaining property values and free water allowances. The Council is of the view that Tasmania has met its second tranche commitments with respect to this aspect of the framework but will revisit the issue of property value based charges and free water allowances in its third tranche assessment.

### ***Bulk water***

The Council supports the efforts of the bulk water authorities to reduce cross-subsidies and make any that remain transparent. However, the existence of uniform charges suggests some cross-subsidies could remain within Bulk water prices, although the absence of nodal pricing information means that the magnitude of these subsidies is unknown. GPOC has supported the introduction of nodal pricing as representing best practice but acknowledges that factors such as the degree of integration within the system and the availability of nodal cost information means that average rather than nodal pricing is currently more cost effective. The Council supports GPOC's recommendation that nodal cost information be available by 2001 and that all cross-subsidies be transparent by that time. Therefore, the Council has concluded that Tasmania has met its tranche two commitments but this issue will be revisited in its third tranche assessment.

#### **10.7.2.4 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.

### **Tasmanian arrangements**

#### ***State GBEs***

The *Government Business Enterprises Act 1995* specifies the appropriate approach to identifying, costing, funding and determining delivery arrangements for all CSOs provided by GBEs such as NWRWA on behalf of the State government. In July 1996, the State released its CSO policy framework and guidelines to assist the frameworks implementation. The framework provides for:

- cessation of all non-commercial activities by GBEs;
- selection of a responsible Minister for the social outcomes associated with activities determined to be CSOs; and
- CSO funding and costing are to be determined as part of the Budget process.

However, there are currently no CSOs established under the GBE Act for water services.

### ***Local government businesses***

As noted above the HRWA is reducing its subsidy to major industrial consumers to zero by 1999-00. Background information provided to the Council notes that the HRWA also undertakes activities that could be defined as CSOs. These include financial contributions to the Tolosa and Water Works Recreation Reserves (totaling \$194 500) and outsourcing costs associated with operating the Risdon Brook Dam recreation area (\$51 900). In a submission to GPOC, HRWA argue against treating this expenditure as a CSO. HWRA note that in this case the customer and the owner are one in the same and that there is a separate item the HWRA budget for these expenditures. The EWA has no CSOs.

## **COUNCIL COMMENT**

### ***State GBEs***

The Council considers that the State Government's CSO arrangements provide a robust framework for CSO provision and is consistent with the intent of the COAG framework.

### ***Local government businesses***

The Council does not have sufficient information on the details of CSOs provided by local governments to urban water or wastewater services, although available information does suggest that some subsidies are paid. The Council understands that the State Government's Local Government Office will work cooperatively with local governments with assistance from the Local Government Association of Tasmania to develop an appropriate CSO framework. Given the State Government's commitment to progress this issue, rather than recommend a negative assessment the Council will review progress on this matter as part of a supplementary assessment in June 2000.

The Council supports steps taken by the HRWA to remove its subsidy to major industrial customers. The Council will also consider further treatment of HWRA's expenditure on recreation reserves in its third tranche assessment.

### **10.7.2.5 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.

## **Tasmanian arrangements**

### ***Urban water and waste water***

Tasmania's competitive neutrality timetable requires that full cost attribution be applied to significant local government business activities by January 1999. The State's full cost attribution guidelines note that this includes a rate of return consistent with the rates provided bi-annually by the Local Government Office in consultation with Treasury and the Local Government Association of Tasmania. The Council

notes that as discussed above most local government water and sewerage businesses are recovering costs but few earn a positive rate of return.

### ***Bulk water***

As shown by Table 10.7.1 above the three metropolitan bulk water authorities earn low, but in most cases positive, rates of return. Assets have been valued at their depreciated replacement cost. The authorities are moving towards obtaining optimised asset values where this has not already been done.

GPOC has developed maximum and recommended prices for the three metropolitan bulk water authorities. Maximum revenues were based on a rate of return of 7 per cent. Targets revenues were based on a rate of 4.5 per cent for existing assets and 7 per cent for all new assets.

## **COUNCIL COMMENT**

### ***Urban water and wastewater***

Most local government water and sewerage businesses are recovering costs and Tasmania has committed to introduce full cost attribution and measures have been taken to assist implementation (such as guidelines and workshops). Tasmania has also undertaken to prepare pricing guidelines that should assist local government cost recovery. The Council is therefore satisfied with progress in this area for the purposes of its second tranche assessment but will look for continued progress in its third tranche assessments.

### ***Bulk water***

The Council is satisfied that bulk water authorities have met the requirements of this element of the framework.

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

**10.7.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater<sup>379</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 NCC will assess jurisdictions as having complied with the pricing principles applicable to rural water supply where jurisdictions:

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<sup>379</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.**

- 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.

## **Tasmanian arrangements**

### ***Regulated water***

The State's three irrigation schemes are managed by the Rivers and Water Supply Commission (RWSC). Water prices are set through each scheme's business plan which form part of the RWSC's corporate plan. Water prices are set on a cost reflective basis and take into account maintenance, operations, and management costs as well as depreciation and financial costs. As the RWSC is a GBE under the *Government Businesses Enterprises Act 1995* it is required to make provision for tax equivalents and debt guarantees. All schemes receive a transparent, separately reported subsidy which assists with interest and loan payments arising from the construction of the schemes.

The RWSC does not currently recover costs. However, cost recovery consistent with the agreed ARMCANZ pricing guidelines is intended to be in place by 2001-02. This is expected to require a 12 to 13 per cent increase in prices. To assist the move to full cost recovery the RWSC in January 1998 initiated a consultancy to among other things:

- provide a cost for asset consumption that can be used as a renewals annuity in setting prices;
- investigate how future water prices can appropriately take account of capacity of the user to pay; and
- recommend strategies for reducing operating costs including consideration of alternative management structures.

Tasmania noted that the complexity of the above issues has delayed the completion of the consultancy to July 1999. The Council also understands that the RWSC will consult with scheme participants on the consultancy report with a view to factoring the reports recommendations (including renewals annuity) into prices for 1999-2000.

### ***Raw water pricing***

Currently, raw water prices range from nil to \$26/ML. The RWSC collects fees for Commissioned Water Rights from around 2 400 users. However, the fees charged are not cost reflective. Similarly, other water rights do not reflect bailiffing and monitoring costs.

The Water Management Bill proposes a new user pays system for unregulated streams, lakes and groundwater which provides for:

- clear separation of public and private good costs incurred in water management;
- licence fees that reflect costs directly attributable to the licence (which include a standard administrative fee and a variable management fee to cover bailiffing, compliance auditing and water quality monitoring);
- seven different pricing regions to reflect the variations in cost of service;
- a broader collection base to ensure that all beneficiaries contribute to the cost of services provided;
- different pricing structures for different types of licences (for example water taken into storage as opposed to water taken from rivers in summer); and
- opportunities for licensees to reduce their costs by changing the level of service received from the government.

## COUNCIL COMMENT

### *Regulated water*

The Council is satisfied with progress to date but will revisit this issue as part of its third tranche assessment.

### *Raw water*

Although a third tranche issue, the Council notes that current system for raw water pricing is not consistent with COAG commitments. However, the passage of the Water Management Bill will provide the legislative basis for a pricing regime that, at this stage, appears to meet the requirements of this aspect of the framework. The Council will review progress in this area as part of its tranche three assessment.

**10.7.2.7 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.

## **Tasmanian arrangements**

### ***Environmental sustainability***

The ability of new investments to acquire water resources is constrained by a moratorium on the issue of new water entitlements imposed by the RWSC in 1995. This moratorium principally applies to applications for taking water from rivers in Summer. The moratorium has been lifted only when appropriate environmental flow regimes have been established. To date, this has occurred for the Derwent, Huon and Leven River.

Temporary allocations have been made where the RWSC expects that environmental flow regimes are readily met by the current levels of entitlements. However, these allocations only last for one year and can be revoked if they pose a risk to the health of the river system.

Under the water management plan approach proposed by the Water Management Bill (see below) future allocations are subject to environmental requirements and a set of water values determined by government and private stakeholders. For water resources not covered by a water management plan the Minister can only approve applications for new allocations where doing so is consistent with the objectives of the Water Management Bill which, consistent with Tasmania's Resource Management Planning System, are directed towards the sustainable development of Tasmania's resources.

### ***Dams***

The Tasmanian Resource Management Planning System provides an integrated approach to managing the State's natural resources. This requires appropriate environmental impact assessments prior to the construction of any new dams. This process currently involves the RWSC having primary responsibility for assessing applications in consultation with specialist advice provided by an interagency Farm Dam Working Group. However, under the Water Management Bill, responsibility for oversight of approvals for dam construction will be transferred to a statutory committee.

Where a proposal is expected to have a significant regional impact it is also assessed by the Board of Environmental Management and Pollution Control. Local government may also have a role in assessing development proposals under the *Land Use Planning and Approval Act 1993*.

### ***Economic viability and ecological sustainability***

Information provided to the Council provides evidence that economic viability is required for any proposed development on Crown land. For example, the State's Irrigation Development Program offers dam sites to private developers provided that they can demonstrate the viability of their proposal.

Tasmania also notes that the State's Resource Management Planning System provides a framework for assessing the economic, environmental, and social implications of projects that are deemed to be of state significance. To be classified as such a proposal must have at least two of the following properties:

- significant investment;
- significant contribution to the State's economic development;
- significant consequential economic impacts;
- significant potential contribution to Australia's balance of payments;
- significant impact on the environment;
- complex technical processes and engineering designs; and
- significant infrastructure requirements.

The evaluation of projects meeting the above requirement is conducted by the Resource Planning and Development Commission (RPDC). The Commission is comprised of private sector representatives nominated by the Minister for Primary Industries, Water and Environment with expertise in areas such as industry and commerce, resource conservation and planning.

Key elements of the evaluation process include:

- finalisation of guidelines for an Integrated Impact Statement by RPDC following public comment;
- preparation by the project proponent of an Integrated Impact Statement; and
- submission of a final Integrated Assessment Report to the relevant Minister following consultation with relevant government agencies and public comment on Draft Integrated Assessment Report.

The environmental and economic effects of the Basslink electricity project are currently being considered through the above process.

### **COUNCIL COMMENT**

Given the above information, the Council is satisfied that the arrangements currently used by Tasmania and refinements provided by the Water Management Bill make sufficient provision for ensuring the ecological sustainability and economic viability of new project proposals to meet tranche two commitments.

#### **10.7.2.8 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.

**Tasmanian arrangements**

Currently, day to day management of the State's three government owned irrigation schemes is provided by the RWSC with advice on significant matters provided by advisory committees in which elected irrigator representatives have a majority membership. However, in January 1998 the RWSC initiated a consultancy which includes consideration of alternative management structures for the State's three government owned irrigation schemes.

**COUNCIL COMMENT**

It is the Council's view that current arrangements provide only limited scope for participant involvement in day to day management of the State's three government owned irrigation schemes. Therefore, the Council sees the Government's response to the consultancy report as important in demonstrating its commitment to this area of water reform. The Council understands that Tasmania will be able to advise on action to be taken in relation to this matter by mid December 1999. The Council will revisit this issue as part of a December 1999 supplementary assessment and as part of its third tranche assessment.

### **10.7.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

#### **Institutional Role Separation**

**10.7.3.1 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 NCC 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.

#### **Tasmanian arrangements**

Under current arrangements allocation and management of the State's freshwater resources is regulated primarily through the *Water Act 1957* and the *Groundwater Act 1985*. However, 11 other Acts contain provisions relating to water allocation and a further 14 Acts contain provisions for the water management.

The above arrangements have resulted in responsibilities for particular water related functions being shared across a range of public and private entities. For example, under existing legislation the RWSC, the Hydro-Electric Corporation, Mineral Resources Tasmania, local governments and private companies all have water management responsibilities.

Individual bodies are also often responsible for a range of different functions. For example, almost all of the bodies listed above also have service provision responsibilities. A major aim of the Water Management Bill is to simplify and clarify the State's institutional arrangements. Tasmania's current and proposed institutional arrangements are provided as Attachments 1 and 2 respectively.

#### **Resource management**

Under the Water Management Bill, the Minister for Primary Industry, Water and the Environment will be responsible for all of the State's ground and surface water resources with the Department of Primary Industries, Water and the Environment (DPIWE) being responsible for implementing the provisions of the Act. Service providers will be able to manage water resources as part of their licence conditions where an approved water management plan (see below) is in place. In these situations DPIWE will still be accountable for ensuring the requirements of the water management plan are met. Local government may also have a role by assessing development proposals such as farm dams under the *Land Use Planning and Approval Act 1993*.

#### **Service provision**

Under the Water Management Bill urban and bulk water service provision will continue to be largely a local government responsibility.

On 1 July 1997 legislation was passed which transferred the ownership and governance of the State owned Hobart Regional Water Board to local government by

re-establishing it as a local government joint authority (the HRWA) under the *Local Government Act 1993*. Similarly ownership of the North Esk and West Tamer Supply Schemes were transferred to local government with the establishment of the EWA also on 1 July 1997. Legislation transferring ownership of the NWRWA to participating local governments was passed in 1997 and is awaiting proclamation. With the transfer of the NWRWA the Prosser Water Supply Scheme will be the only remaining State owned water supply scheme.

The RWSC and the Hydro-Electric Corporation will continue to provide some rural water services however most rural diversions are done by private individuals. All water users including the Hydro-Electric Corporation, the RWSC and local councils will require a licence to take water under the new legislation.

The Council also notes that in addition to its service provision responsibilities RWSC currently has primary responsibility for assessing applications for the construction of dams. However, the Council also understands that under the Water Management Bill this function is transferred to a statutory committee comprised of both government and non government representatives.

### **Price regulation**

Under the Water Management Bill, price regulation of metropolitan bulk water services will continue to be provided by GPOC. In background information provided to the Council Tasmania state that licence fees charged by DPIWE will be subject to an independent audit to ensure that they are cost reflective.

Prices for the RWSC are set in accordance with its corporate plan and must be approved by the Minister for Primary Industries, Water and Environment. The Council understands that since 1994 the RWSC meets with scheme participants each spring to discuss the financial performance of the scheme over the proceeding year and proposed pricing arrangements for the current year. In 1994 the RWSC also presented an outline of planned price movements over the following seven years to move the Commission closer to full cost recovery. The Council understands that consultation with Winnaleah Irrigation Scheme users saw a change in the proposed charging arrangements in 1998-99 to see revenue targets being met in a manner more acceptable to scheme participants. The Council also notes that as the RWSC is a GBE it may be declared for prices oversight by GPOC although there is no intention to do this at this stage. Tasmania state that the principle reasons for the RWSC not being declared are customer satisfaction with the current arrangements and the transparency of the RWSC's financial activities in relation to the three schemes.

As noted in section 10.7.2, oversight of local government water prices is provided through the submission of annual operational plans to the Local Government Office. These plans include price, cost and revenue information but do not include rates of return. However, the Council understands that Tasmania has undertaken to tighten local government reporting requirements by commissioning GPOC to prepare pricing guidelines consistent with COAG commitments. Local governments must then report against these guidelines in annual operating plans with GPOC then assessing compliance. The Council notes the potential for local government water businesses be declared as a monopoly service and thus be subject to a formal GPOC review and price determination by the Minister should it not comply with the GPOC guidelines.

In addition, the Council understands that the Local Government Office also intends to progress a Bill requiring draft operating plans be available for public comment 42 days before any fees, rates or charges are set under the plan. Once public submissions are taken into account the plan can be approved by the local government's general manager.

### **Environmental regulation**

Under current legislation there is no mechanism through which water managers are directly accountable to an environmental regulator. However, under the new Water Management legislation DPIWE will be required to:

- maintain agreed environmental flows;
- not compromise protected environmental values;
- abide by environmental protection measures; and
- monitor the impacts of its activities.

To facilitate the implementation of the above an environmental regulation system has been established under the *Environmental Management and Pollution Control Act 1993*. This system involves the Board of Environmental Management and Pollution Control determining a set of broad protected environmental values (PEVs) in consultation with stakeholders and water quality objectives (WQOs) in accordance with the State Policy on Water Quality Management 1997. Individual water management plans will then be prepared by DPIWE consistent with the above and will include processes for monitoring, audit and review.

In areas where there is no water management plan the Director of Environmental Management may issue an Environmental Protection Notice under the *Environmental Management and Pollution Control Act 1993* to ensure that PEVs and environmental objectives are met by DPIWE.

### **COUNCIL COMMENT**

The lack of separation between water management standard setting, regulatory enforcement and service provision means that Tasmania's current institutional arrangements are not consistent with the State's COAG commitments. However, when implemented, the changes proposed by the Water Management Bill will represent a significant improvement.

It is the Council's view that the provisions of the GPOC Act provide for an open transparent approach to the prices oversight of bulk water providers. The Council supports the proposed audit of DPIWE licence fees and suggests that GPOC may be an appropriate mechanism for undertaking the audit. The Council is also of the view that audits should be undertaken periodically.

The Council also supports steps taken by Tasmania to strengthen reporting requirements for urban water and wastewater providers. Measures such as introducing a requirement for full cost attribution, guidelines to assist implementation and a more open and transparent process for setting charges will facilitate better

pricing outcomes. The Council also notes the importance of effectively ring fencing local government water businesses where local governments perform both resource management (under the *Land Use Planning and Approval Act 1993*) and service provision functions.

While the Council is not satisfied that current arrangements are consistent with tranche two commitments it is of the view the measures proposed by the Water Management Bill are sufficient to meet institutional separation commitments. The Council acknowledges however, that factors such as the recent State election, the failed council amalgamation scheme and the Bass Link project have delayed the introduction of the Water Management Bill. Therefore, rather than provide a negative assessment the Council will revisit this issue with a supplementary assessment in June 2000 to ensure that the appropriate arrangements are in place.

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

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

#### **Tasmanian arrangements**

The Council understands that the transfer of the three metropolitan bulk water authorities to local government is contingent on assurances from local government the activities of the new authorities will be consistent with NCP commitments. This includes adherence to tax equivalent, dividend and debt guarantee fee regimes.

Tasmania's 1999 annual report to the Council notes that significant local government businesses activities (including urban water and sewage services) are required to introduce full cost attribution by January 1999 or where appropriate corporatisation from July 2000. In some cases where the January 1999 deadline for full cost attribution has not been met it will be introduced retrospectively. Treasury has undertaken to work with the three local governments that have not yet begun to introduce full cost attribution to ensure timely compliance.

The corporatisation model adopted in establishing the HRWA and EWA was based on that recommended by London Economics in 1995. As both the RWSC and the NWRWA are GBEs under the *Government Business Enterprises Act 1995* they are required to:

- operate in accordance with sound commercial practice;
- operate as efficiently as possible; and
- maximise their sustainable return consistent with their corporate plans and noting the economic and social objectives of the State.

As discussed in section 10.7.2, GPOC's investigation into the pricing policies of the three metropolitan bulk water authorities concluded that there was insufficient benchmarking data to comment on the efficiency of the three authorities. However,

GPOC also noted that it would revisit this matter as part of its next review in 2001 when the necessary information should be available.

Under the *Local Government Act 1993* local governments are required to prepare five year strategic plans and annual operating plans which must be reported upon in annual reports and at council annual meetings. Local governments are required to include performance comparison criteria in these plans.

## **COUNCIL COMMENT**

Based on the information provided, the Council is satisfied that water providers have an appropriate commercial focus. The Council will look for all local government water businesses to have applied appropriate competitive neutrality measures by the tranche three assessment.

### **Performance Monitoring and Best Practice**

#### **10.7.3.3 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 NCC 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 NCC recognises the first reports for the NMU and rural sectors are likely to be a rough cut in the initial years.

### **Tasmanian arrangements**

The HRWA is participating in the WSAA Facts benchmarking process. The EWA and NWRWA have less than the threshold 50 000 connections and are thus precluded. The EWA and NWRWA will however participate in a similar national performance monitoring program for non-major urban authorities.

The Tasmanian Government is using the strategic and operational plan requirements of the *Local Government Act 1993* to require local governments to report on performance comparison criteria which were originally developed for the three major authorities.

Performance indicators for government owned irrigation schemes are being developed through a consultancy initiated in 1998 by the RWSC. The RSWC is also participating in the performance monitoring program for irrigation schemes being developed by ARMCANZ.

**COUNCIL COMMENT**

Based on the information provided, the Council is satisfied that Tasmania has met its tranche two commitments in this area.

## **10.7.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

**10.7.4.1 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 NCC will recognise the progress towards achieving legislative change during its assessment of compliance.

