

3 Victoria

Outstanding assessment issues

Full cost recovery - urban

Outstanding issue: Consider evidence on the level of cost recovery in all nonmetropolitan urban water and wastewater businesses

Next full assessment: The Council will assess urban pricing reforms in 2003.

Reference: Water reform agreement, clause 3(a)

Background

For the 2001 NCP assessment, the Council concluded that a number of nonmetropolitan urban providers (referred to in Victoria as regional urban water authorities) are not operating on a commercially viable basis as defined by the CoAG guidelines.

The Victorian Government noted its intention to announce a price path that would establish full cost recovery within three years. Victoria also announced that an Essential Services Commission would be created as an independent economic regulator to oversee the implementation of the price paths.

In 2001 the Council noted that demonstration of further progress on full cost recovery, particularly among the regional urban providers, would be a significant issue for the Council's 2002 NCP assessment.

Victorian arrangements

Victoria has reported the completion of the 2001 Price Review for Water, Drainage and Sewerage. In late June 2001, the Minister for Environment and Conservation announced a new framework for water pricing in Victoria. This framework, a result of the 2001 price review, caps prices that Victorians will pay for water, sewerage and drainage services from water businesses over the next three years, from July 2001 to June 2004.

The review was conducted using the building block approach, which involves reviewing the obligations of each business, determining the set of costs to

efficiently deliver these obligations and computing a set of prices to recover those costs.

Key considerations in the price review were the need to:

- establish prices that lie within the band of a floor price that ensures commercial viability and a ceiling price that avoids monopoly rents consistent with CoAG pricing principles;
- maintain financially viable water businesses;
- meet Government policy commitments; and
- facilitate the Government's commitment to transfer economic regulation of the water industry to the Essential Services Commission (refer to progress report on institutional reform for more information).

A revenue requirement for each business was determined (consistent with CoAG pricing principles), to be recovered from customers through a set of tariffs, consisting of a fixed service charge and a use component.

According to Victoria, the resulting price framework provides an appropriate balance between the need to meet the economic imperative of responsible financial management and the social imperative of protecting customer interests by minimising pricing impacts.

For regional urban water authorities, Victoria expects all businesses to be operating between the lower and upper pricing bounds at the end of the 2004 price path.

Under the new framework, the pricing cap is:

- 2001-02: consumer prices index¹ plus 2 per cent (4.9 per cent total);
- 2002-03: consumer prices index plus 1 per cent; and
- 2003-04: consumer prices index only.

Victoria estimates that the price rises announced by the three metropolitan water retailers, and all regional urban water authorities, will result in Victorian households paying an average of 45 cents a week more for water and sewerage services, from 1 July 2001. The average metropolitan household water bill of \$459 a year will rise to \$482.

The framework has been introduced following extensive industry and community consultation over the eight months prior to setting the price framework.

¹ The consumer prices index figure used by the Victorian Government is 2.9 per cent, which does not take into account goods and services tax impacts.

Submission

Concerns about Victoria's pricing reforms have been raised by the World Wide Fund for Nature (2002, submission 13). Its submission argues that Victoria should improve the transparency of pricing issues, include a formalised transparent process for public input, and ensure externalities are incorporated into water prices.²

The comments in this submission are relevant to urban full cost recovery. However, the Council recognises that the issues raised also relate to various other assessment and progress reports in the 2002 NCP assessment. The Council has considered the views raised in that submission under all the relevant areas of this assessment.

Discussion and assessment

The methodology used to calculate the price paths for the regional urban water authorities appears to be consistent with the CoAG pricing principles, based on the information provided to the Council. The Council is concerned to ensure that, in line with the information provided by Victoria, by the end of the price path all regional urban services are priced within a band calculated to be consistent with the CoAG pricing framework. This includes rates of return calculated on asset values based on an appropriate asset valuation methodology.

In 2003 the Council will review the cost recovery achieved by each regional urban service provider to ensure its progress reflects Victoria's commitment to achieve appropriate levels of cost recovery by June 2004.

Full cost recovery - rural

<p>Outstanding issue: Demonstrate significant progress on rural full cost recovery</p> <p>Next full assessment: The Council will next assess rural pricing reforms in 2004.</p> <p>Reference: Water reform agreement, clauses 3(a) & (b)</p>

² Victoria had advised that during the 2001 Pricing review an Issues Paper relating to issues for consideration during the price determination was released for public comment. In addition, public consultation workshops were held in Melbourne and three regional centres (Ballarat, Bendigo and Traralgon) to discuss the Issues paper. All workshops were advertised in metropolitan and regional newspapers, and 49 submissions were received on the Issues Paper. No submission was received from the World Wide Fund for Nature.

Background

For the 2001 NCP assessment, Victoria provided indicative information only on the level of full cost recovery by the rural water authorities. For Goulburn–Murray Water, the largest rural authority, 25 of 34 schemes were recovering an amount consistent with the lower bound of the CoAG pricing guidelines. Goulburn–Murray Water advised that the nine schemes that were not operating on a commercially viable basis (10 per cent of Goulburn–Murray’s total rural services), would be shown to be financially viable for 2000–01.

The Council indicated that a demonstration of further progress on full cost recovery for the rural sector would be a significant issue for the 2002 NCP assessment when it would look for Victoria to have made progress in the following areas:

- finalised figures for full cost recovery by rural water authorities for 2000–01 and forecasts for 2001–02 including state tax equivalent regime payments;
- completed arrangements to improve asset valuation;
- completed guidelines for renewals annuities and oversight by the Essential Services Commission;
- considered a process to improve the treatment of externalities; and
- set a process in place to ensure that where dividends are paid they reflect commercial realities and simulate a competitive market outcome.

Victorian arrangements

Full cost recovery

Victoria has provided finalised figures for full cost recovery by rural water authorities for 2000–01 in table 3.1 below. Attachment 1 provides a forecast of the level of cost recovery expected to be achieved by 2002 by the State’s five rural water authorities.

There are still districts supplied by Goulburn–Murray Water that are not recovering full costs. For the fourth consecutive year, sales revenue was well below normal due to the drought reducing the amount of water available in the Goulburn system.

Given the final cost recovery figures for Goulburn–Murray Water were below expectations, and the lower bound, the Council requested a breakdown of cost recovery per scheme in that region. The irrigation supply areas that are under recovering are Central Goulburn Gravity Irrigation, Rochester Gravity Irrigation, Campaspe Gravity Irrigation, Pyramid–Boort Gravity Irrigation,

Shepparton Gravity Irrigation and Woorinen Gravity Irrigation. Goulburn–Murray’s detailed cost recovery information is at Attachment 2. Victoria provided the Council with the volumes and proportions of water in irrigation areas supplied by Goulburn–Murray Water Authority that are not recovering full costs.

Victoria has recognised the problem of under recovery and following a report by Marsden Jacob and Associates has restructured its tariff to reduce the risk of under recovery in drought years. These changes will be implemented in 2002-03. Victoria states that its pricing policy will, on average, deliver full cost recovery in all irrigation districts within Goulburn-Murray.

Victoria points out that while the proposed role and responsibilities of the Essential Services Commission for the rural water sector are yet to be determined, the proposals paper released in May 2002 foreshadowed arrangements to apply to the rural water authorities. Rural water authorities, in consultation with their rural customer committees, will prepare and submit pricing proposals (consistent with a set of pricing principles defined by the Government) to the Essential Services Commission for review. Where the principles are complied with, the Essential Services Commission will recommend to the Government that it accept the prices proposed by the rural water authority.

Table 3.1: Full cost recovery in the rural sector, June 2001

	<i>First Mildura Irrigation Trust</i>	<i>Gippsland and Southern</i>	<i>Goulburn– Murray</i>	<i>Sunraysia</i>	<i>Wimmera Mallee</i>
	<i>\$ million</i>	<i>\$ million</i>	<i>\$ million</i>	<i>\$ million</i>	<i>\$ million</i>
Revenue					
Bulk, service and usage	4.146	13.146	54.536	10.891	12.171
Other	0.492	4.060	23.892	2.607	2.513
	4.638	17.206	78.428	13.498	14.684
Expenses					
Operations, maintenance and administration	2.725	10.576	68.306	9.200	9.606
Finance charges	0	0	0.209	0	0.034
Other	0.894	0.819	3.999	0.663	4.203
Renewals annuity	0.937	2.957	14.844	2.081	3.254
	4.556	14.352	87.358	11.944	17.097
Surplus/(deficit)	0.082	2.854	(8.930)	1.554	(2.413) ^a

^a Wimmera Mallee Water's result includes an expense item for the write down of some \$2.4 million of channel assets abandoned due to the Northern Mallee Pipeline project. When the effect of this item on the business is removed, Wimmera Mallee Water achieved full cost recovery in 2000-01.

Source: State Government of Victoria (2002)

Where proposed tariffs are not consistent with the pricing principles, the Essential Services Commission will recommend to the Government that it reject the prices and that the rural water authority be required to submit revised tariffs. The Government will be responsible for making the final decision to accept or reject the rural water authorities proposed tariffs.

Improved asset valuation methodologies

Victoria's 2002 NCP annual report stated that an asset valuation practice statement, which adopts the deprival value concept for the assessment of asset values for financial reporting purposes, has been developed. The Council was provided with a draft of this statement. Its release, and implementation by businesses, is subject to the finalisation of a proposed accounting policy – *Valuation of Non-Current Physical Assets*.

More recently, Victoria has advised that while the accounting policy has been released, it temporarily excludes water businesses due to uncertainty with the application of fair value measurement of the infrastructure assets they hold. Consultation with these businesses will occur to resolve these issues.

The asset valuation practice statement will need to be reviewed to ensure consistency with the accounting policy and to resolve several issues regarding the application of the recoverable amounts test to water businesses. Victoria will issue the statement to apply on or after 1 July 2002.

Renewals annuity

Victoria reports that an initial draft of guidelines for renewals annuities was developed late in 2001. Further work is required, however, before consultation with the rural water businesses can commence. The Council has been provided with a copy of the draft guidelines.

The proposals paper on establishing the Essential Services Commission provides for bulk water pricing to be subject to explicit price controls. Pricing principles will be completed prior to the industry being brought under the jurisdiction of the Essential Services Commission from 1 January 2003.

In assessing rural water authorities' compliance with the Government's pricing principles, the Essential Services Commission may refer to the draft guidelines for renewals annuities. Victoria notes, however, that these are only guidelines and the Essential Services Commission may develop and adopt its own methodology for assessing the suitability of rural water authorities' renewals annuities.

Discussion and assessment

Victoria states that, on average, all rural water services achieve full cost recovery. Over recent years drought conditions have resulted in sales revenue levels that are well below normal and, hence, there has been under recovery in some districts. Victoria has recognised this problem and will adjust its pricing structure in 2002-03 to reduce the risk of under recovery in drought years. Victoria intends that the Essential Services Commission will oversight the prices of all rural water authorities from 2004.

Victoria is refining its approach to full cost recovery. The asset valuation practice statement will adopt deprival value for the assessment of asset values for financial reporting purposes. This is consistent with CoAG commitments on full cost recovery. However, considering the statement will undergo further review to ensure consistency with other accounting policies such as on the valuation of non-current assets, the Council will assess the situation when Victoria has finalised its approach.

Renewal annuities are the preferred method to reflect the medium to long term cash requirements for refurbishing and replacing water and wastewater infrastructure assets. The Council is satisfied that Victoria's draft guidelines for renewals annuities reflect CoAG pricing commitments. These are, however, non-prescriptive guidelines subject to change, and the extent of adoption of the method by water and wastewater businesses is yet to be seen.

Given Victoria's intention that recent changes in its pricing policy will reduce the temporary under recovery in some schemes in the Goulburn–Murray region the Council will conduct a progress report in 2003 on rural water pricing prior to its full assessment of rural cost recovery in 2004. As part of

the progress report, it will look at Victoria's progress in refining the approaches to renewals annuities and asset valuation.

Full cost recovery – rural dividend payments

Outstanding issue: Examine dividend payments to ensure they reflect CoAG commitments

Next full assessment: The Council will assess rural pricing reforms in 2004.

Reference: Water reform agreement, clauses 3(a) and (b)

Background

For the 2001 NCP assessment, the Council noted that dividends paid by rural water authorities were not based on commercial principles. The CoAG pricing principles state that dividends should be set at a level that reflects commercial realities and simulates a competitive market outcome.

Victorian arrangements

The rural water sector pays a dividend of \$1.1 million annually. The dividend amount determined for the rural sector as a whole, and for each authority is not based on commercial principles of profitability and Victoria's general government business enterprise benchmark levels of distributions. Victoria has supplied a summary (table 3.2) of the dividends payable by the rural and regional urban water authorities during 2001-02. The dividends paid by regional urban water authorities are based on reported surplus/deficits for 2000-2001. Capital contributions are removed before dividends are determined.

Table 3.2: Dividends payable by rural and regional urban water authorities during 2002

<i>Provider</i>	<i>Calculated from 2000-01 reports</i>	
	<i>Dividends (\$'000s)</i>	<i>Per cent of adjusted surplus/deficit</i>
Rural water authorities		
Goulburn–Murray	385	Not applicable
Sunraysia	88	Not applicable
Southern	221 ^a	Not applicable
Wimmera Mallee	209	Not applicable
Total – rural water authorities	903	
Regional urban water authorities		
Barwon	0	-
Central Gippsland	0	-
Central Highlands	516	65
Coliban	3760	65
East Gippsland	900	65
Glenelg	0	-
Goulburn Valley	0	-
Grampians	0	-
Lower Murray	0	-
North East	0	-
Portland Coast	0	-
South Gippsland	0	-
South West	0	-
Western	260	65
Westernport	1001	65
Total – regional urbans	6440	

^a This amount excludes \$197 000 in holding costs for Blue Rock storage.

Source: State Government of Victoria (2002, unpublished)

All rural water authorities paid dividends except the First Mildura Irrigation Trust. The amount payable is apportioned between Goulburn–Murray Water, Southern Rural Water, Sunraysia Rural Water and Wimmera Mallee Water based broadly on the volume of bulk water sales to the regional urban water businesses, and the capacity of the rural water authorities to pay dividends. Southern Rural Water's final dividend is adjusted for the costs of holding unallocated water in Blue Rock Dam.

