

## **CENTRAL HIGHLANDS WATER**

### **SUBMISSION TO HOUSE OF REPRESENTATIVES' STANDING COMMITTEE ON ENVIRONMENT AND HERITAGE ENQUIRY INTO CATCHMENT MANAGEMENT**

#### **Central Highlands Water**

Central Highlands Water is responsible for the provision of water supply and sewerage services to towns in the Ballarat region. The Authority sources the bulk of its water from inhabited catchments that have been subject to intensive pressure for further development. Although the Authority has no direct powers to control activities with these catchments over the past 20 years it has developed strong policy and practices that have protected and influenced the management of the local catchments in an integrated way. The principle catchments for which the Authority has taken an active role are those supplying Ballarat from the West Moorabool River, the town of Daylesford and the City of Maryborough from tributaries of the Loddon River.

#### **The Development of Catchment Management**

The Authority's major catchments are located east of Ballarat, approximately 70 kilometres west of Melbourne. The Authority first became aware of potential risks to the quality of its water supply in the early 1980's following a strong interest in the area by land developers. The area comprises of rich volcanic soils used extensively for agriculture, however, most of the farming properties are made up of a large number of small allotments that were created in the late 1800's. Consequently, most agricultural holdings are attractive to land developers as the existing lots can be sold individually bypassing the controls that would apply to a new subdivision. At the time the Authority became involved, there was little interest or support from most government agencies and the accepted solution to increasing catchment pollution was the construction and upgrading of water treatment plants using chemical treatment.

In order to protect the public health of its consumers, this Authority implemented a multi-barrier approach to the protection of water quality. The first two barriers involved protection of the catchment to minimise contamination of the raw water and the management of streams and reservoirs to prevent recontamination and encourage natural purification processes. Because the local Council required owners to obtain a planning permit to construct a house on their allotment the Authority was able to use the land planning legislation to object to inappropriate developments and these objections were, in the early days, strongly upheld by the Victorian Planning Appeals Tribunal.

A number of decisions by the Appeals Tribunal in the late 1980's and new government policy resulted in local municipalities introducing objectives into their planning schemes aimed to limit development, protect agricultural land from encroachment and maintain the quality of water in the rivers and streams of the region.

The Authority has always held the view that management of the catchments for water quality is consistent with broad scale agricultural land use and, to this end, commenced a strategy of

providing financial assistance to landowners to initiate water quality protection works such as the construction of off-stream watering points, fencing of streams and revegetation of stream banks.

The major algal bloom in the Murray-Darling system in 1991 triggered governments to look more closely at causes of pollution and to take note of the interaction between land use and water quality. This has led, in Victoria and some other States, to the creation of Catchment Management Authorities with the responsibility of preparing catchment management plans. In Victoria the Catchment and Land Protection Act was gazetted which requires the relevant Catchment Management Authority to formulate their plans in consultation with local stakeholders. Government agencies and local municipal authorities are required to have regard to the implementation of these plans within their own action plans.

In the mid 1990's the Victorian Government restructured its agencies into larger integrated ministries, such as the Department of Natural Resources and Environment, this decision has to some extent integrated land and water management. Many of the responsibilities of a number of government agencies are currently in the process of being devolved to regional Catchment Management Authorities in Victoria.

### **The Value of a Catchment Management Approach**

Both the quality of water within our river and streams and the quantity of water in those waterways are dependent upon the use of the land forming their catchment. Land use practices that create polluted surface water runoff, encourage erosion and damage stream banks are obvious examples of this on a broad scale. On a local scale, failing septic tanks, inadequately treated municipal sewage, industrial wastes and chemical runoff from agricultural and urban areas are all potential threats to water quality. Stream side vegetation provides an opportunity to filter over land flow and protect natural stream habitats, allowing natural purification processes to continue. The experience of Central Highlands Water is that the integrated management of the whole of the catchment with its large number of stakeholders is essential for the future public health of its customers and the health of our waterways.

Unless the catchment is managed ever increasing levels of treatment will be required to provide a safe water supply and water authorities will continue to tread a fine line between treating pollutants and the level of chemicals added to the water.

The value of catchment management to Central Highlands Water can be quantified by considering our recent experience in reviewing tenders for water treatment. This Authority recently sought tenders for the construction and operation of water treatment plants for 25 years for Ballarat and surrounding towns. A number of tenderers indicated in their offer that they were prepared to construct a treatment plant involving low levels of chemical treatment and accept responsibility for the plant's performance if the Authority continued its current practices of catchment management.

