

# Lake Taupo long-term monitoring programme 2017-2018

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# Lake Taupo Long-Term Monitoring Programme

2017-2018

*Prepared for Waikato Regional Council*

*March 2019*

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## Executive summary

Waikato Regional Council has commissioned a long-term programme to monitor water quality of Lake Taupo with the expectation that the trophic status will slowly change to reflect changes in land use within the lake's catchments. This programme commenced in October 1994 and is conducted by NIWA with field assistance from the Department of Internal Affairs, Taupo Harbourmaster's Office. This report presents the results from the 2017-2018 monitoring period.

The monitoring programme was designed to detect change through assessment of the lake's water quality.

The long-term monitoring programme uses the historical mid-lake site, Site A. Previous work determined that the near-shore water quality was very similar to the mid-lake water quality.

During the winter of 2017, the average chlorophyll *a*, a proxy for algal biomass, was the highest recorded since the program started. This was consistent with a relatively low average Secchi depth during winter. However, it is not clear what lead to the relatively high algal biomass, as nutrient concentrations were lower than average during the winter of 2017, as a result of incomplete vertical mixing.

The mean winter air temperature in 2017 was above the long-term winter time average, and the temperature difference between air and the lake surface was below the long-term average of this temperature difference. As a result, the mixing season, as defined by the water column temperature gradient, was shorter than in previous years, lasting only a couple of weeks. Possibly also as an effect of lower wind speeds, the short mixing season was apparently too short to allow full mixing of the water column in the winter of 2017. This was indicated by oxygen concentrations and chlorophyll fluorescence not becoming homogenous throughout the water column during winter. Oxygen in bottom water, depleted after the previous summer, was not fully replenished. Another clear indication of the lack of mixing was provided by the concentrations of inorganic phosphorus and nitrogen in bottom water, which were not reduced as much as in other years by the vertical mixing that occurs down to the bottom in lake Taupo during most winters.

The high winter time chlorophyll, although consistent with low Secchi depth, was not explained by higher nutrients, and not consistent with concentrations of particulate carbon, nitrogen and phosphorus, which are presumed to be largely contained in algal cell matter. Dissolved nutrients in the surface layer were lower than usual in the winter of 2017, likely because of the reduced mixing in the winter of 2017, and total and particulate nutrients were near average or below average (TP).

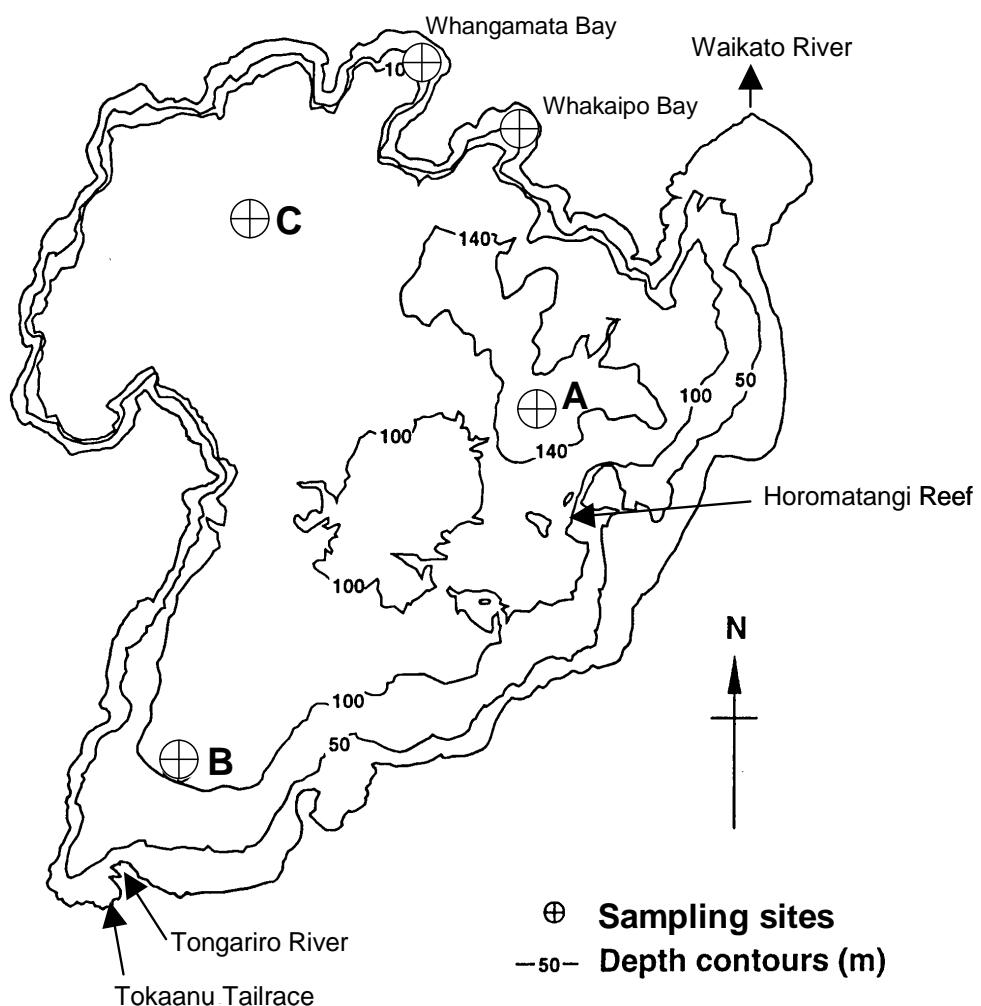
Diatoms dominated the algal species composition much of the year at 0-10 m depth, and even more so at 50 m depth. At 0-10 m depth phytoplankton was dominated by diatoms during winter (mostly *Aulacoseira granulata* and *Synedra* sp.) and during the summer by dinoflagellates (*Ceratium* sp.) and diatoms (mostly *Fragilaria crotonensis*). Cyanobacteria were never dominant and on average made up only about 1% of the biovolume. Cyanobacteria were most abundant in May 2018 (*Dolichospermum cf. lemmermannii*). *Dolichospermum cf. lemmermannii* was, as in previous years, the most common species of cyanobacteria, both in the surface layer and at 50 m depth. At the approximate depth of the deep chlorophyll maximum, 50 m, domination of phytoplankton biomass by diatoms was stronger than in the surface layer through much of the year.

## 1 Introduction

A long-term monitoring programme of Lake Taupo's water quality was commissioned by Waikato Regional Council in October 1994 in the expectation that the trophic state of the lake would change to reflect changes in land use within the lake's catchment. This programme is conducted by NIWA with field assistance from the Department of Internal Affairs, Taupo Harbourmaster's Office. Various additions and improvements to the monitoring methodology have occurred with advances in available technology but the core monitoring parameters remain unchanged (Appendix 1). This report presents data from the routine mid-lake monitoring station from July 2017 to June 2018.

In two earlier reports (Gibbs 2005, 2006), data were included from two additional offshore sites representing those historically sampled in the 1974-76 assessments of lake water quality (White et al. 1980) (Figure 1) to evaluate spatial variability of water quality across the lake. Results from these two additional sites showed that, in general, there were minimal differences between the sites in seasonal variation and that data collected from Site A (mid lake) could be used as representative of the main body of the lake. In addition, a comparison of upper water column nutrient and chlorophyll *a* concentrations and algal abundance was made between Site A and near-shore sites in Whangamata Bay (Kinloch) and Whakaipo Bay (Figure 1), over a 2-year period from February 2007 up to June 2009 (Gibbs 2010a). That study determined that, although there were small differences, the near-shore water quality was similar to the mid-lake water quality. This report presents data from Site A only.

The monitoring programme examines algal species composition and biomass, upper water layer water quality, whole water column water quality, and dissolved nutrient concentrations in bottom water. In order to enable understanding of processes contributing to changes in water quality and trophic state, the upper water column (0-10 m depth) is sampled for nutrients, chlorophyll *a*, phytoplankton species composition and water clarity at 2-3 weekly intervals, and full depth profiles are carried out twice a year, around the onset of stratification and at the end of the stratified period. The first profile is taken in spring or early summer when thermal stratification has become established and is stable, the second profile is taken in autumn the following year before thermal stratification begins to break down, as the thermocline deepens.



**Figure 1: Site map of Lake Taupo.** Showing location of the routine monitoring site at mid lake (A), and the two additional sites at Kuratau Basin (B) and the Western Bays (C) sampled during the three-year period 2002–2004. The near-shore comparison sites at Whangamata Bay and Whakaipo Bay sampled during a two-year period (2007–2009) are also shown.

## 2 Methods

Detailed method descriptions are given in Appendix 1. The parameters routinely measured or derived by calculation from component parameters at 2-3 weekly intervals are:

- Depth-related temperature and dissolved oxygen (DO), using a RBR XR420f CTD profiler until January 2008, thereafter using a RBR XR620f CTD profiler, and from February 2016 a RBR Maestro profiler/logger, with a fast response oxygen sensor, and Wi-fi download. Additional parameters of conductivity and chlorophyll fluorescence, and since January 2008, PAR, and since February 2016 turbidity and CDOM, recorded by the profiler sensors, are available at NIWA and will only be reported as appropriate.
- Water clarity by Secchi disc depth (20 cm black and white quartered).
- Chlorophyll *a*, nitrate+nitrite-nitrogen (indicated as NO<sub>3</sub>-N because nitrate concentrations are typically much higher than of nitrite), ammoniacal-N (NH<sub>4</sub>-N), dissolved organic N (DON), particulate-N (PN), dissolved reactive phosphorus (DRP), dissolved organic phosphorus (DOP), particulate phosphorus (PP), and algal species composition (cell counts and biovolume) in integrated-tube water samples from the top 10 m. Concentrations of total nitrogen (TN) and total phosphorus (TP) are estimated by summing the respective measured fractions. Zooplankton net hauls from 100 m (63 µm mesh) are preserved in 4% formalin and stored pending analysis.

Since 2000, water samples have also been collected using a van Dorn water bottle from just above the lake bed (150 m) for analysis of NO<sub>3</sub>-N, NH<sub>4</sub>-N, and DRP to assess nutrient accumulation rates in the hypolimnion and to assess the extent of winter mixing.

From the 2010/2011 monitoring period on, inclusive, water samples have also been collected by a van Dorn water sampler from a depth of 50 m for analysis of chlorophyll *a* to assess the species composition and biomass of the phytoplankton in the deep chlorophyll maximum around or below the thermocline.

Whole water column sampling is carried out twice a year in spring and autumn and the parameters measured (or derived by calculation from component parameters) at 10 m depth intervals from the surface down to 150 m depth are:

- Conductivity, pH, temperature, DO, DRP, DOP, PP, TP, NO<sub>3</sub>-N, NH<sub>4</sub>-N, DON, PN, TN, total suspended solids (SS), volatile suspended solids (VSS), particulate carbon (PC), and dissolved organic carbon (DOC).

Additional parameters measured twice yearly, but not as complete profiles are:

- Algal species composition (cell counts and biovolume) in water samples from 1, 10, 50, 100 and 140 m depth.

Details of data handling and the treatment of values that are near analytical detection limits are described in Appendix 1.

## 2.1 Report contents

This report presents the results from the 2017-2018 period, from winter 2017 to winter 2018, and refers to data in previous annual monitoring reports from 1995 to 2017 for inter-annual comparisons, and archived historical data since 1974 held by NIWA. The methods used are as per the 1994/95 report (Gibbs 1995), with minor modifications, and are included in Appendix 1. Temperature and dissolved oxygen data from the past twenty four years are given in Appendix 2 and nutrient data are in Appendix 3. Graphical presentations of time-series of data collected since the start of this monitoring programme are updated and presented in figures in the text. Phytoplankton species composition and biovolume data are included in Appendix 4, which contains phytoplankton data since 2006, and are discussed in the text. Historical (before 1994) nitrate and dissolved reactive phosphorus data from spring and autumn full lake profiles are presented in Appendix 5 for reference.

## 2.2 Statistical evaluation

Simple statistical evaluation of data has been made using Microsoft Excel® and linear regression results have been reported to  $\pm 95\%$  confidence limits. Statistical significance (p), where used, includes the coefficient of determination ( $R^2$ ) and the number of data points used (n). For details see Statistical Methods, Appendix 1.

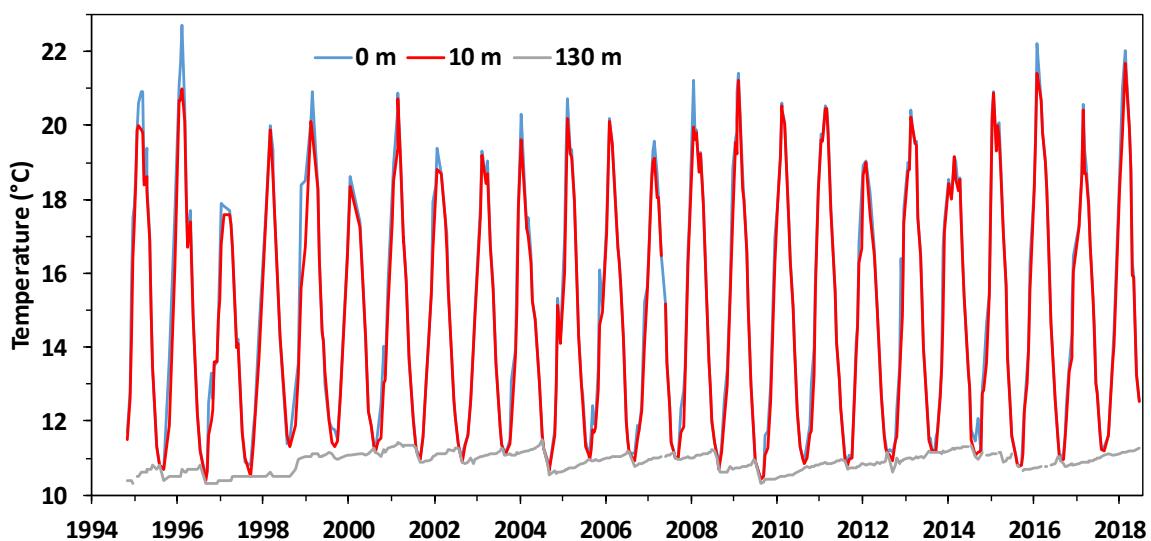
## 2.3 “TREND” definition

As in previous reports, the word “trend” is used in the context of a change between the start and the end of a time series data set where the use of a linear regression analysis shows a statistically significant difference from the null hypothesis of there being no change. It should be noted that in environmental data, as long as the data possess sufficient resolution, there is always a trend across any time period, and whether the trend is statistically significant depends on the number of data collected. Therefore, statistically significant trends are not necessarily meaningful. A statistically significant positive trend suggests that the actual trend over the tested period was not likely to be a negative one. Statistical significance says nothing about how large or how important a trend is, or how well the trend is given by the regression. Use of the word “trend” is a statistical one. It does not imply any valid extrapolation of the observed change beyond the period of the data set being examined by the linear regression.

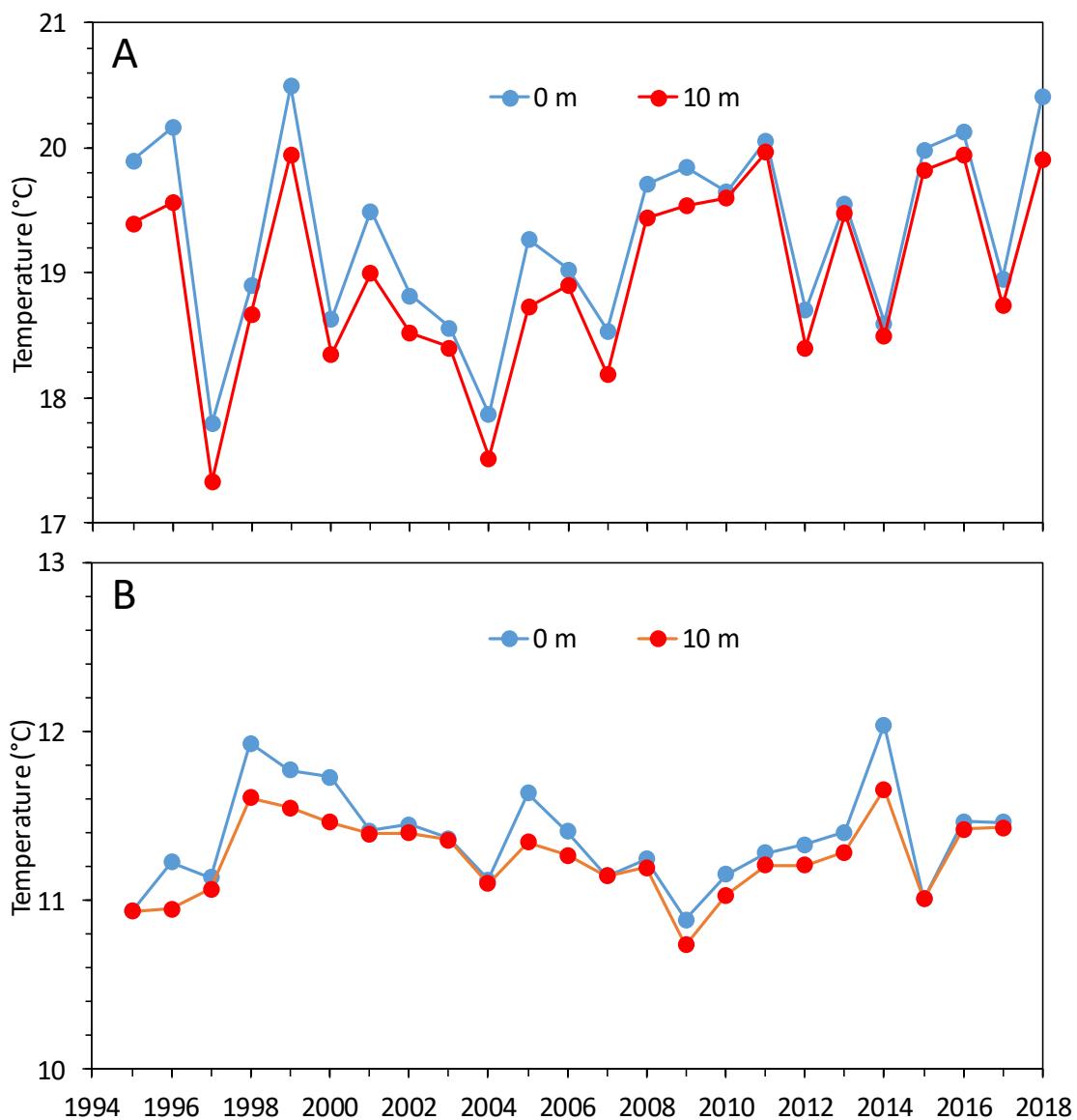
## 3 Results and discussion

### 3.1 Temperature and mixing

The time-series of temperature at 0, and 10 m depth (epilimnion) and 130 m depth (hypolimnion) collected in the monitoring programme since 1994 are presented in Figure 2. Annual maximum temperatures at 0 m depth were between 17.9°C and 22.7°C (Figure 2). In most winters the water column becomes isothermal and mixing occurs but mixing was incomplete in the winter of 1998. The maximum at 10 m depth in the summer of 2018 (21.7°C) was the highest on record, while the maximum at 0 m depth (22.0°C) was the third highest on record. The winter minima at 0 and 10 m depth in 2017 (11.2°C) were exceeded in only 2 years since 1995 (in 1998 and 1999).

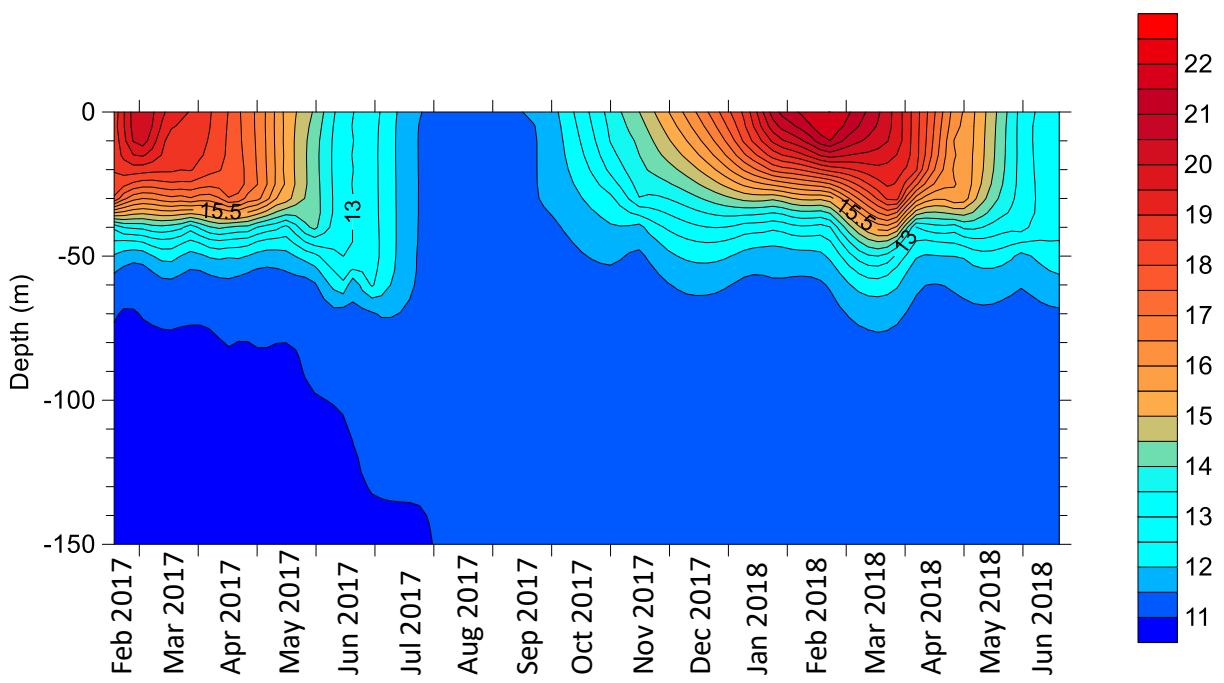


**Figure 2:** Time-series temperature data. Water temperatures at 0, 10 and 130 m. X-axis tick marks indicate 1 January of each year.



**Figure 3: Mean A) summer (January-March) and B) winter (July-September) water temperatures at 0 and 10 m depth.**

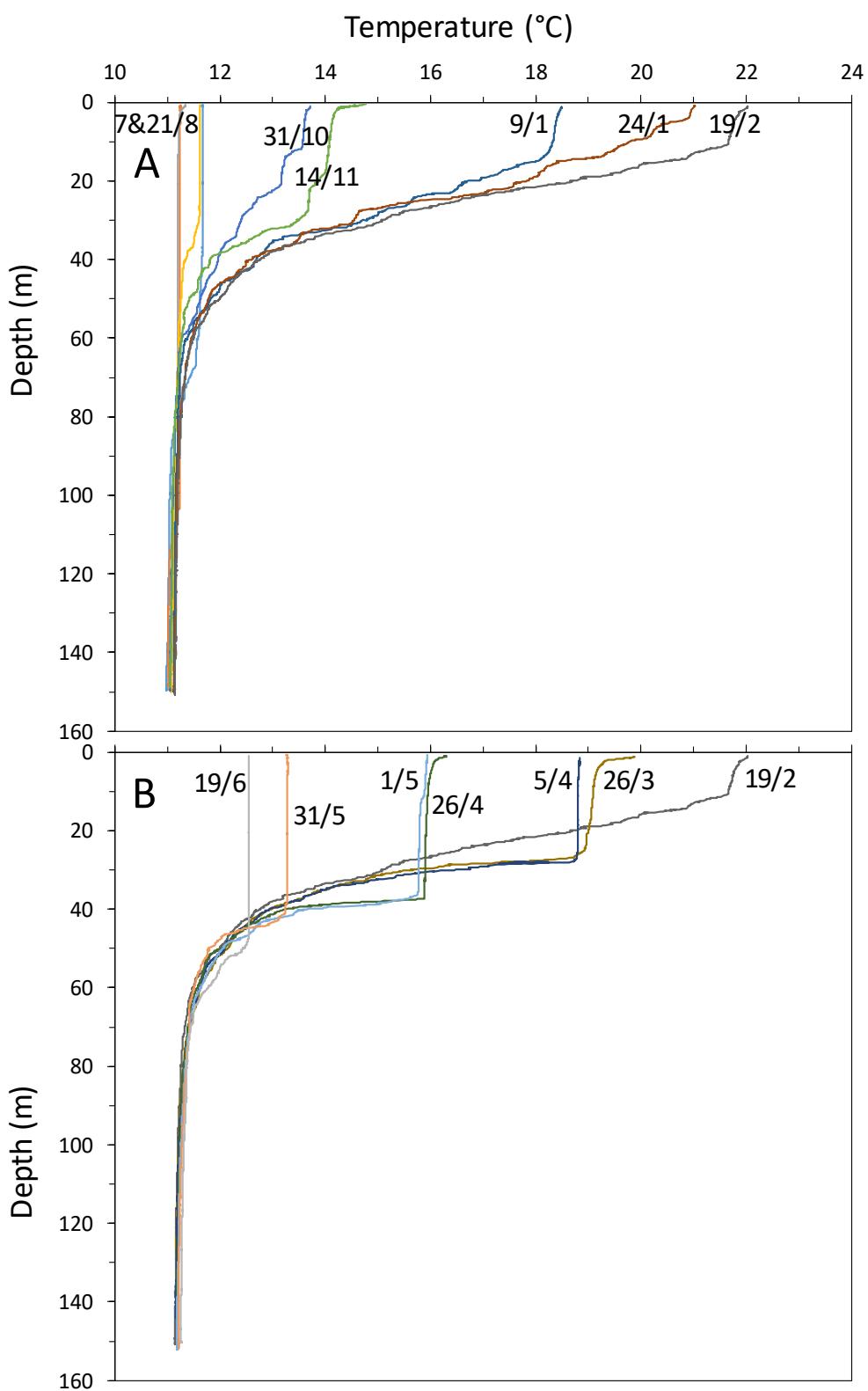
Summers were cooler in the early 2000s (Figure 3). The summer of 2018 was warmer than the previous year. In the monitoring year 2017-2018 the surface temperature was highest in February (22.0°C; see also Figure 25) and lowest in August (11.2°C). There has been no statistically significant change in annual mean water surface temperatures since 1995 (Figure 26). However, the mean difference in temperature between 0 and 10 m depth (Figure 3) decreased during summer ( $R^2 = 0.29$ ,  $p < 0.01$ ), although 2018 was substantially above the decreasing trend line, but not during winter.



**Figure 4:** Contour plot of water temperatures ( $^{\circ}\text{C}$ ) from February 2017 to June 2018.

A contourplot (Figure 4) shows the homothermal water column from end of July to mid September 2017, the onset of stratification in September–October 2017, the deepening of the thermocline during the first half of summer, and the reduction in stratification during autumn 2018 before the overturn starting in the following winter. The  $11^{\circ}\text{C}$  isotherm disappeared at the end of July 2017, which had not happened in the previous two monitoring years (Verburg and Albert 2017; Verburg and Albert 2018). The mixing period in the winter of 2017, defined by the temperature difference between 20 m and 130 m depth being less than  $0.3^{\circ}\text{C}$ , lasted about 2 weeks during August, which is not obvious in Figure 4 because the steps between the isotherms in the contourplot are  $0.5^{\circ}\text{C}$ . The average temperature difference between 20 m and 130 m depth in July–October 2017 was  $0.72^{\circ}\text{C}$ , higher than the long term mean of  $0.46^{\circ}\text{C}$ . It was higher than in the previous two winters ( $0.43^{\circ}\text{C}$  and  $0.57^{\circ}\text{C}$ ; Verburg and Albert 2017, Verburg and Albert 2018), as a result of a later start of full water column mixing and an earlier onset of stratification. The water column was thermally most homogenous on 21 August 2017 with a temperature difference of  $0.11^{\circ}\text{C}$  between 20 m and 130 m depth.

Temperature depth profiles (Figure 5) show cooling from 18 July to 7 August 2017, with the water column more or less isothermal on 7 and 21 August 2017, followed by warming until February 2018. The lake surface cooled from February 2018 until the end of the monitoring year. The thermocline and surface mixed layer were less distinct until February 2018 than in the previous monitoring year (Verburg and Albert 2018). For instance, in January 2018 there was no distinct surface mixed layer. The surface mixed layer ranged from 10 m deep in February 2018 to 47 m deep in June 2018. In general, the mixed layer became shallower as the lake warmed and the difference between surface and deep water became greater, and the reverse happened during cooling in the autumn. There was a sharp drop in mixed layer depth between February and March 2018 (25 m) when the surface first started cooling, although a diurnal thermocline was visible as well in the upper 2 m. As was the case in the previous monitoring year (Verburg and Albert 2018), mixed layers and the thermocline were most clearly defined in the cooling part of the year, from February to June.



**Figure 5: Temperature profiles.** A) Cooling from 18 July to 7 August 2017, with the water column isothermal on 7 and 21 August 2017, followed by warming until February 2018. B) Surface layer cooling, and deepening of the thermocline, from 19 February 2018 to 19 June 2018.

### 3.1.1 Trends in temperature and mixing

There have been no statistically significant trends since 1995 in summer (January-March), winter (July-September) or annual mean water surface temperatures (Figure 6), unlike in many other lakes around the world (O'Reilly et al. 2015). The winter 2017 mean water surface temperature, 11.5°C, was 0.1°C above the long-term average and the summer 2018 mean, 20.4°C, was 1.1°C above the long-term average.

Vertical mixing in the water column during winters appears to have increased in Lake Taupo since 1994, which is the opposite of what would be expected in a deep lake in a warming climate (Verburg and Hecky 2009). Climate warming tends to result in lake surface temperatures warming faster than deep temperatures. In Lake Taupo, temperature differences between 20 m depth and 130 m depth ( $T_{20m} - T_{130m}$ ) that were <0.3°C have occurred only in the months of July to October since 1995.  $T_{20m} - T_{130m} < 0.2^\circ\text{C}$  has occurred as well in each of the months from July to October and in no other months. In contrast with previous monitoring years (Verburg and Albert 2018), the decrease in the average  $T_{20m} - T_{130m}$  in July-October (Figure 7) since 1995 was not statistically significant, as the 2017 winter value was 0.4°C above the trend line. It must be kept in mind that the number of CTD casts per winter (July-October) were not the same between years (varied from a minimum of four in 1995 to a maximum of eight in 2005, average 5.7) and that CTD casts were not equally spaced in time through each winter period, which may have resulted in a bias. The Taupo Automatic Monitoring Buoy has provided water temperature profiles at fixed time intervals (Verburg 2016) with high frequency (1 minute) since March 2015, but that is too short for analysis of long-term changes in heat content and the mixing regime.

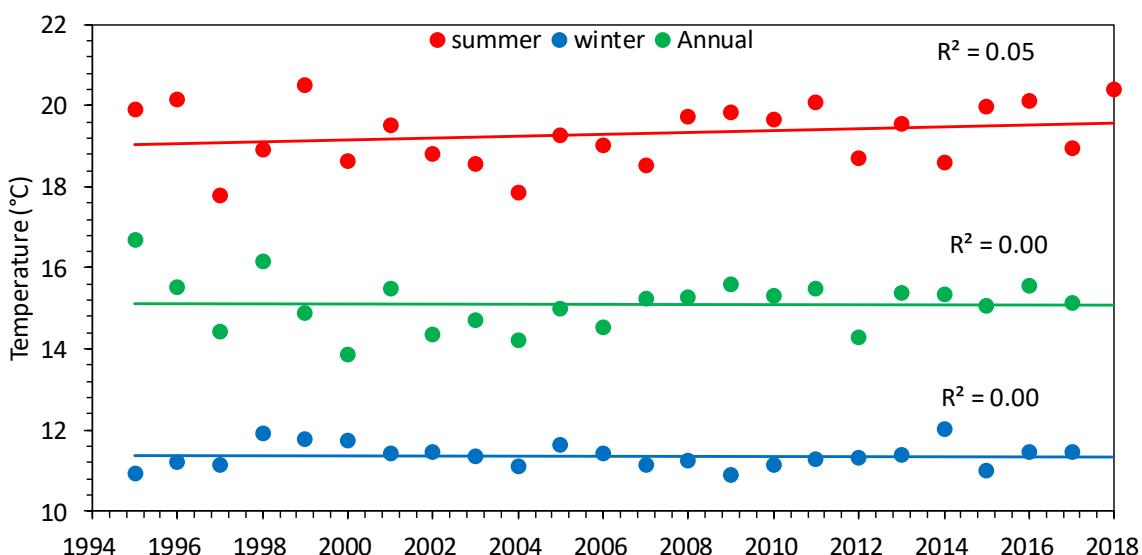
The winter mixing period, as defined by the time between first and last depth profile in which  $T_{20m} - T_{120m}$  was <0.3°C (here the difference with temperature at 120 m depth was used instead of 130 m, to increase data availability, because of a few profiles that did not quite reach 130 m depth), appears to have increased (Figure 8,  $R^2 = 0.19$ ,  $p < 0.05$ ). However, the mixing season in 2017, 14 days, was shorter than in 2014-2016, and below the long-term average of 43 days. It has decreased since 2014, when the winter mixing period was the longest since 1995 (nearly 3 months). This analysis is from necessity imprecise. On average there were only 3.1 profiles per year where  $T_{20m} - T_{120m}$  was <0.3°C. In 1997 there was only one profile where  $T_{20m} - T_{120m}$  was <0.3°C. Therefore, the mixing period in 1997 is shown in Figure 8 as zero days. We don't know what temperature gradients may have been shortly before or after these dates or in the intervening periods. Therefore, the estimate of the duration of the mixing period is imprecise and is likely to be an underestimate. Data of the Taupo Automatic Monitoring Buoy, because of its far higher measurement frequency, are more suitable to derive estimates of the duration of the mixing period and its intensity. An alternative way of estimating the duration of the mixing period with the data available, is by adding half of the days between the first and last depth profile in which  $T_{20m} - T_{120m}$  was <0.3°C, and the previous and next depth profile (i.e., the last and first day when  $T_{20m} - T_{120m}$  was >0.3°C, respectively, before and after the winter mixing), shown in Figure 9. This method accounts better for sometimes relatively long periods between profile dates. The winter mixing period in 2017 estimated this way was 43 days, below the average of 64 days. However, the trend estimated this way was not statistically significant.

Without further research it is not known what has driven the long-term changes in mean winter temperature depth gradients and the potential for mixing. Increased or prolonged winter mixing is likely to have had implications for algal growth in the lake. Lower mean winter temperature depth gradients allow a greater rate of return of nutrients, which accumulate during summer in the hypolimnion by decomposition of organic material produced in the epilimnion, back to the

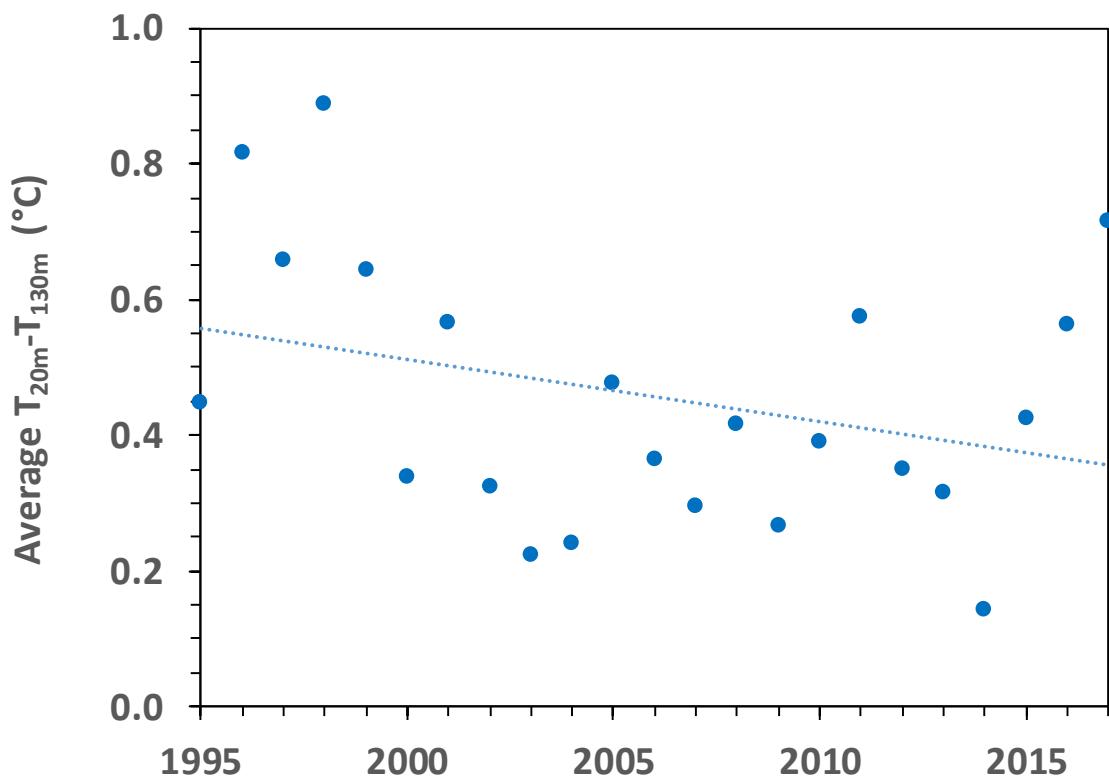
epilimnion where these nutrients are used by algae to grow. As a result, the algal biomass is greatest during winter in Lake Taupo and the mean algal biomass during winter is correlated with the mean winter temperature depth gradient (Figure 10).

There was a statistically significant correlation ( $p < 0.05$ ) between the winter mean chlorophyll *a* and the winter mean temperature difference between 20 and 130 m depth (Figure 10), confirming that winters with low temperature gradients enhance algal growth. However, the data for winter 2017 presented an outlier in this relationship, with higher mean winter chlorophyll *a* than expected from the temperature depth gradient. The inter-annual variability in winter mixing that has occurred since 1995 resulted in a more than two fold range in mean winter chlorophyll *a*. The finding of increased algal biomass as a result of increased potential for vertical mixing across years underlines the importance of a consistent long term monitoring program with sufficient sampling frequency.

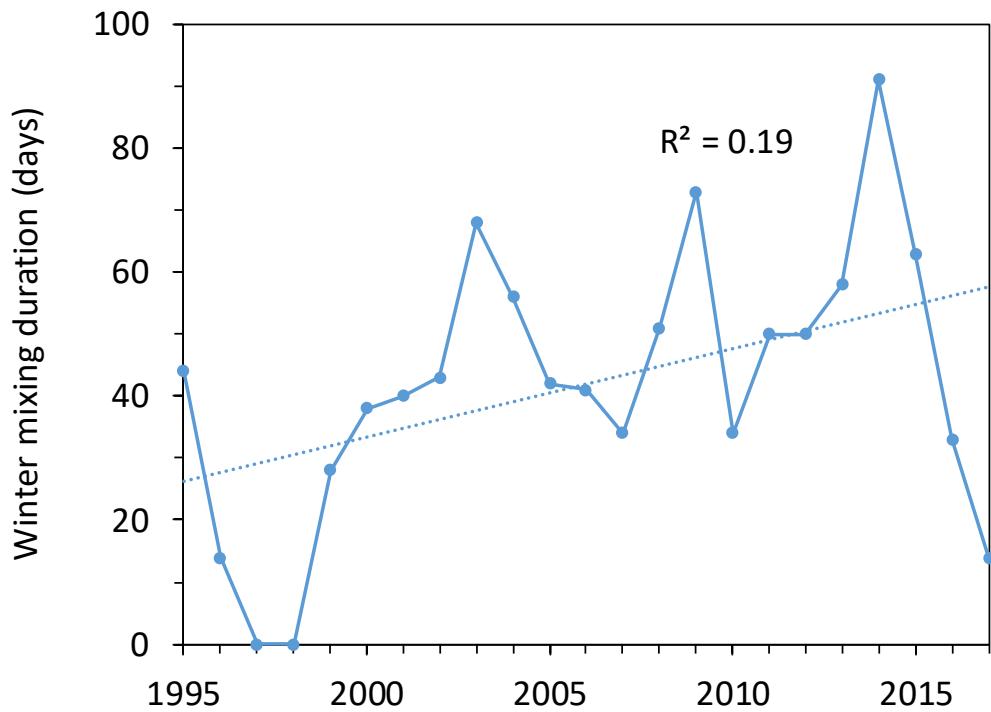
There was no statistically significant trend in mean winter, summer or annual air temperatures at the Taupo Automatic Weather Station (Figure 11) since 1995 (data down loaded from the NIWA climate data base). However, the maximum monthly air temperature in January 2018 was the highest monthly mean temperature on record since monitoring started.



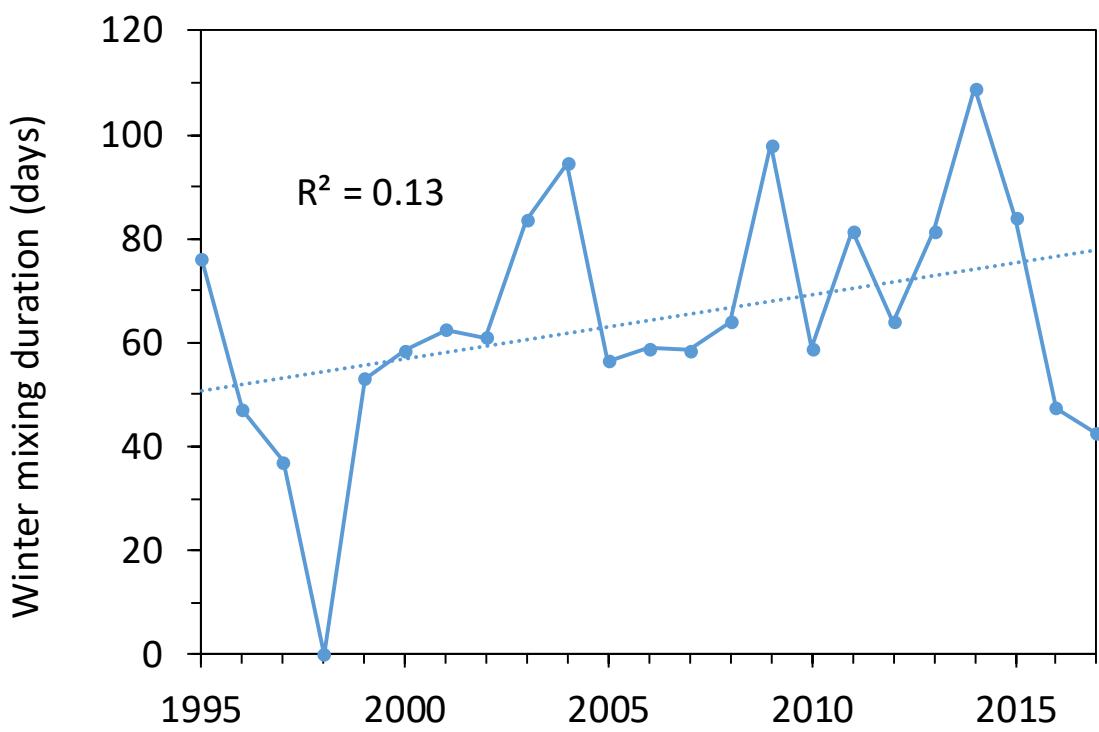
**Figure 6: Water surface temperature trends.** Mean winter (July-September), summer (January-March) and annual surface temperatures.



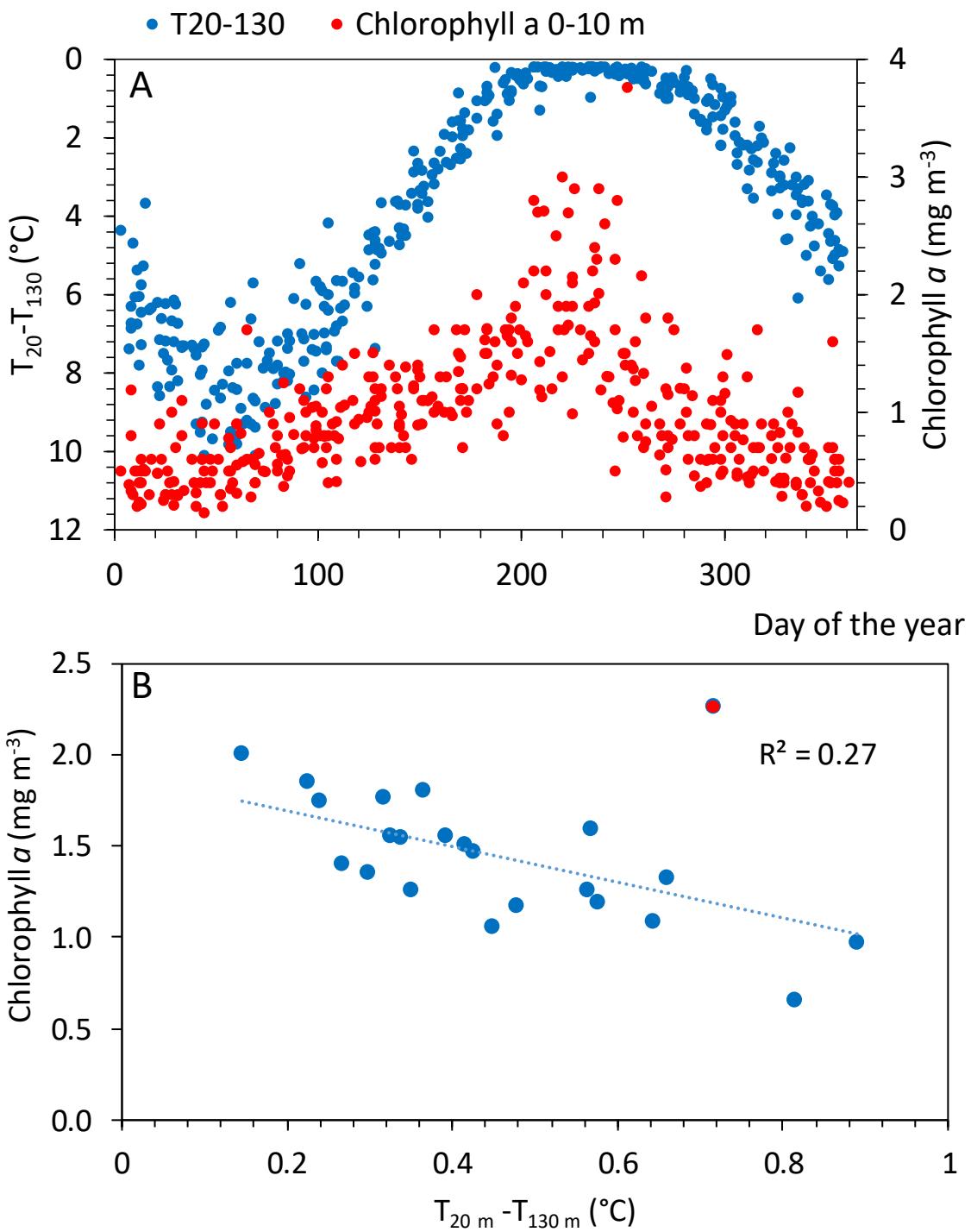
**Figure 7:** The average difference between temperatures at 20 m depth and at 130 m depth during July to October. The trend is not statistically significant.