Discussion

The Council is concerned that dividends are distributed to Government from the rural water authorities based on criteria other than commercial principles.

Victoria has committed to working on the details of a commercially based dividend framework, and will consult with the rural and regional urban water authorities as part of that process. While there is no commitment for rural water authorities, Victoria intends that a framework for dividends payable will apply to regional urban water authorities for 2002-03.

In developing the dividend policy for the rural sector, Victoria is looking to achieve consistent dividend principles that recognise the need for dividends to be based on profits generated from the commercial segments of business operations.

Victoria argues that, as the owner of the water businesses, it will continue to oversight the application of its dividend policy, including the proposed dividend framework for the rural water businesses. The return on capital would enable a water business to meet finance charges and pay a dividend to government, consistent with the Government's dividend policy.

Under corporations law, dividends may be paid out of profits only, not out of capital (s. 201). Profits in this context include accumulated retained profits as well as the current year's profit. The purpose of this restriction is to protect creditors by maintaining the company's capital.

The Council considers that a reasonable upper bound for the dividend distribution policy of a government water service business is the corporations law requirement that dividends may be paid only out of profits.

Not all water authorities are subject to corporations law, but the principles behind the corporations law approach to dividends should nevertheless be applied. The Council considers that the adoption of the limit in the corporations law would safeguard the authorities against being left with insufficient financial resources which could undermine service quality. This approach would also help satisfy competitive neutrality principles.

Assessment

The Council has not received sufficient information from Victoria to determine whether the current methodology for determining dividends or the actual dividend payments are consistent with commercial principles. Given Victoria's intention to develop a dividend framework the Council will reassess Victoria's progress on dividend payments for both regional urban and rural service providers in 2003. In that assessment the Council will look for the following;

- a completed dividend framework which includes equivalent corporations law safeguards for distribution of profits;
- agreement to apply that framework to both regional urban and rural water authorities; and
- actual dividend payments being set at an appropriate level.

Rural full cost recovery – community service obligations and cross-subsidies

Outstanding issue: Transparent reporting of community service obligations by rural water authorities.

Victoria is to establish an approach on identifying and reporting cross-subsidies before the Essential Services Commission assumes responsibility for regulating water and wastewater prices.

Next full assessment: The Council will assess rural pricing reforms in 2004.

Reference: Water reform agreement, clauses 3(a) and (b)

Background

Community service obligations

For the 2001 NCP assessment, the Council was concerned with the apparent lack of transparency in community service obligations (CSOs) arrangements among rural water authorities. For example, there is currently no requirement to provide information on the nature or value of CSOs in rural water authority annual reports. In 2001, the Council suggested that the noncommercial elements of the rural water authorities be separately identified and reported. One way of improving the level of transparency in current arrangements would be to include a requirement within the water service agreements that each annual report include information on the nature and value of any CSOs provided by the rural water authority.

Victoria advised that over the 12 months following the 2001 NCP assessment rural water authority water service agreements would contain a requirement to report CSOs in annual reports.

Cross-subsidisation

For the 2001 NCP assessment, the Council was of the view that Victoria had yet to meet cross-subsidy commitments in full. While progress in reforming cost recovery and consumption based pricing had decreased the scope for nontransparent cross-subsidies, a more rigorous consideration of this issue was needed to meet CoAG commitments. The Council's concerns related to:

- the depth with which the issue of cross-subsidies have been considered to date; and
- the apparent absence of a mechanism for reporting cross-subsidies transparently.

One possible way of addressing the Council's concerns would be to develop a set of guidelines for identifying cross-subsidies and requiring each rural water authority as part of its water service agreement to apply the guidelines and report any identified cross-subsidies in annual reports.

Victoria has advised that it would consider the issue of identifying and reporting cross-subsidies over the twelve to eighteen months following the 2001 NCP assessment with a view to establishing a preferred approach before the Essential Services Commission assumes responsibility for regulating water prices. Victoria also noted that the preferred approach is likely to include a set of guidelines for identifying and reporting cross-subsidies.

Victorian arrangements

For the urban sector, community service obligations are limited to the provision of concessions to pensioners, rebates to certain not-for-profit organisations and payments under the rates and charges relief grant scheme. The Minister for Environment and Conservation may direct the inclusion of additional information in annual reports as is necessary or appropriate in the public interest.

The *Financial Management Act 1994* (s. 51) has been used to require rural water businesses to report a range of additional information on water industry performance and operations. Victoria will institute arrangements to require rural water businesses to report community service obligations, as applicable, in their annual reports, commencing in 2001-02.

In its 2002 NCP annual report, Victoria indicates that it is yet to develop guidelines on the identification, measurement and reporting of cross-subsidies. It may do so, however, subject to finalising new regulatory arrangements to transfer prices oversight to the Essential Services Commission.

The Department of Natural Resources and Environment has released a proposals paper that sets out the Government's framework for the economic regulation of the water industry, and identifies the regulatory instruments necessary to implement the proposed regulatory arrangements. These include pricing principles documents that may include such matters as:

- a requirement that tariffs be fair and reasonable;
- a requirement that they be developed with regard to CoAG principles, where relevant;

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- a requirement that they lie between an upper bound of stand alone cost and a lower bound of incremental cost;
 - a requirement that services and prices be unbundled to the maximum extent possible;
 - a requirement that tariffs reflect efficient, forward looking costs; and
 - the methodology by which tariffs should be determined.

While the regulatory arrangements for the Essential Services Commission have yet to be finalised, Victoria argues that it expects the pricing principles under the new regulatory framework to ensure that cross-subsidies are identified and transparent. If the Essential Services Commission regulation reveals significant cross-subsidies between services and/or customers, Victoria will reconsider the need for guidelines for its water businesses on cross-subsidies. The most appropriate mechanisms for specifying obligations to identify and report cross-subsidies would be considered at that time.

Victoria argues that cross-subsidies in the rural sector have been removed. This is a function of the transitioning of rural water services to a position of full cost recovery and price setting in consultation with water services committees, which limits the potential for cross-subsidies between services. Water services committees are fully aware of the operational, maintenance, administrative and renewal costs recovered in their prices and would not agree to higher prices that generated cross-subsidies for other customers.

Discussion and assessment

The Council is satisfied with the actions Victoria propose for the reporting of community service obligations by rural water businesses. Once those actions have been taken, Victoria will meet its community service obligation commitments for rural water businesses.

The Council remains concerned with the lack of evidence of a more rigorous consideration of the issue of cross-subsidisation to meet the CoAG commitment. In 2001, Victoria advised that it would consider the issue over the next twelve to eighteen month period, with a preferred approach likely to include a set of guidelines for identification and reporting. There has been no progress on this commitment over the past 12 months. Victoria continues to argue that there are few, if any, rural cross-subsidies.

The Council recognises that some mechanisms are now in place to reduce the risk of cross-subsidies in the rural water sector, like consultation with water service committees and the pursuit of full cost recovery. However, cost recovery is not yet in full effect (as discussed in the section on full cost recovery – rural).

Given that under-recovery is still occurring, and the Victorian Government has not provided evidence to substantiate the claim that cross-subsidies have

been removed, the Council expects to see a mechanism to review the extent and risk of cross-subsidies. The Council suggests that one way this could be done is by the Victorian Government committing to requiring the Essential Services Commission to specifically examine the issue of cross-subsidies when it first looks at pricing by rural service providers. The Council will reassess this issue in 2003.

Water allocations and property rights

Outstanding issue: Victoria is to demonstrate progress on the following outstanding property rights issues.

- Further developments in implementing the program of bulk entitlements, streamflow management plans and groundwater management plans.
- A policy on the regulation of farm dams and the legal recognition of the provisions of streamflow management plans. The Council is to assess how Victoria has addressed the recommendations of the 2001 Farm Dams Review in relation to these issues.
- The development of a river health strategy. The Council will assess the strategy in terms of the State's CoAG commitments, how it manages public consultation, and its implementation pathway.
- The decision by the Sunraysia Rural Water Authority to reduce the duration of private diverter's licences from 15 years to five years.

Next full assessment: The Council will assess water allocations and property rights reforms in 2004.

Reference: Water reform agreement, clause 4(a)

Background

In June 2001, the Council considered that Victoria's system of water property rights met the CoAG commitments. The Council found, however, that progress by Victoria in the rollout of its implementation program of bulk entitlements, streamflow management plans and groundwater management plans had been slower than anticipated. The Council undertook to re-assess Victoria's progress against the implementation program in June 2002.

An emerging issue in the 2001 NCP assessment for Victoria concerned the cumulative impacts on property rights and the environment of the capture of surface runoff by Victorian farm dams. At the time of the 2001 NCP assessment, the Victorian Government was considering the recommendations of the 2001 Farm Dams Review and was expected to respond in the second half of 2001. Given Victoria was in the process of developing policy to address the recommendations of the 2001 Farm Dams Review, the Council committed to re-assess this issue in the 2002 NCP assessment.

The 2001 NCP assessment also found that Victoria was proposing to develop a river health strategy. For the 2002 NCP assessment, the Council has assessed the property rights aspects of Victoria's proposed strategy.

Finally, at the time of the 2001 NCP assessment, Sunraysia rural water authority had just announced that the tenure of private diverters' licences would be reduced from 15 years to five years on renewal. The Council was concerned that this decision effectively undermines irrigator's property rights. It has looked closely at this decision in the 2002 NCP assessment, including a strong justification for this decision given the effects on the Victorian property rights system. Following a request from the Victorian Government, Sunraysia Rural Water agreed to review its decision.

Victorian arrangements

Progress against the implementation program

Victoria is in the process of capping diversions on all streams through the bulk entitlement process and through management arrangements for unregulated streams. The bulk entitlement system is the mechanism for capping diversions for the regulated systems. For the unregulated systems, management arrangements regulate licence diversions in terms of the timing of diversions and improved rostering rules over the summer periods.

Bulk entitlement regimes

Bulk entitlements are issued to water authorities and are a legal entitlement to water. They specify the volume of water that can be extracted, the reliability and the rate of extraction and other obligations associated with system operation and resource management and reporting, including how much water has to be provided for the environment and the flow pattern in which it should be provided. Those issued to rural water authorities consist of any delivery bulk entitlements, individual irrigation water rights, sales water, losses and licences on regulated waterways.

Since June 2001, three bulk entitlements have been granted and five others have been finalised. Entitlements for the major systems — the Melbourne, Tarago, Ovens and Broken systems — that were to be completed in 2001 are now scheduled to be completed by the end of 2003. The reasons cited by the Victorian Government for this delay are the need to review the approach to conversion for the Melbourne and Tarago systems (where the environmental assessment is complete) and the need to reach stakeholder consensus.

Streamflow management plans

Streamflow management plans are developed on unregulated rivers to manage diversion licences. They are agreements for flow sharing which specify immediate and long term environmental flows, agreed levels of security for water users under various climatic conditions, management rules, trading rules and caps on water use development in catchments. These plans

are developed by consultative committees composed of the key stakeholders including environmental managers (such as the catchment management authorities, the Department of Natural Resources and Environment, and the Environmental Protection Authority), rural water authorities, environmental groups, and irrigators. In addition, broad community comment is sought through the process and the final plan must go to the Minister and then be tabled in both Houses of Parliament.

Streamflow management plan preparation began in 1995 in three catchments. Three plans are operational and there are currently 30 streamflow management plans under development. Another eight are targeted for completion by mid-2002. Victoria has cited the requirement to inform and build sufficient understanding in the community to make difficult decision about the management of water as the reason for the delays in implementing the streamflow management plan program. In particular, in overallocated systems, it takes time and considerable effort to establish consensus with regard to the appropriate balance between the environments water requirements and the needs of users.

Groundwater management plans

Victoria has been applying permissible annual volumes to reflect the sustainable yield of the aquifer. Allocations exceeding 70 per cent of the sustainable yield of an aquifer (expressed as the permissible annual volume) trigger a mechanism to establish a groundwater supply protection area, resulting in increased monitoring and the development of a community-based groundwater management plan to manage the resource. The objective of these plans is to ensure the groundwater resources of the relevant groundwater supply protection area are managed in an equitable manner, to ensure the long-term sustainability of the resource. A plan must address issues such as metering and monitoring, environmental allowances for groundwater dependent ecosystems, allocation arrangements (including transferable water entitlements) and the costs of implementing the plan.

Since June 2001, 10 groundwater supply protection areas have been established and groundwater management plans are under way. Victoria has advised that six groundwater management plans are complete and four more have been submitted for approval.

Farm Dams Act 2002

In July 2001, the Victorian Government released a response to the final report of the Farm Dams (Irrigation) Review Committee. The Government agreed to the recommendations and introduced the Farm Dams Bill in spring 2001 to amend the *Water Act 1989* to require licensing of all irrigation and commercial use within the catchment whether the water is taken from a waterway or not.

The *Water (Irrigation Farm Dams) Act 2002* (the Farm Dams Act) was passed in April 2002. The key feature of the Farm Dams Act is the extension of licence requirements for taking and using water, to cover all new irrigation and commercial water use in a catchment. The Act extends the licensing regime to people who take water (other than for stock and domestic use) from a spring, soak or dam. Licensing of groundwater extractions has been in place since 1970. This allows for a whole-of-catchment management approach to the resource and strengthens Victoria's compliance with the Murray–Darling Basin cap.

Existing unlicensed irrigation and commercial water users can apply for a registration licence or a standard licence. Registered licences incur no annual charges and are not tradeable off the property. Standard licences are tradeable off the property but incur an annual charge.

Other aspects of the new licensing and registration arrangements are that:

- one registration licence can be issued to cover all existing irrigation catchment dams on a farmer's property;
- meters will be required on new irrigation and commercial dams when a licence exceeds 20 megalitres or when the volume of the licence is less than the volume of the dam;³
- metering of existing use on unregulated waterways is being dealt with under the streamflow management plan process;⁴ and
- re-use dams will not be affected if they are within specified design criteria. Existing re-use dams larger than the criteria will need to be registered. New re-use dams larger than the criteria will need to obtain a licence.

