



WEST COAST REGIONAL COUNCIL

news

LAKE BRUNNER WATER QUALITY REPORT

Meeting of the TLI Target

The West Coast Regional Council has achieved its water quality target for Lake Brunner.

As of January 2015 lake water monitoring data shows the rolling 5 year mean of the Tropic Level Index (TLI) for the lake dropped below the target level of 2.8. This means that all the hard work by landowners and others in the catchment in recent years has paid off. The TLI target has been met five years earlier than was anticipated in the Regional Council's Land and Water Plan.

Meeting the TLI target for Lake Brunner has been a long process involving various agencies and the commitment of the landowners in the catchment. The achievement of the target reflects the large investment from the farming landowners within the catchment to address the issues identified.

The achievement of the target also highlights the importance of the relationship between Council and Westland Milk Products. This close relationship resulted in several combined projects and investment over the years, focused on improving water quality.

Many others have contributed to the achievement of the target including the Ministry for the Environment, AgResearch, Landcare Trust, NIWA, Dairy NZ and Jan Derks.

Without the engagement and effort of the community in addressing this issue we would not have met this target.

The collaborative approach to the issues identified and mix of regulatory and non-regulatory approaches has been very successful. The onus is now on ensuring that this positive trend continues - building on the work that has occurred to ensure the Lake Brunner catchment remains a sustainable catchment. Council will continue to monitor the lake and report regularly on the results.

"Without the engagement and effort of the community in addressing this issue we would not have met this target".

Message from the Chairman



**Andrew Robb
Chairman**

In this edition of our newsletter the theme is the good news about Lake Brunner. The Council has achieved a major performance target with this significant water quality improvement, in our most important lake.

The work that has been done in the Lake Brunner catchment shows that we can achieve a balance between using our region's natural resources and at the same time maintaining or improving our special places for the enjoyment of future generations.

On behalf of Regional Councillors I would like to thank all those involved, for their assistance in helping us to achieve this outcome.

Having been involved in the planning and consultation process for the lake, this illustrates that with good consultation, providing facts and taking on board people's concerns, good results can be achieved. Positive change can come out of what at times can be a very daunting process: especially for those being asked to bear the costs.

The farmers in this catchment deserve real praise for how they have accepted the changes, and got on with implementing them as part of their day to day business activities. Well done to them and congratulations from myself and the Councillors.



**THE WEST COAST
REGIONAL COUNCIL**

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Lake Water Quality Background

Since 1992 water quality monitoring at Lake Brunner indicated deteriorating trends for nutrients and water clarity. The parameter of most concern was phosphorus due to Lake Brunner being phosphorus limited.

Council began working with the Lake Brunner farming community in the early 2000's, in an effort to improve water quality. This work was initially focussed on compliance with regional rules, working closely with the farming community to improve on farm practices.

Along with the regulatory focus, a large amount of research was undertaken to understand the issue better. Studies were undertaken on various farm practices like humping and hollowing, effluent management, stock access to waterways and fertiliser usage. The focus of the studies was on improving efficiencies and reducing impacts on the environment.

Water Quality Monitoring

Council staff sample lake water quality from the centre of the lake on a monthly basis. From this data set, trends in some parameters indicated that the water quality of Lake Brunner had deteriorated since the 1990s, although water quality in the lake was still relatively good.

Why is the Objective Based on TLI?

The Trophic Level Index (TLI) is a measure of four key parameters:

- Total Nitrogen;
- Total Phosphorus;
- Water Clarity; and
- Chlorophyll a.

In 2004 Council released the Proposed Water Management Plan which

recognised the importance of Lake Brunner to local tangata whenua, recreation, fishing and the local ecology. It was acknowledged that the nutrient inputs into the lake were increasing which impacted on water clarity.

Further research was undertaken along with consultation with the farming community. This led to proposed changes to the Land and Water Plan, which combined the Discharge to Land, Proposed Water Management and Proposed Land and Riverbed Management Plans.

The proposed changes included new rules relating to:

- Effluent management;
- Stock access to waterways; and
- Land development and subsequent fertiliser use.