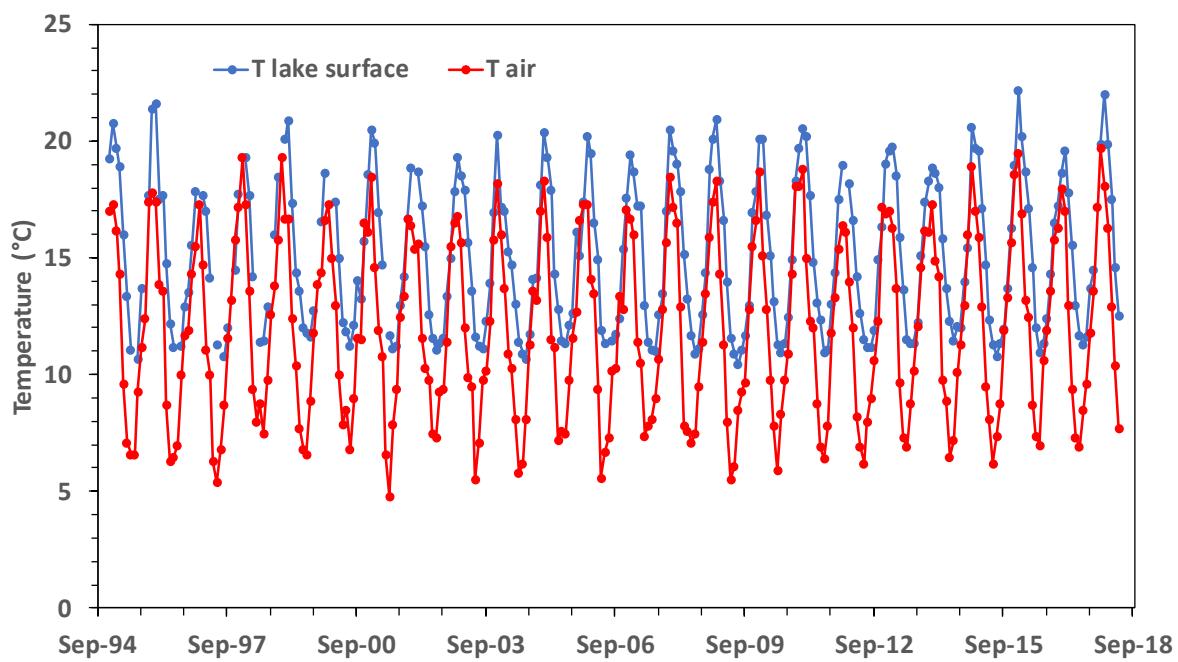
**Figure 8:** Number of days of winter mixing periods ( $T_{20m} - T_{120m} < 0.3^{\circ}\text{C}$ ).  $R^2 = 0.19$ ,  $p < 0.05$ .



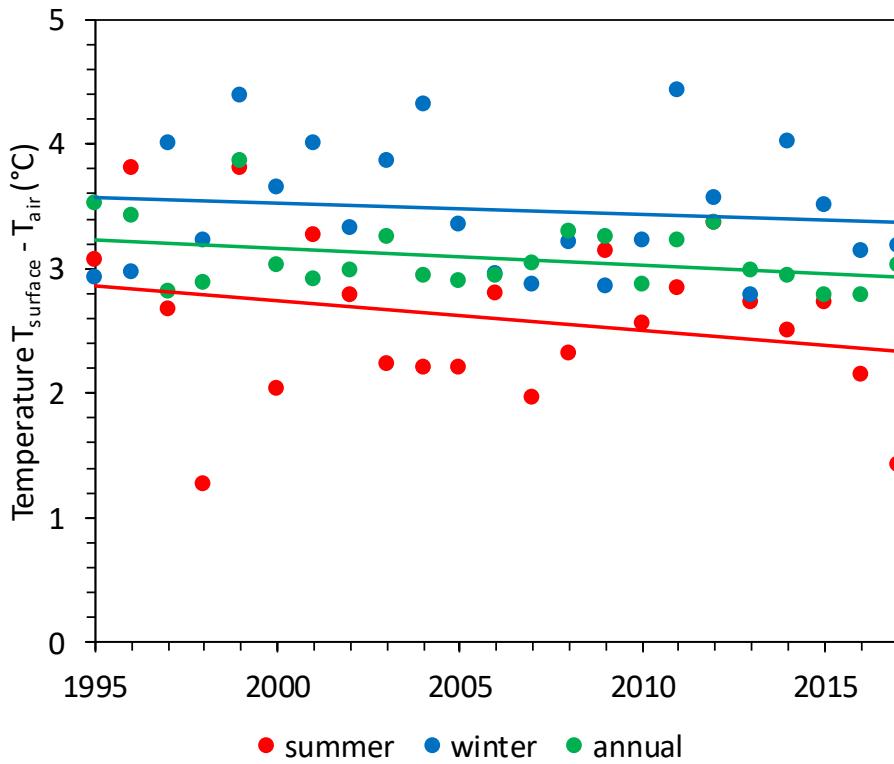
**Figure 9: Number of days of winter mixing periods ( $T_{20m} - T_{120m} < 0.3^\circ\text{C}$ ).** Same as Figure 8, but including half of the days before the first mixed temperature profile, and half of the days after the last mixed temperature profile, until the next temperature profile. The trend is not statistically significant.



**Figure 10:** The relationship between water column stratification and chlorophyll *a*. A. Chlorophyll *a* reaches peak values when the temperature difference between 20 and 130 m depth becomes smallest over the year. Data since 1994. B. Winter (July-October) mean chlorophyll *a* concentration against the mean temperature difference T<sub>20m</sub>-T<sub>130m</sub> during winter. Winter of 2017 indicated by red dot. R<sup>2</sup> = 0.27, p < 0.05.



**Figure 11:** Lake surface temperature and monthly mean air temperature. Air temperature from the Taupo Automatic weather station (NIWA Climate data base).



**Figure 12:** Winter, summer and annual mean temperature differences between the lake surface and air.

Annual maximum water surface temperatures correlated with annual maximum monthly mean air temperatures (Figure 11.  $R^2 = 0.45$ ,  $p < 0.0005$ ). Mean summer (January-March) water surface temperatures also correlated with mean summer air temperatures ( $R^2 = 0.35$ ,  $p < 0.005$ ).

In winter, the temperature of the water surface remains up to about 5°C above monthly mean air temperatures (Figure 11). Naturally, night time air temperatures likely drop further (Figure 11 shows monthly mean air temperatures, night time included), while there will be much less change in water surface temperatures between day and night because of the thermal inertia of water (Figure 11 shows only mean water temperature measured in the daytime). The cold air contributes to the cooling of the lake during winter by sensible heat loss while heat loss by evaporation will be high as well during winter when air temperatures are well below the temperature of the lake (Verburg and Antenucci 2010). The lake surface is warmer than the air in summer as well but not as much as during winter.

Lake surface temperatures were correlated with air temperatures measured at Taupo airport ( $R^2 = 0.45$ ,  $p < 0.0005$ , annual averages). There were no statistically significant trends in mean summer, winter or annual mean temperature differences between the lake water surface and air (Figure 12). The annual mean difference between the lake surface temperature (daytime measurements only) and the air temperature as measured at Taupo on the shore ( $T_s-T_a$ ) was on average 3.09°C since 1995, and 3.07°C in this monitoring year. The temperature difference between the lake surface and the air over the lake, for instance as measured on the Taupo automatic monitoring buoy, is typically less than the difference with shore based measurements, because of an about 1°C higher mean air temperature over the lake compared with on land (Verburg and Albert 2017), as a result of heat exchange between the lake and the atmosphere. In addition, the Taupo buoy data include night time measurements of lake surface temperature. In this monitoring year monthly mean  $T_s-T_a$  was always positive and lowest in January 2018 (0.18°C) and highest in June 2018 (4.85°C, using Taupo Aws data).

The mean air temperature in winter 2017 was above the long-term average, and the temperature difference between air and the lake surface was below the average. As a result, heat loss by exchange with the atmosphere will have been lower during the winter in the monitoring year.

### 3.2 Dissolved oxygen

During summer, dissolved oxygen decreases - in deep water because of consumption during decomposition of organic matter, and in shallower water because warmer water can contain less oxygen and a surplus is released to the atmosphere (Figure 13). Because Lake Taupo is large and has a long residence time (11 years), oxygen consumption is likely mostly based on autochthonous carbon, i.e., carbon fixed in the lake by phytoplankton, as opposed to organic matter entering from the catchment. During winter, dissolved oxygen increases in the bottom water because of mixing with shallower water richer in oxygen. Since 1994 dissolved oxygen during summer rarely dropped below 7 g m<sup>-3</sup> at any depth. However, in the present monitoring year during August 2017 oxygen at 150 m dropped below 7 g m<sup>-3</sup> (average 6.8 g m<sup>-3</sup>), which is highly unusual because in August the lake is typically fully mixed and deep water oxygen at a maximum (average 9.4 g m<sup>-3</sup>). During winter dissolved oxygen concentrations near the bottom of the lake are expected to become similar to those nearer the surface but that did not happen in the winter of 2017 (Figure 13). Dissolved oxygen in the hypolimnion reached a relative low maximum in November 2017, after the winter mixing, and thereafter declined further until at 130 m depth it was 6.7 g m<sup>-3</sup> in June 2018, only slightly above the minimum in 2001. The same pattern occurred at 140 and 150 m depth, with values dropping below 7

$\text{g m}^{-3}$  in June 2017, a relative low maximum in October-November, and again dropping below  $7 \text{ g m}^{-3}$  from the end of March until June 2018.

Figure 14 shows the average concentrations of oxygen in the water column were higher during winter, as expected, in spite of the minimum near the bottom reached in August 2017. However, unlike previous years mixing of oxygen did not occur throughout the water column in the winter of 2017. Only the upper circa 80 m become mixed and in the deeper parts of the hypolimnion oxygen concentrations were not replenished after declining during the previous summer. The only other years during which comparably little mixing occurred were 1998 and 1999. Oxygen concentrations in the hypolimnion started to decrease from about October-November 2017 and continued to decrease until June 2018. Figure 14 also shows the relatively high dissolved oxygen at around 30 m depth during summer, just above the depth of the deep chlorophyll maximum.

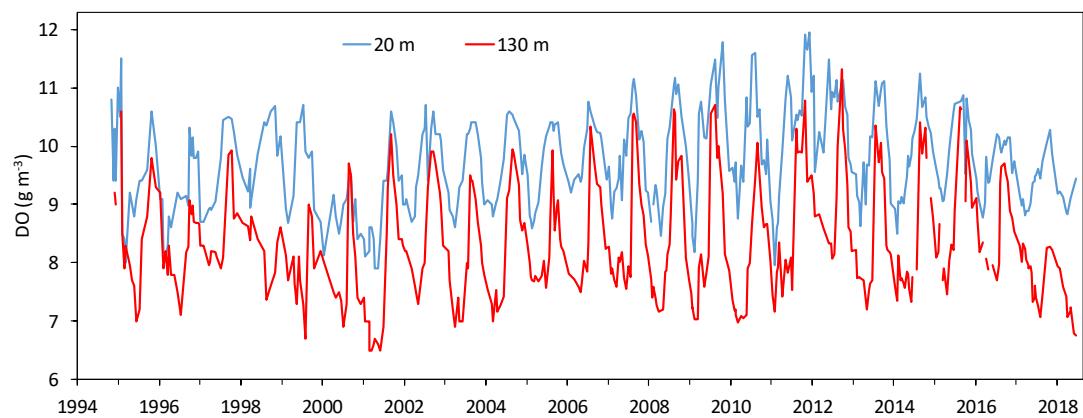


Figure 13: Dissolved oxygen at 20 m and 130 m depth.

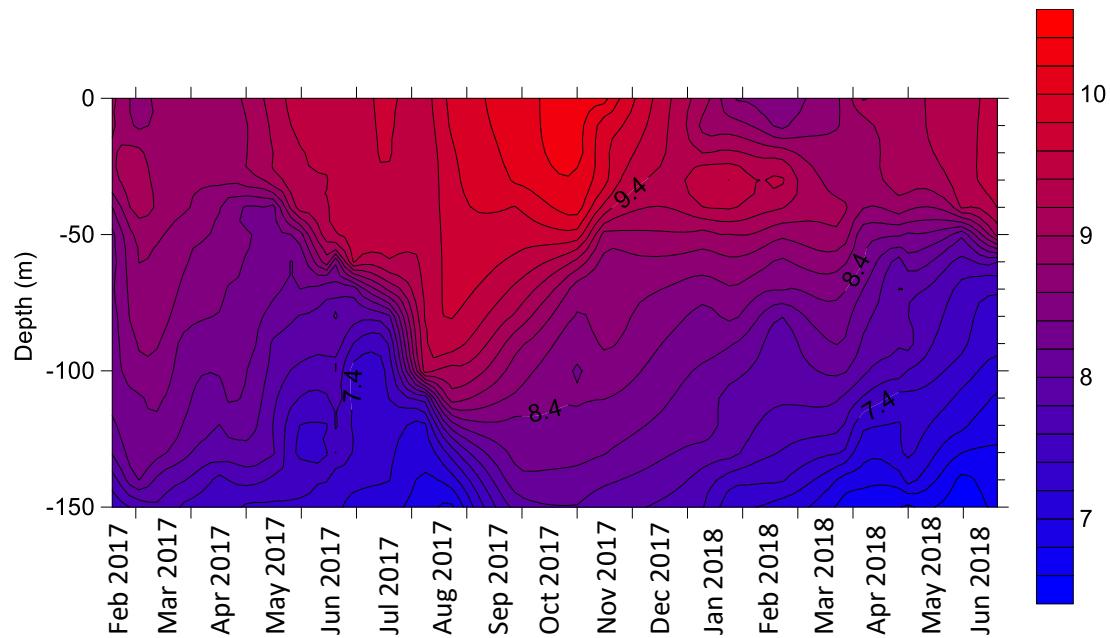
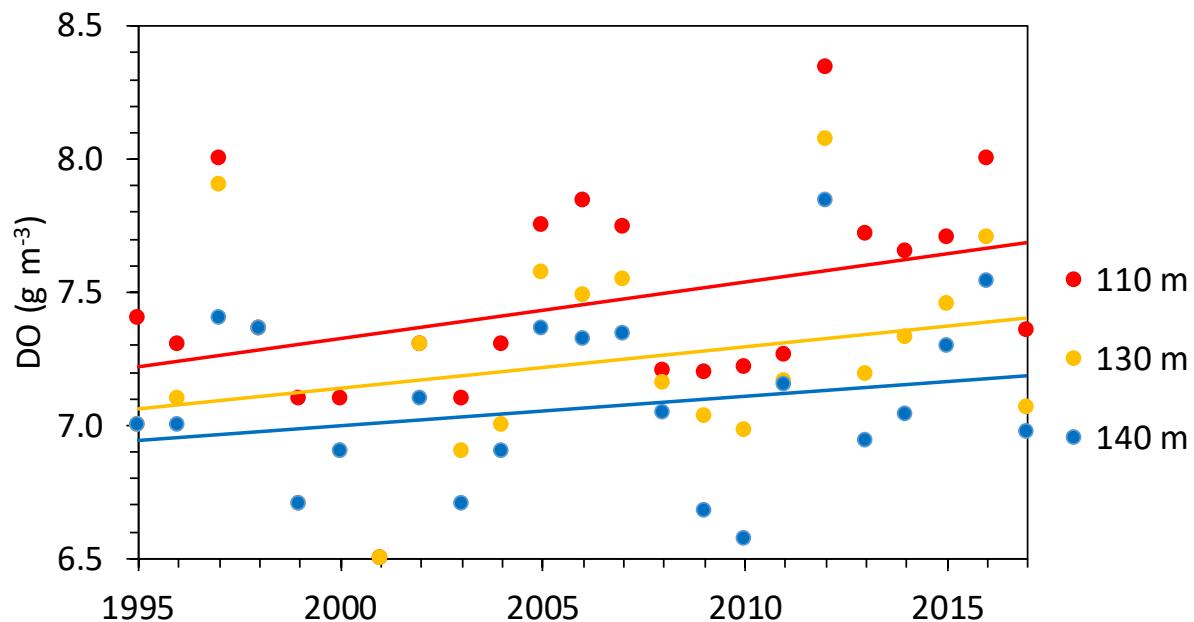


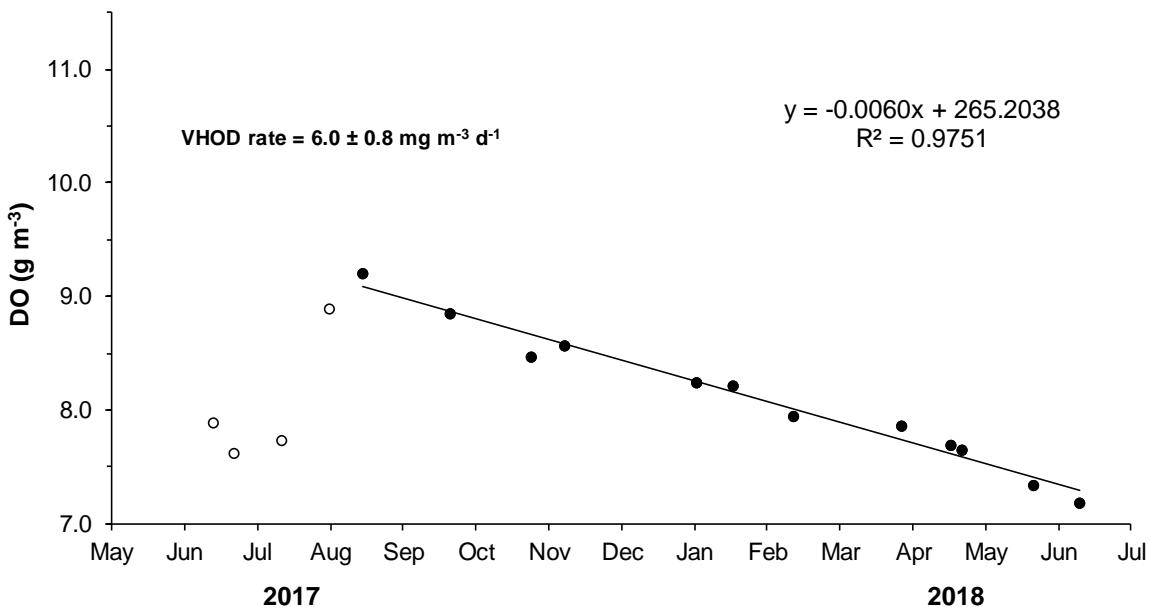
Figure 14: Contour plot of oxygen ( $\text{g m}^{-3}$ ), February 2017 – June 2018.

While deep water annual minimum oxygen concentrations were low in this monitoring year, they increased statistically significantly since 1999 ( $p < 0.05$ ) and 130 m depth (Figure 15) and increases in the annual minimum oxygen concentrations at other depths between 100 and 150 m were similarly statistically significant.



**Figure 15: Annual minimum dissolved oxygen concentrations.** Trends at 110 m and 130 m depths in the hypolimnion since 1999 were statistically significant ( $p < 0.05$ ; trend lines shown are since 1995).

Hypolimnetic dissolved oxygen continued to decline until June of the monitoring year (Figure 16), which is unusually long. In the past it started to increase again in December (e.g., 2012/2013, 2013/2014), January (2010/2011, 2011/2012), February (2009/2010), March (2008/2009, 2014/2015, 2015/2016), or June (2016/2017). In the past 10 years only in the previous monitoring year did dissolved oxygen continue to decline until June.



**Figure 16: Oxygen depletion in the hypolimnion.** Average hypolimnetic oxygen concentrations, and the VHOD rate for August 2017 to June 2018.

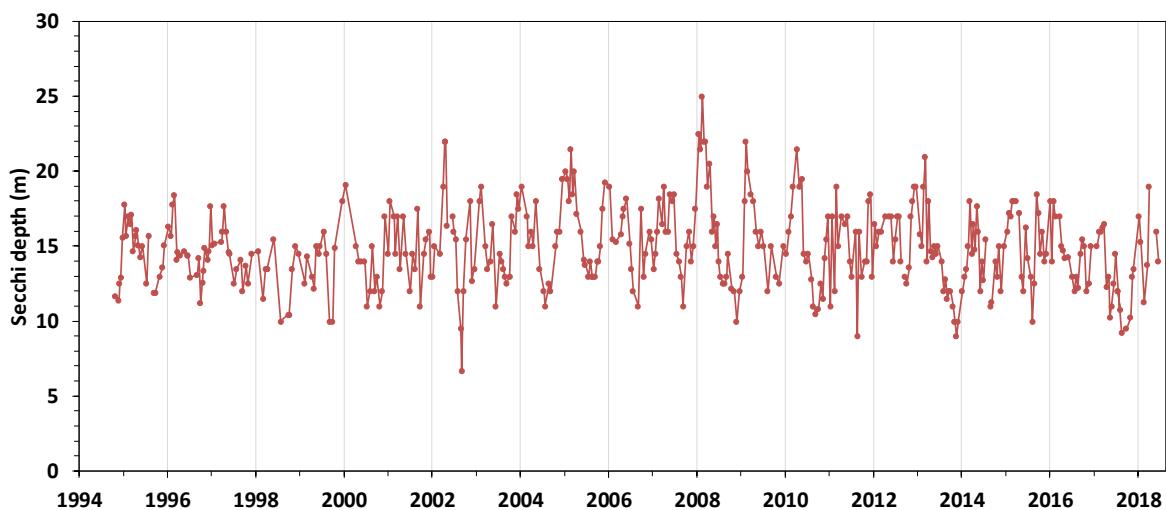
The net rate of oxygen loss in the hypolimnion (the volumetric oxygen demand or VHOD) between September 2017 and February 2018, determined as the linear decline in total oxygen content below 70 m depth during the summer stratified season (Verburg and Albert 2016; Gibbs 2015), was  $6.0 \pm 0.8 \text{ mg m}^{-3} \text{ d}^{-1}$  ( $p < 0.00001$ ,  $R^2 = 0.98$ ) (Figure 16). It has been declining every monitoring year since 2012–2013.

It is not clear what drives the differences between years in VHOD in Lake Taupo, with a ten-fold range from a minimum of  $2.6 \pm 1.9 \text{ mg m}^{-3} \text{ d}^{-1}$  in 1999 to a maximum of  $29.3 \pm 7.1 \text{ mg m}^{-3} \text{ d}^{-1}$  in 2013. There appears to be no relation between epilimnetic chlorophyll biomass and VHOD. While oxygen consumption in the hypolimnion would be expected to be accompanied by proportional rates of decomposition and mineralization, there was no significant correlation between the VHOD and the annual maximum accumulation of  $\text{NO}_3$  or DRP in bottom water. There was also no significant correlation between annual maxima of bottom water  $\text{NO}_3$  or DRP, and annual oxygen minima. It seems likely that oxygen transported by river water plunging into the hypolimnion enhances bottom water oxygen concentrations and distorts the relationship with algal productivity that would typically be expected.

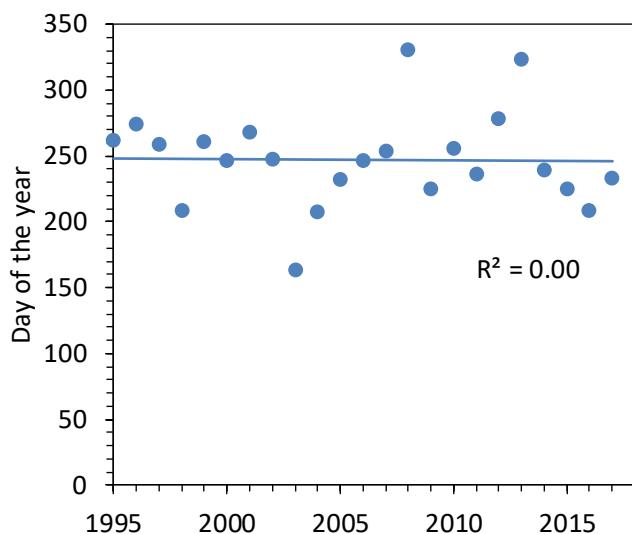
### 3.3 Secchi depth

In this monitoring year Secchi depth was lowest in August 2017 (9.25 m), coinciding with the maximum chlorophyll *a* concentration, as is usually the case. This is relatively low compared with other years, consistent with high chlorophyll *a* (see below, and Figure 10B). A lower minimum Secchi depth was reached in only 3 years (6.7 m in 2002, 9 m in 2011 and in 2013). The average of the winter mixing season July–October 2017 was 10.35 m, which was the lowest mean winter time Secchi depth since 1998 (10.28 m).

Secchi depth was also low in February 2018, which is unusual as Secchi depth is usually highest in summer in Lake Taupo, and it did not coincide with high chlorophyll *a*. Secchi depth was highest in April 2018 (19 m; Figures 17 and 26; the May value was lost), when chlorophyll *a* was fairly low (1.3 mg m<sup>-3</sup>, see below) although chlorophyll *a* was not at its lowest point which was in January. The maximum Secchi depth, 19.0 m, was similar to the long-term mean maximum Secchi depth, 19.3 m. There has been no statistically significant trend in annual mean Secchi depth (Figures 17 and 27), nor in annual maximum or minimum Secchi depth, or in the difference between the annual minimum and maximum. There was also no trend in the day of the year at which Secchi depth was lowest and the average day was 3 September (Figure 18).



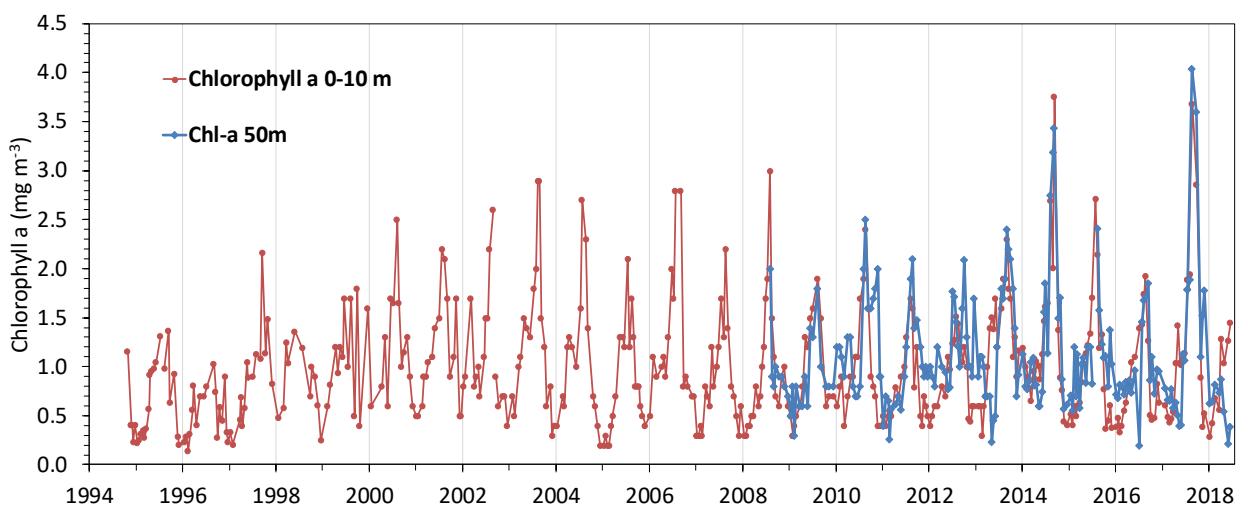
**Figure 17:** Time series of Secchi depth.



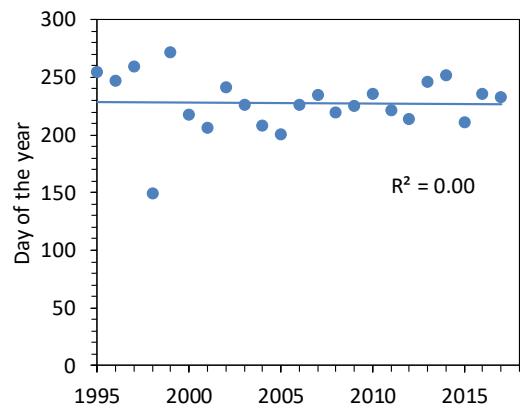
**Figure 18: Day of the year that Secchi depth was lowest.** There was no statistically significant trend.

### 3.4 Phytoplankton

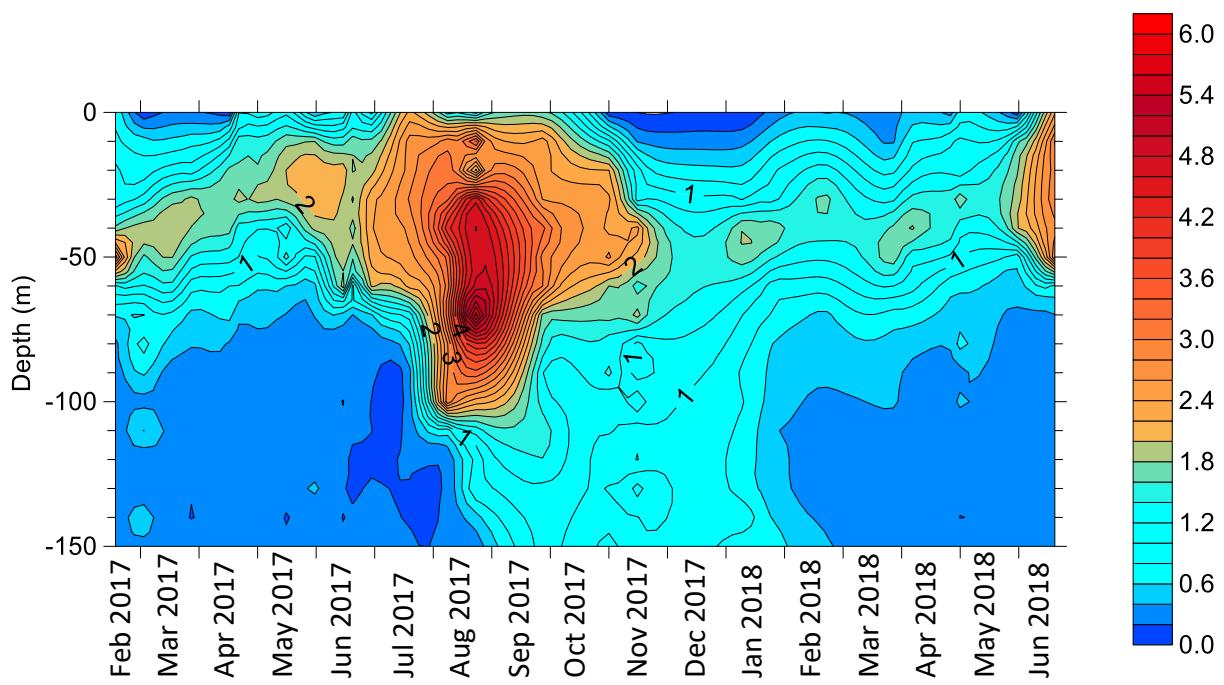
The maximum chlorophyll *a* concentration measured on 23 August 2017 was  $3.7 \text{ mg m}^{-3}$  (Figures 19 and 26), which exceeded all previous recorded maxima, except that in 2014 ( $3.8 \text{ mg m}^{-3}$ ). Mean chlorophyll during winter (July–October) was the highest ( $2.3 \text{ mg m}^{-3}$ ) recorded (Figure 10B). The high chlorophyll during the winter of 2017 was consistent with low Secchi depths. The two highest chlorophyll measurements coincided with the two lowest Secchi depths in the monitoring year. Secchi depth and chlorophyll *a* concentrations were inversely correlated in the monitoring year ( $R^2 = 0.31$ ), as in most years. The maximum at 50 m depth was higher than recorded before (Figure 19). Chlorophyll was low, below  $1 \text{ mg m}^{-3}$ , from October 2017 to March 2018 (Figure 26). There was a reasonable inverse correlation between annual means of Secchi depth and chlorophyll *a* concentrations after 2000 ( $R^2 = 0.35$ ). Chlorophyll *a* concentrations were lower between 1995 and 2000, possibly related to an eruption of Mount Ruapehu (Gibbs 2015). There has been no statistically significant trend in chlorophyll *a* concentrations since 2000 (Figure 27). There was no statistically significant trend in the day of the year at which chlorophyll *a* was highest and the average day was 14 August (Figure 20). The annual maximum chlorophyll at 50 m depth is correlated with chlorophyll at 0–10 m ( $R^2 = 0.72$ ), but the minima are not correlated. This is because when chlorophyll is at its maximum, during winter, the water column is typically well mixed. Therefore, only during summer chlorophyll concentrations are typically higher at 30 to 50 m depth than in the surface layer.



**Figure 19:** Time series of chlorophyll a concentrations.



**Figure 20:** Day of each year when chlorophyll a was highest. There was no statistically significant trend.



**Figure 21: Contour plot of *in situ* chlorophyll fluorescence.** February 2017 – June 2018. Showing the deep chlorophyll maximum at about 50 m depth during summer, and the partially mixed water column with relative high fluorescence during winter.

During summers chlorophyll *a* shows a distinct peak in Lake Taupo well below the thermocline at around 30-50 m depth (Figure 21), the deep chlorophyll maximum (DCM). During winters chlorophyll increases and is typically mixed more homogeneously throughout the water column. However, in the winter of 2017 it was not mixed down to the bottom, unlike previous years (Figure 21). Figure 21 also shows the low chlorophyll during summer in the surface layer.

Below the euphotic zone, by definition, no net productivity by algal cells can occur. Below a certain depth, there is not enough light for photosynthesis to balance respiration. It is usually assumed, as a rule of thumb, that the depth at which light is less than 1% of that at the surface, is the depth of the euphotic zone. In Lake Taupo this is typically around 40-60 m depth (Leach et al. 2018).

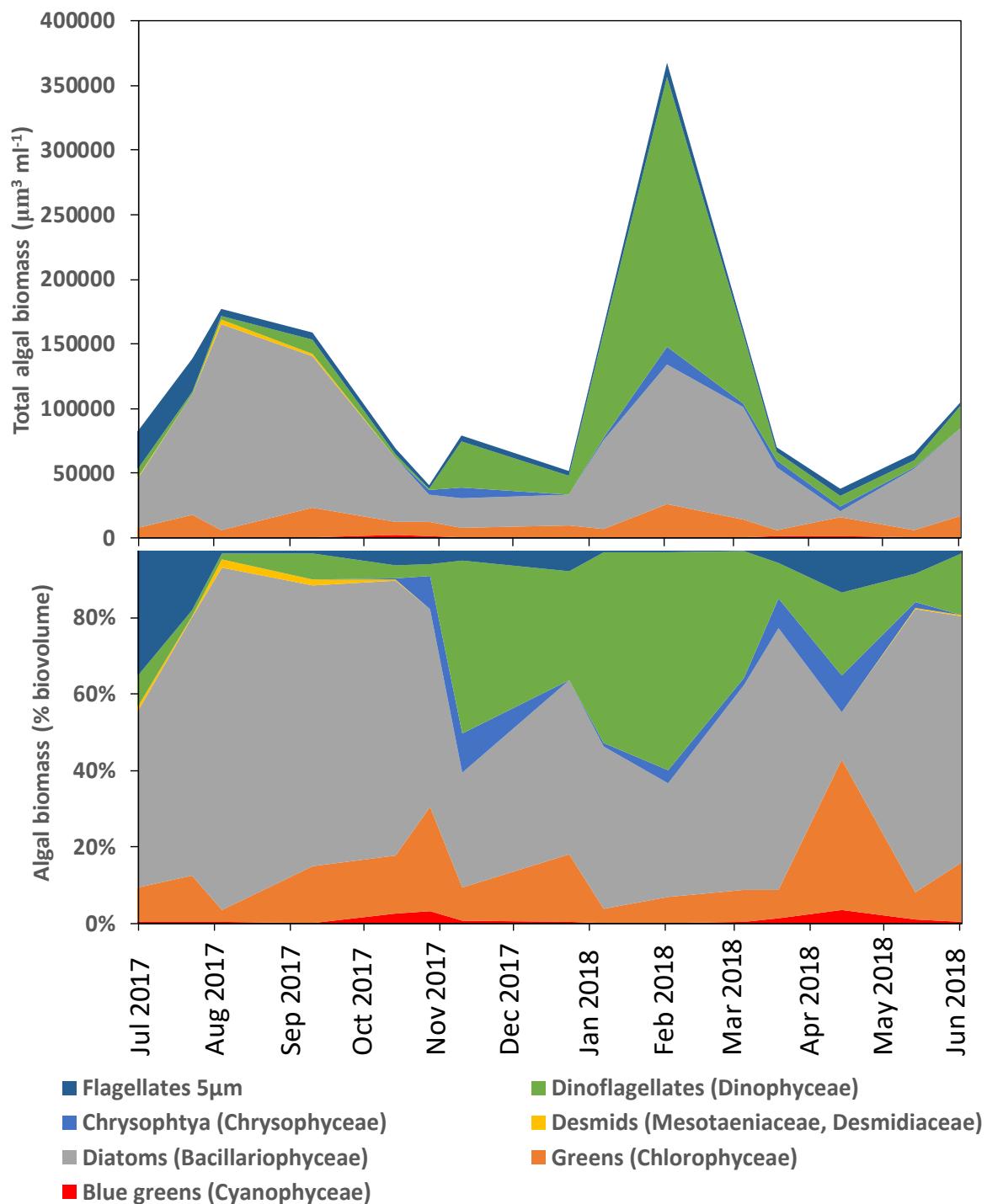
At 0-10 m depth phytoplankton (Figures 22 – 23) biomass was dominated by diatoms during winter (mostly *Aulacoseira granulata* and *Synedra* sp.) and during the summer by dinoflagellates (*Ceratium* sp.) and diatoms (mostly *Fragilaria crotonensis*). The proportion of the phytoplankton biomass at 0-10 m depth accounted for by diatoms was higher during this monitoring year (annual average 54% of biovolume and 42% of cell counts), compared with the average since 2007 (47% of biovolume and 35% of cell counts). Diatoms dominated phytoplankton biomass even more at 50 m depth, and more in this monitoring year (average 72% of biovolume and 45% of cell counts) than the long-term average (average 58% of biovolume and 44% of cell counts). Dinoflagellates were also more common this monitoring year (26% of biovolume) than in 2007-2018 (18% of biovolume) at 0-10 m depth. Green algae were less common this year, 10% of biovolume, in contrast to 25% in the long-term average. Unlike previous years, *Botryococcus braunii* colonies (Chlorophyceae) was never dominant. At 0-10 m depth, cell numbers were also mostly dominated by diatoms (annual average 42%, usually, *Aulacoseira granulata* or *Fragilaria crotonensis* and sometimes *Asterionella formosa*), and occasionally by chlorophytes (average 24%). Dinoflagellates were never dominant in terms of cell counts. Cyanobacteria were never dominant at 0-10 m depth, not individual species or as a group,

both for biovolume (annual average 1%) and cell numbers (annual average 2%, both same as the previous monitoring year). Their proportional maximum was reached in May 2018 for biovolume (*Dolichospermum c.f. lemmermannii*, 3.5%) and October 2017 for cell numbers (5%). Cyanobacteria were proportionally less represented than in the long-term average (2% for biovolume and 6% for cell numbers).

At 50 m depth, total biovolume and cell numbers declined about 10 fold from winter 2017 to the start of winter 2018 (Figures 24 and 25).

At 50 m depth, diatoms dominated the phytoplankton biomass throughout most of the year (mostly *Aulacoseira granulata* and occasionally *Fragilaria crotonensis*). The annual average proportion of the biomass accounted for by dinoflagellates was 4%, close to the long-term average of 6% and less than in the previous monitoring year (20%). Cyanobacteria were never dominant at 50 m depth, not individual species or as a group, both for biovolume and cell numbers. The annual average proportions of biovolume and cell numbers accounted for by cyanobacteria were 0.4 and 1%, respectively (less than the long term averages of 1% and 2%, respectively).

At 0-10 m depth total algal biomass followed the pattern in particulate carbon (Figure 26), with a peak in February 2018.



