

Lake Tarawera

INFOSHEET 10, JANUARY 2018

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

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

It will be reviewed and updated annually.

NAME MEANING

The name means "burnt spear".

IWI

Tuhourangi, Ngāti Rangitihi

AT A GLANCE

Lake size:	4130 ha
Catchment area:	14520 ha
Elevation:	298 m
Average depth:	50 m
Deepest point:	87.5 m

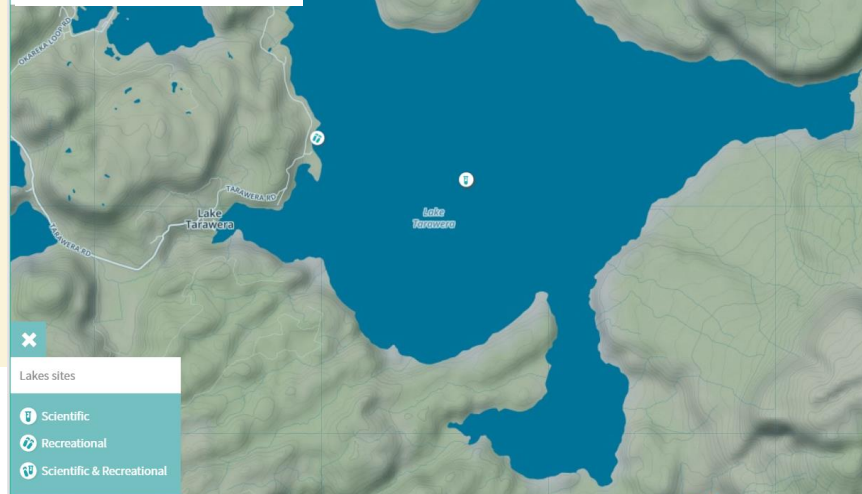
Seven lakes in the area drain into it directly or via groundwater (Lakes Ōkāreka, Ōkaro, Tikitapu, Rerewhakaaitu, Ōkataina, Rotomahana and Rotokākahi). There are also geothermal springs on the southern and northern shores.

WATER QUALITY MONITORING

The Regional Council carries out regular monitoring of Lake Tarawera. 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.

Monitoring Sites
Source: LAWA website

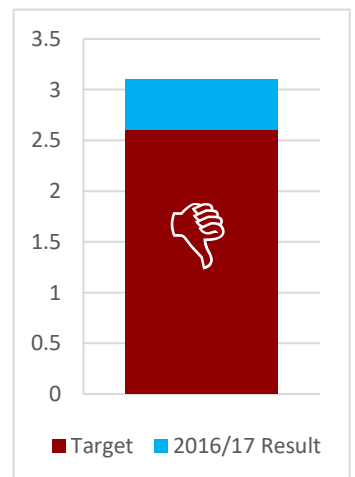


- **Scientific** – One site measured monthly for clarity, algae, phosphorous and nitrogen. Result articulated as the Trophic Level Index or TLI.

WATER QUALITY STATUS

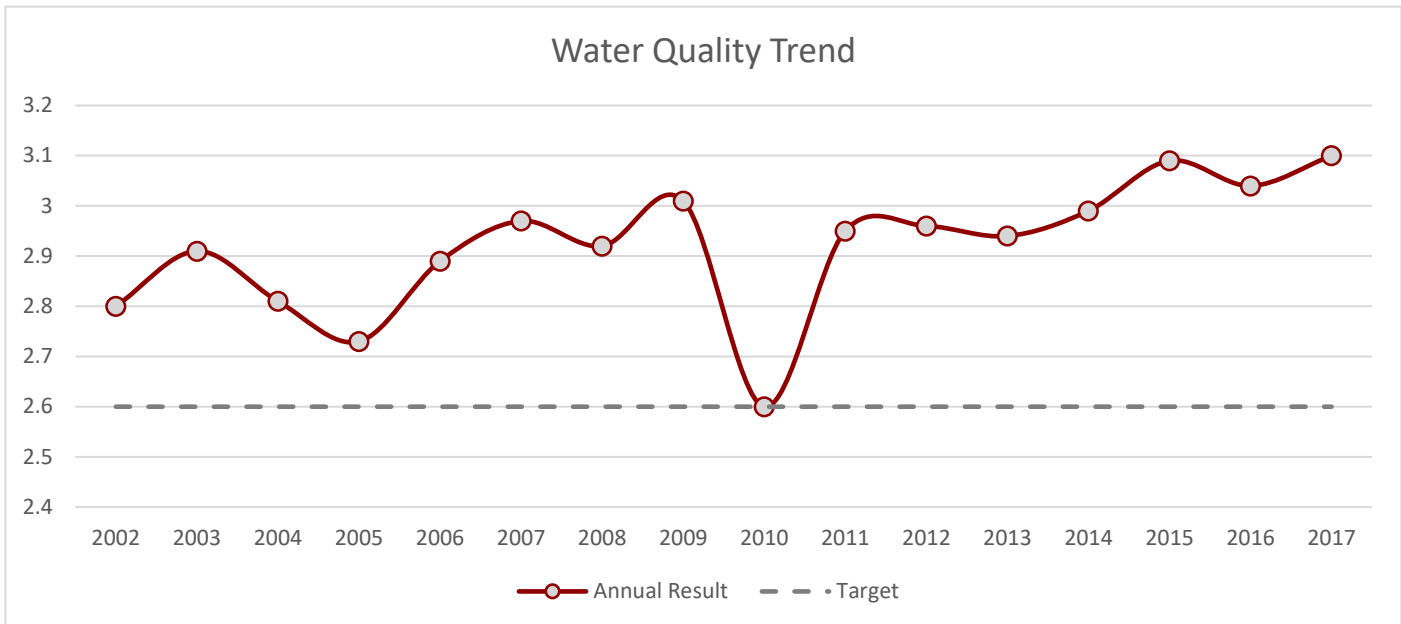
The Trophic Level Index (TLI) is used to give an overall picture of the health of Lake Tarawera.

TLI target not met. For the 2016/17 year, the TLI was 3.1, which is over the target of 2.6.



WATER QUALITY TREND

Although the water quality is good (just over the target TLI), the long-term trend shows that water quality in Lake Tarawera is declining.



RESEARCH

Includes, but is not limited to:

Taonga fish species research, NIWA, 2007

- ▶ Koaro present in bush-clad streams, some in lake
- ▶ Kākahi and kōura were present. Tuna were historically common.

Stream health assessment trial, 2014

- Assessment by Wally Lee & Alistair Suren (BOPRC) using scientific and cultural indicators.
- Trialled at two sites on this lake. Study found a good correlation between scientific and cultural indicators.
- Recommendation: Council should establish a region-wide cultural health monitoring programme.

TE ARAWA MONITORING

Te Arawa Lakes Trust is embarking on a project to measure and monitor the cultural health of Lake Tarawera 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 PLAN

Lake Tarawera Restoration Plan 2015 - This Plan comprises 10 actions to cap the total amount of nitrogen and phosphorus in Lake Tarawera. The actions relate to the Lake Tarawera Catchment as well as the seven connected lake catchments.

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

ACTION PLAN PROJECTS

Includes, but is not limited to:

Project	Status
Reticulation of sewage	In progress
All agricultural properties to have an environmental management plan	In progress
Build a model of the Tarawera groundwater system to understand the connection between the lakes and identify the sources of nutrients to the lakes.	In progress
Cultural Monitoring - measure and monitor the cultural health of Lake Tarawera and all lakes that feed into it. 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