A three member dispute panel will be established to consider disputes that arise from the licensing or registering of existing unlicensed dams. From April 2002, any person wishing to build an irrigation or commercial dam anywhere in a catchment will need a licence for the use of water. No changes were made to the existing arrangements for domestic and stock use.

To help with the transition to the new arrangements, the Victorian Government developed a transition package for landholders wishing to build catchment dams for irrigation or commercial purposes. In capped catchments such as those in the Murray–Darling Basin where no more licences are issued, a new developer must purchase a water entitlement from an existing user. In these circumstances, a grant of 50 per cent of the cost of water purchased (up to a maximum of \$400 per megalitre) is available. The grant applies to the first 50 megalitres purchased by an individual. The grants will be available until 14 500 megalitres are taken. Grants are also available for

³ Some licensing authorities have more stringent metering requirements.

⁴ All irrigation use on regulated waterways is already metered.

developing farm plans to improve efficiencies on farm for environmental assessments and dam engineering design. Individual farmers may be eligible for a total of \$26 000 in grants.

The Act also allows for specification of sustainable catchment limits on the amount of surface water and groundwater that can be used within a catchment to ensure resource sustainability. It enables the specification of permissible annual volumes, which is the amount of water that can be taken from a particular area annually. The Act prohibits the issue of licences if the permissible annual volume would be exceeded.

The Water Act already allowed for the establishment of groundwater supply protection areas to enable community involvement in preparing groundwater management plans. The Farm Dams Act extends these arrangements to surface water, and combined use (both groundwater and surface water). It amends the Water Act to allow the Minister to declare a water supply protection area⁵ and appoint a consultative committee to prepare a draft streamflow management plan and/or groundwater management plan for an area. These water management plans will set rules for the issue and transfer of licences, metering and monitoring requirements and place limitations on the use of water to ensure maintenance of specified stream flows or to prevent specified groundwater level declines. The plan may also recommend what the permissible annual volumes for the area should be. The amendments give legislative force to streamflow management plans.

Extensive consultation will occur to create a water supply protection area and develop management plans. Consultative committees appointed by the Minister will be responsible for developing draft plans. Section 29(2)(a) of the Water Act requires the Minister to ensure, as far as possible, that all relevant interests are fairly represented on a committee, and the membership consists of persons who have knowledge or experience in the matters to be covered in management plans. Catchment management authorities must be consulted on the appointment of members. The Victorian model specifies that at least 50 per cent of the members of consultative committees responsible for preparing plans will be farmers who own or occupy land in the area concerned.⁶ The Victorian Farmers Federation must be consulted on the appointment of farmer representatives.

The Water Act also provides for compensation in certain circumstances. A water management plan can specify compensation payments for any loss suffered or expenses sustained as a result of an authority directing works to be carried out, or works (other than a private dam) being removed. If the enforcement of a plan confers a benefit on another person to the detriment of

⁵ A water supply protection area can apply to both surface water and groundwater resources.

⁶ Unless the area is wholly within an urban area.

another, then the person suffering a loss is entitled under the Act to seek compensation from the person receiving the benefit.

Victorian river health strategy

The draft Victorian river health strategy was released for public review on 1 March 2002 and comments were sought by 17 May 2002. Approximately 50 submissions were received during this process. The Victorian Government is considering these submissions with a view to finalising the strategy by August 2002.

The targets in the Victorian river health strategy that relate to water property rights and the Victorian water allocation framework are shown in box 3.1.

Box 3.1: The targets for implementing the Victorian water allocation framework

- Winter sustainable diversion limits will be in place in all catchments by December 2002;
- All bulk entitlement conversions on major water supply systems will be completed by 2003;
- A Statewide water market will be in operation for the 2002–03 irrigation season;
- 16 groundwater management plans to be completed by 2003;
- 33 streamflow management plans to be completed in priority areas by 2004;
- Sustainable catchment limits will be in place by 2005; and
- 100 per cent compliance with the Murray–Darling Basin cap.

Source: Department of Natural Resources and Environment (2002)

The draft strategy notes that any proposals for new bulk water entitlements will generally be for either a new urban water supply or augmentation of an existing system. Before developing a proposal for a new bulk water entitlement, a water authority must examine all options for meeting future water demand. The proposal must include an outline of the costs and benefits, including the environmental costs and benefits of all options examined. The Government requires that a proponent for a new bulk water entitlement undertake a full assessment, including a detailed study of environmental water requirements, according to guidelines being prepared by the Department of Natural Resources and Environment. As a general rule, new bulk water entitlements will be approved only where they fully meet the environmental water requirements, address existing environmental flow issues and do not have an impact on other authorised users.

For unregulated systems, the Victorian river health strategy proposes to classify streams into three management priority groups: high risk, medium risk and low risk. The risk assessment will be based on:

- environmental/ecological values that need to be protected or enhanced;

- the amount of water authorised to be taken and the amount of water used in the area;
- the history of management difficulty in terms of water shortages;
- the likelihood of further demand for water;
- the need to protect downstream entitlements; and
- the permissible annual volume (the volume of entitlements that can be safely diverted) for the area.

Streams with a high environmental value and a high level of risk will be given the highest level of management effort. This effort will be through the development of community based streamflow management plans.

Streams for which the level of risk or the environmental values are not as high will be categorised as medium risk. These streams are intended to be eventually managed using a streamflow management plan, but currently are a lower priority for plan development. In the interim, they will be managed by Statewide management rules directed at relieving summer ecological stress, using trade to improve environmental flow regimes, managing winter diversions within a sustainable catchment limit and collecting data on water use to develop the streamflow management plan.

Streams with a clearly low level of risk will also be subject to Statewide rules for management which protect their current values and therefore address the protection of summer flows and freshes, the management of winter diversions within a sustainable limit, and trading. The proposed approach (shown in table 3.3) will be phased in by December 2002.

As a key component to a Statewide framework for managing waterways, the Government will establish interim diversion limits for waterways across Victoria. Winter sustainable diversion limits are to be created by December 2002. These limits are being developed for diversions for catchments and subcatchments for the winter months as an allowable rate of extraction based on an analysis of the hydrology of the system. In other words, these limits will be a conservative estimate of how much water can be extracted from these systems during winter with minimum environmental impact.

A streamflow management plan consultative committee may review the interim diversion limits. The committee will also provide an important link between farmers, relevant agencies (the Department of Natural Resources and Environment, rural water authorities and the catchment management authorities) and the general community affected by streamflow management plans.

Table 3.3: Management arrangements for unregulated rivers

<i>Category</i>	<i>Priority/risk</i>	<i>Management requirements</i>
1	High	<p>Development of a streamflow management plan.</p> <p>During the development of a streamflow management plan, where there is a declared Water Supply Protection Area under the <i>Water Act 1989</i>, no further licences will be allowed until the plan is completed. Licences will then be granted only in accordance with the plan provisions.</p>
2	Medium	<p>Will have a streamflow management plan in time.</p> <p>In the interim, these unregulated rivers will be managed in accordance with Statewide Rules covering:</p> <ul style="list-style-type: none"> • no further licences issued for summer diversion; • summer rostering rules to protect summer flows; • the introduction of metering to provide data on water use (see note 1); • granting of new winter licences up to the sustainable diversion limit (see note 2); • trading: <ul style="list-style-type: none"> – of summer licences; – downstream only in the Murray–Darling Basin and elsewhere unless specific impact assessment establishes otherwise; – reduction of 20 per cent of entitlement on trade (only in the Murray–Darling Basin); – of winter licences only within the sustainable diversion limit; • monitoring; and • compliance.
3	Low	<p>Will be managed in accordance with Statewide rules, covering:</p> <ul style="list-style-type: none"> • no further licences issued for summer diversion; • summer rostering rules to protect summer flows; • the introduction of metering to provide data on water use (see note 1); • granting of new winter licences up to the sustainable diversion limit (see note 2); • trading: <ul style="list-style-type: none"> – of summer licences; – downstream only in the Murray–Darling Basin and elsewhere unless specific impact assessment establishes otherwise; – reduction of 20 per cent of entitlement on trade (only in Murray–Darling Basin); – of winter licences only within the sustainable diversion limit; • monitoring; and • compliance.

Notes 1. The introduction of metering in Category 2 and 3 catchments will be in accordance with programs agreed between licensing authorities and the Department of Natural Resources and Environment.

2. This is subject to the completion of implementation programs for sustainable diversion limits agreed between licensing authorities and the Department of Natural Resources and Environment.

Source: Department of Natural Resources and Environment (2002)

The draft Victorian river health strategy has set a target of 2005 to have sustainable catchment limits to be in place for all catchments and aquifers. A sustainable catchment limit will restrict the amount of water that can be

extracted from a system. Limiting diversions within systems protects the security of existing consumptive users and environmental flows. Further development of catchments can continue to occur through the water market.

In developing streamflow management plans to manage diversions on unregulated rivers, Victoria recognises that the existing diversions in a number of streams, particularly in summer, may not enable the immediate meeting of environmental flow requirements. The environmental flow regime is required to be improved over the planning period, however, with the aim of ultimately providing the agreed regime. A streamflow management plan will include:

- immediate negotiated environmental flow provisions;
- flow-sharing rules for a range of climatic conditions;
- trading rules;
- provisions to improve the environmental flow regime over time, where necessary to meet the environmental flow requirements;
- rules covering the granting of any new licences;
- roles and responsibilities;
- cost-sharing arrangements; and
- provisions for monitoring, compliance and plan review.

These arrangements are outlined in the Streamflow management plan framework that was recently endorsed by the Minister.

In relation to groundwater, the Victorian river health strategy recognises that first estimates of permissible annual values used the best available data but were 'first cut' estimates. As resources become closer to triggering the 70 per cent permissible annual value, further data collection takes place, refining the estimates for use in community based groundwater management plans.

Sunraysia Rural Water Authority licences

The Sunraysia Rural Water Authority has been investigating options for giving long term certainty of water availability to growers while meeting operational, administration and environmental responsibilities (such as drainage management and salinity issues). One option being considered is to extend the term of the licence to beyond 15 years, subject to site use conditions being renewed every five years. The Authority, however, is yet to resolve legal impediments concerning how to revert to 15-year licence terms while still being able to update conditions of the licence more frequently. Another option yet to be considered by Government is to have a licence condition specifying that drainage obligations could be tightened if a

community based salinity planning process suggests this is necessary for existing irrigators.

Assessment

The passage of the Farm Dams Act is a significant achievement by Victoria in re-affirming water property rights and addressing environmental river health. Prior to the Farm Dam Act's amendments to the Water Act, there was no mechanism to control irrigation dams constructed off waterways to capture overland flow. Landholders could build farm dams on their properties to capture overland flow with no consideration of the effect on downstream users.

Large irrigation and commercial dams off waterways may have the same hydrological impact as that of dams built on waterways. They may reduce the amount of water and thus the security of existing downstream users and the potential for environmental harm. There was a need to protect those who rely on water provided by bulk entitlements and licences, and to ensure water is available for stock and domestic use.

To overcome these problems, the Farm Dams (Irrigation) Review Committee recommended that the Government introduce legislation to require licensing of all irrigation and commercial use in a catchment. The committee proposed that a licence be required regardless of whether the water is taken from a waterway or captured in a 'catchment dam'. The passage of the Act addresses the regulation of catchment farm dams, which are now part of the water allocation framework.

New irrigation or commercial dams built off a waterway after 24 July 2001 will need the same type of licence as required by a dam built on a waterway. This arrangement will enable catchment management to account for all significant water use, and will strengthen Victoria's compliance with the Murray–Darling Basin cap.

The Farm Dams Act also provides a strong link between groundwater and surface water in the planning processes. The relevant planning processes for streamflow management plans, groundwater management plans and bulk entitlements can now be undertaken in a way that recognises the interdependence of these water sources. The Council considers that the Act was a key outstanding property rights issue and commends Victoria on how it has addressed this commitment.

Regarding the implementation program, Victoria's progress on the bulk entitlement program and streamflow management plans has further slowed. Bulk entitlements and licences to take and use water are the means by which Victoria manages diversions from its waterways. The Council notes, for example, that no more plans have been finalised beyond the three streamflow management plans that were endorsed and in operation in June 2001. Nevertheless, the Victorian river health strategy has set some robust targets

for completing the bulk entitlement program and advancing the key streamflow management and groundwater management plans. Victoria is also developing a framework to streamline arrangements for the development of streamflow management plans.

The Victorian river health strategy requires winter sustainable diversion limits to be in place by December 2002 and proposes that overall sustainable catchment limits will be in place by 2005 for all catchments and aquifers. New winter licences will be available for allocations up to the sustainable diversion limit. Storage of this water for later use will provide greater options for irrigators facing summer diversion restrictions. Limiting extractions protects the security of existing consumptive users and environmental flows, and provides for the sustainable use of groundwater systems. The Council considers that the system of diversion and catchment limits proposed by Victoria provides a suitable mechanism to protect the environment from excessive diversions and to ensure water users understand the limits of the available resource.

In summary, Victoria has passed the Farm Dams Act, addressing the regulation of catchment farm dams, and is progressing arrangements with the Sunraysia Rural Water Authority (though in this last instance the path to resolving this issue remains uncertain). While the draft river health strategy does not contain a clawback mechanism for the stressed rivers, it does set targets for delivering the allocation framework. The Council is satisfied that Victoria has addressed outstanding property right issues and will re-examine progress in this area in 2004.

Provision for the environment

Outstanding issue: Victoria is developing a river health strategy. The Council is to assess the strategy in terms of the State's CoAG commitments, how it manages public consultation, and its implementation pathway.

Next full assessment: The Council will assess allocations for the environment in 2004 and provide a stocktake of progress against a jurisdiction's implementation program to identify remaining areas for assessment in 2005 when the program is to be complete.

Reference: Water reform agreement, clause 4(b-f)

Background

In 2001, the Council considered that the Victorian Government had made insufficient progress in increasing environmental allocations and restoring the health of its stressed rivers. Rivers are considered to be stressed when the negotiated environmental flow regime does not meet the recommendations from the scientific environmental flow assessment. Where this occurs, there is a risk of environmental damage including the contraction of wetlands, diminishing populations of native fish, flora and fauna, rising salinity and algal blooms.