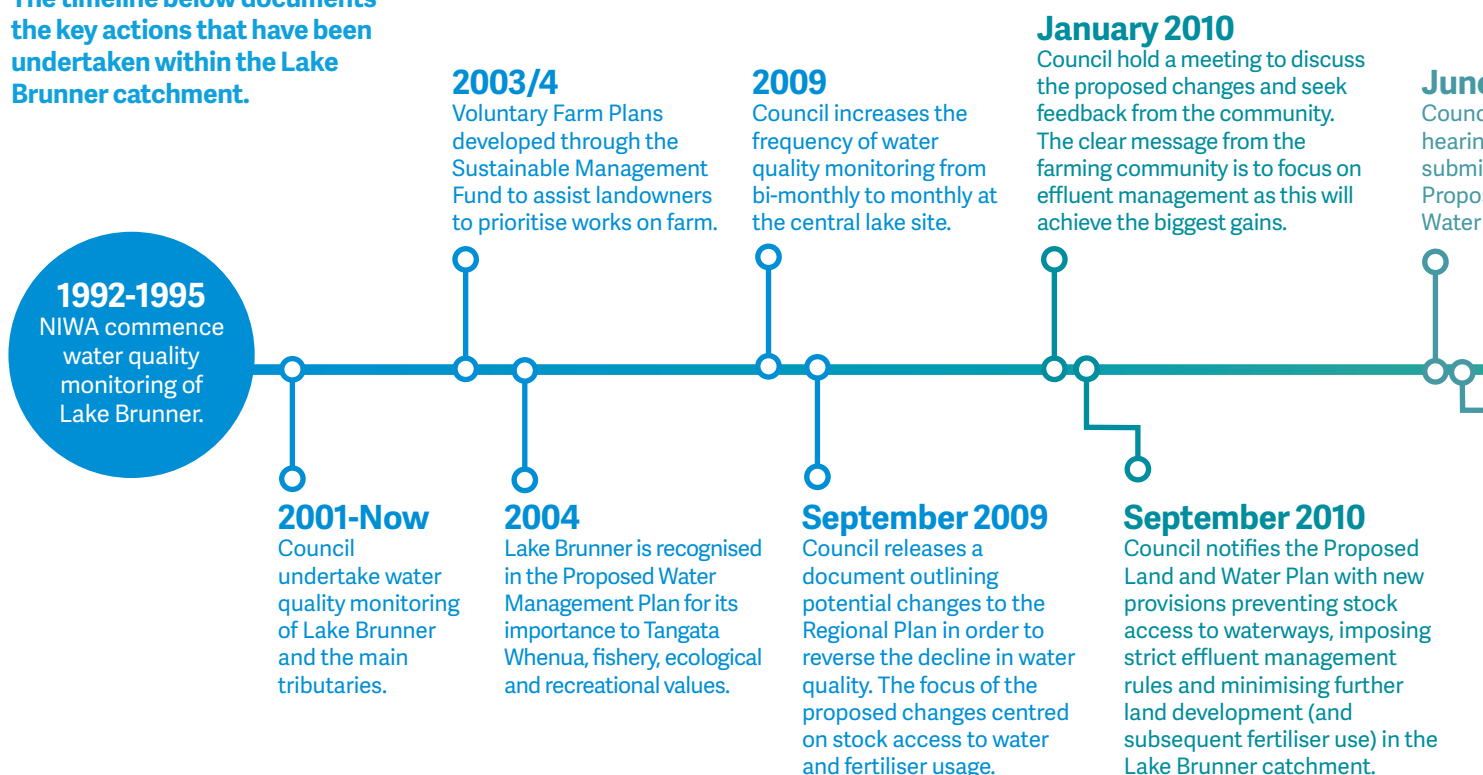
The Land and Water Plan Objective for Lake Brunner/ Kotuku-Whakaoho Catchment is:

"To improve the water quality of Lake Brunner by managing the adverse effects of activities in the catchment to reach an average trophic level index of 2.8 by 2020, and then maintain or enhance the trophic level index".

This trophic level index has now been achieved - five years early.

Lake Brunner Catchment Timeline

The timeline below documents the key actions that have been undertaken within the Lake Brunner catchment.