### **Tasmanian arrangements**

#### ***Current situation***

Under existing arrangements water can be obtained through a wide variety of channels. Features of the current system include:

- most commercial users are licensed under the *Water Act 1957*, some of which also have entitlements under separate provisions of the Act (eg the Hydro-Electric Corporation (HEC) and holders of prescriptive rights);
- owners of riparian tenements may take water for stock and domestic purposes under common law within a daily limit set by regulations under the *Water Act 1957*;
- water users in formal irrigation schemes have licences under the *Irrigation Clauses Act 1972*;
- other surface water users may have rights under several specific pieces of legislation; and
- there are no formal allocations for groundwater as current use represents only 4 per cent of sustainable yield. However, there is provision for the Director of Mines to license bores in ‘proclaimed areas’ under the *Groundwater Act 1957*.

Under the current system water property rights are not separated from land tenure and there is significant variation in the types of water rights issued to the State’s major users. Property rights may vary even within a particular use type.

The HEC is the State’s largest user of water controlling around a quarter of the State’s surface water. Under the *Water Act 1957* Hydro-Electric Water Districts are declared and the HEC may take all of the water in a declared district subject to that covered by

other legislation. In some instances the HEC makes water available to the RWSC and local governments which is then allocated on to other users.

### **Water Management Bill**

The Water Management Bill creates a single system for allocating all water resources. Under the proposed arrangements DPIWE is responsible for management of all surface and groundwater and all major water users (including the HEC) must obtain a licence. Under the new system water licences are separate from land title and are transferable. Water licences under the new system will specify, the name of the resource, water surety, the quantity of water to be taken and the date on which the licence expires and any special conditions.

Specified people may take water without a licence (such as riparian or quasi-riparian land owners and casual land users) for human consumption, stock watering and fire fighting. However, these entitlements are subject to their use not leading to material environmental harm and must be consistent with the relevant water management plan. Maximum takes by these users are specified by regulation. The Minister may require users that would not normally require a licence to obtain one to ensure equitable sharing of water or to avoid environmental harm.

Under the Water Management Bill all licences must be consistent with the relevant water management plan. Water management plans are to be reviewed at least every five years. The Minister may vary licence conditions or reduce allocations where necessary to meet environmental requirements.

The Minister may also impose temporary restrictions to prevent reductions in water quality or damage to the ecosystem or where there is insufficient water available to meet demand. These restrictions may:

- require the removal or modification of the means by which water is taken;
- specify conditions subject to which water may be taken from the water resource;  
or
- specify action to remove or reduce the damage or risk of damage to ecosystems that depend on the water.

The Water Management Bill contains provisions for special licences to be granted to a corporate body intending to use the water to generate at least 400 gigawatt hours of electricity annually or for the purposes reasonably incidental to that purpose. Alternatively, a special licence may also be granted to another body approved by an Advisory Committee made up of relevant Ministers. Under the Bill a special licence:

- is provided for a for a period up to 99 years;
- is renewable on application within 10 years of the expiry date; and
- has a surety for water only exceeded by rights to take water for stock and domestic purposes and the aquatic needs of the environment.

A special licence may be varied only with the consent of the licensee or the Advisory Committee. If the licensee incurs a liability as a result of the variation, compensation is payable in accordance with the *Commercial Arbitration Act 1986*.

The provisions contained in the *Water Act 1957* for establishing water districts for the provision of water services or undertaking water works are largely preserved under the Water Management Bill. This includes provision for establishing hydro-electric, water supply, irrigation, riverworks and drainage districts.

### **COUNCIL COMMENT**

The current arrangements for water resource allocation in Tasmania do not provide a system of water allocations and entitlements that is consistent with tranche two commitments. For example, current arrangements do not clearly separate water property rights from land tenure.

By contrast, the arrangements proposed by the Water Management Bill appear to provide a system that recognises both consumptive and environmental needs. The Bill also applies to both ground and surface water resources.

The Council notes that the special licences to be provided for hydro-electric power generation will tie up a significant amount of the State's water resources for a substantial period of time. The Council acknowledges the need for surety and minimising sovereign risk but also notes the State's commitment to the ongoing sustainable use of its water resources.

The Council understands that like all water licence holders special licence holders will be required to comply with water management plans. Therefore, provisions provided by the Water Management Bill such as the periodical review of water management plans and the potential for special licences to be varied (albeit subject to compensation) will assist in ensuring that adequate allowance is made for the environment over time. The Council also understands that in establishing hydro-electric districts special licence holders are required to undertake streamflow monitoring and pollution protection measures. Consequently, the Bill provides a number of avenues for identifying and making ongoing provision for environmental needs in areas covered by special licences. The Council will look for evidence of the effective application of the above provisions in its third tranche assessment.

Again the Council recognises that the passage of the Bill has been delayed by Basslink associated issues and the failed local government amalgamation program. However, the Council now understands that the Bill has been introduced. Further, DPIWE argues that the vast majority of current entitlements are sustainable which should assist the timely introduction of the new allocation system. The Council will review progress in a supplementary assessment in June 2000 to ensure that the proposed legislation has been passed.

**10.7.4.2 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 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 2005, allocations and trading must be substantially completed for all river systems and groundwater resources identified in the agreed and endorsed individual implementation programs.

**Tasmanian arrangements**

The State Policy on Water Quality Management 1997 establishes the framework for the development and implementation of Protected Environmental Values (PEVs) for water quality. Under this State Policy, PEVs for specific water resources are established. PEVs are values or uses of the environment for which it has been determined that a given area should be protected. The PEVs are supported by Water Quality Objectives (WQOs). Tasmania states that the WQOs for a specific water body are the most stringent set of indicators which should be met to achieve all of the PEVs for that water body. The environmental flow for that water body will be the minimum quantitative flow required by the ecosystems in that water body to achieve the PEV of "ecosystem protection" defined in the State Policy.

The development of statutory water management plans is a parallel process which integrates PEVs and WQOs with a number of other water values related to water quantity. This parallel process determines water quantity values at the same time as PEVs to ensure that quality and quantity issues are considered together. Environmental flow estimates are estimates of the streamflow necessary to ensure that natural water values and management objectives are not compromised.

Water management plans may be prepared for watercourses, lakes, groundwater resources and surface water that would normally flow into or recharge the water resources. Water management plans must include an assessment of:

- the needs of the ecosystems that depend on the resource; and
- any detrimental effects that the taking or use of the water from the resources may have on those needs or on the needs of ecosystems in any other relevant water resource.

The Council understands that water management plans may also:

- provide for the allocation and use of water, taking current and future ecosystem requirements into account;
- provide for the licensing of all specified classes of persons taking water from the relevant resource including those that would otherwise have a right to take water without needing a licence;
- provide for the transfer of water allocations;
- specify conditions to be considered in granting permits; and
- provide for the administration of the plan by a water entity.

The water management planning process identifies and prioritises the consumptive and non-consumptive needs of the water users in consultation with a State working group and the catchment community. The process aims to take account of the fact that sustainable water use sometimes means that trade-offs between alternative water users must be made. However, Tasmania states that critical environmental requirements are not negotiable.

No water management plans have been completed. The first of these is expected by the year 2001. To date, preliminary water values have been developed through nine catchment communities with workshops to establish values for a further seven priority catchments planned by mid-late 2000.

Priority river systems have been identified by:

- identifying stressed rivers through an assessment of the pressure on the available resource; and
- balancing the priorities of water flow management, water quality management, ecological significance, estuarine conservation status and existing or immediate potential for human impact. Stressed rivers have already been completed. For the remaining catchments, annual priority setting is undertaken in winter to ensure allocation of the most appropriate rivers for study in the following summer.

A list of priority systems has been identified (see Attachment 3). Environmental stress and development pressures have been the primary considerations in prioritising river systems. A variety of approaches are being used to identify environmental flow requirements ranging from detailed methodologies on stressed rivers to simpler, more timely methods for lower priority systems.

Determination of environmental flow requirements began in December 1997 and it is anticipated that assessment of ten priority systems will be completed annually over the next four years. The State has adopted a largely regional approach in assessing the needs of individual systems to facilitate timely and efficient collection of ecosystem data and enable public meetings to address a number of local river systems. Once complete, environmental flow requirements will be used in the water management planning process discussed above.

Assessments in the North Eastern region have been largely completed and it is expected that about 75 per cent of assessments and recommendations on environmental flow regimes for systems in the South Esk basin and the Southern region will be completed between mid-1999 and mid-2000. Work on the Jordan, Nichols and Lake systems will be completed between mid-2000 and mid-2001. The North Western region will be targeted for environmental flow work during 1999 and 2000 and should be completed by the end of 2001.

Tasmania points out that the above timetable is for the establishment of the environmental flow requirements only. Other water use issues such as future allocations will be addressed through water management plans developed following the establishment of these environmental flow requirements. For streams where the work shows that additional water is available for allocation during summer, the current moratorium on further permanent allocations will be continued until the relevant water management plan is in place.

Where the environmental flow requirements are considered to be at risk from the current level of consumptive use, water management plans will be developed as a matter of urgency to provide the mechanism to address this risk. For example, preliminary work to establish the water management plan for the Meander River has been in progress for two years and the draft plan is expected to be completed by early 2000. In the interim, the environmental flow is fully protected by implementing restrictions on consumptive use when threshold minimum flows are reached. Such restrictions are empowered by both the current and proposed legislation (the *Water Act 1957* and the *Water Management Bill* respectively).

Tasmania note that groundwater consumption in is around 20 000 ML per annum which is well within the State's sustainable yield of 500 000 ML per annum. The Water Management Bill contains most of the provisions provided by the *Groundwater Act 1985* and includes provision for a code of practice for such activities as drilling, plugging or sealing a well to be included in water management plans. Well orders can also be issued requiring a range of actions to be taken in relation to a well including meter installation, well maintenance or closure and restriction of the amount of water taken.

In supplementary information provided to the Council Tasmania state that due to the low groundwater extraction amounts in Tasmania and the recession behaviour of Tasmanian streams, the effects of these extractions on environmental flows does not require additional studies at present.

### 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.***

As noted above, water management plans are required to include assessment of the ecosystem requirements and any detrimental effects that the taking or use of water may have on those needs or the needs of any other relevant water resource.

***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.***

The Council acknowledges that it is appropriate to adopt a range of approaches for identifying the environmental needs of water resources that vary significantly in terms of size and stress. The Council understands that the AUSRIVAS approach is the primary vehicle for assessing the benefit of environmental flow regimes and that the Victorian index of stream condition is being used in the North East of Tasmania.

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

Water management plans established under the Water Management Bill provide guidance on the allocation of water among competing users. However, environmental water provisions are not negotiable.

***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.***

The water management planning process includes significant public consultation. The Council understands that the process seeks to balance the competing uses of water resources once provision has been made for environmental needs.

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

DPIWE argues that the vast majority of current entitlements are sustainable which should mean that there will be few instances where environmental requirements can not be met. Also, under the Water Management Bill there is scope for the Minister to reduce the allocation on a licence where necessary to implement the relevant water plan.

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

Under the Water Management Bill the Minister must allocate water in accordance with the any relevant water management plan and where there is no such plan in accordance with the objectives of the Act which include promoting the sustainable use and facilitate economic development of water resources and to maintain ecological processes for aquatic ecosystems.

Given the above the Council is satisfied that Tasmania has developed a process for identifying environmental requirements that appears to be consistent with tranche two commitments. However, the Council will conduct an supplementary assessment before July 2000 to ensure passage of the Water Management Bill. The Council will also look for progress with the implementation of the water management planning process as part of its third tranche assessment.

As part of their second tranche commitments State's have agreed to provide prioritised list of action to be taken on river systems and groundwater resources, including all river systems which have been over-allocated or stressed and detailed implementation actions and dates for allocations and trading. The list provided by Tasmania is included as Attachment 3.

While Tasmania has prioritised the completion of environmental flow assessment within the timeframe agreed at the Tripartite meeting. It will not complete any of its water management plans prior to the third tranche assessment. The Council will discuss the implications of this with Tasmania prior to its third tranche assessment. The Council also 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 Council understands that the High Level Taskforce on Water Reform may, in the lead up to the Council's third tranche assessment, undertake to identify some relevant criteria for classifying stressed systems. This process may result in a modification to implementation programs; and
- the 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 over time provided there is agreement between Tasmania and the Council.

**10.7.4.3 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 NCC will assess the adequacy of trading rules to ensure no impediments. If legislation has not achieved final parliamentary passage, the NCC 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 NCC 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.

### **Tasmanian arrangements**

#### ***Unregulated water***

As noted above, water property rights are currently, not separate from land tenure. However, the Water Management Bill provides for:

- all or part of a water allocation may be transferred on a temporary or permanent basis;
- any transfer must be consistent with the relevant water management plan or in accordance with the objectives of the Act where there is no plan;
- the Minister may modify or refuse to approve a transfer where it would have a significant adverse impact on other users or the environment;
- the Minister may require a transfer applicant to pay for an assessment of the implications of the transfer; and
- a transfer can only be approved with the consent of any person noted on the register of water licences as having an interest in the licence (eg a mortgagee).

### ***Regulated water***

Participants in the State's three government owned irrigation schemes, not wishing to use their allocation in a given year, have been able to transfer it to other participants, subject to RWSC approval, since 1994-95. Since that time the *Irrigation Clauses Amendment Act 1997* has been used to establish a more robust trading framework whereby irrigation rights are separate from land title and can be leased or sold to other scheme participants subject to any conditions imposed by the Minister. There is no restriction on the length of a lease. Transfer rules have been developed by the RWSC in consultation with users and include the following requirements:

- the RWSC may refuse any proposed trade on the grounds that (i) the RWSC is not able to supply the water due to the capabilities of existing physical infrastructure or water availability or (ii) supplying the water would have a significant negative effect on other users;
- the RWSC may require preparation of a Water Development Plan to ensure the sustainability of the proposed trade with approval being contingent on the implementation of the plan;
- applications for trades will incur an administrative and registration fee based on marginal cost recovery. A fee to recover the cost of any technical assessment of applications will also be imposed; and
- applicants must provide evidence that any parties with a financial interest in an irrigation right or land to which it relates approve of the trade.

To assist trade the RWSC will maintain a voluntary register of people wishing to buy, sell or lease irrigation rights. However, participation in the register is not compulsory. The Council has been informed that 12 trades were approved in the two remaining months of the irrigation season following the introduction of the new arrangements in December 1998.

In addition to selling or leasing, irrigation rights may also be transferred on a temporary basis for a period not exceeding seven days with the possibility of a one off extension of up to seven days. These temporary trades do not incur an administrative cost, do not require full registration and have been instituted to provide a quicker means of covering emergency needs for water.

### **COUNCIL COMMENT**

Tasmania's approach to regulated water trading appears to facilitate the flow of water to higher value uses subject to ecological, physical and social constraints and is thus consistent with COAG framework commitments. However, government regulated water only accounts for 10 per cent of the State's water use.

As noted above, there is currently no effective means of trading unregulated water rights although this will be rectified with the passage of the Water Management Bill. The proposed legislation removes regulatory restrictions on trade, promote effective water use and provides adequate safeguards for ensuring that trades are sustainable. The Council will conduct an interim review in June 2000 to ensure that the legislation necessary to establish the above regime has been passed.

## **10.7.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.7.5.1 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 NCC will examine the programs established by jurisdictions to address areas of inadequacy. Programs would desirably address such areas as government agency coordination, community involvement, coordinated 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.

#### **Integrated resource management**

Tasmania has established its Resource Management Planning System (RMPS) with a view to providing an integrated approach for the use, development, conservation and protection of land, water and air. The RMPS applies to both State and local governments and is supported by a suite of complimentary legislation (which will soon include the Water Management Act). The RMPS provides the policy, statutory and administrative framework for resource management in the State (see Attachment 4). The intent of the RMPS is to:

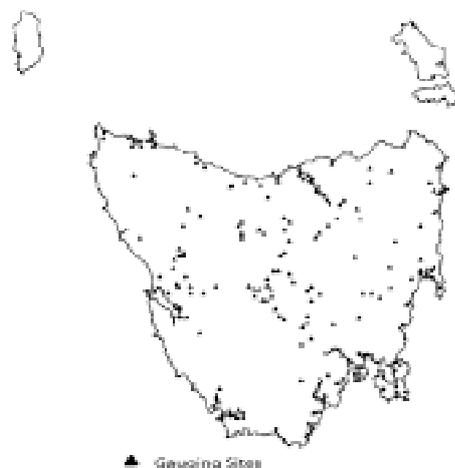
- simplify and streamline the approvals process;
- create surety for land managers, users and owners; and
- improve the quality of resource management and planning decisions.

Another aim of the RMPS is to encourage public involvement in resource management and planning and to share responsibility for resource management and planning between different spheres of government, the community and industry.

#### **Water quality monitoring**

Tasmania has some of Australia's longest continuous streamflow records due to the early recognition of hydro-electricity as a major potential power source. Today both the HEC and DPIWE undertake stream gauging activities at various locations throughout the State (see Figure 10.7.1).

**Figure 10.7.1: Location of existing & continuous water quality monitoring sites in Tasmania**



Source: Water into Tasmania's Future: Current arrangements and key issues for the management of Tasmania's fresh water resource.

DPIWE is developing a network of continuous water quality monitoring stations linked to stream gauging stations at ten sites around the State. The stations monitor conductivity, temperature and turbidity.

'State of Rivers' reports providing a snapshot water quality have been prepared for two river basins and reports for a further four are underway. These and other water quality reports are available through the DPIWE website and public seminars. DPIWE has also developed a State Algal Management Strategy providing procedures for monitoring and managing algal blooms in fresh water storages.

### **Catchment management**

There are currently 12 catchment management groups in Tasmania and catchment management plans have been completed for the Huon, Meander, Coal and Mersey Rivers. Government efforts to assist catchment management have included the publication of a guide for community groups entitled 'Integrated catchment management - what is it and how to do it'. Tasmania is currently developing a State Policy on Integrated Catchment Management under the *State Policies and Projects Act 1993*.

### **Landcare**

The State Policy on Water Quality Management contains provisions for dealing with, among other things:

- the control of erosion and stormwater runoff from land disturbance though addressing the use of the planning system and development of a code of practice to reduce the effect of development activities in waterways;

- agricultural run off through a requirement to develop a code of practice or guidelines to reduce the impact of stormwater from agricultural land on water quality; and
- forestry operations through a legally enforceable code of practice already in place.

### **COUNCIL COMMENT**

The Council is satisfied that Tasmania's Resource Planning System provides an integrated approach to resource management and planning consistent with COAG framework commitments. The Council also believes that the programs currently underway and planned are consistent with the holistic, coordinated and consultative approach intended by the framework. The Council will review progress again in tranche three.

#### **10.7.5.2 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.

#### **Tasmanian arrangements**

The State Policy on Water Quality Management 1997 (SPWQM) is a statutory policy specifically designed to implement the NWQMS. The Policy covers both ground and surface water and follows the model provided by the NWQMS 'Policies and Principles'.

Water quality and water quantity issues are linked through reference to the SPWQM in the Water Management Bill. Consequently, the development of water management plans which are used to allocate resources among uses (including the environment) must be consistent with the protected environmental values and water quality objectives developed under the SPWQM.

### **COUNCIL COMMENT**

The Council is of the view that Tasmania's progress with respect to this element of the framework meets its tranche two commitments.

## **10.7.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**10.7.6.1 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.

### **Tasmanian arrangements**

Consultation measures associated with the Water Management Bill have included distribution of information brochures and packages, public meetings and meetings with specific stakeholder groups and receipt of written, oral and electronic submissions from interested parties. The Bill also provides for the public participation in developing water management plans.

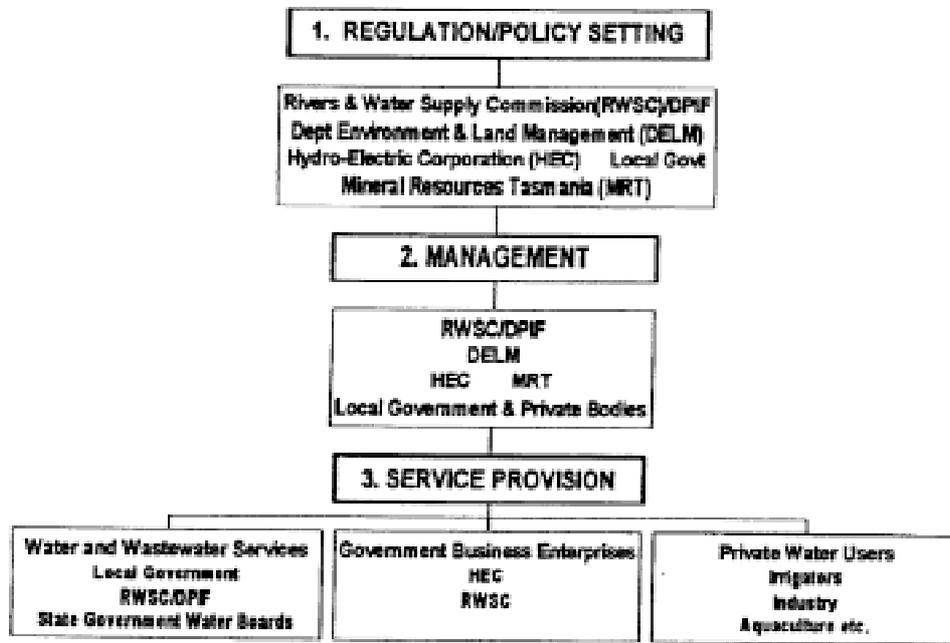
The strategic and operational plan requirements under the *Local Government Act 1993* provide a mechanism for providing information to the community and developing service delivery standards and related costs with customers as appropriate. The Council understands that changes to reporting requirements are being considered that will see local governments being required to make operational plans for water and sewerage services available for public comment 42 days before setting fees, rates or charges.