In the 2001 NCP assessment, however, the Victorian Government committed to a comprehensive program to improve the health of the priority stressed rivers. By June 2002, Victoria was expected to have completed a publicly endorsed statewide river health strategy and met the appropriate milestones in the priority stressed river program agreed to by the Council.

In addition, the Council was mindful of Victoria's pivotal role in investing \$150 million in an intergovernmental agreement on the Snowy River. This historic initiative to restore the Snowy River to 28 per cent of its natural flow while protecting other river systems and water users reflected a real commitment by the Victorian Government to the long term health of its waterways.

Given the delays to date and the overall importance of allocating sufficient water to Victoria's other stressed rivers, however, the Council called for a re-assessment of this issue in the 2002 NCP assessment. The Council signalled its intention to consider payment recommendations if Victoria made insufficient progress by this time.

Victorian arrangements

In March 2002, the Victorian Government released the draft Victorian river health strategy for public consultation. The strategy has been developed to protect and restore Victorian rivers over the long term. It establishes a vision for river management, policy direction on issues affecting river health, and a blueprint for integrating all efforts to ensure the maximum river health benefits are obtained from the resources invested.

In the 2001 NCP assessment, Victoria provided a three year comprehensive program for improving the health of its priority stressed rivers. The program contained specific measures (such as specific flow plans), habitat measures (such as wetland and waterway management plans) and water quality measures (such as nutrient plans to address stressed rivers). Victoria's 2002 NCP annual report states that it is broadly on track in undertaking the three year program of action. Victoria has provided a status report of developments against the 11 nominated stressed rivers in attachment 3 including further work that is being undertaken.

Victoria's original implementation program (submitted in June 1999) nominated eight stressed rivers: the Thomson, Avoca, Loddon, Glenelg, Broken, Lerderderg, Maribyrnong, and Badger (Correnderk Creek). In 2001 Victoria provided information on a further three flow-stressed rivers where work is also being undertaken: the Macalister, Wimmera and Snowy. In addition, Victoria has targeted the Snowy and its portion of the River Murray as special cases due to the importance of these rivers to all Victorians.

The Victorian river health strategy will be implemented within the broader context of the Victorian catchment management framework. Under the integrated regional catchment strategies that are currently under review,

river health strategies will be developed. These will identify environmental, cultural, social and economic assets, threats and opportunities, and broad priorities. The river health plans will identify the high value and high priority river reaches and will integrate all the major issues that are threatening river assets. These include:

- flow, as specified by bulk entitlements, streamflow management plans and groundwater management plans;
- water quality, as addressed in nutrient management plans, State environment protection policies and salinity management plans;
- floodplain management, including rural drainage;
- waterway management (including fish passages and the removal of levees); and
- fisheries management.

As outlined in the 2001 NCP assessment, the timeframes for developing river health strategies for the stressed rivers are as follows:

- the Thomson, Macalister, Lerderberg, Badger Creek, and Maribyrnong rivers by December 2002;
- the Avoca, Glenelg, Broken, Wimmera and Snowy rivers by December 2003; and
- the Loddon river by December 2004.

Victoria has advised that the work program will need to be reviewed after the Victorian river health strategy is finalised and the regional river health strategies are developed, to ensure the program is consistent with the new approach.

The Victorian river health strategy is built on the principle of seeking to protect rivers of high value and to set priorities for restoration to achieve maximum 'net environmental gain' for the funds invested. The strategy aims to achieve ecologically healthy rivers over time. The strategy defines the characteristics of an ecologically healthy river and discusses how this should be used in river restoration. Stressed rivers are defined in the strategy as:

Where provisions in bulk entitlements and the immediate negotiated environmental flows in streamflow management plans do not meet environmental needs, these rivers are considered within the water allocation framework to be stressed. (Department of Natural Resources and Environment 2002, p. 69)

Where current flow regimes do not meet environmental flow requirements, it is likely that significant environmental damage either has occurred or is occurring, and the river is considered to be flow stressed. The further away

from the recommended flow regime, the higher the risk and severity of environmental damage. The draft strategy proposes a two-part process.

Stage 1 applies to all flow-stressed rivers for both regulated and unregulated systems.

- For regulated rivers (some 85 per cent of water diverted in Victoria), reduced flow regimes occur downstream of dams or within parts of irrigation systems. The aim is to reduce the rate of decline, improve the environment condition and, in some cases, achieve ecologically healthy rivers (albeit of a smaller size, different flow type or different ecosystem type). Water authorities in stressed river reaches in regulated systems are to: (a) ensure no further diversions will be allowed; (b) review operations to see whether improvements can be made to the environmental flow regime without affecting other users; and (c) develop and implement a demand management program.
- For unregulated rivers where there is a high level of stress, a streamflow management plan will be undertaken. If achieving the recommended environmental flow measures in a streamflow management plan is likely to have a significant impact on existing users, then those measures will be phased in over a period proposed by the streamflow management plan.

Stage 2 concerns stressed river proposals. Where the time predicted to restore ecological health is considered to be too long, the relevant catchment management authority and rural water authority may develop a stressed river proposal with communities to achieve further environmental improvements. These proposals are developed for rivers identified to be of high priority in the regional river health strategies. They build on the outcomes of the bulk entitlement or streamflow management plan processes. They identify the environmental flow improvements required, how these could be best achieved, habitat restoration and cost-sharing arrangements. Proposals may also include mechanisms for water savings, water re-use, supply rationalisation, and changes to systems or on-farm operations, or the use of the market.

The Victorian Government will consider stage 2 proposals that it receives based on the level of regional commitment, the environmental and community values of the river, the overall benefits to the wider community, the level of environmental improvements predicted and funding proposals. The Government may choose to co-invest with the region and other funding initiatives on behalf of the broader community in rivers of high environmental and/or community value.

The Department of Natural Resources and Environment is developing a statewide method for determining environmental water requirements across Victoria. The method is being developed by the Cooperative Research Centre for Freshwater Ecology, in partnership with Sinclair Knights Merz, and has been trialed in three catchments over the last 18 months. The new method will be used in all streamflow management plans and as the basis for bulk entitlements to ensure these processes use the best scientific information

available to negotiate environmental flow regimes. The method is expected to be finalised and launched in August 2002.

Every water allocation decision in Victoria, whether it is a bulk entitlement or a streamflow management plan, involves a scientific and hydrological assessment of the environmental flow requirements of the river system. This is a key input into decision making. The outcomes of environmental flow studies will be included in any draft streamflow management plan when it is released for public comment. The study reports will be made available on the web to ensure the wider community has access to this information.

In June 2002, the Victorian Government announced that it would establish an independent panel to assist consultative committees in the preparation of groundwater and surface water management plans. The panel will comprise technical experts selected on the basis of skills in ecology, hydrology and groundwater. It will audit the surface water and groundwater assessments and environmental flow investigations that form the basis of the technical information provided to committees. The audit results will be made available to the public. The aim of including a technical audit step in the water allocation process is to provide confidence to all stakeholders that allocation decisions are made in accordance with best available science. The Government expects that this panel will boost community confidence in decisions on managing the State's water resources.

Submissions

The Council has received submissions that commented on the Victorian Government's progress in implementing the CoAG water reform agenda. These included submissions from the Australian Conservation Foundation (2002, submission 9), Environment Victoria (2002, submission 2) and the World Wide Fund for Nature (2002, submission 13). The submissions all conclude that Victoria has demonstrably failed to commit to the environment reforms of the CoAG water agreements and that penalties should be applied until funding and policy commitments are secured.

The World Wide Fund for Nature (submission 13) argued that the Victorian river health strategy is inadequate and there are no funding commitments, so the Council should strongly consider recommending a penalty for Victoria.

A number of submissions noted that the proposed Victorian river health strategy was not expected to receive new funding in the 2002-03 Victorian Budget. The submission from Environment Victoria estimated that approximately \$15–20 million spent over three years, in addition to the approximately \$21 million that catchment management authorities receive for waterway management, would be necessary to enable Victoria to meet its CoAG commitments.

The Australian Conservation Foundation (submission 9) stated that the strategy would not receive funding in the 2002-03 State Budget and that the

Council should consider recommending penalties against Victoria for noncompliance. It argued that Victoria's only environmental reform achievements since 1994 have been the Snowy Initiative and the Farm Dams Act 2002, which accelerated the streamflow management plan process (albeit with committees with 50 per cent membership by nominees of the Victorian Farmers Federation). The foundation believes that Victoria has failed to identify environmental flow needs for rivers based on best available science, and that a premature demise in the stressed rivers program has resulted in an overwhelming failure to restore adequate environmental flows in stressed rivers.

The Australian Conservation Foundation argued the Victorian river health strategy does not provide any clawback of entitlements for the environment from consumption in relation to stressed rivers. (It should be noted that the Australian Conservation Foundation was part of the reference group that developed and agreed to the draft Victorian river health strategy). Further, there is a lack of any strategic approach to thermal pollution caused by large dams; Victoria has failed to respond to the Nolan-ITU report on pollution from irrigation drains in northern Victoria.⁷ This report recommended a licensing regime for irrigation drains, to be managed by the Environmental Protection Authority.

The catchment management boards collected a levy which, under legislation, was to be spent on river management works. Victoria has abolished the levy in favour of specific top up funding to the boards. There is no requirement, however, on where that money is spent, so now there are essentially no river management works being undertaken by any board in Victoria.⁸

The Australian Conservation Foundation also noted the slow progress of the bulk entitlement and streamflow management plan processes, the lack of any five year reviews of bulk entitlements (such as the Goulburn bulk entitlement), and the lack of funding to address the flow needs of Victoria's Ramsar wetlands.⁹

Environment Victoria (submission 2) also stated that the Council should consider suspending payments to Victoria until the Government provides adequate funds to implement the river health strategy, and Victoria agrees to deliver at least 1000 gegalitres of environmental flows to the River Murray by 2005. The operation of streamflow management plans does not significantly improve environmental flows or effectively engage the community in decision making. Combined with the lack of funding, this situation will impede the

⁷ The Victorian Government formally responded to the Nolan report on 9 May 2002.

⁸ Victoria has advised that strict guidelines govern how the Catchment Management Authorities spend the Tariff Replacement Funds.

⁹ The Ramsar wetlands are those listed under the 1971 Convention on Wetlands as wetlands of international importance. Victoria's Ramsar wetlands include Lake Albacutya, Dowds and Hearts Morasses and Lake Corangamite.

achievement of environmental targets set by the Victorian river health strategy. No streamflow management plan has met the environmental flow recommendations recommended by independent scientific investigation. Victoria needs to establish a Statewide monitoring program to determine the ecological impact of environmental flow allocations made under the bulk entitlement and streamflow management plan processes. The Department of Natural Resources and Environment should produce, publish and distribute guidelines for developing streamflow management plans. The failure to produce such comprehensive guidelines for consultative committees means diverters and water authorities drive through commercial interests at the expense of the environment.¹⁰

Environment Victoria argues the river health strategy and regional catchment strategies need ongoing participation by environmental groups, and this participation needs funding support.¹¹ The development of groundwater management plans should also involve environmental representation. There is a failure to equip members of streamflow management planning groups with the knowledge to participate meaningfully in decision making. While community stakeholders attend streamflow management plan meetings, these processes are inadequately funded, there is no training and no information is provided to allow parties to engage effectively in decision making.

The Victorian river health strategy 'aims, over time, to achieve the recommended environmental flow regimes'. The strategy is no stronger than an aim over an unspecified time period. With regard to a clawback mechanism for the strategy, the Council should direct Victoria to develop a public options paper on how to retrieve sufficient water to re-instate environmental flows to meet the ecological needs of stressed rivers.

The Environment Victoria submission cites the conclusions of a Parliamentary inquiry into the allocation of water resources in Victoria, which found:

- streamflow management planning groups are largely discretionary and highly variable with no provision to ensure expertise in hydrology or aquatic ecology;

¹⁰ The Victorian Government produced and released these guidelines in June 2002. Associated with the guidelines, an education program is being developed for agency and community members about the streamflow management plan process as well as to provide technical information.

¹¹ The Department of Natural Resources and Environment provides Environment Victoria with \$135 000 a year to coordinate community input into the water allocation framework. In addition, the department has provided a 'one off' \$50 000 contribution to improve Environment Victoria's community input into the water allocation framework.

- a broader and balanced representation of water users on committees (including environment representatives) could improve the planning process;
- improving conditions of stressed rivers appears to be feasible, and will produce benefits beyond the river. Reversing past mistakes, however, will involve considerable commitment and resources;
- resources for additional and ongoing data collection need to be adequate to assure the sound management of water resources; and
- the bulk entitlement conversion process is converting pre-existing, poorly defined entitlements of authorities to well-defined entitlements. Generally, it does not — and nor does it aim to — increase water for the environment.

Discussion

Victoria has taken a different approach to the environment from that of any other State. Through the bulk entitlement conversion process, it has defined the levels of consumption (through metering arrangements) and minimum passing flows for the environment, resulting in general improvements in environmental outcomes.

Victoria commissions environmental flow studies by independent consultants and, while it often cannot achieve the flow regime recommended by the science, it considers that there have been real reductions in allocations for consumptive use. The environmental flow regime of the bulk entitlements and streamflow management plans will generate regional river health objectives in regional health strategies.

A key question for the 2002 NCP assessment has been to determine how Victoria sets an appropriate environmental flow regime. Clarifying current entitlements to divert water for consumption sets bulk entitlements, which are legal entitlements under the Victorian system. Environmental flow needs are then assessed and a trade-off is made by the consultative committee based on an analysis of the predicted environmental benefits and the impact on the security of water users. Victoria has argued that this process complies with the CoAG requirement of achieving a better balance in water resource use (including allocations for the environment) Victoria has advised, for catchments that are relatively undeveloped with ecologically healthy rivers, the emphasis is on protecting existing environmental values. In rivers where the water resources are highly developed and generating significant economic activity, the emphasis needs to be on achieving an appropriate balance between the needs of the environment and consumptive users. To achieve this balance, Victoria has put forward the river health strategy as a framework for sustainably managing a finite resource. The framework is designed to:

- protect river health by providing water to sustain rivers, floodplains and associated wetlands and estuaries;
- provide all users with water entitlements that are explicit, exclusive enforceable and tradeable;
- enable water users to make informed choices about their use and management of water, to allow for certainty for long-term planning;
- protect social and cultural values;
- provide clarity on the water entitlements of all users in times of drought;
- facilitate the movement of water to its highest value use; and
- enable community input into decisions on water allocation.