Lake Brunner Key Facts

Lake Brunner is located on the West Coast, inland from Greymouth

Size: 41km² **Max depth:** 109m

The Lake Brunner catchment is a special management area as it has values associated with fishery and tourism, is an important recreational resource, is prized highly by tangata whenua and is an important area ecologically. Swimming, fishing, and boating are popular recreational activities on the lake in the summer months. It is also the largest lake on the West Coast.

A dedicated policy chapter was developed in the Council's draft regional water plan in 2003 acknowledging its unique importance. New objectives, policies and rules were put in place in 2010 to strengthen the existing policy framework in an attempt to turn around the declining water quality trend.

Lake Brunner remains safe for swimming and other recreational activities. Due to the efforts of the Council, Westland Milk Products and the local farmers, among others, the lake water quality has now met it's water quality target.



June 2012
Council holds discussions for the 60 letters on the Proposed Land and Water Plan.

September 2012
Council releases decisions on the Proposed Land and Water Plan. Two appeals are received, unrelated to the new provisions for the Lake Brunner catchment.

February 2013
Lake Brunner Community Catchment Care Group formed by Landcare Trust, with support from Council.

April 2014
All farm plans and applications to the MFE fund on behalf of landowners complete and approved.

August 2014
Lake Brunner Community Catchment Care Group receives the Runner Up award for the Heritage and Environment section of the Trustpower Grey District Community Awards.

July 2012
Council applies to the Ministry for the Environment's (MFE) Fresh Start to Freshwater Fund for funding to help enhance water quality in the Lake Brunner catchment.

January 2013
Council are successful in its application to the MFE Fresh Start to Freshwater Fund. Council receives \$200,000 to distribute to the community and landowners to undertake fencing and riparian planting in the catchment. Council and Westland Milk Products jointly fund further voluntary farm plans to assist budgeting and prioritising works in support of the new Regional Plan rules.

October 2013
The first round of farm plans are complete, Council commence distributing the MFE funding to landowners.

May 2014
The Land and Water Plan is made operative.

August 2015
Water quality monitoring indicates the achievement of the TLI target, five years ahead of the deadline set in the Regional Plan.

October 2015
MFE Fresh Start to Freshwater Fund completion date.



MFE Fresh Start to Freshwater Fund

Council applied to the MFE Fresh Start to Freshwater Fund to assist landowners undertake activities on their farms to enhance water quality.

MFE allocated \$200,000 to the project which is used to fund fencing and planting where the landowner exceeds what is required by the regional rules. Council in conjunction with Westland Milk Products funded farm plans which identified these works.

Farm Plan Project Works:

- Total distance of fencing completed to date - 43.4km. When all works have been completed 62.3km will be fenced.
- Total number of riparian plants planted to date - 19,035. On completion of the project 21,190 riparian plants will have been planted on farms.

Lake Brunner Community Catchment Care Group Project \$20,000 funding:

- Total Number of plants planted - 5,208 at four sites:
- 450 at Iveagh Bay
- 986 at Mitchells
- 1,037 at Lake Poerua Scenic Reserve
- 2,735 at Homestead Creek on the shoreline of Lake Poerua

Total number of planting days - 10

- Approximately 60 volunteers attended the planting days, including 20 children.



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Voluntary Farm Planning Work

In 2003/4 Council received funding through the Ministry for the Environment to undertake farm planning work in the catchment. The farm plan work was coordinated by Landcare Trust and was a voluntary process, where each participating landowner worked through a list of water quality issues identified on their property. These were prioritised and compiled into a three year plan for the farm, fitting within the farm budget.

The voluntary farm plan work received a high uptake from the farming community and resulted in many improved practices. It identified high priority actions, which were completed by farmers at their own cost.

In 2013 Council and Westland Milk Products funded further farm planning work in the catchment to assist landowners in meeting the new rules. This was again a voluntary process with a high level of uptake.

In 2013 Council was successful in an application to the Ministry for the Environment Fresh Start to Freshwater Fund. This resulted in \$200,000 being allocated towards riparian planting and fencing work within the catchment. \$20,000 of the funding was allocated towards the newly formed Lake Brunner Catchment Care Group who used the funding to plant and fence four community sites.

\$180,000 was allocated towards works landowners identified in their farm plan, which related to improving water quality. This project is set for completion in October 2015.