

Lake Rerewhakaaitu

INFOSHEET 4, DECEMBER 2017

This information sheet has been prepared for Te Arawa whānau to summarise information about:

- *research and monitoring occurring on Lake Rerewhakaaitu.*
- *projects occurring on, and adjacent to Lake Rerewhakaaitu, particularly efforts to reduce the impacts of land use on lake water quality.*

It will be reviewed and updated annually.

NAME MEANING

Rerewhakaaitu means the lake of "wandering spirits."

IWI

Ngāti Rangitihi

AT A GLANCE

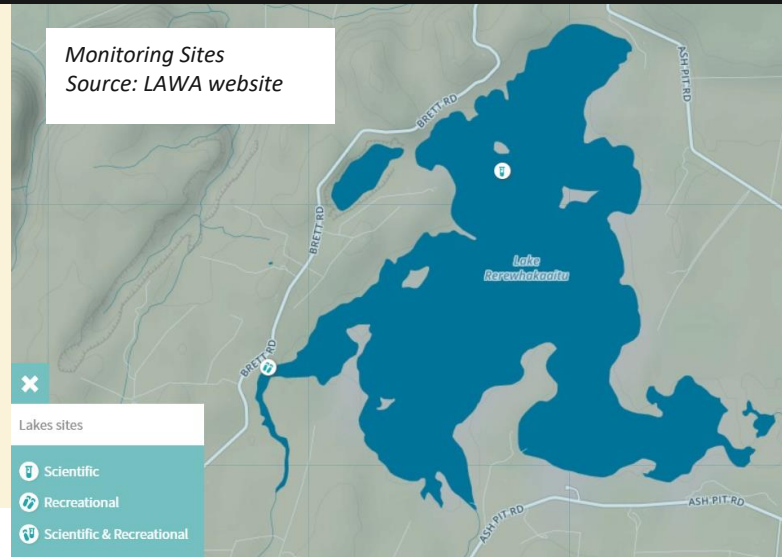
Lake size:	530 ha
Catchment area:	5290 ha
Elevation:	435 m
Average depth:	7 m
Deepest point:	15 m

Lake Rerewhakaaitu has unusual catchment drainage. Most of the farmland groundwater does not enter the lake, but drains into other catchments (e.g. Rotomahana plus some overflow to the Mangaharakeke Stream and Rangitaiki River during high lakes levels).

WATER QUALITY MONITORING

The Regional Council carries out regular monitoring of Lake Rerewhakaaitu. This includes:

- **Swimming water quality** – One site measured from October to June. Any health warnings are posted on the Regional Council and Toi Te Ora Public Health websites.

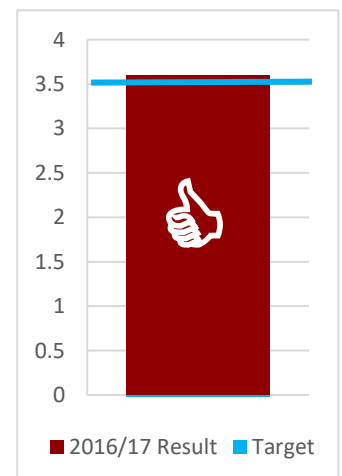


- **Scientific** – One site measured monthly for clarity, algae, phosphorous and nitrogen. Result articulated as an annual Trophic Level Index or TLI.