The bulk entitlement and streamflow management planning processes have taken two to three years to implement through consultative committees comprised of key stakeholders. The committee works through a range of water sharing scenarios, which involves examining the impacts of environmental flow scenarios on the volume and security of existing consumptive users and the likely economic impacts. The stakeholders on the committee negotiate an agreed water-sharing arrangement with provisions for both the environment and consumptive users.

Victoria has argued that the environment has security under its allocation system. The bulk entitlement process guarantees passing flows for the environment in summer and thus the environment is sacrosanct. Victoria has advised that the environmental flows program is still broadly on track, despite some minor delays and the slow progress of the bulk entitlement conversion program and the development of streamflow management plans. For the regulated systems, bulk entitlements provide minimum passing flows and appropriate flow patterns to determine general environmental improvements for all major systems. Attachments 4 and 5 contain examples of environmental allocations provided by bulk entitlements and streamflow management plans respectively additional to progress on the stressed rivers program in attachment 3.

The second stage for the environment will be to set priorities for high value stressed rivers for investment by the Victorian Government and the community. Victoria's data shows that around one third of all rivers are in poor or very poor condition, while only 22 per cent are in good or excellent condition. This is due to a combination of factors including changed flow regimes, degraded water quality and changes in riparian and instream habitat.

The Council found the 2002-03 State Budget released in May 2002 contained the following new water reform funding measures.

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- Some \$10.5 million was allocated in support of the implementation of the river health strategy to improve environmental flows and provide for river restoration over three years. This money was additional to the \$21.4 million annual funding provided to Victoria's five catchment management authorities for river and floodplain management and in excess of \$150 million per year in general catchment management activities.
 - In April 2002, Victoria and South Australia agreed to establish a \$25 million joint fund to improve the environmental health of the River Murray. The aim of the fund is to achieve an additional 30 gigalitres of environmental flows for the river. This funding is additional to the substantial commitments being considered by the Murray–Darling Basin Commission as part of the Corowa agreement. Victoria committed \$15 million to the joint fund.
 - Some \$77 million was committed to the Wimmera–Mallee pipeline project to enclose open channels. The project is subject to the Commonwealth matching Victoria's contribution to the project. (Comments by the Commonwealth indicate that it has not committed to the project, and funding was not included in the 2002–03 Commonwealth Budget.) The pipeline is expected to result in an additional 93 gigalitres in annual water efficiency savings. Some 83 gigalitres will be provided as environmental flows to be shared between the Wimmera and Glenelg rivers, with an additional 10 gigalitres for stock and domestic purposes. The total cost of the Wimmera–Mallee pipeline will be \$300 million. Some \$91 million represents the net present value of 50 years of operations, maintenance and administration expenditure, and users are to fund the residual.
 - Some \$12.8 million to address the health of the Gippsland Lakes.

In aggregate, \$243.8 million is being spent to restore flow in the Snowy River. This amount includes Victoria's \$150 million contribution to the tripartite agreement with the Commonwealth and New South Wales to establish a joint government enterprise to acquire water to provide environmental flows for the Snowy River.

The Council notes that at the time submissions closed (April 2002), there was a strong view that the 2002–03 State Budget would not contain new funding for the Victorian river health strategy. In follow-up meetings with the parties that made submissions, the Council was able to ascertain that Environment Victoria was satisfied that the \$10.6 million in the 2002–03 Budget for the strategy over three years would allow a real start to producing some key environmental outcomes. Given no new funding was expected for the strategy, Environment Victoria considers that the \$77 million proposed for the Wimmera–Mallee pipeline, the rescue package for the Gippsland Lakes, and the additional \$15 million in environmental flows for the River Murray indicate that Victoria is beginning to deliver outcomes for the environment. The Australian Conservation Foundation, however, considers that the funding for the strategy can be described at best as the minimum needed for

the program to produce strategies and plans and that the funding is insufficient to invest in any real river health works and services.

Another key issue that emerged during the course of this assessment was the nature of the trade-offs made in deciding what the environment receives under the Victorian system. In making a decision on an appropriate environmental flow regime that either does not meet (or does not meet in the short term) the scientifically recommended one, it is Victoria's view that the community has agreed to accept a higher level of environment risk and/or a certain level of environmental degradation as a consequence. However, it is the Council's view that to do this properly there needs to be independent science that models scenarios that identify levels of risk to the environment to allow the community to make informed choices.

It is the consultative committees that balance the environmental, social and economic needs to devise an appropriate environmental flow regime for immediate implementation. The Council has been concerned to ensure the risks to the environment posed by the negotiated environmental flow regimes are explicitly and transparently acknowledged. The Council has viewed the terms of reference to establish the independent technical review panel to provide advice on environmental flow requirements to consultative committees. The environmental flow studies, the draft water management plans, and the reports of the independent technical review panel will be made publicly available on the web. The Victorian Government has also committed to include in the draft guidelines to be used by consultative committees the need for plans to incorporate a description of the risks both to the environment and to the users of an agreed flow regime. The risk analysis will involve hydrological modelling of different flow scenarios.

The Council has also noted a number of other significant environmental achievements. The Northern– Mallee pipeline to be completed by July 2002 will return 35 500 megalitres of water to be shared between the Wimmera and Glenelg rivers. The project has been completed in seven stages and water generated from stages 1–6 has already been released into the Wimmera and Glenelg rivers. A bulk entitlement for Victoria's share of the River Murray has been set. Further, capping summer diversions across the state and the intention of the river health strategy to cap winter diversions, as well as a number of minor improvements in flow have occurred as a result of the bulk entitlement and streamflow management processes (see attachments 4 and 5 respectively).

Finally, the Australian Conservation Foundation submission made a number of claims. First, the submission claimed (at the time of writing) that the stressed rivers program has suffered a premature demise. The Council does not agree with this view. Rather, the stressed rivers program is being expanded. Victoria is committed to addressing flow stress on the nominated priority stressed rivers. In addition, substantial funds have been committed to reducing flow stress on the Snowy and Wimmera Rivers. The river health strategy also provides a mechanism to identify additional flow stressed rivers and the mechanisms to undertake action to reduce the stress.

A second claim made is that the abolition of a catchment management board levy has resulted in no river management works being undertaken by any board in Victoria. The State Government provides funds in the order of \$21 million a year to catchment management authorities and the Port Phillip Catchment and Land Protection Board for river management works. These funds are allocated through the regional management planning process. The funds are invested in critical works for the protection and restoration of waterways, water quality management action plans and in the proposed river health plans.

Assessment

In conducting this assessment, the Council has looked to ensure the Victorian system provides for transparency, and a balance of broader community interests. Informed community choices require independent science to model scenarios that identifies levels of risk to the environment and what happens if environmental water provisions are set below the recommended environmental water requirements. The science should be transparent, and the scenarios as determined by science used as the basis for decision-making.

While generally satisfied with the mechanisms in the Victorian river health strategy, the Council has been concerned that the timeframes may be too long such that there is doubt as to when the outcomes will be achieved. While the strategy provides two mechanisms to allocate water for the environment in developing individual river health strategies, it is the Council's view that committees may need to consider the two stages simultaneously.

With regard to the nominated stressed rivers program, Victoria has advised that there are a number of flow rehabilitation studies under way, and it is not possible to commit to stage 2 funding at this stage until the costs of these are known and weighed against the environmental benefits. It is Victoria's expectation, however, to deliver stage 2 flow regimes in more than the nominated rivers over the next three years as stressed river proposals are developed through the bulk entitlement and streamflow management plan processes.

The Council is satisfied the mechanisms contained in the river health strategy provide the tools for Victoria to meet the stressed rivers commitment. The outstanding 2001 commitment to develop the overarching river health strategy has been met. The Council will assess the first round of five stressed river plans in the 2003 NCP assessment against the stage 1 and 2 mechanisms of the river health strategy. To prepare for that assessment, the Council's Secretariat will hold quarterly consultative meetings with Victorian officials to monitor progress in developing these plans in accordance with the proposed reform path.

Compliance with principle 3

Outstanding issue: The Council will assess Victoria's response to the 2001 Farm Dams Review recommendation that environmental water provisions for the unregulated systems should be legally recognised, as per principle 3 of the national principles for the provision of water for ecosystems.

Next full assessment: The Council will assess allocations for the environment in 2004 and provide a stocktake of progress against a jurisdiction's implementation program to identify remaining areas for assessment in 2005 when the program is to be complete.

Reference: Water reform agreement, clause 4(b-f)

Background

In 2001, the Council found that the Water Act explicitly recognises environmental conditions on bulk entitlements, yet the environmental allocations set by streamflow management plans were not statutory based. The 2001 Farm Dams Review recommended that the Water Act should legally recognise streamflow management plans. For the 2002 NCP assessment, the Council undertook to review Victoria's response to the 2001 Farm Dams Review on this issue.

Victorian arrangements

The Farm Dams Act established planning processes for managing unregulated catchments through the specification of permissible annual volumes and sustainable diversion limits, the declaration of water supply protection areas applicable to both surface water and groundwater resources, and the development of streamflow and groundwater management plans. The Act gives statutory recognition to these plans. The Act requires that draft streamflow and groundwater management plans must be available for public comment. Once a draft plan has been sent to the Minister, it must be made available for inspection. On approval of the plan by the Minister, the plan must be tabled in both Houses of Parliament. Further, the Act also extends the licencing provisions to include the commercial and irrigation use of water in private off-stream dams or from springs or soaks.

Discussion and assessment

The Farm Dams Act has provided statutory backing for the provisions of streamflow and groundwater management plans. The Minister may now make a decision to accept or reject a plan if the community based plan is not consistent with legislation, or the process has not been followed. In addition, the Act allows for the Minister on his or her own initiative to declare a water supply protection area and develop a management plan.

In preparing the Farm Dams Act, the cumulative effect of catchment dams has been shown to be significant for the health of rivers. The Victorian river health strategy states that studies show that every megalitre of additional farm dam development leads to a 3-megalitre reduction in average stream flows, with low flows occurring earlier in the year and for longer periods. This is the period when water demand from entitlement holders is greatest. It is also the period of highest environmental stress, as a result of significantly reduced habitat, higher water temperatures and reduced water quality due to low flows. The Farm Dams Act caps future diversions and sets sustainable diversion limits (based on hydrological data for winter diversions) on a precautionary basis for new allocations.

The Council is satisfied that the changes embodied in the Farm Dams Act address principle 3 and meet the outstanding issue raised in the 2001 NCP assessment.

Compliance with principle 5

Outstanding issue: The Council is to re-assess Victoria's compliance against principle 5 of the national principles for the provision of water for ecosystems, in light of the river health strategy.

Principle 5 states that where environmental water requirements cannot be met due to existing uses, action (including re-allocation) should be taken to meet environmental needs.

Next full assessment: The Council will assess allocations for the environment in 2004 and provide a stocktake of progress against a jurisdiction's implementation program to identify remaining areas for assessment in 2005 when the program is to be complete.

Reference: Water reform agreement, clause 4(b-f)

Background

In the 2001 NCP assessment, the Council found that the streamflow management plan and bulk entitlement provisions go as far as possible to provide for the environment's water requirements balanced against current water users needs. The bulk entitlement process was scheduled to be complete in 2003. The development of all other plans was generally on schedule, although the processes and methods to be used depended on Victoria completing the river health strategy.

For the 2002 NCP assessment, the Council committed to re-assess progress against principle 5 in light of the Victorian river health strategy and the three year action plan for stressed rivers that the Council published in the 2001 NCP assessment.

Victorian arrangements

Victoria allocates water to competing uses via: streamflow management plans for unregulated streams and bulk entitlements. The first steps, done in consultation with all interested parties, are to identify:

- existing entitlements and other consumptive claims on the resources;
- the environmental values of the system; and
- the available resources.

The water required to meet the various environmental and consumptive needs is then assessed. This involves an assessment of the environmental flow requirements of the river and an assessment of the existing entitlements on the system in terms of volume and levels of security. A consultative committee of key stakeholders is established for each streamflow management plan and bulk entitlement process. After two to three years, the consultative committee develops a negotiated water-sharing arrangement with provisions for the environment and consumptive use. The environmental flow provisions are decided through a community-driven process that considers environmental, social and economic implications of water allocation.

The earlier section on the draft Victorian river health strategy describes two proposed mechanisms (stage one and two proposals) for dealing with stressed rivers. Rivers are described as stressed where current flow regimes do not meet environmental flow requirements, significant environmental damage has occurred (or is occurring) and the river is considered to be flow stressed.

The environmental flow regimes agreed through the bulk entitlement processes are implemented once the bulk entitlement is finalised and usually with minimal transitional arrangements. Transitional arrangements have been negotiated in the Thomson River bulk entitlement, however, and are likely to be included in the Wimmera and Loddon rivers' bulk entitlements.

Streamflow management plans may include a timetable to move from the current flow arrangements to the negotiated environmental flows. The planning process has a long term aim of achieving the scientifically recommended flow regime. Part of the process is the community's decision on how long it will take to achieve the targets.

Discussion and assessment

The original 1999 stressed rivers program provided by Victoria, as set out in the Council's 1999 NCP assessment, stated:

River restoration plans will be developed for rivers where the environmental provisions made through the bulk entitlement process are considered to be insufficient to meet environmental objectives.