Waterwatch is the primary mechanism for formal water education programs in Tasmania. A 25 hour framework syllabus has been developed for use by grade 9/10 teachers and Waterwatch Field Handbook was released in 1996. A pre-tertiary syllabus and technical reference manual for Waterwatch coordinators have also been developed while professional development training has been provided to assist teachers involved in the schools programs.

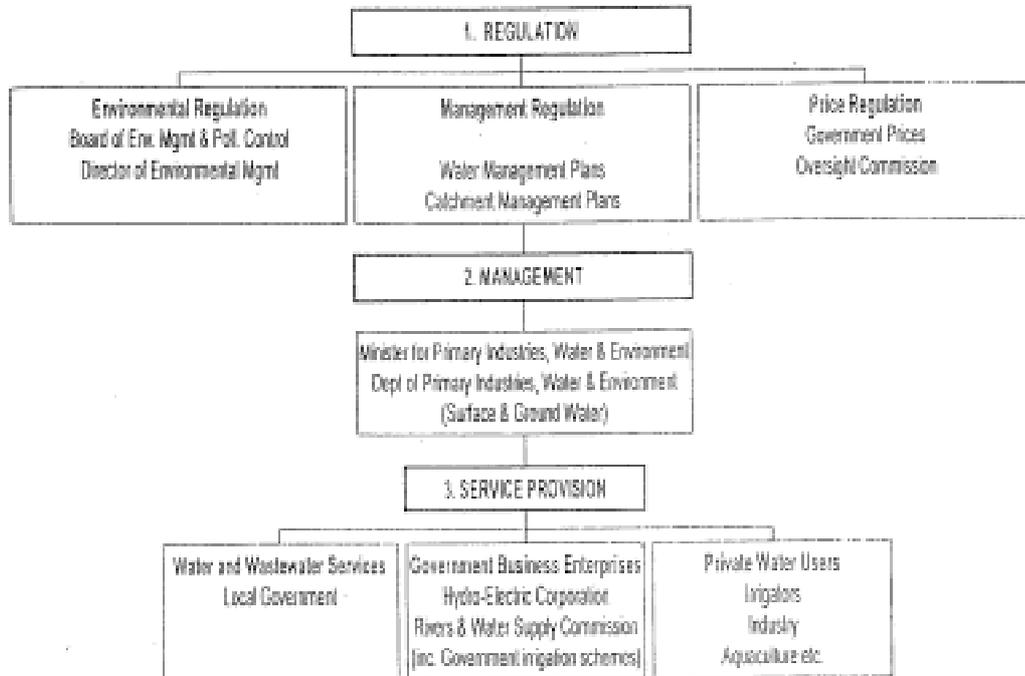
### **COUNCIL COMMENT**

Tasmania's approach to public consultation is illustrated by the broad consultation process undertaken by Tasmania in preparing the Water Management Bill, and the proposed moved to a more open and transparent approach to the preparation of the operational plans for local governments. Overall the Council is satisfied that the education and consultation initiatives undertaken by Tasmania to date are consistent with the intent of the framework.

### Attachment 1: Current Institutional Arrangements



## Attachment 2: Proposed Institutional Arrangements



### Attachment 3: Environmental Flows and Water Management Plans for Priority River Systems<sup>1</sup>

WATER RESOURCE	EXPECTED COMPLETION DATE ENVIRONMENTAL FLOW ASSESSMENT	EXPECTED COMPLETION DATE <sup>2</sup> OF DRAFT WATER MANAGEMENT PLANS <sup>3</sup>
<b>Northeastern Region</b>		
Little Forester River	31 December 1999	
Great Forester River	30 November 1999	31 December 2004
Lower Ringarooma River	30 June 1999	31 December 2003
North Esk River	31 August 1999	31 December 2005
St Patricks River	31 August 1999	31 December 2005
Upper Ringarooma River	31 August 1999	31 December 2003
Boobyalla River	31 March 2000	
Little Musselroe River	31 March 2000	
Great Musselroe River	31 March 2000	
Brid River	31 August 1999	
Pipers River	31 August 1999	
Tomahawk River	31 March 1999	
<b>South Esk Basin</b>		
Liffey River	31 August 1999	31 December 2002
South Esk River <sup>4</sup>	Completed	31 December 2004
Meander River	Completed	30 December 2001
Elizabeth River	31 July 1999	30 December 2002
Macquarie River d/s Ross	30 September 1999	30 December 2003
Tooms River	31 July 1999	30 December 2002
Lake River & Macquarie below Lake River	31 December 2000	31 December 2004
<b>Southern Region</b>		
Coal River	30 June 2000	30 June 2004
Clyde River	30 June 2000	30 June 2005
NW Bay River	31 March 2000	
Mountain River	31 March 2000	
Browns River	31 August 2000	
Ouse River	30 June 2003	
Jordan River	30 June 2001	
Nicholls Rivulet	31 December 1999	

Esperance	Completed	
Derwent River <sup>1</sup>	30 June 2006	
<b>East Coast Region</b>		
George River	31 March 2000	
Ansons Rivulet	31 March 2000	
Swan River	31 December 2000	
Little Swanport	31 December 2000	
<b>North West Region</b>		
Upper Mersey	Completed	31 December 2001
Lower Mersey	31 March 2000	31 December 2001
Welcome River	31 December 2001	
Montagu River	31 December 2001	
Duck River	31 December 2000	
Cam River	31 December 2001	
Erno River	31 December 2001	
Leven River	31 December 2001	
Blythe River	31 December 2001	
Rubicon River	31 December 2001	
Forth River <sup>2</sup>	30 June 2006	
Others on NW Coast	31 December 2001	
<b>West Coast</b>		
Gordon River <sup>3</sup>	30 June 2003	
HEC West Coast Catchments <sup>4</sup>	30 June 2006	
<b>Remaining rivers including South West</b>	31 December 2004	

<sup>1</sup>The timetable for Water Management Plans is based on initial determinations of which rivers systems may be stressed. It is possible that this priority list will change once environmental flows are formally determined.

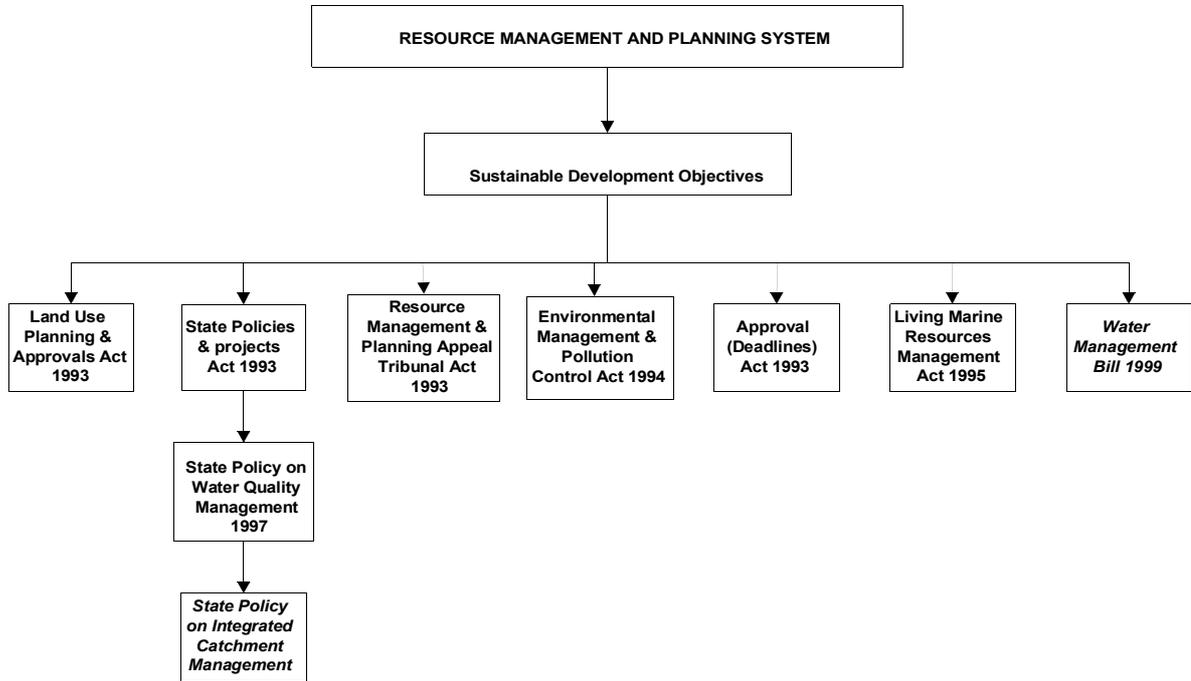
<sup>2</sup>Water resources without a date are not considered to be stressed. Water Management Plans will be developed following the adoption of Plans for the stressed resources. In the interim, environmental flows will be protected through the continuation of the current moratorium on new allocations and the implementation of water use restriction thresholds.

<sup>3</sup>Water Management Plans are statutory plans under the *Water Management Bill 1999*. They include environmental flows, water allocation and usage policies and, where appropriate, trading guidelines.

<sup>4</sup>South Esk (from Postina via Brumbys, Macquarie and lower South Esk) to Trevallyn and Ouse are due to finish by December 2003.

<sup>5</sup>Water resource in Hydro Electric Corporation (HEC) area - work to be undertaken in conjunction with HEC and may be accelerated by input of HEC resources.

## Attachment 4: Resource Management Planning System



## **B10.8 WATER REFORM, AUSTRALIAN CAPITAL TERRITORY**

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**B10.8.6 REFORM COMMITMENT: PUBLIC CONSULTATION,  
EDUCATION**

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## Table of Abbreviations

ACT	Australian Capital Territory
ACTEW	ACTEW Corporation
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ANZECC	Australian and New Zealand Environment and Conservation Council
COAG	Council of Australian Governments
CPA	Competition Policy Agreement
CPI	Consumer Price Index
CSO	Community Service Obligation
DUS	Department of Urban Services
EBIT	Earnings before Interest and Tax
EFG	Environmental Flow Guidelines
EMA	Environment Management Authority
EWC	Environmental Water Charge
IPARC	Independent Prices and Regulatory Commission
kL	Kilolitre (1000 L)
LRMC	Long Run Marginal Cost
MDBC	Murray Darling Basin Commission
ML	Megalitre (1 000 kL)
NCC	National Competition Council
NHMRC	National Health and Medical Research Council
NWQMS	National Water Quality Management Strategy
RoR	Rate of Return
SCARM	Standing Committee on Agriculture and Resource Management
TER	Tax Equivalent Regime

TOC Act	<i>Territory Owned Corporations Act 1990</i>
WAC	Water Abstraction Charge
WACC	Weighted Average Cost of Capital
WR Act	<i>Water Resources Act 1998</i>
WRMP	Water Resource Management Plan
WSAA	Water Services Association of Australia

# B10 Water Reform

## B10.8 Australian Capital Territory

### B10.8.1 EXECUTIVE SUMMARY

This is an assessment of the Australia Capital Territory's (ACT) 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 full cost pricing, the ACT has referred pricing of water to the Independent Pricing and Regulatory Commission. The Council is of the view that this has ensured a consistent approach and integrity in the price setting process.
- ACTEW Corporation, the ACT water service provider, has implemented two part tariff regimes, the usage charge based on marginal costs.
- Cross-subsidies have on the whole been removed from ACTEW's pricing structures.
- The ACT has a clearly defined and well targeted Community Service Obligation regime.
- ACTEW returns a positive rate of return on assets employed in water and wastewater services.
- New investments are the subject of appraisals regarding economic viability and ecological sustainability.

The Council is satisfied that the ACT has largely implemented cost reform and pricing commitments.

#### *Institutional reform*

- The institutional arrangements for separation of water service provision from functions of standard setting, regulatory enforcement and service provision meet to a large extent the requirements for the second tranche assessment. The Council notes the reforms to regulation proposed in the *Statement of Regulatory Intent for Utilities in the ACT* and respectfully adopts the findings of the Regulation Review Taskforce. The Council will look to the implementation of the recommendations prior to the third tranche assessment.

- ACTEW has a commercial focus.
- ACTEW participates in performance monitoring and benchmarking arrangements.

The Council is satisfied that, for the second tranche, the ACT has met institutional reform commitments

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

- The *Water Resources Act 1998* provides for a comprehensive system of water entitlements backed by separation of water property rights from land title and a clear specification of entitlements in terms of volume, reliability or transferability. The Council is satisfied that the system satisfies the requirements of the strategic framework.
- The ACT has in place detailed procedures and policies that will permit allocations to be developed for the environment. The Council is also satisfied that the policies have regard to relevant scientific information.
- The ACT has committed to having completed its water allocations process by December 1999. The Council will continue to monitor this commitment prior to the third tranche assessment.
- The *Water Resources Act 1998* provides for trading in water that permits trading in the spectrum of water rights. At present no intra-territory trade is occurring as there is no scarcity. Hence, other than requiring approval from the relevant authority, no rules have been developed. The ACT has noted that interstate trade awaits legislative reform. The Council will monitor the development of trading rules and interstate trade during the period prior to the third tranche assessment.

The Council is satisfied that the ACT has met this reform commitment.

### ***Environment and water quality***

- The ACT has adopted integrated resource management structures, policies and practices that satisfy the strategic framework. The Council will continue to monitor development of initiatives outlined by the ACT.
- The ACT has made significant progress in implementing National Water Quality Management Strategy Guidelines. The Council will continue to monitor this matter and in particular institutional reforms governing licence conditions and monitoring.

The Council is satisfied that this reform commitment has been met.

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

- The ACT has engaged in public consultation and education regarding water reform.

- The Council notes its preliminary view that service providers are not appropriate public education suppliers on matters such as water conservation. The Council notes that the ACT is considering this matter in its review of utility regulation. This issue will continue to be reviewed prior to the third tranche assessment.

The Council is satisfied that this reform commitment has been met.

## **ASSESSMENT**

The Council is satisfied that the ACT has met reform commitments required for the second tranche. It has been impressed with both the commitment and progress of water reform in the ACT.

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

## **B10.8.2 REFORM COMMITMENT: COST REFORM AND PRICING**

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

#### **10.8.2.1 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.

### **ACT arrangements**

#### **Introduction**

ACTEW Corporation (ACTEW) is a Territory owned corporation with the following relevant functions: bulk water storage and transfer; retail water treatment reticulation; and wastewater reticulation and treatment.<sup>380</sup> ACTEW provides monopoly water and wastewater service to 311 000 persons, serving some 125 000 properties in the Australian Capital Territory (ACT). ACTEW provides some 73 000 ML of water (614 kL per property), residential consumption accounting for about 53 per cent of the water supplied. Some 30 665 ML (264 kL per property) of wastewater is collected.<sup>381</sup> All water supplied by ACTEW is obtained from impounding reservoirs (that is, dams etcetera).

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<sup>380</sup> ACTEW also provides electricity supply services.

<sup>381</sup> WSAA Facts '98.

## IPARC

The *Independent Pricing and Regulatory Commission Act 1997* (IPARC Act) establishes the Independent Pricing and Regulatory Commission<sup>382</sup> (IPARC) and relevantly provides for the objectives, in relation to regulated industries, of promoting effective competition in the interests of consumers and facilitating an appropriate balance between efficiency, environmental and social considerations. IPARC is the price regulator for ACTEW.

The IPARC Act provides for IPARC to undertake investigations in accordance with terms of reference and to provide an opportunity for public submissions on the draft reports. As regards Price Directions (directions), matters to be taken into consideration include:

- the protection of consumers from abuses of monopoly power in terms of price and standards of the service;
- standards of quality, reliability and safety;
- the need for greater efficiency in the supply of services to reduce costs to consumers and taxpayers;
- the appropriate rate of return (RoR);
- the cost of providing the service;
- the principles of ecologically sustainable development;
- the social impacts of the decision;
- demand management; and
- borrowing, capital and cash flow requirements and the need to renew or increase assets.

The Council has reviewed the 1997-1998, 1998-1999, and 1999-2000 to 2003-2004 directions of IPARC.

The 1998-1999 direction has regard to the relevant terms of reference matters. IPARC notes the use of incentive regulation (that is, price caps (CPI +/- X)) and revenue regulation (that is, regulating the total revenue per customer).

The principal features of the direction are: that for 1-300 kL, water is charged at the rate of 37c per kL. For in excess of 300 kL<sup>383</sup> water is charged at 76c per kL. The access charge is decreased from \$135 to \$125. Sewerage levels are frozen at \$245 plus an additional \$245 for every additional flushing cistern in excess of two. A \$40

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<sup>382</sup> Previously the ACT Energy and Water Charges Commission.

<sup>383</sup> Reduced from 350Kl in 1997-1998.

environmental works charge (EWC) is levied plus an additional \$40 EWC for every additional flushing cistern in excess of two.

In determining the water charges specific regard was had to the marginal cost of supplying each additional unit of water. Although the unit charge for water below 300 kL is well below Long Run Marginal Cost (LRMC), the addition of the access fee led to water charges approximating IPARC's estimation of LRMC (between 63-90c). The extra charge for increased consumption falls in the midpoint of the LRMC estimates.

IPARC's determination includes recovery by ACTEW of operational, maintenance and administrative costs. It includes specific provision for environmental works and a TER. The direction includes the payment of interest on debt (ACTEW borrows in the marketplace) and provides for a dividend to the ACT Government.

The 1997-1998 direction notes the need to establish a regulatory asset base for determining the WACC; for the purpose of this determination IPARC calculated a RoR for the whole of ACTEW's business<sup>384</sup> of 3.7 per cent using ACTEW's '*fair valuations*'<sup>385</sup>, and 6.2 per cent if capital contributions and gifted assets are included as income and ACTEW achieved cost savings recommended by IPARC.

The 1999-2000 to 2003-2004 direction builds on the earlier determinations. The direction continues with incentive regulation (for water, price increases of CPI + 3-4 per cent are allowed, and for sewerage, CPI + 0-1 per cent). The direction provides for a return on assets<sup>386</sup> of 4.8 to 6.6 per cent for water services and 6.1 to 6.3 per cent for sewerage services.

In addition the direction provides for bulk water charges with individual customers to be negotiated on the basis that prices do not fall below avoidable costs of supply and for a water abstraction charge of 10c/kL to be spent on managing of catchments and identified environmental work not part of ACTEW's normal business operations and an estimate of the scarcity value of water.

Of particular note is the following:

- specific regard was had to the Expert Group Guidelines on Asset Valuations;
- IPARC considered that ACTEW should consider the water abstraction charge as a pass through cost and should show the charge separately on the water bill; and

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<sup>384</sup> IPARC did not provide separate RoRs for each part of the business.

<sup>385</sup> Nominal post-tax, based on ACTEW's book value of assets.

<sup>386</sup> Pre tax and excluding capital contributions.

- as regards asset valuation, IPARC adopted an economic valuation<sup>387</sup> of the water and sewerage assets, this being less than the depreciated optimised replacement cost and therefore, under the deprival valuation rules, the cost to be adopted.

### WSAA Facts

WSAA Facts '98 notes that the average annual bill for 1997-1998 was \$598, the volumetric component of water supply constituting \$154 (or 53 per cent) of the \$289 average water supply component of the bill. WSAA Facts notes that the average annual water bill has fallen 11.87 per cent between 1996-1997 and 1997-1998.