**Figure 22:** Biovolume for seven major algal groups in the upper 10 m depth, in units of volume and as a proportion.

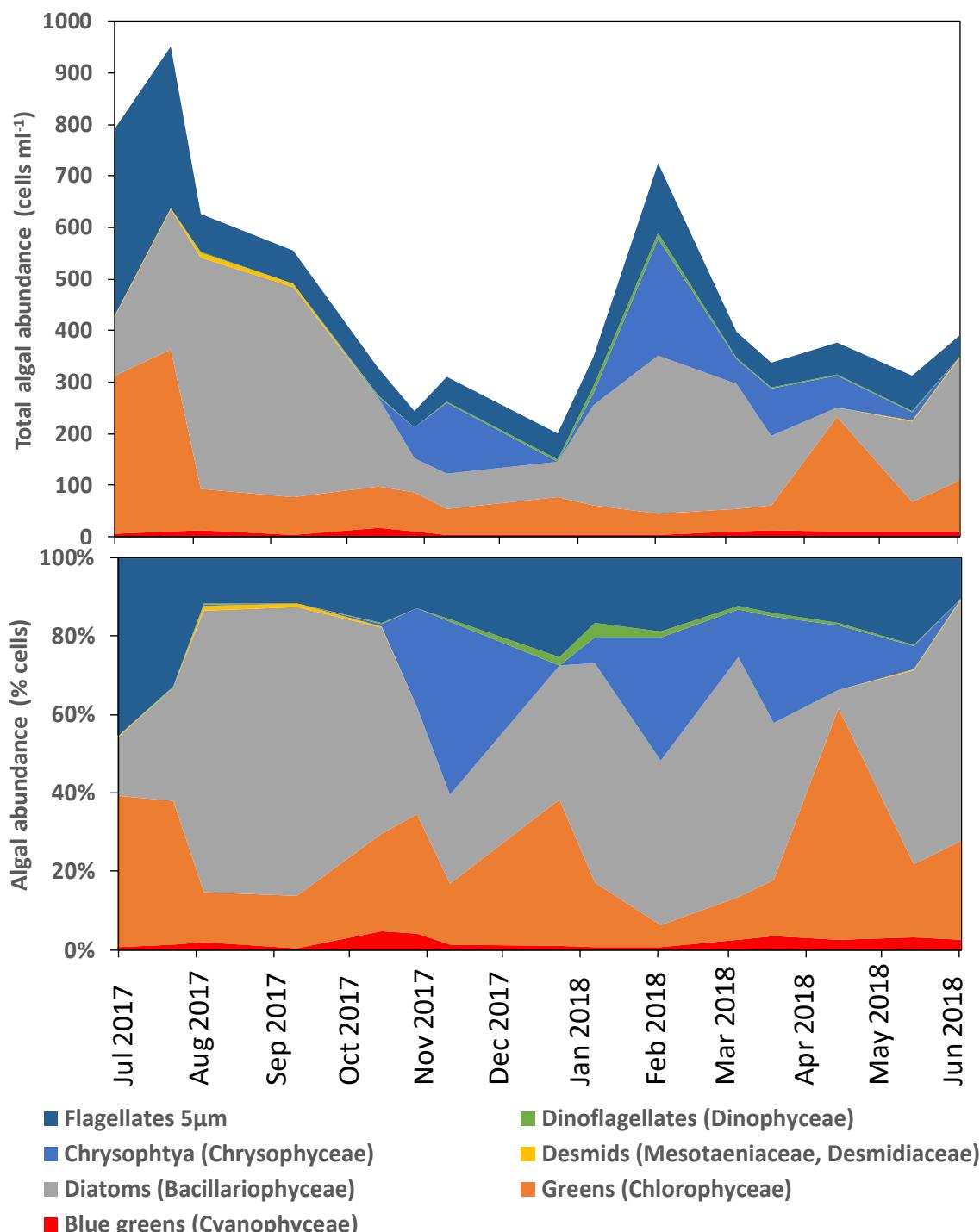
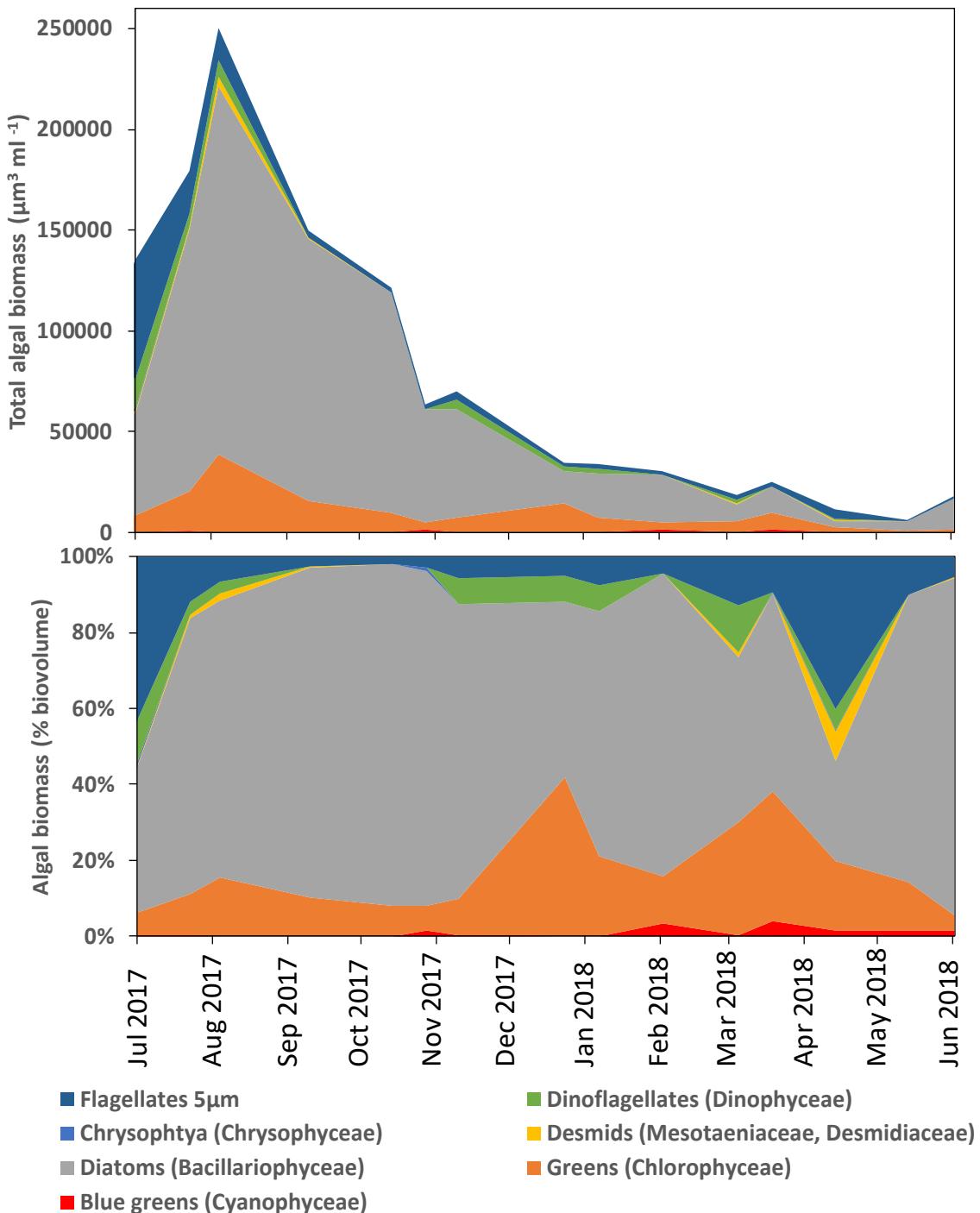
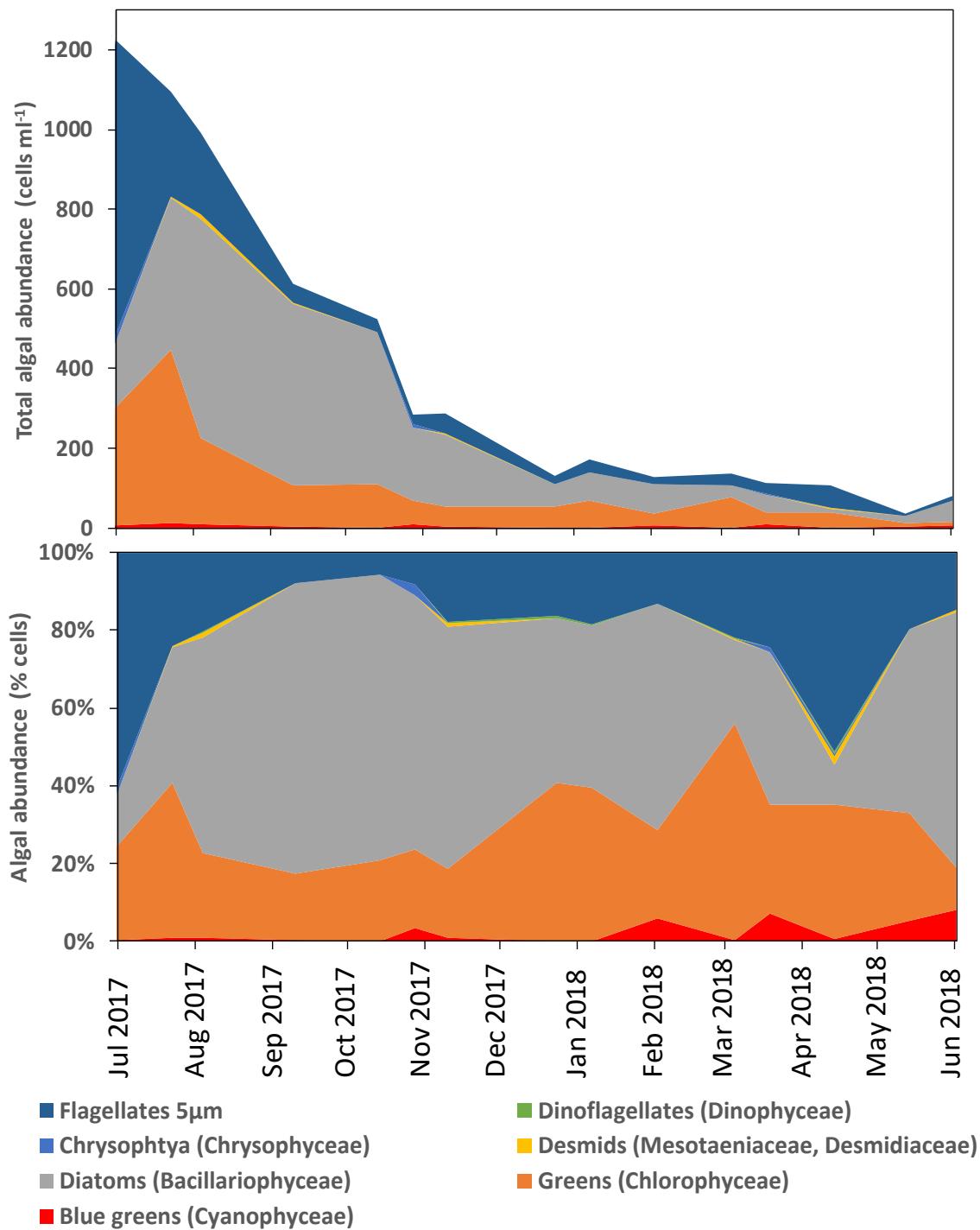


Figure 23: Abundance of seven major algal groups in the upper 10 m depth, in numbers of cells per ml and as a proportion.



**Figure 24:** Biovolume for seven major algal groups at 50 m depth, in units of volume and as a proportion.



**Figure 25:** Abundance of seven major algal groups at 50 m depth, in numbers of cells per ml and as a proportion.

### 3.5 Nutrients in the upper water layer

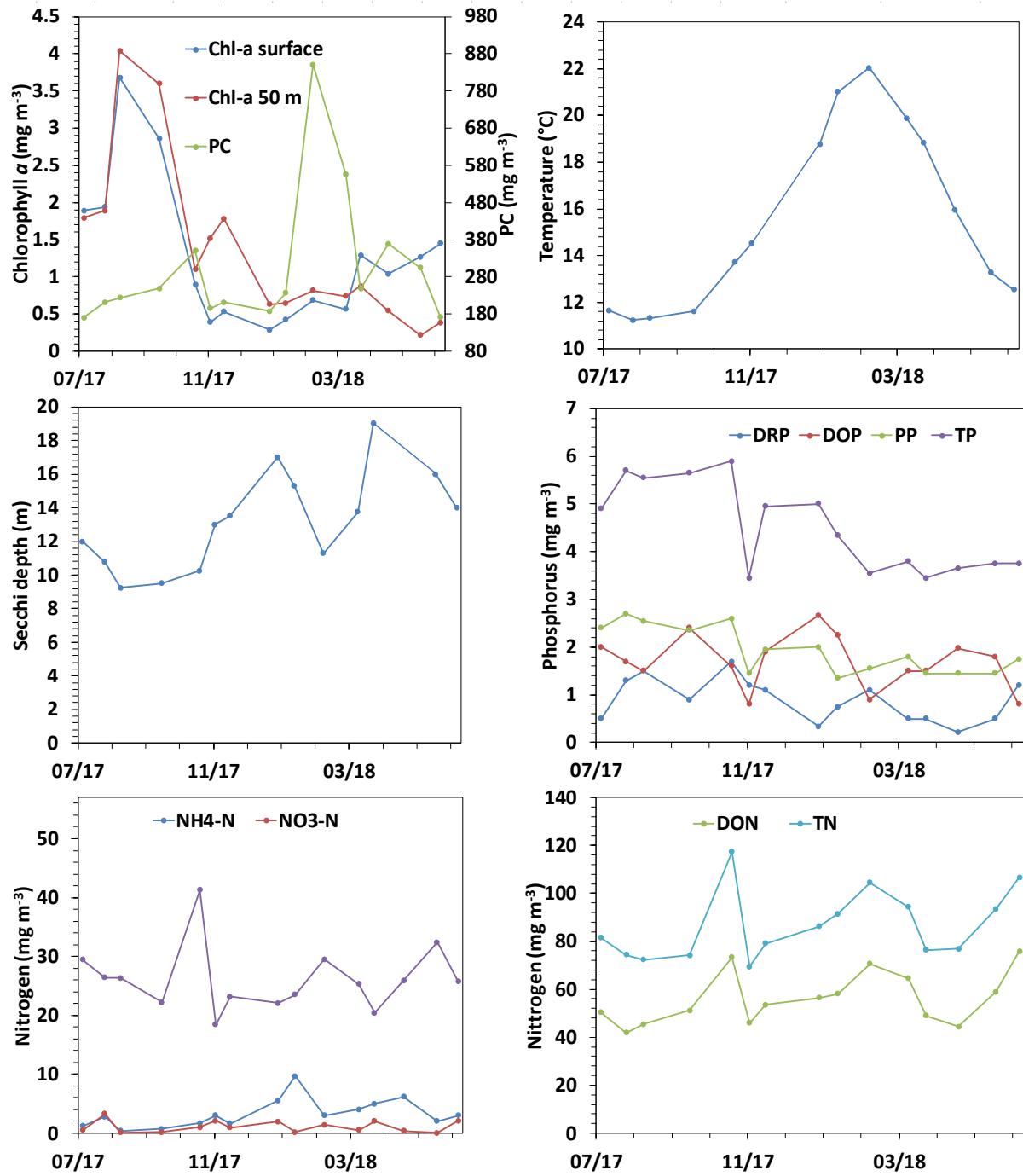


Figure 26: Temperature, Secchi depth, and concentrations of nutrients and chlorophyll  $a$  in the upper 10 m water layer during 2017-2018.

Seasonal patterns in nutrients in 2017-2018 are in Figure 26. Chlorophyll peaked in August 2017. Towards the end of the year, from April 2018, chlorophyll in the surface layer exceeded that at 50 m depth. A peak in particulate carbon occurred in February 2018. Concentrations of TP and PP declined through the year, but TN and PN did not.

There were positive trends in total, dissolved organic and particulate nitrogen since 1995 (Figure 27). However, in the monitoring year and the previous three years all forms of nitrogen have been lower than the maximum that occurred in or around 2013. Also total phosphorus, and its various forms, has declined since 2013. The trend in particulate carbon, maximum in 2013, is consistent with the change in nutrient concentrations.

**Table 1: Mean water quality variables since 1995, compared with this monitoring year's values.**  
Averages of the 0-10 m layer (units: m for Secchi depth and mg m<sup>-3</sup> for remaining variables). W:A is the ratio (in %) of the winter value to the annual mean value, showing the proportional increase or decrease during winter.

	1995-2018				2017-2018			
	Winter	Summer	Annual	W:A	Winter	Summer	Annual	W:A
Chlorophyll <i>a</i>	1.4	0.6	1.0	45	2.3	0.5	1.3	76
Secchi depth	13.0	16.5	14.8	-12	10.4	14.3	13.2	-22
TP	5.9	4.8	5.4	10	5.5	4.2	4.5	23
TN	80.7	83.2	82.0	-1	83.9	94.1	86.5	-3
DRP	1.6	0.8	1.1	37	1.2	0.7	0.9	33
NO <sub>3</sub> -N	1.6	0.8	1.2	34	1.0	1.0	1.1	-8
PP	2.5	1.8	2.1	21	2.5	1.7	1.9	31
PN	24.5	20.6	22.1	11	29.1	25.1	26.1	11
PC	235.3	218.8	223.2	5	240.8	457.3	302.1	-20

TP, DRP and NO<sub>3</sub>-N in winter 2017-2018 were lower than average (Table 1) and were lower than during the winters in the 5 preceding years. The reduction in mean concentration during winter 2017-2018 relative to the long-term winter time average was especially marked for NO<sub>3</sub>-N. TN in winter 2017-2018 was slightly higher than average but it was lower than in 4 of the 5 preceding years. The same was the case for summer and annual means of TN in 2017-2018.

Since 1995, PP, PN, and PC were typically higher during winter than during summer, consistent with higher chlorophyll *a* and lower Secchi depth. In 2017-2018 this was not the case for PC. Among these three variables, the difference between winter and summer values is on average most pronounced for PP, and this was also the case in 2017-2018.

In contrast to chlorophyll *a*, which was higher in the winter of 2017 than in any previous recorded winter, winter time average PC was higher in 9 of the 19 years since the year its recording began (1999), PP was higher in 9 of the 19 years since 1999, and PN was higher in 4 of the 19 years since 1999.

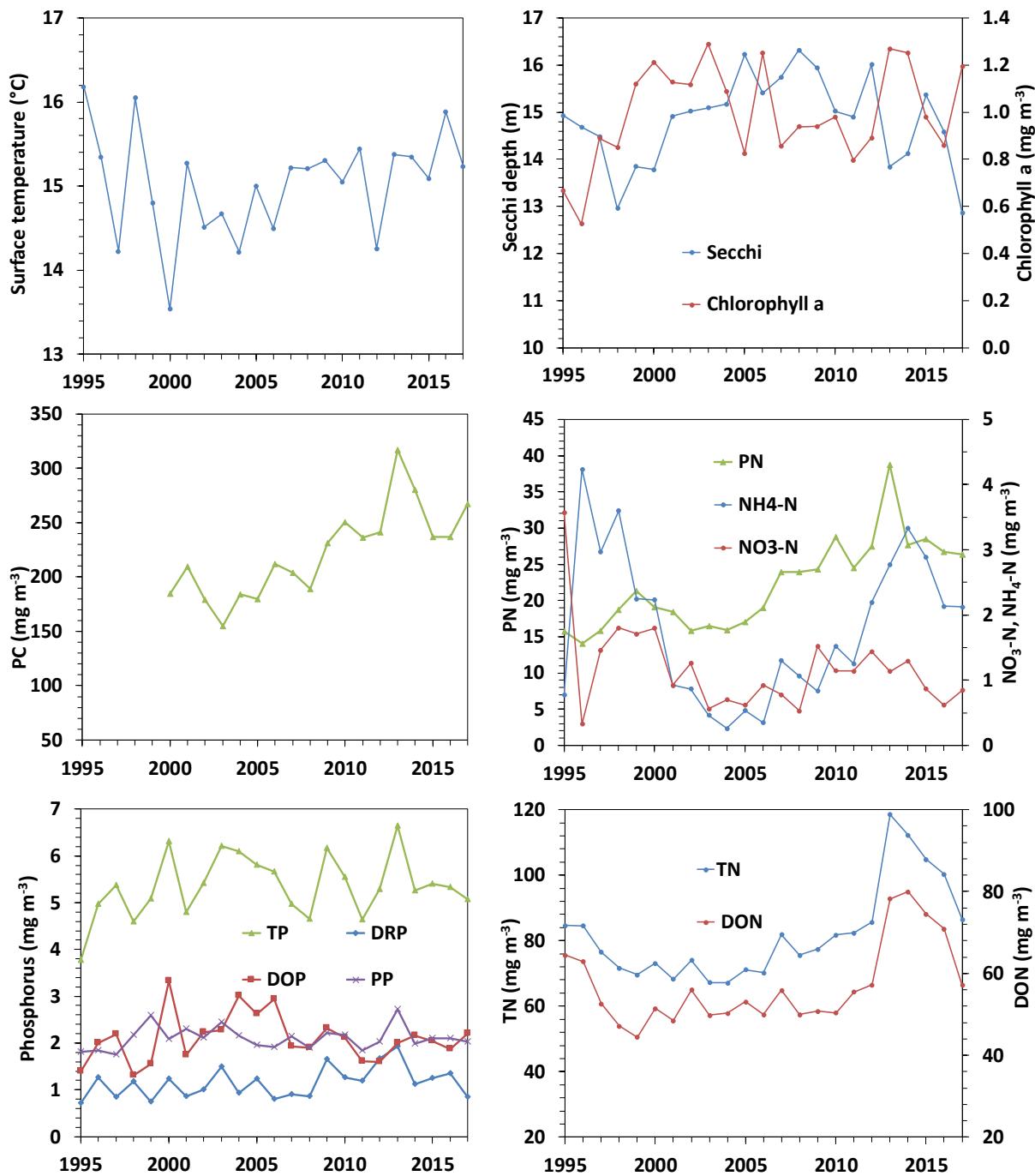
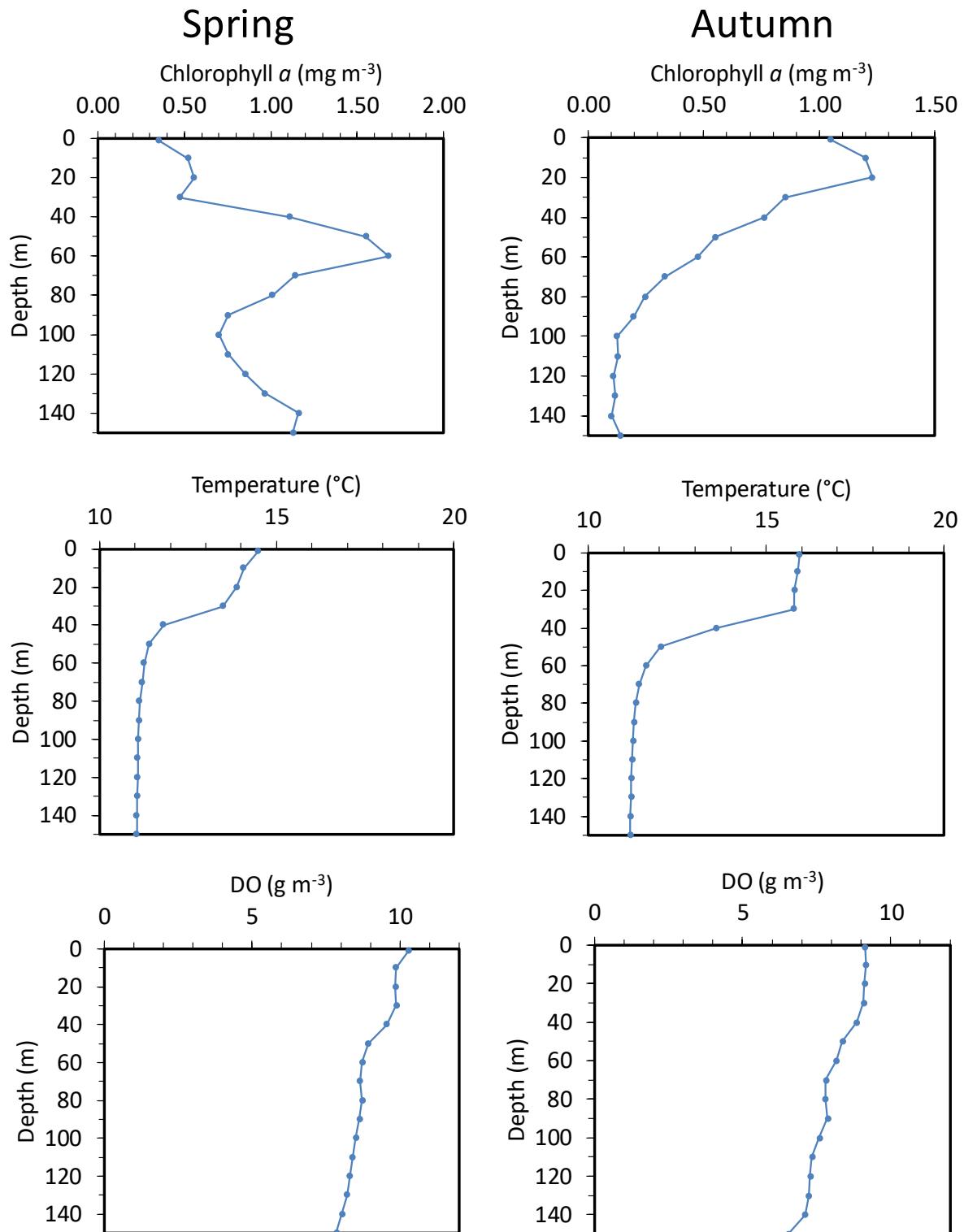


Figure 27: Annual means for temperature, Secchi depth, and concentrations of nutrients and chlorophyll *a* in the upper 10 m water layer since 1995.

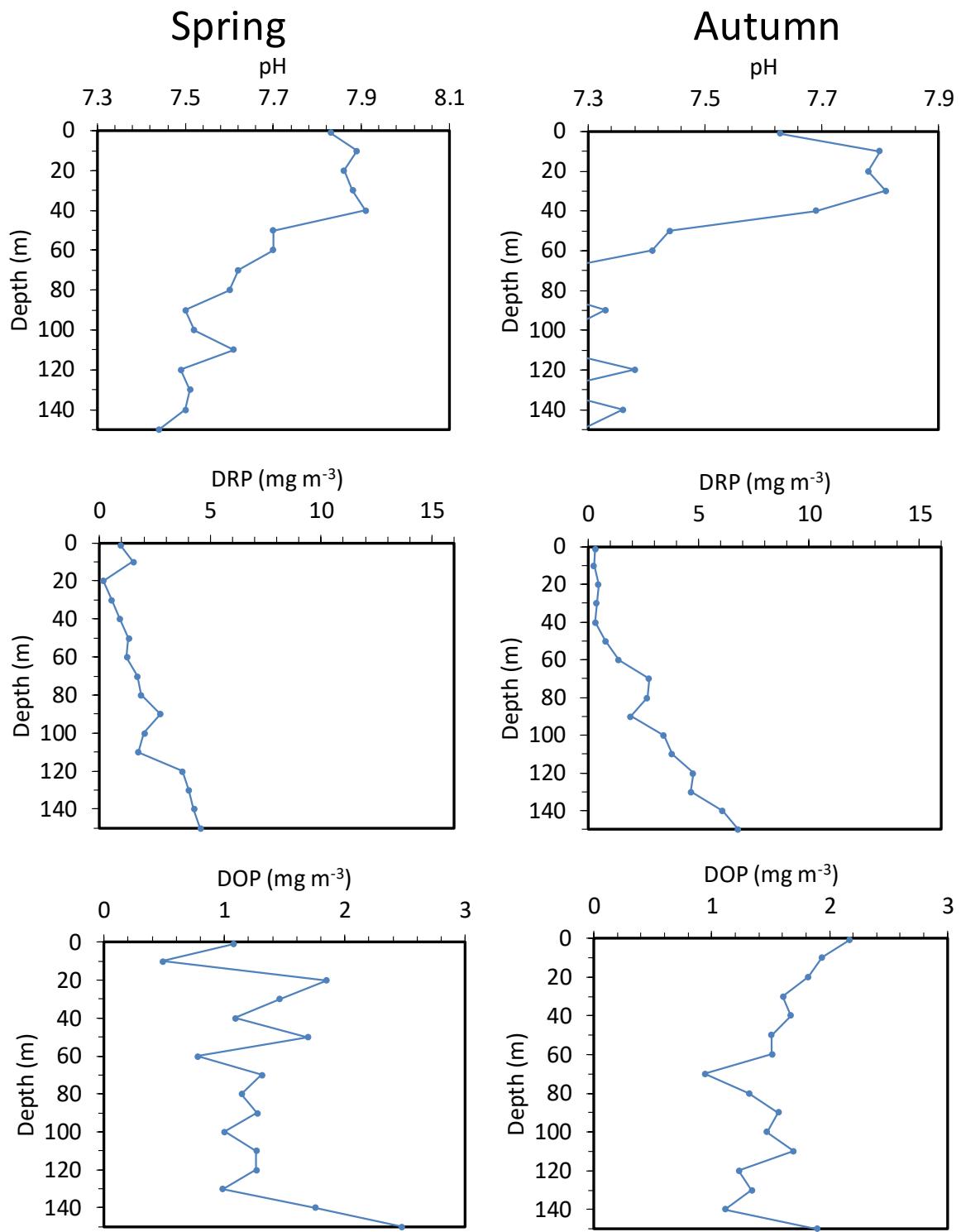
### 3.6 Vertical profiles

Vertical profiles of concentrations of nutrients, oxygen and chlorophyll *a*, dissolved and particulate carbon, and temperature and pH are in Figures 28-32. The profiles are of late spring (14 November 2017) and autumn (1 May 2018). The profiles show the lake already stratified in spring but not with a well-defined thermocline, down to about 30 m depth, and nutrients generally increasing with depth. The thermocline was more defined in autumn, with a sharp thermocline starting at 30 m depth, and the increase with depth in nutrient concentrations was greater (except for dissolved organic and

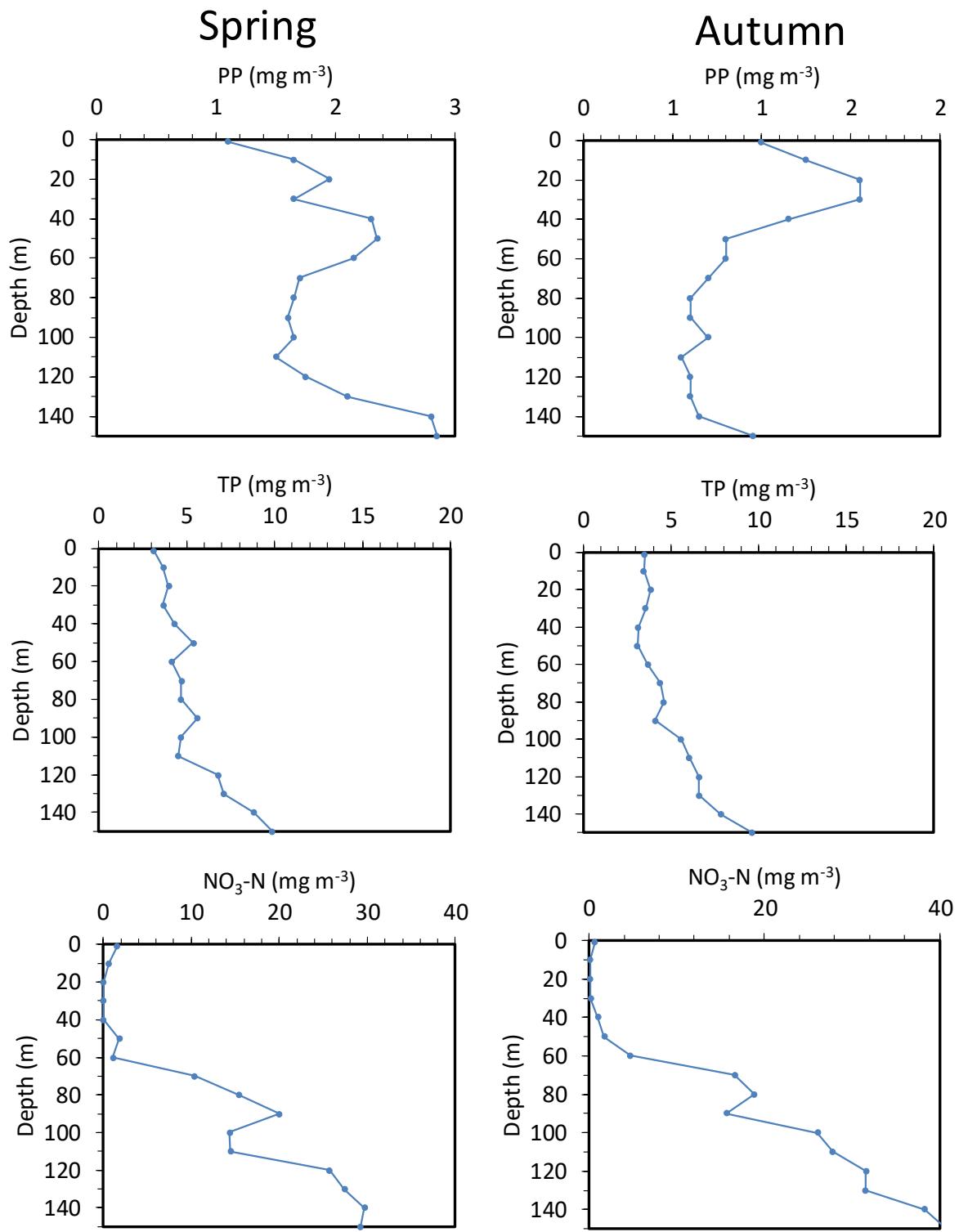
particulate nutrients). Dissolved inorganic nutrients build up in the hypolimnion during summer, as senescent algae sink out and nutrients after decomposition are not mixed back up to the surface layer until the next winter. In spring the chlorophyll maximum was at about 60 m depth. There was no deep chlorophyll maximum in autumn, confirming chlorophyll in the surface layer being higher than at 50 m depth (Figure 26). Dissolved organic carbon decreased with depth from about 600 mg m<sup>-3</sup> near the surface to 450 to 500 mg m<sup>-3</sup> near the bottom. The profile of particulate carbon resembled that of chlorophyll, especially in autumn.



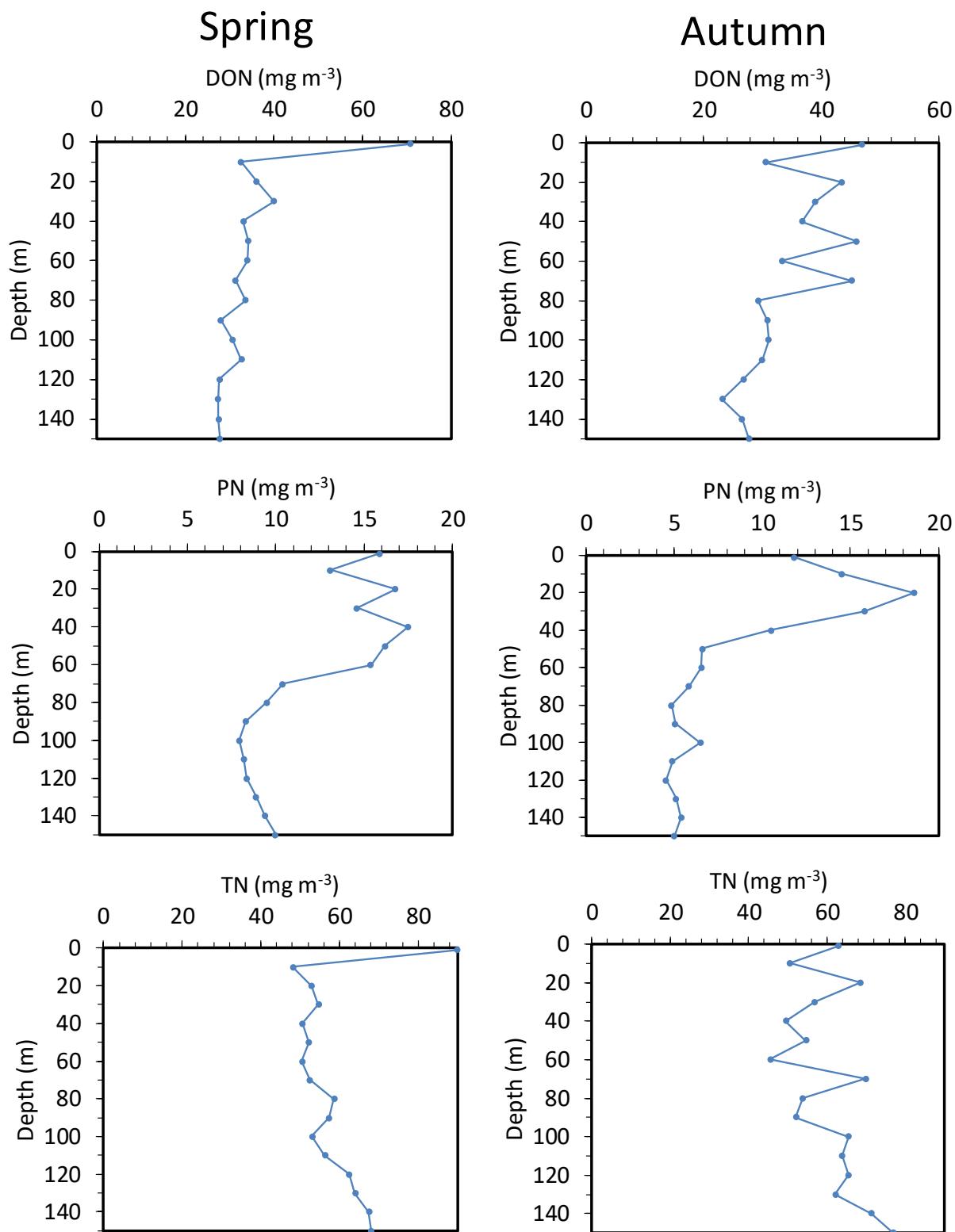
**Figure 28: Vertical profiles of temperature and concentrations of chlorophyll  $\alpha$  and oxygen, in spring of 2017 and autumn 2018. 14 November 2017 and 1 May 2018.**



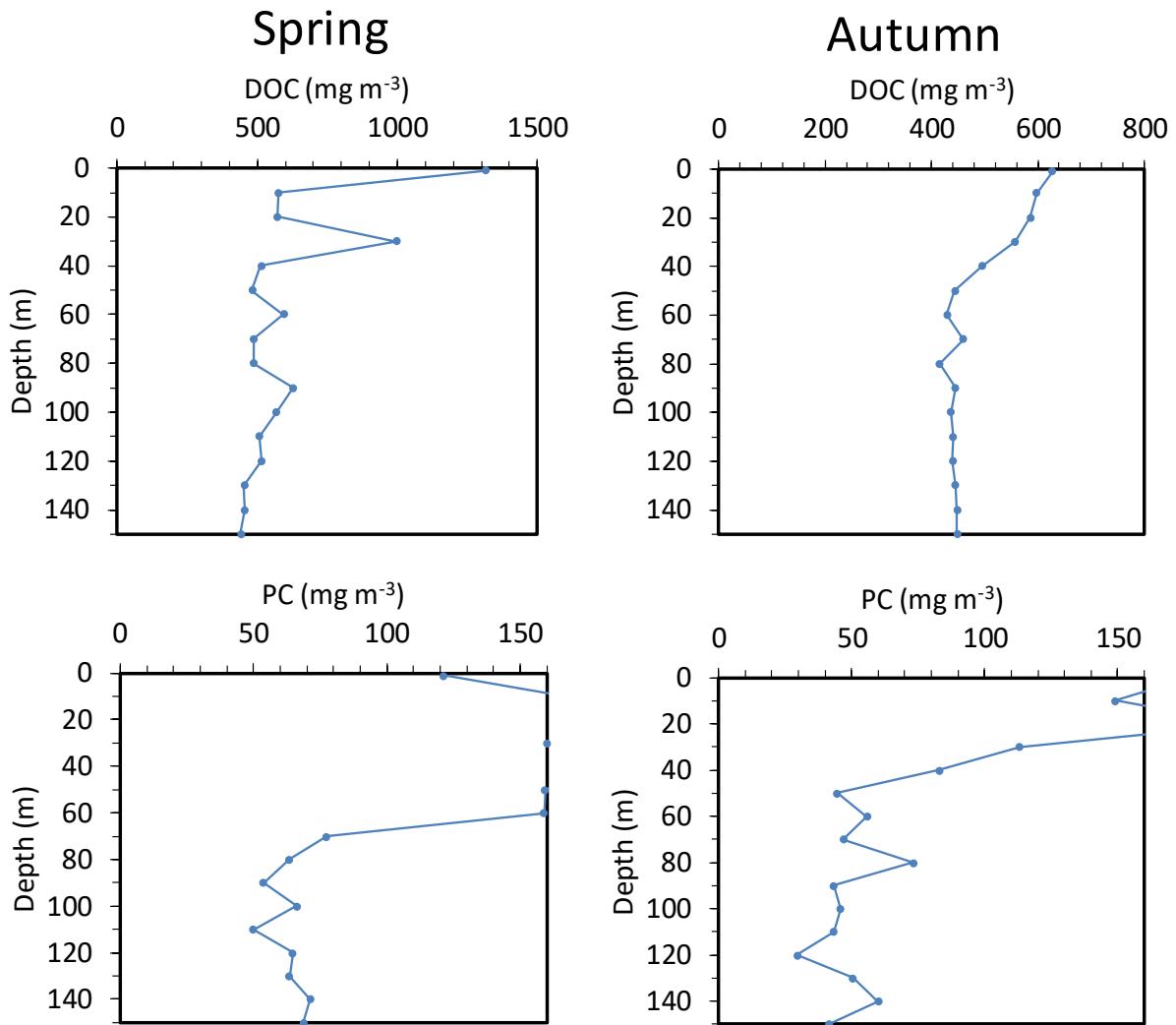
**Figure 29:** Vertical profiles of pH and concentrations of DRP and DOP, in spring 2017 and autumn 2018. 14 November 2017 and 1 May 2018.



**Figure 30:** Vertical profiles of concentrations of particulate and total phosphorus, and of nitrate, in spring of 2017 and autumn 2018. 14 November 2017 and 1 May 2018.



**Figure 31:** Vertical profiles of concentrations of dissolved, particulate and total nitrogen, in spring of 2017 and autumn 2018. 14 November 2017 and 1 May 2018.



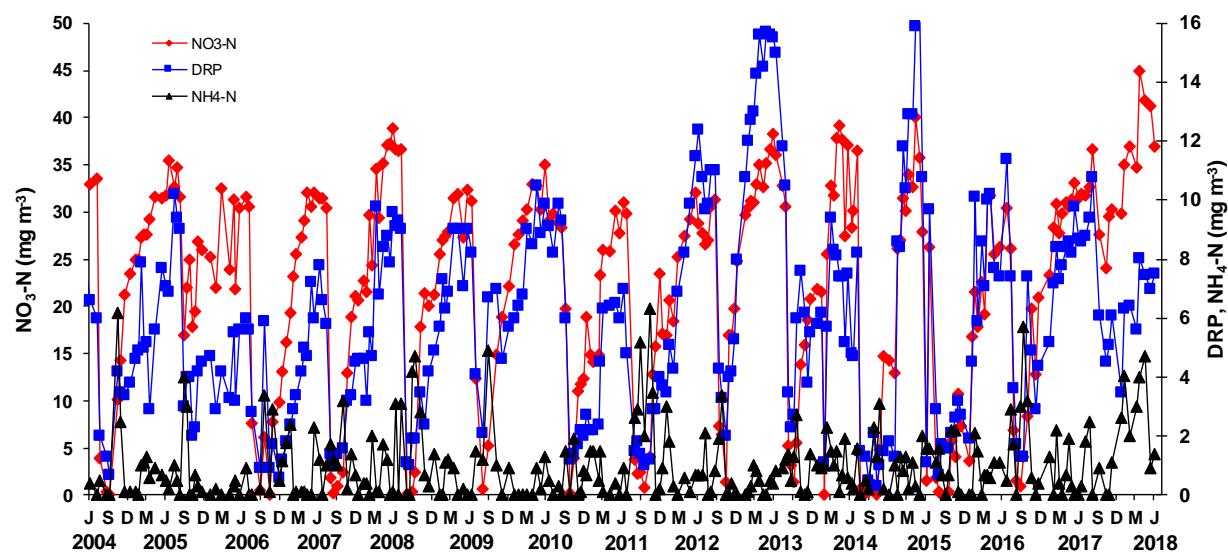
**Figure 32: Vertical profiles of concentrations of dissolved and particulate carbon, in spring of 2017 and autumn 2018. 14 November 2017 and 1 May 2018.**

### 3.7 Nutrient accumulation in the hypolimnion

During summer when the lake is stratified (i.e., does not mix vertically) organic material sinks out from the phototrophic layer followed by decomposition in bottom water. As a result, dissolved nutrients (mainly  $\text{NO}_3\text{-N}$  and DRP) accumulate in the hypolimnion. During the winter overturn, these accumulated nutrients are mixed through the entire water column and their concentrations drop in the hypolimnion. In contrast,  $\text{NH}_4$  concentrations in the bottom water often increase during the winter overturn because of mixing with shallower water where  $\text{NH}_4$  concentrations are higher during summer than in the hypolimnion. Whereas  $\text{NO}_3$  gets mixed upward during winter,  $\text{NH}_4$  gets mixed down in the water column. During summer,  $\text{NH}_4\text{-N}$  concentrations in bottom water remain low probably because of nitrification at the sediment-water interface.  $\text{NO}_3\text{-N}$  and DRP accumulate in a low ratio (around 5), as a result of denitrification.

Longer mixing seasons may result in higher winter time algal biomass by delaying the accumulation of dissolved nutrients in the bottom water in spring and keeping them available for algal growth in the surface layer, explaining the strong correlation between the mean winter temperature depth gradient and winter time chlorophyll concentrations (Figure 10).

The maximum hypolimnetic  $\text{NO}_3\text{-N}$  and DRP concentrations reached before the winter mixing started, in August 2017, were about average (Figure 33), even though this peak occurred several months later than in previous years. The delayed peak in hypolimnetic nutrients is consistent with the decline in hypolimnetic oxygen continuing unusually long in the previous monitoring year (Verburg and Albert 2018). The hypolimnetic nutrient concentrations suggested incomplete mixing during the winter period in 2017. While the winter mixing period of 2016 was relatively short, in 2017 there was hardly any mixing at all, especially notable in the  $\text{NO}_3\text{-N}$  concentrations. After a decrease much less than usual in bottom water nutrient concentrations, concentrations started increasing again from October 2017 when they were lowest. By April 2018,  $\text{NO}_3\text{-N}$  reached the highest concentration since recording started. In contrast, DRP concentrations were by June 2018 less high than usual.



**Figure 33:** Time series bottom water nutrient data. DRP,  $\text{NO}_3\text{-N}$  and  $\text{NH}_4\text{-N}$  concentrations in the hypolimnion (150 m depth) of Lake Taupo since winter mixing of 2004.

## 4 Summary

During the winter of 2017, the average chlorophyll *a*, a proxy for algal biomass, was the highest recorded since the program started. This was consistent with a relatively low average Secchi depth during winter. However, it is not clear what lead to the relatively high algal biomass, as nutrient concentrations were lower than average during the winter of 2017, as a result of incomplete vertical mixing.

The mean winter air temperature in 2017 was above the long-term winter time average, and the temperature difference between air and the lake surface was below the long-term average of this temperature difference. As a result, the mixing season, as defined by the water column temperature gradient, was shorter than in previous years, lasting only a couple of weeks. Possibly also as an effect of lower wind speeds, the short mixing season was apparently too short to allow full mixing of the water column in the winter of 2017. This was indicated by oxygen concentrations and chlorophyll fluorescence not becoming homogenous throughout the water column during winter. Oxygen in bottom water, depleted after the previous summer, was not replenished. Another clear indication of the lack of mixing was provided by the concentrations of inorganic phosphorus and nitrogen in bottom water, which were not reduced as much as in other years by the vertical mixing that occurs down to the bottom in lake Taupo during most winters.

The high winter time chlorophyll, although consistent with low Secchi depth, was not explained by higher nutrients, and not consistent with concentrations of particulate carbon, nitrogen and phosphorus, which are presumed to be largely contained in algal cell matter. Dissolved nutrients in the surface layer were lower than usual in the winter of 2017, likely because of the reduced mixing in the winter of 2017, and total and particulate nutrients were near average or below average (TP).

Diatoms dominated the algal species composition much of the year at 0-10 m depth, and even more so at 50 m depth. At 0-10 m depth phytoplankton was dominated by diatoms during winter (mostly *Aulacoseira granulata* and *Synedra* sp.) and during the summer by dinoflagellates (*Ceratium* sp.) and diatoms (mostly *Fragilaria crotonensis*). Cyanobacteria were never dominant and on average made up only about 1% of the biovolume. Cyanobacteria were most abundant in May 2018 (*Dolichospermum c.f. lemmermannii*). *Dolichospermum cf lemmermannii* was, as in previous years, the most common species of cyanobacteria, both in the surface layer and at 50 m depth. At the approximate depth of the deep chlorophyll maximum, 50 m, domination of phytoplankton biomass by diatoms was stronger than in the surface layer through much of the year.

## 5 Acknowledgements

Heath Cairns and employees of the Taupo Harbourmaster's Office carried out the field work.

Water samples were processed in the NIWA chemistry laboratory and analytical results were provided by Graham Bryers, Margaret McMonagle, Cara Mackle and team. Quality control was provided by Mike Crump, Lab Manager. Phytoplankton dominance and enumeration results were provided by Karl Safi and Helen Brider from NIWA Algal Services.

This report has benefited from reviews by Bill Vant and Graham McBride. We thank Waikato Regional Council for commissioning the monitoring program.