These plans 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 maximise environmental gains and establish agreed cost-sharing for implementation...in general, they will be starting at a point where any flexibility in operating systems has already been identified and negotiated within the [bulk entitlement] conversion process.” (NCC 1999, p. 438)

The recommended environmental flows have been achieved for the Thomson and Broken rivers (two of the original eight stressed rivers nominated in 1999) and significantly improved environmental flow regimes have been achieved for the Macalister River (one of the three stressed rivers added in 2001). The 2002-03 State Budget shows Victoria has committed to environmental actions to address three more of the 11 stressed rivers identified: the Snowy and Wimmera rivers (added in 2001) and the Glenelg River (nominated in 1999). The Council notes that action on the latter two rivers is contingent on the development of the Wimmera–Mallee pipeline, which requires matching Commonwealth funding. Action is still to be achieved on five stressed rivers nominated in the 1999 implementation program: the Maribyrnong, Lerderderg, Badger (Correnderrk Creek), Loddon, and Avoca rivers.

In the 2001 NCP assessment, Victoria nominated (and the Council published) a three year stressed rivers plan, including a timetable for implementation. Victoria was given an extension of implementation time because it proposed to broaden its approach in the Victorian river health strategy and the development of individual river health strategies to comprise a flow component, a habitat component and a water quality component.

It is the Council's view that the bulk entitlement and streamflow management plan processes alone will not be sufficient to meet this principle. Victoria has agreed that the consultative committees may simultaneously consider and recommend stage 2 proposals for stressed rivers of high value identified in regional river health strategies. The Council will therefore be looking for Victoria to invest in stage 2 proposals with priority consideration being given to the nominated three year stressed rivers program.

In 2001, Victoria was given an extension of time to meet its commitments on stressed rivers. In future NCP assessments, the Council will need to assess that the environmental outcomes in individual plans are being delivered. Victoria will need to be assessed each year against the 2001 three year action plan on stressed rivers, given that it has yet to meet the 2001 commitment for action on stressed rivers. A key area for assessment in 2003 will be the outcomes of Victoria's first round of five river health strategies for the stressed systems of the Thomson, Macalister, Maribyrnong, Badger Creek and Lerderderg rivers.

In relation to unstressed systems, Victoria has until 2005 to implement bulk entitlements and streamflow management plans as per the 1999 tripartite

meeting timetable. The Victorian river health strategy, which specifies December 2003 as the completion date for the bulk entitlement program and 16 priority groundwater management plans, and 2004 as the completion date for 33 streamflow management plans, should meet this commitment.

Compliance with principle 6

Outstanding issue: The Council is to examine the Victorian Government's response to the 2001 Farm Dams Review to determine progress and compliance with principle 6 of the national principles for the provision of water for ecosystems.

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

Next full assessment: The Council will assess allocations for the environment in 2004 and provide a stocktake of progress against a jurisdiction's implementation program to identify remaining areas for assessment in 2005 when the program is to be complete.

Reference: Water reform agreement, clause 4(b-f)

Background

In 2001, the Council found that Victoria was meeting principle 6. The Water Act requires a water authority to consider the impact on the environment and other uses before issuing a licence. An emerging issue in 2001 was the cumulative impact of winterfill dams on water resources. The Farm Dams Review recommended processes to deal with the cumulative impact, including introducing sustainable diversion limits to define precautionary diversion limits for all catchments and not issuing new licences until a streamflow management plan is in place. The review also recommended guidelines for assessing the environmental impact of dams, to assess the local environmental impacts of issuing licences.

In re-assessing compliance with principle 6 in the 2002 NCP assessment, the Council advised that it would examine the Government's response to the 2001 Farm Dams Review recommendations.

Victorian arrangements

Under the Farm Dams Act, streamflow management plans and groundwater management plans will specify monitoring and compliance conditions for a water supply protection area. Rural water authorities must publicly provide an annual report on compliance with water management plans. These annual reports must be made available to the Minister, catchment management authority and to the public by way of a notice in the newspaper.

The granting of new bulk entitlements is governed by the Water Act, which states that approval for a new bulk entitlement can be given only after consideration of the following matters listed in s. 40:

-
- existing and projected water availability and water quality;
 - any adverse effect the use of water is likely to have on:
 - existing authorised uses of water;
 - a waterway or aquifer; and
 - the environment;
 - the need to protect the environment, including riverine and riparian environments; and
 - the Government's conservation policy and its policies on water resources.

The draft Victorian river health strategy elaborates on those circumstances in which Victoria would consider granting new allocations. The strategy states that the Government anticipates that any proposals for new bulk entitlements will generally be for new urban water supply systems or an augmentation of an existing system. Any new bulk entitlement proposals will be required to undertake a full environmental assessment, including a detailed study of environmental water requirements according to guidelines being developed by the Department of Natural Resources and Environment. Water authorities will be expected to have first examined all options for meeting future demand before applying for a new bulk entitlement. A proposal for a new bulk entitlement will need to include the environmental costs and benefits of all options examined.

Due to the ecological stresses caused by summer diversions, Victoria has not issued new summer diversion licences for the unregulated systems for the past 15 years. For unregulated streams that are not flow stressed, statewide management rules are being developed to protect environmental values. These rules will include no further summer diversions, the introduction of summer restrictions and the management of winter diversions within sustainable diversion limits. A streamflow management plan will be developed to manage any river with high environmental values and a high degree of flow stress.

Further, the draft Victorian river health strategy proposes a comprehensive adaptive management framework for river health. The requirements of this framework are:

- a monitoring program designed to measure progress in achieving State and regional objectives and targets;
- a consistent statewide, long term monitoring network, to provide baseline information on aspects of the resource base that are relevant to river health;

- a research program aimed at improving the understanding of river health processes and management responses. The program will test key assumptions made in the development of regional plans;
- regular review of all plans to use improved information; and
- mechanisms to engage the community in the management of river health.

Submissions

Environment Victoria (2002, submission 2) argued that Victoria has not met principle 6 because there is no Statewide program to monitor the ecological impacts of environmental flows from bulk entitlements and streamflow management plans. New South Wales uses the integrated monitoring of environmental flows program across the State. Until such a program is initiated in Victoria, it is impossible for the State to meet principle 6 or establish effective, adaptive management practices.

Discussion and assessment

The draft Victorian river health strategy specifies the basis for new or additional allocations. As a general rule, new allocations will be made only where the environmental water requirements of the system are met. For the regulated systems, the Victorian Government will only approve new bulk entitlements that fully meet the environmental water requirements of the system, including a consideration of the impacts on downstream ecosystems, existing environmental flows and impacts on other users. For unregulated systems, new diversion licences will be only granted within a catchment's sustainable diversion limit or streamflow management plan.

Victoria concedes that a few cases may require a choice between augmenting an existing site, causing further environmental stress, or empounding a river that is in pristine condition. In these cases, the decision should be made after a full community consultation process has been applied under the Water Act and the *Planning and Environment Act 1987*. If a decision is made to stress a river further, then the rural water authority's evaluation process must consider options for river restoration elsewhere, to prevent a net loss of environmental values.

As a result of the Farm Dams Act, streamflow management plans and groundwater management plans will specify monitoring and compliance conditions, and rural water authorities must publicly report on compliance with the provisions of plans.

The Council is satisfied that Victoria is meeting principle 6 and has addressed the outstanding 2001 issue. The Council will re-examine progress against this principle in the 2004 NCP assessment, including the operation of the adaptive management framework. For that assessment, all aspects of the framework

should be in place to deliver the monitoring objectives contained in the river health strategy.

Progress report issues

Full cost recovery: urban

Progress report: Whether returns more closely reflect the weighted average cost of capital for the Melbourne retail water suppliers.

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreement, clause 3(a) and (b); CoAG pricing guidelines

Background

For the 2001 NCP assessment, the Council reported the economic real rates of return of the four metropolitan water and wastewater businesses. At that time the Council was concerned that Victoria's metropolitan service providers earn returns well in excess of the minimum requirement for commercial viability as defined by the CoAG pricing guidelines. In one case, City West Water, the combined rate of return for water and wastewater services was more than three times the national average (WSAA 2000) and more than twice the weighted average cost of capital of 7.5 per cent reported in the company's annual report. The Council believed that price paths to be set through the 2001 Price Review should provide a sound basis for recovering costs consistent with CoAG guidelines, and strongly supported the proposal for future price path oversight by the Essential Services Commission.

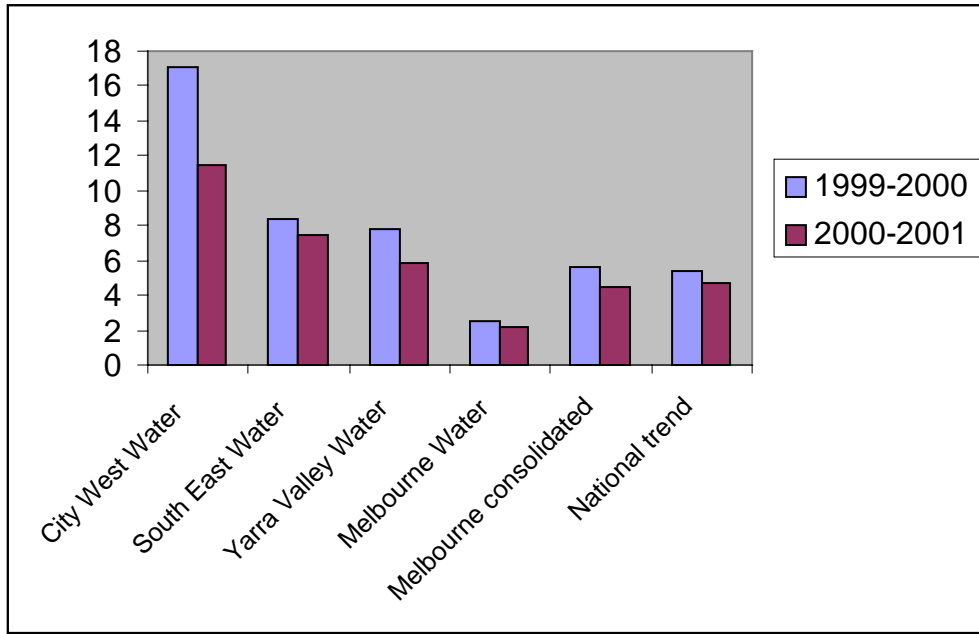
Victorian progress

For the 2002 NCP assessment, the Council requested Victoria to provide evidence that returns more closely reflect the weighted average cost of capital. Figure 3.1 compares the 1999-2000 returns earned by the four metropolitan businesses (reported in the Council's 2001 NCP assessment) against the 2000-01 financial year.

City West Water's combined rate of return has reduced from 17 per cent in 1999-2000 to 11 per cent in 2000-01. Victoria's 2001 NCP annual report notes that independent consultants, engaged during 2000 to estimate the current weighted average cost of capital for urban water business, have now completed their work. Estimates were sought to ensure Victoria's defined rates of return do not push revenue levels above the upper bound as determined by CoAG pricing guidelines. The consultants used the capital

asset pricing model to estimate the cost of capital associated with the regulated activities of water businesses. In estimating the weighted average cost of capital, treatment of taxation, and the use of real or nominal weighted average cost of capital was considered.

Figure 3.1: Economic real rates of returns to combined water and wastewater businesses 1999-2000 and 2000-01 (per cent)



Note: Melbourne consolidated figure reflects the returns to the system overall and nets out the impact of charges between Melbourne Water and the three retail businesses.

Source: Water Services Association of Australia (2001a)

A real after-tax weighted average cost of capital of 6 per cent was estimated,¹² and was used in identifying price paths in the 2001 Price Review.

Victoria, in explaining the reason for previous high rates of return, advises that the figures were determined using historic cost by the Water Association of Australia benchmarking report (WSAA Facts) using historic cost. The rate of return earned on regulatory asset values (using depreciated optimised replacement cost) bears little resemblance to that reported by the benchmarking report.

In 2003 the Council's assessment of urban pricing reform will need to consider whether the price paths are achieving their objectives of appropriate rates of return or whether high rates of return continue to be an issue.

¹² Victoria reports the weighted average cost of capital in after-tax terms. This reflects finance theory, the general finance practice of delivering costs in after-tax terms and provides protection from inflation risk where prices are set for a fixed period of time.

Full cost recovery – regional urban authority asset valuations

Progress report: Review the independent auditing of regional urban water authorities to ensure compliance with the State's asset valuation and financial reporting statement

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreements, clause 3(a) and (b); CoAG pricing guidelines

Victorian progress

Victoria advised in the 2001 NCP assessment that, as part of the water service agreements with the regional urban suppliers, service providers were required to have in place asset management systems, processes and plans. The Council understands that Victoria is considering extending the annual audit of metropolitan asset management plans to include regional urban water authorities.

As noted in the previous discussion on full cost recovery for regional urban water authorities, Victoria's 2002 NCP annual report stated that an asset valuation practice statement has been developed, which adopts the deprival value concept for the assessment of asset values for financial reporting purposes. The Council was provided with a draft of this statement. Its release, and implementation by businesses, is subject to the finalisation of a proposed accounting policy, *Valuation of Non-Current Physical Assets*.

More recently, Victoria has advised that the accounting policy has been released. This policy temporarily excludes water businesses due to uncertainty with the application of fair value measurement of the infrastructure assets they hold. Consultation with these businesses will occur to resolve these issues.

The asset valuation practice statement will be reviewed to ensure consistency with the accounting policy and to resolve several issues regarding the application of the recoverable amounts test to water businesses. Victoria will issue the statement to apply from 1 July 2002.

Urban full cost recovery: dividends

Progress report: Progress with introducing commercially based dividend arrangements, including appropriate returns earned on regional urban headworks services.

Next full assessment: The Council will next assess urban pricing reform in 2003.

Reference: Water reform agreements, clauses 3(a) and (b); CoAG pricing guidelines

Victorian progress

The metropolitan urban retail and wholesale water businesses operate under the standard government business enterprise dividend framework. Under this framework, dividends are determined by reference to two general benchmarks: dividends equivalent to 50 per cent of net profit after tax, and dividends plus income tax equivalent payments to 65 per cent of pre-tax profit. Individual dividend levels may vary from the benchmark due to the liquidity of the business, its capital requirements, and gearing and interest cover.