As regards financial performance measures, ACTEW's written down replacement cost of assets is about \$830 million. The Economic Real RoR<sup>388</sup> in 1997-1998 was 2.68 per cent (up from 1.68 per cent the previous year). The financial information was as follows:

**Table 10.8.1 Financial performance of ACTEW, 1997-1998.**

	\$
<b>Turnover</b>	<b>110 057</b>
Total income	113 112
<b>Operating, maintenance and administration</b>	<b>62 515</b>
<b>Other operating costs</b>	<b>2 299</b>
<b>Depreciation</b>	<b>20 478</b>
Total Operating Costs	85 292
Operating Profit	27 820
<b>Net Interest</b>	<b>5 908</b>
Profit before Tax	21 912
<b>Tax</b>	<b>3 150</b>
Profits after tax	18 762
Dividends	19 211

### Second tranche report

The second tranche report notes that ACTEW is subject to Commonwealth wholesale and income tax equivalents. The dividend policy is for 100 per cent of the net surplus

<sup>387</sup> Defined as the recoverable amount, that is, the future revenue stream, less cash operating costs adjusted to today's costs.

<sup>388</sup> Based on the total operation assets owned and operated by ACTEW (including those supplied by industry and through land development). Asset replacement costs determined by estimating the current cost of replacement of assets currently in use. ACTEW was unable to provide a vertical breakdown of costs (reticulation, treatment, bulk).

to be paid to the Government as a dividend. ACTEW borrowings are undertaken externally, and therefore debt guarantee fees are not relevant.

The cost of externalities<sup>389</sup> will be addressed by the application from July 1999 of a Water Abstraction Charge. In addition, for the past five years sewerage capital works enhancements were funded from an annual levy of \$40 per household. The latest IPARC direction notes that this amount will not be maintained as a separately identifiable component but will continue to be included in ACTEW sewerage charges in order to fund normal operations including the existing capital works program.

### **Council Comment**

The Council is of the view that the regulation of pricing by IPARC has ensured both a consistent approach and integrity in the price setting process. The transparent process, detailed reasons and separation of price controller from monopoly service provider are strengths of the IPARC process.

The Council is satisfied that, in relation to water services, ACTEW:

- meets operating, maintenance and administration costs;
- meets interest costs;
- pays tax or a tax equivalent;
- pays a dividend to government; and
- earns a real RoR on capital.

The approach of IPARC is consistent with the efficient pricing of water. As regards the valuation of assets, the Council is satisfied that the approach outlined in the 1999-2000 to 2003-2004 determination is consistent with the spirit of full cost recovery.

The Council has concluded that full cost recovery for water has been substantially implemented in the ACT.

#### **10.8.2.2 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 RoR.

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<sup>389</sup> For example, catchment management and environmental damage costs and costs reflecting the scarcity value of water.

## ACT arrangements

Some of the pricing arrangements for ACTEW are discussed in the previous section. The second tranche report noted that the step tariff<sup>390</sup> is retained on the basis that it provides an incentive for conservative water use. The price for the upper step is higher than would be the case with a single tier tariff, as a disincentive to high water use and partly as a subsidy for low water users.

ACTEW is a vertically integrated water service provider. IPARC noted in its 1999-2000 to 2003-2004 direction a preference that bulk water prices should reflect efficient cost of water delivery, and a preference for two part tariffs with the usage component reflecting the marginal cost of supply. Although not determining a price, IPARC did direct that ACTEW's freedom to negotiate bulk water prices was on the proviso that customers are charged no less than the avoidable costs of supply.

## Council Comment

The Council is satisfied that ACTEW charges for water by way of a two part tariff including an access component and volumetric component. The volumetric component is based to a large extent on the marginal cost of supply of water. The sewerage tariff is a single charge, and in the Council's view consistent with reform commitments.

Having regard to the price direction for the supply of bulkwater by ACTEW, the Council is also satisfied that bulk water will be sold at a price above avoidable costs, which will ensure at least cost recovery and enables ACTEW to negotiate prices that reflect market realities.

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

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.

## ACT arrangements

The two part tariff pricing structure for the ACT's water is noted.

The second tranche report notes that CSOs and subsidies, scrutinised through the IPARC process, are determined and funded by Government and directed to providing

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<sup>390</sup> That is, the increased rate at 300 kL.

social safety net objectives. IPARC has identified cross-subsidies between both electricity and water and domestic and industrial customers. The report also notes that water prices have been raised so that the need for subsidy is reduced. Water prices will continue to rise as other relevant costs are recognised in the price and external costs are passed through to consumers in water accounts. In addition, CSOs are made transparent in annual reporting and Budgetary cycles.

### **Council Comment**

The Council notes that the removal of property value based pricing regimes and their replacement with a two part tariff in large part removes cross-subsidisation of water services provided to one customer by another customer. The purpose of the stepped tariff has been explained, and the Council notes that the upper usage charge approximates with LRMC as calculated by IPARC. The Council is satisfied that, on the whole, cross-subsidies have been eliminated in ACTEW's pricing regime.

#### **10.8.2.4 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.

### **ACT arrangements**

The *Draft Outline of ACT Utilities Regulatory Regime* (March 1999)<sup>391</sup> (the Outline) notes the adoption by the ACT of the Steering Committee on National Performance Monitoring of Government Trading Enterprises' definition of a CSO:

*A community service obligation arises when a government specifically requires a public enterprise to carry out activities relating to outputs which it would not elect to do on a commercial basis and which the government does not require other businesses in the public or private sectors to generally undertake, or which it would only do commercially at higher prices.(p53)*

Relevant 1998-1999 CSOs (all of which are funded by revenue forgone by ACTEW) are: \$2 million for reduced water and sewerage charges to schools; \$51 000 for nil charges to church-leased land; and \$2.3 million rebate to health benefit card holders.

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<sup>391</sup> Regulatory Reform Taskforce. The Outline builds on the work of the *Statement of Regulatory Intent* (discussed under Institutional Reform) to enable informed community consultation and debate before finalising the new regulatory regime.

The Outline recommends the reporting of the CSOs in the ACT budget, ACTEW annual reports and customer's bill. It also recommends a review every five years.

Each IPARC direction obtained by the Council includes a costing of CSOs. For example, CSO income to ACTEW in the 1998-1999 direction was estimated to be \$4.4 million.

### **Council Comment**

The Council is satisfied that the ACT's CSOs are made transparent both in IPARC decisions and the ACT Budget. Further, the Council is satisfied that the types of CSO measures identified by the ACT in the second tranche report do not undermine the overall policy objectives of the strategic framework. The Council is satisfied that this aspect of the reform framework has been met.

#### **10.8.2.5 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 financial performance of ACTEW has previously been discussed. The Council is satisfied that ACTEW achieves a positive RoR on assets, and is confident in the process adopted by IPARC to determine asset values.

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

#### **10.8.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater),<sup>392</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 the year 2001 with transitional CSOs made transparent; or

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<sup>392</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 cooperative 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.

- 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.

### Council Comment

The ACT has advised that it has no publicly funded rural water supply infrastructure for irrigation.<sup>393</sup>

#### **10.8.2.7 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.

### ACT arrangements

Section 69 of the *Water Resources Act* 1998<sup>394</sup> (the WR Act) provides that the Environment Management Authority (EMA) may grant a person a permit to construct or alter a dam, water storage or other water control structure in a waterway. The EMA is to have regard to matters including the following in determining whether a permit should be granted:

- whether the structure is in the interests of the public;
- whether the environment would be adversely affected or environmental flows maintained;
- whether the rights of other users will be affected;
- whether the applicant is the holder of a licence to take water (see section on *Water Allocations and Trading*); and
- the design of the structure.

The WR Act permits the review by the ACT Administrative Appeals Tribunal of decisions of the EMA concerning dam and other construction.

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<sup>393</sup> ACT annual report to COAG, 1997.

<sup>394</sup> Commences on or before 12 December 1999.

The second tranche report notes that all developments are subject to the *Water Use and Catchment Policies* of the Territory Plan which protects water and catchments by specifying permitted uses and environmental values which must be protected. New dams would be required to comply with the Territory Plan.

IPARC must take into consideration principles of ecologically sustainable development in making price directions<sup>395</sup> and have regard to an appropriate RoR.

### **Council Comment**

The Council is satisfied that any new developments of rural infrastructure would require a robust assessment of ecological sustainability. The Council also notes that, in pricing water resources harvested from the developments, IPARC would have regard to an appropriate RoR.

The Council notes: the requirement for ACTEW to operate efficiently (see institutional separation) and to maximise sustainable return on investment; both IPARC and ACTEW are to have regard to principles of ecologically sustainable development; and the other matters outlined under *Allocation and Trading*.

Having regard to these matters the Council is satisfied that this reform commitment has been met.

### **10.8.2.8 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.

### **Council Comment**

ACT has advised that it has no publicly funded rural water supply infrastructure for irrigation.<sup>396</sup>

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<sup>395</sup> Section 20, IPARC Act.

<sup>396</sup> ACT annual report to COAG, 1997.

## **B10.8.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

### **Institutional Role Separation**

**10.8.3.1 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.

### **ACT arrangements**

The second tranche report notes that the present institutional structure for the ACT is as follows:

- ACTEW is the service provider;
- ACT Department of Urban Services (DUS) is the Water Resources Manager;
- standard setting is provided by IPARC (Efficiency), Environment ACT (Environment) and DUS (other standard setting); and
- regulation is provided by IPARC (Price), Environment ACT (Environment) and the ACT Government (other regulation).

The *Territory Owned Corporations Act 1990* (the TOC Act) provides that the ACTEW, a Territory owned corporation, has as its principal objectives (each of which is of equal importance):<sup>397</sup>

- to operate at least as efficiently as any comparable business;
- to maximise the sustainable return on investment in accordance with the statement of corporate intent;
- to '*exhibit a sense of social responsibility by having regard to the interests of the community in which it operates*'; and
- to conduct its operations in compliance with the principles of ecologically sustainable development.

Ecologically sustainable development is taken to require '*the effective integration of economic and environmental considerations in decision-making processes*', having regard to:

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<sup>397</sup> Schedule 4, Clause 2, TOC Act.

- the *precautionary principle*, that is, if there is a threat of serious or irreversible environmental damage, a lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- the *intergenerational equity principle*, that is, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- conservation of biological diversity and ecological integrity; and
- improved valuation and pricing of environmental resources.

The TOC Act provides that ACTEW is not entitled to an exemption from taxes etc. because it is a Territory owned corporation (Federal taxes are paid as TERs to the Territory Government), although it is exempt from taxes for incorporation, acquisition of shares and transfer of shares and assets between ACTEW and other Territory owned corporations. Directors are appointed on the basis of expertise and skills. The TOC Act provides that borrowing by ACTEW may only occur within limits approved by the Treasurer, although money may be borrowed from other than the Territory and may be secured over ACTEW assets or guaranteed by the Treasurer. A borrowing levy determined by the Treasurer is also to be paid. Dividends are to be paid out of profits.

Shareholders hold shares on trust for the Territory and only Ministers may have voting shares. ACTEW must provide all information required on the request of a voting shareholder. ACTEW is required to comply with written directions of voting shareholders even if it is not in the best commercial interests of ACTEW, and the Territory is required to reimburse the net reasonable expense of complying with the direction. Directors are required to prepare an annual statement of corporate intent including commercial objectives, main undertakings, strategies, performance and measures. This statement is tabled in Parliament.

The role of IPARC has been outlined above (Full Cost Recovery).

The *Statement of Regulatory Intent for Utilities in the ACT* (November 1998) (the statement), prepared by the Regulation Review Taskforce, sets out the ACT Government's proposal to develop a new regulatory framework to address present deficiencies. The principles identified in guiding the statement include:

**Consistency.** Regulatory arrangements should apply to all industry participants and wherever practicable regulatory arrangements should be consistent with approaches in other jurisdictions. A generic approach will be adopted across the utilities sector that still allows the regulation to be tailored to suit the nature of the services provided and to meet specific the ACT objectives.

**Standard setting.** Regulatory standards should be set by Government and the ACT Legislative Assembly in accordance with community values and objectives.

**Independent standards administration.** Regulatory arrangements and standards should be independently administered and enforced.

**Cost reflective.** Service standards should match community expectations at a fair price that enables the owners to earn a fair RoR on their investment.

**Infrastructure management.** Regulatory arrangements need to ensure the necessary capital investment in the future management, maintenance and expansion of service capacity and fair access to essential infrastructure to encourage competition and efficient use.

**Outcomes focused.**

**Transparent and Certain.** Regulations should be clear, predictable and well understood by industry and consumers.

The statement notes deficiencies in the current arrangement including the following:

- insufficient separation of regulatory and consumer functions (on the one hand) from the supply functions (on the other hand), with ACTEW setting its own standards for the provision of services;
- no capacity for customer service standards for water or sewerage supply to be independently prescribed;
- no method for regulating the operation and service provision of the water and sewerage utility;
- no independent right of complaint about service standards to a body that can fine a utility or order rebates or other remedial action;
- no legally enforceable technical and safety standards for a utility's equipment or infrastructure;
- no specific environmental requirements such as demand management programs. For example energy efficiency targets are largely voluntary and not enforceable;
- inadequate consumer protection measures;
- lack of transparency of the basis under which determinations are made; and
- no appeal mechanism against pricing decisions.

The statement notes that there is a need to build into the regulatory framework a clear and transparent licensing regime and a single independent utilities regulator. This will enable existing regulations to be streamlined and better co-ordinated and the roles of the various regulatory agencies to be clarified. It will also give utilities and the ACT community a clearer understanding of their rights and responsibilities in relation to the provision of water supply and sewerage services. The structure the ACT proposes to address these deficiencies includes:

- IPARC as the independent utilities regulator;

- an Essential Services Consumer Council to provide policy advice to government on consumer issues and be responsible for handling consumer complaints and disconnections for people experiencing financial hardship;
- industry codes of practice;
- licence conditions requiring compliance with codes of practice and setting out dispute resolution and enforcement provisions; and
- standard consumer contracts.

*The Draft Outline of ACT Utilities Regulatory Regime* (March 1999)<sup>398</sup> (the Outline), a further Taskforce document, notes that a new *Utilities Act* will establish an operating licence regime, with IPARC to be given powers to act as the industry licensor. Regulations, operating licences, industry codes<sup>399</sup> and standard forms of contracts will then be issued under the provisions of the *Utilities Act* and under IPARC's supervision. IPARC will be able to fine or in extreme circumstance revoke the licence of ACTEW. In addition, the Outline builds on the experience of the Sydney Water Crisis and provides for the Chief Health Officer to have authority to manage public health risks associated with drinking water (for example, issuing *boil water* alerts) and determine appropriate drinking water quality standards.

The ACT has advised that legislation reflective of the spirit of the Statement, and reflecting the extensive consultation concerning the statement, should be introduced into the Parliament in mid-1999.

### **Council Comment**

The Council is satisfied that, to a significant extent, present institutional arrangements provide for institutional separation of service provision and water resource management. The existing structure also provides for some separation of standard setting and regulatory functions (for example, price setting).

The Council notes the very detailed analysis of institutional arrangements by the Taskforce. The ACT intends to implement the Taskforce's recommendations and the Council is of the view that full implementation of the recommendations would result in a comprehensive institutional structure consistent with the strategic framework.

The Council is satisfied that, for the purposes of the second tranche, the ACT has met reform commitments for institutional separation.

The Council, however, will continue to monitor the implementation of the reforms foreshadowed for the purpose of third tranche assessment. It is expected that the recommendations would be implemented well before 30 June 2001.

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<sup>398</sup> Regulatory Reform Taskforce. The Outline builds on the work of the *Statement of Regulatory Intent* (discussed under Institutional Reform) to enable informed community consultation and debate before finalising the new regulatory regime.

<sup>399</sup> Covering matters such as consumer protection, dam safety management, service standards, metering, safety and development.

The Council is of the view that, consistent with the approach to legislation reviews, if recommendation/s are not to be implemented, the ACT would need to show a bona fide public interest justification for the departure from the recommendation/s.

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

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

**Council Comment**

The Council notes that ACTEW is a Territory owned corporation, with objectives as set out above. The Council is satisfied that ACTEW has a commercial focus to maximise efficiency of service delivery.

**Performance Monitoring and Best Practice**

**10.8.3.3 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.

**ACT arrangements**

WSAA Facts 1998 includes ACTEW in performance comparisons. In addition, the second tranche report notes ACTEW's representation (as WSAA representative) on the Board of the Co-operative Research Centre for Water Quality and Treatment and participation in National Standards codes workshops.

**Council Comment**

The Council is satisfied that, through its participation in WSAA Facts, ACTEW is involved in performance comparison and benchmarking and the ACT meets this aspect of the framework.

## **B10.8.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

### **10.8.4.1 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.

#### **ACT arrangements**

Section 13 of the WR Act provides that the right to the use, flow and control of all water<sup>400</sup> is vested in the Territory. Section 28 of the WR Act<sup>401</sup> provides that a person may obtain a water allocation, specified by volume, rate of water flow or in any other manner, and the EMA may fix a different measure for water allocation for different days of the year. The power to allocate water is generally vested in the EMA by auction, tender or private contract. Section 29 provides that the matters are to be taken into account in determining whether to grant an allocation including the following:

- the availability of water;
- the existing and likely future demand for water; and
- environmental flow guidelines.

Section 30 of the WR Act permits reductions in allocations where there are reductions in the flow of a waterway<sup>402</sup> or to prevent a reduction in water quality or damage to an ecosystem dependent on the water from the waterway.

Section 33 of the WR Act prohibits the taking of water without a licence except for domestic, stock or fire-fighting purposes. Section 35 of the WR Act provides for the EMA to grant a licence to take water from a specified waterway or location and the

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<sup>400</sup> Other than groundwater under land the subject of a lease of Territory Land granted before 11 December 1998.

<sup>401</sup> This section commences on or before 12 December 1999.

<sup>402</sup> That is, a river, creek, channel, lake, pond, lagoon or marsh.

licence may be granted subject to conditions including: to keep and maintain records; to install, operate and maintain equipment including a water meter; to provide information regarding compliance with licence conditions; specification of the rate and maximum amount of water that may be taken. The matters to be taken into account when determining a licence application include:

- the *water* environmental record of the applicant in both the ACT and elsewhere, and whether the applicant has been convicted of an offence against the WR Act or corresponding legislation;
- whether the grant of licence would have an adverse effect on the environment, environmental flows or the rights of other users; and
- as regards groundwater, whether there is sufficient water to meet present and future demand and whether the taking of water will or will be likely to affect the quality of water.

A licence is not permitted to be granted unless a water allocation has also been granted to the applicant.

The second tranche report notes that information is currently being gathered on existing surface and groundwater users. They will be given allocations and licences equal to their current use, at the commencement of the allocation and licensing provisions of the WR Act in December 1999.

The WR Act provides for review of decisions concerning water allocations and licences by the ACT Administrative Appeals Tribunal.

### **Council Comment**

The Council is satisfied that the system put in place by the WR Act establishes a system of water allocation that separates water property rights from other rights and that allocations will be specified in terms of volume and reliability. The system will permit water trades (see 10.8.4.3) and recognises the environment through both environmental flow guidelines and a system to reduce allocations in appropriate circumstances. The system permits the determination of allocations by the water resource manager.

The Council is satisfied that the ACT has met reform commitments as regards this aspect of the framework.

**10.8.4.2 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 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 Council 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.

### **ACT arrangements**

The WR Act provides the functions of the EMA including:

- to keep under review water resources;
- to co-ordinate water resource management policy;
- to regulate the allocation of water; and
- to provide education and promote efficient water use.

The WR Act requires the EMA to undertake a continuous assessment of the ACT's water resource,<sup>403</sup> prepare a water resource management plan (WRMP) and consult with the public concerning the plan. The WRMP is to include a description of the water resources required to meet the environmental needs of waterways and aquifers, proposed allocations for the succeeding ten years, water allocations to be created for urban, industry and other uses and action to be taken to manage the water resources.

The second tranche report notes that allocation of water to the environment takes priority over allocations for other purposes. In addition, no new allocation of water will be made unless provided for in the WRMP. Allocations will be determined for each subcatchment on a reach by reach basis.

The Council was also provided with the draft *Environmental Flow Guidelines* (December 1998) (EFGs). The purpose of the EFGs are to outline the basis for and specify the flows necessary to sustain the environmental value *maintaining aquatic ecosystems* (that is, protection of biological diversity and maintenance of essential ecological processes and life support systems). The EFGs classify aquatic ecosystems as: natural (that is, pristine), modified (for example, by catchment activities), water supply or created (for example, Lake Burley Griffin). The *building block* approach adopted identifies hydrological components of the flow regime necessary to maintain ecological processes. The approach was developed by Griffith University and South African researchers and advantages identified include:

- the underlining philosophy is the maintenance of the aquatic ecosystem as a whole;
- the approach makes provision for the natural variability in river flow; and
- additional information can be readily incorporated into the approach.

