

GUEST EDITORIAL

Co-op structure works well

by Bill Hunter

General Manager, Kerikeri Irrigation Co Ltd

The Kerikeri Irrigation Co Ltd was founded as a cooperative company in March 1990 by local horticulturists and farmers to purchase the assets of the government-owned and -operated Kerikeri Irrigation Schemes which had been installed in the



early 1980s.

We have approximately 350 shareholder members who are supplied with water. There are two main storage reservoirs that supply water to some 2,800 hectares of horticultural and agricultural land.

The cooperative has a board with seven directors elected on a rotational basis, with two standing down every year but who are able to stand for re-election. This process has established a very stable company.

Horticulture has been part of the Kerikeri infrastructure for a long time with the first citrus orchards being established in the 1920s. The moisture-holding capacity of the volcanic soils in the district is low and the summer droughts can be long so that even with an annual rainfall of 1,800mm, supplementary irrigation is necessary for consistently high quality fruit. Streams in the area are small and their drought flows are very low so that harvesting of the winter runoff is necessary.

The main reservoirs are sited high in the catchments to minimize diversion and spillway costs, to enable a largely gravity feed irrigation supply and to lessen the impact on the local environment.

Some adjoining catchments in the southern area are contained by small weirs and diverted through pipelines to supplement the flow into the main Southern Reservoir. At the top end of the Southern Reservoir, one stream has been diverted through a conveniently low saddle. This same saddle also acts as an auxiliary spillway in times of exceptionally large floods.

Southern Reservoir – Lake Waingaro

Water from this reservoir is piped to the southern Kerikeri area.

Catchment area (including diversions)	645 hectares
Volume of compacted earth in dam	720,000 m ³
Live storage volume of reservoir	4.8 million m ³
Dam height	32.5 metres
Maximum water flow	660 litres per second
Reservoir area at top of water level	44 hectares

One of our major advantages is the way that the irrigation company harvests the water in the high rainfall times and stores this in its reservoirs for distribution during drier periods. This has reduced the pressure on the local rivers and streams for the taking of water for irrigation purposes and helping to protect their natural flows.

Before the irrigation scheme was built, there was so much pressure on the local streams and rivers that in times of drought, neighbours continually argued over who had the right to take water.

All lake beds, dam structures and lands surrounding Lake Manuwai water reservoir and Lake Waingaro water reservoir are in the ownership of the Kerikeri Irrigation Co Ltd as well as the related pipelines (some 120km) and pump sheds.

Because of its larger area, less marked water level fluctuations and easier public access, the northern reservoir – Lake Manuwai – is available for recre-



Bill Hunter
General Manager,
Kerikeri Irrigation Co Ltd
PHOTO: KERIKERI
IRRIGATION CO LTD

Lake Waingaro, the
cooperative's southern
reservoir

PHOTO: KERIKERI
IRRIGATION CO LTD

ational activity. This area has been made available to the community for recreational use through the granting of an easement to the Far North District Council. Currently, the main active recreational activities occurring at Lake Manuwai are sailing and trout fishing.

Kerikeri Irrigation Co Ltd has found that the cooperative structure works very well for the type of industry we are involved in. ●

Northern Reservoir – Lake Manuwai

A dam on the Waipapa River stores the water for use in the northern Kerikeri area. Water from this reservoir is taken in two different ways. To the higher land the water is pumped by Michell turbines.

The water driving the turbines is then released back into the Waipapa stream and recaptured at an intake some three km downstream and then piped away to supply properties at lower levels.

Catchment area	575 hectares
Volume of compacted earth in Dam	400,000 m ³
Live storage volume of reservoir	8 million m ³
Dam height	28 metres
Maximum irrigation flow	600 litres per second and 420 to Waipapa stream
Reservoir area at top water level	122 hectares

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Cooperatives
Association Inc.,
Level 3
75 Ghuznee St
Te Aro
Wellington 6011
P 04 384 4595
F 04 801 6966
nzca@nz.coop