This commercial dividend arrangement, based on profitability and government business enterprise dividend benchmark, was introduced to the regional urban water authorities in 1999. In addition to the standard government business enterprise considerations, capital contributions from customers and industry are excluded from dividend calculations.

The Council notes, however, that WSAA Facts 2001 reports that for the 2000-01 financial year Melbourne Water paid after tax profit dividends of 121 per cent, Yarra Valley water 109 per cent, South East Water 94.8 per cent, and City West Water of 67 per cent.

The CoAG guidelines require that dividends reflect commercial realities and simulate a competitive market outcome. The Council has expressed a concern with other jurisdictions that dividend policies do not prevent adequate funds being retained within the business.

Full cost recovery: externalities

Progress report: Developments in factoring externalities into pricing by urban service providers

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreements, clause 3(a)(i); Expert Group report on externalities

Victorian progress

The CoAG pricing guidelines require externalities to be incorporated into prices. The Council recognises that this is a complex and difficult area,

particularly in the urban sector. The Council's view is that the first step is to look for prices to reflect an appropriate proportion of the costs of mitigating environmental problems of water use but pricing is only one part of a holistic approach to dealing with externalities.

Victoria has advised that the 2001 Price Review considered the cost of externalities as part of the building block approach to determining the costs of efficiently delivering services.

The financial submissions provided by the 19 urban and regional urban water authorities to the 2001 Price Review included the costs of meeting future service performance standards and obligations in relation to environmental management. The operating licences of the metropolitan urban retail water businesses included an obligation to report to the Environment Protection Authority on compliance with respect to:

- the conditions of any waste discharge licence issued to it by the Environment Protection Authority;
- State environmental pollution policy requirements; and
- performance criteria specified in an environmental improvement plan.

At the time regional urban water businesses provided their financial submissions, work was underway to develop a generic water services agreement template that would include resource management obligations in respect of environmental management, effluent management, emergency management and incidents response, water conservation, drought response and security of supply. The template would also reflect the obligations of these businesses to comply with performance standards for wastewater, effluent and sludge reuse. The purpose of the water services agreement was to more formally articulate resource management obligations and performance standards.

Victoria points out that while the costs attributable to these natural resource management obligations were included in the businesses' financial submissions, the information was aggregated such that these costs were not directly identifiable or reported separately in annual reports. Victoria states that the move to Essential Service Commission regulation of the water industry should make these costs more transparent.

With regard to the future treatment of externalities, Victoria indicates it has no immediate plans to alter its treatment of externalities. Victoria's approach is for water businesses to internalise the costs of addressing externalities directly attributable to water users by incorporating them into their cost structures.

Community service obligations

Progress report: The transparent reporting of the size and nature of community service obligations provided by urban service providers.

Next full assessment: The Council will assess the reporting of community service obligations in 2003.

Reference: Water reform agreement, clause 3(a)(ii)

Victorian progress

Victoria's water industry limits CSOs to the provision of concessions to pensioners, rebates to certain not-for-profit organisations and payments under the rates and charges relief grant scheme. CSOs are provided for urban water and wastewater services, and are funded by Government in a transparent manner. The value of CSOs delivered by individual water businesses is readily available from both the Department of Human Services and each business. The Department prepares annual summary reports on the level of pensioner concessions delivered by each business. In addition, Victoria will institute arrangements to require all authorities to report on CSOs in their annual reports commencing 2001-02.

Full cost recovery: cross-subsidies

Progress report: Progress in identifying and reporting cross-subsidies

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreement, clause 3(a)(i)

Victorian progress

In its 2002 NCP annual report, Victoria indicates that it has not developed guidelines to identify, measure and report cross-subsidies. It may do so, however, subject to finalising new regulatory arrangements to transfer the economic regulation of the water industry from the Government to the Essential Services Commission.

The proposals paper sets out the Government's framework for the economic regulation of the water industry, and identifies the regulatory instruments necessary to implement the proposed regulatory arrangements. These include pricing principles that require:

- tariffs to be fair and reasonable;
- tariffs to be developed with regard to CoAG principles, where relevant;

- tariffs to lie between an upper bound of stand alone cost and a lower bound of incremental cost;
- services and prices to be unbundled to the maximum extent possible;
- tariffs to reflect efficient, forward looking costs; and
- the methodology by which tariffs should be determined.

While the regulatory arrangements for the Essential Services Commission have yet to be finalised, Victoria argues that the pricing principles under the new regulatory framework will ensure that cross-subsidies are identified and transparent. If the Essential Services Commission regulation reveals significant cross-subsidies between services and/or customers, Victoria has said it will reconsider the need for guidelines for its water businesses on cross-subsidies. The most appropriate mechanisms for specifying obligations to identify and report cross-subsidies would be considered at that time.

Victoria argues that cross-subsidies in the regional urban sector have been removed.

Institutional reform: structural separation

Progress report: Implementation of the institutional reforms outlined in the Council's 2001 assessment.

Next full assessment: The Council will assess institutional reform in 2003.

Reference: Water reform agreement, clause 6

Background

Late in the Council's 2001 assessment process (26 June) the Victorian Government announced its new pricing framework for Victorian Water businesses. This framework sets a three year price path. Because of the timing of its release the Council was unable to fully consider the outcomes of that review in its 2001 NCP assessment.

At the time of the 2001 NCP assessment, the Minister for Environment and Conservation had responsibility for service provision and price regulation for Melbourne Water. The introduction of the Essential Services Commission, however, was expected to provide the transparency and accountability necessary to address any possible conflicts of interest.

The Minister for Environment and Conservation also had oversight of all aspects of services delivery, standards setting and pricing for regional urban water providers. The plans to introduce an Energy and Water Ombudsman and the Essential Services Commission could also address any potential conflicts of interest in the regional urban sector.

In addition, the template for regional urban water services agreements indicated that these agreements would add to transparency by clarifying, auditing, monitoring and reporting the obligations on service providers.

Finally, the Minister for Environment and Conservation had dual roles as owner of Melbourne Water, regional urban and rural water authorities and responsibility for water allocations and management. Again, this potentially raised conflicts of interest. In its response to the Council's concerns, Victoria noted the water service agreements would set out clear responsibilities and accountabilities for service delivery and regulatory functions.

The 2001 NCP assessment noted that the Council would report on Victoria's progress in implementing proposed changes in the following areas:

1. defining the roles of the Essential Services Commission and establishing this organisation;
2. demonstrating that the approach taken in the 2001 Pricing Review of Water Drainage and Sewerage in Victoria was consistent with the CoAG obligations;
3. finalising the new regulatory framework for drinking water standards so that it allows for independence (from the service provider) in the setting and enforcement of standards consistent with the 1996 Australian Drinking Water Guidelines;
4. signing water services agreements with regional urban and rural water authorities that provide the transparency and accountability necessary to remove any conflicts between the ownership of these organisations and their regulation;
5. responding to any institutional reform issues that arise from the review of Victoria's water legislation; and
6. responding to the Environmental Protection Authority review of the regulatory arrangements for septic tanks.

Victorian progress

Essential Services Commission

The Victorian government has made progress in defining the involvement of the Essential Services Commission in water issues. The Department of Natural Resources and Environment released an issues paper in November 2001 outlining the issues for establishing the Essential Services Commission as the economic regulator for the water industry. The issues paper formed the basis of preliminary targeted consultation to assist in the development of specific proposals for broad community and stakeholder consultation. Submissions on the issues paper closed on 18 January 2002.

A proposals paper was released in early 2002 proposing the various services to be regulated by the Essential Services Commission and calling for submissions by 22 May 2002. These services are outlined in table 3.4.

Table 3.4: Nature of service and initial form of regulation

<i>Service/Service type</i>	<i>Proposed initial form of regulation</i>
Urban water and wastewater services	Explicit price controls
Urban water and wastewater services – connection/developer charges	Detailed pricing principles
Bulk water and sewerage supplies	Explicit price controls
Rural water authority irrigation and stock and domestic services	Detailed pricing principles
Regional urban water authority irrigation services	Explicit price controls
Metropolitan drainage services	Explicit price controls
Trade waste services	Detailed pricing principles
Other monopoly water/wastewater services eg tee insertions, meter testing	Prices oversight/dispute resolution
Groundwater and surface water licensing	No role for the ESC. Prices to be overseen by the Government
Recycled water	No role for ESC
Competitive services eg mulching and plumbing services	No role for ESC

Source: Department of Natural Resources and Environment (2002c, p.7)

Consultation on the proposals paper will aid in the development of new legislation to give effect to the regulation of the water industry by the Essential Services Commission. The new legislation is scheduled for introduction in the 2002 spring parliamentary session. Victoria's states that:

It is the Government's intention that all water businesses will be brought under the jurisdiction of the ESC from 1 January 2003. (State Government of Victoria 2002, p.67)

The Government states that its overarching objective for the water industry is to ensure that it delivers water services that meet the social, economic and environmental needs of current and future generations. The key objectives in bringing the water industry under the Essential Services Commission are to:

- *protect the long-term interests of all customers in terms of price and quality of water services;*
- *facilitate a financially viable water industry;*
- *ensure environmental, public health and safety and social obligations in water are fully considered;*
- *ensure transparent and accountable processes for regulatory decision making; and*

- *provide incentives for optimal long-term investment.* (Department of Natural Resources and Environment 2001, p.11)

2001 pricing review

Victoria argues that this review was developed consistent with the CoAG water pricing guidelines. The new pricing framework is based on two-part tariffs. It is also designed to recover the business costs of providing water, sewerage and drainage services as a minimum. The prices were developed based on business costs submitted by the water businesses that consisted of:

- operations, maintenance and administration costs;
- cost of asset consumption (depreciation);
- finance charges/borrowing expenses; and
- cost of capital (rate of return).

The cost of capital (set at 6 per cent after-tax) recognised that both debt and equity sources of funding have a cost to business.

Drinking water quality

In August 2000, the Victorian Minister for Health and the Minister for Environment and Conservation jointly released a consultation paper setting out proposals for a new regulatory framework for drinking water quality in Victoria. Feedback on the consultation paper was considered in the development of a proposals paper, *Safe Drinking Water a New Regulatory Framework for Drinking Water Quality in Victoria*. The proposals paper was released for targeted consultation in November 2001. The key features of the proposed framework are:

- *enforceable and achievable health and non-health related statewide standards for drinking water, set after a public process which examines the costs and benefits of the proposed standards;*
- *flexibility for local community-based variations to non-health related standards;*
- *public disclosure of water quality information; and*
- *obligations tailored to ensure that authorities understand and manage risks to drinking water quality.* (State Government of Victoria 2002)

A further discussion paper, *Proposed Standards for Drinking Water Quality in Victoria*, was released at the same time as the proposals paper. The discussion paper is the first step in developing regulations to establish drinking water quality parameters. To assist in assessing the impact of

drinking water quality standards, a further document was circulated requiring water authorities to provide information on the expected impact of the proposals on their businesses.

Victoria has informed the Council that it is expected that a set of proposals will be considered by Cabinet before the end of the year, based on the outcomes of the most recent round of consultation. Standards for drinking water quality will be specified in regulations, which would be made following the passage of safe drinking water legislation.

Following the passage of the regulation, a regulatory impact statement is to be undertaken and it is envisaged that regulated standards will be in place within three to six months thereafter, that is, by December 2003.

Water services agreements

Water service agreements have been signed for each of Victoria's 15 regional urban water businesses. Work is progressing on the water services agreements for the five rural water businesses, which are customising the rural water services agreement template to reflect their specific business situations. It is expected that the agreements will be signed off by June 2002. At this stage the Council is not in a position to assess the implications of any modifications the rural water authorities have made to the template agreement.

The agreements are yet to be publicly released. Victoria has said that, consistent with the Government's proposal to develop a suite of instruments to regulate the water industry, the obligations in the agreements will be rolled into proposed statements of obligations to be developed for each water authority. It is proposed that the statements of obligations will be publicly available. The Department of Natural Resources and Environment monitors performance quarterly against the obligations and performance standards in these agreements.

Institutional reform issues that arise from the review of Victoria's water legislation

The Victorian government finalised its response to the NCP review of Victoria's water legislation at the end of June 2002. Victoria has provided a copy of this report to the Council. Given the report was not received until very late in the Council's assessment process it has not been reported as part of this assessment. The Council will consider the report in the 2003 NCP assessment.

The Environment Protection Authority review of the regulatory arrangements for septic tanks

The Victorian government has noted that the issues relevant to the separation of regulatory and service provider roles that were covered in this review are being considered in the context of the broader NCP review of water legislation. Again the Council does not have the Government's response to that review and cannot report on how this issue has been addressed.

Water trading

Progress report: The extent to which the 2 per cent rule is reached, and other mechanisms to manage this issue

Next full assessment: The Council will assess intrastate trading arrangements in 2003, and interstate trading arrangements in 2004.

Reference: Water reform agreement, clause 5

Background

Within the regulated systems, the primary concerns the Council had at the time of the 2001 NCP assessment of intrastate trading, were the regulations that restricted who can trade water, where it can be traded, and caps on the volume of water that may be transferred out of an irrigation area.

Of particular concern was the '2 per cent rule' which allows authorities to refuse trades that would result in more than 2 per cent of the total water entitlement being transferred from an irrigation district in any given financial year. The regions which use the 2 per cent rule are shown in box 3.2.

Box 3.2: Irrigation areas and districts which employ the 2 per cent rule

- Cohuna, Kerang, and Swan Hill irrigation areas;
- Murray Valley irrigation areas;
- Shepparton irrigation areas;
- Rodney and Tongala irrigation areas;
- Rochester irrigation areas;
- Pyramid Hill and Boort irrigation areas;
- Campaspe irrigation district; and
- Merbein, Red Cliffs and Robinvale irrigation districts.

Source: NCC (2001b, p.103)

The Council recognised that this restriction was in place due to community concern that excessive water traded out of a district may result in:

- a negative impact upon local production;

-
- reduction in the rate base for local governments;
 - corresponding regional decline; and
 - the loss of economies of scale for irrigation infrastructure, with remaining members required to assume a greater proportion of the fixed costs.¹³

In assessing the impact of this rule, the Council noted advice from Victoria that the rule had only been invoked twice and did not significantly suppress trade. With regard to the two instances cited, Victoria advised that the net trade out of the Torrumbarry system in the 1998-99 irrigation season reached the 2 per cent level in mid-February 1999. Any applications made after that time were approved to come into effect on 1 July 1999. The second example was in Nyah, where trade out of the system reached the two per cent level on 28 February 2001. No applications for transfers were received after this time.