## 6 Glossary of abbreviations and terms

BOD	Biochemical Oxygen Demand: the rate of oxygen consumption associated with biological decomposition and chemical processes and in the water column.
VHOD	Volumetric Hypolimnetic Oxygen Demand: the net rate of oxygen loss associated with biological, chemical and physical processes in the hypolimnion of a lake in the absence of a temperature change.
Phytoplankton	Microscopic free-floating aquatic plants (algae).
Cyanobacteria	Blue-green algae. These are potentially toxic. They can adjust their depth in the water column using small gas bladders (gas vacuoles), and some species can use (i.e., fix) atmospheric nitrogen for growth when nutrient nitrogen in the water column is depleted.
Zooplankton	Small to microscopic free-swimming aquatic animals which graze on phytoplankton or smaller zooplankton.
Biomass	The living mass of the phytoplankton or zooplankton populations.
Thermal stratification	Separation of a water column into two layers by temperature – warmer water on top.
Thermocline	The boundary zone or temperature gradient between the two layers in a thermally stratified water column.
Epilimnion	The upper water column in a thermally stratified water column.
Hypolimnion	The lower water column in a thermally stratified water column.
Metalimnion	The thermocline zone — of variable thickness.
Euphotic zone	The upper water column in which there is sufficient light for photosynthesis and hence phytoplankton growth.
Euphotic depth	Lower limit of phytoplankton growth where light levels are 1% of surface irradiance.
Hydrothermal eruption	Sudden release of superheated water from volcanic vents in the bed of the lake. The source is most likely infiltrating lake water heated by hot rocks. The heated water includes dissolved salts leached from the rocks and sediment.
Nutrients	Essential dissolved inorganic nitrogen and phosphorus compounds which can be used directly by plants for growth.
Ammoniacal nitrogen	Sum of ammonium ion ( $\text{NH}_4^+$ ) plus free (unionised) ammonia ( $\text{NH}_3$ ). Some amines ( $\text{NH}_2^-$ ) may be included as interference during analysis. Symbol, $\text{NH}_4\text{-N}$ .
Nitrate nitrogen	Used in this report as the sum of nitrate ( $\text{NO}_3^-$ ) plus nitrite ( $\text{NO}_2^-$ ). Symbol, $\text{NO}_3\text{-N}$ .

DIN	Dissolved Inorganic Nitrogen: the sum of NH <sub>4</sub> -N + NO <sub>3</sub> -N.
DON	Dissolved Organic Nitrogen: the soluble nitrogen other than DIN.
PN	Particulate Nitrogen: includes phytoplankton and other detritus.
TN	Total Nitrogen: Sum of DIN + DON + PN.
NO <sub>x</sub>	Gaseous oxides of nitrogen, including N <sub>2</sub> O, NO, NO <sub>2</sub> .

## 7

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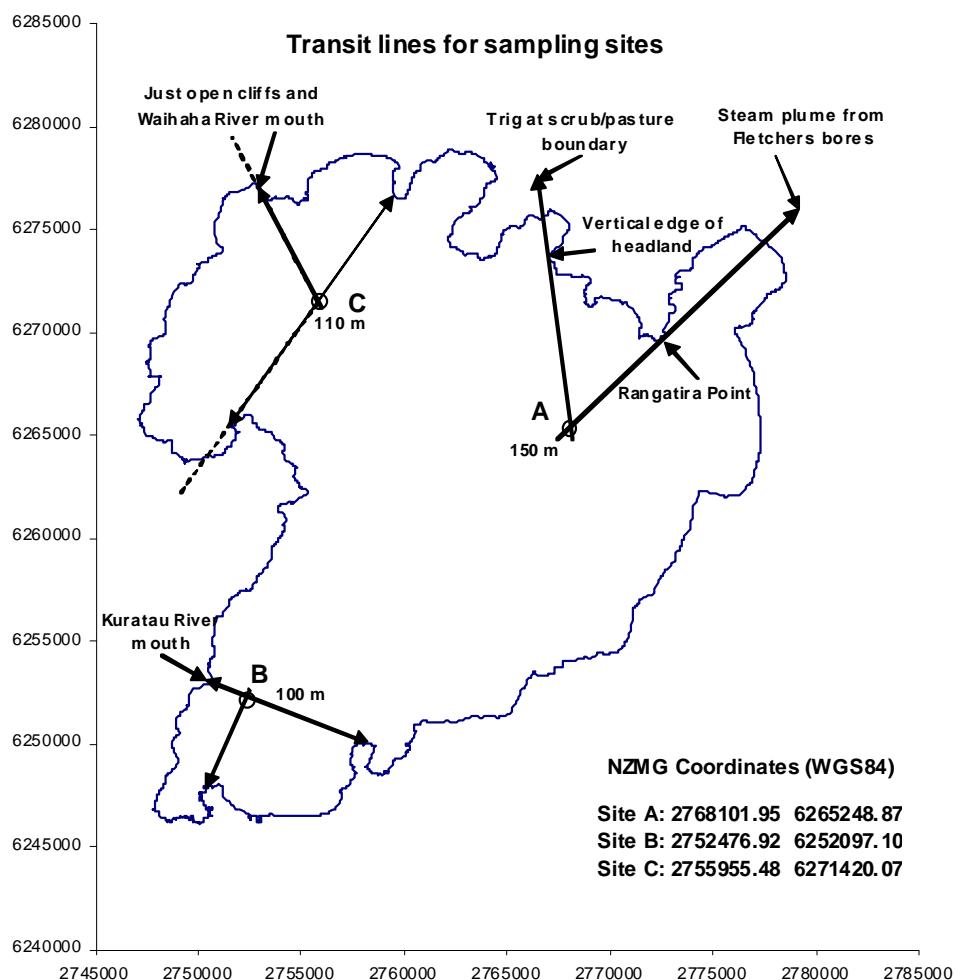
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## Appendix 1 - Site map, sampling strategy and methods

### Site map

Lake monitoring sites were originally established using land-based markers (Figure 34). These have now been defined using GPS and corrected for curvature using WGS84 convention.



**Figure 34: Site map of Lake Taupo.** Site map of Lake Taupo showing location of the routine monitoring site at mid lake (A). Two additional sites at Kuratau Basin (B) and the Western Bays (C) were sampled between January 2002 and December 2004 inclusive. Data from those sites have been retained with the Site A data presented in the appendices. Map coordinates are in NZ Map Grid with WGS84 correction. Lat. Long WGS 84 corrected co-ordinates of "Site A" are 38° 46'.810 S; 175° 58'.440 E.

The following section has been copied from Gibbs 1995, and was modified after 1998.

## Methods

The sampling site was selected in the central basin of Lake Taupo (Site Map) with a water depth of about 160 m. This site is more than 5 km from the nearest land.

For the monitoring of Lake Taupo, which mixes in winter between July and October, a full water column sampling is carried out in spring, to give sufficient time for thermal stratification to establish a stable hypolimnion. Autumn sampling is generally done in April, before lake surface cooling breaks down the thermocline leading to the winter mixing.

At each of these biannual samplings, a detailed profile of DO and temperature was measured. Prior to 1998, measurements were made at 1 m depth intervals through the full depth of the water column using an in situ recording Applied Microsystems STD-12 profiler fitted with a Royce DO sensor, and compared with manual measurements of DO and temperature made at 10 m depth intervals from the surface to the bottom of the lake using a Yellow Springs Instrument (YSI) model 58 dissolved oxygen meter fitted with a stirred Model 5739 probe on a 160 m cable. Subsequent to 1998, a Richard Brancker Research (RBR) model TD410 conductivity-temperature-depth (CTD) profiler fitted with a stirred YSI model 5739 DO sensor was used. In January 2002, the TD410 CTD profiler was upgraded to an RBR model XR420f freshwater CTD profiler fitted with the YSI model 5739 DO sensor and a Seapoint chlorophyll fluorescence probe. The DO sensor was calibrated regularly by NIWA, Rotorua staff and chlorophyll fluorescence was converted to chlorophyll *a* from extracted chlorophyll *a* analyses of water samples collected beside the profiler.

In January 2008, the XR420f profiler was upgraded to a RBR model XR620f freshwater profiler/logger with improved sensitivity. The new profiler is fitted with a Sea Point chlorophyll fluorescence probe and a Li-Cor underwater photosynthetically active radiance (PAR) sensor to measure in situ light levels and light extinction (Kd) associated with the vertical distribution of algal biomass within the lake water column. In the new system the YSI dissolved oxygen (DO) sensor was replaced with an Oxyguard DO sensor, with a temperature sensor, fitted to a separate RBR logger attached to the profiling frame.

Cross-calibration between the two profilers confirmed the quality of the data and the XR420f was retained as a back-up.

In February 2016 the depth profiler was upgraded to a RBR Maestro profiler/logger, now with all new sensors integrated in the same instrument. The logger includes temperature, freshwater conductivity, turbidity, CDOM, chlorophyll, and fast response oxygen sensors, and Wi-fi download.

The following parameters were also measured (or calculated from component parameters) as profiles from water samples collected using a van Dorn water sampling bottle starting at 1 m and then at 10 m intervals from 10 m to the bottom of the lake:

DO, chlorophyll *a*, dissolved reactive phosphorus (DRP), dissolved organic phosphorus (DOP), particulate phosphorus (PP), total phosphorus (TP), nitrate+nitrite nitrogen ( $\text{NO}_3\text{-N}$ )\*, ammoniacal nitrogen ( $\text{NH}_4\text{-N}$ ), dissolved organic nitrogen (DON), particulate nitrogen (PN), total nitrogen (TN), urea nitrogen (Urea-N), total suspended solids (SS), volatile suspended solids (VSS), particulate carbon (PC) and dissolved organic carbon (DOC). (\* Little, if any, nitrite is ever found in the Lake Taupo water column, hence the use of  $\text{NO}_3\text{-N}$  in the report).

Note: TN and TP values are the summation of all other N and P components, respectively, excluding Urea-N which is part of the DON component. DON and DOP are calculated as the total dissolved nutrient minus the inorganic dissolved nutrients.

Additional parameters measured but not as complete profiles were:

Water clarity (by Secchi disc depth) and algal species composition and abundance on water samples from 1, 10, 50, 100, and 150 m.

Determinations on the water samples were made with the standard methods routinely used for freshwater analysis by NIWA on a Lachat FIA flow injection analyser and C/N analyser.

Algal species composition and abundance were obtained by settling a measured volume of sample (up to 100 mL) in Utermöhl tubes and counting on an inverted microscope. Biovolume was estimated from cell volume tables calculated from the cell dimensions of each species. Dominance was estimated from relative biovolumes with the highest biovolume assigned dominance 1 as most common and the lowest biovolume assigned the dominance 10 as rare. Professional judgement was used to relate dominance between samplings.

Since 2007, dominance is no longer used and the algal data are reported in cell counts and biovolume.

Data for the long term monitoring programme were scheduled to be collected from the mid-lake sampling station at 2 weekly intervals. The practicality of achieving this target was limited by the weather and in reality data were generally collected at about 2-3 weekly intervals. Parameters measured were:

DO and temperature profiles at 1 m depth intervals to the bottom of the lake by RBR profiler, water clarity as Secchi disc depth, and a 10 m tube water sample was collected for measurement of chlorophyll *a*, NO<sub>3</sub>-N, NH<sub>4</sub>-N, DRP, TDN, TDP, PP, PN, PC, and algal species dominance. TN and TP were calculated as the sum of their components. Chlorophyll fluorescence, conductivity, and PAR data from the profiler are archived but not routinely included in this report.

From 2000, near-bottom water samples from 150 m were collected using a van Dorn water sampling bottle and analysed for DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N.

#### **Data handling and less than detection limit values**

All data in this report have been processed and manipulated on Excel spreadsheets. Contour plots were made in Surfer. For the calculation of annual means and long term trends, results below the detection limit (<DL) were replaced by a value of half of the detection limit. These changes were not made in the data sheets in the appendices.

#### **Statistical methods**

Copied from Gibbs (2005).

In this report we have used linear regressions and associated statistical tests to examine trends. The key result of these procedures is the coefficient of determination ( $R^2$ ), which measures the amount of variability in the data that is accounted for by the regression. Another is the p-value (defined as the probability of obtaining a trend at least as extreme as was obtained if in fact there was no trend at all). This can be used as a weight of evidence against the hypothesis that there was in fact no trend

(or rather, an opposite trend since there will always be a trend in continuous environmental data with sufficient resolution). This weight is strong when  $p$  is small, meaning that a trend at least as large as that measured could have occurred merely by chance—we have only a limited number of data from which to infer the strength of any trend, so our measurements always are uncertain to some degree. So if  $p$  is low enough (taken as less than 5% in this report, which is the usual practice), it is conventional to say that the measured trend is "statistically significant", and that convention is followed in this report. However, it is important (and often not realised) to note that the  $p$ -value cannot be used as an absolute weight of evidence. This is because it tends to decrease as the number of samples taken in a given period is increased.

## Appendix 2 - Temperature and dissolved oxygen data

Includes accumulated data since 1994.

\* represents data missing or invalid.

For completeness, additional data from Kuratau Basin (Site B) and Western Bays (Site C) collected for the period between January 2002 and December 2004 are included as separate sheets following the mid-lake data from Site A for those years.

Lake taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.												2017-2018													
Mid-Lake site A																									
Temperature																									
Date																									
Depth (m)	18/07/2017	7/08/2017	21/08/2017	27/09/2017	31/10/2017	14/11/2017	9/01/2018	24/01/2018	19/02/2018	26/03/2018	5/04/2018	26/04/2018	1/05/2018	31/05/2018	trace metal program	18/06/2018	26/06/2018	01/07/2018							
0	11.66	11.24	11.32	11.62	13.72	14.49	18.74	21.02	22.03	19.87	18.83	16.27	15.94	13.27	12.55										
10	11.67	11.24	11.21	11.62	13.57	14.08	18.33	19.78	21.66	19.87	18.81	15.95	15.88	13.28	12.55										
20	11.67	11.23	11.20	11.61	13.17	13.88	16.69	17.81	18.65	19.09	18.80	15.91	15.79	13.28	12.55										
30	11.67	11.23	11.20	11.60	12.40	13.48	14.70	14.54	15.06	19.01	16.45	15.90	15.78	13.28	12.55										
40	11.66	11.23	11.20	11.34	11.96	11.81	12.69	12.55	12.74	15.66	12.93	13.23	13.60	13.24	12.55										
50	11.62	11.23	11.19	11.26	11.63	11.41	11.81	11.77	11.99	12.97	12.09	12.01	12.04	11.79	12.44										
60	11.58	11.23	11.20	11.22	11.27	11.27	11.38	11.46	11.48	12.13	11.61	11.56	11.63	11.51	11.77										
70	11.42	11.23	11.19	11.18	11.20	11.21	11.23	11.34	11.33	11.61	11.41	11.38	11.43	11.41	11.44										
80	11.23	11.23	11.19	11.17	11.15	11.14	11.20	11.24	11.26	11.41	11.31	11.31	11.34	11.36	11.37										
90	11.06	11.23	11.19	11.14	11.13	11.12	11.18	11.20	11.22	11.31	11.26	11.26	11.29	11.31	11.35										
100	11.04	11.23	11.17	11.13	11.10	11.09	11.16	11.18	11.20	11.24	11.22	11.24	11.26	11.28	11.31										
110	11.04	11.09	11.16	11.12	11.08	11.09	11.15	11.17	11.18	11.21	11.19	11.22	11.23	11.25	11.29										
120	11.02	11.03	11.14	11.11	11.07	11.08	11.14	11.16	11.17	11.19	11.19	11.21	11.22	11.24	11.27										
130	11.01	11.02	11.09	11.10	11.06	11.07	11.13	11.16	11.16	11.18	11.18	11.19	11.20	11.22	11.27										
140	10.99	11.02	11.05	11.09	11.05	11.06	11.12	11.14	11.15	11.17	11.17	11.18	11.18	11.21	11.26										
150	10.98	11.02	11.04	11.07	11.05	11.06	11.13	11.13	11.14	11.17	11.18	11.18	11.21	11.26											
Dissolved Oxygen (g m <sup>-3</sup> )																									
Depth (m)	18/07/2017	7/08/2017	21/08/2017	27/09/2017	31/10/2017	14/11/2017	9/01/2018	24/01/2018	19/02/2018	26/03/2018	5/04/2018	26/04/2018	1/05/2018	31/05/2018	trace metal program	18/06/2018	26/06/2018	01/07/2018							
0	9.64	9.50	9.85	10.10	10.27	10.28	9.11	8.57	8.44	8.81	9.24	9.13	9.12	9.31	9.46										
10	9.63	9.49	9.82	10.07	10.25	9.87	8.88	8.90	8.50	8.81	8.86	9.11	9.15	9.34	9.45										
20	9.62	9.45	9.75	10.05	10.28	9.85	9.18	9.23	9.13	8.86	8.84	9.10	9.11	9.32	9.44										
30	9.59	9.45	9.73	10.04	10.13	9.88	9.65	9.62	9.48	8.85	8.99	9.08	9.08	9.30	9.43										
40	9.57	9.44	9.72	9.78	10.11	9.55	9.42	9.43	9.23	9.06	8.82	8.93	8.84	9.28	9.40										
50	9.47	9.42	9.69	9.67	9.72	8.92	8.90	8.98	8.83	8.96	8.45	8.43	8.37	8.01	9.07										
60	9.39	9.42	9.66	9.56	9.13	8.73	8.71	8.77	8.55	8.64	8.44	7.90	8.17	7.74	7.81										
70	8.85	9.43	9.63	9.34	8.65	8.65	8.48	8.59	8.44	8.43	8.22	7.79	7.81	7.53	7.43										
80	7.90	9.40	9.61	9.17	8.58	8.73	8.33	8.46	7.97	8.30	8.05	7.99	7.79	7.49	7.28										
90	7.56	9.34	9.52	8.84	8.45	8.64	8.31	8.20	7.87	8.21	7.98	7.81	7.87	7.45	7.26										
100	7.42	9.32	9.09	8.70	8.37	8.50	8.14	8.07	7.96	8.04	7.87	7.72	7.58	7.31	7.11										
110	7.39	7.61	8.95	8.57	8.42	8.40	8.04	7.91	7.83	7.78	7.60	7.31	7.34	7.13	6.97										
120	7.33	7.13	8.06	8.31	8.35	8.31	8.07	7.94	7.70	7.62	7.23	7.18	7.27	7.04	6.93										
130	7.26	7.07	7.44	8.26	8.28	8.21	7.94	7.90	7.60	7.42	7.07	7.18	7.24	6.80	6.75										
140	7.22	6.97	7.10	8.15	8.11	8.05	7.66	7.45	7.45	6.91	6.91	6.88	7.10	6.53	6.74										
150	7.07	6.93	6.71	7.87	7.99	7.85	7.60	7.23	7.09	6.61	6.61	6.55	6.51	6.65											



Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.															2015-2016										
Mid-Lake site A																									
Temperature																									
Date															New CTD	New CTD	New CTD	New CTD	New CTD	New CTD	New CTD	New CTD	New CTD	New CTD	
Depth (m)	2/07/2015	30/07/2015	13/08/2015	27/08/2015	17/09/2015	1/10/2015	15/10/2015	2/11/2015	19/11/2015	1/12/2015	7/01/2016	21/01/2016	3/02/2016	9/03/2016	22/03/2016	7/04/2016	19/04/2016	5/05/2016	2/06/2016						
0	11.59	11.04	10.84	10.78	10.79	11.65	12.33	13.42	13.96	16.27	18.30	19.68	22.21	20.66	19.79	19.03	18.31	17.11	14.62						
10	11.61	11.04	10.83	10.77	10.79	11.13	12.28	13.04	13.93	15.53	18.21	19.62	21.42	20.67	19.81	19.00	18.28	17.11	14.62						
20	11.61	11.04	10.82	10.76	10.79	10.92	12.06	12.89	13.86	14.47	17.92	18.90	17.84	20.67	19.81	19.00	18.28	17.11	14.63						
30	11.60	11.04	10.82	10.76	10.79	10.88	11.99	12.17	13.39	13.74	14.73	14.81	14.62	16.17	15.41	16.23	16.40	17.10	14.62						
40	11.58	11.04	10.83	10.77	10.79	10.83	11.03	11.67	12.53	11.76	12.58	12.27	12.17	12.77	12.31	12.92	12.47	13.28	14.60						
50	11.57	11.05	10.82	10.77	10.79	10.79	10.85	10.92	11.92	11.14	11.31	11.51	11.43	11.45	11.44	11.53	11.59	11.84	11.32						
60	11.57	11.05	10.83	10.77	10.73	10.77	10.80	10.77	11.50	10.86	11.02	11.07	11.06	11.04	11.10	11.13	11.13	11.20	11.05						
70	11.55	11.05	10.83	10.77	10.70	10.75	10.75	10.74	10.93	10.78	10.88	10.88	10.92	10.92	10.95	10.95	10.94	10.93							
80	11.50	11.05	10.83	10.77	10.70	10.74	10.72	10.73	10.85	10.78	10.81	10.83	10.83	10.85	10.85	10.86	10.88	10.87							
90	11.43	11.05	10.83	10.77	10.70	10.70	10.71	10.72	10.77	10.75	10.77	10.79	10.79	10.81	10.83	10.82	10.83	10.85	10.85						
100	11.38	11.05	10.82	10.77	10.69	10.70	10.70	10.71	10.75	10.74	10.75	10.79	10.76	10.80	10.80	10.80	10.81	10.83	10.83						
110	11.36	11.05	10.82	10.77	10.69	10.66	10.69	10.71	10.73	10.74	10.74	10.77	10.75	10.78	10.78	10.78	10.79	10.82							
120	11.25	11.06	10.82	10.77	10.69	10.66	10.68	10.70	10.72	10.72	10.74	10.76	10.74	10.78	10.77	10.77	10.78	10.81							
130	11.12		10.82	10.77		10.66	10.68	10.70	10.71	10.71	10.74	10.75	10.73	10.77	10.77	10.76	10.77	10.80							
140	11.05		10.82	10.77		10.64	10.67		10.70	10.71	10.72	10.74	10.73					10.76						10.79	
150	11.01		10.81	10.77		10.63																			
Dissolved Oxygen (g m <sup>-3</sup> )																									
0	10.78	10.94	11.02	11.07	10.92	10.35	10.76	10.43	10.24	9.74	9.39	9.13	8.30	8.95	9.26	9.86	9.74	9.60	10.11						
10	10.57	10.90	10.72	10.77	10.81	9.57	10.77	10.36	10.23	9.61	9.42	9.19	8.28	8.78	9.01	9.85	9.44	9.44	9.93						
20	10.72	10.85	10.76	10.77	10.88	9.53	10.81	10.45	10.28	9.87	9.44	9.22	9.02	8.78	9.01	9.81	9.38	9.39	9.76						
30	10.77	10.89	10.69	10.77	10.80	9.42	10.84	10.44	10.29	9.78	9.48	9.34	9.15	9.46	9.42	9.89	9.41	9.35	9.70						
40	10.79	10.83	10.66	10.70	10.81	9.38	10.66	10.35	10.32	9.74	9.68	9.63	9.06	8.86	8.90	9.24	8.81	8.97	9.65						
50	10.84	10.83	10.68	10.67	10.79	9.31	10.62	10.18	10.24	9.52	9.53	9.66	8.85	8.64	8.75	8.90	8.74	8.71	8.78						
60	10.75	10.80	10.67	10.66	10.72	9.29	10.45	9.98	10.10	9.41	9.35	9.66	8.77	8.68	8.82	8.86	8.68	8.73	8.87						
70	10.71	10.82	10.63	10.64	10.66	9.23	10.43	9.96	9.92	9.35	9.34	9.52	8.73	8.68	8.85	8.75	8.58	8.66	8.75						
80	10.61	10.85	10.62	10.67	10.66	9.19	10.28	9.85	9.80	9.19	9.24	9.33	8.75	8.40	8.78	8.79	8.61	8.26	8.46						
90	10.60	10.77	10.61	10.65	10.65	9.14	10.29	9.83	9.77	9.17	9.26	9.26	8.76	8.64	8.53	8.54	8.41	8.03	8.45						
100	10.30	10.82	10.63	10.66	10.68	9.07	10.19	9.81	9.62	9.13	9.18	9.03	8.79	8.34	8.49	8.57	8.42	7.94	8.41						
110	10.17	10.74	10.65	10.65	10.77	9.08	10.20	9.80	9.57	9.09	9.18	8.93	8.66	8.29	8.56	8.34	8.31	8.10							
120	9.61	10.74	10.66	10.66	10.69	9.07	10.13	9.73	9.49	8.93	9.11	8.82	8.65	8.25	8.50	8.47	8.10		8.08						
130	8.89		10.68	10.63		9.05	10.09	9.75	9.37	8.93	9.11	8.74	8.19	8.35			8.06	7.88		7.97					
140	8.52		10.66	10.61		8.99	10.00			9.29	8.96	8.92	8.47	8.13				7.94		7.76					
150	8.12		10.61	10.63		8.99																			
Secchi depth	2/07/2015	30/07/2015	13/08/2015	27/08/2015	17/09/2015	1/10/2015	15/10/2015	2/11/2015	19/11/2015	1/12/2015	7/01/2016	21/01/2016	3/02/2016	9/03/2016	22/03/2016	7/04/2016	19/04/2016	5/05/2016	2/06/2016						
(m)	14.25	13	10	12.5	18.5	17.25	14.5	16	14	14.5	18	14	18	no secchi	17	15	14.75	14.2	14.3						

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.																	2014-2015					
Mid-Lake site A																						
Temperature																						
Date	1/07/2014	21/07/2014	26/08/2014	9/09/2014	8/10/2014	20/10/2014	5/11/2014	25/11/2014	17/12/2014	14/01/2015	29/01/2015	12/02/2015	26/02/2015	9/03/2015	25/03/2015	21/04/2015	11/05/2015	27/05/2015	18/06/2015	2/07/2015		
Depth (m)	0	12.86	11.76	11.48	12.06	11.15	12.91	13.34	14.63	15.43	20.35	20.91	19.47	20.00	20.08	19.11	17.15	15.63	13.79	12.34	11.59	
0	12.86	11.76	11.48	12.06	11.15	12.91	13.34	14.63	15.43	20.35	20.91	19.47	20.00	20.08	19.11	17.15	15.63	13.79	12.34	11.59		
10	12.87	11.51	11.08	11.17	11.18	12.76	12.83	13.58	15.41	20.17	20.87	19.32	20.00	19.64	18.94	17.07	15.66	13.69	12.35	11.61		
20	12.87	11.50	11.07	11.12	11.18	11.44	12.55	13.44	15.33	16.18	17.05	18.85	18.09	19.61	18.92	17.03	15.65	13.68	12.35	11.61		
30	12.88	11.50	11.06	11.03	11.18	11.27	12.46	13.32	13.91	13.82	14.27	14.16	14.92	14.72	15.30	15.20	15.66	13.67	12.35	11.60		
40	12.88	11.50	11.05	10.99	11.17	11.23	12.06	12.49	13.02	12.60	12.67	12.73	13.41	12.84	12.98	12.80	15.63	13.67	12.35	11.58		
50	12.88	11.49	11.05	10.99	11.18	11.20	11.82	11.58	11.92	11.86	11.80	11.99	12.32	11.75	11.88	11.78	12.19	13.65	12.35	11.57		
60	12.85	11.46	11.05	10.99	11.17	11.20	11.57	11.31	11.37	11.38	11.44	11.59	11.55	11.43	11.52	11.29	11.52	13.57	12.35	11.57		
70	11.66	11.42	11.05	10.98	11.16	11.20	11.38	11.25	11.22	11.25	11.30	11.40	11.44	11.26	11.32	11.11	11.15	11.77	12.15	11.55		
80	11.53	11.39	11.05	10.98	11.15	11.19	11.25	11.20	11.18	11.19	11.25	11.27	11.29	11.23	11.29	11.01	11.04	11.48	11.20	11.50		
90	11.44	11.37	11.04	10.97	11.14	11.18	11.18	11.16	11.14	11.16	11.19	11.23	11.22	11.20	11.24	10.97	10.98	11.36	11.12	11.43		
100	11.40	11.36	11.04	10.97	11.13	11.18	11.14	11.14	11.12	11.13	11.16	11.20	11.19	11.19	11.24	10.94	10.95	11.23	11.05	11.38		
110	11.37	11.36	11.04	10.97	11.13	11.17	11.13	11.11	11.10	11.12	11.15	11.17	11.17	11.18	11.20	10.91	10.93	11.08	11.02	11.36		
120	11.36	11.35	11.04	10.96	11.11	11.17	11.12	11.09	11.10	11.11	11.13	11.13	11.15	11.18	11.19	10.90	10.93	11.03	11.00	11.25		
130	11.35	11.04	10.95	11.09	11.14		11.07	11.09	11.11	11.11	11.12		11.16	11.15	10.89	10.91	11.00	10.99	11.12			
140		11.35	11.04	10.95	11.05	11.10		11.06	11.09	11.10	11.11	11.11		11.15	11.15	10.88	10.90	10.98		11.05		
150		11.35	11.03		11.00			11.05	11.08							11.15			10.95		11.01	
Dissolved Oxygen (g m <sup>-3</sup> )	0	10.55	10.82	10.81	10.75	10.93	10.48	10.41	10.13	9.92	9.04	8.86	9.15	8.97	9.02	9.18	9.61	9.96	10.37	10.72	10.78	
0	10.55	10.82	10.81	10.75	10.93	10.48	10.41	10.13	9.92	9.04	8.86	9.15	8.97	9.02	9.18	9.61	9.96	10.37	10.72	10.78		
10	10.28	10.62	11.07	11.40	10.82	10.41	10.19	10.16	9.86	9.11	8.81	9.14	9.02	9.06	9.15	9.35	9.85	10.14	10.46	10.57		
20	10.26	10.47	11.25	10.67	10.83	10.50	10.34	10.22	9.91	9.61	9.42	9.28	9.27	9.05	9.08	9.52	9.95	10.28	10.59	10.72		
30	10.15	10.25	11.23	10.43	10.74	10.30	10.27	10.17	9.80	9.67	9.60	9.23	9.46	9.30	9.24	9.62	9.97	10.31	10.72	10.77		
40	10.04	10.16	11.12	10.21	10.63	10.04	10.11	9.90	9.85	9.44	9.39	9.57	9.37	9.32	9.39	10.03	9.92	10.27	10.66	10.79		
50	10.02	9.99	10.90	10.09	10.60	9.98	10.06	9.90	9.63	9.35	9.21	9.44	9.17	9.07	9.25	9.77	9.88	10.28	10.67	10.84		
60	9.96	9.54	10.83	10.03	10.60	9.92	10.00	9.79	9.38	9.07	8.93	9.29	8.60	8.61	8.73	9.29	9.25	10.16	10.60	10.75		
70	8.67	8.96	10.72	10.05	10.56	9.92	9.88	9.77	9.33	9.02	8.80	9.22	8.49	8.44	8.48	9.14	9.07	9.62	10.54	10.71		
80	8.38	8.40	10.61	10.03	10.52	9.89	9.81	9.69	9.19	8.96	8.67	9.01	8.38	8.33	8.02	8.98	8.71	9.32	9.19	10.61		
90	8.26	8.29	10.54	10.01	10.51	9.87	9.69	9.58	9.12	8.89	8.66	8.94	8.33	8.25	7.94	8.73	8.63	9.15	9.07	10.60		
100	8.19	8.08	10.50	9.96	10.47	9.86	9.57	9.39	9.03	8.70	8.50	8.90	8.28	7.94	7.71	8.55	8.29	8.89	8.76	10.30		
110	8.10	8.04	10.46	9.98	10.41	9.85	9.52	9.27	8.98	8.60	8.42	8.93	8.24	7.87	7.71	8.48	8.09	8.61	8.61	10.17		
120	8.04	7.94	10.42	9.87	10.39	9.82	9.46	9.15	8.89	8.24	8.37	8.80	7.97	7.69	7.73	8.35	7.77	8.43	8.41	9.61		
130	7.89	10.41	9.86	10.31	9.80		9.11	8.78	8.10	8.18	8.67		7.69	7.91	7.45	8.04	8.31	8.23	8.89			
140	7.74	10.37	9.86	10.15	9.67		8.87	8.61	7.90	7.68	8.17		7.38	7.37	7.29	7.70	8.19		8.52			
150	7.71	10.31		10.04			8.72	8.43							7.10			8.04		8.11		
Drift angle																						
Secchi depth	(m)	12.75	15.5	11	11.25	14	13	15	12	15	16	17.25	17	18 na		18	17.25	13	12	16.25	14.25	

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

2013-2014

Mid-Lake site A for the period starting 22 July 2013

Temperature	Date	22/07/2013	6/08/2013	21/08/2013	3/09/2013	18/09/2013	2/10/2013	21/10/2013	7/11/2013	20/11/2013	2/12/2013	8/01/2014	28/01/2014	12/02/2014	25/02/2014	12/03/2014	27/03/2014	9/04/2014	23/04/2014	8/05/2014	20/05/2014	5/06/2014	19/06/2014	1/07/2014	21/07/2014																																																																												
		Depth (m)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	680	690	700	710	720	730	740	750	760	770	780	790	800	810	820	830	840	850	860	870	880	890	900	910	920	930	940	950	960	970	980
0	10.93	10.80	10.67	10.90	10.83	10.91	10.55	10.31	9.79	9.53	9.39	9.31	9.25	9.20	9.25	9.31	9.29	9.56	9.73	9.92	10.23	10.33	10.55	10.82																																																																													
10	11.43	10.66	11.18	11.15	11.27	11.40	10.71	10.26	9.68	9.16	9.22	8.79	9.17	9.07	9.12	9.03	9.20	9.49	9.74	9.72	9.89	10.19	10.28	10.62																																																																													
20	11.11	10.19	10.68	10.97	11.07	11.11	10.35	10.13	9.76	9.03	8.93	8.51	9.05	9.02	9.12	9.01	9.20	9.48	9.84	9.64	9.83	10.13	10.26	10.47																																																																													
30	11.05	9.91	10.78	10.90	10.89	11.01	10.08	9.87	9.60	8.90	9.35	8.14	8.58	8.36	8.68	8.56	9.01	9.34	9.76	9.54	9.78	10.06	10.15	10.25																																																																													
40	11.32	8.91	11.01	10.99	10.91	10.87	10.15	9.70	9.44	8.91	9.28	9.00	9.01	8.72	8.78	8.59	8.54	8.76	9.47	9.43	9.71	10.04	10.16	10.26																																																																													
50	11.61	8.50	11.23	10.88	10.87	10.82	10.12	9.68	9.22	8.69	9.29	8.98	8.99	8.59	8.56	8.46	8.38	8.73	8.98	8.77	9.18	9.55	10.02	9.99																																																																													
60	11.72	7.49	11.44	11.00	10.89	10.91	10.15	9.46	9.18	8.65	9.16	8.93	9.09	8.46	8.35	8.22	8.31																																																																																				

**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**

**2012-2013**

**Mid-Lake site A for the period starting 1 August 2012**

**Temperature**

Date	1/08/2012	17/08/2012	29/08/2012	20/09/2012	4/10/2012	24/10/2012	8/11/2012	22/11/2012	6/12/2012	19/12/2012	23/01/2013	7/02/2013	21/02/2013	6/03/2013	20/03/2013	4/04/2013	22/04/2013	7/05/2013	23/05/2013	6/06/2013	19/06/2013	22/07/2013	
Depth (m)			no profile																				
0	11.15	11.25		11.17	11.45	12.35	13.45	16.40	14.97	17.75	19.02	18.83	20.41	20.01	19.52	19.58	17.49	16.50	15.25	13.99	13.37	11.50	
10	11.17	11.07		10.91	11.45	11.59	13.23	14.06	14.83	17.35	18.79	18.82	20.24	20.01	19.55	19.48	17.50	16.47	15.29	14.00	13.37	11.48	
20	11.17	11.02		10.71	11.45	11.55	12.95	13.73	14.34	15.74	17.40	18.11	19.42	19.99	19.56	19.45	17.49	16.46	15.32	14.00	13.38	11.48	
30	11.18	11.01		10.70	11.44	11.52	12.40	13.10	13.80	14.16	14.32	15.66	16.05	15.73	14.81	15.96	15.87	16.07	15.34	14.00	13.38	11.47	
40	11.19	10.99		10.70	11.13	11.51	11.75	11.93	12.22	12.30	12.25	13.20	12.63	12.98	12.48	12.95	12.81	12.47	14.85	13.88	13.38	11.47	
50	11.19	10.99		10.68	10.94	11.49	11.47	11.60	11.53	11.65	11.67	12.02	12.02	11.98	11.69	11.88	11.79	11.69	12.03	11.72	12.12	11.47	
60	11.19	10.98		10.68	10.92	11.43	11.30	11.38	11.27	11.41	11.45	11.46	11.64	11.48	11.42	11.52	11.45	11.42	11.50	11.47	11.41	11.42	
70	11.19	10.97		10.67	10.92	11.37	11.13	11.22	11.19	11.28	11.32	11.29	11.37	11.33	11.22	11.32	11.28	11.29	11.25	11.31	11.24	11.37	
80	11.20	10.96		10.66	10.91	11.34	11.04	11.17	11.11	11.14	11.22	11.18	11.28	11.21	11.15	11.21	11.18	11.17	11.20	11.15	11.35		
90	11.20	10.95		10.64	10.90	11.29	10.99	11.05	11.07	11.06	11.15	11.08	11.15	11.13	11.10	11.13	11.12	11.13	11.11	11.28			
100	11.19	10.95		10.63	10.88	11.25	10.95	11.04	11.04	11.03	11.08	11.08	11.11	11.05	11.07	11.09	11.08	11.09	11.09	11.09	11.09	11.26	
110	11.17	10.94		10.61	10.86	11.18	10.91	10.97	11.01	11.00	11.04	11.05	11.06	11.01	11.03	11.06	11.05	11.06	11.06	11.06	11.06	11.22	
120	11.16	10.94		10.60	10.82	11.10	10.89	10.95	10.96	10.98	11.01	11.04	11.02	11.00	11.00	11.05	11.03	11.04	11.04	11.03	11.05	11.20	
130	11.16	10.94		10.60	10.82	11.00	10.86	10.92	10.92	10.96	10.98	11.02	10.98	10.98	10.99	11.03	11.02	11.03	11.02	11.04	11.18		
140	11.16	10.94		10.60	10.82	10.97	10.85	10.90	10.90	10.94	10.96	10.98	10.97	10.97	10.99	11.02	11.01	11.01	11.01	11.03	11.11		
150	11.16	10.94		10.60	10.82	10.91	10.84	10.90	10.89	10.93	10.94	10.97	10.96	10.96	10.98	11.00	11.00	11.00	11.00	11.00	11.03	11.11	

**Dissolved Oxygen (g m<sup>-3</sup>)**

	4/10/2012	24/10/2012	8/11/2012	22/11/2012	6/12/2012	19/12/2012	23/01/2013	7/02/2013	21/02/2013	6/03/2013	20/03/2013	4/04/2013	22/04/2013	7/05/2013	23/05/2013	6/06/2013	19/06/2013	22/07/2013				
Depth (m)																						
0	11.03	10.90		11.00	11.20	10.68	10.40	9.56	9.50	9.14	9.05	8.76	8.73	8.76	10.61	9.11	9.05	9.70	9.70	10.27	10.14	10.93
10	11.19	11.09		11.03	11.24	10.81	10.57	9.88	9.64	9.29	9.17	8.86	8.87	8.73	12.43	13.37	9.08	9.71	9.72	10.26	10.15	11.43
20	11.13	10.77		11.06	11.14	10.66	10.53	9.79	9.68	9.56	9.52	9.14	9.04	8.62	9.69	9.73	9.00	9.68	9.67	10.17	10.16	11.11
30	11.21	10.77		11.07	11.18	10.70	10.68	9.85	9.75	9.79	10.31	9.59	9.92	9.59	9.72	10.07	9.11	9.63	9.64	10.17	10.18	11.05
40	11.10	10.44		11.10	10.93	10.56	10.53	9.60	9.75	9.79	9.74	9.56	9.62	9.63	9.34	9.90	9.05	9.45	9.62	10.15	10.19	11.32
50	11.01	10.24		11.12	10.57	10.60	10.49	9.59	9.46	9.28	9.57	9.22	9.40	9.23	8.97	9.38	8.73	9.02	9.04	9.38	10.17	11.61
60	11.11	10.18		11.17	10.44	10.37	9.99	9.19	8.93	9.01	9.29	8.68	8.96	8.92	8.80	9.08	8.64	8.66	8.92	9.11	9.38	11.72
70	11.11	10.04		11.18	10.43	10.43	9.91	9.02	8.84	8.90	8.87	8.52	8.78	8.67	8.91	8.74	8.49	8.76	8.75	8.99	9.11	11.61
80	11.05	10.22		11.21	10.37	10.34	9.57	8.87	8.78	8.73	8.86	8.25	8.60	8.22	8.91	8.71	8.39	8.80	8.54	8.84	8.99	11.68
90	10.79	10.22		11.22	10.36	10.31	9.55	8.87	8.70	8.62	8.37	8.21	8.38	8.00	8.72	8.28	8.24	8.56	8.34	8.60	8.84	11.44
100	10.02	10.15		11.25	10.27	10.19	9.40	8.50	8.49	8.44	8.40	7.91	8.17	8.14	8.82	8.06	7.93	8.38	8.10	8.32	8.60	11.21
110	9.41	10.16		11.26	10.19	10.12	9.44	8.68	8.38	8.38	8.27	7.89	8.08	7.97	8.73	7.86	7.71	7.92	8.02	7.89	8.32	10.81
120	9.23	10.02		11.30	10.34	9.96	9.34	8.59	8.51	8.25	8.36	7.78	7.77	7.74	8.13	7.73	7.40	7.46	7.79	7.71	7.89	10.44
130	9.10	9.98		11.32	10.30	9.95	9.34	8.61	8.53	8.20	8.22	7.74	7.75	7.74		7.69	7.36	7.19	7.53	7.64	7.71	10.36
140	9.10	9.98		11.34	10.26	9.75	9.10	8.28	8.35	7.87	7.93	7.84	7.40	7.74		7.57	6.94	7.16	7.46	7.56	7.64	9.99
150	9.05	9.98		11.41	10.26	9.51	8.91	8.21	8.07	7.72	7.39	7.41	7.08	7.74		7.23	6.81	7.11	7.35	7.53	7.56	9.02

