

# Lake Ōkāreka

## INFOSHEET 1, DECEMBER 2017

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

- *research and monitoring occurring on Lake Ōkāreka.*
- *projects occurring on, and adjacent to Lake Ōkāreka, 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 "the lake of sweet food". In early times, Maori grew sweet potatoes or kumara around the outside of the lake.

### IWI

Ngāti Whakaue, Ngāti Uenukukopako, Ngāti Tarawhai, Tuhourangi

### AT A GLANCE

Lake size:	340 ha
Catchment area:	1,980 ha
Elevation:	355 m
Average depth:	20 m
Deepest point:	34 m

### WATER QUALITY MONITORING

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

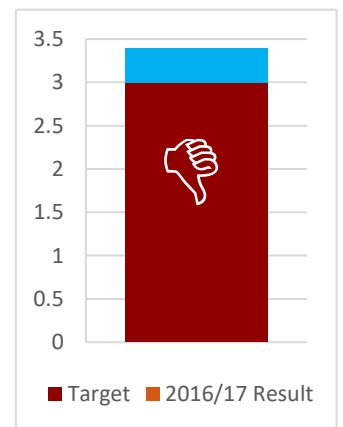
- **Swimming water quality** – One site measured from October to June. Any health warnings are posted on the Regional Council and Toi Te Ora Public Health websites.
- **Scientific** – One site measured monthly for clarity, algae, phosphorous and nitrogen. Result articulated as an annual Trophic Level Index or TLI.



### WATER QUALITY STATUS

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

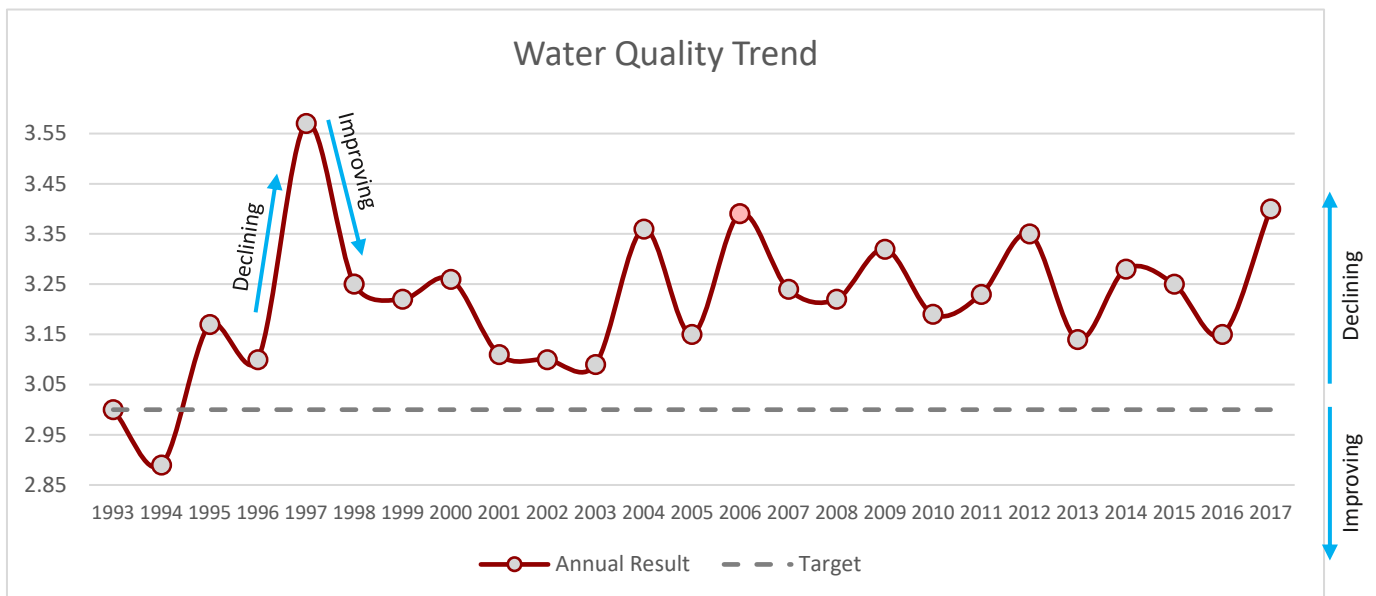
**TLI target not met.** For the 2016/17 year, the TLI was 3.4, which is over the target of 3.



### WATER QUALITY TREND

Water quality within Lake Ōkāreka has declined in recent years even though all actions, targeted at reducing nutrient loss, have been completed.

The Regional Council is carrying out further modelling to work out what else needs to be done to improve lake water quality.



## RESEARCH

Includes, but is not limited to:

Taonga fish species research, NIWA, 2007

- ▶ Koaro present in bush-clad streams, some in lake
- ▶ Kōura and tuna / eel was present.
- ▶ 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.

## TE ARAWA MONITORING

Te Arawa Lakes Trust is embarking on a project to measure and monitor the cultural health of Lake Ōkāreka 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 Ōkāreka Action Plan 2006** – This Plan outlines six recommendations to improve the water quality in Lake Ōkāreka. These recommendations include projects and actions for the regional council, district council and catchment landowners.

<http://www.rotorualakes.co.nz/vdb/document/73>

**Lake Tarawera Restoration Plan 2015** - Lake Ōkāreka 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
Sewerage reticulation scheme	Completed
Pest management: <ul style="list-style-type: none"> <li>▶ Weed cordon in place at Acacia Reserve launching range (hornwort weed).</li> <li>▶ Boat-base aquatic spraying also occurs at Boyes beach.</li> <li>▶ Pest fish surveillance in place (catfish).</li> </ul>	Ongoing

## WHERE TO FIND MORE INFORMATION

[www.tearawa.iwi.nz](http://www.tearawa.iwi.nz)  
[www.rotorualakes.co.nz](http://www.rotorualakes.co.nz)  
[www.lawa.org.nz](http://www.lawa.org.nz)

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