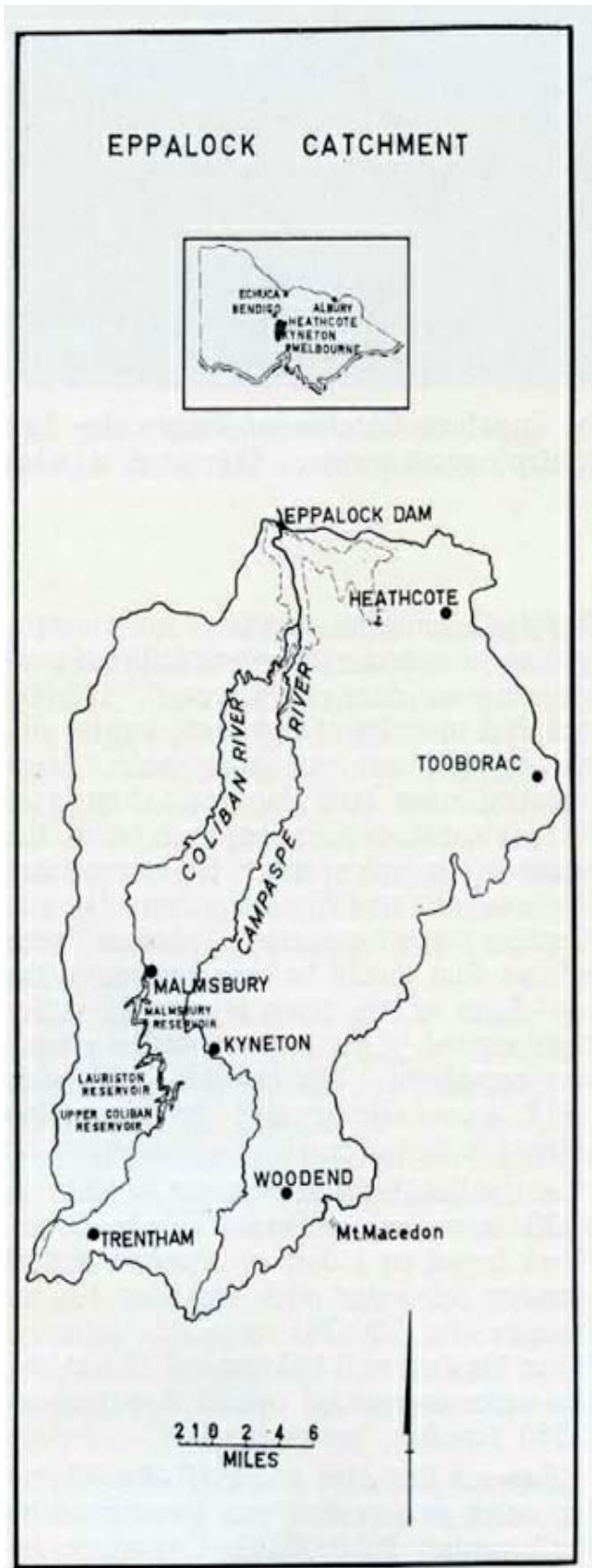


EPPALOCK CATCHMENT PROJECT

Before 1960



In 1960, when the Soil Conservation Authority was given the task of controlling soil erosion in the Campaspe River Catchment upstream from the proposed Eppalock Reservoir, the country had little resemblance to that which Major Mitchell and his party traversed in 1836 on their return journey from Portland to Sydney. Man had so changed the country that much of it was looked upon as poor grazing land which was so eroded that it constituted a serious threat to the proposed water storage.

The land was first settled by Europeans in 1838 when graziers brought their flocks overland from Sydney. It was subjected to a great influx of people in 1853 following the discovery of gold in December of the previous year. Within a few weeks, 40, 000 people were camped along the McIvor Creek where the town of Heathcote now stands. About twenty years later the large grazing runs were subdivided for closer settlement and the land was used for agriculture. Later still, rabbits found their way into the area and from then on they continued to exercise a considerable influence on the vegetative cover on the land.

Overclearing of land for firewood and the other timber requirements of the large population during the gold mining period and then over-cultivation of land not suited to agriculture, followed by over-grazing of land by sheep which was aggravated by the presence of rabbits, produced disastrous effects.