Probe error

(m)	17	14	13	12.5	13.6	17	18	19	19	15.8	15	19	21	14	18	14.7	14.25	15	14.5	15	14
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.												2011-2012														
Mid-Lake site A for the period starting 9 August 2011																										
Temperature														Temperature												
Date																										
Depth (m)	9/08/2011	24/08/2011	7/09/2011	28/09/2011	26/10/2011	8/11/2011	22/11/2011	8/12/2011	22/12/2011	12/01/2012	26/01/2012	16/02/2012	7/03/2012	10/04/2012	7/05/2012	30/05/2012	14/06/2012	2/07/2012	18/07/2012	1/08/2012	17/08/2012	29/08/2012	20/09/2012			
0	11.07	10.88	11.09	11.02	13.02	14.12	14.59	16.81	18.23	18.91	19.02	no profile		18.17	16.64	15.07	13.41	12.64	11.64	11.44	11.15	11.25				
10	10.95	10.80	10.95	11.02	12.80	13.80	14.55	16.26	16.67	18.64	19.01	no profile		17.56	16.47	15.07	13.47	12.68	11.62	11.28	11.17	11.07				
20	10.94	10.75	10.88	11.01	12.31	13.37	14.52	14.83	15.55	16.68	18.30	no profile		17.26	16.42	15.07	13.48	12.68	11.62	11.27	11.17	11.02				
30	10.93	10.74	10.76	10.96	11.82	13.00	14.20	13.56	13.57	14.81	16.51	no profile		16.24	16.21	15.07	13.50	12.67	11.61	11.26	11.18	11.01				
40	10.94	10.73	10.76	10.84	11.05	11.67	12.15	12.25	12.35	12.58	12.21	no profile		12.77	14.24	15.03	13.49	12.66	11.61	11.26	11.19	10.99				
50	10.94	10.72	10.75	10.81	10.92	11.15	11.36	11.54	11.56	11.89	12.13	no profile		11.82	11.95	12.50	11.95	12.67	11.61	11.26	11.19	10.99				
60	10.94	10.71	10.75	10.80	10.86	10.92	11.00	11.11	11.15	11.31	11.17	no profile		11.30	11.24	11.65	11.43	11.61	11.60	11.26	11.19	10.98				
70	10.94	10.71	10.75	10.79	10.81	10.85	10.89	10.96	11.04	11.07	11.14	no profile		11.12	11.06	11.23	11.17	11.19	11.59	11.25	11.19	10.97				
80	10.94	10.71	10.75	10.78	10.79	10.83	10.86	10.91	11.01	10.96	10.96	no profile		11.02	10.98	11.09	11.02	11.02	11.24	11.18	11.20	10.96				
90	10.94	10.71	10.75	10.77	10.77	10.80	10.83	10.85	10.93	10.92	10.93	no profile		10.96	10.91	11.01	10.97	10.97	11.00	11.04	11.20	10.95				
100	10.93	10.71	10.75	10.76	10.75	10.78	10.82	10.85	10.95	10.89	10.89	no profile		10.93	10.89	10.97	10.93	10.95	10.99	10.97	11.19	10.95				
110	10.93	10.71	10.75	10.75	10.75	10.76	10.80	10.81	10.88	10.87	10.87	no profile		10.89	10.87	10.92	10.89	10.95	10.95	10.94	11.17	10.94				
120	10.93	10.70	10.74	10.74	10.73	10.75	10.79	10.81	10.88	10.85	10.86	no profile		10.87	10.84	10.89	10.87	10.92	10.91	10.92	11.16	10.94				
130	10.93	10.70	10.73	10.73	10.72	10.74	10.78	10.78	10.84	10.83	10.83	no profile		10.84	10.82	10.87	10.85	10.90	10.89	10.91	11.16	10.94				
140	10.92	10.70	10.72	10.72	10.72	10.73	10.77	10.77	10.85	10.82	10.83	no profile		10.84	10.81	10.86	10.84	10.88	10.88	10.90	11.16	10.94				
150	10.92	10.70	10.71	10.72	10.72	10.72	10.76	10.76	10.82	10.81	10.83	no profile		10.83	10.81	10.85	10.83	10.86	10.88	10.89	11.16	10.94				
Dissolved Oxygen (g m <sup>-3</sup> )																										
Depth (m)	0	10.49	10.58	10.50	10.57	10.55	10.73	10.33	9.97	9.38	9.29	9.26	no profile		9.40	9.70	10.07	10.40	10.60	10.90	10.90	11.03	10.90			
0	10.62	10.59	10.64	10.56	11.22	11.45	11.18	11.11	10.16	9.95	9.21	no profile		10.23	9.91	10.00	11.23	11.28	10.98	11.12	11.19	11.09				
10	10.53	10.45	10.62	10.52	11.91	11.69	11.66	11.95	10.92	11.21	9.56	no profile		10.24	9.88	9.40	11.49	10.63	10.93	10.83	11.13	10.77				
20	10.40	10.32	10.40	10.50	12.08	11.55	11.57	11.85	11.26	11.50	9.76	no profile		10.45	9.83	9.22	11.59	10.78	10.87	10.91	11.21	10.77				
30	10.32	10.23	10.34	10.25	11.68	11.44	11.72	11.74	11.16	11.06	10.18	no profile		10.63	9.57	9.01	10.77	10.57	10.86	10.70	11.10	10.44				
40	10.36	10.22	10.31	10.18	11.54	11.11	11.61	11.20	10.96	10.88	9.89	no profile		10.52	9.50	9.24	10.10	10.69	10.81	10.84	11.01	10.24				
50	10.34	10.19	10.27	10.13	11.34	10.62	10.84	10.67	10.46	10.47	9.71	no profile		10.07	9.36	9.20	9.38	9.33	10.78	10.66	11.11	10.18				
60	10.34	10.11	10.13	10.10	11.24	10.61	10.79	10.64	10.47	10.47	9.46	no profile		10.04	9.24	6.84	9.31	9.26	10.69	10.79	11.11	10.04				
70	10.38	10.11	10.13	10.10	11.24	10.61	10.79	10.64	10.47	10.47	9.46	no profile		10.04	9.24	6.84	9.31	9.26	10.69	10.79	11.11	10.04				
80	10.29	10.06	10.21	10.08	11.15	10.39	10.43	10.17	10.01	10.13	9.40	no profile		9.62	9.02	10.17	8.94	8.84	9.85	9.71	11.05	10.22				
90	10.28	10.05	10.08	10.06	11.13	10.38	10.30	10.20	10.06	10.06	9.31	no profile		9.50	8.99	6.39	8.89	8.87	8.81	9.23	10.79	10.22				
100	10.31	10.01	10.17	10.00	11.05	10.20	9.92	9.90	9.71	9.49	9.14	no profile		9.13	8.85	10.68	8.72	8.63	8.64	8.35	10.02	10.15				
110	10.29	9.99	10.05	9.95	10.94	10.17	9.93	10.01	9.74	9.38	9.10	no profile		9.12	8.89	6.26	8.66	8.40	8.38	8.35	9.41	10.16				
120	10.29	9.95	10.10	9.91	10.96	10.01	9.47	9.52	9.33	9.12	8.87	no profile		8.84	8.62	8.17	8.44	8.26	8.16	8.20	9.23	10.02				
130	10.30	9.89	9.92	9.89	10.77	10.02	9.39	9.45	9.49	9.18	8.80	no profile		8.83	8.59	7.63	8.33	8.33	8.08	8.15	9.10	9.98				
140	10.25	9.90	9.99	9.89	10.50	9.63	9.13	9.27	9.38	9.02	8.61	no profile		8.23	8.27	8.13	7.84	7.92	7.99	7.84	9.10	9.98				
150	10.20	9.90	9.66	9.66	10.45	9.43	8.94	8.57	8.88	8.42	8.02	no profile		8.01	8.03	8.90	7.57	7.83	7.99	7.75	9.05	9.98				
Secchi depth	(m)	16	9	16	13	14	14	18	18.5	13	16.5	15	16	16	17	17	17	14	15.5	17	17	14	14	14	14	

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.													2010-2011												
Mid-Lake site A for the period starting 13 July 2010																									
Temperature																									
Date																									
Depth (m)	13/07/2010	10/08/2010	24/08/2010	13/09/2010	5/10/2010	26/10/2010	10/11/2010	25/11/2010	21/12/2010	11/01/2011	27/01/2011	17/02/2011	1/03/2011	15/03/2011	13/04/2011	10/05/2011	31/05/2011	22/06/2011	5/07/2011	9/08/2011					
0	11.31	11.01	10.92	11.37	11.90	13.00	13.98	15.96	18.32	19.75	19.62	20.54	20.47	19.94	17.68	15.51	14.13	13.11	12.35	11.07					
10	11.29	10.96	10.86	11.02	11.66	11.72	13.25	15.65	18.25	19.62	19.58	20.44	20.48	19.72	17.67	15.52	14.14	13.13	12.33	10.95					
20	11.29	10.95	10.85	10.95	11.23	11.53	13.13	13.81	14.51	17.39	18.98	20.35	20.48	19.53	17.64	15.50	14.15	13.12	12.33	10.94					
30	11.28	10.95	10.85	10.89	11.01	11.44	11.88	12.10	12.53	12.88	15.19	16.03	15.33	15.41	17.62	15.43	14.15	13.12	12.33	10.93					
40	11.28	10.95	10.85	10.85	10.96	11.37	11.54	11.42	11.66	11.62	12.22	12.26	12.17	12.27	12.12	15.32	14.15	13.13	12.33	10.94					
50	11.28	10.95	10.85	10.85	10.88	11.31	11.17	11.11	11.24	11.37	11.47	12.09	11.31	11.43	11.39	12.27	11.84	13.11	12.32	10.94					
60	11.26	10.94	10.83	10.83	10.85	11.21	11.02	10.98	11.03	11.08	11.13	11.33	11.10	11.11	11.12	11.28	11.31	11.38	11.41	10.94					
70	11.01	10.94	10.81	10.82	10.82	11.03	10.93	10.91	10.92	10.96	10.97	11.09	10.98	11.02	10.99	11.09	11.11	11.19	11.18	10.94					
80	10.96	10.92	10.80	10.81	10.80	10.89	10.85	10.87	10.88	10.89	10.90	10.96	10.93	10.97	10.95	11.00	11.03	11.07	11.03	10.94					
90	10.79	10.84	10.78	10.81	10.78	10.88	10.82	10.84	10.85	10.86	10.86	10.92	10.92	10.92	10.97	11.00	11.00	11.02	10.94						
100	10.75	10.81	10.76	10.80	10.76	10.83	10.81	10.83	10.84	10.86	10.85	10.89	10.90	10.90	10.89	10.93	10.97	10.97	10.98	10.93					
110	10.70	10.75	10.76	10.80	10.75	10.82	10.78	10.81	10.81	10.85	10.84	10.88	10.90	10.87	10.88	10.91	10.95	10.95	10.97	10.93					
120	10.68	10.73	10.75	10.80	10.75	10.80	10.77	10.81	10.80	10.84	10.84	10.87	10.88	10.87	10.87	10.90	10.95	10.94	10.97	10.93					
130	10.67	10.71	10.75	10.78	10.75	10.78	10.77	10.80	10.79	10.83	10.83	10.87	10.87	10.85	10.86	10.89	10.92	10.92	10.95	10.93					
140	10.66	10.71	10.74	10.76	10.75	10.79	10.77	10.80	10.79	10.83	10.83	10.85	10.85	10.84	10.87	10.92	10.91	10.92	10.92	10.92					
150	10.66	10.70	10.74	10.76	10.75	10.77	10.77	10.80	10.79	10.82	10.83	10.84	10.85	10.85	10.84	10.87	10.91	10.90	10.93	10.92					
Dissolved Oxygen (g m <sup>-3</sup> )																									
Depth (m)	10.50	9.50	10.64	11.24	9.90	10.12	9.83	9.57	9.00	8.73	8.76	8.60	8.64	8.30	9.17	9.54	9.85	10.07	10.22	10.49					
0	10.50	9.50	10.64	11.24	9.90	10.12	9.83	9.57	9.00	8.73	8.76	8.60	8.64	8.30	9.17	9.54	9.85	10.07	10.22	10.49					
10	11.42	11.29	10.52	10.92	9.80	9.78	9.68	9.32	8.37	8.00	7.98	8.63	8.64	8.73	9.64	10.26	10.71	10.30	10.27	10.62					
20	11.57	11.60	10.50	10.62	9.68	9.76	9.52	10.10	9.06	8.74	7.96	8.61	8.69	9.15	9.93	10.81	11.21	10.84	10.09	10.53					
30	11.65	11.63	10.44	10.71	9.64	9.75	9.29	10.07	9.52	8.57	7.91	8.72	8.99	9.55	9.86	10.72	10.99	10.92	10.10	10.40					
40	11.35	11.59	10.41	10.13	9.51	9.54	9.18	9.70	9.31	8.86	8.23	9.26	9.40	10.06	10.23	10.51	10.91	11.05	10.07	10.32					
50	11.30	11.63	10.37	10.17	9.47	9.56	9.05	9.58	9.14	8.55	8.08	9.17	9.33	9.63	9.78	10.15	10.57	10.97	10.07	10.36					
60	11.04	11.67	10.31	10.03	9.34	9.32	8.86	9.24	8.86	8.41	7.90	8.84	8.84	9.13	9.67	9.44	9.26	9.54	8.80	10.34					
70	10.73	11.81	10.25	10.04	9.31	9.27	8.81	9.29	8.71	8.29	7.66	8.70	8.76	9.11	9.12	9.28	9.01	9.41	8.62	10.38					
80	10.04	11.58	10.22	9.85	9.25	8.90	8.75	9.03	8.49	8.10	7.51	8.28	8.43	8.92	9.08	9.13	8.65	8.96	8.10	10.29					
90	9.68	11.21	10.18	9.87	9.19	8.90	8.72	9.24	8.47	7.93	7.42	8.19	8.31	9.03	8.46	9.06	8.72	8.91	8.06	10.28					
100	9.25	10.56	10.15	9.64	9.17	8.78	8.73	8.80	8.31	7.70	7.33	7.93	8.03	8.53	8.22	8.59	8.37	8.68	7.81	10.31					
110	9.06	10.35	10.10	9.67	9.11	8.73	8.64	9.12	8.35	7.56	7.26	7.90	8.00	8.55	8.06	8.60	8.27	8.53	7.72	10.29					
120	8.71	9.83	10.06	9.43	9.04	8.61	8.66	8.84	8.07	7.46	7.18	7.86	7.95	8.40	7.92	8.27	7.91	8.45	7.67	10.29					
130	8.66	9.44	10.05	9.49	8.95	8.60	8.66	8.67	8.04	7.45	7.16	7.85	7.91	8.35	7.42	8.06	7.84	8.08	7.54	10.30					
140	8.59	9.34	10.10	8.83	8.84	8.36	8.66	8.62	7.50	7.42	7.16	7.80	7.79	7.43	7.48	7.72	7.62	7.81	7.15	10.25					
150	8.33	9.10	9.96	8.71	8.81	8.17	8.66	8.51	7.46	7.30	7.16	7.47	7.51	7.52	6.98	7.24	7.40	7.30	7.00	10.20					
Secchi depth																									
(m)	14.5	12.8	11	10.5	10.8	12.5	11.5	14.2	17	11	17	12	19	15	17	16.5	17	14	13	16					

**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**

Mid-Lake site A for the period starting 6 July 2009

**2009-2010**

**Temperature**

Date	6/07/2009	13/08/2009	7/09/2009	17/09/2009	19/10/2009	12/11/2009	17/12/2009	13/01/2010	2/02/2010	11/02/2010	18/02/2010	10/03/2010	8/04/2010	28/04/2010	20/05/2010	3/06/2010	23/06/2010	13/07/2010	10/08/2010
Depth (m)																			
0	10.93	10.43	10.56	11.63	11.72	13.00	16.99	17.89	19.23	20.60	20.45	20.08	17.36	16.38	15.09	14.11	12.23	11.31	11.01
10	10.93	10.41	10.52	11.08	11.25	12.54	16.25	17.89	19.15	20.53	20.40	20.04	17.35	16.31	15.09	14.00	12.25	11.29	10.96
20	10.92	10.41	10.51	10.71	11.24	12.43	15.85	17.56	17.60	18.34	18.73	19.69	17.35	16.30	15.09	13.99	12.23	11.29	10.95
30	10.92	10.41	10.47	10.57	11.20	12.19	13.45	13.21	13.95	14.51	13.91	15.56	17.34	16.12	15.08	13.99	12.25	11.28	10.95
40	10.91	10.38	10.47	10.50	10.98	11.77	12.54	11.65	11.92	12.03	12.23	12.28	12.72	12.41	11.71	12.21	11.28	10.95	
50	10.92	10.36	10.47	10.49	10.67	11.40	11.34	11.20	11.13	11.07	11.10	11.20	11.19	11.21	11.25	11.12	11.02	11.28	10.95
60	10.92	10.36	10.46	10.48	10.58	10.97	10.86	11.02	10.86	10.88	10.86	10.84	10.82	10.85	10.88	10.90	10.84	11.26	10.94
70	10.92	10.36	10.46	10.48	10.53	10.67	10.68	10.71	10.68	10.67	10.68	10.67	10.73	10.73	10.77	10.72	11.01	10.94	
80	10.91	10.35	10.46	10.47	10.50	10.56	10.57	10.59	10.59	10.62	10.63	10.62	10.65	10.66	10.69	10.69	10.96	10.92	
90	10.92	10.34	10.46	10.47	10.49	10.54	10.53	10.51	10.55	10.58	10.57	10.58	10.60	10.60	10.63	10.65	10.67	10.79	10.84
100	10.92	10.34	10.46	10.46	10.47	10.50	10.49	10.51	10.52	10.55	10.53	10.56	10.57	10.59	10.60	10.63	10.65	10.75	10.81
110	10.91	10.33	10.46	10.46	10.46	10.48	10.51	10.52	10.52	10.51	10.53	10.57	10.56	10.58	10.61	10.64	10.70	10.75	
120	10.91	10.33	10.44	10.45	10.44	10.44	10.46	10.49	10.50	10.51	10.51	10.52	10.55	10.55	10.57	10.59	10.64	10.68	10.73
130	10.91	10.33	10.36	10.42	10.43	10.42	10.44	10.48	10.49	10.50	10.50	10.51	10.53	10.54	10.55	10.56	10.62	10.67	10.71
140	10.90	10.33	10.35	10.38	10.41	10.40	10.44	10.47	10.49	10.50	10.50	10.51	10.53	10.54	10.55	10.56	10.61	10.66	10.71
150	10.90	10.30	10.35	10.38	10.41	10.40	10.44	10.46	10.49	10.50	10.51	10.53	10.54	10.55	10.56	10.61	10.66	10.70	

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)																			
0	8.91	9.83	9.37	10.58	11.67	9.88	9.66	9.48	9.29	9.47	9.34	8.84	9.48	10.48	10.57	10.44	10.54	10.50	9.50
10	9.88	10.72	10.29	11.08	12.13	10.80	9.63	9.18	9.26	9.40	9.32	8.28	10.17	10.17	11.29	10.25	10.86	11.42	11.29
20	11.06	11.48	10.48	11.00	11.79	10.78	9.58	9.62	9.38	9.71	9.59	8.75	9.66	9.39	10.84	10.34	10.40	11.57	11.60
30	11.31	11.57	10.49	10.68	11.78	10.84	9.71	9.34	9.17	9.65	9.45	8.92	9.43	9.09	10.63	10.39	10.38	11.65	11.63
40	11.28	11.39	10.46	10.40	11.24	10.56	9.31	9.15	8.86	8.72	8.75	8.60	9.04	8.53	9.06	9.39	10.28	11.35	11.59
50	11.29	11.39	10.36	10.31	11.10	10.47	9.29	8.78	8.36	8.21	8.44	8.14	8.57	8.13	8.68	9.26	9.46	11.30	11.63
60	11.03	11.20	10.18	10.15	10.10	9.86	8.78	8.68	8.06	7.94	7.99	7.73	8.31	7.92	8.11	8.93	9.04	11.04	11.67
70	11.05	11.16	10.21	10.12	10.02	9.86	8.60	8.31	7.88	7.76	7.97	7.59	8.11	7.84	8.08	8.84	8.82	10.73	11.81
80	10.83	10.86	10.09	10.11	9.70	9.24	8.34	8.27	7.69	7.74	7.70	7.51	7.97	7.70	8.03	8.54	8.55	10.04	11.58
90	10.87	10.97	10.16	10.02	9.72	9.26	8.25	7.97	7.47	7.55	7.68	7.38	7.74	7.56	7.70	8.44	8.37	9.68	11.21
100	10.68	10.87	10.23	10.03	9.51	8.60	8.17	7.71	7.37	7.54	7.41	7.25	7.43	7.42	7.51	8.18	8.26	9.25	10.56
110	10.72	10.90	10.30	9.95	9.50	8.60	8.05	7.50	7.23	7.37	7.43	7.22	7.27	7.27	7.39	8.10	8.09	9.06	10.35
120	10.55	10.86	9.91	10.26	9.20	8.20	7.98	7.55	7.23	7.19	7.17	7.15	7.11	7.08	7.17	7.95	8.03	8.71	9.83
130	10.55	10.71	9.80	10.00	9.18	8.15	7.87	7.37	7.18	7.20	7.12	6.98	7.09	7.05	7.11	7.90	8.00	8.66	9.44
140	10.48	10.80	9.52	9.69	8.82	7.70	7.62	7.42	6.90	6.95	6.71	6.57	6.82	6.77	6.79	7.18	7.85	8.59	9.34
150	10.30	10.77	9.46	9.47	8.79	7.72	7.41	7.25	6.88	6.93	6.65	6.46	6.75	6.73	7.17	7.84	8.33	9.10	

**Secchi depth**

(m)	15	12	15	*	13	12.5	15	14.5	16	*	17	19	21.5	19	19.5	14.5	14	14.5	12.8
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**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**

Mid-Lake site A for the period starting 11 September 2007

**2008-2009**

**Temperature**

Date	4/09/2008	16/09/2008	14/10/2008	4/11/2008	26/11/2008	22/12/2008	13/01/2009	22/01/2009	28/01/2009	11/02/2009	25/02/2009	16/03/2009	26/03/2009	15/04/2009	7/05/2009	27/05/2009	18/06/2009	6/07/2009	13/08/2009
<b>Depth (m)</b>																			
0	10.97	11.34	12.59	13.37	15.45	18.84	19.67	19.84	20.88	21.42	20.46	18.71	17.96	16.60	15.05	12.97	11.60	10.93	10.43
10	10.92	11.14	12.09	12.94	15.26	17.50	19.55	19.23	20.17	21.21	20.39	18.29	17.95	16.59	15.04	12.96	11.61	10.93	10.41
20	10.85	10.99	11.93	12.62	15.17	15.77	16.97	19.12	18.45	20.04	20.37	18.25	17.94	16.59	15.04	12.96	11.61	10.92	10.41
30	10.82	10.93	11.85	12.55	12.87	13.32	13.60	13.90	13.21	13.92	14.47	16.68	13.86	16.58	15.04	12.90	11.61	10.92	10.41
40	10.79	10.91	11.75	12.35	12.07	12.27	12.19	12.11	11.90	12.09	12.84	12.43	12.13	12.53	12.55	12.62	11.60	10.91	10.38
50	10.75	10.88	11.59	11.51	11.44	11.39	11.33	11.52	11.31	11.50	11.62	11.56	11.45	11.56	11.64	11.50	11.60	10.92	10.36
60	10.72	10.79	10.90	10.83	10.93	11.06	11.08	11.04	11.05	11.19	11.18	11.22	11.19	11.12	11.17	11.06	11.60	10.92	10.36
70	10.69	10.69	10.76	10.79	10.78	10.88	10.89	10.90	10.89	10.97	10.92	10.98	10.98	10.98	11.01	10.94	11.60	10.92	10.36
80	10.66	10.68	10.71	10.72	10.76	10.81	10.82	10.87	10.84	10.86	10.87	10.88	10.89	10.92	10.93	10.90	11.59	10.91	10.35
90	10.66	10.66	10.69	10.70	10.77	10.78	10.78	10.81	10.80	10.81	10.82	10.83	10.84	10.88	10.89	10.88	11.41	10.92	10.34
100	10.65	10.65	10.68	10.68	10.82	10.75	10.76	10.80	10.78	10.77	10.79	10.81	10.81	10.86	10.86	10.86	11.09	10.92	10.34
110	10.64	10.64	10.66	10.67	10.78	10.73	10.75	10.78	10.74	10.76	10.77	10.80	10.79	10.84	10.86	10.85	11.00	10.91	10.33
120	10.63	10.64	10.64	10.65	10.78	10.71	10.73	10.77	10.74	10.75	10.76	10.79	10.78	10.82	10.84	10.84	10.98	10.91	10.33
130	10.63	10.63	10.60	10.63	10.79	10.70	10.72	10.74	10.73	10.73	10.75	10.77	10.77	10.79	10.82	10.82	10.95	10.91	10.33
140	10.63	10.62	10.59	10.63	10.81	10.70	10.72	10.73	10.72	10.73	10.74	10.77	10.76	10.78	10.80	10.81	10.94	10.90	10.33
150	10.62	10.62	10.59	10.63	10.80	10.70	10.71	10.74	10.72	10.73	10.74	10.76	10.76	10.78	10.80	10.81	10.89	10.90	10.30

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.03	9.84	10.29	*	10.09	9.29	8.67	9.24	8.52	8.48	*	9.26	9.44	9.33	10.05	10.13	10.47	8.91	9.83
10	10.85	10.65	10.29	*	10.08	9.72	9.21	8.89	8.45	8.34	*	9.16	10.06	10.11	10.15	10.25	10.73	9.88	10.72	
20	10.90	11.05	10.50	*	10.00	9.39	8.88	8.68	8.47	8.19	*	9.40	10.55	10.76	10.15	10.13	10.59	11.06	11.48	
30	11.12	10.91	10.46	*	9.79	9.81	9.02	8.53	8.54	8.20	*	9.12	10.34	10.83	10.15	10.17	10.57	11.31	11.57	
40	10.76	10.82	10.34	*	9.23	9.69	8.96	8.46	8.06	8.36	*	8.24	9.86	10.39	9.15	9.78	10.56	11.28	11.39	
50	10.88	10.63	10.05	*	9.10	9.05	8.49	8.06	7.98	7.92	*	7.97	9.25	9.58	8.91	9.47	10.49	11.29	11.39	
60	10.74	10.55	9.89	*	8.54	8.77	8.25	7.91	7.81	7.80	*	7.62	8.97	9.06	8.67	8.73	10.40	11.03	11.20	
70	10.52	10.25	9.86	*	8.60	8.53	8.10	7.64	7.74	7.71	*	7.55	8.94	8.84	8.51	8.60	10.43	11.05	11.16	
80	10.48	10.20	9.81	*	8.43	8.47	7.98	7.46	7.66	7.64	*	7.44	8.54	8.21	7.79	8.25	10.43	10.83	10.86	
90	10.34	10.13	9.85	*	8.44	8.21	7.92	7.38	7.56	7.60	*	7.37	8.45	8.24	7.79	8.24	10.25	10.87	10.97	
100	10.28	10.10	10.03	*	8.20	8.22	7.78	7.25	7.53	7.44	*	7.26	8.24	8.07	7.65	8.10	8.65	10.68	10.87	
110	9.79	10.00	10.13	*	8.31	7.99	7.67	7.22	7.47	7.31	*	7.20	8.26	8.12	7.62	8.06	8.53	10.72	10.90	
120	9.62	9.97	10.09	*	8.04	7.91	7.63	7.17	7.32	7.26	*	7.01	7.94	8.02	7.63	7.79	8.17	10.55	10.86	
130	9.42	9.75	9.83	*	8.09	7.70	7.48	7.21	7.24	7.04	*	7.03	7.93	8.15	7.59	7.83	8.11	10.55	10.71	
140	9.37	9.52	9.76	*	7.88	7.59	7.40	7.24	7.08	6.92	*	6.68	7.08	8.01	7.74	7.49	7.99	10.48	10.80	
150	9.17	9.24	9.85	*	7.85	7.48	7.25	7.03	6.90	6.72	*	6.59	6.91	7.55	7.35	7.30	7.97	10.30	10.77	

**Secchi depth**

(m)	13.0	14.5	12.2	12.0	10.0	12.0	13.0	14.8	18.0	22.0	20.0	15.6	18.5	18.0	16.0	15.0	16.0	15.0	12.0
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**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**

**2007-2008**

**Mid-Lake site A for the period starting 11 September 2007**

**Temperature**

Date	11/9/2007	9/10/2007	30/10/2007	15/11/2007	4/12/2007	20/12/2007	17/01/2008	31/01/2008	14/02/2008	27/02/2008	13/03/2008	26/03/2008	17/04/2008	7/05/2008	22/05/2008	5/06/2008	19/06/2008	1/07/2008	15/07/2008	7/08/2008	20/08/2008
Depth (m)																					
0	11.00	12.33	12.84	13.47	16.64	17.38	21.23	19.79	19.87	19.28	18.83	19.26	17.88	15.67	14.65	13.60	12.89	11.97	11.42	11.06	10.70
10	10.99	11.69	11.83	13.19	16.20	17.15	19.96	19.62	19.81	19.26	18.75	19.24	17.87	15.67	14.65	13.60	12.90	12.03	11.41	10.98	10.70
20	10.98	11.67	11.76	12.92	14.48	14.76	17.21	17.59	19.65	19.24	18.75	18.92	17.85	15.67	14.65	13.59	12.90	12.03	11.40	10.98	10.69
30	10.99	11.44	11.70	12.86	12.58	13.19	13.64	13.82	16.07	14.08	16.20	16.92	15.58	15.67	14.65	13.60	12.90	12.01	11.40	10.98	10.69
40	10.99	11.42	11.64	12.78	12.02	12.18	12.26	12.31	12.63	12.24	12.54	12.44	12.38	15.27	12.27	13.60	12.90	12.03	11.40	10.98	10.69
50	10.99	11.39	11.51	11.80	11.69	11.75	11.64	11.61	11.80	11.71	11.76	11.77	11.72	12.11	11.66	11.93	12.86	12.03	11.39	10.99	10.70
60	10.99	11.34	11.43	11.49	11.42	11.53	11.41	11.39	11.47	11.44	11.47	11.48	11.48	11.56	11.44	11.54	11.60	12.03	11.39	10.98	10.70
70	10.99	11.16	11.32	11.37	11.29	11.33	11.23	11.26	11.33	11.30	11.34	11.29	11.34	11.37	11.32	11.37	11.36	11.61	11.38	10.98	10.70
80	10.96	11.00	11.23	11.31	11.25	11.23	11.22	11.17	11.25	11.25	11.24	11.23	11.27	11.29	11.27	11.29	11.27	11.39	11.38	10.98	10.70
90	10.96	10.98	11.16	11.17	11.14	11.12	11.12	11.11	11.19	11.18	11.18	11.17	11.20	11.21	11.22	11.24	11.23	11.29	11.35	10.98	10.70
100	10.96	10.98	11.07	11.10	11.10	11.09	11.12	11.09	11.15	11.14	11.14	11.14	11.17	11.16	11.18	11.21	11.21	11.28	11.30	10.98	10.70
110	10.96	10.97	11.04	11.04	11.07	11.04	11.06	11.08	11.11	11.11	11.11	11.12	11.14	11.16	11.16	11.19	11.19	11.28	11.25	10.98	10.70
120	10.96	10.96	11.02	11.02	11.05	11.03	11.04	11.06	11.07	11.09	11.09	11.11	11.15	11.15	11.16	11.17	11.25	11.22	10.98	10.70	
130	10.96	10.96	11.00	11.00	11.02	11.00	11.02	11.05	11.06	11.07	11.07	11.09	11.12	11.12	11.13	11.15	11.15	11.22	11.20	10.98	10.70
140	10.96	10.96	10.98	10.97	10.99	11.01	11.00	11.05	11.05	11.06	11.06	11.08	11.11	11.11	11.12	11.13	11.15	11.17	11.19	10.98	10.70
150	10.96	10.95	10.96	10.95	10.98	10.99	11.00	11.04	11.04	11.05	11.06	11.08	11.11	11.10	11.12	11.13	11.15	11.16	11.19	10.98	10.70

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)																					
0	11.00	10.23	10.18	10.03	9.35	9.21	8.61	*	10.77	9.20	9.38	9.87	9.49	9.91	10.13	10.36	10.53	10.75	10.89	10.21	9.55
10	11.12	10.37	10.27	10.11	9.45	9.24	8.63	*	8.76	9.09	9.05	8.61	8.97	9.04	9.37	9.84	10.26	10.63	10.66	11.03	10.80
20	10.87	10.12	10.25	10.07	9.23	9.21	8.70	*	9.00	9.32	9.24	8.85	8.46	8.97	9.18	9.72	10.14	10.32	10.51	11.04	11.16
30	10.99	10.17	10.07	10.17	9.36	9.37	8.93	*	9.35	9.45	9.01	8.73	8.52	8.86	9.16	9.63	10.10	10.37	10.48	10.94	11.11
40	10.84	9.92	10.02	9.97	9.09	9.09	8.69	*	9.01	8.92	8.96	8.57	8.72	8.87	8.68	9.81	10.12	10.40	10.42	10.72	11.08
50	10.92	10.09	9.85	9.66	9.08	9.21	8.67	*	8.64	8.82	8.60	8.51	8.48	8.45	8.56	9.22	10.10	10.31	10.52	10.83	11.07
60	11.07	9.96	9.52	9.75	9.14	8.69	8.60	8.70	8.44	8.49	8.34	8.15	8.20	8.25	8.58	8.96	9.51	10.36	10.45	10.60	11.05
70	10.89	9.90	9.77	9.30	8.74	8.69	8.26	8.22	8.19	8.15	8.02	7.79	7.84	7.89	8.37	8.65	9.07	10.28	10.39	10.76	10.98
80	10.90	9.59	9.58	9.12	8.76	8.38	8.03	8.05	8.16	7.88	7.92	7.52	7.71	7.90	8.30	8.53	8.91	9.60	10.34	10.74	10.96
90	10.66	9.63	9.42	9.07	8.62	8.46	8.10	8.06	7.99	7.87	7.76	7.47	7.57	7.68	8.22	8.45	8.72	9.18	10.23	10.73	10.91
100	10.64	9.58	9.49	9.14	8.46	8.41	7.90	7.90	7.97	7.86	7.69	7.45	7.45	7.46	8.14	8.44	8.66	9.06	9.93	10.72	10.90
110	10.62	9.57	9.16	8.83	8.37	8.46	7.83	7.87	7.81	7.64	7.50	7.20	7.29	7.38	8.03	8.19	8.43	8.72	9.34	10.68	10.84
120	10.66	9.52	9.27	8.95	8.42	8.08	7.95	7.52	7.82	7.39	7.45	7.20	7.29	7.38	7.94	8.16	8.32	8.55	8.94	10.67	10.83
130	10.42	9.35	9.01	8.81	8.31	8.13	7.72	7.40	7.59	7.41	7.27	7.16	7.18	7.19	7.86	8.14	8.31	8.79	10.63	10.57	
140	10.40	9.30	9.11	8.81	8.28	7.88	7.74	7.27	7.62	7.05	7.10	7.10	7.13	7.17	7.81	7.61	8.01	8.25	8.48	10.62	10.38
150	10.37	9.13	8.91	8.45	7.95	7.95	7.33	7.35	7.27	7.00	6.76	6.59	6.72	6.85	7.40	7.50	7.73	8.08	8.48	10.57	9.67

**Secchi depth**

(m)	11	15	16	14	15	17.5	22.5	21.5	25	22	22	19	20.5	16	17	15	16.5	14	13	12.5	12.5
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**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**

Mid-Lake site A for the period starting 4 September 2006

**2006-2007**

**Temperature**

Date	4/09/2006	26/09/2006	18/10/2006	1/11/2006	5/12/2006	19/12/2006	9/01/2007	25/01/2007	8/02/2007	21/02/2007	21/03/2007	3/04/2007	19/04/2007	8/05/2007	22/05/2007	14/06/2007	27/06/2007	18/07/2007	8/08/2007	23/08/2007	11/09/2007
<b>Depth (m)</b>																					
0	11.10	11.88	11.72	12.43	15.21	15.62	16.51	18.60	19.31	19.58	18.70	18.04	16.49	19.29	15.17	13.56	12.38	11.43	11.15	11.00	11.00
10	10.93	11.48	11.73	12.27	14.06	15.46	16.41	18.42	18.98	19.12	18.03	18.03	16.48	18.98	15.16	13.56	12.39	11.43	11.15	11.00	10.99
20	10.93	11.29	11.72	12.25	13.87	14.45	15.44	17.96	18.16	17.62	17.99	17.94	16.47	18.16	15.16	13.56	12.39	11.43	11.16	11.00	10.98
30	10.89	11.19	11.69	12.20	13.69	14.15	14.42	15.82	14.86	15.17	15.18	16.72	16.47	14.86	15.16	13.56	12.39	11.36	11.15	11.00	10.99
40	10.87	11.15	11.45	12.10	13.16	12.43	12.25	13.05	12.89	13.09	12.65	13.50	13.78	12.89	15.15	13.56	12.39	11.29	11.16	11.00	10.99
50	10.83	11.08	11.34	11.96	11.77	11.64	11.74	11.84	11.89	11.91	11.94	12.33	12.47	11.89	11.99	13.55	12.39	11.27	11.16	11.00	10.99
60	10.82	11.06	11.25	11.34	11.20	11.36	11.29	11.47	11.39	11.46	11.51	11.65	11.69	11.39	11.54	11.77	12.38	11.25	11.15	11.00	10.99
70	10.82	11.00	11.21	11.17	11.11	11.21	11.15	11.26	11.21	11.22	11.28	11.33	11.21	11.33	11.35	11.39	11.22	11.16	11.01	10.99	
80	10.82	10.94	11.16	11.06	11.06	11.10	11.09	11.14	11.15	11.16	11.22	11.20	11.15	11.21	11.22	11.28	11.17	11.16	11.01	10.96	
90	10.81	10.90	11.08	10.99	10.97	11.03	11.03	11.04	11.06	11.05	11.09	11.11	11.13	11.06	11.12	11.11	11.22	11.14	11.16	11.01	10.96
100	10.81	10.87	10.97	10.94	10.94	11.00	11.00	11.00	11.03	11.05	11.05	11.10	11.09	11.03	11.10	11.10	11.16	11.13	11.16	11.01	10.96
110	10.81	10.84	10.89	10.91	10.91	10.96	10.98	10.98	11.01	11.02	11.03	11.04	11.05	11.01	11.07	11.09	11.12	11.12	11.16	11.01	10.96
120	10.80	10.81	10.86	10.88	10.90	10.94	10.97	10.99	11.06	11.02	11.02	11.04	11.04	11.06	11.07	11.08	11.11	11.12	11.16	11.01	10.96
130	10.79	10.79	10.85	10.85	10.88	10.92	10.95	10.97	10.99	10.99	11.01	11.01	11.03	10.99	11.03	11.07	11.08	11.11	11.16	11.01	10.96
140	10.76	10.78	10.83	10.84	10.88	10.89	10.94	10.97	10.97	10.98	10.99	11.00	11.02	10.97	11.03	11.05	11.07	11.10	11.16	11.01	10.96
150	10.75	10.76	10.82	10.85	10.88	10.91	10.93	10.99	10.96	11.02	11.04	11.03	11.02	11.00	11.04	11.05	11.07	11.10	11.16	11.01	10.96

**Dissolved Oxygen (g m<sup>-3</sup>)**

<b>Depth (m)</b>																					
0	10.52	10.31	10.36	10.23	9.62	9.52	9.35	8.99	8.95	9.16	9.31	9.44	9.74	9.20	10.01	10.01	10.26	10.36	10.96	11.02	11.00
10	10.47	10.28	10.31	10.16	9.69	9.52	9.52	8.95	8.96	9.26	9.27	9.51	9.73	9.29	10.06	9.95	10.37	10.43	11.08	11.05	11.12
20	10.33	10.25	10.23	10.14	9.56	9.43	9.64	8.95	8.77	9.22	9.27	9.45	9.84	9.08	10.12	9.83	10.48	10.56	11.05	11.15	10.87
30	10.23	10.22	10.27	10.07	9.48	9.50	9.49	8.61	8.78	9.21	8.52	9.30	9.75	9.09	10.06	9.74	10.25	10.27	10.89	11.01	10.99
40	10.13	10.10	10.14	10.08	9.38	9.39	9.47	8.84	8.95	9.08	8.94	8.86	9.26	9.28	9.87	9.71	10.17	10.11	10.89	10.92	10.84
50	10.00	9.96	9.99	10.03	9.05	9.05	9.28	9.33	8.66	8.68	8.71	8.77	8.87	9.11	9.00	9.39	9.70	10.12	9.88	10.67	10.90
60	9.91	10.06	9.93	9.73	9.15	8.97	9.15	8.61	8.62	8.63	8.72	8.76	9.00	8.93	8.83	9.28	10.23	9.84	10.67	10.84	11.07
70	9.82	9.95	9.83	9.54	8.79	8.89	9.02	8.53	8.48	8.57	8.76	8.82	8.96	8.78	8.90	8.45	9.67	9.60	10.67	10.68	10.89
80	9.88	9.83	9.82	9.51	8.66	8.85	8.85	8.34	8.47	8.41	8.62	8.49	8.89	8.78	8.62	8.42	9.34	9.39	10.78	10.88	10.90
90	9.78	9.71	9.71	9.33	8.69	8.67	8.75	8.29	8.29	8.40	8.54	8.53	8.70	8.59	8.66	7.89	8.47	8.36	10.67	10.73	10.66
100	9.82	9.69	9.65	9.30	8.49	8.46	8.65	7.99	8.21	8.01	8.36	8.23	8.58	8.51	8.13	7.66	8.56	8.20	10.79	10.67	10.64
110	9.73	9.62	9.47	9.21	8.40	8.38	8.38	8.02	8.04	7.95	8.22	8.24	8.41	8.33	8.20	7.74	8.40	7.87	10.66	10.70	10.62
120	9.79	9.38	9.37	9.08	8.34	8.33	8.38	7.88	7.84	7.72	8.02	8.01	8.24	8.12	7.74	7.69	8.30	7.92	10.61	10.76	10.66
130	9.65	9.35	9.29	9.00	8.24	8.26	8.27	7.81	7.91	7.71	7.58	8.09	8.01	8.19	7.74	7.54	7.95	7.75	10.52	10.55	10.42
140	9.61	9.38	9.10	8.94	8.22	8.21	8.14	7.75	7.86	7.61	7.58	7.72	7.66	8.15	7.34	7.35	7.94	7.74	10.50	10.75	10.40
150	9.65	9.13	9.02	8.69	7.96	7.82	7.89	7.45	7.25	7.35	7.25	7.25	7.32	7.50	7.18	7.39	7.58	7.55	10.46	10.54	10.37

**Secchi depth**

(m)	11	17.5	13	14.5	16	15.5	13.5	14.5	16	18.2	16.5	19	16	16	18.5	18	18.5	14.5	14	13	11
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

Mid-Lake site A for the period starting 17 August 2005

2005-2006

**Temperature**

Date	17/08/2005	31/08/2005	14/09/2005	29/09/2005	12/10/2005	25/10/2005	10/11/2005	1/12/2005	10/01/2006	2/02/2006	1/03/2006	12/04/2006	27/04/2006	9/05/2006	30/05/2006	27/06/2006	11/07/2006	25/07/2006	4/09/2006
Depth (m)																			
0	11.17	11.74	12.42	11.91	11.92	13.40	16.10	15.09	17.40	20.20	19.50	16.71	16.31	15.70	14.21	11.94	11.51	11.15	11.10
10	10.98	11.24	11.76	11.68	11.79	12.84	14.59	14.93	17.10	20.11	19.50	16.72	16.29	15.70	14.21	11.99	11.51	11.15	10.93
20	10.97	11.10	11.22	11.67	11.76	12.17	14.27	14.22	16.85	18.15	19.25	16.72	16.29	15.70	14.21	11.99	11.50	11.15	10.93
30	10.97	11.05	11.05	11.66	11.66	11.63	12.36	13.34	14.84	15.46	16.14	16.71	16.29	15.70	14.21	11.99	11.48	11.15	10.89
40	10.97	11.00	11.01	11.60	11.47	11.47	11.66	12.32	12.21	13.40	12.93	16.48	13.96	13.40	14.20	11.99	11.48	11.15	10.87
50	10.97	10.98	10.98	11.18	11.39	11.29	11.27	11.66	11.60	11.75	11.57	12.00	12.20	11.94	14.16	11.99	11.48	11.15	10.83
60	10.97	10.97	10.99	11.02	11.37	11.17	11.15	11.26	11.21	11.35	11.35	11.53	11.56	11.36	11.54	11.39	11.47	11.15	10.82
70	10.96	10.97	10.97	10.97	11.26	11.06	11.04	11.11	11.13	11.19	11.16	11.29	11.30	11.23	11.27	11.21	11.46	11.15	10.82
80	10.97	10.96	10.97	10.97	11.13	10.99	11.00	11.06	11.06	11.11	11.14	11.19	11.19	11.14	11.19	11.16	11.45	11.15	10.82
90	10.96	10.96	10.96	10.96	11.07	10.97	10.98	11.01	11.05	11.06	11.06	11.12	11.12	11.10	11.16	11.15	11.42	11.15	10.81
100	10.96	10.95	10.96	10.95	11.01	10.97	10.97	10.98	11.04	11.04	11.05	11.08	11.08	11.09	11.12	11.14	11.23	11.15	10.81
110	10.96	10.94	10.94	10.94	10.98	10.94	10.95	10.97	11.02	11.02	11.05	11.05	11.07	11.06	11.11	11.14	11.20	11.15	10.81
120	10.96	10.94	10.93	10.93	10.98	10.94	10.94	10.97	11.00	11.02	11.05	11.03	11.06	11.06	11.09	11.13	11.19	11.15	10.80
130	10.96	10.93	10.93	10.92	10.96	10.93	10.93	10.96	10.99	11.00	11.03	11.02	11.05	11.04	11.07	11.13	11.18	11.15	10.79
140	10.95	10.93	10.91	10.91	10.96	10.93	10.94	10.96	10.99	11.00	11.00	11.02	11.04	11.03	11.07	11.12	11.18	11.15	10.76
150	10.93	10.93	10.89	10.91	10.96	10.92	10.96	10.97	10.98	10.99	11.00	11.02	11.04	11.04	11.07	11.10	11.14	11.15	10.75

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.52	10.47	10.26	10.35	10.38	10.04	9.95	9.70	9.23	9.00	9.20	9.33	9.39	9.46	9.97	10.29	10.84	10.54	10.52
10	10.55	10.47	10.26	10.47	10.49	9.98	9.99	9.94	9.38	9.39	9.24	9.15	9.96	9.59	10.49	10.27	10.88	10.94	10.47	
20	10.41	10.26	10.37	10.39	10.40	10.04	9.88	9.69	9.37	9.20	9.43	9.51	9.39	9.47	9.97	10.30	10.77	10.59	10.33	
30	10.39	10.28	10.19	10.39	10.44	9.89	9.74	9.26	8.96	8.94	8.99	9.23	9.31	9.50	10.21	10.22	10.76	10.54	10.23	
40	10.31	9.80	9.40	10.32	10.25	9.61	9.48	9.74	8.95	8.69	9.02	8.92	8.82	8.90	9.98	10.22	10.74	10.34	10.13	
50	10.29	9.66	9.39	10.20	10.23	9.51	9.36	9.63	8.61	8.59	8.91	8.61	8.70	8.51	10.10	10.16	10.71	10.54	10.00	
60	10.17	9.57	9.18	9.83	9.92	9.14	8.65	9.08	8.69	8.22	8.78	8.49	8.31	8.29	9.25	9.64	10.70	10.38	9.91	
70	10.13	9.41	9.26	9.63	9.86	9.03	8.83	8.80	8.50	8.20	8.52	8.20	8.51	8.26	8.87	8.85	10.64	10.45	9.82	
80	10.06	9.38	9.01	9.46	9.63	8.76	8.50	8.78	8.21	8.04	8.19	7.94	8.17	8.19	8.47	8.42	10.47	10.36	9.88	
90	10.05	9.42	9.07	9.38	9.68	8.76	8.59	8.40	8.12	8.07	7.82	7.98	8.10	8.08	8.33	8.15	10.46	10.44	9.78	
100	10.04	9.41	8.86	9.20	9.33	8.54	8.35	8.39	7.96	7.88	7.89	8.05	8.12	8.06	8.16	8.05	9.65	10.34	9.82	
110	10.04	9.37	8.88	9.12	9.24	8.49	8.41	8.35	7.92	7.94	7.85	7.91	7.84	7.96	8.11	7.96	8.87	10.35	9.73	
120	9.96	9.23	8.56	9.03	9.13	8.44	8.22	8.28	7.89	7.62	7.86	7.44	7.57	7.77	8.04	7.89	8.41	10.17	9.79	
130	9.93	9.14	8.56	8.96	9.07	8.40	8.27	8.20	7.82	7.78	7.72	7.58	7.49	7.66	8.04	7.84	8.31	10.33	9.65	
140	9.32	8.94	8.38	8.79	9.01	8.38	7.92	8.08	7.62	7.36	7.67	7.34	7.32	7.58	7.99	7.82	8.29	10.39	9.61	
150	8.63	8.57	8.20	8.56	8.94	8.24	7.86	8.00	7.39	7.28	7.34	7.19	7.15	7.23	7.57	7.61	8.14	10.28	9.65	