In examining the effect of this rule in Victoria the Council's view was that the rule did not substantially impede trade in 2000-01. The rule had only been invoked twice, with both instances occurring toward the end of the irrigation season. Trade had generally been delayed rather than prevented. However, as trade increases, these limits are likely to be reached more often.

Victorian progress

Trade out of irrigation districts

Victoria's 2002 NCP annual report argues that the 2 per cent rule provides a useful mechanism to manage community concern resulting from water trading out of districts and the rate of structural adjustment. Victoria does not believe the rule suppresses trade. However, it is investigating other options such as exit fees and argues any such options need to be carefully approached to ensure they do not hinder trade and structural adjustment. Victoria has not reported any further instances of the 2 per cent rule affecting trade since those discussed in the Council's 2001 NCP assessment.

The rate of return differential on rural water authority assets

In Victoria, a 4 per cent return on assets is charged for water supplied by rural water authorities to regional urban customers but not for water supplied to irrigators.

In the 2001 NCP assessment, the Council supported the consultant's findings that the differential between the returns earned by Goulburn–Murray Water, Southern Rural Water and Wimmera Mallee Water on services to rural

¹³ Also known as 'stranded assets'.

customers and service to regional urban customers creates distortions in the temporary market for water trading.¹⁴ The Marsden Jacob report suggested the Victorian Government clarify and confirm future policy for bulk water pricing to ensure compliance with CoAG water reform. The proposed solution is to charge the same return on all water users.

For 2002, Victoria reports that the current pricing arrangements for sales of bulk water involving differential rates of return have not been shown to suppress or distort trade in the water market in Victoria. While urban water businesses are involved in the temporary trading market, approximately 98 per cent of water trading in Victoria occurs between irrigators. Thus, farmers set the price at which water trades on the market.

Victoria agrees with the consultants finding that the differential rates of return have the potential to distort pricing signals and has committed to reviewing the current pricing arrangements for bulk water supply prior to the Essential Services Commission determining prices for this service in 2003. The outcome of the review will be reflected in the pricing principles and price controls being developed for the rural sector.

¹⁴ The charge for supply to country towns is higher than the charge to irrigators for water from the same system.

Attachment 1: Rural full cost recovery forecast

Full cost recovery forecast in the rural sector, June 2002

	<i>First Mildura Irrigation Trust</i>	<i>Gippsland and Southern</i>	<i>Goulburn– Murray</i>	<i>Sunraysia</i>	<i>Wimmera Mallee</i>
	\$ million				
Revenue					
Bulk, service and usage	4.587	14.889	62.837	11.254	12.414
Other	0.393	1.118	35.995	1.854	1.925
Total Revenue	4.980	16.007	98.832	13.108	14.339
Expenses					
Operations, maintenance and administration	3.071	9.43	81.877	8.787	10.149
Finance charges	0	0	0.164	0	0.033
Other	0.467	1.909	2.530	0.236	1.232
Renewals annuity	0.934	1.999	14.775	2.207	2.763
Total expenses	4.472	13.338	99.345	11.230	14.177
Surplus/(deficit)	0.508	2.669	(0.513)	1.878	0.162

Source: State Government of Victoria (2002)

Attachment 2: Goulburn-Murray Water -Cost recovery of major business services -June 2002 (\$'000s)

Irrigation Supply Services

	<i>Murray Valley Gravity Irrigation</i>	<i>Shepparton Gravity Irrigation</i>	<i>Central Goulburn Gravity Irrigation</i>	<i>Rochester Gravity Irrigation</i>	<i>Campaspe Gravity Irrigation</i>
Revenue					
Bulk, service and usage	7,784.6	5,563.0	11,348.9	4,451.4	812.8
Other	193.5	97.4	75.3	49.5	1.4
Total Revenue	7,978.1	5,660.4	11,424.2	4,500.9	814.2
Expenses					
Operations, Maintenance & administration	6,163.8	4,728.3	8,839.5	4,052.2	510.9
Finance	-	-	-	-	-
Renewals annuity	1,439.4	1,075.7	4,116.2	1,704.0	309.4
Total Expenses	7,603.2	5,804.0	12,955.7	5,756.2	820.3
Surplus/(Deficit)	374.9	- 143.6	- 1,531.5	- 1,255.3	- 6.1

	<i>Pyramid-Boort Gravity Irrigation</i>	<i>Torrumbarry Gravity Irrigation</i>	<i>Woorinen Gravity Irrigation</i>	<i>Nyah Pumped Irrigation</i>	<i>Tresco Pumped Irrigation</i>
Revenue					
Bulk, service and usage	4,619.5	10,560.8	451.0	477.6	399.0
Other	110.4	112.8	2.0	13.6	1.9
Total Revenue	4,729.9	10,673.6	453.0	491.2	400.9
Expenses					
Operations, Maintenance & administration	5,324.6	8,841.7	341.5	441.6	335.5
Finance	-	-	72.7	-	-
Renewals annuity	145.0	1,212.1	384.0	39.3	62.9
Total Expenses	5,469.6	10,053.8	798.2	480.9	398.4
Surplus/(Deficit)	- 739.7	619.8	- 345.2	10.3	2.5

Source: State Government of Victoria (2002, unpublished)

Attachment 3: State of play on Victoria's nominated stressed rivers program

<i>River system</i>	<i>Current status</i>	<i>Additional considerations</i>	<i>Proposed actions</i>
Thomson River	<p>No flow specified for upper reaches above Cowwar Weir. Scientific determination of environmental flows is being provided for the upper reaches.</p> <p>The bulk entitlement is complete. The 25 megalitres per day at lower reaches below Cowwar Weir has increased to 125 megalitres per day. The recommended environmental flow has been provided.</p>	The scientific panel recommended that additional work was required to address the implications of water extraction on other aspects of the flow regime and the need to undertake associated catchment and habitat works.	<p>A consultant has been commissioned to develop a water activity plan and a flow rehabilitation plan. The flow rehabilitation plan will categorise the level of flow stress on all aspects of the flow regime and develop options for addressing any stress identified. The water activity plan will identify all actions required to improve the health of the Thomson River.</p> <p>Increased environmental flows in lower reaches has resulted in a loss of supply certainty for water users. The Government is committed to on-farm efficiency savings to offset the impacts.</p>
Avoca	The streamflow management plan is under way.	There is a concern regarding the appropriate watering of the Avoca marshes.	A project, the Lower Avoca Wetland Management Study, to identify how to improve the health of the wetlands will commence in 2002. The \$166 000 project will identify processes affecting wetlands, provide clear objectives, determine environmental water requirements, and integrate actions to minimise problems into broader plans.
Loddon	The bulk entitlement is under way. The preliminary assessment of the environments' water requirements has identified the need to review the minimum flows and provisions for fresher flows.		Once the bulk entitlement is complete a flow rehabilitation plan will be developed to categorise any ongoing flow stress in the system and to identify actions to address these. Further, the proposed construction of the Wimmera–Mallee pipeline provides a potential to end the transfer of water from the Loddon to the Wimmera and use that water to improve Loddon flows.
Glenelg	The bulk entitlement is under way. Water savings from the Northern–Mallee pipeline have already been returned to the Glenelg River. In 2003, this will be in the order of 13 880 megalitres.*	There is a concern regarding the provision of summer and autumn flushes and on occasion high winter flows.	The Victorian Government has committed \$77 million to the building of the Wimmera–Mallee pipeline. Initial studies have identified this will provide significant water savings that can be returned to the Glenelg River for environmental flows. A detailed feasibility study of the pipeline will be commissioned shortly. The water savings from this study will further improve the ability to meet

<i>River system</i>	<i>Current status</i>	<i>Additional considerations</i>	<i>Proposed actions</i>
			environmental flows.
Broken	The bulk entitlement is in its final stages. The project group overseeing the bulk entitlement has agreed in principle.	Additional concerns were in-stream barriers and the high turbidity emanating from Lake Mokoan.	Funds have been allocated to improve fish passage in the Broken River and passage has been improved. However, implementation of additional fish passage is on hold until the Cooperative Research Centre for Freshwater Ecology Campaspe flow study is complete (the Broken River is a control in that study). Additional improvements to flows could be realised from the review of Lake Mokoan and the consideration of pipelining the Tungamah domestic and stock district. Feasibility studies for both of these projects have been commissioned.
Lerderderg	The bulk entitlement is complete and the recommended flow has been provided.	There is a concern about the removal of summer flushes and extending the low summer flow period.	A flow rehabilitation plan has commenced. The plan will categorise the level of any flow stress in the system and identify actions to ameliorate these.
Badger	The bulk entitlement is under way.		The environmental flows in Badgers Creek will be addressed when the water supply to Healesville is upgraded. The improvement of flow will then be undertaken by the authority and paid for by users. In the interim, Melbourne Water will undertake habitat and physical works to ameliorate stress in the Creek.
Maribyrnong	The bulk entitlement and streamflow management plan is complete. Passing flows at three locations have been specified. In two instances the flow provided was higher than that recommended (3 vs 1.8 megalitres per day, and 10 vs 7 megalitres per day). In the last instance it was slightly lower (5 vs 7 megalitres per day). The recommended flow of 8 megalitres per day in the streamflow management plan has not been met but the passing flow has increased from 0 to 3 megalitres per day.		A flow rehabilitation plan has commenced. This plan will review the environmental flow provisions and categorise levels of flow stress in the system. The plan will identify actions to ameliorate flow stresses.

<i>River system</i>	<i>Current status</i>	<i>Additional considerations</i>	<i>Proposed actions</i>
Additional Rivers			
Macalister	The bulk entitlement is complete. The environmental flows have been improved from 15 megalitres per day to 60 megalitres per day at Maffra Weir (reduced to 30 megalitres per day during drought conditions). However, the recommended flow of 125 megalitres per day has not been met.	The scientific panel recommended that additional work was required to address the implications of water extraction on other aspects of the flow regime.	A consultant has been commissioned to develop a flow rehabilitation plan. The flow rehabilitation plan will specifically look at categorising the level of stress caused by the water extraction across the flow regime and the options for addressing any stresses identified.
Wimmera	The bulk entitlement is under way. Water savings from the Northern–Mallee pipeline have already been returned to the Wimmera River. In 2003, this will be in the order of 20 820 megalitres.*	Preliminary assessment indicates that minimum flows, fresher and flushing flows all need to be improved.	The Victorian Government has committed \$77 million to the building of the Wimmera–Mallee pipeline. Initial studies have identified that this will provide significant water savings that can be returned to the Glenelg River for environmental flows. A detailed feasibility study of the pipeline will be commissioned shortly. The water savings from this study will further improve the ability to meet the environmental water requirements.
Snowy	The Snowy rescue package will return 21 per cent of the flow (212 000 megalitres) to the river over 10 years.		

* The Northern Mallee pipeline will be completed in July 2002 and will return 35 500 megalitres of water to be shared between the Wimmera and Glenelg rivers. The project has been completed in seven stages and water generated from stages 1–6 have already been released into the Wimmera and Glenelg rivers.

Source: Department of Natural Resources and Environment (2002, unpublished)

Attachment 4: Environmental flows achieved in the bulk entitlement program

<i>River system description</i>	<i>Previous environmental flow</i>	<i>Revised environmental flow</i>
Goulburn River (major dam and weir for irrigation supply in central Victoria)	120 megalitres per day at Lake Eildon End of system not specified	250 megalitres per day at Eildon 80 gigalitre flush in November 350 megalitre per day at the end of the system (McCoys Bridge)
Moorabool river (major urban supply for Geelong and Ballarat)	5 megalitres per day at Lal Lal Reservoir No environmental flow specified at Sheoaks diversion weir	20 megalitres per day at Lal Lal Reservoir 40 megalitres per day at Sheoaks diversion weir
Latrobe River (power generation and irrigation supplies in Gippsland)	75 megalitres per day at Blue Rock Dam 8 megalitres per day at Moondarra Dam No environmental flow specified for lower reaches	90–150 megalitres per day (depending on the month) at Blue Rock Dam 30 megalitres per day at Moondara Dam 500 megalitres per day at Rosedale 750 megalitres per day at Swing Bridge
Broken River (major irrigation system in northern Victoria)	25 megalitres per day at Broken Weir 15 megalitres per day at Gowangardie Weir	34 megalitres per day at Broken weir 25 megalitres per day at Gowangardie Weir

Source: Department of Natural Resources and Environment (2002, unpublished)

Attachment 5: Environmental flows achieved in the streamflow management plan program

<i>River System Description</i>	<i>Previous environmental flow</i>	<i>Revised environmental flow</i>	<i>Comment</i>
Narracan Creek (Moe water supply)	None specified	11 megalitres per day at the diversion weir	Maximum diversion rate capped at 16 megalitres per day
Easterbrooke Creek (Thorpdale water supply)	None specified	1 megalitre per day	Maximum diversion rate capped at 1.73 megalitres per day
Merri streamflow management plan (moderate-size river system in south-west Victoria)	None specified	10 megalitres per day, protection of summer flushes and winterfill cap of 500 megalitres per year	
Upper Latrobe streamflow management plan (large unregulated river system in Gippsland)	None specified	100 megalitres per day	
Gellibrand streamflow management plan (large unregulated river system in southern Victoria)	None specified	Complex sharing arrangements have been developed with the rural and urban water users in dry years. Water sharing and the protection of environmental values are not an issue in other years	
Hoddles Creek streamflow management plan (small creek in the Upper Yarra Valley)	None specified	5 megalitres per day	Agreed by project group, but not yet ratified by the community

Note: All streamflow management plans have caps on the existing level of development in summer, and caps for winter either are incorporated or will be incorporated through the sustainable diversion limit process.

Source: Department of Natural Resources and Environment (2002, unpublished)