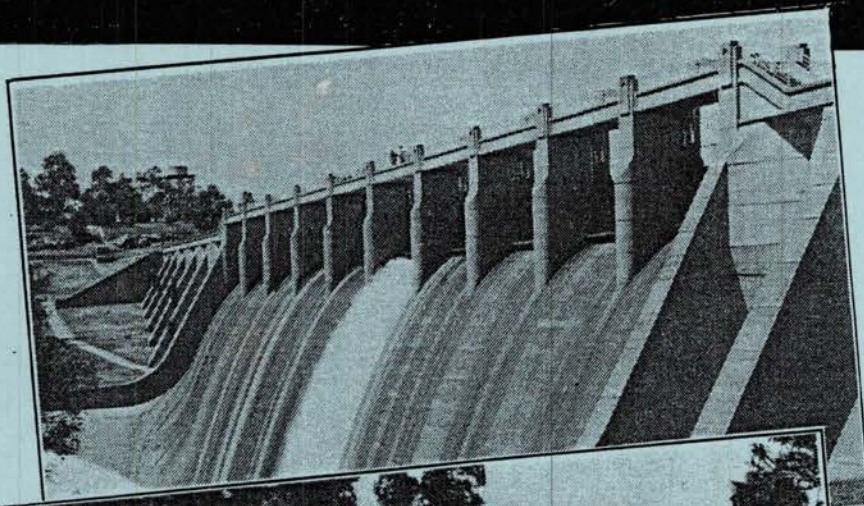
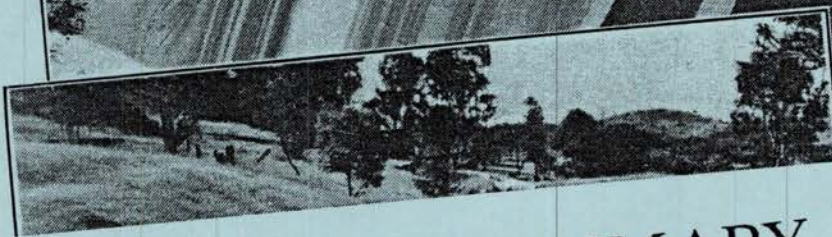


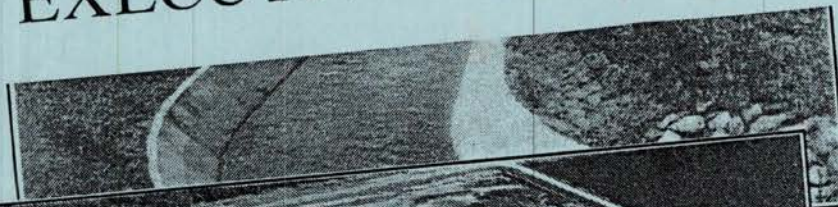
COLIBAN REGION STUDY



Lauriston Reservoir



EXECUTIVE SUMMARY



*Coliban-Harcourt
Main Channel*



*New Biological
Nutrient Removal
Plant at Bendigo*

Future Management of Water, Wastewater and Irrigation Services in the Region

Draft Report Issued for Authority Discussions

December 1990

EXECUTIVE SUMMARY

The Coliban Region Study was established to examine the management arrangements that would best provide effective management of water and related resources for the Coliban Region.

The Study area covers 7,000 square kilometres from Echuca in the north to Kyneton in the south. This is one of the fastest growing areas in the State with about 1.5 to 2 percent growth per annum. Most of the growth is centred around Bendigo and its surrounds, as well as Kyneton, Heathcote and smaller centres. Urban water, sewerage and irrigation services in the region are currently covered by eleven authorities. They are the Water Boards at Bendigo, Castlemaine, Echuca, Rochester, Kyneton, Heathcote, Elmore, Bridgewater, Goornong and Axedale, and the Rural Water Commission. There is also one small river management authority in the region.

The level of rates for the authorities in the Coliban Region are currently above the State Average of \$341 for both water and sewerage services (\$154 for water and \$187 for sewerage for 1989/90). The Average Residential Bills (ARBs) are particularly high in Heathcote, Goornong, Axedale and Bridgewater. The quality of water supply is generally below national standards bacteriologically **except** for Echuca, Rochester and Lockington.

New health regulations are expected to be in place in 1991 and these may direct authorities supplying unsafe drinking water to meet a specified standard. Licence conditions on the outfall of wastes are expected to be tightened with the aim of eliminating disposal of waste to rivers, except where nutrients are removed. These moves reflect increasing concerns by customers and the wider community to improve standards of service provided and minimise harmful impact on the environment. Considerable sums of money are required for water treatment, sewerage treatment and related works over the next ten years.

A number of systems also need rehabilitation to replace ageing mains and other distribution works especially where operations commenced late last century or early this century, or where maintenance has been neglected.

The most affected authorities are the ones that must cater for growth, as well as improve their levels of service and undertake replacement works, for instance authorities at Bendigo, Castlemaine and Heathcote. Significant capital expenditure is required. It will lead to significant increases in charges for mid sized and small authorities which are unable to spread costs over a large rating base.