WATER QUALITY STATUS

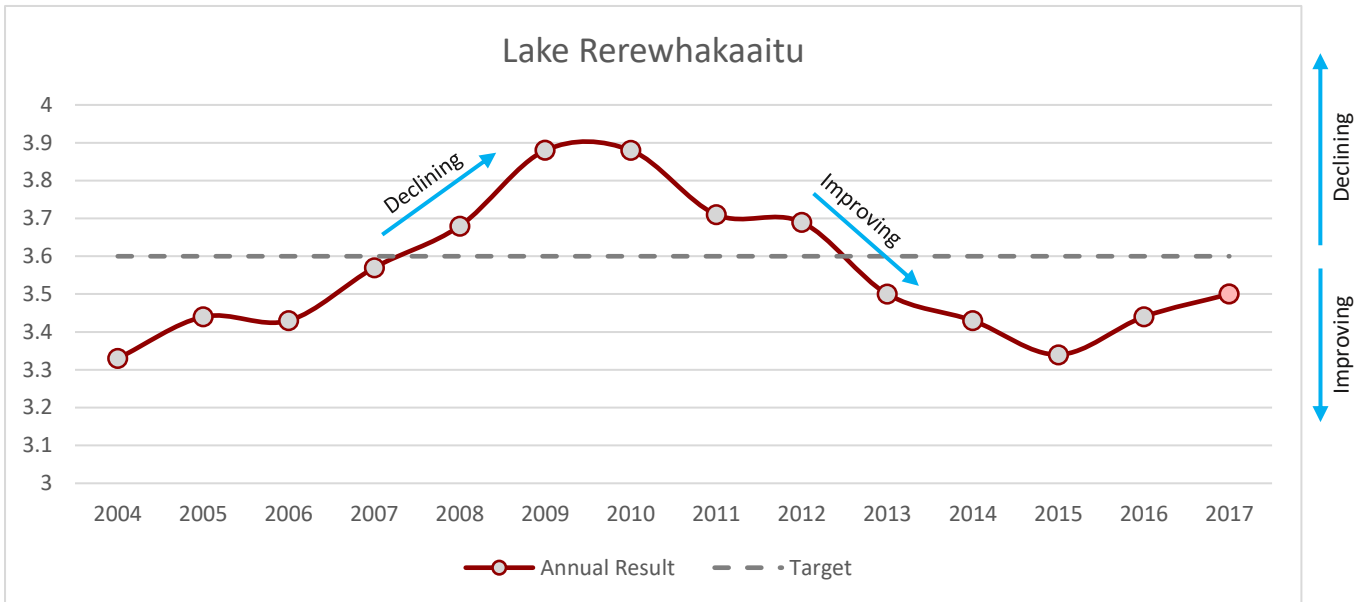
The Trophic Level Index (TLI) is used to give an overall picture of the health of Lake Rerewhakaaitu.

TLI target met. For the 2016/17 year, the TLI was 3.5, below the target of 3.6.



WATER QUALITY TREND

Water quality within Lake Rerewhakaaitu has improved since 2010, meeting the target TLI in 2013 and every year afterwards.



RESEARCH

Includes, but is not limited to:

Taonga fish species research, NIWA, 2007

- Kōaro extinct within this lake
- Kākahi were present

Kākahi and blue-green algae, NIWA, 2007

- General research about the ability of kākahi to reduce abundance of algae in Te Arawa lakes.
- Pilot study recommended for a small, shallow lake such as Lake Rerewhakaaitu

Kōura Monitoring Programme, Kusabs, 2017

- Monitoring carried out in March 2016, June 2016 and November 2016 and February 2017.
- Kōura abundance was low (71 captured over four surveys) compared to the other Te Arawa lakes.
- Interesting observation of an extraordinary abundance of dragonfly larvae.

TE ARAWA MONITORING

Te Arawa Lakes Trust is embarking on a project to measure and monitor the cultural health of Lake Rerewhakaaitu using indicators that are more meaningful to us. This may be based on the following:

- Can I swim here?
- Can I gather food here?

We will also continue working with Dr Ian Kusabs who monitors kōura populations in our lakes using tau (bracken fern bundles).

LAKE ACTION PLANS

An Action Plan is not required for this catchment as the TLI has been met. Nevertheless, an informal action plan was developed and implemented by farmers within the catchment.

Lake Tarawera Restoration Plan 2015 - Lake Rerewhakaaitu is also covered by the actions within the Tarawera Lakes Restoration Plan as it is one of the outer catchment lakes.

<http://www.rotorualakes.co.nz/vdb/document/1049>

ACTION PLAN PROJECTS

Includes, but is not limited to:

Project	Status
Further details about the actions taken by Rerewhakaaitu farmers can be downloaded from: http://www.rotorualakes.co.nz/case-studies	Ongoing
Cultural Monitoring - measure and monitor the cultural health of Lake Tarawera and all lakes that feed into it, including Lake Rerewhakaaitu. This project will be led by TALT.	In planning

WHERE TO FIND MORE INFORMATION

- www.tearawa.iwi.nz
- www.rotorualakes.co.nz
- www.lawa.org.nz

Te Arawa Lakes Trust
Rotorua Te Arawa Lakes Programme
Land Air Water Aotearoa