

taking evidence that Committee, in its report dated 12th June, 1941, recommended to the Governor in Council—

1. The construction of a storage reservoir on the Little River in the vicinity of the Little River township, at the estimated cost of £5,971 8s.
2. A grant be made to the State Rivers and Water Supply Commission to carry out the works recommended.
3. Charges to water users to be such as to repay within a reasonable period the cost of works recommended, together with interest, administration, and maintenance costs.
4. The works to be carried out and controlled by the State Rivers and Water Supply Commission.

Because of war conditions, it was not possible for this work to be undertaken at that time, and it was not until 1951 that work was completed on this structure, which is of mass concrete 330 feet long and 7 feet above existing river bed level.

The capacity of the storage is approximately 120 acre-feet, and as a result of its completion the Commission has been able to recommend the issue of long-term licences to land holders authorizing the diversion of water for the irrigation of their lands. These licences are for periods of fifteen years, and they rank equally in value to water rights in an irrigation district in times of water shortage. In addition, eleven permits have been issued giving limited water rights to divert surplus water, the total area covered by these licences and permits being 170 acres.

The maximum amount that may be irrigated under the licences or permits when water is available is 2 acre-feet <sup>PER</sup> per annum, the annual charge being 25s. per acre per annum under licence, and 5s. per acre per annum under permits. The permits operate when water overflows the weir, whereas irrigators with licences are able to irrigate from stored water which is released as required to meet the commitments under licence on the full length of the stream.

The construction of the weir will enable the farmers to engage in intense culture, mostly market gardening, under conditions not possible prior to the construction of this storage. Already increased quantities of market garden produce are reaching the metropolis from Little River.

The weir was designed and built by the State Rivers and Water Supply Commission, the engineer in charge of work on the site being Mr. Gordon Hirth, B.C.E., under the direction of the Divisional Engineer, formerly Mr. I. B. Hughes, C.E., A.M.I.E. Aust., who was succeeded by Mr. F. A. Nevill, C.E., M.I.E. Aust.

Members of the present Advisory Committee are—

Mr. N. G. Ferguson, State Rivers and Water Supply Commission.

Councillor W. W. Shaw, J.P., Werribee Shire.

Councillor J. A. Drysdale, Corio Shire.

Messrs. J. Bull, E. F. Gleeson and J. C. Rees.

The Commission wishes to place on record its appreciation of the co-operation received from the Werribee and Corio Shire Councils, from local irrigators, and from land holders generally, in the building of Little River Weir.

## THE STATE RIVERS AND WATER SUPPLY COMMISSION OF VICTORIA

# The LITTLE RIVER WEIR



LITTLE RIVER WEIR.

# 1951



# LITTLE RIVER WEIR

## THE LITTLE RIVER.

The Little River rises in the Brisbane Ranges at an elevation of some 1,300 feet above sea level and flows generally in a south-easterly direction through the Township of Little River into Port Phillip Bay, reaching the bay some 6 miles west of the mouth of the Werribee River.

The catchment of the stream covers a total area of 170 square miles, of which 10 square miles are tapped to supplement the water supply to the City of Geelong and adjacent municipalities by the Geelong Waterworks and Sewerage Trust.

The catchment, which includes 11,000 acres of State forest, is comprised of cleared plain or lightly-timbered hills, much of which is used for grazing.

The eastern or larger portion of the catchment, which is newer basaltic, is flat to undulating. The lower half of the western portion is composed of the granite outcrops of the You Yangs and Anakie Ranges, which form the watershed between the Little River and Hovell's Creek. To the north-west the catchment is bounded by a steep range of Ordovician slates and sandstones, while to the north there is a small area of Miocene clays. On the lower slopes of these latter three formations there is an area of Tertiary sand, clays and gravels.

From the water supply point of view the catchment cannot be regarded as a good one, the run-off being very low indeed in summer months and practically nothing at all in times of protracted drought.

The maximum flow is estimated at 17,000 cusecs, and for six months, say, from November to April, there is practically no flow.

## BRIEF HISTORY.

For a number of years prior to the construction of the Little River Weir demands for water for intense irrigation of lands adjoining that river in the vicinity of Little River township exceeded by far the capacity of that stream.

Many years before any commercial irrigation small areas were watered by early land owners, who had riparian rights which permitted the irrigation of gardens not exceeding 3 acres used in connection with a dwelling.

The first applications for authority to divert water for commercial irrigation from Little River were made in 1907 by Mr. John Rees and Mr. P. T. Wilson. The first permits issued at Little River was No. 107 to Mr. Rees on 14th January, 1910, for irrigating 3 acres of fruit trees, and No. 158 to Mr. Wilson on 15th March, 1910, for irrigating 20 acres of lucerne. From time to time attempts were made by farmers to extend lucerne plots and market gardens without a great deal of success, because of the failure of the stream in dry seasons. Market gardening was proving highly profitable in the adjoining irrigation district at Werribee, where lands with water rights were changing hands at high prices, and, as further extension

of irrigation at Werribee was impossible owing to the limited water supply available from the storages, farmers gave increasing attention to the possibilities of private irrigation along the Little River.

By 1939 the number of pumping plants along that stream had increased to twelve, and the gross area authorized to be irrigated amounted to 209 acres.

As has been found with many Australian rivers which are not backed by storages, the flow of the Little River is subject to very great variation and pumping had to be restricted during dry periods in order to ensure equitable distribution of available supplies between the diverters.

The year 1938-39 was one of very severe drought, and irrigators along the Little River were able to obtain only about 70 acre-feet of water as against their normal requirement of about 418 acre-feet—which figure represents 2 acre-feet per acre over the 209 acres registered.

The Commission decided, therefore, that no new permits should be issued for irrigation of lands upstream of the Geelong-road, and that areas for which permits to irrigate had already been issued should be limited to 10 acres per permit for the year 1939-40.

It was clearly evident that irrigation from the Little River for market gardening and other purposes could not have any permanency unless water was stored on that stream to meet periods of shortage such as had occurred in 1938-39.

In July, 1939, at a public meeting of irrigators at which the Commission's Superintendent of Water Distribution, Mr. N. G. Ferguson, explained the necessity for imposing the restrictions, certain resolutions were carried, the most important being that a local committee of five representative land holders should be formed to advise the Commission on all matters affecting water users along the Little River. The Commission agreed to the formation of the Committee and also to a request that restrictions should continue to be made as required.

As an outcome of that public meeting the Little River Advisory Committee was formed. This was actually the first of the very many successful local river Advisory Committees now operating all over the State. These Committees are composed of water users, varying in number from three to nine, under the chairmanship of the Superintendent of Water Distribution, Mr. N. G. Ferguson. The purpose of these Committees is to bring about the most equitable distribution of available water supplies where a number of irrigators are diverting water directly from streams for intense culture.

## CONSTRUCTION.

Following the formation of the Advisory Committee at Little River, representations were made to the Government on behalf of the irrigators for the building of a weir in the vicinity of Little River for the purpose of storing and efficiently regulating the flow of that stream. In 1940 the Government referred the question of the building of a weir on the Little River to the Parliamentary Public Works Committee, which investigated the matter. After