**Secchi depth**

(m)	13	13	13	14	14	15	17.5	19.3	19	15.5	15.3	15.8	17	17.5	18.2	15.2	13.5	12	11
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**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**

Mid-Lake site A for the period starting 24 August 2004

**2004-2005**

**Temperature**

Depth (m)	24/08/2004	7/09/2004	21/10/2004	2/11/2004	22/11/2004	15/12/2004	11/01/2005	25/01/2005	9/02/2005	22/02/2005	10/03/2005	21/03/2005	14/04/2005	18/05/2005	9/06/2005	20/06/2005	20/07/2005	3/08/2005	17/08/2005	31/08/2005	14/09/2005
0	10.92	10.70	11.75	12.94	15.31	14.17	16.97	19.27	20.73	20.05	19.25	19.34	17.92	14.33	12.98	12.67	11.46	11.12	11.17	11.74	12.42
10	10.83	10.66	11.61	12.89	15.15	14.10	16.01	18.05	20.19	19.73	19.24	19.17	17.96	14.31	12.99	12.47	11.31	11.11	10.98	11.24	11.76
20	10.83	10.66	11.60	12.49	13.69	13.89	15.83	16.72	18.05	18.80	19.23	18.81	17.95	14.24	12.98	12.43	11.31	11.10	10.97	11.10	11.22
30	10.83	10.66	11.59	11.65	13.17	13.79	13.37	14.55	14.65	14.02	14.92	14.59	15.13	14.13	12.98	12.42	11.30	11.11	10.97	11.05	11.05
40	10.83	10.66	11.59	11.28	11.61	13.59	12.39	13.12	12.83	12.36	13.06	12.62	12.92	13.88	12.98	12.44	11.30	11.10	10.97	11.00	11.01
50	10.83	10.65	11.58	10.93	11.09	11.35	11.33	11.89	11.75	11.49	11.75	11.64	12.00	11.47	12.97	12.42	11.28	11.11	10.97	10.98	10.98
60	10.83	10.66	11.15	10.75	10.97	11.03	11.04	11.23	11.12	11.00	11.16	11.20	11.33	11.18	12.57	11.54	11.28	11.10	10.97	10.97	10.99
70	10.83	10.66	10.78	10.72	10.77	10.88	10.86	10.98	10.90	10.87	10.92	10.96	10.99	10.97	11.13	11.07	11.26	11.11	10.96	10.97	10.97
80	10.83	10.65	10.74	10.64	10.73	10.80	10.81	10.91	10.83	10.82	10.88	10.94	10.88	10.93	10.98	11.00	11.21	11.10	10.97	10.96	10.97
90	10.82	10.61	10.72	10.62	10.69	10.73	10.75	10.80	10.75	10.80	10.80	10.81	10.82	10.89	10.95	10.93	10.98	11.10	10.96	10.96	10.96
100	10.83	10.58	10.71	10.61	10.68	10.70	10.74	10.81	10.80	10.78	10.80	10.82	10.78	10.90	10.90	10.91	10.94	11.10	10.96	10.95	10.96
110	10.83	10.56	10.67	10.60	10.64	10.67	10.69	10.72	10.73	10.75	10.74	10.76	10.76	10.87	10.89	10.87	10.93	11.08	10.96	10.94	10.94
120	10.83	10.56	10.66	10.58	10.64	10.66	10.68	10.73	10.76	10.76	10.76	10.79	10.76	10.88	10.87	10.86	10.89	10.99	10.96	10.94	10.93
130	10.82	10.55	10.64	10.57	10.61	10.63	10.66	10.69	10.71	10.71	10.72	10.73	10.74	10.81	10.84	10.86	10.88	10.97	10.96	10.93	10.93
140	10.82	10.53	10.61	10.57	10.61	10.61	10.65	10.68	10.74	10.73	10.75	10.77	10.74	10.82	10.80	10.86	10.88	10.93	10.93	10.93	10.91
150	10.79	10.47	10.56	10.58	10.60	10.62	10.67	10.67	10.70	10.70	10.71	10.72	10.72	10.77	10.78	10.85	10.87	10.90	10.93	10.93	10.89

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	10.7	10.7	10.4	10.1	9.5	9.9	9.4	8.95	8.64	8.74	8.77	8.89	9.12	9.75	10.12	10.15	10.7	10.7	10.52	10.47	10.26
0	10.7	10.5	10.1	10.2	9.6	9.8	9.5	8.87	8.75	8.78	8.77	8.87	9.01	9.75	10.03	10.12	10.5	10.5	10.55	10.47	10.26
10	10.5	10.5	10.3	10.0	9.5	9.8	9.5	8.79	8.73	8.59	8.72	8.85	9.04	9.66	9.97	10.17	10.5	10.5	10.41	10.26	10.37
20	10.5	10.4	10.1	9.9	9.5	9.7	9.2	8.72	8.68	8.62	8.01	8.34	8.37	9.55	9.97	10.03	10.4	10.4	10.39	10.28	10.19
30	10.4	10.4	10.2	9.9	9.5	9.7	9.2	8.80	8.76	8.68	8.48	8.39	8.66	9.49	9.88	9.99	10.4	10.3	10.31	9.80	9.40
40	10.4	10.3	10.2	9.9	9.5	9.7	9.2	8.80	8.76	8.68	8.48	8.39	8.66	9.49	9.88	9.99	10.4	10.3	10.29	9.66	9.39
50	10.3	10.3	10.0	9.6	9.4	9.3	9.0	8.54	8.45	8.36	8.16	8.17	8.34	9.01	9.87	9.93	10.3	10.3	10.29	9.57	9.18
60	10.3	10.2	9.9	9.5	9.1	9.4	8.9	8.50	8.41	8.37	8.14	8.22	8.21	8.66	9.69	9.05	10.3	10.2	10.17	9.57	9.18
70	10.2	10.2	9.7	9.3	9.1	9.3	8.8	8.40	8.36	8.32	8.04	8.18	8.21	8.56	8.90	8.72	10.2	10.2	10.13	9.41	9.26
80	10.2	10.1	9.6	9.2	9.0	9.2	8.7	8.29	8.24	8.27	8.04	8.13	8.19	8.22	8.70	8.33	10.2	10.1	10.06	9.38	9.01
90	10.1	10.0	9.4	9.1	8.8	9.1	8.6	8.18	8.12	8.13	8.03	8.11	8.27	8.07	8.39	8.23	10.1	10.0	10.05	9.42	9.07
100	10.1	10.0	9.4	9.0	8.8	9.0	8.5	8.13	7.86	7.93	7.89	7.90	7.99	7.90	8.27	8.06	10.1	10.0	10.04	9.41	8.86
110	9.9	9.9	9.3	9.0	8.8	8.9	8.4	8.07	7.84	7.81	7.82	7.83	7.82	7.75	8.16	7.99	9.9	9.9	10.04	9.37	8.88
120	10.0	9.9	9.3	8.9	8.6	8.8	8.4	8.02	7.78	7.71	7.73	7.81	7.66	7.78	8.08	7.70	10.0	9.9	9.96	9.23	8.56
130	10.0	9.9	9.3	8.7	8.6	8.7	8.3	8.00	7.76	7.71	7.68	7.78	7.69	7.77	8.03	7.57	10.0	9.9	9.93	9.14	8.56
140	9.9	9.9	9.2	8.7	8.4	8.5	8.1	7.83	7.59	7.50	7.36	7.48	7.56	7.69	7.94	7.42	9.9	9.9	9.32	8.94	8.38
150	9.8	9.7	9.0	8.6	8.2	8.3	7.9	7.51	7.54	7.46	7.35	7.43	7.47	7.67	7.75	7.36	9.8	9.7	8.63	8.57	8.20

**Secchi depth**

(m)	12.5	12	15	16	16	19.5	20	19.5	18	21.5	18.5	20	17.2	16	14.1	13.8	13	14	13	13
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

Mid-Lake site A for the period starting 14 July 2003

2003-2004

**Temperature**

Date	14/07/2003	31/07/2003	14/08/2003	26/08/2003	8/09/2003	7/10/2003	21/10/2003	19/11/2003	4/12/2003	18/12/2003	13/01/2004	26/02/2004	8/03/2004	31/03/2004	14/04/2004	10/05/2004	10/06/2004	13/07/2004	26/07/2004	24/08/2004	7/09/2004
Depth (m)																					
0	11.85	11.38	11.25	11.23	11.13	11.48	13.11	13.96	16.15	17.72	20.29	17.20	17.50	16.49	15.27	14.74	13.04	11.59	11.29	10.92	10.70
10	11.86	11.38	11.24	11.17	11.13	11.39	11.92	13.79	15.11	17.76	19.60	17.19	17.00	16.29	15.24	14.74	13.05	11.64	11.26	10.83	10.66
20	11.86	11.38	11.24	11.12	11.11	11.37	11.53	13.78	14.53	15.57	16.72	17.18	16.70	16.23	15.21	14.74	13.04	11.62	11.25	10.83	10.66
30	11.86	11.38	11.24	11.11	11.06	11.37	11.40	13.70	12.96	13.23	13.87	17.16	16.55	16.19	15.19	14.74	13.05	11.65	11.25	10.83	10.66
40	11.86	11.38	11.24	11.11	11.06	11.32	11.34	12.30	12.26	12.33	12.58	12.90	13.30	16.15	15.13	14.73	13.05	11.62	11.26	10.83	10.66
50	11.86	11.38	11.24	11.11	11.06	11.31	11.23	11.35	11.48	11.84	11.58	11.83	11.60	12.51	12.40	12.56	13.05	11.65	11.26	10.83	10.65
60	11.86	11.38	11.24	11.11	11.06	11.31	11.19	11.28	11.41	11.39	11.33	11.53	11.60	11.59	11.67	11.66	13.05	11.64	11.26	10.83	10.66
70	11.86	11.38	11.24	11.10	11.06	11.31	11.16	11.23	11.26	11.26	11.35	11.40	11.40	11.48	11.43	12.42	11.65	11.25	10.83	10.66	
80	11.35	11.38	11.24	11.00	11.06	11.30	11.15	11.19	11.25	11.22	11.23	11.30	11.35	11.34	11.39	11.38	11.56	11.64	11.25	10.83	10.65
90	11.31	11.38	11.24	11.09	11.06	11.29	11.13	11.16	11.20	11.17	11.22	11.25	11.27	11.30	11.32	11.35	11.51	11.66	11.25	10.82	10.61
100	11.27	11.35	11.24	11.09	11.06	11.25	11.11	11.15	11.18	11.17	11.21	11.23	11.27	11.27	11.30	11.32	11.39	11.65	11.25	10.83	10.58
110	11.24	11.34	11.23	11.09	11.06	11.21	11.10	11.12	11.17	11.15	11.19	11.20	11.24	11.26	11.28	11.30	11.35	11.65	11.26	10.83	10.56
120	11.22	11.32	11.22	11.09	11.06	11.14	11.10	11.11	11.18	11.14	11.18	11.18	11.22	11.24	11.25	11.30	11.34	11.65	11.26	10.83	10.56
130	11.21	11.27	11.22	11.08	11.06	11.11	11.08	11.09	11.14	11.13	11.17	11.18	11.20	11.22	11.23	11.28	11.33	11.49	11.26	10.82	10.55
140	11.21	11.26	11.21	11.08	11.06	11.09	11.08	11.09	11.15	11.13	11.16	11.17	11.20	11.21	11.27	11.32	11.39	11.26	10.82	10.53	
150	11.20	11.22	11.20	11.08	11.07	11.09	11.08	11.09	11.14	11.13	11.16	11.17	11.20	11.21	11.26	11.31	11.34	11.26	10.79	10.47	

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.3	10.6	10.5	10.5	10.5	10.1	9.9	9.5	9.1	9.2	9.3	9.4	9.2	9.5	9.7	10.2	10.5	10.6	10.7	10.7
10	10.2	10.4	10.5	10.5	10.6	10.5	10.0	9.9	9.5	9.2	9.3	9.4	9.0	9.1	9.2	9.6	9.9	10.5	10.6	10.5	10.5
20	10.2	10.2	10.3	10.4	10.4	10.4	10.2	9.8	9.4	9.0	9.1	9.0	8.8	9.0	9.1	9.4	9.8	10.5	10.6	10.5	10.5
30	10.2	9.9	10.1	10.3	10.1	10.1	10.0	9.5	9.2	9.2	9.1	8.9	8.5	9.0	8.8	9.3	9.5	10.3	10.3	10.4	10.4
40	10.1	9.9	10.0	10.0	9.8	10.0	9.7	9.3	9.0	9.1	8.7	8.4	8.0	8.9	8.8	9.2	9.5	10.1	10.1	10.4	10.3
50	10.0	9.0	9.9	9.9	9.8	9.8	9.4	9.0	8.7	8.8	8.5	8.1	7.9	8.2	8.2	8.6	9.4	9.8	9.9	10.3	10.3
60	9.9	8.8	9.8	9.7	9.6	9.7	9.2	8.9	8.6	8.4	8.2	8.0	7.7	8.0	8.0	8.2	9.4	9.9	9.8	10.3	10.2
70	9.9	8.7	9.8	9.6	9.6	9.6	9.1	8.7	8.5	8.3	8.1	7.9	7.6	8.0	7.8	7.9	9.1	9.6	9.7	10.2	10.2
80	8.7	8.6	9.7	9.5	9.5	9.6	8.9	8.6	8.4	8.1	8.0	7.9	7.5	8.0	7.7	7.9	8.5	9.7	9.6	10.2	10.1
90	8.5	8.5	9.7	9.5	9.5	9.5	8.9	8.6	8.3	8.1	8.0	7.9	7.5	7.9	7.6	7.8	8.0	9.5	9.5	10.1	10.0
100	8.2	8.4	9.6	9.5	9.5	9.4	8.8	8.6	8.2	7.9	7.8	7.8	7.4	7.8	7.5	7.7	7.7	9.5	9.4	10.1	10.0
110	8.2	8.1	9.6	9.4	9.5	9.3	8.8	8.4	8.2	7.9	7.8	7.7	7.3	7.7	7.4	7.6	7.6	9.4	9.4	9.9	9.9
120	8.0	8.0	9.5	9.4	9.5	9.3	8.7	8.4	8.1	7.8	7.7	7.5	7.1	7.6	7.3	7.4	7.5	9.4	9.3	10.0	9.9
130	8.0	7.9	9.5	9.4	9.4	9.1	8.7	8.3	8.0	7.8	7.5	7.3	7.0	7.5	7.2	7.3	7.4	9.1	9.2	10.0	9.9
140	7.8	7.8	9.5	9.3	9.4	9.0	8.5	8.2	7.9	7.5	7.4	7.3	6.9	7.4	7.0	7.3	7.3	8.3	9.2	9.9	9.9
150	7.7	7.6	9.3	9.3	9.4	8.9	8.5	8.0	7.7	7.3	7.2	7.1	6.8	7.1	6.8	7.3	8.0	9.2	9.8	9.7	

**Secchi depth**

(m)	14.5	14	13.5	13	12.5	13	17	16	18.5	17.5	19	17	15	16	15	18	13.5	12	11	12.5	12
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**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
Additional site B (Kuratau Basin ) for the period starting 14 July 2003**

**2003-2004**

**Temperature**

Date	14/07/2003	31/07/2003	14/08/2003	26/08/2003	8/09/2003	7/10/2003	21/10/2003	19/11/2003	4/12/2003	18/12/2003	13/01/2004	26/02/2004	8/03/2004	31/03/2004	14/04/2004	10/05/2004	10/06/2004	13/07/2004	26/07/2004	24/08/2004	7/09/2004
Depth (m)																					
0	11.82	11.32	11.38	11.36	11.13	11.70	13.31	13.79	15.65	17.08	20.25	16.83	17.63	15.92	15.10	14.72	13.02	11.43	11.26	10.92	10.85
10	11.80	11.29	11.22	11.17	11.11	11.44	12.28	13.49	15.00	16.43	19.73	16.72	16.56	15.90	15.02	14.68	12.95	11.40	11.20	10.77	10.59
20	11.79	11.29	11.22	11.14	11.07	11.40	11.71	13.33	13.81	15.28	16.73	16.58	16.51	15.89	15.00	14.64	12.84	11.41	11.20	10.73	10.58
30	11.79	11.29	11.21	11.13	11.03	11.35	11.46	12.22	12.37	13.38	13.74	16.16	16.40	15.88	14.99	14.47	12.71	11.41	11.20	10.72	10.57
40	11.79	11.29	11.21	11.13	11.02	11.34	11.38	11.67	11.90	12.91	12.48	15.75	15.53	14.18	14.07	12.67	11.41	11.19	10.72	10.57	
50	11.79	11.29	11.21	11.13	11.02	11.33	11.28	11.40	11.57	11.65	11.62	12.97	12.55	12.89	12.48	12.66	11.41	11.19	10.72	10.56	
60	11.78	11.29	11.21	11.13	11.01	11.25	11.23	11.31	11.37	11.33	11.40	11.88	11.64	11.69	11.72	11.78	12.57	11.40	11.19	10.72	10.56
70	11.78	11.29	11.21	11.12	11.01	11.12	11.15	11.24	11.25	11.27	11.28	11.55	11.47	11.49	11.51	11.47	12.51	11.41	11.18	10.72	10.56
80	11.77	11.29	11.16	11.12	11.01	11.06	11.09	11.18	11.21	11.25	11.20	11.38	11.41	11.37	11.43	11.38	12.27	11.37	11.18	10.72	10.51
90	11.35	11.29	11.04	11.11	11.01	11.02	11.08	11.13	11.13	11.19	11.16	11.32	11.35	11.32	11.37	11.31	11.77	11.26	11.17	10.71	10.45
100	11.27	11.29	10.91	11.08	11.01	11.02	11.05	11.10	11.11	11.16	11.14	11.28	11.33	11.26	11.30	11.24	11.65	11.24	11.17	10.66	10.38

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.7	10.9	10.8	10.6	10.4	10.5	10.1	9.8	9.1	9.2	9.3	9.5	8.8	10.5	11.4	12.3	10.6	10.5	10.5	10.8
10	10.5	11.0	10.6	10.6	10.5	10.4	10.4	10.3	9.9	9.3	9.2	9.1	9.0	9.0	9.5	10.2	10.7	10.6	10.5	10.4	10.7
20	10.3	11.3	10.4	10.2	10.2	10.1	10.1	9.9	9.6	9.4	9.2	9.0	8.9	8.9	9.2	9.9	10.1	10.1	10.5	10.5	10.7
30	10.2	11.2	10.1	9.9	10.1	9.9	10.0	9.6	9.3	9.1	9.0	9.0	8.7	8.8	8.9	9.4	9.7	9.8	10.3	10.4	10.6
40	10.1	11.2	9.9	9.8	9.9	9.6	9.7	9.2	8.9	9.1	8.8	8.7	8.2	8.7	8.5	9.1	9.6	10.0	10.3	10.5	
50	10.0	10.9	9.8	9.6	9.8	9.6	9.4	9.0	8.8	8.7	8.5	8.2	7.9	8.2	7.9	8.5	9.3	9.5	9.8	10.2	10.3
60	9.9	10.7	9.7	9.5	9.7	9.4	9.0	8.8	8.6	8.3	8.2	8.1	7.7	8.0	7.6	8.0	9.2	9.3	9.6	10.1	10.3
70	9.9	10.4	9.7	9.5	9.7	9.3	8.9	8.7	8.6	8.3	8.1	7.9	7.6	7.8	7.3	7.7	8.9	9.2	9.6	10.1	10.2
80	9.8	10.3	9.4	9.4	9.6	9.1	8.7	8.6	8.4	7.9	7.8	7.8	7.4	7.6	7.1	7.4	8.7	9.1	9.4	10.0	10.1
90	9.2	10.1	9.2	9.3	9.6	9.0	8.7	8.5	8.3	7.9	7.8	7.7	7.3	7.6	7.0	7.5	8.3	8.7	9.5	9.9	10.1
100	8.3	10.0	9.2	9.3	9.6	8.9	8.6	8.2	7.9	7.9	7.6	7.4	7.3	7.3	6.8	7.0	8.1	9.4	9.8	10.0	

**Secchi depth**

(m)	12	13	13	11.5	11	9.5	15	17	17	15	16	13.5	5	11	14	15.5	12	11	10	10	11
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
Additional site C (Western Bays ) for the period starting 14 July 2003

2003-2004

**Temperature**

Date	14/07/2003	31/07/2003	14/08/2003	26/08/2003	8/09/2003	7/10/2003	21/10/2003	19/11/2003	4/12/2003	18/12/2003	13/01/2004	26/02/2004	8/03/2004	31/03/2004	14/04/2004	10/05/2004	10/06/2004	13/07/2004	26/07/2004	24/08/2004	7/09/2004
Depth (m)																					
0	11.86	11.43	11.56	11.31	11.32	11.85	13.29	15.10	15.79	17.00	20.17	16.90	18.43	16.37	15.41	14.98	13.16	11.58	11.51	10.97	11.14
10	11.80	11.36	11.26	11.21	11.13	11.24	11.93	13.84	15.29	16.33	18.89	16.69	17.02	16.35	15.18	14.80	13.08	11.61	11.32	10.94	10.73
20	11.80	11.34	11.25	11.14	11.09	11.17	11.62	13.76	14.31	15.26	17.11	16.34	16.45	16.35	15.15	14.76	13.07	11.61	11.30	10.90	10.71
30	11.80	11.32	11.25	11.14	11.08	11.14	11.52	13.63	12.99	13.46	13.74	14.66	15.33	15.95	15.15	14.75	13.07	11.61	11.31	10.90	10.71
40	11.80	11.31	11.25	11.14	11.08	11.14	11.50	11.91	12.03	12.88	12.25	12.56	13.64	13.21	15.14	14.73	13.07	11.60	11.31	10.89	10.70
50	11.80	11.31	11.25	11.14	11.07	11.13	11.46	11.42	11.43	11.64	11.57	11.63	11.64	11.68	12.68	12.57	12.80	11.61	11.30	10.90	10.70
60	11.80	11.31	11.25	11.14	11.07	11.13	11.38	11.31	11.30	11.31	11.36	11.53	11.48	11.45	11.76	11.73	11.68	11.60	11.30	10.89	10.70
70	11.80	11.31	11.25	11.14	11.07	11.12	11.21	11.27	11.28	11.26	11.28	11.39	11.37	11.34	11.54	11.48	11.44	11.61	11.30	10.89	10.70
80	11.79	11.31	11.25	11.14	11.07	1.10	11.13	11.20	11.25	11.22	11.25	11.31	11.35	11.32	11.37	11.39	11.37	11.58	11.30	10.89	10.70
90	11.60	11.29	11.25	11.14	11.07	11.04	11.07	11.14	11.21	11.19	11.21	11.26	11.33	11.29	11.30	11.32	11.33	11.61	11.30	10.89	10.70
100	11.28	11.27	11.24	11.14	11.07	11.03	11.07	11.11	11.19	11.12	11.19	11.23	11.32	11.25	11.29	11.31	11.32	11.61	11.30	10.89	10.70

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.3	10.7	10.3	10.4	10.4	11.4	10.1	9.8	9.5	9.2	9.2	9.3	9.3	9.4	10.4	10.3	10.6	10.6	11.0	10.4	10.7
10	10.3	10.8	10.3	10.3	10.4	11.0	10.1	9.9	9.9	9.1	9.2	9.1	9.0	9.2	9.5	9.8	10.1	10.6	10.5	10.4	10.4	
20	10.1	10.3	10.1	10.1	10.2	10.8	9.9	9.9	9.5	9.2	9.1	9.2	9.1	9.0	9.1	9.7	9.9	10.6	10.2	10.3	10.4	
30	10.1	10.0	9.9	9.9	10.0	10.1	9.6	9.6	9.3	9.1	8.8	8.6	8.6	8.9	8.9	9.4	9.7	10.3	9.9	10.2	10.4	
40	10.0	10.0	9.8	9.7	9.9	9.7	9.4	9.4	9.0	9.1	8.8	8.4	8.4	8.3	8.7	9.2	9.6	9.9	9.8	10.1	10.3	
50	10.0	10.0	9.8	9.7	9.9	9.7	9.4	9.4	9.0	9.1	8.8	8.4	8.4	8.3	8.7	9.2	9.6	9.9	9.8	10.1	10.3	
60	9.9	9.9	9.6	9.6	9.7	9.7	9.3	9.2	8.8	8.8	8.5	8.2	8.0	8.0	8.2	8.7	9.3	9.6	9.6	10.1	10.2	
70	9.8	9.6	9.6	9.5	9.6	9.5	9.2	9.0	8.5	8.5	8.2	8.0	7.9	8.0	7.8	8.2	8.6	9.5	9.5	10.1	10.2	
80	9.8	9.5	9.5	9.4	9.5	9.4	9.1	8.8	8.5	8.3	8.1	7.9	7.8	7.9	7.5	8.0	8.2	9.4	9.5	10.0	10.1	
90	9.7	9.5	9.5	9.4	9.5	9.3	8.8	8.8	8.3	8.2	7.9	7.8	7.8	7.8	7.4	7.8	8.0	9.3	9.4	10.0	10.0	
100	8.8	8.8	9.0	9.3	9.4	9.1	8.7	8.5	8.3	7.9	7.7	7.6	7.7	7.5	7.3	7.5	7.8	9.1	9.3	9.9	10.0	

**Secchi depth**

(m)	14	12	14.5	13	12	12.5	12	17.2	17	19	17.5	14	13	12.5	16.5	16	14	12.5	11	10	12
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

2002-2003

Mid-Lake site A for the period starting 1 July 2002

**Temperature**

Date	1/07/2002	17/07/2002	31/07/2002	29/08/2002	18/09/2002	9/10/2002	13/11/2002	28/11/2002	18/12/2002	30/01/2003	13/02/2003	17/03/2003	3/04/2003	28/04/2003	15/05/2003	12/06/2003	14/07/2003	31/07/2003	14/08/2003	26/08/2003	8/09/2003
Depth (m)																					
0	12.13	11.44	11.20	11.10	11.38	11.60	12.58	14.12	15.00	17.84	19.31	18.55	19.05	16.76	15.67	13.59	11.85	11.38	11.25	11.23	11.13
10	12.12	11.44	11.20	10.90	11.33	11.60	12.55	14.02	14.78	17.59	19.19	18.43	18.70	16.73	15.57	13.56	11.86	11.38	11.24	11.17	11.13
20	12.11	11.44	11.20	10.90	11.28	11.40	12.50	12.91	14.48	17.08	18.10	18.37	18.59	16.73	15.56	13.55	11.86	11.38	11.24	11.12	11.11
30	12.11	11.44	11.20	10.80	11.02	11.30	12.38	12.41	14.26	16.13	15.50	16.77	17.02	16.72	15.57	13.55	11.86	11.38	11.24	11.11	11.06
40	12.11	11.44	11.20	10.90	10.97	11.30	12.16	11.98	12.67	12.69	12.85	13.44	13.31	12.80	15.53	12.22	11.86	11.38	11.24	11.11	11.06
50	12.11	11.44	11.20	10.90	10.96	11.20	12.00	11.54	11.87	12.03	12.14	12.03	12.30	11.96	12.20	11.82	11.86	11.38	11.24	11.11	11.06
60	12.10	11.44	11.20	10.80	10.94	11.20	11.72	11.22	11.64	11.70	11.68	11.60	11.81	11.62	11.61	11.52	11.86	11.38	11.24	11.11	11.06
70	12.10	11.44	11.20	10.80	10.93	11.20	11.51	11.09	11.31	11.41	11.33	11.39	11.52	11.34	11.36	11.38	11.86	11.38	11.24	11.10	11.06
80	11.97	11.44	11.20	10.90	10.92	11.10	11.32	10.98	11.17	11.25	11.25	11.27	11.31	11.27	11.27	11.27	11.35	11.38	11.24	11.00	11.06
90	11.49	11.43	11.20	10.90	10.91	11.10	11.13	10.95	11.06	11.15	11.16	11.16	11.20	11.17	11.22	11.21	11.31	11.38	11.24	11.09	11.06
100	11.39	11.41	11.20	10.90	10.90	11.10	11.05	10.92	11.04	11.11	11.10	11.13	11.18	11.15	11.20	11.20	11.27	11.35	11.24	11.09	11.06
110	11.32	11.37	11.20	10.90	10.89	11.00	11.05	10.90	11.04	11.09	11.08	11.10	11.13	11.13	11.16	11.17	11.24	11.34	11.23	11.09	11.06
120	11.29	11.32	11.20	10.90	10.87	11.00	11.01	10.87	11.00	11.06	11.06	11.09	11.13	11.13	11.15	11.22	11.22	11.32	11.22	11.09	11.06
130	11.25	11.27	11.20	10.90	10.85	10.90	10.99	10.85	10.98	11.04	11.04	11.08	11.09	11.10	11.12	11.12	11.21	11.27	11.22	11.08	11.06
140	11.23	11.26	11.20	10.80	10.83	10.90	10.97	10.83	10.97	11.03	11.03	11.09	11.09	11.09	11.12	11.11	11.21	11.26	11.21	11.08	11.06
150	11.23	11.26	11.20	10.80	10.81	10.90	10.96	10.82	10.97	11.03	11.03	11.07	11.08	11.09	11.11	11.11	11.20	11.22	11.20	11.08	11.07

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)																					
0	10.3	10.4	9.7	10.5	10.5	10.2	9.8	9.6	9.1	8.9	9.0	8.8	9.2	9.5	10.0	10.3	10.6	10.5	10.5	10.5	10.5
10	10.3	10.7	9.5	10.4	10.7	10.3	10.2	10.0	9.7	9.1	8.9	8.8	9.2	9.2	9.7	10.2	10.4	10.5	10.5	10.5	10.6
20	10.3	10.7	9.4	10.3	10.6	10.2	10.2	10.1	9.6	9.2	8.9	8.8	8.6	9.1	9.3	9.4	10.2	10.2	10.3	10.4	10.4
30	10.2	10.7	9.4	10.3	10.5	10.2	10.2	10.1	9.6	9.1	8.8	8.5	8.3	8.9	9.2	9.3	10.2	9.9	10.1	10.3	10.1
40	10.2	10.6	9.4	10.2	10.4	10.2	10.1	9.7	9.5	9.2	8.8	8.4	8.0	8.4	9.1	9.0	10.1	9.9	10.0	10.0	9.8
50	10.2	10.6	9.4	10.2	10.3	10.1	10.1	9.7	9.3	9.1	8.6	8.2	7.8	8.2	8.2	8.2	10.0	9.0	9.9	9.9	9.8
60	10.1	10.5	9.4	10.2	10.2	10.1	10.0	9.5	9.1	8.9	8.4	8.0	7.7	8.1	8.1	8.1	9.9	8.8	9.8	9.7	9.6
70	10.1	10.5	9.3	10.1	10.2	10.0	9.9	9.5	8.8	8.8	8.4	7.8	7.6	8.0	8.0	9.9	8.7	9.8	9.6	9.6	9.6
80	10.0	10.3	9.4	10.1	10.2	10.1	9.7	9.4	8.7	8.7	8.3	7.8	7.5	7.9	7.8	7.9	8.7	8.6	9.7	9.5	9.5
90	9.7	10.3	9.4	10.1	10.1	10.1	9.5	9.3	8.7	8.7	8.2	7.8	7.4	7.8	7.5	7.6	8.5	8.5	9.7	9.5	9.5
100	8.6	10.1	9.4	10.1	10.0	9.8	9.4	9.1	8.6	8.6	8.1	7.7	7.3	7.7	7.2	7.5	8.2	8.4	9.6	9.5	9.5
110	8.3	9.8	9.3	9.9	9.9	9.8	9.4	9.1	8.4	8.4	8.0	7.6	7.2	7.6	7.1	7.4	8.2	8.1	9.6	9.4	9.5
120	8.1	8.8	9.3	9.9	9.9	9.8	9.3	9.0	8.3	8.3	7.8	7.4	7.0	7.5	7.1	7.2	8.0	8.0	9.5	9.4	9.5
130	8.0	8.5	9.3	9.9	9.9	9.7	9.2	9.0	8.3	8.2	7.7	7.2	6.9	7.4	7.0	7.0	8.0	7.9	9.5	9.4	9.4
140	7.8	8.1	9.3	9.9	9.9	9.4	9.0	8.8	8.2	8.0	7.4	7.1	6.8	7.2	6.8	6.7	7.8	7.8	9.5	9.3	9.4
150	7.8	8.1	9.3	9.8	9.8	9.4	8.9	8.7	8.1	7.9	7.3	6.9	6.5	6.9	6.7	7.7	7.6	9.3	9.3	9.4	

**Secchi depth**

(m)	16	15.5	12	9.5	12	15.5	18	12.7	13.5	18	19	15	13.5	14	16.5	11	14.5	14	13.5	13	12.5
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**Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.**  
**Additional site B (Kuratau Basin ) for the period starting 1 July 2002**

**2002-2003**

**Temperature**

Date	1/07/2002	17/07/2002	31/07/2002	29/08/2002	18/09/2002	9/10/2002	13/11/2002	28/11/2002	18/12/2002	30/01/2003	13/02/2003	17/03/2003	3/04/2003	28/04/2003	15/05/2003	12/06/2003	14/07/2003	31/07/2003	14/08/2003	26/08/2003	8/09/2003
<b>Depth (m)</b>																					
0	12.13	11.48	11.3	11	11.08	11.70	11.98	13.82	15.16	16.76	18.87	18.74	19.09	16.73	15.79	13.24	11.82	11.32	11.38	11.36	11.13
10	12.09	11.49	11.1	10.8	11.05	11.30	11.94	13.67	15.08	16.75	18.46	18.54	18.82	16.66	15.49	13.02	11.8	11.29	11.22	11.17	11.11
20	12.09	11.48	11.1	10.8	11.03	11.20	11.9	12.79	13.86	16.53	17.71	18.45	18.49	16.62	15.47	12.79	11.79	11.29	11.22	11.14	11.07
30	12.09	11.48	11.1	10.8	11.03	11.20	11.8	12.31	13.4	14.33	16.2	14.87	15.32	16.2	15.41	11.83	11.79	11.29	11.21	11.13	11.03
40	12.08	11.48	11.1	10.8	11.02	11.20	11.68	11.75	13.18	12.98	13.89	12.03	13.25	13.46	13.2	11.62	11.79	11.29	11.21	11.13	11.02
50	11.97	11.49	11.1	10.8	10.91	11.20	11.44	11.44	12.91	12.1	12.59	12.06	12	12.28	12.09	11.51	11.79	11.29	11.21	11.13	11.02
60	11.93	11.49	11.1	10.8	10.9	11.10	11.26	11.27	12.27	11.69	11.75	11.58	11.58	11.7	11.71	11.38	11.78	11.29	11.21	11.13	11.01
70	11.87	11.48	11.1	10.8	10.89	11.10	11.11	11.17	11.58	11.37	11.4	11.36	11.35	11.4	11.4	11.29	11.78	11.29	11.21	11.12	11.01
80	11.78	11.48	11.1	10.8	10.89	11.00	11	11.03	11.51	11.23	11.3	11.24	11.25	11.25	11.28	11.27	11.77	11.29	11.16	11.12	11.01
90	11.37	11.46	11.1	10.7	10.87	11.00	10.93	10.96	11.39	11.14	11.17	11.13	11.15	11.18	11.21	11.26	11.35	11.29	11.04	11.11	11.01
100	11.28	11.3	11	10.7	10.85	11.00	10.91	10.92	11.2	11.09	11.12	11.13	11.12	11.12	11.18	11.25	11.27	11.29	10.91	11.08	11.01
110					10.7	10.7		10.90													

**Dissolved Oxygen (g m<sup>-3</sup>)**

<b>Depth (m)</b>																						
0	10.3	10.4	9.9	10.4	10.4	10.3	9.9	9.6	9.3	9.4	8.9	8.9	9.7	9.4	10	10.7	10.9	10.8	10.6	10.6	10.6	
10	10.3	10.8	9.7	10.3	10.5	10.5	10.3	10	9.7	9.3	8.9	8.8	9.6	9.4	10	10.5	11	10.6	10.6	10.6	10.5	
20	10.2	10.6	9.6	10.3	10.5	10.3	10.3	9.9	9.5	9.2	9.3	8.8	8.5	9.5	9.3	9.6	10.3	11.3	10.4	10.2	10.2	
30	10.2	10.6	9.6	10.2	10.5	10.3	10.3	103	9.9	9.6	9.2	9.2	8.2	8.1	9.4	8.8	9.2	10.2	11.2	10.1	9.9	10.1
40	10.1	10.5	9.6	10.2	10.4	10.2	10.2	9.5	9.4	9.1	9	8.2	8	8.8	8.5	8.8	10.1	11.2	9.9	9.8	9.9	9.9
50	10.1	10.5	9.6	10.1	10.3	10.1	10.1	9.5	9.4	8.9	8.8	8	7.7	8.3	7.9	8.5	10	10.9	9.8	9.6	9.8	9.8
60	9.8	10.4	9.6	10.1	10.2	10.1	10.1	9.9	9.4	9.2	8.6	8.6	7.8	7.6	8.3	7.8	8.3	9.9	10.7	9.7	9.5	9.7
70	9.7	10.4	9.5	10	10.1	9.8	9.8	9.4	9	8.4	8.4	7.7	7.4	8.2	7.7	8.2	9.9	10.4	9.7	9.5	9.7	9.7
80	9.5	10.3	9.5	10	10.1	9.7	9.7	9	8.6	8.3	8.3	7.3	7.3	8	7.7	8.1	9.8	10.3	9.4	9.4	9.6	9.6
90	9.1	10.3	9.5	10	10	9.7	9.5	9	8.6	8.2	8	7.2	7.1	7.7	7.7	7.9	9.2	10.1	9.2	9.3	9.6	9.6
100	8.7	9.8	9.6	9.9	9.9	9.7	9.2	9	8.4	7.7	7.6	7	7	7.6	7.1	7.5	8.3	10	9.2	9.3	9.6	9.6
110					9.2	9.8		9.4														

**Secchi depth**

(m)	16	12.5	10.5	8	11	16	14	12.7	14	18	11	14	12.8	13.5	15.5	12	12	13	13	11.5	11

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
Additional site C (Western Bays ) for the period starting 1 July 2002

2002-2003

**Temperature**

Date	1/07/2002	17/07/2002	31/07/2002	29/08/2002	18/09/2002	9/10/2002	13/11/2002	28/11/2002	18/12/2002	30/01/2003	13/02/2003	17/03/2003	3/04/2003	28/04/2003	15/05/2003	12/06/2003	14/07/2003	31/07/2003	14/08/2003	26/08/2003	8/09/2003
Depth (m)																					
0	12.22	11.52	11.6	11.4	11.24	12.10	12.56	13.98	15.12	17.61	19.58	19.04	18.15	17.1	15.8	13.65	11.86	11.43	11.56	11.31	11.32
10	12.15	11.5	11.2	10.9	11.23	11.30	12.5	13.45	14.21	17.49	18.95	18.45	18.58	16.82	15.54	13.62	11.8	11.36	11.26	11.21	11.13
20	12.14	11.49	11.2	10.9	11.16	11.30	12.38	12.63	13.31	17.48	17.41	18.29	18.3	16.77	15.52	13.59	11.8	11.34	11.25	11.14	11.09
30	12.14	11.49	11.2	10.8	11.06	11.20	12.33	12.42	12.73	14.31	14.19	14.81	14.61	16.76	15.51	13.59	11.8	11.32	11.25	11.14	11.08
40	12.13	11.49	11.2	10.8	11.02	11.20	11.75	12.2	11.98	12.36	12.79	12.88	12.73	13.62	13.07	13.59	11.8	11.31	11.25	11.14	11.08
50	12.13	11.49	11.2	10.8	11.02	11.20	11.28	11.98	11.53	12	11.98	11.86	12.1	12.08	12.14	13.54	11.8	11.31	11.25	11.14	11.07
60	11.92	11.49	11.2	10.8	11	11.10	11.12	11.37	11.33	11.61	11.68	11.49	11.71	11.56	11.71	13.28	11.8	11.31	11.25	11.14	11.07
70	11.55	11.49	11.2	10.8	10.99	11.10	11.08	11.21	11.15	11.29	11.3	11.35	11.37	11.35	11.4	11.8	11.8	11.31	11.25	11.14	11.07
80	11.5	11.49	11.2	10.8	10.95	11.10	11.03	11.04	11.12	11.19	11.19	11.25	11.22	11.24	11.27	11.45	11.79	11.31	11.25	11.14	11.07
90	11.47	11.49	11.2	10.8	10.94	11.00	11	10.98	11.1	11.11	11.15	11.2	11.18	11.18	11.22	11.35	11.6	11.29	11.25	11.14	11.07
100	11.45	11.49	11.2	10.8	10.92	11.00	10.97	10.96	11.08	11.08	11.13	11.2	11.15	11.15	11.17	11.23	11.28	11.27	11.24	11.14	11.07

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.4	10.5	9.7	10.3	10.5	10.4	10.2	9.9	9.6	9.1	9.5	9.9	8.9	9.4	9.3	10	10.3	10.7	10.3	10.4	10.4
10	10.4	10.8	9.5	10.2	10.7	10.4	10.3	9.7	9.6	9	9.3	9.7	8.8	9.2	9.1	9.6	10.3	10.8	10.3	10.3	10.4	10.4
20	10.4	10.8	9.5	10.2	10.7	10.4	10.3	9.9	9.7	9	9.3	9	8.8	9.2	9	9.3	10.1	10.3	10.1	10.1	10.2	10.2
30	10.3	10.7	9.4	10.1	10.6	10.4	10.2	9.9	9.6	8.7	9	8.4	8.3	9	8.8	9.1	10.1	10	9.9	9.9	10	10
40	10.3	10.5	9.4	10	10.5	10.3	10.1	9.7	9.5	8.7	9	8.4	8.1	8.5	8.3	9.3	10	10	9.8	9.7	9.9	9.9
50	10.2	10.5	9.4	10	10.4	10	9.9	9.7	9.2	8.6	8.7	8.1	7.9	8.2	7.8	9.2	9.9	9.9	9.6	9.6	9.7	9.7
60	10	10.5	9.4	10	10.4	10	9.7	9.6	9.1	8.5	8.5	8.1	7.9	8.2	7.8	9.9	9.8	9.6	9.6	9.5	9.6	9.6
70	9.6	10.5	9.4	9.9	10.3	9.9	9.7	9.5	9	8.4	8.4	7.9	7.8	8	7.7	9.7	9.8	9.5	9.5	9.4	9.5	9.5
80	8.8	10.5	9.3	9.9	10.2	9.9	9.5	9	8.8	8.3	8.3	7.6	7.7	8	7.5	9.4	9.7	9.5	9.5	9.4	9.5	9.5
90	8.7	10.4	9.3	9.9	10.1	9.8	9.5	9.1	8.7	8.1	8.3	7.5	7.6	7.9	7.3	9.2	9.6	9.1	9.4	9.3	9.4	9.4
100	8.6	10.2	9.3	10	10	9.6	9.3	9.1	8.7	8	8.1	7.3	7.4	7.8	7.2	9.1	8.8	8.8	9	9.3	9.4	9.4

**Secchi depth**

(m)	14	12.5	12	8	12	19	16	15.5	13.5	18.5	19	15	14.5	14.5	17	11	14	12	14.5	13	12
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

Mid-Lake site A for the period starting 2 July 2001

2001-2002

**Temperature**

Date	2/07/01	25/07/01	13/08/01	3/09/01	25/09/01	25/10/01	12/11/01	10/12/01	20/12/01	8/01/02	22/01/02	6/03/02	4/04/02	22/04/02	5/05/02	19/06/02	1/07/02	17/07/02	31/07/02	29/08/02	18/09/02	9/10/02	
Depth (m)																							
0	12.11	11.26	11.15	10.96	11.58	12.97	14.23	15.47	17.92	18.37	19.4	18.69	17.45	17.05	15.51	12.57	12.13	11.44	11.2	11.1	11.38	11.60	
10	12.04	11.26	11.12	10.98	11.57	12.91	14.16	15.51	16.60	18.07	18.8	18.69	17.38	16.64	15.54	12.57	12.12	11.44	11.2	10.9	11.33	11.60	
20	12.00	11.26	11.12	10.95	11.56	12.90	13.37	15.52	15.46	17.62	18.05	18.68	17.18	16.61	15.52	12.57	12.11	11.44	11.2	10.9	11.28	11.40	
30	11.99	11.26	11.11	10.94	11.52	12.89	12.85	14.52	13.79	13.5	14.8	15.3	16.83	16.56	15.5	12.56	12.11	11.44	11.2	10.8	11.02	11.30	
40	11.98	11.26	11.11	10.94	11.04	12.00	11.87	13.01	12.41	12.43	13.1	12.42	12.9	13.35	15.39	12.56	12.11	11.44	11.2	10.9	10.97	11.30	
50	11.98	11.26	11.11	10.94	10.96	11.50	11.57	11.80	11.70	11.61	12.06	11.73	12.09	11.93	11.92	12.56	12.11	11.44	11.2	10.9	10.96	11.20	
60	11.95	11.26	11.10	10.94	10.92	11.13	11.24	11.27	11.32	11.38	11.52	11.43	11.51	11.53	11.49	12.53	12.1	11.44	11.2	10.8	10.94	11.20	
70	11.76	11.26	11.09	10.94	10.91	11.01	11.13	11.13	11.22	11.24	11.25	11.27	11.3	11.3	11.33	11.98	12.1	11.44	11.2	10.8	10.93	11.20	
80	11.51	11.26	11.08	10.92	10.90	10.96	11.03	11.05	11.16	11.16	11.17	11.2	11.24	11.25	11.27	11.35	11.97	11.44	11.2	10.9	10.92	11.10	
90	11.45	11.26	11.08	10.91	10.90	10.95	11.01	11.02	11.12	11.13	11.15	11.17	11.19	11.22	11.28	11.27	11.49	11.43	11.2	10.9	10.91	11.10	
100	11.41	11.26	11.08	10.91	10.90	10.94	10.99	11.00	11.08	11.12	11.14	11.16	11.17	11.2	11.38	11.25	11.39	11.41	11.2	10.9	10.9	11.10	
110	11.39	11.26	11.08	10.91	10.90	10.92	10.97	10.99	11.07	11.1	11.13	11.13	11.14	11.18	11.27	11.24	11.32	11.37	11.2	10.9	10.89	11.00	
120	11.36	11.26	11.08	10.91	10.89	10.92	10.95	10.97	11.04	11.1	11.12	11.13	11.14	11.17	11.26	11.21	11.29	11.32	11.2	10.9	10.87	11.00	
130	11.35	11.26	11.07	10.90	10.89	10.91	10.94	10.96	11.04	11.09	11.1	11.13	11.13	11.15	11.24	11.2	11.25	11.27	11.2	10.9	10.85	10.90	
140	11.34	11.26	11.07	10.90	10.89	10.90	10.94	10.96	11.04	11.08	11.1	11.13	11.13	11.14	11.23	11.19	11.23	11.26	11.2	10.8	10.83	10.90	
150	11.33	11.26	11.07	10.90	10.89	10.90	10.94	10.96	11.03	11.08	11.1	11.12	11.13	11.14	11.19	11.9	11.23	11.26	11.2	10.8	10.81	10.90	