The ability of authorities to absorb these pressures were examined using ten year Business Plans which include capital proposals funding and information on their operations, maintenance and administration costs. It is clear that a number of authorities will be able to continue operations in the short term but are unable to be financially strong or independent in the longer term given their capital needs.

The standard of service will continue to be poor in some areas over the next ten years. Kyneton, Trentham and Malmsbury will not have full water treatment. Heathcote would probably not be able to afford full water treatment given its already high debts and rates.

Smaller towns will not be able to afford to introduce new sewerage schemes. They are also unable to generate any future reserves because of their very small rate base. Towns affected include Lockington, Elmore, Maldon, Goornong, Bridgewater,

Chewton, Campbell's Creek, Malmsbury, Trentham and Tylden. Problems will continue to exist in these towns with sullage in the drains or poor drainage for the septic tanks. These towns, however, may be forced to consider sewerage in the near future because of health risks and impact on the environment.

It is likely that Bendigo and Castlemaine will continue to only have partially treated water for some years, although these works have been included in the plans for the area. While the Rural Water Commission remains part of the Government's budget, it will be subject to the year to year budgetary constraints of Government. Unlike urban water and sewerage authorities which have some Government constraints on annual borrowings for capital works, the Rural Water Commission currently is an Inner Budget Agency and faces more direct budget constraints. Funding requirements for both capital and operations of the Rural Water Commission are allocated in the Government's annual budget. There is also competition annually within the RWC for capital funds from other RWC areas such as irrigation districts.

Some of the smaller authorities like Bridgewater, Elmore, Goornong and Axedale could continue to operate on a part time basis. However in some cases, the lack of in-house expertise means that the operation of treatment plants is beyond the scope of these authorities. It also means that authorities cannot properly assess capital needs or prioritise them. They would continue to rely on local voluntary labour which may not be available in the future.

Other authorities like Heathcote will face financial difficulties in the near future. Rates and debt levels of the Board are already very high and the Board would have great difficulties financing replacement works or improvements in water quality at the same time as catering for growth.

The Coliban Rural Sector would continue to be subsidised by urban customers until the subsidy to the Rural Sector is phased out within the next fifteen years. The total subsidy is estimated to be about \$6.6 million over the ten years in 1989/90 values. This is \$30 from each urban assessment per year.

Authorities in the region would also continue to make decisions separately without giving due consideration to catchment planning and management for it to be effective.

Currently, Bendigo and Castlemaine and also some smaller townships do not control water supplied to their towns. Bendigo remains the largest centre in Victoria where water is not managed by a local authority. Planning for subdivisions in these towns has not occurred in an orderly or rational manner in the past because of the separate control of water and sewerage functions.

It is concluded that with the exception of the major authorities, the status quo is unable to adequately cater for growth and improve the standards of service for water supply and sewerage demanded by customers and the community over the next ten years. It is considered that these pressures together with continuing financial constraints will mean that the water industry in the year 2000 will be very different from that in 1990. The Study Group sees its role in this Study as actively planning for the desired outcome, rather than responding to individual factors.

To address these key issues, water management in the region needs to ensure that it is:

- . Able to plan, evaluate, and undertake significant works program;
- . Have high levels of financial, technical and planning skills; and
- . Have the financial strength to meet the many demands, often unpredictable, which are placed on authorities.

Four management options other than the Status Quo have been examined to address these issues. They are:

Option 1 Full regional option including headworks and rural function

The regional authority would cover all the existing functions of the eleven authorities in the Study including urban water, sewerage and irrigation services. In addition, the authority would own the Coliban system of headworks, provide river management functions in the Coliban river, manage diversions in the Coliban River and also manage bulk water entitlements in the area. It would also provide existing laboratory, workshop and other technical services. In this option, the existing 11 authorities with 7 full time and 4 part time management structures would be reduced to one.

Option 2 Coliban/Northern option

For this option, two authorities would be created instead of one. The 'Coliban' authority would cover water and sewerage functions from Goornong south to Kyneton, including Coliban irrigation services. It would own the Coliban headworks, provide river management functions in the Coliban river, and manage diversions in the Coliban River and also manage bulk water entitlements in the area. It would also provide existing laboratory, workshop and other technical services. A separate authority called here the 'Northern authority' would be created for the northern area for Echuca, Elmore and Rochester.

Option 3 Regional option (with separate headworks and irrigation)

This system also has two authorities comprising a new regional authority and the Rural Water Commission. A 'regional' authority would cover water and sewerage functions for the whole region from Echuca in the north to Kyneton in the south. Headworks and irrigation would be left with the Rural Water Commission, which would also manage catchment planning, provide river management functions in the Coliban River and manage diversions in the Coliban River. Water required by the new authority would be bulk supplied by the Commission.

It would also be responsible for existing laboratories, workshop and other technical services currently managed by the Rural Water Commission.