The tenderers were asked for the approximate cost of treatment if the Authority abandoned its interest in catchments and chose to rely on water treatment only. Two of the tenderers advised that they would consider installing advanced water treatment processes that would increase the tender price by between \$6 and \$8 million and increase the operating cost by about \$750,000 per year. As the Authority spends about \$100,000 per year on catchment

management the financial benefits alone are sufficient to convince the Authority of the value of continuing these activities.

### **Best Practice Methods**

The management of catchments requires the involvement of a large number of stakeholders and the creation within these stakeholders of an interest in environmental management. These stakeholders include individual farmers, urban property owners, contractors, municipal councils, government agencies, water authorities, environmental groups and industry.

Because of the large number and diverse interests of these stakeholders the primary objective of any catchment management program will involve an extensive education program. This will not be achieved quickly and will require long term support and resources. In the end, this will only be effective when the community begins to see tangible benefits from integrated catchment management. Regulation, of course, will always be necessary to deal with blatant cases of environmental abuse. To assist this education process and to prevent degradation there are a number of strategies that can be considered. These are:

#### Land Use Planning

Use of the planning controls is an important facility to manage the development of land and to control its use. It requires the planning authority, usually the local council, to be vigilant in reviewing development applications and taking water quality issues into account in their considerations.

Planning legislation provides the opportunity for State and Local Government to set clear objectives to be considered and given legislative force in considering applications for the use or development of land. Central Highlands Water has found this process to be invaluable in protecting its domestic water supply catchments from inappropriate development. More information can be provided in this area if required.

#### Codes of Practice

Recognised Codes of Practice provide a mechanism for establishing appropriate standard operational procedures which have been demonstrated to have minimal environmental impact. Again, State and Local Government have the legislative power, usually through the planning process, to require the use of land to adhere to the relevant recognised Code of Practice at the time a development application is approved.

Industry bodies are usually willing to assist in the development of a Code of Practice for their industry and to strongly encourage their members to adhere to that Code. They also provide a mechanism that may be used by environmental protection agencies to set clear performance standards expected from various user groups.

#### Catchment Management Authorities

The integration of the management of land use and water quality, in particular, into a single agency provides a mechanism to ensure that the impact of land use in water quality is carefully considered by the agency in carrying out its operational tasks. Clear objectives and

strategies need to be set at a local level and long term resources will need to be committed as the process which involves a change of community perception will be slow.

### Support of Local Environmental Action Groups

Possibly, the most difficult problem facing catchment management is the accumulative impact of the large number of individual actions taken by landowners, government agencies and authorities. Taken in isolation, no one single action is perceived to have any significant impact on the environment. The removal of a few trees here, a failing septic tank there, draining of a small area of wetland in isolation, have a negligible effect. However, when taken in total, the impact in both water quality and water quantity can be devastating. A major challenge is, therefore, to educate the community that the impact of their actions does, in the end, have an impact on the environment. One effective way of achieving this is through small local community environmental groups, such as Landcare and Bushcare. Groups such as these provide a very important source of information at a local level. They also provide a source of peer group pressure to encourage landowners to improve their environmental management practices. Such groups can, if properly supported, provide a large volunteer workforce that can achieve far more in terms of on ground results than can be achieved by regulation or through government agencies. By using volunteer groups local ownership of the problem is secured. The encouragement and support of these groups is, probably, the key factor in ensuring the resources of our waterways continue into the future and are improved.

Within the Ballarat region, Central Highlands Water has found the support of these groups to be a very cost effective way of educating communities, initiating projects that become demonstration projects for other landowners in the region and of slowly changing attitudes of the rural community.

In general, our experience has been that providing a 50/50 financial support to these groups yields cost effective action on the ground, community education benefits and goodwill among most landowners. It is important, however, that clear strategies are developed, funding guidelines are precise and focussed and desired outcomes are monitored to ensure they are achieved.

### **Institutional Roles**

#### Federal Government

Central Highlands Water would see the roles of the Federal Government as:

- providing overriding strategy at a national level
- identifying national priorities, based on scientific research
- providing some resources, directed to the achievement of these strategies
- preparing national Codes of Practice
- preparing and implementing national education programs.