The four elements of the approach are Low Flows, Flushing Flows, Special Purpose Floods and Maintenance of Impoundment Levels. The EFGs identify further investigation required into the flow requirements of local aquatic biota; the impact of diurnal, seasonal, annual and episodic flow variability to long term health of aquatic systems; and the impact of groundwater abstraction on flows.

In respect of each classification of ecosystem, environmental flows for the various elements are identified.

For example, as regards natural ecosystems, flows below the 80<sup>th</sup> percentile are protected. For flows above the 80<sup>th</sup> percentile, 10 per cent of the flow is available for abstraction. Abstractions are never to exceed the flow rate. No abstractions are permitted from lakes and ponds in which natural ecosystems are to be maintained.

The second tranche report noted that there are no stressed systems in the ACT. However, implementation will be completed by December 1999.

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<sup>403</sup> Section 17, WR Act.

## 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 WRMP provides explicitly for the identification of water resources required to meet environmental needs. EFGs identify flow requirements for the environment. The WR Act provides for allocations to have regard to resource availability.

***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 building block approach utilises hydrological components in determining flow requirements;
- the approach was adopted after identifying relevant advantages including suitability to local conditions;
- regard has been had to the various building blocks in developing EFGs; and
- the approach provides for the inclusion of new information as it becomes available.

The Council is satisfied that the policies and procedures in the ACT provide for consideration of current scientific information.

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

EFGs provide explicit recognition for flow events to be provided to the environment. The WR Act provides for specific regard to be had to whether there is sufficient water to meet present demand before water allocations are granted to users. The WRMP will include a description of water required to meet environmental needs.

The Council is satisfied that environmental water provisions are recognised both in legislation and policy.

***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.***

The Council has been advised that in no water systems in the ACT is there insufficient water to meet both environmental and user needs.

***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 has been advised that in no water systems in the ACT is there insufficient water to meet both environmental and user needs.

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

Having regard to the above information, the Council is satisfied that further allocations will have regard to matters including availability, water quality and the need to maintain aquatic ecosystems.

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

The draft WRMP is presently the subject of public consultation. In addition, the EFGs are now finalised and are to be tabled before the ACT Legislative Assembly for consideration.

The Council is satisfied that the processes outlined by the ACT will address all rights to water as part of the allocation process, and that new water allocations will not be granted where they conflict with environmental priorities.

The ACT has advised that allocations for all systems will be completed by December 1999. This timeframe is well inside the requirements as agreed to in the strategic framework. The Council therefore agrees to this implementation program.

The Council is satisfied that the ACT has met this aspect of the framework.

**10.8.4.3 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.

### **ACT arrangements**

Section 31 of the WR Act<sup>404</sup> permits the holder of a water allocation to transfer, in whole or in part, and for a limited time or permanently, that allocation. The approval of the EMA is required. Section 37 of the WR Act permits a similar transfer of a licence with the approval of the EMA where an allocation is transferred or the water is to be used at the same place for the same purpose. In determining whether to approve the transfer of a licence the EMA is required to take into account the water environmental record of the applicant in both the ACT and elsewhere, and whether the applicant has been convicted of an offence against the WR Act or corresponding legislation.

Where transfers of allocations or licences are refused by the EMA, the WR Act permits the review of the decisions by the ACT Administrative Appeals Tribunal.

The second tranche report noted that currently there are no water trades taking place in the ACT but this will change as future demand grows. The ACT advises that it will become involved in water trading through the Murray Darling Basin Commission (MDBC) trading process.

As regards interstate trade, the second tranche report notes that this is complicated by existing legislation and discussions are underway with New South Wales and the Commonwealth to ensure that interstate trade can be accommodated.

### **Council Comment**

The Council is satisfied that the WR Act provides a legal entitlement to trade water. The Council notes the advice of the ACT that no trades are presently taking place given that the water resource is not sufficiently scarce when compared to consumptive demand.

The Council considers the approach of adopting the MDBC model of trading as consistent with encouraging interstate trade. It will also permit the ACT to have access to the considerable expertise that the MDBC will have developed.

The Council is satisfied that the ACT has met its reform commitments as regards trading, but would look to the consideration of development of trading rules beyond EMA approval prior to the third tranche assessment. In addition, the Council would look to further development of trade with New South Wales.

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<sup>404</sup> This section commences on or before 12 December 1999.

## **B10.8.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.8.5.1 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.

#### **ACT arrangements**

The *Draft Outline of ACT Utilities Regulatory Regime* (the Outline) notes that there are two water supply catchments from which ACTEW draws raw water; Cotter catchment (mostly within Namadgi National Park) and Googong Dam catchment. As regards Cotter catchment, the Outline notes that arrangements are set out in the Namadgi National Park Management Plan. As regards Googong, 5000 hectares of land is controlled by the ACT Government and DUS will prepare a management plan for this area by 30 June 1999 that recognises the area's primary purpose of supporting urban water supply.

The second tranche report notes that all water and other natural resource responsibilities are located in DUS. Existing planning arrangements specifically promote integrated resource management at a broad level, and community consultation and participation through WRMP processes, Waterwatch and Landcare.

The *Territory Plan*<sup>405</sup> divides the ACT catchments into three Water Use Catchments: Conservation, Water Supply and Drainage and Open Space. In respect of each catchment type, objectives are identified and permissible water uses/environmental values identified.

For example, Conservation Catchments incorporate those lakes, streams and wetlands for which the primary value is conservation of aquatic habitats (natural & modified), migratory routes or landscape qualities. The Conservation policies allow for a range

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<sup>405</sup> Empowered under the *Land (Planning and Environment) Act 1997*.

of other uses which are generally compatible with, but secondary to, the primary value. These include recreation, discharge, water supply and stream-flow regulation. The policy seeks to manage these uses such that they are consistent with the primary value. The objectives of the Conservation Water Use and Catchment policies include:

- protection and conservation of water quality and aquatic habitats of highly valued lakes, rivers and streams;
- provision for a range of water uses and environment values which are compatible with the conservation values of the catchments;
- ensuring water and catchment land use is consistent with maintaining ecological sustainability and the conservation values of the catchments;
- ensuring stream-flow and quality of discharges from the catchments are consistent with protection of environment values of downstream waters; and
- protection and conservation of the water quality of ground-water resources of the ACT.

The policies specify catchments by description and identify both water uses (for example, fishing, stock water supply, irrigation water supply) and environmental values (for example, mountain or lowland stream aquatic habitat, urban wetland aquatic habitat). The policies provide for specific measures to protect water quality (for example, collection and treatment of urban stormwater pollutants), stream flow (for example, diversion restricted to authorised diversions), stream environs (for example, removal of sand and gravel) and groundwater field (to be consistent with authorised abstractions).

In addition, the ACT is involved in integrated catchment management through contributing to the Murrumbidgee Catchment Action Plan and Catchment Strategy. An ACT integrated catchment strategy is currently being developed.

Examples of present initiatives provided include:

- the ACT Nature Conservation Strategy, the goal of which is to protect our biological diversity and maintain ecological processes and systems. Of particular relevance is the “*Management of degradation of aquatic systems*” which notes that the ACT lies entirely within the Murrumbidgee River catchment. The actions include development of EFGs and promoting liaison between landowners and water/catchment management agencies;
- the ACT Weeds strategy; and
- the Willow Management Strategy.

### **Council Comment**

The Council is satisfied that the ACT has in place integrated resource management practices. In this respect, the Council points to evidence such as:

- the co-location of water resource and catchment management functions in DUS. This arrangement should provide for co-ordination of activities;
- the Territory Plan, which includes detailed consideration of catchment uses and management with a focus on primary values. The Plan provides for public consultation and community involvement. It also provides for urban and land development in addition to water use and catchment policies. It specifically addresses catchments which are primarily used for conservation;
- the WRMP process, which provides for a consideration of all water resources in the ACT and an opportunity to ensure their coherent future management;
- Cotter Catchment's management as part of the National Park management scheme. In addition, land under control of DUS surrounding the Googong dam is presently in the process of having a management plan developed; and
- the ACT's contribution, in conjunction with New South Wales, to the integrated catchment management plan for the Murrumbidgee.

The Council notes that both the WRMP and Territory Plan processes provide explicitly for public consultation in their development.

The Council is satisfied that the approach of the ACT is consistent with the spirit of the strategic framework, and is satisfied that the ACT has met its commitments as regards integrated resource management for the second tranche.

The Council will look to further development of initiatives such as the WRMP and Googong Dam Management Plan in accordance with timetables outlined by the ACT prior to the third tranche assessment.

**10.8.5.2 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.

**ACT arrangements**

The Council notes information set out above including EMA's responsibility to have regard to water quality when considering applications for water allocations or determining whether allocations should be reduced at any point in time.

The second tranche report notes the ACT's participation in the development and implementation of NWQMS, and that the ACT Water Quality Standards either meet or exceed NWQMS Guidelines.

As regards drinking water quality, the second tranche report notes that although there are no formalised standards, necessary arrangements are being considered within the context of the current review of the regulatory structure governing operations in the

ACT. In addition, tradewaste management and sewerage arrangement are being reviewed.

WSAA Facts '98 notes, as regards water quality compliance, ACTEW's 100 per cent compliance with bacteriology quality and 93.2 per cent compliance with Physico/Chemical (turbidity/colour/pH) as set out in the 1996 National Health and Medical Research Council standards. As regards wastewater effluent, ACTEW is noted to be 100 per cent compliant with overall effluent discharge standards, although only one of three<sup>406</sup> treatment plants was compliant with Licence conditions at all times.

### **Council Comment**

ACTEW aims to comply with 1996 NHMRC Guidelines for drinking water. Its performance is consistent with the performance of many other urban water providers. The performance as regards wastewater effluent is also consistent. The Council notes that the review of institutional arrangements should provide increased confidence as to both the measures of ACTEW's performance as regards water quality and its compliance.

The Council also notes the contribution of the ACT to NWQMS activities.

The Council, while satisfied that the ACT has met reform commitments for the purpose of the second tranche, will continue to monitor the performance of the ACT, and in particular the implementation of institutional change to facilitate maintenance of water quality.

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<sup>406</sup> ACTEW has a licence for only one of its plants. The other two operate under a Memorandum of Understanding.

## **B10.8.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**10.8.6.1 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.

### **ACT arrangements**

The second tranche report notes that public consultation in the implementation and adoption of significant new initiatives is an ACT Government Policy requirement. Examples cited in the second tranche report include:

- *ACT Future Water Supply Strategy* used to consult and educate the public regarding water pricing issues and reductions in water use;
- draft IPARC determinations provided for public comment prior to final pricing determination; and
- public consultation concerning the WR Act and input by the public in the preparation of the WRMP.

The second tranche report noted that continuing education is provided through schemes such as: ACTEW providing demonstration houses and gardens; *Aquafest* to increase community awareness through experiential learning; and Waterwatch.

The second tranche report notes that while ACTEW has a good track record in providing public education material, its responsibility to provide a guaranteed level of activity in this regard will be formalised during the current review of the regulatory structure governing utility operations in the ACT.

### **Council Comment**

The Council is satisfied that substantial consultation concerning the reforms required by the strategic framework has occurred and is ongoing. Although the Council has not been provided with copies of actual educational and consultative material used on an ongoing basis and as part of the reform process, the Council accepts the assertions in the second tranche report and is satisfied that the ACT has met its agreed obligations under the strategic framework in this respect.

The Council notes, however, that there is a conflict in the service provider also providing ongoing public education concerning, for example, water conservation, when it has a financial interest in increased water consumption. The Council notes the present review of utility regulation and the Council's preliminary view that the most appropriate body to undertake this type of activity is the resource manager and

not the service provider. The service provider is, however, well placed to provide information concerning water price and service conditions.

The Council is satisfied that the ACT has met its second tranche commitments in respect of this part of the framework. The Council will continue to monitor this matter prior to the third tranche assessment.



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***B10.9.6 REFORM COMMITMENT: PUBLIC CONSULTATION,  
EDUCATION***

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***Abbreviations***

ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ANZECC	Australian and New Zealand Environment and Conservation Council
AUSRIVAS	Australian River Assessment Scheme
CEO	Chief Executive Officer
COAG	Council of Australian Governments
CPA	Competition Policy Agreements
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSO	Community Service Obligation
DLPE	Department of Lands, Planning and Environment
EIS	Environment Impact Statement
ICM	Integrated Catchment Management
L	Litre
ML	Megalitre
NCC	National Competition Council
NMU	Non-Metropolitan Urban service provider
NWQMS	National Water Quality Management Strategy
SCARM	Standing Committee on Agriculture and Resource Management
SWQMS	State Water Quality Management Strategy
TER	Tax Equivalent Regime
WACC	Weighted Average Cost of Capital
PAWA	Power and Water Authority
WSAA	Water Services Association of Australia

## **B10 Water Reform**

### **B10.9 NORTHERN TERRITORY PROGRESS AGAINST COAG WATER REFORM COMMITMENTS**

#### **B10.9.1 EXECUTIVE SUMMARY**

This is an assessment of Northern Territory 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 full cost recovery, Power and Water Authority (PAWA) water and wastewater services did not raise sufficient revenue to meet the lower band of the agreed ARMCANZ pricing guidelines in 1997-98 (the most recent year for which data is available). However, the Council understands that price increases for water services are expected to see revenue improve significantly in 1998-99. Future price paths for water and wastewater are currently being considered as part of a consultancy commissioned by PAWA due to report by September 1999. In addition, a range of reforms have also been initiated to improve PAWA's performance.
- Two part tariffs have been introduced to urban water services. A fixed charge is applied to wastewater services. PAWA is a vertically integrated service provider but the Northern Territory have advised that it has the capacity to provide bulk water on a commercial basis should a demand for this arise. The Council has not received details of internal bulk water charges adopted by PAWA and the Council has not seen information on the separation of costs for the bulk water business.
- Cross-subsidies are currently being considered as part of a consultancy commissioned by PAWA.
- A uniform tariff policy has been applied to water and wastewater businesses which in the past was funded through cross-subsidies and community service obligation (CSO) payments. Changes announced as part of the 1999-00 Budget Papers will significantly refine the Territory's CSO arrangements including moving to full CSO funding of uniform tariffs.
- As noted above PAWA water and wastewater businesses did not recover costs in the most recent year for which data are available and therefore did not achieve a

positive rate of return. However, measures for moving PAWA towards a positive rate of return will be considered as part of a consultancy due by September 1999.

- The Council is satisfied that the Northern Territory has in place appropriate transparent arrangements to ensure the ecological sustainability of new investments in rural water infrastructure. The Council will revisit the Northern Territory's economic viability appraisal processes as part of a supplementary assessment in December 1999 with a view to improving its understanding of how these arrangements operate.

The Council is not satisfied that the Northern Territory has met its commitments with respect to urban water and wastewater cost recovery, rates of return and cross-subsidies. However, as action is being taken to address each of these issues rather than provide a negative assessment the Council will review these issues as part of a December 1999 supplementary assessment. In conducting its December supplementary assessment the Council will revisit the magnitude of the above issues in light of additional information for example, the degree of cost recovery achieved in 1998-99, and the current consultancy's findings with respect to cross-subsidies. Where issues of non-compliance with COAG commitments remain the Council will look for the Northern Territory to provide a timetable for the resolution of these issues. The Council will also seek additional information in relation to bulk water pricing and economic viability assessment procedures for new investments as part of its December 1999 supplementary assessment.

### ***Institutional reform***

- The Northern Territory has achieved progress towards institutional separation between the roles of water resource management, standard setting and regulatory enforcement and service provision. However, a number of issues remain outstanding. The Council has not been advised of the nature of the regulatory functions undertaken by PAWA (including price regulation) or when they will be removed but understands that separation of regulatory functions is an objective of the reform program currently being applied to PAWA. Also, the Council has no information on the price regulation arrangements for water licences.
- The Council is satisfied that appropriate measures have been put in place that will see a significant improvement in PAWA's commercial focus.
- The Northern Territory has met its commitments with respect to performance monitoring and benchmarking.

The Council will revisit the issue of institutional separation as part of a December 1999 supplementary assessment.

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

- The Northern Territory has established a regional approach to water resource management. However, under current arrangements water property rights are tied to the land listed on the licence and thus the Council is not satisfied that a process for establishing a comprehensive system of water entitlements is in place. The Council notes that measures to address this are being pursued.

- The Northern Territory has not removed all impediments to trade although the Council understands that amendments to the relevant regulations will be made to separate water property rights from land title.
- Northern Territory arrangements acknowledge the environment as a legitimate user of water resources. However, a comprehensive timetable for action to be taken on priority surface and ground water systems has not been provided.

The Council accepts the demand for water trading in the Northern Territory is not likely to be great. However, the Council does see it as important that appropriate arrangements be in place to remove any barriers to resources flowing to their most valuable use. Given the Northern Territory has committed to a deadline to address this issue the Council will look for appropriate arrangements to be in place when it conducts a supplementary assessment in December 1999.

#### *Environment and water quality*

- The Northern Territory has established integrated resource management structures, policies and practices that satisfy tranche two commitments.
- The Northern Territory has made progress in implementing National Water Quality Management Strategy Guidelines.

The Council is satisfied that the Northern Territory has made progress towards a meeting its commitments under this aspect of the framework.

#### *Public education and consultation*

The Council is broadly satisfied that Northern Territory has engaged in appropriate public education and consultation regarding water reform. The Council is of the view however, that care needs to be taken to avoid any conflict of interests where service providers such as PAWA are also responsible for public education programs addressing such matters as water conservation.

### **Assessment**

The Council is of the view that the Northern Territory has made progress against its COAG water commitments although progress in some areas has been slow. In particular, the Council is not satisfied that tranche two commitments have been met in relation to full cost recovery, rate of return, cross subsidies, allocations and trade, and institutional separation. The Northern Territory has also not provided a comprehensive timetable for action to be taken on priority surface and ground water systems. However, the Council also notes the Northern Territory has committed to resolve these issues and in some cases remedial measures have already been initiated. Therefore, rather than recommend a negative assessment the Council will review Northern Territory progress against its COAG commitments in a December 1999 supplementary assessment. The Council will also revisit the bulk water pricing and economic viability appraisal procedures to ensure compliance with tranche two commitments. If progress can not be demonstrated on the matters considered as part of the Council's December 1999 review the Council will consider whether to recommend a deduction of competition payments.

## 10.9.2 REFORM COMMITMENT: COST REFORM AND PRICING

### Major Urbans and Non-Metropolitan Urbans

#### 10.9.2.1 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.

### Northern Territory arrangements

#### *Water and wastewater services in the Northern Territory*

The Power and Water Authority (PAWA) is the Northern Territory's largest government owned business activity and provides water sewerage and energy services throughout the Territory. PAWA is the Northern Territory's only public provider of water and sewerage services and provides services to the Territory's four major urban areas (Darwin, Katherine, Tennant Creek and Alice Springs). WASSA facts '98 reported that PAWA provided water services to 24 000 metropolitan residential and 5 000 non residential properties in 1997-98. Wastewater services were provided to 29 000 and 2 000 residential and non residential properties respectively.<sup>407</sup> PAWA's 1997-98 annual report notes that water is also supplied to eighty-five rural and remote communities and 400 outstations while wastewater services were provided to thirty-five rural and remote communities. In total, PAWA provided 38 864 ML of water and collected 15 276 ML of wastewater in 1997-98.

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<sup>407</sup> **There are a larger number of residential wastewater connections as only one water supply master meter is provided for blocks of flats/units while each property within the strata title blocks of flats/units is counted as a separate wastewater service.**

PAWA's 1998 annual report notes that overall (including water, wastewater and energy businesses) PAWA earned a rate of return of just over 3.5 per cent in 1997-98 and forecasts a return of around 4 per cent in 1998-99. This compares to a estimated cost of capital of around 10 per cent.

The Northern Territory's second tranche report states that a three year forward budgeting process suits the type and scale of public works infrastructure. Asset consumption is also reflected in PAWA annual report through depreciation. Expenditure on operations maintenance and administrative costs as well as interest costs are reported in PAWA's annual report. PAWA also pays TERs. The Council is not aware of any environmental charges paid by PAWA or its customers.

PAWA is a vertically integrated service provider. Water and sewerage businesses are separated into headworks and networks business segments with networks including reticulation infrastructure and headworks including upstream assets such as water extraction, treatment storage assets for water services and trunk sewers, major pumping stations and treatment plants for wastewater services. The Authority's latest annual report notes that under new planning and monitoring arrangements financial information will now be provided for water and wastewater businesses' network and headworks operations.