Sub-regional option

Option 4 Sub-regional option ('Northern', 'Central', 'Southern' authorities, and separate headworks and irrigation)

There would be 3 new authorities in this option, together with the Rural Water Commission, as detailed below:

- i) 'Northern' covering Echuca, Rochester, Lockington and Elmore
- ii) 'Central' covering Bendigo, Heathcote, Axedale, Bridgewater, Goornong, Marong, Raywood and Sebastian. Existing laboratory, workshop and other technical services of the Commission will also be managed by the 'Central' authority.

- iii) 'Southern' covering Kyneton, Castlemaine, Taradale, Guildford, Elphinstone, Fryerstown, Newstead, Maldon, Harcourt, Chewton, Campbell's Creek, Malmsbury, Trentham and Tylden.
- iv) The Rural Water Commission would be responsible for headworks and would bulk supply to the 'Central' and 'Southern' authorities. It will also be responsible for irrigation, catchment and river management.

Analysis of the options has a deliberate long term focus, where the demands and pressures faced by authorities together with those which are expected to have a major impact on authorities over the next ten years are thoroughly examined.

A full regional authority (Option 1) would be viable in the long term. It would be able to provide improvements to services immediately for towns like Axedale and Goornong. A regional authority would also have a greater capacity to meet more stringent controls by the EPA and Health Department. New sewerage services to smaller communities like Malmsbury, Tylden, Trentham, Lockington, Elmore, Chewton, Campbell's Creek and Maldon can also be considered under a new regional authority. Improvements to water quality can also be considered for Kyneton, Bendigo, Castlemaine, Heathcote, Bridgewater and Axedale.

This could occur because a regional authority would have the resources to properly evaluate and prioritise a large program of works for the region (\$135 million over 10 years). Considerable gains can be achieved from managing a larger pool of funds for investments or securing better terms for borrowings.

Bulk purchasing of stores and services such as insurance would enable significant savings while the proper provision of safety and other equipment to workers and improved training could be provided by a regional authority.

Savings would be achieved from reducing 7 full time and 4 part time management structures to one. Initial savings estimated are \$624,000 per annum or \$7 for each water or sewerage assessment. These are however minimum savings only and would increase to \$810,000 after the initial set up costs. Savings are detailed in the report.

The option would allow effective catchment management with a regional authority controlling headworks. There would also be effective management of land use and development in the catchment areas to ensure that water quality does not deteriorate leading to increased health risks and higher water treatment costs, for instance in the catchment areas in Kyneton, where there is currently considerable development.

The integrated water and sewerage functions of the new authority would improve sub-divisional planning in towns like Bendigo and Castlemaine. Current separation in management of these two functions have not enabled sub-divisional planning to proceed in an orderly manner taking into account costs of providing water, sewerage and other services.

On its own, Heathcote would have considerable difficulties supporting its growth or improve its water quality given its financial constraints and inability to generate reserves with a small rate base and already very high rates. However as part of a regional authority, capital works needed to improve water quality and to cater for pressures of growth can be undertaken. Rural users are very conscious of the security of water supply and arrangements can be made with the new authority to have water entitlements so as to guarantee that supply.

For the first five years, it is proposed the northern authorities of Echuca, Elmore and Rochester would move towards common rating. The other areas would also move towards a common rate except for Heathcote. The rural sector would also be rated separately.

The Coliban Northern option (Option 2) has virtually all the benefits of the regional authority. It also has the added benefits of providing more compact regional groupings around the major centres of Bendigo and Echuca. The northern Boards of Echuca, Rochester and Elmore have separate sources of water supply to the rest of the authorities in the Coliban Region and are supplied by the Murray and Campaspe Systems. Unlike the towns around Bendigo, the northern Boards do not require their own storages and therefore have much lower costs and rates. Quality of water is also good. The northern Boards also have no major capital works needed over the next ten years apart from sewerage Elmore and Lockington.

The 'Coliban' regional authority with 74,000 assessments would be almost as large as a full regional authority (85,000 assessments) and would enjoy all the economies and benefits of a full sized regional authority.

Immediate cash savings are \$236,000 per annum at a minimum or \$3 for each water or sewerage assessment. After the initial set up of the authorities, savings would increase to \$470,000 per year. Cash savings are lower here compared to the full regional authority because of the need to set up two instead of one management structure.

The 'Northern' authority would move towards a common rate. The 'Coliban' authorities would have separate rates for Heathcote, the rural sector, and other authorities.

In Option 3, the effectiveness of catchment management by the Authority would be reduced as headworks would be separate from the distribution network. Savings are about the same as in Option 2. The rural sector would have to be subsidised by other Rural Water Commission customers or the Government because urban customers would be in a separate authority.

The Commission Headworks and Irrigation works could be restrained by Government funding. At the local level, there would be no control over works program and funding in the region.

A sub regional option (Option 4) would incur higher setting up costs with four management structures. The cost would be \$205,000 per year or \$2 for each water or sewerage assessment above present costs.

Apart from the Bendigo area, benefits would be limited. It would also break up the existing management of the whole water system and create separate control of distribution works and headworks and irrigation. This would reduce the effectiveness of catchment planning. The rural sector would continue to require subsidy from either other Rural Water Commission customers or the Government, as urban customers would be in separate authorities.

The sub-regional option would not be considered further in this Study as it does not effectively address all the issues raised.