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	9.2	10.2	9.6	10.6	10.4	9.9	9.5	9.4	9.1	9.0	8.7	8.8	9.4	10.5	10.2	10.3	10.4	9.7	10.5	10.5	10.3
10	9.1	10.5	9.6	10.7	10.4	9.9	9.8	9.5	8.9	9.0	8.9	8.7	8.9	9.3	9.5	10.2	10.3	10.7	9.5	10.4	10.7	10.3
20	9.4	9.4	9.6	10.6	10.4	10.0	9.4	9.5	9.0	9.0	9.1	8.7	8.8	9.3	9.5	10.2	10.3	10.7	9.4	10.3	10.6	10.2
30	9.8	9.2	9.6	10.6	10.4	10.1	9.4	9.1	8.8	9.0	9.1	8.4	8.7	9.2	9.4	10.2	10.2	10.7	9.4	10.3	10.5	10.2
40	9.8	9.1	9.6	10.6	10.0	9.7	8.9	9.1	8.6	8.8	9.0	8.4	8.3	8.7	9.3	10.1	10.2	10.6	9.4	10.2	10.4	10.2
50	9.6	8.9	9.6	10.6	9.9	9.5	9.0	8.7	8.6	8.7	8.7	8.2	8.2	8.3	8.6	10.1	10.2	10.6	9.4	10.2	10.3	10.1
60	9.4	8.9	9.5	10.5	9.8	9.3	8.7	8.6	8.5	8.6	8.6	8.2	8.1	8.1	8.3	10.0	10.1	10.5	9.4	10.2	10.2	10.1
70	9.5	9.0	9.4	10.4	9.7	9.3	8.8	8.7	8.5	8.6	8.5	8.2	8.0	8.0	8.2	9.6	10.1	10.5	9.3	10.1	10.2	10.0
80	7.7	8.9	9.4	10.4	9.7	9.2	8.6	8.4	8.5	8.6	8.4	8.1	7.9	7.9	8.2	8.5	10.0	10.3	9.4	10.1	10.2	10.1
90	7.8	8.9	9.4	10.4	9.6	9.5	8.8	8.5	8.5	8.6	8.2	8.1	7.8	7.8	8.0	8.3	9.7	10.3	9.4	10.1	10.1	10.1
100	7.5	8.6	9.3	10.4	9.6	9.2	8.6	8.4	8.3	8.5	8.1	8.0	7.8	7.8	7.5	8.2	8.6	10.1	9.4	10.1	10.0	9.8
110	7.4	8.7	9.3	10.4	9.6	9.2	8.6	8.4	8.3	8.4	8.1	8.0	7.7	7.7	7.3	8.1	8.3	9.8	9.3	9.9	9.9	9.8
120	6.9	8.5	9.3	10.3	9.5	9.0	8.4	8.4	8.3	8.2	8.1	7.9	7.7	7.6	7.2	8.0	8.1	8.8	9.3	9.9	9.9	9.8
130	6.9	8.5	9.3	10.2	9.5	9.0	8.4	8.4	8.3	8.2	8.2	7.9	7.6	7.5	7.3	7.9	8.0	8.5	9.3	9.9	9.9	9.7
140	6.8	8.3	9.2	10.2	9.5	8.6	8.2	8.2	8.1	8.0	8.1	7.8	7.1	7.8	7.3	7.8	7.8	8.1	9.3	9.9	9.9	9.4
150	6.4	8.2	9.2	10.2	9.3	8.5	8.1	8.1	7.9	7.8	7.9	7.6	7.0	7.2	7.3	7.7	7.8	8.1	9.3	9.8	9.8	9.4

**Secchi depth**

(m)	12	14.5	13.5	17.5	11	14.5	15.5	16	13	13	15	14.5	19	22	16.4	17	16	15.5	12	9.5	12	15.5
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
Additional site B (Kuratau Basin ) for the period starting 8 January 2002 on

**2001-2002**

Temperature												
Date	8/01/2002	22/01/2002	6/03/2002	4/04/2002	22/04/2002	5/05/2002	19/06/2002	1/07/2002	17/07/2002	31/07/2002	29/08/2002	18/09/2002
Depth (m)												
0	18.1	18.8	18.64	17.38	16.84	15.12	12.45	12.13	11.48	11.3	11	11.08
10	17.55	18.45	18.58	17.35	16.61	15.14	12.44	12.09	11.49	11.1	10.8	11.05
20	15.72	17.4	18.56	17.1	16.6	15.05	12.44	12.09	11.48	11.1	10.8	11.03
30	13.74	13.9	15.07	16.74	16.4	14.75	12.43	12.09	11.48	11.1	10.8	11.03
40	12.62	12.73	13.08	14.3	13.4	14.4	12.24	12.08	11.48	11.1	10.8	11.02
50	11.92	11.98	11.91	12.77	12.12	14.07	12.11	11.97	11.49	11.1	10.8	10.91
60	11.31	11.41	11.5	12.03	11.53	12.96	11.73	11.93	11.49	11.1	10.8	10.9
70	11.21	11.25	11.24	11.5	11.32	12.2	11.49	11.87	11.48	11.1	10.8	10.89
80	11.15	11.19	11.21	11.29	11.24	11.97	11.38	11.78	11.48	11.1	10.8	10.89
90	11.1	11.13	11.15	11.2	11.18	11.69	11.3	11.37	11.46	11.1	10.7	10.87
100	11.1	11.12	11.12	11.19	11.15	11.39	11.22	11.28	11.3	11	10.7	10.85
110										10.7	10.7	
Dissolved Oxygen (g m <sup>-3</sup> )												
Depth (m)												
0	8.7	8.8	9.3	9.3	9.3	10.9	10.4	10.3	10.4	9.9	10.4	10.4
10	8.6	9	9.1	9.2	9.3	9.5	10.3	10.3	10.8	9.7	10.3	10.5
20	8.8	9	9.1	9.2	9.2	9.4	10.2	10.2	10.6	9.6	10.3	10.5
30	8.8	8.9	8.6	9.1	9.2	9.3	10.2	10.2	10.6	9.6	10.2	10.5
40	8.7	8.7	8.7	8.9	8.5	9.1	10.1	10.1	10.5	9.6	10.2	10.4
50	8.7	8.4	8.5	8.6	8.2	9	10	10.1	10.5	9.6	10.1	10.3
60	8.7	8.3	8.4	8.4	8	8.6	9	9.8	10.4	9.6	10.1	10.2
70	8.7	8.3	8.3	8.3	7.9	8.1	8.7	9.7	10.4	9.5	10	10.1
80	8.7	8.2	8.1	8.1	7.8	7.9	8.4	9.5	10.3	9.5	10	10.1
90	8.2	8.1	7.9	7.7	7.7	7.8	8.2	9.1	10.3	9.5	10	10
100	8	7.6	7.5	7.7	7.5	7.7	7.8	8.7	9.8	9.6	9.9	9.9
110	8				6.2					9.2	9.8	
Secchi depth												
Depth (m)	13.5	12	14.5	19.5	19	13.2	15	16	12.5	10.5	8	11

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
Additional site C (Western Bays ) for the period starting 8 January 2002 on

2001-2002

Temperature		2001-2002											
Date	8/01/2002	22/01/2002	6/03/2002	4/04/2002	22/04/2002	5/05/2002	19/06/2002	1/07/2002	17/07/2002	31/07/2002	29/08/2002	18/09/2002	9/10/2002
Depth (m)													
0	18.72	18.82	18.68	17.47	16.88	15.6	12.58	12.22	11.52	11.6	11.4	11.24	12.10
10	17.41	18.46	18.47	17.24	11.63	15.64	12.56	12.15	11.5	11.2	10.9	11.23	11.30
20	16.95	18.21	18.32	17.16	16.58	15.64	12.56	12.14	11.49	11.2	10.9	11.16	11.30
30	14	13.77	15.9	17.12	16.5	15.61	12.56	12.14	11.49	11.2	10.8	11.06	11.20
40	13.14	12.01	12.98	13.17	13.02	12.26	12.56	12.13	11.49	11.2	10.8	11.02	11.20
50	11.97	11.5	12.13	12.11	11.87	11.57	12.56	12.13	11.49	11.2	10.8	11.02	11.20
60	11.44	11.26	11.59	11.57	11.47	11.37	11.9	11.92	11.49	11.2	10.8	11	11.10
70	11.26	11.17	11.36	11.38	11.32	11.29	11.36	11.55	11.49	11.2	10.8	10.99	11.10
80	11.18	11.16	11.25	11.32	11.26	11.24	11.28	11.5	11.49	11.2	10.8	10.95	11.10
90	11.15	11.14	11.18	11.21	11.23	11.21	11.23	11.47	11.49	11.2	10.8	10.94	11.00
100	11.12	11.11	11.18	11.19	11.19	11.19	11.22	11.45	11.49	11.2	10.8	10.92	11.00
110	11.11	11.1			11.16	11.15				11.2	10.8		10.90
120										11.2	10.8		10.90
Dissolved Oxygen (g m <sup>-3</sup> )		2001-2002											
Depth (m)													
0	8.6	8.9	9.3	9.4	9.3	10.6	10.3	10.4	10.5	9.7	10.3	10.5	10.4
10	8.4	8.9	9	9.1	9.2	9.5	10.2	10.4	10.8	9.5	10.2	10.7	10.4
20	8.9	8.9	9	9.1	9.2	9.5	10.2	10.4	10.8	9.5	10.2	10.7	10.4
30	8.6	8.9	8.8	9.1	9.1	9.4	10.1	10.3	10.7	9.4	10.1	10.6	10.4
40	8.6	8.5	8.6	8.6	8.5	8.9	10.1	10.3	10.5	9.4	10	10.5	10.3
50	8.5	8.2	8.5	8.5	8.1	8.6	10	10.2	10.5	9.4	10	10.4	10
60	8.6	8.1	8.5	8.2	7.9	8.3	9.7	10	10.5	9.4	10	10.4	10
70	8.6	8.1	8.2	8.2	7.8	8.2	9.1	9.6	10.5	9.4	9.9	10.3	9.9
80	8.7	8.1	8.1	8	7.7	8	8.4	8.8	10.5	9.3	9.9	10.2	9.9
90	8.6	8.1	8.1	7.9	7.7	7.9	8	8.7	10.4	9.3	9.9	10.1	9.8
100	8.7	8.1	8.1	7.9	7.6	7.8	7.7	8.6	10.2	9.3	10	10	9.6
110	8.5	7.9			7.6	7.7				9.3	10		9.7
120	8.5	7.7								9.1	9.9		9.6
Secchi depth		2001-2002											
Depth (m)													
	14.5	15.5	16	19	18.5	15.6	16	14	12.5	12	8	12	19

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
For the period starting 11 July 2000

2000-2001

Temperature	11-7-00	04-8-00	21-8-00	11-9-00	28-9-00	25-10-00	13-11-00	06-12-00	03-1-01	15-1-01	20-2-01	01-3-01	19-3-01	09-4-01	11-4-01	10-5-01	29-5-01	02-7-01	25-7-01	13-8-01	
Date																					
Depth (m)	0	11.87	11.32	11.19	11.80	12.47	14.04	13.27	15.73	18.16	18.98	20.47	20.87	19.01	16.99	16.99	15.78	13.62	12.11	11.26	11.15
	10	11.87	11.32	11.15	11.46	11.52	13.03	13.09	15.06	17.37	18.51	19.37	20.71	19.05	16.87	16.99	15.78	13.74	12.04	11.26	11.12
	20	11.86	11.32	11.14	11.33	11.36	11.99	12.98	14.15	15.46	14.79	18.08	18.98	19.06	16.78	16.97	15.78	13.78	12.00	11.26	11.12
	30	11.86	11.33	11.14	11.30	11.33	11.83	12.80	13.31	13.61	13.63	16.06	15.95	16.46	15.82	16.84	15.73	13.79	11.99	11.26	11.11
	40	11.86	11.33	11.14	11.27	11.31	11.60	12.36	12.49	12.73	12.81	13.39	13.36	13.05	13.13	13.87	13.19	13.80	11.98	11.26	11.11
	50	11.86	11.33	11.14	11.22	11.30	11.49	12.10	12.16	12.21	12.27	12.67	12.58	12.42	12.35	12.68	12.42	13.80	11.98	11.26	11.11
	60	11.64	11.33	11.14	11.22	11.30	11.49	12.10	12.16	12.21	12.27	12.67	12.58	12.42	12.35	12.68	12.42	13.80	11.98	11.26	11.11
	70	11.42	11.33	11.15	11.15	11.24	11.39	11.41	11.53	11.64	11.67	11.77	11.79	11.67	11.67	11.69	11.61	11.76	11.26	11.09	
	80	11.31	11.33	11.15	11.14	11.20	11.38	11.29	11.40	11.47	11.55	11.56	11.63	11.55	11.54	11.54	11.52	11.54	11.51	11.26	11.08
	90	11.22	11.33	11.15	11.13	11.17	11.33	11.26	11.36	11.43	11.46	11.50	11.55	11.49	11.46	11.48	11.47	11.46	11.45	11.26	11.08
	100	11.21	11.32	11.15	11.13	11.14	11.33	11.21	11.32	11.38	11.39	11.43	11.50	11.43	11.41	11.43	11.42	11.42	11.41	11.26	11.08
	110	11.19	11.32	11.15	11.13	11.06	11.29	11.19	11.28	11.36	11.36	11.40	11.46	11.41	11.37	11.39	11.40	11.38	11.39	11.26	11.08
	120	11.19	11.31	11.15	11.13	11.04	11.27	11.19	11.27	11.33	11.34	11.39	11.44	11.39	11.33	11.35	11.38	11.35	11.36	11.26	11.08
	130	11.18	11.26	11.15	11.12	11.02	11.23	11.17	11.26	11.30	11.32	11.37	11.43	11.37	11.32	11.34	11.36	11.33	11.35	11.26	11.07
	140	11.16	11.18	11.14	11.12	11.01	11.18	11.15	11.25	11.30	11.31	11.35	11.40	11.35	11.31	11.32	11.34	11.31	11.34	11.26	11.07
	150	11.15	11.18	11.14	11.12	11.01	11.15	11.15	11.25	11.32	11.31	11.33	11.41	11.34	11.31	11.32	11.34	11.31	11.33	11.26	11.07
Dissolved Oxygen (g m <sup>-3</sup> )																					
Depth (m)	0	9.0	9.0	9.2	9.3	9.1	8.9	8.2	8.7	8.2	8.0	8.0	8.2	8.4	8.3	8.4	8.2	8.7	9.2	10.2	9.6
	10	9.0	9.0	9.4	9.5	8.7	8.8	8.4	8.3	8.6	8.0	8.5	8.3	8.3	8.2	8.0	8.5	9.1	10.5	9.6	
	20	9.0	9.1	9.4	9.5	8.7	9.1	8.4	8.5	8.4	8.1	8.2	8.6	8.6	8.4	7.9	7.9	8.4	9.4	9.6	
	30	9.0	9.1	9.6	9.5	8.7	8.9	8.4	8.5	8.5	8.2	8.0	8.3	8.0	8.0	8.0	7.8	8.4	9.8	9.2	9.6
	40	9.0	9.1	9.6	9.5	9.1	8.7	8.2	8.2	8.4	7.9	8.1	8.1	7.6	7.8	7.6	7.7	8.3	9.8	9.1	9.6
	50	9.0	9.1	9.6	9.5	9.1	8.5	8.2	8.2	8.2	8.1	7.9	7.8	7.6	7.5	7.4	7.5	8.3	9.6	8.9	9.6
	60	9.0	9.1	9.7	9.5	8.7	8.4	8.0	7.9	8.0	7.5	7.7	7.4	6.8	7.2	7.2	7.5	7.2	9.4	8.9	9.5
	70	8.9	9.1	9.7	9.5	8.7	8.3	7.9	7.8	7.9	7.4	7.6	7.2	6.8	7.1	7.4	7.3	7.0	9.5	9.0	9.4
	80	7.8	9.0	9.7	9.5	8.7	8.2	7.6	7.6	7.8	7.5	7.4	7.0	6.5	6.9	7.3	7.3	7.0	7.7	8.9	9.4
	90	7.4	8.9	9.7	9.5	8.7	8.2	7.6	7.6	7.7	7.5	7.4	6.9	6.5	6.9	7.1	7.1	7.0	7.8	8.9	9.4
	100	7.2	8.7	9.7	9.5	8.7	8.0	7.5	7.6	7.6	7.3	7.2	6.8	6.6	6.8	7.0	7.0	6.9	7.5	8.6	9.3
	110	7.1	8.3	9.7	9.5	8.7	8.0	7.5	7.5	7.6	7.2	7.1	6.7	6.5	6.8	7.0	7.0	6.7	7.4	8.7	9.3
	120	6.9	7.9	9.7	9.5	8.2	8.1	7.4	7.4	7.5	7.1	7.0	6.5	6.5	6.7	6.8	6.9	6.6	6.9	8.5	9.3
	130	6.9	7.3	9.7	9.5	8.5	8.1	7.4	7.3	7.4	7.0	7.0	6.5	6.5	6.6	6.7	6.6	6.5	6.9	8.5	9.3
	140	6.9	7.1	9.7	9.5	8.6	8.0	7.3	7.2	7.2	6.9	6.8	6.4	6.5	6.4	6.4	6.7	6.3	6.8	8.3	9.2
	150	6.8	7.4	9.7	9.3	8.5	7.9	7.3	7.1	7.1	6.6	6.5	6.3	6.4	6.3	6.3	6.6	6.1	6.4	8.2	9.2
Secchi depth																					
Depth (m)	11	12	15	12	13	11	12	17	17	18	17	14.5	17	13.5	17	13.5	17	14.5	12	14.5	13.5

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

For the period starting 13 July 1999

1999-2000

**Temperature**

Date	13-7-99	6-8-99	3-9-99	29-9-99	18-10-99	19-12-99	18-1-00	12-4-00	4-5-00	25-5-00	20-6-00	11-7-00	4-8-00	21-8-00	11-9-00	28-9-00	25-10-00	13-11-00	6-12-00
Depth (m)																			
0	12.0	11.8	11.8	11.5	12.8	16.56	18.63	17.41	15.82	14.22	12.28	11.87	11.32	11.19	11.80	12.47	14.04	13.27	15.73
10	12.0	11.4	11.3	11.5	12.7	16.40	18.35	17.25	15.77	14.28	12.28	11.87	11.32	11.15	11.46	11.52	13.03	13.09	15.06
20	12.0	11.4	11.2	11.5	12.4	15.96	17.22	17.21	15.76	14.31	12.28	11.86	11.32	11.14	11.33	11.36	11.99	12.98	14.15
30	12.0	11.4	11.1	11.4	11.6	15.23	14.94	16.65	15.75	14.28	12.27	11.86	11.33	11.14	11.30	11.33	11.83	12.86	13.31
40	12.0	11.3	11.1	11.2	11.4	12.16	13.29	12.55	13.64	14.22	12.26	11.86	11.33	11.14	11.27	11.31	11.60	12.36	12.49
50	12.0	11.3	11.1	11.1	11.3	11.64	11.91	11.67	12.14	12.53	12.26	11.86	11.33	11.14	11.22	11.30	11.49	12.10	12.16
60	12.0	11.3	11.0	11.1	11.1	11.35	11.45	11.39	11.56	11.56	12.21	11.85	11.33	11.15	11.18	11.27	11.42	11.69	11.78
70	12.0	11.3	11.0	11.0	11.1	11.25	11.31	11.29	11.36	11.34	11.58	11.64	11.33	11.15	11.15	11.24	11.39	11.41	11.53
80	11.4	11.3	11.0	11.0	11.0	11.18	11.21	11.23	11.24	11.23	11.32	11.42	11.33	11.15	11.14	11.20	11.38	11.29	11.40
90	11.3	11.3	11.0	11.0	11.0	11.16	11.17	11.20	11.21	11.20	11.24	11.31	11.33	11.15	11.13	11.17	11.33	11.26	11.36
100	11.2	11.2	11.0	11.0	11.0	11.14	11.14	11.17	11.17	11.15	11.17	11.22	11.32	11.15	11.13	11.14	11.33	11.21	11.32
110	11.2	11.2	11.0	11.0	11.0	11.12	11.12	11.15	11.14	11.12	11.16	11.21	11.32	11.15	11.13	11.06	11.29	11.19	11.28
120	11.2	11.1	11.0	11.0	11.0	11.10	11.09	11.13	11.12	11.10	11.14	11.19	11.31	11.15	11.13	11.04	11.27	11.19	11.27
130	11.1	11.1	11.0	11.0	11.0	11.08	11.08	11.11	11.10	11.09	11.12	11.18	11.26	11.15	11.12	11.02	11.23	11.17	11.26
140	11.1	11.1	11.0	11.0	11.0	11.07	11.07	11.09	11.09	11.09	11.10	11.16	11.18	11.14	11.12	11.01	11.18	11.15	11.25
150	11.1	11.0	11.0	10.9	11.0	11.10	11.06	11.09	11.09	11.07	11.10	11.15	11.18	11.14	11.12	11.01	11.15	11.15	11.25

**Dissolved Oxygen (g m<sup>-3</sup>)**

Depth (m)	0	10.5	10.1	9.2	9.5	8.9	8.3	7.9	9.2	8.7	8.5	8.1	9.0	9.0	9.2	9.3	9.1	8.9	8.2	8.7
10	10.7	10.2	9.8	9.8	8.9	8.6	7.9	9.2	8.6	8.3	8.3	9.0	9.0	9.0	9.4	9.5	8.7	8.8	8.4	8.3
20	10.7	9.9	9.8	9.9	8.9	8.7	8.1	9.2	8.8	8.5	8.7	9.0	9.1	9.4	9.5	8.7	9.1	8.4	8.5	
30	10.6	10.0	9.8	9.7	8.9	8.7	8.3	9.0	8.8	8.5	8.6	9.0	9.1	9.6	9.5	8.7	8.9	8.4	8.5	
40	10.6	9.7	9.5	9.6	8.8	8.7	8.1	8.3	8.2	8.6	8.6	9.0	9.1	9.6	9.5	9.1	8.7	8.2	8.2	
50	10.4	9.9	9.5	9.3	8.6	8.7	8.0	8.0	7.9	8.2	8.6	9.0	9.1	9.6	9.5	9.1	8.5	8.2	8.2	
60	10.4	9.8	9.4	9.2	8.6	8.6	8.0	8.0	7.9	7.7	8.7	9.0	9.1	9.7	9.5	8.7	8.4	8.0	7.9	
70	10.3	9.7	9.3	9.0	8.6	8.7	8.0	8.0	7.8	7.7	8.4	8.9	9.1	9.7	9.5	8.7	8.3	7.9	7.8	
80	10.3	9.0	9.2	9.0	8.5	8.5	7.9	7.9	7.7	7.6	7.6	7.8	9.0	9.7	9.5	8.7	8.2	7.6	7.6	
90	8.1	8.6	9.2	9.0	8.6	8.5	7.7	7.9	7.8	7.4	7.4	7.4	8.9	9.7	9.5	8.7	8.2	7.6	7.6	
100	7.9	7.3	9.2	8.9	8.6	8.5	8.3	7.7	7.6	7.4	7.3	7.2	8.7	9.7	9.5	8.7	8.0	7.5	7.6	
110	7.5	7.1	9.1	8.9	8.6	8.3	8.1	7.7	7.6	7.6	7.4	7.1	8.3	9.7	9.5	8.7	8.0	7.5	7.5	
120	7.4	6.8	9.1	8.9	8.3	8.4	8.1	7.7	7.4	7.5	7.3	6.9	7.9	9.7	9.5	8.2	8.1	7.4	7.4	
130	7.3	6.7	9.0	8.8	7.9	8.2	8.0	7.5	7.4	7.5	7.3	6.9	7.3	9.7	9.5	8.5	8.1	7.4	7.3	
140	7.1	6.7	8.9	8.7	7.5	8.1	8.0	7.5	7.2	7.4	7.2	6.9	7.1	9.7	9.5	8.6	8.0	7.3	7.2	
150	6.9	6.4	8.9	8.6	7.5	8.0	7.5	7.2	6.8	7.0	6.9	6.8	7.4	9.7	9.3	8.5	7.9	7.3	7.1	

**Secchi depth**

Depth (m)	16	14.5	10	10	14.9	18	19.1	15	14	14	14	11	12	15	12	13	11	12	17
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Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

For the period starting 28 July 1998

**Temperature**

Date	28-7-98	22-8-98	29-9-98	1-11-98	26-11-98	22-12-98	12-2-99	3-3-99	14-4-99	30-4-99	19-5-99	1-6-99	17-6-99	13-7-99	6-8-99	3-9-99	29-9-99	18-10-99
Depth (m)																		
0	11.4	11.5	12.9	13.6	18.4	18.5	20.1	20.9	18.3	16.4	14.4	14.2	13.0	12.0	11.8	11.8	11.5	12.8
10	11.6	11.3	11.9	13.2	15.6	16.7	20.1	19.8	18.3	16.4	14.4	14.1	13.4	12.0	11.4	11.3	11.5	12.7
20	11.6	11.3	11.5	12.7	15.4	15.7	20.1	19.8	18.3	16.4	14.5	14.1	13.4	12.0	11.4	11.2	11.5	12.4
30	11.6	11.3	11.3	12.4	12.7	14.5	14.9	15.1	18.1	16.0	14.5	14.1	13.4	12.0	11.4	11.1	11.4	11.6
40	11.6	11.3	11.2	12.4	12.1	12.7	13.2	13.1	12.9	13.1	14.5	13.9	13.4	12.0	11.3	11.1	11.2	11.4
50	11.6	11.3	11.1	12.2	11.8	11.8	12.1	12.1	11.9	12.2	13.1	13.0	13.4	12.0	11.3	11.1	11.1	11.3
60	11.6	11.3	11.1	11.7	11.5	11.5	11.6	11.8	11.6	12.0	11.8	12.0	12.1	12.0	11.3	11.0	11.1	11.1
70	11.6	11.1	11.0	11.2	11.3	11.3	11.4	11.5	11.4	11.8	11.3	11.4	11.5	12.0	11.3	11.0	11.0	11.1
80	10.6	10.9	11.0	11.1	11.2	11.2	11.2	11.4	11.3	11.2	11.2	11.3	11.3	11.4	11.3	11.0	11.0	11.0
90	10.6	10.9	10.9	11.1	11.1	11.1	11.1	11.3	11.2	11.1	11.1	11.2	11.2	11.3	11.3	11.0	11.0	11.0
100	10.5	10.8	10.9	11.0	11.1	11.1	11.1	11.3	11.2	11.1	11.1	11.1	11.2	11.2	11.2	11.0	11.0	11.0
110	10.5	10.5	10.9	11.0	11.0	11.1	11.1	11.2	11.2	11.1	11.1	11.1	11.1	11.2	11.2	11.0	11.0	11.0
120	10.5	10.5	10.9	11.0	11.0	11.0	11.0	11.2	11.2	11.1	11.1	11.1	11.1	11.2	11.1	11.0	11.0	11.0
130	10.5	10.5	10.7	11.0	11.0	11.1	11.1	11.1	11.1	11.1	11.0	11.1	11.1	11.1	11.1	11.0	11.0	11.0
140	10.5	10.5	10.7	10.9	11.0	11.1	11.1	11.1	11.1	11.1	11.0	11.1	11.0	11.1	11.1	11.0	11.0	11.0
150	10.5	10.5	10.5	10.7	10.9	11.0	11.1	11.1	11.1	11.1	11.0	11.1	11.0	11.1	11.0	11.0	10.9	11.0
Dissolved Oxygen (g m <sup>-3</sup> )																		
Depth (m)																		
0	10.6	10.6	10.6	10.4	9.6	9.7	9.0	8.6	9.1	9.5	9.9	10.0	10.4	10.5	10.1	9.2	9.5	8.9
10	10.5	10.5	10.7	10.7	9.9	10.1	9.0	8.7	9.2	9.5	10.5	10.4	10.3	10.7	10.2	9.8	9.8	8.9
20	10.4	10.4	10.6	10.7	9.8	10.2	8.9	8.7	9.1	9.6	10.4	10.4	10.4	10.7	9.9	9.8	9.9	8.9
30	10.4	10.3	10.5	10.6	10.1	10.2	9.9	9.5	9.1	9.6	10.1	10.7	10.5	10.6	10.0	9.8	9.7	8.9
40	10.3	10.3	10.3	10.4	10.0	10.1	9.9	9.2	9.1	9.1	10.0	10.4	10.4	10.6	9.7	9.5	9.6	8.8
50	10.3	10.2	10.2	10.2	9.8	9.9	9.6	8.9	9.0	8.7	9.2	9.6	10.4	10.4	9.9	9.5	9.3	8.6
60	10.3	10.1	10.1	10.0	9.7	9.7	9.5	8.8	8.9	8.7	8.7	9.4	9.0	10.4	9.8	9.4	9.2	8.6
70	10.3	9.5	9.9	9.6	9.5	9.5	9.4	8.7	8.7	8.6	8.3	9.1	8.9	10.3	9.7	9.3	9.0	8.6
80	8.6	8.2	9.5	9.1	9.2	9.3	9.2	8.6	8.6	8.4	8.2	9.1	8.6	10.3	9.0	9.2	9.0	8.5
90	8.5	7.9	9.3	8.8	9.1	9.1	8.4	8.6	8.6	8.0	7.8	8.8	8.5	8.1	8.6	9.2	9.0	8.6
100	8.3	7.4	8.9	8.5	9.1	8.9	8.9	8.3	8.6	8.0	7.7	8.5	8.2	7.9	7.3	9.2	8.9	8.6
110	8.3	7.4	8.5	8.3	8.8	8.9	8.7	8.2	8.5	8.0	7.5	8.2	8.1	7.5	7.1	9.1	8.9	8.6
120	8.2	7.4	7.7	8.0	8.6	8.8	8.3	7.9	8.3	7.9	7.4	8.2	8.0	7.4	6.8	9.1	8.9	8.3
130	8.2	7.4	7.6	7.8	8.4	8.6	8.1	7.7	8.1	7.7	7.3	8.1	7.7	7.3	6.7	9.0	8.8	7.9
140	8.1	7.4	7.4	7.6	8.2	8.4	7.9	7.5	7.9	7.5	7.2	7.8	7.4	7.1	6.7	8.9	8.7	7.5
150	8.1	7.4	7.4	7.6	8.0	8.2	7.7	7.3	7.7	7.3	7.0	7.5	7.3	6.9	6.4	8.9	8.6	7.5
Secchi depth																		
Depth (m)	10.0	10.5	10.4	13.5	15.0	14.5	12.5	14.3	13.0	12.2	15.0	15.0	15.0	16.0	14.5	10.0	10.0	14.9

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.  
For the period starting 16 September 1997

1997-1998

Temperature		16-9-97	11-10-97	28-10-97	02-12-97	21-1-98	04-3-98	24-3-98	26-3-98	07-4-98	29-5-98	28-7-98	22-8-98
Date	Depth (m)												
	1	10.8	11.8	12.2	14.5	17.7	20.0	19.3	18.6	17.7	14.2	11.4	11.49
	10	10.5	11.4	12.0	13.7	17.6	19.9	18.6	18.6	17.7	14.3	11.6	11.32
	20	10.5	11.1	11.5	13.6	16.5	19.7	18.5	18.5	17.7	14.0	11.6	11.27
	30	10.5	10.8	11.5	13.1	14.3	16.4	18.0	18.1	17.5	13.1	11.6	11.27
	40	10.5	10.6	11.4	12.5	12.0	13.3	13.0	12.6	13.7	12.0	11.6	11.27
	50	10.5	10.5	11.1	11.5	11.2	12.0	11.9	11.7	11.5	11.2	11.6	11.26
	60	10.5	10.5	11.1	11.0	11.0	11.5	11.1	11.1	11.0	10.9	11.6	11.26
	70	10.5	10.5	10.8	10.8	10.8	11.0	10.7	10.8	10.8	10.8	11.6	11.12
	80	10.5	10.5	10.7	10.7	10.7	10.8	10.6	10.7	10.6	10.6	10.6	10.90
	90	10.5	10.5	10.6	10.6	10.6	10.7	10.5	10.6	10.6	10.6	10.6	10.86
	100	10.5	10.5	10.5	10.5	10.6	10.7	10.5	10.6	10.6	10.6	10.5	10.82
	110	10.5	10.5	10.4	10.5	10.6	10.6	10.5	10.5	10.5	10.6	10.5	10.5
	120	10.5	10.5	10.5	10.5	10.5	10.6	10.5	10.5	10.5	10.5	10.5	10.5
	130	10.5	10.5	10.5	10.5	10.5	10.6	10.5	10.5	10.5	10.5	10.5	10.5
	140	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
	150	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
Dissolved Oxygen (g m <sup>-3</sup> )													
Depth (m)													
	1	10.55	10.37	10.68	9.89	9.27	9.17	9.43	9.10	9.14	9.92	10.60	10.64
	10	10.52	10.51	10.22	9.86	9.38	9.19	9.53	9.07	9.10	9.88	10.46	10.50
	20	10.50	10.46	10.24	9.86	9.46	9.22	9.61	8.95	9.07	9.87	10.40	10.36
	30	10.29	10.46	10.00	9.74	9.81	9.30	9.78	8.97	9.09	9.68	10.35	10.27
	40	10.31	10.39	9.96	9.66	9.85	9.32	9.73	9.47	9.32	9.40	10.32	10.26
	50	10.27	10.36	9.89	9.47	9.53	9.16	9.55	9.45	9.34	9.26	10.30	10.20
	60	10.16	10.31	9.77	9.44	9.37	9.17	9.30	9.47	9.30	9.18	10.28	10.10
	70	10.08	10.24	9.76	9.19	9.30	9.11	9.21	9.38	9.24	9.20	10.25	9.54
	80	10.06	10.15	9.85	9.04	9.13	9.04	9.14	9.30	9.13	9.12	8.58	8.15
	90	10.03	10.09	9.33	9.00	9.10	8.93	9.03	9.24	9.05	9.08	8.52	7.90
	100	9.99	10.06	9.23	8.96	9.01	8.89	8.39	9.16	8.97	8.94	8.34	7.36
	110	9.96	10.02	9.03	8.87	8.89	8.83	8.38	8.98	8.94	8.78	8.26	7.36
	120	9.91	10.00	8.96	8.87	8.84	8.75	8.38	8.87	8.88	8.69	8.21	7.36
	130	9.86	9.92	8.76	8.84	8.68	8.63	8.38	8.38	8.79	8.41	8.21	7.36
	140	9.82	9.87	8.76	8.71	8.45	8.30	8.38	8.38	8.58	8.41	8.14	7.36
	150	9.56	9.69	8.76	8.65	8.38	8.22	8.38	8.38	8.40	8.41	8.14	7.36
Secchi depth data (m)													
Depth (m)		12.0	13.7	12.5	14.5	14.7	11.5	13.5	13.5	13.5	15.5	10.0	10.5

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

For the period starting 3 September 1996

Temperature

	Date	3-9-96	17-9-96	27-9-96	17-10-96	24-10-96	6-11-96	28-11-96	11-12-96	23-12-96	8-1-97	29-1-97	26-3-97	2-4-97	15-4-97	20-5-97	29-5-97	7-7-97	29-7-97
Depth (m)																			
1		10.5	10.7	12.5	13.3	12.6	13.5	13.6	14.8	16.3	17.9	17.8	17.7	17.3	16.7	14.1	14.2	11.7	10.9
10		10.4	10.6	11.6	12.0	12.3	13.6	13.6	14.8	15.3	16.8	17.6	17.6	17.3	16.7	14.0	14.1	11.7	11.0
20		10.3	10.4	11.1	11.9	12.3	13.4	13.3	14.4	15.1	16.5	17.4	17.2	17.2	16.7	14.0	14.1	11.7	11.0
30		10.3	10.3	11.0	11.8	12.3	13.3	13.3	14.2	15.0	15.6	14.8	16.6	17.2	16.7	12.6	14.1	11.7	11.0
40		10.3	10.3	10.5	11.7	11.9	11.7	11.6	12.7	13.5	13.0	13.4	13.8	14.5	14.0	11.5	14.0	11.7	11.0
50		10.4	10.3	10.4	11.5	11.6	10.8	10.9	12.5	12.4	11.9	11.8	12.4	11.5	11.9	11.0	12.1	11.7	11.0
60		10.3	10.3	10.4	10.9	11.1	10.6	10.9	11.7	11.3	11.2	10.9	11.2	10.9	11.1	10.5	11.8	11.7	11.0
70		10.3	10.3	10.3	10.6	10.6	10.5	10.5	11.7	10.7	10.8	10.7	10.7	10.6	10.9	10.5	11.1	11.7	11.0
80		10.3	10.3	10.3	10.5	10.5	10.4	10.4	11.1	10.6	10.6	10.6	10.5	10.5	10.7	10.5	10.8	10.9	11.0
90		10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.4	10.5	10.5	10.6	10.5	10.6	10.8	10.9
100		10.3	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.5	10.6	10.7
110		10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.5	10.6
120		10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.5	10.5
130		10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.5	10.5
140		10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.4	10.3	10.3	10.3	10.4	10.4	10.5	10.5	10.5	10.5	10.5
150		10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.4	10.4	10.5	10.4	10.5	10.5	10.5
Dissolved Oxygen (g m <sup>-3</sup> )	Depth (m)																		
1		8.81	9.08	10.03	9.78	10.32	9.96	9.99	10.03	9.10	8.71	8.80	9.70	9.40	9.06	9.09	9.3	9.9	10.53
10		9.17	9.17	10.43	9.85	10.27	9.84	9.87	9.97	9.30	8.70	8.80	9.30	9.25	8.95	9.10	9.2	9.8	10.42
20		9.14	8.98	10.32	9.84	10.15	9.80	9.80	9.90	9.30	8.70	8.70	8.93	8.94	8.91	9.06	9.2	9.8	10.45
30		8.98	8.95	10.16	9.84	9.89	9.79	9.81	9.76	9.30	8.80	9.10	8.80	8.82	8.87	9.01	9.2	9.8	10.43
40		8.90	8.93	9.98	9.80	9.89	9.73	9.77	9.70	9.30	9.00	8.90	8.78	8.79	8.82	8.94	9.1	9.8	10.46
50		8.78	8.87	9.69	9.76	9.80	9.29	9.35	9.10	9.30	8.80	8.90	8.51	8.58	8.65	8.86	9.1	9.7	10.40
60		8.73	8.80	9.54	9.67	9.67	9.19	9.14	9.04	9.15	8.60	8.70	8.49	8.56	8.71	8.70	9.0	9.7	10.36
70		8.74	8.80	9.45	9.56	9.44	9.14	9.09	9.03	9.07	8.60	8.60	8.47	8.52	8.71	8.64	8.9	9.7	10.34
80		8.70	8.77	9.37	9.42	9.33	9.03	9.01	9.01	9.00	8.60	8.50	8.36	8.46	8.69	8.48	8.5	8.6	10.34
90		8.63	8.70	9.24	9.29	9.30	8.99	8.96	8.92	8.98	8.60	8.50	8.30	8.45	8.63	8.32	8.3	8.2	10.24
100		8.59	8.61	9.11	9.22	9.21	8.94	8.93	8.88	8.95	8.60	8.40	8.27	8.40	8.54	8.29	8.2	8.1	8.70
110		8.48	8.49	9.13	9.15	9.20	8.90	8.87	8.80	8.89	8.50	8.30	8.18	8.29	8.48	8.27	8.1	8.0	8.02
120		8.44	8.33	9.07	8.91	8.98	8.77	8.74	8.73	8.85	8.40	8.20	8.08	8.20	8.41	8.22	8.1	8.0	8.05
130		8.19	8.27	9.07	8.83	8.98	8.71	8.69	8.66	8.30	8.30	7.96	8.02	8.20	8.19	8.1	7.9	8.09	
140		8.39	8.35	9.05	8.89	8.89	8.62	8.65	8.60	8.33	8.20	8.20	7.40	7.60	7.87	7.97	7.8	7.4	7.79
150		8.81	8.84	8.98	8.49	8.94	8.48	8.43	8.47	8.25	8.10	8.10	7.40	7.50	7.71	7.88	7.7	7.2	7.13
Secchi depth data (m)	Secchi d	13.1	14.2	11.2	12.6	13.4	14.9	14.1	14.7	17.7	15.1	15.2	15.3	16.0	17.7	14.6	14.5	12.5	13.5

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

For the period starting 12 September 1995

1995-1996

Temperature

Date	12-9-95	25-9-95	30-10-95	24-11-95	06-12-95	12-1-96	31-1-96	13-2-96	29-2-96	20-3-96	28-3-96	18-4-96	19-5-96	14-6-96	9-7-96
Depth (m)															
1	10.7		13.7		17.7	21.1	21.7	22.7	20.5	18.2	16.8	17.7	14.8	12.2	11.2
10	10.7		11.9		16.2	20.7	20.7	21.0	20.1	18.2	16.7	17.4	14.8	12.2	11.2
20	10.7		11.4		15.3	18.1	18.5	20.6	20.0	18.2	16.6	17.3	14.8	12.1	11.2
30	10.7		11.2		12.4	14.8	13.5	15.1	15.5	18.1	13.7	17.0	14.8	12.1	11.2
40	10.7		10.9		11.4	12.4	12.3	12.2	11.9	12.3	12.4	12.6	14.7	12.0	11.2
50	10.7		10.8		11.0	11.5	11.6	11.6	11.3	11.4	11.6	11.4	11.6	11.2	11.2
60	10.7		10.7		10.7	11.0	11.2	11.0	11.0	11.1	11.4	11.1	11.1	10.9	11.2
70	10.7		10.5		10.6	10.9	10.8	10.8	10.9	10.9	11.6	11.1	10.9	10.8	11.2
80	10.5		10.5		10.6	10.9	10.7	10.7	10.7	10.8	11.2	10.9	10.8	10.8	11.2
90	10.4		10.5		10.6	10.7	10.7	10.7	10.7	10.7	11.3	10.8	10.7	10.8	10.8
100	10.4		10.5		10.5	10.6	10.6	10.7	10.7	10.7	10.9	10.8	10.7	10.7	10.8
110	10.4		10.5		10.5	10.6	10.6	10.7	10.7	10.6	10.8	10.8	10.7	10.7	10.8
120	10.4		10.5		10.5	10.5	10.5	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8
130	10.4		10.5		10.5	10.5	10.5	10.7	10.6	10.6	10.7	10.7	10.7	10.7	10.8
140	10.4		10.5		10.5	10.5	10.5	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8
150	10.4		10.5		10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.7	10.7	10.7	10.8
160	10.4	*			10.5	10.5	10.5	*	*	*	*	*	*	*	*

Dissolved oxygen (g m<sup>-3</sup>)

Depth (m)															
1	9.6		10.3		9.5	8.5	8.5	8.1	8.2	8.4	8.7	8.6	9.0	9.2	9.3
10	9.6		10.5		9.9	8.7	8.5	8.1	8.2	8.3	8.7	8.6	9.0	9.2	9.1
20	9.6		10.6		10.0	9.1	9.1	8.2	8.1	8.3	8.8	8.6	8.9	9.2	9.1
30	9.6		10.7		10.5	9.7	10.1	9.2	9.0	8.1	9.0	8.4	8.9	9.1	9.0
40	9.7		10.7		10.5	10.1	10.2	9.5	9.1	8.7	8.8	8.7	8.9	9.0	8.9
50	9.6		10.3		10.3	9.9	9.9	9.0	9.0	8.6	8.6	8.4	8.7	8.4	8.8
60	9.5		10.3		10.0	9.6	8.9	8.7	8.8	8.5	8.5	8.4	8.5	8.1	8.7
70	9.4		10.2		10.0	9.6	8.9	8.6	8.6	8.5	8.5	8.4	8.3	7.9	8.7
80	9.4		10.2		9.9	9.6	8.8	8.5	8.5	8.4	8.3	8.4	8.3	7.8	8.6
90	9.0		10.1		9.8	9.5	8.8	8.4	8.4	8.3	8.2	8.3	8.2	7.7	8.1
100	9.0		10.0		9.7	9.4	8.8	8.3	8.3	8.3	8.2	8.3	8.1	7.7	7.5
110	9.0		9.9		9.6	9.4	8.8	8.1	8.3	8.2	8.1	7.9	7.8	7.6	7.3
120	8.8		9.9		9.4	9.3	8.3	8.1	8.3	8.1	8.3	7.9	7.8	7.5	7.1
130	8.8		9.8		9.3	9.2	8.3	7.9	8.2	7.8	8.3	7.8	7.8	7.5	7.1
140	8.7		9.6		9.1	8.9	7.9	7.6	8.2	7.5	8.0	7.6	7.7	7.4	7.0
150	8.7		9.2		8.9	8.7	7.9	7.6	8.0	7.4	7.8	7.4	7.5	7.4	7.0

Secchi depth

Depth (m)	11.9	11.9	13.0	13.6	15.1	16.3	15.7	17.8	18.4	14.1	14.6	14.4	14.7	14.4	12.9

Lake Taupo Temperature, Dissolved Oxygen, and Secchi Depth Database.