#### State Government

We would see the roles of the State Governments as:

- preparing strategies
- prioritising works by their agencies and allocating resources
- managing, controlling and reporting of expenditure of public funds
- preparing, implementing and monitoring of a legislative framework to enhance catchment management
- creating appropriate structural arrangements
- initiating environmental monitoring and reporting
- educating and information dissemination
- monitoring and reporting of the condition of land and water.
- Developing and managing an enforcement regime to support the state strategies

### Local Government

Local Government clearly has the responsibility of managing, development and monitoring the performance of land use activities within their area of control. This includes septic tanks and surface water runoff from urban areas. Their responsibilities, therefore, should include:

- implementing the State strategy with respect to aspects that fall within their planning control and monitoring of the performance of these environment controls
- controlling, monitoring and enforcing standards for on-site waste disposal systems
- managing surface water runoff from urban areas
- supporting local community groups
- monitoring their own works performance to ensure a high quality standard is set as an example to others
- preparation of appropriate legislative controls at a local level, such as By-Laws, to ensure appropriate environmental safeguards are in place within their municipal district. (to manage runoff from building and construction sites, waste disposal and illegal dumping)

### Private Sector

The private sector clearly has a responsibility to act in an environmentally sound manner and, possibly, to take the lead in supporting local community groups. Agricultural business such as food processors should be encouraging their suppliers to meet appropriate Codes of Practice. There may also be a role for sponsoring.

### The Community

The task of championing catchment management will clearly fall upon community groups, such as Landcare and environmental groups. Their role will be to:

- identify and initiate projects with support from State and Local Government
- identify areas requiring attention and implement the appropriate action
- generate and sustain interest within the local community.

To maintain substantial long term community support on going resources from higher levels of Government and their agencies will be required.

## **Planning and Resourcing in Catchment Management**

While State Government agencies can do a lot, much of the problem resides on private land or State owned land leased to private persons. The management of local pollution and vegetation requires the support and positive action of individual landowners. While many will support, in general, environmental objectives, their circumstances mean they do not have the resources in either labour or funds to undertake significant projects. Support is therefore required but only at a sufficient level to top up their own resources.

It is essential that local landowners commit some of their own resource to a project to ensure ownership and help ensure maintenance responsibilities are discharged. The bulk of the planning role will appear to fall to State Government in assigning priorities for action and, through their agencies, supporting local action groups. It is suggested that States should establish catchment based agencies whose clear role is to develop catchment management plans and oversee their implementation by state agencies and local groups. These plans should be prepared in consultation with all stakeholders and identify clear outcomes and targets to be achieved.

By creating catchment wide agencies the previous problem of separating the management of land and water, to a large measure, may be overcome. Catchment Authorities should be of sufficient size to attract appropriate expert staff and discharge a range of functions currently performed by other Government agencies. In the long run, funding of these could be by some form of levy or rate. Whilst this will, no doubt, be unpopular it does provide an ideal mechanism to raise catchment awareness issues throughout the general community. It also provides security of income from the vagary of the political processes which could occur if these agencies were funded directly by the State. Obviously, Federal and State grants to achieve specific objectives consistent with State and Federal strategies would also be a source of funding. To provide incentives, the Government may wish to consider some appropriate form of tax concession for the purchase of materials used in environmental projects that are consistent with a Government strategy.

## **Monitoring and reporting**

Clearly, any expenditure of public funds requires the appropriate level of accountability and regular reporting on the progress should be required. In a broader sense, however, catchment authorities should be required to prepare and publish, in a standardised form, a report on the state of their catchments and the progress achieved toward their longer term objectives.

For rural land, measurements of

- percent of land subject to various levels of degradation
- percent of tree cover, and
- a measure of infestation by weeds

would appear the minimal information required.

For urban areas it may be possible to report on

- volume of litter collected or discharged into waterways per annum.
- Length of urban waterway rehabilitated
- Percentage of stormwater treated

The measurement of water quality, however, becomes difficult in that water quality can change rapidly, depending on the rate of flow and, as most pollutants in terms of their mass are transported in times of high flow accurate measurements become very difficult. It may, however, be better therefore measure the state of the watercourse in terms of biodiversity along specified reaches of streams, monitoring these over a period of time and reporting on any change.

### **Summary**

Central Highlands Water is a strong supporter of integrated catchment management and has found, in its experience, that the integrated management of land and water to be essential for the protection of its raw water supply and the public health of its customers.