The effects were worst in those parts of the catchment where the average annual rainfall was less than about 25 inches. Extensive tunnel erosion produced numerous gullies and harbour for rabbits; sheet erosion of the surface soil produced stony bare surfaces on steep slopes which were conducive to high run-off after rain and further erosion of the gullies. In some places where run-off was not high there was excess seepage of unused water to the lower slopes to produce dryland salting.

The land in the northern part of the catchment close to the site of the water storage presented an example of extensive land destruction rarely paralleled in other parts of the State.

The Campaspe River which drains the catchment is notorious for its widely fluctuating annual flows. Even before it was disturbed by settlement it would have had this characteristic but undoubtedly, the bad land use and soil erosion would have tended to increase the irregularity rather than reduce it. Furthermore, when there were large flows they carried heavy loads of silt.

Several attempts had been made by the local people to convince successive governments that some kind of water conservation scheme was essential if reasonable use was to be made of the widely fluctuating water resources of the river.



There were hundreds of gullies like this in the Eppalock Catchment before the Soil Conservation Authority began its erosion control programme. Compare it with the picture below.

In 1908, the State Rivers and Water supply commission carried out some investigations to ascertain the practicability of constructing a dam to impound 100,000 acre-feet of water at Eppalock, but the full investigation was not completed. Local agitation arose again during the drought of 1914 when landholders began to realise the value of irrigation water for overcoming the seasonal variability in northern Victoria. Concern was expressed whether such a large dam should be build because of the low flows of the river in all but wetter than normal years, and a smaller project was considered. The bountiful rains after 1914 were accompanied by a waning interest in the proposal.

A modified scheme was put forward in 1930 as an unemployment relief scheme. Work began on a dam to impound 60,000 acre-feet of water with provision for an increase to 100,000 acre-feet capacity. When the dam wall had reached 30 feet and the water impounded behind it was about 1,250 acre-feet, work ceased.



The gully has been 'smoothed out', sown to improve pasture species and, with stumps removed, all the paddock can be easily worked by a chisel plough.

Between that time and 1960, the scheme for water conservation was investigated by Parliamentary Public works committees on three separate occasions.

The first in 1935 was asked to report on the construction of a dam and irrigation channels. The committee concluded that a storage of 60,000 acre-feet capacity would submerge 25,000 acres of good land along the Campaspe River and its tributary in wild Duck creek; that it would cost just over \$1 million and the nearest area to be irrigated would be 16 miles away from the storage. It recommended that no action be taken.

The second investigation was made in 1947 when the committee was asked to report on the desirability and practicability of increasing the capacity of the Eppalock Reservoir; the extent to which the capacity should be increased, the cost of such increase and the purpose for which the stored water should be used.

The committee concluded that a storage of 200,000 acre-feet capacity with an annual outflow of 64,000 acre-feet of water was possible and could be constructed for about \$1.6 million.

The water could be used for irrigating 20,000 acres of land in a new irrigation district, 3,000 acres of land along the river and for stock and domestic supply for 120,000 acres of land used for dryland farming. It recommended that the proposed scheme should proceed but it recognised the eroded state of the catchment and the potential for producing a high rate of siltation in the water storage.

The committee therefore further recommended that a comprehensive scheme of soil conservation be prepared and implemented immediately throughout the catchment serving the water storage. No estimates of the cost of this work were given and no mention was made of the source of finance. At the time the Soil Conservation Board, an interdepartmental co-ordinating body with few staff, was responsible for soil conservation in Victoria and it would have been hard pressed to carry out the recommendation even if the Government has accepted it.

The third investigation occurred in 1959, at a time when circumstances had changed considerably. The proposal put forward by the State Rivers and Water Supply Commission provided for additional water for the City of Bendigo and it reduced the need for duplication of a main channel in the northern Victoria interlocking grid for efficient water control and use.

The Soil Conservation Authority, established in 1950 to achieve soil conservation in Victoria, had become an active body with experience in the successful reclamation of land similar to that in the Eppalock Catchment, and it was keen to undertake work with group of land holders over a whole catchment.

In evidence to the committee the Authority had provided an estimate of the cost of conservation works based on the detailed planning and costing of several sampling units. It had expressed its confidence in being able to achieve success over a period of ten years.

