**Lake Okareka**

Lake Ōkāreka’s annual average TLI increased from 3.2 last year to 3.5 for 2017/2018. The three year annual average was 3.4 TLI units. The increase in the last two years has been primarily due to increases in chlorophyll-*a* and TP. TN decreased on average compared to last year

Hypolimnetic oxygen levels did improve on the last two years, with a slower rate of oxygen consumption over the stratification period. Ammoniacal-nitrogen concentrations did increase in the hypoliminion over the stratification period, although dissolved reactive phosphorus and nitrate-nitrite-nitrogen did not. A dramatic increase in lake level over the year will have had some influence on nutrient concentrations, particularly an increase in particulate phosphorus.

Figure 7: Lake Okareka annual average and three year average TLI results, compared to the RNRP Objective TLI.

**Lake Tarawera**

The annual average TLI in Lake Tarawera remained the same as 2016/2017 at 3.1. The TLI remains almost 0.5 above the RNRP objective of 2.6, with the three year average at 3.1.

Like many of the other lakes, the chlorophyll-*a* annual average concentration increased compared to the previous nine years, with a corresponding decrease in water clarity. Both total and dissolved phosphorus concentrations decreased moderately compared to last year’s annual average. Annual average nitrogen concentrations were similar to last year, with nitrate-nitrite-nitrogen showing an increase in both the epilimnion and hypolimnion. The annual average Secchi depth (water clarity) has increased compared to the previous five years.

Cyanobacteria biovolumes for the most part did not reach alert levels, with the exception of one sample taken near the Tarawera outlet (Te Tapahoro) which did reach the orange alert level in early February. No health warnings were posted over the 2017/2018 season.

Figure 11: Lake Tarawera annual average and three year average TLI results, compared to the RNRP Objective TLI.

Note: Lake Rotokakahi TLI’s are based on Te Wairoa Stream monitoring and a three-parameter TLI (no Secchi disk).

Figure 13: Regional Natural Resources Plan (RNRP) TLI Objectives and average annual TLI results, 2011 to 2018.