Lake Ōkataina

TE ARAWA LAKES TRUST

INFOSHEET 3, DECEMBER 2017

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

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

It will be reviewed and updated annually.

Monitoring Site
Source: LAWA website

NAME MEANING

The name Ōkataina means "The lake of laughter", a shortened form of the original name Te Moana-i-kataina-a-Te Rangitakaroro or "The ocean where Te Rangitakaroro laughed".

Te Rangitakaroro and his warriors were resting when one member of his group referred to the lake as an ocean and this was seen as a great joke by the rest of the group. Their laughter echoed around the lake and now remains enshrined in its name.

IWI

Ngāti Rongomai, Ngāti Tarawhai, Tuhourangi

AT A GLANCE

Lake size:	1080 ha
Catchment area:	6290 ha
Elevation:	311 m
Average depth:	39 m
Deepest point:	79 m

WATER QUALITY MONITORING

The Regional Council carries out regular monitoring of Lake Ōkataina:

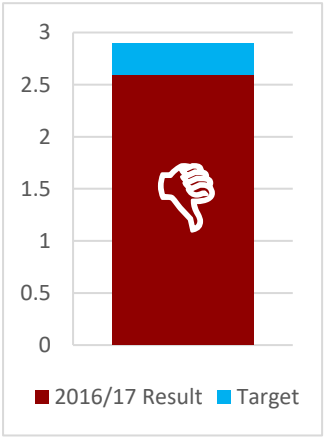
- **Scientific** – One site measured monthly for clarity, algae, phosphorous and nitrogen. Result articulated as an annual Trophic Level Index or TLI.

Swimming water quality is not monitored.

WATER QUALITY STATUS

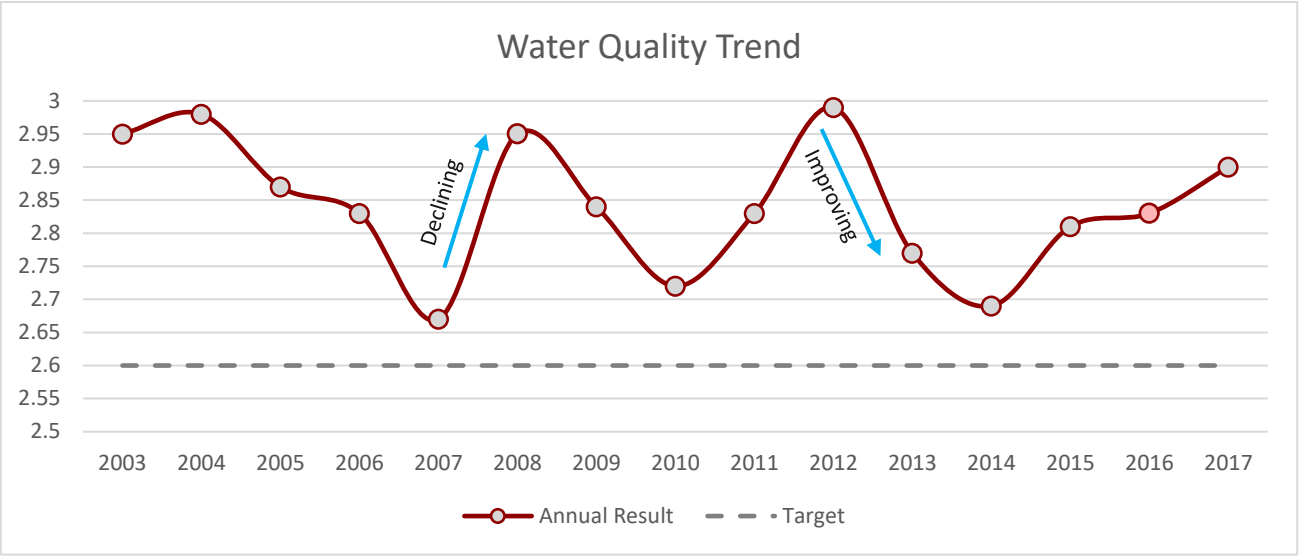
The Trophic Level Index (TLI) is used to give an overall picture of the health of Lake Ōkataina.

TLI target not met. For the 2016/17 year, the TLI was 2.9, above the target of 2.9.



WATER QUALITY TREND

Water quality within Lake Ōkataina has fluctuated over the last 14 years. It has largely been stable but has yet to reach its target TLI.



FISHERIES RESEARCH & MONITORING

Includes, but is not limited to:

Taonga fish species research, NIWA, 2007

- Kōaro present in bush-clad streams, some in lake
- Kōura was present by kākahi was not present

Stream health assessment trial, 2014

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

Impact of native bush health on lake water quality, 2016

- PhD study concluded that pest animals (e.g. possums) contribute to increased erosion.
- This in turn increases the rate of sediment and nutrients entering the lake.

TE ARAWA MONITORING

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

Lake Ōkataina Action Plan 2013 - Set out water quality improvement projects and actions for the regional council, district council and catchment landowners.
http://www.rotorualakes.co.nz/vdb/document/315

Action Plan Projects

Includes, but is not limited to:

Project	Status
Land use and land management changes • Led by Regional Council. • Resulted in fencing, lake margins retired from stock and discussions around voluntary land use change from pasture to forestry.	In progress
Watersports • Action Plan sought to ban jet and water skis. • Actioned through the Navigation Safety Bylaw 2010. • Lake Ōkataina is designated a "non-watersports area".	Completed

WHERE TO FIND MORE INFORMATION

www.tearawa.iwi.nz — Te Arawa Lakes Trust
www.rotorualakes.co.nz — Rotorua Te Arawa Lakes Programme
www.lawa.org.nz — Land Air Water Aotearoa