The most interesting and significant recommendations of the committee were:

1. *That the existing Eppalock Reservoir be enlarged to impound 250,000 acre-feet of water, the estimated cost of which enlargement as at 1st March, 1969, was \$6,000,000, and the cost of the works for the distribution of such water was, at that date, estimated at \$2,000,000.*
2. *That in order to reduce to a minimum the amount of silt entering the enlarged reservoir and, at the same time, increase the productivity of the catchment areas of the reservoir, erosion mitigation, soil conservation and extensive pasture improvement be undertaken therein and that not less than \$100,000 per annum for a period of ten years be made available for this work. The question of further amounts necessary to be reviewed at the end of the ten-year period.*
3. *That the construction of the dam be not commenced until such work in the catchment areas was started.*
4. *That as well as carrying out soil conservation and erosion control measures in the catchment area, the Soil Conservation Authority continue and extend experiments as to the amount of runoff water occurring before and after such measures and pasture improvement techniques be undertaken in the catchment area.*
5. *That a co-ordinating body consisting of representatives of the Department of Agriculture, the Soil Conservation Authority, the Forests Commission, the State Rivers and Water Supply Commission*

and of municipalities in the catchment area of the Eppalock Reservoir be established immediately so as to ensure maximum efficiency so as to ensure maximum efficiency in carrying out works for the improvement of the catchment as above mentioned.

One member of the committee dissented from recommendation No. 5 on the grounds that the Soil conservation authority had a statutory responsibility for the welfare of water supply catchments and because of this, the statutory machinery already existed for achieving a co-ordinated approach to the task.

The government accepted the recommendations, with the exception of No. 5, and the Authority began its task. The funds available to it were less than those recommended in the evidence it gave to the Parliamentary Public Works Committee. The Authority had recommended that an amount of \$100,000 per annum for three years and \$150,000 per annum for fourteen years be made available for erosion control work in the catchment, together with a Trust Fund to which an amount of \$100,000 per annum would be contributed for each of ten years. This fund was to be used to make loans to land holders at a low interest rate to carry out the improved land management practices needed to achieve soil conservation and improved productivity.

However, the Authority was given only an amount of \$100,000 per annum for ten years, but subject to review at the end of that period if necessary.

When the authority began work in the catchment there was a legacy of suspicion of government and Government departments in the district. Understandably those whose land was to be flooded were opposed to the whole project and has been, traditionally. Until then they had been able to exert sufficient influence to prevent the scheme but on this occasion they had failed.

Furthermore, they were not enthusiastic about the Authority coming into the district to tell them what to do with their remaining less-productive land.

The Authority appreciated this situation and took deliberate action to gain the confidence and the co-operation of the people. It called a public meeting at which it informed the people of its responsibilities, powers and problems. It told the people how it would go about its task, the order of priority for areas, the nature of the assistance it would give to landholders and what it expected in return from landholders, both with respect to co-operation and the implementation of improved land use practices.

An extract from a newspaper report of the meeting reads: "We have developed a policy of assistance to landholders, and two types of works are involved. One, productive work, embracing general improvement in land use and management. This productive approach will return value to the farmers for the capital and effort they put into their properties. Second, non-productive works, which include erosion control structures, stopping gully heads, fencing to keep out stock, putting in silt traps, planting of trees and vegetation to stop gullies".



This was an ugly, active gully. The gullyhead has been shaped and sown to provide a non-eroding grassed chute. A concrete silt trap has been built and stones in wire mesh prevent any further erosion.

The Authority told the meeting that this was a unique project in Australia because it was the first occasion on which a government has provided funds for conservation of a catchment at the same time as the building of a reservoir. Furthermore, it was an exercise in group conservation which would attract the interest of technical conservationists, politicians and public administrators from throughout Australia and other parts of the world, and its success would depend on them, the local people.

The basic philosophy on which the policy was determined can be stated simply. The community was not blaming the present landholders for the condition of the land. The Government, through the Authority, would pay for the erosion control works to correct the result of past land use mistakes, provided landholders would adopt systems of land use and management which would ensure that erosion would not occur again. The Authority would work with all the landholders in sub-catchments, the order of priority being determined by the urgency to reduce erosion and siltation and, second, the evidence of co-operation by the landholders.

By the end of June, 1961, work had begun in three badly eroded sub-catchments having an area of 23 square miles and the people of the district had at least begun to have complete confidence in the way in which the Authority was handling its responsibility.