While the Council does not have separate costs and revenue information for headworks and network business units, financial information on PAWA's water and sewerage business segments overall is provided by Table 10.9.1.

Table 10.9.1: PAWA financial information for water, sewerage and total activities, 1997-98

	<i>Water</i>		<i>Sewerage</i>		<i>Total<sup>1</sup></i>	
	<b>1998</b> <b>(\$'000)</b>	<b>1997</b> <b>(\$'000)</b>	<b>1998</b> <b>(\$'000)</b>	<b>1997</b> <b>(\$'000)</b>	<b>1998</b> <b>(\$'000)</b>	<b>1997</b> <b>(\$'000)</b>
Sales	27 844	26 692	16 702	16 302	286 748	272 784
Interest	173	989	109	317	1 817	2 542
Other <sup>2</sup>	10720	20 059	4 085	7 226	66 117	61 103
<b>Total revenue</b>	<b>38 737</b>	<b>47 740</b>	<b>20 896</b>	<b>23 845</b>	<b>354 682</b>	<b>336 429</b>
Employee expenses	8 015	9 525	4 615	5 355	47 723	45 119
Energy	6 034	5 909	928	948	152 217	147 510
Other expenses	10 837	14 717	8 313	7 411	60 391	61 202
Interest	8 566	4 529	4 321	2 469	29 915	24 290
Depreciation/ amortisation	9 653	9 413	5 976	5 288	54 857	54 216
<b>Total expenditure</b>	<b>43 105</b>	<b>4 4093</b>	<b>24 153</b>	<b>21 471</b>	<b>345 103</b>	<b>332 337</b>
<b>Surplus/ deficit before income tax</b>	<b>(4 368)</b>	<b>3 647</b>	<b>(3 257)</b>	<b>2 374</b>	<b>9 579</b>	<b>4 092</b>
Segment assets	329 638	329 441	184 993	175 366	1 088 950	1 109 030

1. Total includes costs and revenues arising from power, water, sewerage, gas, eliminations and investment activities

2. Includes CSOs

Source: PAWA Annual Report 1997-98

As shown above, in contrast to the previous year, water and wastewater businesses did not recover costs in 1997-98 as revenues declined and expenses increased. A share of CSO payments totaling \$51.4 million offset this shortfall somewhat.

The Authority's annual report also notes that PAWA paid total dividends of \$14.8 million to the Government in 1997-98 suggesting a dividend payout ratio of around 25 per cent. PAWA also reported that a dividend payout ratio of 70 per cent is planned for 1998-99. However, WASSA facts '98 do not report this ratio for PAWA's water and sewerage businesses in 1997-98 as they did not earn an after tax profit.

The Council understands that the Government has set PAWA a financial improvement target of \$30 million per year to be achieved within three years. The Council also understands that significant changes to arrangements for providing CSO payments to government business divisions (including PAWA) were announced in the 1999-00 Budget Papers (see below).

Supplementary information provided to the Council by PAWA forecasts an revenue increase for PAWA's water business of around 12 per cent in 1998-99. The price rise driving this increase is also expected to result in a reduction in total demand of 8.5 per cent. Wastewater revenues are forecast to increase by almost 6 per cent. The information provided by PAWA suggests that, assuming constant costs, the forecast increase in revenue is expected to lead to PAWA recovering the cost (including depreciation and interest on debt) of providing water to its four major urban areas in 1998-99. Further, this estimate does not include CSOs.

Forecasts for wastewater suggest that CSO payments will be a significant factor in whether costs are recovered in 1998-99. Only Alice Springs is expect to cover wastewater costs.

The Council notes that future price paths will be given further consideration in light of the consultancy report to be completed by September 1999. Issues covered by the consultancy include:

- impact of the recent revaluation of PAWA assets on current and future costs and financial performance;
- the value of any cross-subsidisation between consumer groups;
- future path ways to achieve positive rates of return including consideration of volumetric charges for sewerage services;
- options for capital consumption charges including annuities; and
- the value of water and wastewater CSOs undertaken by the Authority.

### **COUNCIL COMMENT**

While PAWA's latest annual report states that financial information will now be reported on up and downstream water and wastewater businesses this information has not been made available to the Council. The Council is therefore unable to comment on the level of cost recovery achieved by headworks and networks businesses.

Further, available information suggests that in 1997-98 (the most recent year for which full year data is available) while PAWA recovered costs overall water and wastewater businesses did not earn sufficient revenue to cover:

- operations, maintenance and administrative costs;
- externalities;
- TERs;
- interest on debt; and
- asset consumption (depreciation).

Consequently, it is the Council's view that PAWA water and wastewater businesses were operating below the agreed minimum as defined by AMRCANZ pricing guidelines in 1997-98.

However, the Council notes action already taken by the Northern Territory to promote improved PAWA performance. Further, the Council has been advised that a significant increase in prices is expected to see an improvement in PAWA water business revenues in 1998-99. The Council also notes that future price paths and related issues will be considered as part of a consultancy due to report by September 1999. Therefore, rather than recommend a negative assessment the Council will review this issue as part of a supplementary assessment in December 1999. In conducting this assessment, the Council will look for a timetable to address, as soon as possible, any situations where costs are not being recovered consistent with the agreed ARM CANZ pricing guidelines.

**10.9.2.2 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.

**Northern Territory arrangements**

***Urban water***

Since 1995 PAWA's volumetric charges for water have increased by 15 per cent for government customers and 30 per cent for non government customers. WASSA facts '98 reported that in 1998 the volumetric component was made up of a single rate of 53c/kL. A fixed charge was also introduced on 1 July 1998 with the size of the charge being dependent on meter size.

***Wastewater***

WASSA facts '98 reported that in 1998 a fixed charge of \$278 was applied. PAWA's 1997-98 annual report suggests that sewerage charges have been relatively stable

since mid 1996. The Water Supply and Sewerage Act currently provides for PAWA to determine, by notice in the Government Gazette, that all operators in a specified industries must enter into trade waste agreements with the Authority. Currently, the brewing industry is the only industry required to enter into trade waste agreements for discharge to sewers. The Council understands that PAWA is consulting industry concerning the extension of the range of trades that are required to enter into trade waste agreements.

The Council has been advised that the trade waste agreement between PAWA and the Darwin Brewery includes a volumetric charge provided that the trade waste biochemical oxygen demand concentration is inside specified bounds. The Council also understands that from 1 January 2000 trade waste charges will be determined by separate charges for volume, biochemical oxygen demand and suspended solids.

### ***Bulk water***

As noted above, PAWA is a vertically integrated water and wastewater service. Given this, the Territory's annual report stated that metropolitan bulk water suppliers do not operate in the Northern Territory. The Council has been advised however, that PAWA does have the capacity to provide water to individual customers at contracted supply prices. PAWA state that contract supply prices are fully commercial and are based on a rate of return on investment and project specific operational and asset consumption costs. The Council understands that a number of projects currently at the feasibility stage have been supplied with offers of bulk water supply.

### **COUNCIL COMMENT**

PAWA has introduced two part tariffs to urban water supply consistent with COAG water commitments. The Council notes that the uniform charge set by PAWA does not reflect the different costs of providing services to different customers through out the Territory. The costs of supplying various communities are likely to vary significantly. The Council also understands that uniform prices are currently funded through a CSO payment and cross-subsidies. This issue is assessed under section 10.9.2.3 and 10.9.2.4 of this assessment.

The Council is satisfied that current wastewater arrangements met second tranche commitments but will review the outcomes of current consultation on the extension of trade waste agreements as part of its third tranche assessment.

The Council has not been provided with any evidence to support PAWA's claim that it has the capacity to charge appropriate bulk water prices to external customers should a demand for these services arise. The Council notes the statement in PAWA's 1998 annual report that financial information will now be prepared on up and downstream components for water services but has not been provided with any details regarding the size or nature of internal charges for bulk water services.

The Council believes that the identification of bulk water costs, and charging for these costs at an appropriate rate and in an appropriate manner can be a catalyst for change in the water industry including increasing competition in the supply of water. It provides for increased transparency and more efficient pricing and allocation of resources. It also provides a mechanism to assist in identification of cross-subsidies

between customer classes. The Council notes that the process of identifying bulk water charges may, most appropriately, be monitored by an independent price regulator. The Council will revisit these issue to establish whether the Northern Territory has the necessary cost information and pricing structures in place to identify bulk water charges as part of a December 1999 supplementary assessment.

### **10.9.2.3 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 provided as a subsidy, a grant or CSO; or
- arises from a source other than other customer classes.

#### **Northern Territory arrangements**

PAWA is a vertically integrated provider of water, wastewater and energy services to customers throughout the Northern Territory. Consequently, there would appear to be potential for significant cross subsidisation between the Authority's activities.

The Council notes that according to PAWA's latest annual report inter-segment prices (for example, prices charged for energy used by water businesses) are determined on a commercial basis. PAWA's annual report also notes that each of the major businesses have recently been valued so as to clearly identify the key 'value drivers' for each business.

The existence of a uniform charge suggests the potential for significant cross-subsidies between high and low cost customers. The Council also understands that in the past the uniform price has been funded through a combination of cross-subsidies and CSO payments. But that the 1999-00 Budget will see full CSO funding of uniform prices.

#### **COUNCIL COMMENT**

Information provided by the Northern Territory notes that the value of cross-subsidies between customer groups will be assessed as part of a consultancy report expected to be completed by September. A significant potential source of cross-subsidies, the uniform price policy, was through a mix of cross-subsidies and CSO payments. The Council's view is that using non transparent cross-subsidies to fund non commercial activities is not consistent with the agreed framework. However, the Council notes that measures announced in the 1999-00 Budget Papers will see non commercial activities be fully funded through a transparent CSO.

The Council currently does not have sufficient information to be able to recommend that the Northern Territory has complied with its second tranche commitments with respect to cross-subsidies. While the Council is satisfied that full CSO funding of uniform tariffs should address the Council concerns regarding the potential for non transparent cross subsidies, the Council requires more information on the range and magnitude of any other cross-subsidies within PAWA. The Council will therefore revisit this issue in a December 1999 supplementary assessment in light of the recommendations of the above consultancy but notes that the Northern Territory has taken action towards meeting its commitments in this area.

**10.9.2.4 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.

**Northern Territory arrangements**

In reporting to the Council on progress in competitive neutrality the Territory Government state that its CSO policy has been tightened and made more transparent to ensure the government is getting value for money and that GBEs are being compensated for the CSOs they provide. The Council understands that this has involved establishing a process for:

- negotiating a purchaser provider agreement wherever possible and funded on a per unit basis; and
- as part of the Budget, annually reviewing the amounts of each CSO purchased to justify the outlays against competing alternatives.

PAWA's latest annual report identifies two main CSOs, uniform tariffs, and Aboriginal Essential Services. The uniform tariff policy results in all customers paying the same rate for water and sewerage services regardless of where they live and the cost of how much it costs to deliver services.

Aboriginal Essential Services include provision of potable water to eighty-five rural and remote communities and four hundred outstations and wastewater services to thirty-five rural and remote communities. A resource conservation program is also included among these services (see section 10.9.6.1).

The Northern Territory has advised the Council that PAWA's current CSO arrangements are to be reviewed as part of the consultancy to be completed by September.

## **COUNCIL COMMENT**

The Council's view is that policies such as a uniform price may be consistent with the agreed COAG water framework provided that the cost does not undermine the principle of full cost recovery and is funded through an appropriately funded CSO. In the past, the uniform price was part funded through a transparent CSO, with the difference between CSO funding and the total cost of the policy made up through non transparent cross-subsidies, which was not consistent with the agreed framework.

The Council is satisfied that refinements to the Territory's CSO framework announced in the 1999-00 Budget papers will promote the objectives of the COAG water framework. The Council also supports the decision to move to full CSO funding of uniform tariffs. The Council is satisfied that tranche two commitments in respect of CSO have been met.

### **10.9.2.5 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.

#### **Northern Territory arrangements**

As noted above, overall PAWA earned a positive rate of return in 1997-98. However, neither water nor wastewater business recovered costs consistent with the lower bound of the ARMCANZ pricing guidelines in the latest year for which data are available. The Council also has no information on the level of cost recovery achieved by bulk water activities.

## **COUNCIL COMMENT**

The Council is of the view that water and wastewater businesses did not meet the lower band in the latest year for which data is available. Though PAWA has been set a target of achieving a financial improvement amounting to \$30 million per annum after three years. Further, the Council has been provided with PAWA forecasts stating that price increases are expected to lead to a significant increase in revenues in 1998-99. As noted above a consultancy due in September will also consider pathways for the Authority to achieve a positive rate of return. Therefore, given that action is being taken to address current cost recovery levels, while the reform commitment has not been met, the Council will review progress again as part of a supplementary assessment in December 1999 in light of the above consultancy, rather than provide a negative assessment.

## Rural Water Supply and Irrigation Services

**10.9.2.6 Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater),<sup>408</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 NCC 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

### Northern Territory arrangements

The Northern Territory have indicated that proposed amendments to the Water Act and Regulation will require that full cost recovery will be made for water resource regulation, monitoring and remediation through: charges on licence holders; in-kind contribution from licence holders; transparent government subsidy/CSO.

### COUNCIL COMMENT

The Council notes that this is a tranche three issue and will assess rural pricing in the lead up to its third tranche assessment.

**10.9.2.7 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.

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<sup>408</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.

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

## **Northern Territory arrangements**

### ***Economic viability***

The Territory's 1998 annual report states that for the majority of cases the economic viability of future investment projects will remain dependent on CSOs. The Council has been advised that all PAWA capital works proposals are subject to engineering optimisation and economic evaluation through the Capital Works Evaluation Committee. This committee consists of senior power, water and sewerage planning engineers and economists. Proposals are then ranked in order of priority for inclusion in the Forward Works (three year) Budget. The Council has been advised that PAWA's capital works program is based on demand projections as far out as 100 years.

### ***Ecological sustainability***

Information supplied to the Council by Department of Lands, Planning & Environment (DLPE) indicates that 90 per cent of streamflow is not divertible due to topography, seasonality of runoff and land tenure constraints due to National Parks and Aboriginal land. Major regional water resource development to date in the Northern Territory has occurred in four areas. With a current combined surface and groundwater demand for urban and irrigation usage of: Darwin 52 000 ML/year; Katherine 23 000 ML/year; Alice Springs 13 000 ML/year; and Ti Tree 2 100 ML/year. Water use in the remainder of the Northern Territory accounts for a further annual demand of 6 000 ML/year. Water demand in Alice Springs and Ti Tree is satisfied entirely from groundwater sources as is half of Katherine's supply.

Overall the demand on water resources relative to total available resources is likely to remain low with total demand for 2020 predicted to be 230 350 ML/year with 164 150 ML/year to be satisfied from groundwater sources. However, the Northern Territory notes that it is likely that some individual local water resources may experience high demands as a consequence of developing irrigated agricultural industry.

The Northern Territory states that significant future irrigation with Ord Stage 2 carries no environmental water allocation issues for Northern Territory rivers. The Northern Territory also notes that significant dam construction may occur in the year 2025 for Darwin water supply and that appropriate assessments for environmental water requirements will be undertaken as part of ongoing regional water allocation planning.

The Council has been advised that all major projects are subject to the Environmental Assessment Act and are required to provide an environmental impact statement (EIS) for public comment. The Northern Territory state that it is established practice for EIS processes to be based on comprehensive baseline environmental investigation and analysis prior to public release with on going work for finalisation based on public comment. The Northern Territory notes that regional water resource management strategies, beneficial use declarations and integrated catchment management plans (discussed below) in advance of future investment offer the prospect of vastly

improved frameworks in which to develop an EIS. The Council also understands that all non riparian surface and ground water extraction must be licensed as must all bore extractions exceeding 15 L/second. In addition, all bores in declared groundwater management areas must also be licensed.

In their second tranche report the Northern Territory states that:

‘The principle of adequately meeting environmental water requirements of river systems is accepted but will be subject to the outcomes of consultatively based regional water allocation planning which may result in environmental water provisions not always meeting environmental water requirements.’ (p46)

The Northern Territory further notes that this view reflects that trade-offs will need to be made between competing demands. Recognising that circumstances may arise where actual environmental provision does not meet the environmental water requirement in part of a catchment because there is a higher economic, social or regional value legitimately placed on other uses of the water resources.

## **COUNCIL COMMENT**

The Council accepts that water resources in the Northern Territory are relatively undeveloped and that total demands placed on resources is low relative to their total availability. However, in assessing progress against this criteria the Council has looked for processes to be in place that will ensure that future investments are made on transparent, ecologically sustainable and economically viable basis so as to avoid the problems experienced in some other jurisdictions.

Given the above, the Council notes that existing arrangements require an EIS to accompany major projects and that this process will be bolstered when the regional strategies have been revised. However, the Council is potentially concerned with the statement made in the Northern Territory’s second tranche report that regional water allocation planning may result in environmental provisions that may not be consistent environmental requirements. This is particularly the case given that the Territory’s statement that some water resources may experience high demands as a consequence of developing irrigated agricultural industry. The Council acknowledges the importance of balancing the needs of competing users and that any development would have some impact on the environment and this can not be avoided. However, the Council is also of the view that maintenance of essential ecological processes and biodiversity of water dependant ecosystems should be given a very high priority. To this end the Council notes that the environmental values have been identified in ten beneficial use declarations for rivers and catchments.

The agreed COAG framework states that future investments in new schemes or extensions to existing schemes should only be undertaken after transparent appraisal has indicated that it is economically viable. While there may be some instances where a strong public benefit justification may see assistance provided to particular projects for example supplying potable water to a rural or remote area, this should be the exception rather than the norm.

Therefore, given the above, the Council is satisfied that the Northern Territory has met its second tranche commitments with respect to assessing the ecological sustainability of new rural investments. However, the Council will revisit the Northern Territory's economic viability appraisal processes as part of a supplementary assessment in December 1999 with a view to improving its understanding of how these arrangements operate.

**10.9.2.8 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.

**Northern Territory arrangements**

The Northern Territory's 1999 report to the Council states that there are no publicly funded or operated irrigation areas in the Northern Territory. The Territory also note that no publicly owned irrigation areas are expected in the foreseeable future with private investment expected to continue as the sole agent of irrigation development.

**COUNCIL COMMENT**

No assessment required for the second tranche.

### **10.9.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

#### **Institutional Role Separation**

**10.9.3.1 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 NCC 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.

#### **Northern Territory arrangements**

The Northern Territory state that PAWA is the Territory's sole service provider with the Department of Lands, Planning & Environment responsible for resource management and regulation. The Northern Territory also note that there is Ministerial separation between these agencies.

The Council has not been advised of the regulatory functions still undertaken by PAWA but understands that separation of these functions is an objective of PAWA's current reform program. The Council understands reform options being considered include the introduction of a new regulator for pricing, competition and standards.

#### **COUNCIL COMMENT**

The Council supports moves to establish an independent pricing regulator. However, the Council does not have sufficient information to be satisfied that the Northern Territory has complied with its institutional separation commitments. In particular, it has not been advised of the regulatory functions still undertaken by PAWA or when they will be separated from its service provision role. The Council notes however, that separation of these functions is a specific objective of the reform program currently being applied to PAWA. The Council has also not been provided with information on price setting arrangements for water licences. However, given that reform is taking place in these areas, rather than provide a negative assessment, the Council will review progress on these issues as part of a December 1999 supplementary assessment.

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

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

#### **Northern Territory arrangements**

The Council understands that PAWA has been set a target of achieving a financial improvement amounting to \$30 million per annum after three years. The Council also understands that a Reform Implementation Working Group is now in place with the specific objective of improving working practices to achieve efficiencies. The

Northern Territory's 1999-00 Budget Paper No. 3 outlines a range of measures designed to improve PAWA's commercial focus. These include increased use of competitive tendering where appropriate with tender contracts being output based, moving to staffing levels that reflect best practice and restructuring PAWA along product lines.

### **COUNCIL COMMENT**

The Council is satisfied that tranche two commitments under this aspect of the framework have been met.

### **Performance Monitoring and Best Practice**

#### **10.9.3.3 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 NCC recognises the first reports for the NMU and rural sectors are likely to be a rough cut in the initial years.

### **Northern Territory arrangements**

PAWA contributes performance indicator information on metropolitan services to the WSAA Facts performance monitoring process. The Council also notes that Alice Springs non-metropolitan services will be included in future inter jurisdictional performance monitoring.

### **COUNCIL COMMENT**

The Council is satisfied that the Northern Territory has met this aspect of tranche two commitments.

## **10.9.4 REFORM COMMITMENT: ALLOCATION AND TRADING**

### **10.9.4.1 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 NCC will recognise the progress towards achieving legislative change during its assessment of compliance.

#### **Northern Territory arrangements**

The Northern Territory's 1999 report to the Council states that water allocation systems are provided at regional scale in the form of declared allocation (or share) of assessed water resources to sectors of beneficial use - with beneficial use sectors being identical to the environmental value categories currently used in the National Water Quality Management Strategy. Consultation leading to beneficial use declarations is made with major stakeholders and through open invitation public meetings before recommendations are made to government.

Since 1994 beneficial use declarations have been made for eleven surface freshwater resources and two groundwater resources. For the surface water resources aquatic ecosystem protection was declared as a beneficial use for ten resources, recreation and aesthetics for four resources, agricultural water supply in three cases and stock water for two resources. The beneficial uses for the two groundwater resources were each declared as agricultural water use and raw water for drinking water supply.

Regional water allocation plans covering surface and groundwater resources have been in place for the greater Darwin region, Katherine local area and Ti Tree Basin since the early 1990s. The Council understands that reviews of the Ti Tree Basin and Darwin allocation plans are expected in 1999 while the Katherine local area plan will be extended to a regional plan also in 1999. The Council also understands that a regional plan for Alice Springs will be completed in the year 2000.

The Northern Territory has reported that administrative arrangements and consultative processes to support formal declaration of water allocations have been trialed successfully in the Ti Tree Basin. Trials will continue during 1999 in the Darwin and Katherine areas, leading to formal declaration of water allocations.

### ***Licences***

In the Northern Territory entitlements are provided in the form of licences for both surface and groundwater resources.

All non riparian surface water extraction must be licensed as must all bore extractions exceeding 15 L/second. In addition, all bores in declared groundwater management areas must also be licensed.

Licences for surface and groundwater resources are granted within the assessed sustainable yield identified in regional allocation plans. However, under current arrangements licences do not separate water property rights from land tenure. Further while licences specify ownership and maximum extraction volumes they do not specify reliability, transferability or quality. The Council understands that amendments to regulations made under the *Water Act 1992* to facilitate trading are expected in 1999 and will address the structure of licenses.

The Northern Territory has also indicated that:

- the current prescribed form of licence gives the regulator freedom to attach any specific conditions considered necessary, and cite the example where in the recent grant of licences for public water supply bores in Darwin a special condition was written into the licence to allow use of extracted water on any land;
- in developing licence conditions for the taking of groundwater for irrigation in the Ti Tree region the proposed new arrangements include:
  - a ten year term;
  - provisions for use from any bore anywhere within the designated area;
  - extensive annual reporting against each bore;
  - the ability to amend licences at any time;
  - provisions to request licence renewal within two years of expiry; and
  - trading a licence with other irrigators within the designated area, subject only to the requirements that the seller completes all normal annual reporting and the buyer provides a list of all bores to be pumped;
- the current *Water Act 1992* requires extraction licences to be granted in the form prescribed in the Water Regulations. The amendments to these regulations will include changes to Form 13 (Licence to Take or Use Surface Water) and Form 15 (Licence to Take Groundwater) so as to:
  - remove the Term/Condition 1, which requires that the water taken must only be used on the land in respect of which the licence is issued, and
  - replace Term/Condition 1, with the requirement, in the instance that the licence is traded, for the prior licence holder to immediately complete all

reporting specified in the licence and notify the Controller of the name and address of the new licence holder;

- under the proposed amendments extraction licences will be tradable but only within beneficial use sectors and within the water control district and, in some cases only, within specified areas of the district.

### **COUNCIL COMMENT**

As noted earlier, the Council understands that under existing arrangements the environment is treated as one of a number of competing users of the resource's sustainable yield. Further, the Council understands that this may lead to situations where allocations for the environment are not sufficient to meet ecological requirements. The Council's view is that sustainable resource use means maintaining the health of the resource rather than just its sustainable yield.

DLPE has provided an outline of ground water allocation arrangements being developed for the Ti Tree region. Information provided suggests: that there has been no comprehensive attempt to quantify sources of recharge; proposed harvesting rates appear to be based on an assumption concerning the quality of the water needed by the environment which possibly requires further work to determine its validity; and no information on how the 20 per cent allowance for the environment, riparian pastoral use and other users was determined. The Council understands that a regional strategy currently in draft form is expected to be implemented over the next five years to address the issues of identifying recharge and assessment of groundwater dependent ecosystems. The strategy is expected to be finalised and initiated by October 1999.

Under the agreed COAG framework, water property rights are to be separated from land tenure and clearly specify reliability, transferability and, if appropriate, quality. Available information suggests that the Northern Territory has not met this commitment because under current arrangements while licences are issued to an individual the use of the licence is tied to the land specified in the licence. The Council notes however, the potential for exemption of this through special condition on the licence as was recently done for in the grant of licences for public water supply in Darwin.

The Council's view is that given that virtually all licences are currently tied to a particular piece of land second tranche commitments have not been met in respect of developing a comprehensive entitlements system. However, the Council notes that the Northern Territory has provided details of measures to resolve this issue and notes the Northern Territory's expectation that changes to existing arrangements will be in place by the end of 1999. The Council also acknowledges that there is unlikely to be significant demand for trade in the near future. Consequently, rather than provide a negative assessment the Council will review this issue as part of a December 1999 supplementary assessment and again if needed by June 2000.

**10.9.4.2 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 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 Council 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.

**Northern Territory arrangements**

In their second tranche report the Northern Territory state that there are no over allocated or stressed water resources. The Northern Territory has advised that, currently, environmental needs and sustainable yields are determined as follows:

- limit extraction from unregulated streams (all but 3 of all Northern Territory rivers) to 20 per cent of low dry season instantaneous flow rate; and
- limit groundwater extraction so as not to reduce water table levels and groundwater flow rates in groundwater dependent ecosystems.

In information provided to the Council the Northern Territory indicate that the *Water Act 1992* and Regulations place monitoring conditions on all surface water licences

and groundwater extraction licences for bores exceeding 15 L/second delivery. In addition, all water drillers are required, as part of their licence, to submit yield data on all bores drilled. Where necessary, mechanisms for more intensive resource management will be triggered through the regional water resource management plans and catchment management plans. These strategies and plans provide (through licensing conditions, and monitoring and assessment programs) the necessary data collection and analysis to verify the allocation.

The Northern Territory note that:

- in all river systems, other than the Katherine and Darwin rivers, water harvesting is low and likely to be ecologically sustainable; and
- the Darwin River Dam is high in the catchment and intercepts most of the upper catchment streamflow in a river which is seasonally dry. There has been a dry season release policy in place for the past 10 to 15 years and there are no reports of downstream environmental impact.

The Northern Territory states that research has been targeted to areas where development pressure is most likely over the next five to ten years. For example, the Council understands that eleven research proposals for the Daly River Catchment are currently under development for commencement in 1999 due to expectations of increasing agricultural development. The research projects are expected to take up to two years to complete. Current work to review the existing Darwin Regional Water Resource Management Strategy will also identify programs to determine environmental water requirements, through five research proposals for the Darwin Rural area are due for commencement in 1999. The Northern Territory states that this area is under increasing development pressure for horticulture and rural residential use, all based on private bore supplies with potential in aggregate to impact on groundwater sustained ecosystems.

The Northern Territory's 1999 report also notes that the groundwater allocation planning trial nearing completion in the Ti Tree Basin sets aside 20 per cent of assessed water resources as an environmental contingency allocation, within a ten year plan, matched by capped licensing, to be reviewed after five years. Reviews of the greater Darwin regional plan and extension of the Katherine area plan in 1999 will incorporate environmental contingency allocations in a similar manner to that trialed in the Ti Tree Basin. However, the Council has been advised that the allocations relevant to the two northern, tropical regions are expected to be greater than the 20 per cent applied in the desert region at Ti Tree.

The Northern Territory has provided brief details of factors involved in setting the allocation and regulatory framework. This involves: determining resource availability and beneficial use requirements which includes environmental uses; development of a regional allocation plan which is claimed to share regional resource availability among beneficial users so as to satisfy principles of ecologically sustainable development; and granting and assigning rights to beneficial users. The Northern Territory also indicates that within two years it anticipates environmental water provisions would be established where existing extraction licences exceed 5 per cent of median flows. This occurs in the Daly and Adelaide River catchments. The Council understands that priority has been given to the Daly River and a research

program has been proposed which will assist in determining environmental water requirements.

### **COUNCIL COMMENT**

In evaluating progress against this aspect of the framework the following principles taken from the *National Principles of the Provision of Water for Ecosystems* are relevant:

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

In setting limits on the volume of water to be extracted from water courses, the Northern Territory has recognised that consumptive use has the potential to impact on ecological values.

***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.***

The Northern Territory appears to be at the early stages of developing a scientific basis for determining environmental water requirements. Research projects are planned to go ahead in 1999 to begin to address this issue.

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

Expected amendments to the *Water Act 1992* will provide for the establishment of water control districts specifically for resource management purposes. The Northern Territory states that these amendments will require the allocation of resources among beneficial use sectors (of which the environment is one) consistent with a declared regional water allocation plan.

***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.***

As noted earlier in the Northern Territory arrangements 'outcomes of consultatively based regional water allocation planning which may result in environmental water provisions not always meeting environmental requirements'. While the Council understands that the water allocation process seeks to balance the competing uses of water, it is of the view that maintenance of essential ecological process and biodiversity of water dependant ecosystems should be given a very high priority.

***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 that in DLPE's view there are no stressed rivers in the Northern Territory and that the majority if not all of current water commitments are sustainable

which indicates that there should be no instances where environmental requirements cannot be met.

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

The Council notes that compliance with this principle will be promoted through planned amendments to the *Water Act 1992* that will allow the establishment of water control districts with the explicit purpose of water resource management in accordance with water allocation plans.

The Council accepts that with the present level of development the Council suggests that few streams in the Northern Territory are likely to be stressed. However, the Council notes the very limited data is currently available on the environmental requirements of the Territory's water resources. The Council also notes that funding for the proposed research program for the Daly River and Darwin area has not been finalised and has concerns regarding progress towards development of methods for determining environmental water requirements should the proposed research not proceed.

At the 14 January Tripartite meeting it was agreed that jurisdictions would provide the NCC with individual implementation programs outlining a priority list of river systems and groundwater resources. The Northern Territory has not provided such a list as their research program is yet to be finalised. The Council will revisit this and the above matter as part of a supplementary assessment in December 1999.

The Council will monitor the passage of amendments to the *Water Act 1992* and Regulations to give legal recognition to the allocation plans. Future assessments would be greatly assisted by draft and when available final versions of water resource policy strategies, a water resource planning strategies, a water resource regulation strategies, a water resource assessment strategies, a water resource management strategies, and a regional water allocation plans. The Council will review completed water management strategies, when available, to ensure that appropriate provisions have been made for the environment in the lead up to its third tranche assessment.

**10.9.4.3 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.

## **Northern Territory arrangements**

### ***Intrastate trade***

Trading is not possible under current arrangements given that licences are currently tied to the land listed on the licence (unless exempted by a special conditions included on the licence). However, the Council understands that changes will be made to the relevant regulations in consultation with water users to facilitate water licence trade. These changes are expected by August 1999.

The Northern Territory's 1999 annual report states that the market for trading is likely to be small given that water users are mainly widely dispersed, small scale, involved in privately owned and operated irrigation developments, drawing on groundwater. All licenses are within the sustainable yield limits of the water resource.

### ***Interstate trade***

In respect of interstate trading the Northern Territory Government note that no cross-border developments exist although Stage 2 of the Ord River project should establish a totally privately operated cross-border irrigation scheme after the year 2000. The Territory Government states that work is in progress with the Western Australian Government to ensure consistent arrangements.

## **COUNCIL COMMENT**

The Council acknowledges that the demand for water trading is likely to be limited in the near future. However, the Council's view is that where trading is to be introduced, it should be done consistent with COAG commitments. As noted above water property rights are currently tied to the land listed on the licence and therefore the Northern Territory has not removed all the barriers to trade. The Council understands that amendments to the *Water Act 1992* will see this issue resolved by August 1999. The Council will review progress on this matter as part of a December 1999 supplementary assessment.

The Council notes Northern Territory's commitment to ensuring consistent water pricing and allocation arrangements between Western Australia and the Territory for the purposes of the Stage 2 of the Ord River project. The Council will look for continued progress on this matter throughout the third tranche.

## **10.9.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **10.9.5.1 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 coordination, community involvement, coordinated 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.

#### **Northern Territory arrangements**

In their 1999 report to the Council Northern Territory states that the Natural Resources Division of the Department of Lands, Planning and Environment was established in 1998 to ensure an integrated approach to natural resource management for sustainable development. The Northern Territory also state that an integrated approach is promoted through the Land Resources Coordination Group made up of the CEOs of the Department of Lands, Planning & Environment, Department of Primary Industry & Fisheries and the Parks & Wildlife Commission of the Northern Territory.

The Northern Territory have indicated that a Mary River Integrated Catchment Management Plan has been prepared under a Government appointed wetlands task force. The Mary River Catchment Advisory Committee appointed to implement the plan has the following members representing:

- Mary River Landcare Group;
- Department of Primary Industry and Fisheries;
- Parks and Wildlife Commission of the Northern Territory;
- Department of Lands, Planning and Environment;
- Commonwealth Parks Australia North Agency;
- Department of Defence;
- pastoral industry;

- fishing industry;
- tourism industry; and
- mining industry;

DLPE has provided an outline of the Process details of the Water Resource Management Strategy which appears to involve six steps to implementation:

- identify the regional management area including surface water catchments, groundwater aquifers and their recharge and discharge areas, land tenure, infrastructure and statutory boundaries;
- assessment of surface and ground water resources including hydrology, quality, flow duration, yield potential, map extent of the resources, determine inter-relationship(s) between surface and groundwaters, and prepare a draft water resource assessment strategy which involves a 5-10 year work program to address significant shortfalls in knowledge;
- commence beneficial use planning which includes examining current and future use demands and preparing a draft water resources planning strategy;
- develop an approach for water resource regulation which examines water extraction licences, waste discharge licences, and links to regulatory controls outside the *Water Act 1992*. The approach involves describing existing arrangements, determining the need for change and/or improvement, describing options for change and/or improvements, and justify and recommend changes, all of which leads to preparation of a draft water resource regulation strategy;
- develop a resource management policy through processes which include describing current arrangements and identifying shortfalls in integrated catchment management within government agencies, community, industry, and then determining the need and describe options for change and/or improvement followed by justifying and recommending those changes all of which leads to preparation of a draft water resource policy strategy;
- proceed towards implementation by compiling a draft regional water resource management strategy from the policy, planning, regulation, and assessment strategies developed in the earlier steps. This is then submitted to cabinet or to the minister as appropriate for endorsement. The submission will also include a regional water allocation plan and recommend if appropriate legislative and regulatory amendments.

Implementation of the strategy may involve making appropriate amendments to the Water Act and Regulations, making beneficial use and water allocation plan declarations, establishment of a policy/management structure followed by monitoring and when necessary revising the strategy.

The Northern Territory have advised that Management Advisory Committees are appointed by the Minister to oversight the development, operation and review of plans and strategies through involvement in direction setting, editorial panels, monitoring and coordinating and directing operational programs. Advisory Committees are

appointed by the Minister and are accountable to the Minister through annual reporting against objectives and work plans set in the strategies and plans.

The Ti Tree Water Advisory Committee has held three public meetings over the past 12 months to provide a vehicle for public input to the regional water resource strategy. Membership of the Water Advisory Committee comprise: three representatives from irrigation interests; and one representative from each of the aboriginal community, pastoralists, hydrogeological expertise and agronomic expertise.

The Council understands that the water quality monitoring is a stand alone operational component of the Mary River ICM plan. The Northern Territory states that it involves significant government agency limnological programs, AUSRIVAS work and, mine and waste discharge licensing and monitoring and local Waterwatch. The Council also understands that water quality monitoring for TI Tree will be incorporated into ground extraction licences and involves public health assessment of regional groundwaters.

### **COUNCIL COMMENT**

The Northern Territory states that Regional Natural Resource Strategies (for example Ti Tree) and Integrated Catchment Management Plans (for example Mary River) are developed and implemented with full landholder and government agency participation and that Advisory Committees representative of catchment community and industry oversight the development, implementation and review of plans and strategies. However, the Council notes that there appears to be no official representation of environmental interests on the Ti Tree Water Advisory Committee. The Council notes the Northern Territory's view that there are no groundwater dependant ecosystems in the area covered by the plan but would support the representation of environmental interests on Advisory Committees wherever possible.

The Northern Territory also states that Mary River ICM Plan and Ti Tree Regional Water Resource Strategy are best practice approaches. The generic approaches to developing a Water Resource Management Strategy as described above seem appropriate. The Council will look for information on how these approaches have been implemented and how best practice is achieved through examples such as the Mary River ICM Plan and Ti Tree Regional Water Resource Strategy in the lead up to its third tranche assessment.

The Council is satisfied that tranche two commitments have been met but will look for continued progress in this area in its third tranche assessment.

#### **10.9.5.2 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.

### **Northern Territory arrangements**

The Northern Territory state that:

- beneficial Use Declarations Program continues under the Water Act in accordance with the National Water Quality Management Strategy;
- extensive community involvement is central to the beneficial use declaration program;
- waste discharge licensing, monitoring programs and development of catchment management strategies proceed from beneficial use declarations;
- Northern Territory participated in the ARMCANZ review of the CSIRO wastewater and stormwater management report;
- watching brief maintained on the more detailed work now in train with CSIRO on urban water cycle; and
- Landcare and Waterwatch groups are expanding throughout the Northern Territory and are associated in many cases with river and stream protection.

### **COUNCIL COMMENT**

Supplementary information provided to the Council on the Northern Territory's approach to environmental management suggest that tranche two commitments in regard to this aspect of the framework have been met. The Council will revisit this issue as part of its tranche three assessment.

## **10.9.6 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**10.9.6.1 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.

### **Northern Territory arrangements**

#### ***Consultation***

In the 1999 report to the Council the Northern Territory state that the principle of consultation is positively accepted and acted upon through direct consultation by Department of Lands, Planning & Environment with industry groups such as Northern Territory Horticulture Association, Northern Territory Irrigation, Grain & Fodder Growers Association as well as through public meetings in Katherine and Ti Tree. The Northern Territory also state that the Alice Springs Water Committee, a community-based environmental consultative group, on which the PAWA is a member, has been active in water conservation and demand management for over five years.

#### ***Education***

The Northern Territory state that for the past five years the annual focus of effort for the Department of Lands, Planning & Environment has been National Waterweek.

PAWA has established a Resource Conservation program which has seen the development of a workbook which has been accepted by the Northern Territory Open Education College for use in their junior school curriculum. The program has been conducted in a short format in all Northern Region remote schools while the more extensive two week program has been held at Numbulwar, Oenpelli, Yirrkala and Minjilan. The two week program will also be conducted in Maningrida and Ramingining in the latter part of 1998. PAWA also participates in the annual Rural Shows circuit (Alice Springs, Katherine, Darwin) with displays and information regarding water use.

### **COUNCIL COMMENT**

The Council notes that negotiation of PAWA CSO arrangements are currently on hold as a result of a review of the Authority. However, given the potential conflict of interests arising from having a service provider responsible for educational programs (which include water conservation issues) the Council would expect that educational services are secured through a well defined purchaser provider agreement. This agreement should included clearly stated outcomes and performance indicators.

The Council is satisfied that the tranche two commitments in respect of public consultation and community education have been satisfied but will revisit this issue in its third tranche assessment.

## **B10.10 Water Reform, Murray Darling Basin Commission**

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**Table of abbreviations**

ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ANZECC	Australian and New Zealand Environment and Conservation Council
Commission	Murray-Darling Basin Commission
COAG	Council of Australian Governments
CSO	Community Service Obligation
GL	Gigalitre (1 000 ML)
IAG	Independent Audit Group
Ministerial Council	Murray-Darling Basin Ministerial Council
ML	Megalitre (1 000 kL)
NCC	National Competition Council
NWQMS	National Water Quality Management Strategy
RMW	River Murray Water
SCARM	Standing Committee on Agriculture and Resource Management
TER	Tax Equivalent regime
WAMP	Water Allocation Management Plan
WMP	Water Management Plan

## **B10 WATER REFORM**

### **B10.10 MURRAY-DARLING BASIN COMMISSION**

#### **10.10.1 EXECUTIVE SUMMARY**

This is an assessment of the Murray-Darling Basin Commission'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*

- The Council notes the substantial progress of the Murray-Darling Basin Commission (the Commission) and Ministerial Council in apportioning costs in a manner which reflects the services provided. The Council also notes the advice of the Commission that it is on schedule to achieve a positive rate of return on assets under its control by 2001. The Council will review this matter further prior to the third tranche assessment.

##### *Institutional reform*

- The Council notes that the creation of River Murray Water as a ringfenced water business unit within the Commission is sufficient to meet the reform commitment of separation of water service from other Commission functions. The Council notes its view that independent price regulation is important, and would look for significant further progress in respect of this matter prior to the third tranche assessment.

##### *Allocations and trading*

- The Council notes the considerable contribution of the cap on diversions to ensuring environmental flows. The work of the Commission, Ministerial Council and contracting jurisdictions in this respect is to be commended. The Council has raised concerns noted in the Independent Audit Group reports with jurisdictions in assessing individual compliance with reform commitments.
- The Council also notes the work of the Commission and Ministerial Council in progressing the pilot interstate water trade project and the recent extension of the project. The Council will look to co-operation of jurisdictions in resolving difficulties prior to the third tranche assessment.

***Environment and water quality***

- The Council has been advised of the large investment by the Commission and Ministerial Council in integrated catchment management, and has been provided with examples of management plans prepared throughout the Basin.
- The Commission has advised that it has adopted relevant National Water Quality Management Strategy guidelines.

***Public education and consultation***

- The Council notes the ongoing commitment of the Commission and Ministerial Council to consulting with relevant stakeholder groups.

**ASSESSMENT**

The Council is of the view that the Commission and Ministerial Council have met their reform commitments for the purposes of the second tranche.

The Council has noted concerns regarding price regulation and will continue to monitor this matter prior to the third tranche assessment. The Council will look to contracting parties and the Commission to have implemented appropriate arrangements prior to the third tranche assessment.

## **B10.10.2 REFORM COMMITMENT: COST REFORM AND PRICING**

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

**Where charges do not currently cover the costs of supplying water to users (excluding private withdrawals of groundwater<sup>409</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 NCC 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

In the case of the Murray-Darling Basin Commission, the Murray-Darling Basin Ministerial Council is to put in place arrangements so that, out of charges for water, funds for the future maintenance, refurbishment and/or upgrading of the headworks and other structures under the Commission's control are provided.

### **Commission Approach**

#### ***Structure of the Murray-Darling Basin Commission and Ministerial Council***

The Murray-Darling Basin Commission (the Commission) began in 1917 as the River Murray Commission to direct the management of the River Murray System. Since 1988 those functions have been performed by the Commission, which co-ordinates the efforts of Governments and various communities in the Murray Darling Basin (the Basin). *Murray Darling Basin Initiative* (undated, Murray-Darling Basin Commission) notes that the Basin is home to 1.8 million people and contributes in excess of \$3 billion of the nation's agricultural output annually. Other industries with an economic output of in excess of \$25 billion are to a lesser or greater extent dependant on water from the Basin. In addition, the Basin has 30 000 wetlands, eight

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<sup>409</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.

of which are recognised as being of international importance, and the region has important biodiversity.

The Murray-Darling Basin Ministerial Council (the Ministerial Council), the policy making body that oversees the functions of the Commission, consists of Ministers for land, water and the environment of each of the contracting Governments: the Commonwealth, New South Wales, Victoria, South Australia and Queensland.<sup>410</sup> In 1998 the Australian Capital Territory undertook formal participation in relevant affairs of the Ministerial Council and Commission, including agreement to contribute to administration, program support and project costs associated with the Basin Sustainability Program.

In addition, there is a Community Advisory Committee made up of 21 community representatives and other representatives including the National Farmers' Federation, Australian Local Government Association, Australian Conservation Foundation and Australian Council of Trade Unions.

The Commission is made up of two Commissioners from each Government, and chaired by an independent President appointed by the Ministerial Council. The Initiative notes that the Commission is a unique organisation. It is equally responsible to each of the governments represented on the Council but is not a government department or statutory body of any individual government. Functions of the Commission include: distributing Basin waters to New South Wales, Victoria and South Australia; advising the Ministerial Council on management issues throughout the Basin; and, administering the Natural Resource Management Strategy.

### **Pricing**

The *SCARM Review of progress by the Murray-Darling Basin Commission* (August 1998) (the SCARM review) noted that the Commission regards itself as a water bank (or tolling company<sup>411</sup>). The Commission neither owns the water nor the assets that regulate the water but has under its control some \$1.025 billion of assets.<sup>412</sup> In 1996-1997 the Commission spent \$42 million on the provision of water services and a further \$46.7 million on natural resource management.

Under the terms of the Murray Darling Basin Agreement, the Commission recovers the costs of operating, maintaining and upgrading/acquiring assets. Previously, operating costs were shared equally by New South Wales, Victoria and South Australia and capital costs were evenly divided between the Commonwealth, New South Wales, South Australia and Victoria.

From 1 July 1998 a new system was adopted to more closely link payment with the services provided. The principles include:

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<sup>410</sup> Since 1992.

<sup>411</sup> Bilateral meeting between the NCC and Commission, 15 February 1999

<sup>412</sup> Written down replacement cost.

- that prices are to meet the full cost of operations, management, administration and renewals, this meets the floor price required in the strategic framework. A decision on TERs is presently deferred. It is noted that the Commission believes it is on target to achieve a positive rate of return on assets by 2001;
- that two part tariffs are to be used wherever possible;
- that a new apportionment of total costs, the long-run effect of which is likely to be: New South Wales, 40 per cent; Victoria, 36 per cent; and, South Australia, 24 per cent; and
- that the Commonwealth will continue to retain an interest in the water business for the time being and will continue to contribute to developing the capital base in a equivalent manner to that applying under the present agreement.

The SCARM review notes that the Commission is looking to an independent regulator to undertake prices surveillance.

The Commission has noted that the revised system is based on the long run outcome of a proposed two-part tariff based pricing system. The Commission also noted that implementation of a specific tariff it is not within in the terms of the existing Agreement. Governments have given a strong commitment to adjusting previous equal cost sharing arrangements to better reflect the outcome of a price for service based on full cost recovery principles, including a renewals annuity.

The Commission has advised that the Commonwealth arrangements will continue to be reviewed in the light of development of the Commission's water business.

### **Council Comment**

The Council notes the substantial progress of the Commission in addressing the question of rural cost recovery, and commends this.

However, TERs should be in place consistent with full cost recovery and other reform commitments. The Council also believes that there should be independent price regulation of the water service provision functions of the Commission. This matter is discussed further under institutional arrangements.

The Council will assess further progress against the Commission's commitment to full cost recovery at the third tranche assessment.

### **B10.10.3 REFORM COMMITMENT: INSTITUTIONAL REFORM**

#### **Institutional Role Separation**

**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 NCC 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.

#### **Commission approach**

The 1997 *Murray-Darling Basin Commission Report of Implementation Progress* (the 1997 report) notes the proposed establishment of River Murray Water (RMW), a ringfenced business unit to undertake the water supply services of the Commission. The 1997 report notes the ultimate goal of this becoming a separate statutory entity, although difficulties to be resolved included the appropriate regulatory regime, ownership and transfer of water assets to the business, liability, and amendment of enabling legislation and the Murray-Darling Basin Agreement. At that time proposed legislative amendments to achieve reform were not expected before Spring 1998.

The proposed arrangements included delegation of relevant powers by the Commission to the General Manager of the RMW and the establishment of a Board to, among other functions, endorse operational arrangements and advise the General Manager. An operating authority (including matters such as pricing, financial management, dam safety etc.), issued by the Commission, would specify the requirements of RMW. It is noted that the business unit would provide a useful transition to the separation of the water business functions. The benefits of the proposed arrangements included cost sharing based on consumption, some improvement in asset management and operating performance and improved decision making.

The SCARM review noted that the Commission is looking to contract an independent price regulator to undertake prices surveillance.

At the bilateral meeting between the Council and Commission in February 1999, the Council was advised that a new institutional framework was being considered by the Commission and Ministerial Council. This new framework would set up the Commission controlled water assets and the water business as a separate and ring-fenced unit of the Commission.

It was further noted<sup>413</sup> that the Commission and Ministerial Council have given careful and thorough consideration to the issue of structural separation of service provision from other Commission functions. The outcome is that while there is clear internal separation of functions *'it is strongly held that the values of an integrated*

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<sup>413</sup> 18 June 1999.

*approach to basin resource management favour continuation of a structure that retains the co-ordinating function of the Council and Commission’.*

Both the Ministerial Council and the Commission are of the view that it is insufficient for the Ministerial Council to act as price regulator. All that has ever been proposed is that the Ministerial Council would provide the fundamental authority and forum for engaging an independent, expert and transparent price regulator to exercise this role and provide its findings to the Ministerial Council. This process is noted to be similar to the cap audit process (see B10.10.4.1). Both the Ministerial Council and the Commission are continuing to discuss the achievement of a specific pricing regime and the subsequent independent, expert and transparent evaluation of its implementation.

### **Council Comment**

The Council has previously advised<sup>414</sup> that, given the unique role of the Commission in providing water services to New South Wales, Victoria and South Australia, strong ringfencing of service provision from other functions of the Commission was just sufficient for the purposes of the framework. The Council has also noted its preference for structural separation in the long term.

The Council believes there is a strong need for independent prices oversight, and that it is insufficient for the Ministerial Council to operate as the price regulator.

While either the new or previous proposal outlined above appear to provide satisfactory ringfencing of service provision functions, there has been no substantial progress in respect of independent prices oversight.

The Council recognises the commitment of both the Ministerial Council and the Commission to implementing price regulation reform. The Council will look for significant further progress in respect of this matter from the Commission, the Ministerial Council and contracting parties prior to the third tranche assessment.

This reform meets the second tranche assessment but the Council notes that failure to provide prices oversight may have implications for the assessment of jurisdictions' compliance with reform commitments in the third tranche assessment.

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<sup>414</sup> Letter to Murray-Darling Basin Commission, 1 April 1997.

## **B10.10.4 REFORM COMMITMENT: ALLOCATIONS AND TRADING**

### **B10.10.4.1 ALLOCATIONS**

**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 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.

#### **Commission arrangements**

In response to continuing growth on diversions and declining river health in the Basin, the Ministerial Council agreed in 1997 to a cap on diversions from the Basin. “*The Cap is the volume of water that would have been diverted under 1993/4 levels of development. In unregulated rivers this Cap maybe defined as an end-of-valley flow regime*”<sup>415</sup>.

*Setting the Cap* (November 1996, Independent Audit Group (IAG)) (the cap report) noted that the primary objectives of the cap are to maintain and where appropriate improve existing flow regimes, to protect and enhance the riverine environment and to achieve sustainable consumptive use by developing and managing Basin water resources to meet ecological, commercial and social needs.

The cap proposal included equity considerations such as climate and priority of water rights. A further allocation to South Australia (in recognition of conservative water management since 1969), Victoria (to complete the Lake Mokoan scheme) and New South Wales (for inclusion of the Pindari Dam) and a delay in setting the Queensland cap (to be determined after completion of the WAMP process) were included in the cap recommendation. The cap report noted that the existence of the cap was likely to

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<sup>415</sup> Setting the Cap (November 1996, Independent Audit Group), pVIII.

increase the pressure for growth in water trading opportunities. Recommendations included the implementation of the pilot trade programme in the Mallee region.

Two reviews of cap implementation<sup>416</sup> have been completed. Both reviews noted the commitment of South Australia, Victoria and New South Wales in implementing the cap.

- South Australian diversions were within the cap for both reviews.
- Victorian diversions in 1996-1997 may have exceeded the cap although IAG noted Victoria's commitment to introduce management changes to ensure cap compliance. 1997-1998 diversions were below climate adjusted cap targets.
- New South Wales diversions for the Lachlan and Murrumbidgee Rivers exceeded the cap on both reviews. 1997-1998 diversions for the Barwon-Darling and Border regions appeared to have exceeded the cap although environmental flow policies on all but the Barwon-Darling River should ensure cap compliance.
- The 1996-1997 report for Queensland noted that the relevant Water Allocation Management Plans (WAMP) should be completed by June 1998, although there was a need to resolve “*key philosophical differences between Queensland and New South Wales about environmental objectives for the Border Rivers*”. (p14) The 1997-1998 report notes that diversions were a record 611 GL (up from 420 GL in 1996-1997) following a growth in on-farm storage and high flows. It was noted that the Condamine-Balonne WAMP was unlikely to be completed before June 1999 and the Border Rivers WAMP draft before December 1999. It was also noted that legislation to provide a statutory basis for WAMPs was expected to be introduced into the Queensland Parliament in March 1999. The IAG recommended that the legislation include management of floodplain harvesting. The IAG also recommended capping diversions at 1997-1998 levels until WAMPs and Water Management Plans (WMP) were completed.
- The *Progress Report in the Queensland WAMP and WMP process* (IAG, March 1999) noted that WAMPs and WMPs for the Queensland component of the Basin were unlikely to be finalised before 30 June 2000. Although the IAG and Ministerial Council supported the approach to use the WAMP to establish end of river flows, it was concerned that downstream impacts, rather than only the area covered by the WAMP, be considered. This concern extended to studies reviewing environmental flow, volume and reliability of water available for diversion or beneficial flooding, economic and social assessments and the draft WAMP scenarios. The IAG was also concerned as regards the number of factors used in the Multi-objective Decision Support System and recommended their rationalisation.

### Other matters

The 1997 report notes the allocation of 100 GL of water to the Barmah-Millewa forest by the Ministerial Council.

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<sup>416</sup> *Review of Cap Implementation* (August 1997, November 1998, IAG).

The SCARM review notes the Commission's efforts in providing water to the environment, including the continuing development of the Environmental Flows Decision Support Program, in an attempt to define the most appropriate approach in the Basin. The 1997 report notes that this computer based product will help decision makers to assess the long term impact on the environment of their decisions and hence assist in making an informed decision about the management of environmental flows in their region.

The Council was advised at the bilateral meeting<sup>417</sup> that while an environmental flow plan for the River Murray was in operation, there were significant developments underway which would have implications for future environmental flow regimes for the River Murray. These included the future resolution by Governments of the operating regime of the Snowy Scheme and review by the Commission of the operations of the Hume and Dartmouth Dams. These and other aspects are being considered by the Commission in a current comprehensive review of environmental flow requirements for the whole of the River Murray System.

### **Council Comment**

The Council notes the considerable contribution of the cap to ensuring environmental flows. The work of the Commission, Ministerial Council and contracting jurisdictions in this respect is to be commended.

The Council has raised concerns noted in the IAG with jurisdictions in assessing individual compliance with reform commitments.

The Council will continue to monitor implementation of the cap prior to the third tranche assessment.

### **B10.10.4.2 TRADING**

**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.**

**That individual jurisdictions would develop, where they do not already exist, the necessary institutional arrangements, from a natural resource management perspective, to facilitate trade in water, with the proviso that in the Murray-Darling Basin the Murray-Darling Basin Commission be satisfied as to the sustainability of proposed trading arrangements.**

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

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<sup>417</sup> February 1999.

## Commission arrangements

The Commission has supported the development of interstate trade through the pilot interstate water trading project (the project) in the Mallee border region of the Murray-Darling Basin.<sup>418</sup> The project was approved by the Ministerial Council in 1997 and commenced on 1 January 1998. The Council has been advised by the Commission that the first water trade under the project occurred in September 1998 and that as at 15 February 1999, 248 ML had been transferred from New South Wales to Victoria, 600 ML from Victoria to South Australia and 528 ML from New South Wales to South Australia. The present price for trades is about \$1 000 per ML.

The project is limited to permanent transfer of high security water entitlements held by private diverters.<sup>419</sup> Each trade must be approved by respective state authorities. The scheme provides for the registration of the trades and exchange rates to limit the impact of trades on the security of others' water entitlements and the environment. Environmental clearances are integral to the pilot, as is the maintenance of the Salinity and Drainage Strategy. The project is to be reviewed after two years or 10 000 ML in trade have occurred.

The Ministerial Council has agreed in May 1999 to extend the project to include high security water entitlements within the pumped irrigation districts below Nyah.

Information provided to the Council at the bilateral meeting indicated that research on the project suggested different water charges between the states involved in the project tended to reflect differences in levels of service. Water charges were unlikely to have an impact on an individual's decision about where to locate a new irrigation project.

## Council Comment

The Council notes the work of the Commission and Ministerial Council in progressing interstate trade through the pilot project. The commitment to trade is evident by the careful and thorough development, extensive education programs and extension of the project.

The Council will look to review the report on the project prior to the third tranche assessment and that, where issues are identified, all jurisdictions have co-operated to work together to resolve difficulties.

The Council is satisfied that this reform commitment has been met for the second tranche.

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<sup>418</sup> The Pilot Interstate Water Trading Project information sheets; MDBC, 1998.

<sup>419</sup> The project area includes water rights of about 400 GL out of a potential 6 000 GL in the Basin.

## **B10.10.5 REFORM COMMITMENT: ENVIRONMENT AND WATER QUALITY**

### **B10.10.5.1 INTEGRATED CATCHMENT MANAGEMENT**

**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 NCC 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.

#### **Commission arrangements**

The 1997 report noted that, through Murray-Darling 2001, more than \$300 million for integrated catchment management will be made available over five years. Funds are only available for works that fit within an integrated catchment management plan, and the Basin has a comprehensive set of 19 catchment management committees, each established under state legislation to co-ordinate activities within catchments.

The aims of Murray-Darling 2001 include: improving water quality; restoring riparian land systems, wetland and floodplains; improving the health of key rivers; and encouraging economically and ecologically sustainable land use.

The SCARM review notes that in 1996-1997, the Commission allocated \$13.8 million to an integrated catchment management program to allow communities to develop regional plans and proposals for funding across the 19 regions. Assessment of plans includes representatives of State and local government. The plans were linked to jurisdictional plans.

The Council was provided with the following examples of catchment plans of the Basin:

- *The Shepparton Irrigation Region Land and Water Salinity Management Strategic Plan, the second five years* (Victorian Department of Agriculture, Energy and Minerals, July 1995);

- *Remnant Vegetation in the Central West Catchment, Issues and Options for the Future* (Central West Catchment Management Committee, July 1997);
- *Denimein Community's Land and Water Management Plan* (Denimein LWMP Working Group, December 1995);
- *Mallee Region Catchment Strategy* (Mallee Catchment and Land Protection Board, June 1997); and
- *Goulburn Broken Catchment Management Authority Catchment Strategy* (Goulburn Broken Catchment and Land Protection Board, July 1997).

The Council has been advised that the Commission's salinity plan should be released in the second half of 1999.

### **Council Comment**

There has been substantial financial commitment by the Commission and Ministerial Council to integrated catchment management. The Council notes the development of catchment plans for the Basin and has canvassed the work of jurisdictions' catchment management strategies in the Basin in their respective assessments.

The Council will review the salinity plan prior to the third tranche assessment.

### **B10.10.5.2 NMQMS**

**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.

### **Commission arrangements**

The 1997 report notes that the Commission has adopted the NWQMS's recommended water quality standards and procedures including the development of an algal management strategy supporting catchment, flow regime, on ground works, investigation and community education initiatives.

The Council was provided with the *Algal Management Strategy* (Ministerial Council, October 1994) (the Strategy). The Strategy notes its goal as "*to reduce the frequency and intensity of algal blooms and other water quality problems associated with nutrient pollution in the Murray Darling Basin through a framework of co-ordinated planning and management actions*". (p. 7)

The objectives of the Strategy are to: reduce nutrient concentrations in the streams and storages of the Basin; improve stream-flow regimes and flow management; increase the community's awareness of the blue-green algae problem; and obtain better information and scientific knowledge of blue-green algae. The main principles

underlying the Strategy are ecologically sustainable development and integrated catchment management.

For each objective the Strategy identifies actions, priorities and the role of respective parties, including the Commission, governments and individuals/communities. The Strategy also identifies monitoring and reporting mechanisms.

### **Council Comment**

The Council notes the commitment of the Commission to NWQMS. The Strategy provides a clear example of the process adopted by the Commission and Ministerial Council to address Basin issues.

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

**B10.10.5 REFORM COMMITMENT: PUBLIC CONSULTATION, EDUCATION**

**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.

**Commission arrangements**

The SCARM review noted that the Commission has extensive community education and consultation plans in place for natural resource management issues, including plans concerning algal blooms and salinity.

The Commission has also provided the Council with information concerning the pilot interstate trading project, and the SCARM review notes that consultation has included negotiations with relevant stakeholders and will continue throughout the trial.

**Council Comment**

The Council notes that the Commission has consulted with relevant stakeholders in respect of reforms, and that it has ongoing consultation and education concerning reforms such as interstate trade and resource management. The Council is satisfied that this reform commitment has been met.



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