Started 27 October 1994

Temperature

Date	27-10-94	21-11-94	01-12-94	13-12-94	27-12-94	13-1-95	25-1-95	09-2-95	26-2-95	08-3-95	24-3-95	12-4-95	19-4-95	04-5-95	21-5-95	08-6-95	14-7-95	30-7-95
Depth (m)																		
1	11.7	12.8	15.7	17.5	17.8	18.6	19.9	20.6	20.9	20.9	18.5	19.4	18.4	17.0	15.0	13.4	11.3	10.8
10	11.5	12.6	14.2	16.4	17.3	18.4	19.9	20.0	19.9	19.8	18.4	18.6	18.2	16.9	15.0	13.5	11.3	10.8
20	11.5	12.6	13.2	15.5	16.9	18.0	17.8	19.6	19.9	19.7	18.4	18.4	18.2	16.8	15.0	13.4	11.3	10.8
30	11.3	12.6	13.0	13.2	13.3	15.9	15.6	15.0	15.0	15.1	18.4	15.7	16.5	14.6	15.0	13.4	11.3	10.8
40	10.9	12.6	12.1	12.5	12.2	13.1	13.3	12.9	13.0	12.8	12.7	13.0	12.5	12.2	12.7	13.3	11.3	10.8
50	10.9	12.4	11.4	11.7	11.6	12.0	11.8	11.9	11.9	11.8	12.0	11.8	11.6	11.3	11.7	12.8	11.2	10.8
60	10.8	11.8	10.7	11.1	*	11.4	11.5	11.4	11.1	11.2	11.3	11.3	11.1	11.2	11.3	11.7	11.2	10.8
70	10.7	10.9	10.6	10.8	*	*	11.2	11.0	10.9	10.9	11.0	10.9	10.9	10.9	11.0	11.2	11.2	10.8
80	10.6	10.7	10.5	10.7	*	*	11.0	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	11.0	10.9	10.8
90	10.5	10.6	10.5	10.6	*	*	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.8	10.8	10.8	10.8
100	10.5	10.5	10.5	10.5	*	*	10.7	10.6	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.8	10.7	10.8
110	10.5	10.5	10.4	10.4	*	*	10.6	10.6	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8	10.7	10.8
120	10.4	10.4	10.4	10.4	*	*	10.6	10.5	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8	10.7	10.8
130	10.4	10.4	10.4	10.3	*	*	10.5	10.5	10.6	10.6	10.6	10.6	10.7	10.7	10.7	10.8	10.7	10.8
140	10.4	10.3	10.4	10.3	*	*	10.5	10.5	10.6	10.6	10.6	10.6	10.7	10.6	10.7	10.8	10.7	10.8
150	10.3	10.3	10.3	10.3	*	*	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.6	10.7	10.8	10.7	10.8
160	10.3	10.3	10.3	10.3	*	*	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.7	*	10.7	*	*

Dissolved oxygen (g m<sup>-3</sup>)

Depth (m)																		
1	10.5	9.6	9.8	9.2	9.0	8.0	8.9	8.4	8.5	8.5	8.7	*	9.2	9.3	9.0	9.0	9.6	9.6
10	10.6	9.4	10.3	9.4	10.6	10.4	10.2	8.5	8.4	8.0	*	*	9.3	9.1	8.8	9.1	9.6	9.5
20	10.8	9.4	10.3	9.4	11.0	10.5	11.5	8.5	8.4	8.0	*	*	9.2	9.0	8.8	9.1	9.4	9.4
30	10.7	9.4	10.2	9.7	12.5	11.2	11.4	9.8	9.6	9.7	*	*	9.3	9.2	8.7	9.0	9.4	9.3
40	10.5	9.3	10.1	9.6	12.5	11.9	12.0	9.7	9.4	9.7	*	*	9.7	9.3	8.6	9.0	9.3	9.3
50	10.4	9.3	9.9	9.5	12.6	11.9	12.0	9.4	9.4	9.5	*	*	9.5	9.2	8.5	8.8	9.2	9.3
60	10.4	9.4	9.9	9.5	*	10.3	11.9	9.4	9.3	9.4	*	*	9.5	9.2	8.5	8.3	9.2	9.2
70	10.4	*	9.8	9.5	*	*	11.7	9.3	9.3	9.3	*	*	9.5	9.2	8.4	8.3	9.2	9.2
80	10.4	*	9.8	9.5	*	*	11.6	9.3	8.9	9.1	*	*	9.0	9.2	8.3	8.3	8.5	9.1
90	10.4	*	9.7	9.5	*	*	11.4	9.2	8.8	9.0	*	*	8.7	9.0	8.1	7.9	8.3	9.0
100	10.2	*	9.6	9.4	*	*	11.3	9.0	8.6	8.8	*	*	8.6	8.6	8.0	7.6	7.8	8.9
110	10.3	*	9.7	9.3	*	*	11.1	9.0	8.3	8.7	*	*	8.3	8.2	8.0	7.5	7.4	8.8
120	10.2	*	9.4	9.2	*	*	10.9	8.7	8.2	8.4	*	*	8.2	7.9	7.8	7.1	7.2	8.6
130	9.8	*	9.2	9.0	*	*	10.6	8.5	7.9	8.3	*	*	8.0	7.7	7.6	7.0	7.2	8.4
140	9.8	*	8.9	9.0	*	*	10.5	8.3	7.6	8.1	*	*	8.0	7.5	7.4	7.0	7.1	8.4
150	9.9	*	8.6	8.7	*	*	10.4	8.3	7.3	7.9	*	*	7.5	7.3	7.0	7.0	7.1	8.3
160	*	*	8.5	8.5	*	*	10.0	8.2	7.5	7.7	*	*	6.6	7.2	*	6.8	*	*

Secchi depth

Depth (m)	11.7	11.4	12.5	12.9	15.6	17.8	15.7	17.0	16.5	17.1	14.7	15.7	16.1	15.1	14.3	15.0	12.5	15.7
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\* = missing or invalid data

## Appendix 3 - Nutrient data

Includes accumulated 10-m tube data since 1994. Blank cells represent missing data.

For completeness, 10-m tube data collected from the Kuratau Basin (site B) and Western Bays (site C) from January 2002 to December 2004 are included as separate sheets following the mid-lake data from site A for those years.

For the spring/autumn profile data, two different analytical methods are used to measure particulate nitrogen:

1. a wet digestion method involving high temperature refluxing in digestion mixture [persulphate / sulphuric acid / Selenium catalyst] for 3 hours followed by colorimetric determination of the nitrogen as the ammoniacal form, and
2. a CHN combustion method which converts all nitrogen compounds to N<sub>2</sub> gas in a furnace at ~1000°C to be measured in a thermal conductivity detector.

From February 2002, DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N were measured on a Lachat Flow Injection Analysis (FIA) system but using essentially the same chemistry as previously used on the Technical Auto-Analyzer system. The reported detection limits for these nutrients remains the same at 0.5 mg m<sup>-3</sup> for DRP and NO<sub>3</sub>-N, and 1 mg m<sup>-3</sup> for NH<sub>4</sub>-N. TN and TP values are the sum of all N and P components, excluding Urea-N which is part of the DON component.

From October 2009, chlorophyll *a* concentrations collected by van Dorn sampler from a depth of 50 m have been included in the data set as an indication of the biomass in the DCM. However, because the DCM moves up and down during the year, the fixed depth samples from 50 m may not always be in the centre of DCM.

Lake Taupo cumulative database of 10m tube sample data from October 1994 to September 2002.

Samples collected from central lake site.

Date Collected	Temp. °C	Secchi m	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>3</sub> -N mg m <sup>-3</sup>	NO <sub>2</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	PN mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	Chlorophyll a mg m <sup>-3</sup>	PC mg m <sup>-3</sup>
27/10/1994	11.7	11.7	1.2	0.7	2.5	4.4	1.1	0.2	56	16.6	73.4	1.16	
24/11/1994	12.8	11.4	0.5	2.7	1.7	4.8	1.7	1.0	51	12.6	66.5	0.41	
1/12/1994	15.7	12.5	0.6	2.4	2.4	5.4	2.2	1.2	56	18.5	78.0	0.41	
13/12/1994	17.5	12.9	0.8	4.2	1.4	6.4	<0.2	0.9	51	9.3	60.8	0.24	
28/12/1994	17.8	15.6	0.5	1.7	1.9	4.1	1.1	1.3	51	16.7	69.6	0.41	
13/01/1995	18.6	17.8	0.1	2.2	1.6	3.8	<0.2	0.8	53	11.6	64.9	0.22	
24/01/1995	19.9	15.7	0.2	2.1	1.2	3.6	<0.2	0.8	57	13.3	71.0	0.25	
10/02/1995	20.6	17.0	0.3	2.2	1.2	3.6	<0.2	1.5	62	10.2	73.3	0.32	
27/02/1995	20.9	16.5	0.4	<0.5	2.5	2.8	1.9	1.5	71	16.5	90.8	0.35	
9/03/1995	20.9	17.1	0.4	1.7	1.7	3.7	0.2	0.7	55	11.6	67.5	0.28	
24/03/1995	18.5	14.7	0.5	1.9	1.9	3.0	<0.2	0.7	51	17.3	69.6	0.37	
12/04/1995	19.9	15.7	0.2	1.4	1.7	3.2	0.3	0.7	51	14.1	90.0	0.92	
19/04/1995	18.4	16.1	2.8	1.5	1.4	5.7	4.0	0.9	71	14.1	90.0	0.92	
4/05/1995	17.0	15.1	1.4	1.1	3.0	5.5	1.4	2.3	76	24.7	104.4	0.96	
21/05/1995	15.0	15.0	1.2	0.9	2.2	4.3	0.4	2.1	50	29.2	81.8	0.98	
8/06/1995	13.4	15.0	0.7	0.4	1.8	2.9	0.2	0.6	54	15.4	70.2	1.05	
14/07/1995	11.3	12.5	0.3	2.5	1.7	4.5	0.3	2.1	53	15.0	70.8	1.32	
30/07/1995	10.8	15.7	0.7	0.7	1.9	3.3	<0.2	4.6	35	17.3	57.3		
13/08/1995	10.5	14.0	0.5	0.4	1.9	2.8	<0.2	4.6	39	14.2	57.4	0.99	
12/09/1995	10.7	11.9	0.5	2.2	2.2	4.9	1.0	40.9	177	19.1	237.6	1.37	
25/09/1995	11.5	11.9	<0.2	0.7	2.1	2.8	<0.2	0.1	84	17.6	101.6	0.64	
30/10/1995	13.0	13.0	<0.2	2.4	1.9	4.3	<0.2	<0.1	56	14.7	70.4	0.93	
24/11/1995	13.7	13.6	0.8	1.8	1.6	4.3	1.9	<0.1	59	12.6	73.3	0.29	
6/12/1995	17.7	15.1	2.2	0.4	1.2	3.9	1.7	<0.1	58	11.3	70.8	0.20	
12/01/1996	21.1	16.3	2.6	0.6	1.3	4.4	3.6	<0.1	64	16.1	77.8	0.38	
3/02/1996	21.7	15.7	1.3	1.6	1.3	4.2	4.2	<0.1	59	11.9	75.5	0.59	
13/02/1996	23.7	17.8	2.1	3.3	1.2	5.6	7.4	<0.1	81	10.4	88.9	0.15	
20/02/1996	20.5	18.4	1.9	2.2	1.2	5.3	4.3	<0.1	61	19.8	76.3	0.31	
20/03/1996	18.2	14.1	0.8	2.2	1.4	4.5	5.4	<0.1	76	14.2	95.3	0.56	
28/03/1996	16.8	14.6	1.3	1.8	1.4	4.5	4.7	<0.1	91	12.6	108.3	0.81	
18/04/1996	17.7	14.4	0.8	2.2	1.9	4.3	<0.1	61				0.41	
18/05/1996	14.8	14.7	0.8	3.0	1.6	6.8	<0.1	59				0.70	
14/06/1996	12.2	14.4	1.6	3.2	1.6	5.7	<0.1	71					
19/06/1996	12.2	14.4	1.0	1.2	4.0	<0.1	49					0.70	
9/07/1996	11.2	12.9	3.0	1.9	4.0	<0.1	47	11.3				0.80	
3/09/1996	10.5	13.1	0.7	2.0	3.0	5.7	2.5	0.2	52	17.0	71.7	1.03	
18/09/1996	10.7	14.2	1.3	2.4	4.9	2.1	0.2	42	14.0	58.3	0.75		
30/09/1996	12.5	11.2	0.9	1.6	1.8	4.3	3.3	0.2	58	11.0	72.5	0.28	
17/10/1996	13.3	12.6	0.6	2.1	2.6	5.3	2.9	2.5	64	19.0	88.4	0.59	
24/10/1996	12.6	13.4	0.7	2.3	2.2	5.2	2.4	0.4	64	15.0	81.8	0.47	
6/11/1996	13.5	14.9	0.8	2.6	2.2	5.6	3.2	1.0	64	17.0	85.2	0.45	
29/11/1996	13.1	14.0	0.4	1.9	2.4	4.7	3.8	0.5	65	20.0	72.0	0.30	
11/12/1996	14.8	14.7	1.3	1.7	1.3	4.3	6.2	0.8	98	17.0	122.0	0.33	
23/12/1996	16.3	17.7	1.3	1.1	1.1	5.3	0.3	46				0.23	
8/01/1997	17.9	15.1	0.7	1.7	1.9	4.3	2.0	0.6	50	15.0	67.6	0.33	
25/01/1997	17.8	15.2	0.7	1.8	1.6	4.1	1.9	0.4	54	17.0	73.3	0.21	
26/03/1997	17.7	15.3	0.6	1.7	2.1	4.4	2.4	1.8	57	19.0	80.2	0.46	
2/04/1997	17.3	16.0	0.9	1.3	1.6	3.8	1.7	0.3	51	16.0	69.0	0.69	
15/04/1997	16.7	17.7	0.7	2.5	1.5	4.7	3.2	0.8	57	12.0	73.0	0.40	
1/05/1997	15.6	16.0	0.6	1.7	1.1	5.1	0.1					0.58	
21/05/1997	14.2	14.6	1.0	8.8	1.7	11.5	4.5	0.3	92	15.0	111.8	1.05	
29/05/1997	14.3	14.5	1.1	1.1	2.0	3.3	1.0	51				0.89	
7/07/1997	11.6	12.5	0.6	0.9	1.1	4.7	2.1	53				0.90	
29/07/1997	10.9	13.5	0.5	1.6	1.6	1.5	2.1	39				1.13	
2/09/1997	10.6	14.1	1.4	1.1	1.7	4.2	7.0	1.8	47.0	13.1	68.9	1.08	
16/09/1997	10.6	12.0	0.5	1.1	1.1	3.8	0.7	35				2.16	
11/10/1997	11.6	13.7	2.4	2.8	1.7	6.9	4.8	0.9	63.3	16.2	85.2	1.14	
29/10/1997	12.1	12.5	0.7	1.9	1.9	4.5	1.3	7.3	32	19.0	59.6	1.49	
1/11/1997	14.5	15.5	0.2	1.3	1.3	3.2	1.7	0.5	55			0.53	
21/01/1998	13.7	14.7	1.4	1.1	1.2	3.7	2.8	1.5	46.0	10.0	60.3	0.48	
4/03/1998	20.0	11.5	1.5	1.7	2.6	5.8	6.4	4.0	76.0	19.8	106.2	0.58	
24/03/1998	19.3	13.5	1.0	1.4	1.8	3.2	2.1	1.1	48.0	13.2	64.4	1.25	
7/04/1998	17.7	13.5	0.9	1.4	1.8	4.1	1.9	2.5	52.0	13.7	70.1	1.04	
20/05/1998	14.2	15.5	1.0	1.9	1.9	4.8	5.0	3.5	51.0	16.4	75.9	1.36	
28/07/1998	11.4	10.0	1.2	1.0	3.1	5.3	2.1	1.4	45.0	26.0	74.5	1.19	
29/08/1998	12.9	10.5	1.5	1.0	2.2	4.0	5.5	2.2	41.0	20.3	64.0	0.70	
8/10/1998	12.9	10.4	1.5	<1	2.4	2.4	2.4	2.4	46.0	37.6	88.4	1.00	
1/11/1998	13.6	13.5	0.6	1.3	2.6	4.5	2.4	<0.5	36.0	15.2	53.6	0.90	
26/11/1998	18.4	15.0	1.3	2.6	2.1	6.0	9.6	1.6	42.0	16.4	69.6	0.61	
22/12/1998	18.5	14.5	1.1	0.4	2.5	4.0	2.7	1.1	36.0	17.7	61.5	0.25	
12/02/1999	20.1	12.5	0.8	2.8	1.7	5.3	4.0	1.6	39.0	11.4	56.0	0.60	
3/03/1999	20.9	14.3	0.6	2.9	2.0	5.5	1.6	1.1	40.0	16.8	59.5	0.82	
14/04/1999	18.3	13.0	0.6	<1	1.8	2.4	3.0	<0.5	41.0	19.0	61.6	1.20	
30/04/1999	16.4	12.2	1.1	1.5	1.7	4.3	2.1	<0.5	38.0	19.6	60.2	0.94	
19/05/1999	14.4	15.0	0.8	<1	1.5	5.1	1	<1	46.0	16.2	63.7	1.2	
8/06/1999	14.1	14.5	1.0	<1	3.9	4.9	1	<1	48.0	25.4	74.9	1.1	
18/06/1999	13.0	15.0	0.8	<1	2.0	5.0	2	5	42.0	16.5	65.5	1.7	
20/07/1999	12.0	16.0	0.5	<1	3.1	3.6	1	<1	45.0	28.3	74.3	1.0	
11/07/2000	11.9	11.0	<1	4	3	7.0	3	2	46	22.5	73.5	1.65	
5/08/2000	11.3	12.0	2	3	3	7.0	1	3.5	43.5	19.5	66.0	2.5	
22/08/2000	11.2	15.0	2	2	6.0	4.2	4	49	16.5	71.5	1.65		
12/09/2000	11.5	12.0	2	5	3.5	10.5	2	<1	63	23.5	88.5	1	
29/09/2000	11.0	13.0	2	4	8.0	1	1	54	21	77.0	1.15		
6/10/2000	13.1	11.0	0.8	2.1	2.15	8.0	1.0	0.4	41.6	25	68.0	1.3	
14/11/2000	13.1	12.0	<1	4	2	6.0	1	<1	41	14.5	56.5	0.9	
7/12/2000	15.1	17.0	2	2	1.55	5.6	7	4	63	14.75	88.8	0.6	
4/01/2001	18.0	14.5	1.1	2	1								

Lake Taupo cumulative database of 10 m tube sample data from June 2000 on  
 Samples collected from Mid Lake (Site A)

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
20/06/2000	12.3	14.0	<1	4	0	4.0	2	2	52	16	72.0	1.7	193.5
11/07/2000	11.9	11.0	<1	4	3	7.0	3	2	46	22.5	73.5	1.65	198
5/08/2000	11.3	12.0	2	2	3	7.0	1	3.5	43.5	19.5	36.0	2.5	153.5
22/08/2000	11.2	15.0	2	2	2	6.0	2	4	49	16.5	71.5	1.65	158.5
12/09/2000	11.5	12.0	2	5	3.5	10.5	2	<1	63	23.5	88.5	1	148
29/09/2000	11.5	13.0	2	4	2	8.0	1	1	54	21	77.0	1.15	236.5
26/10/2000	13.1	11.0	0.8	4.2	3	8.0	1.0	0.4	41.6	25	68.0	1.3	237
14/11/2000	13.1	12.0	<1	4	2	6.0	1	<1	41	14.5	56.5	0.9	171
7/12/2000	15.1	17.0	2	2	1.55	5.6	7	4	63	14.75	88.8	0.6	165.5
4/01/2001	18.0	14.5	<1	2	1.5	3.5	1	<1	40	11	52.0	0.5	127
16/01/2001	19.0	18.0	0.5	2.5	1.5	4.5	1	0.5	53.5	13	68.0	0.5	118.5
21/02/2001	20.5	17.0	0.9	1.1	1.5	3.5	<1	0.5	46.5	12.5	59.5	0.6	190.5
2/03/2001	20.7	14.5	<1	2	2	4.0	2	<1	53	18	73.0	0.9	193
20/03/2001	19.0	17.0	<1	3	1.4	4.4	<1	<1	46	14.25	60.3	0.9	154
9/04/2001	17.0	13.5	0.8	1.2	2.15	4.2	<1	3	62	19.45	84.5	1.05	199
8/05/2001	15.8	17.0	0.8	3.2	1.7	5.7	2	<1	61	23	86.0	1.1	248
30/05/2001	13.6	14.5	1.5	1.5	2	5.0	1	<1	57	12	70.0	1.4	203
2/07/2001	12.1	12.0	<1	3	2.3	5.3	1	1	50	18.3	70.3	1.5	155.5
25/07/2001	11.3	14.5	2	1	2.65	5.7	<1	6	45	19.75	70.8	2.2	188
13/08/2001	11.2	13.5	1	1	2.85	4.9	1	<1	41	21.9	63.9	2.1	225
3/09/2001	10.2	17.5	1	1	2.6	4.6	<1	<1	37	19	56.0	1.7	203
25/09/2001	11.6	11.0	1.1	0.9	2.8	4.8	1	<1	56	24.5	81.5	0.9	283
25/10/2001	13.0	14.5	0.8	1.2	2.4	4.4	<1	<1	46	19.4	65.4	1.1	246
12/11/2001	14.3	15.5	1.0	2	2.55	5.6	0.9	0.1	48	17.6	66.6	0.5	227.5
10/12/2001	15.5	16.0	1.0	2	2.55	5.6	0.9	0.1	48	17.6	66.6	0.5	227.5
20/12/2001	17.0	13.0	0.6	2.7	2.05	5.4	1.3	0.1	48	14.85	64.3	0.5	203.5
8/01/2002	18.3	13.0	0.3	2	2.2	4.5	0	<1	50	17.15	67.2	0.8	246.5
22/01/2002	19.3	15.0	0	7	2.25	9.3	0	<1	40	20.35	60.4	0.9	188
6/03/2002	18.7	14.5	1.2	0.8	2.05	4.1	0.0	0.4	74	17.7	92.1	1.7	226.5

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
4/04/2002	17.4	19.0	0.6	3	1.45	5.1	1.1	0.1	46	10.7	57.9	0.8	138
17/04/2002	17.4	22.0	0.0	3	1.65	4.7	0.5	0.5	47	13.1	61.1	0.9	157
5/05/2002	15.5	16.4	0.7	1			3.1	0.7	48			1	
19/06/2002	12.6	17.0	1.2	1.8	1.9	4.9	0.5	1.4	43.6	15.8	61.3	1.1	165.0
1/07/2002	12.1	16.0	1.2	1.8	1.8	4.8	0.9	1.7	37.3	14.3	54.2	1.5	214
17/07/2002	11.4	15.5	2.3	2.7	1.7	6.7	2.3	7.8	41.9	14.6	66.6	1.5	153.5
31/07/2002	11.2	12.0	2.3	2.7	2.5	7.5	0.9	5.9	177.2	16.7	200.7	2.2	193
29/08/2002	11.1	9.5	1.6	1.4	3.1	6.1	0.0	0	90	23	113.0	2.6	196
18/09/2002	11.4	12	1.3	1.7	2	5.0	0	0.3	47	13	60.3	0.9	196.5
9/10/2002	11.6	15.5	1.3	2.7	2.1	6.1	2.9	0	29	12	43.9	0.6	159.5
13/11/2002	12.6	18	0.9	1.1	2.4	4.4	1.7	1.3	41	14.0	58.0	0.7	158.5
28/11/2002	14.1	12.7	0.7	2.3	2.7	5.7	0.1	0.0	43.0	22.0	65.1	0.7	201.5
18/12/2002	15.0	13.5	0.6	1.8	2.5	4.9	0.2	0.1	47.0	14.0	61.3	0.4	123.0
30/01/2003	17.8	18	0.4	3.6	1.9	5.9	0.4	0.1	56.5	12.0	69.0	0.7	166.0
13/02/2003	19.3	19	0.5	2.5	1.6	4.6	0.0	0.4	43.6	8.0	52.0	0.5	146.0
17/03/2003	18.5	15	0.8	2.2	1.7	4.7	<1	0.4	45.6	13.0	59.0	1.0	212
3/04/2003	19.3	13.5	1.1	2.9	1.8	5.8	<1	0.5	78.5	17.7	96.7	1.1	234.5
28/04/2003	16.7	14	0.3	3.7	1.9	5.9	<1	0.3	73.7	15.6	89.6	1.5	208.5
15/05/2003	15.6	16.5	0.1	3.9	2.2	6.2	0.3	0.3	50.4	19.5	70.5	1.4	228.5
12/06/2003	13.5	11	1.3	2.7	2.2	6.2	0.3	0.4	40.3	13.7	54.7	1.3	111.0
14/07/2003	11.8	14.5	2.2	1.8	2.6	6.6	1.1	1.1	34.8	18.0	55.0	1.8	102.0
31/07/2003	11.4	14	2.4	1.6	2.4	6.4	1.3	3.7	46.0	16.7	67.7	2.0	89.5
14/08/2003	11.2	13.5	1.8	2.2	3.1	7.1	0.7	0.2	46.1	21.1	68.1	2.9	91.5
26/08/2003	11.2	13	3.0	1.0	4.0	8.0	1.0	0.2	42.8	21.7	65.7	2.9	135.5
8/09/2003	11.1	12.5	2.6	0.4	3.3	6.3	0.4	0.2	45.2	17.4	63.2	1.5	199.5
7/10/2003	11.4	13.0	2.6	1.6	2.8	7.0	0.3	0.2	54.5	17.8	72.8	1.2	157.5
21/10/2003	13.0	17.0	2.0	1.0	2.3	5.3	0.1	1.3	39.6	14.0	55.0	0.6	146.0
19/11/2003	13.9	16.0	1.7	1.3	2.8	5.8	0.3	0.1	45.6	20.0	66.0	0.8	148.0
4/12/2003	16.0	18.5	1.6	2.4	1.8	5.8	0.2	0.1	53.7	13.4	67.4	0.3	106.5
18/12/2003	17.7	17.5	1.1	3.9	3.1	8.1	0.0	0.0	49.0	20.6	69.6	0.4	151.5
13/01/2004	20.3	19.0	0.5	3.5	1.6	5.6	0.0	0.3	52.0	12.5	64.8	0.4	127.0
26/02/2004	17.2	17.0	1.4	1.7	1.6	4.7	0.0	0.1	40.9	15.5	56.5	0.7	139.0
8/03/2004	17.5	15.0	0.6	2.4	2.0	5.0	0.4	0.1	42.5	12.4	55.4	0.6	177.5
31/03/2004	16.4	16.0	0.8	5.2	1.9	7.9	0.2	0.2	78.6	11.5	90.5	1.2	159.5

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
14/04/2004	15.3	15.0	1.0	3.0	2.4	6.4	0.1	0.3	46.6	16.0	63.0	1.3	187.5
10/05/2004	14.7	18.0	0.6	4.4	1.8	6.8	0.1	0.2	64.7	16.8	81.8	1.2	215.0
10/06/2004	13.6	13.5	0.9	2.1	2.1	5.1	0.0	0.6	63.4	17.8	81.8	1.0	371.5
13/07/2004	11.6	12.0	1.8	3.2	2.4	7.4	0.3	4.5	37.2	19.4	61.4	1.6	193.3
26/07/2004	11.3	11.0	1.6	2.4	3.0	7.0	0.5	2.4	38.1	23.4	64.4	2.7	196.0
24/08/2004	10.9	12.5	0.8	3.2	2.7	6.7	0.0	0.5	58.5	18.6	77.6	2.3	181.5
7/09/2004	10.7	12.0	0.6	2.4	2.7	5.7	0.0	0.1	40.9	15.5	56.5	1.4	162.5
21/10/2004	11.6	15.0	1.0	3.0	2.0	6.0	0.0	0.0	33.0	13.0	46.0	0.7	185.0
2/11/2004	12.9	16.0	1.0	3.0	1.9	5.9	2.2	0.8	62.0	14.7	79.7	0.6	147.0
22/11/2004	15.1	16.0	0.7	2.3	2.1	5.1	0.1	0.2	49.7	16.4	66.4	0.4	195.0
15/12/2004	14.1	19.5	0.7	3.3	2.2	6.2	0.0	0.2	45.8	14.7	60.7	0.2	127.5
11/01/2005	16.0	20	0.4	2.6	1.4	4.4	0	0.1	42.9	12.5	55.5	0.2	137
25/01/2005	19.3	19.5	0.5	2.5	1.5	4.5	0.0	0.1	54.9	14.5	69.5	0.3	131.0
9/02/2005	20.7	18	2.2	0.8	1.4	4.4	0.5	0.0	38.5	12.7	51.7	0.2	136.0
22/02/2005	20.0	21.5	0.8	5.2	1.7	7.7	1.5	0.5	58.0	15.8	75.8	0.2	159.0
10/03/2005	19.3	18.5	0.2	2.8	1.4	4.4	1.8	0.2	34.0	14.5	50.5	0.4	158.0
21/03/2005	19.3	20	0.8	3.2	1.2	5.2	0.5	0.1	43.4	10.0	54.0	0.5	140.0
14/04/2005	17.9	17.2	0.9	2.1	1.6	4.6	0.8	0.2	54.0	14.0	69.0	0.7	177.0
18/05/2005	14.3	16	0.8	2.2	1.9	4.9	0.0	0.5	46.5	13.9	60.9	1.3	177.5
9/06/2005	13.0	14.1	0.6	3.4	2.2	6.2	0.1	1.6	41.3	17.4	60.4	1.3	140.5
20/06/2005	12.7	13.8	0.6	3.4	2.0	6.0	0.1	1.0	39.9	18.5	59.5	1.2	158.5
20/07/2005	11.5	13	3.9	6.1	2.5	12.5	0.8	0.8	97.4	19.1	118.1	2.1	169
3/08/2005	11.1	14	2.6	1.4	2.3	6.3	2.0	1.4	61.6	20.3	85.3	1.2	116
17/08/2005	11.2	13	3.1	1	3.2	7.3	0.3	2.1	49.6	26.4	78.4	1.7	172.5
31/08/2005	11.7	13	2	1	2.4	5.4	<1	1	69	22.2	92.2	1.3	330
14/09/2005	12.4	13	1	1	2.5	4.5	<1	<1	60	19.9	79.9	0.8	243
29/09/2005	11.9	14	1	1	2.4	4.4	<1	<1	67	18	85	0.8	253.5
12/10/2005	11.9	14	0.7	2.3	2.7	5.7	0.0	0.7	56.3	23.2	80.2	0.8	301
25/10/2005	13.4	15	0.8	4.2	1.8	6.8	0.6	0.7	54.7	16.8	72.8	0.6	193
10/11/2005	16.3	17.5	1.2	3.8	1.5	6.5	0.2	0.1	52.7	15.6	68.6	0.5	160
1/12/2005	15.1	19.3	0.6	2.4	1.4	4.4	0	0.3	39.7	16.1	56.1	0.4	141
10/01/2006	17.4	19	1	2	1.4	4.4	0.1	1	49.9	17.8	68.8	0.5	167
2/02/2006	20.2	15.5	1.1	8.9	1.5	11.5	0.0	0.0	54	18	72	1.1	193.5
1/03/2006	19.5	15.3	0.3	7.7	1.6	9.6	0.0	1.3	38.7	18.5	58.5	0.9	160.5
12/04/2006	16.7	15.8	0.6	2.4	1.6	4.6	0.0	0.0	43	20.4	63.4	1.0	230
27/04/2006	16.3	17	1.0	2	1.6	4.6	0.1	0.0	52.9	17.6	70.6	1.1	196.5
9/05/2006	15.7	17.5	0.7	2.3	1.6	4.6	0.7	0.1	46.2	17.2	64.2	0.9	233

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
27/06/2006	11.9	15.2	0.8	3.2	1.9	5.9	0.8	1.3	61.9	23.2	87.2	2	243
11/07/2006	11.5	13.5	1.4	5.6	2.3	9.3	0.2	1.7	93.1	21	116	1.7	209
25/07/2006	11.1	12	1.0	0	2.1	3.1	0.9	7.4	48.7	17.6	74.6	2.8	192
4/09/2006	11.1	11	1.8	1.2	2.5	5.5	0.0	0.6	31.4	24.5	56.5	2.8	218
26/09/2006	11.9	17.5	1.0	0.8	2.3	4.1	0.0	0.1	39.9	18.6	58.6	0.8	347
18/10/2006	11.7	13	0.8	1.2	2.5	4.5	0.0	0.3	35.7	18.2	54.2	0.9	227.5
1/11/2006	12.4	14.5	0.3	2.7	2.4	5.4	0.0	0.0	41	19.4	60.4	0.8	203
5/12/2006	14.7	16	0.0	3	2	5	0.0	0.0	52	20.2	72.2	0.7	186
19/12/2006	15.6	15.5	0.2	1.8	1.8	3.8	1.0	0.1	48.9	15.4	65.4	0.7	150
9/01/2007	16.5	13.5	0.5	1.5	1.6	3.6	0.9	0.4	60.7	15	77	0.3	207
25/01/2007	18.5	14.5	0.6	0	1.6	2.2	1.5	0.5	59	18.6	79.6	0.3	212
8/02/2007	19.3	16	0.6	0	1.6	2.2	0.4	0.5	58.1	16.8	75.8	0.4	156
21/02/2007	19.6	18.2	0.4	0	1.8	2.2	0.8	0.5	68.3	24.4	94	0.3	182
21/03/2007	18.6	16.5	1.1	0	2.1	3.2	1.8	1.3	47.2	22.1	72.4	0.8	175
3/04/2007	18.0	19	0.9	6.1	1.8	8.8	0.6	0.3	66.9	23.8	91.6	0.7	
19/04/2007	16.5	16	0.9	3.1	2.7	6.7	2.4	1.0	69.6	29.2	102.2	0.6	193
8/05/2007	19.3	16	1.1	3.9	1.2	6.2	0.3	0.4	63.3	17.8	81.8	1.2	169
22/05/2007	15.2	18.5	0.7	2.3	1.3	4.3	2.0	0.5	53.5	15.4	71.4	0.8	201
14/06/2007	13.6	18	0.6	2.4	1.8	4.8	4.0	0.8	65.2	21.8	91.8	1	159
27/06/2007	12.4	18.5	0.8	0.2	3.6	4.6	2.1	1.4	45.5	25.8	74.8	1.2	162
18/07/2007	11.4	14.5	1.1	1.9	2.9	5.9	1.3	1.0	44.7	37.8	84.8	1.7	
8/08/2007	11.1	14	1.1	1.9	2.8	5.8	2.0	2.2	46.8	28.2	79.2	1.3	229
23/08/2007	11.0	13	0.8	2.2	2.5	5.5	0.4	0.4	39.2	30.3	70.3	2.2	202
11/09/2007	11.0	11	1	4	3.3	8.3	0	1	67	34.7	102.7	1.4	324
9/10/2007	12.1	15	1	1	2.6	4.6	1.4	1.5	59.1	23.8	85.8	0.8	184
30/10/2007	12.8	16	1.1	0.9	2.4	4.4	1.2	0.6	64.2	30.5	96.5	0.7	253
15/11/2007	13.5	14	1.8	2.2	2.1	6.1	1.8	0.3	53.9	24.8	80.8	0.5	262
4/12/2007	16.6	15	0.9	2.1	2	5	0.9	0.6	40.5	20.6	62.6	0.3	196
20/12/2007	17.4	17.5	1.1	2.9	1.1	5.1	0.2	0.4	44.4	17	62	0.6	112
17/01/2008	21.1	22.5	1	4	1.5	6.5	0.9	0.4	62.7	24.5	88.5	0.3	230
31/01/2008	19.8	21.5	0.5	1.5	1.3	3.3	1.5	0.3	75.2	17.6	94.6	0.3	190
14/02/2008	19.9	25	0.3	1.7	1.6	3.6	1.4	0.7	75.9	19.8	97.8	0.4	138
27/02/2008	19.3	22	0.1	1.9	1.6	3.6	0.7	0.2	70.1	20	91	0.4	143
13/03/2008	18.8	22	1	1	1.2	3.2	1.2	0.6	56.2	19.6	77.6	0.5	147
26/03/2008	19.3	19	1	0	0.9	1.9	0.4	0.5	63.1	17.1	81.1	0.5	160
17/04/2008	17.8	20.5	1.2	0.8	1.3	3.3	1.1	1	51.9	14.2	68.2	0.8	189
7/05/2008	15.7	16	0.7	2.3	1.5	4.5	1.3	0.3	60.4	21.1	83.1	0.6	189
22/05/2008	14.7	17	0.2	1.8	1.5	3.5	0.4	0.4	71.2	23.6	95.6	0.7	191
5/06/2008	13.6	15	1.3	0.7	1.6	3.6	1	2.1	29.9	17.5	50.5	1	177
19/06/2008	12.9	16.5	0.5	1.5	1.6	3.6	2	0.7	34.3	29.2	66.2	1.2	259
1/07/2008	12.0	14	0.9	2.1	2.15	5.15	0.6	0.7	50.7	34.6	86.6	1.7	242

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
15/07/2008	11.4	13	1.3	1.7	2.7	5.7	0.0	0.9	38.1	26.5	65.5	1.9	193
7/08/2008	11.1	12.5	1.8	1.2	3.4	6.4	0.0	0.7	25.3	28.8	54.8	3.0	119
20/08/2008	10.7	12.5	1.3	1.7	2.1	5.1	0.7	0.6	24.7	25	51	1.5	179
4/09/2008	11.0	13	0.6	3.4	2	6	1.0	0.0	50	21.5	72.5	1.1	217
16/09/2008	11.3	14.5	1.4	2.6	2.1	6.1	2.2	0.5	28.3	24.3	55.3	0.7	202
14/10/2008	12.6	12.2	0.5	2.5	2.6	5.6	0.5	0.0	45.5	27.1	73.1	0.6	203
4/11/2008	13.4	12	1.0	4	2.5	7.5	3.2	0.5	35.3	28.5	67.5	0.9	140
26/11/2008	15.7	10	1.1	1.9	2.4	5.4	0.4	0.0	47.6	27.6	75.6	1	217
22/12/2008	18.8	12	0.3	1.7	2.3	4.3	1.8	0.0	53.2	35.2	90.2	0.6	245
13/01/2009	19.7	13	1.4	1.6	2.1	5.1	0.3	1.4	61.3	29.4	92.4	0.5	266
28/01/2009	20.9	18	0.4	4.6	1.8	6.8	0.0	3.8	52.2	27.6	83.6	0.3	204
11/02/2009	21.4	22	0.1	4.9	1.6	6.6	4.1	0.5	49.4	25.6	79.6	0.4	185.5
25/02/2009	20.5	20	0.5	2.5	1.6	4.6	2.7	0.4	37.9	21.3	62.3	0.5	186.5
26/03/2009	18.0	18.5	1.1	1.9	2.7	5.7	0.0	1.3	56.7	25.1	83.1	0.6	285
15/04/2009	16.6	18	1.5	2.5	3.4	7.4	1.1	0.7	60.8	22.7	85.3	0.8	240
7/05/2009	15.0	16	1.4	4.6	2.3	8.3	1.3	1.1	56.6	21.7	80.7	1.3	223
27/05/2009	13.0	15	1.2	4.8	1.5	7.5	0.0	0.6	58.4	16.7	75.7	1.2	190
18/06/2009	11.6	16	1.9	0.1	1.7	3.7	0.7	1.7	45.6	23.5	71.5	1.5	201
6/07/2009	10.9	15	2.8	1.2	2.4	6.4	0.1	8.1	46.8	23.4	78.4	1.6	190
13/08/2009	10.43	12	1.9	2.1	2.7	6.7	0.6	0.5	46.9	31.4	79.4	1.9	230
7/09/2009	10.56	15	4.2	0	2.9	7.1	0.1	0.6	54.3	32.3	87.3	1.5	301

Date Collected	Temp.	Secchi	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	PN	TN	Chlorophyll <i>a</i>		PC
												(mg m <sup>-3</sup> )	(mg m <sup>-3</sup> )	
19/10/2009	11.72	13	4.2	0	2.7	6.9	0.5	1.1	42.4	23.4	67.4	0.6	0.8	282.5
12/11/2009	13.00	12.5	1.2	2.8	2.4	6.4	1.0	0.3	33.7	19.5	54.5	0.7	0.8	249
17/12/2009	16.99	15	0.9	2.1	1.4	4.4	0.0	0.7	58.3	21	80.0	0.7	0.8	239.5
13/01/2010	17.89	14.5	0.6	1.4	1.8	3.8	0.0	1.0	47	21.6	69.6	0.6	1.2	306.5
2/02/2010	19.23	16	0.7	2.3	1.7	4.7	0.0	0.1	55.9	28.3	84.3	0.8	1.2	274.5
18/02/2010	20.45	17	1.1	1.9	3.9	6.9	1.3	2.3	102.4	85.4	191.4	0.9	1.1	530
10/03/2010	20.10	19	0.8	2.2	1.3	4.3	0.0	4	58	19.1	81.1	0.4	0.9	158.5
8/04/2010	17.40	21.5	0.8	2.2	1.7	4.7	0.0	1.2	58.8	26	86.0	0.7	1.3	231
28/04/2010	16.38	19	1.2	1.8	2.5	5.5	0.3	1.1	61	39.6	101.6	0.9	1.3	262
20/05/2010	15.09	19.5	1.9	1.1	2.1	5.1	7.6	2.5	66.9	25.1	102.1	0.9	0.8	248
3/06/2010	14.11	14.5	0.9	2.1	1.8	4.8	1.1	0.1	44.8	13.7	59.7	1.1	0.7	141.5
23/06/2010	12.23	14	1.1	1.9	2.4	5.4	1.1	0.8	46.1	22.1	70.1	1.1	0.7	196.5
13/07/2010	11.31	14.5	1.5	7.5	2.3	11.3	0.9	1.0	52.1	27.9	81.9	1.7	0.8	217
10/08/2010	11.01	12.8	1.7	1.3	2.6	5.6	0.9	1.0	30.1	29.7	61.7	1.9	2.0	225
24/08/2010	10.92	11	1.6	1.4	1.5	4.5	0.6	0.5	30.9	34.5	66.5	2.4	2.5	244.5
13/09/2010	11.37	10.5	1.1	0.9	3.3	5.3	1.3	0.3	28.4	33.7	63.7	1.6	1.6	342.5
5/10/2010	11.90	10.8	3.1	0	2.5	5.6	2.0	2.3	28.7	22.8	55.8	0.9	1.6	269
26/10/2010	13.00	12.5	1.7	1.3	2.4	5.4	0.9	0.9	34.2	18.2	54.2	0.8	1.7	237
10/11/2010	13.98	11.5	0.8	2.2	2.3	5.3	0.5	0.3	59.2	21.1	81.1	0.7	1.8	250.5
25/11/2010	16.14	14.2	1.4	2.6	1.7	5.7	2.9	1.4	41.7	18	64.0	0.4	2.0	184.5
8/12/2010	15.5	1.2	2.8	1.8	5.8	1.8	0.6	43.6	18.3	64.3	0.4	0.9	181	
21/12/2010	18.41	17	0.8	3.2	1.8	5.8	5.7	0.4	66.9	41.4	114.4	0.4	0.9	259.5
11/01/2011	19.81	11	0.8	1.2	1.9	3.9	1.8	0.5	48.7	27.1	78.1	0.5	0.4	281.5
27/01/2011	19.69	17	1.0	1	1.7	3.7	1.4	0.7	45.9	21.5	69.5	0.4	0.7	178.5
17/02/2011	20.61	12	0.9	1.1	2.1	4.1	0.5	0.5	57	23.6	81.6	0.5	0.7	224
1/03/2011	20.41	19	0.5	2.5	1.5	4.5	0.7	0.9	48.4	19.9	69.9	0.6	0.3	150.5
15/03/2011	20.07	15	3.0	0	1.4	4.4	0.2	2.7	50.1	21.6	74.6	0.5	0.6	179.5
13/04/2011	17.62	17	3.1	0	1.5	4.6	0.0	0.8	64.2	24.7	89.7	0.8	0.6	223
10/05/2011	15.53	16.5	1.4	2.6	1.5	5.5	0.9	0.9	74.2	17.5	93.5	0.7	0.7	207
31/05/2011	14.05	17	1.2	0.8	1.6	3.6	0.3	0.8	44.9	22.5	68.5	0.9	0.6	166.5
22/06/2011	12.95	14	0.4	1.6	2	4	1.1	0.4	42.5	22	66	1.0	0.9	190.5
5/07/2011	12.13	13	1.0	1	1.8	3.8	0.0	0.2	41.8	28.8	70.8	1.3	1.2	233
9/08/2011	11.10	16	1.8	1.2	2.3	5.3	3.4	5.0	75.6	24.7	108.7	1.7	1.9	346
24/08/2011	10.86	9	1.6	1.4	2.8	5.8	1.0	0.2	86.8	39.2	127.2	1.6	2.1	311
7/09/2011	11.22	16	0.6	3.4	1.8	5.8	2.0	1.1	44.9	23.2	71.2	0.8	1.4	198
28/09/2011	10.96	13	1.0	2	2.9	5.9	2.0	0.8	59.2	32.1	94.1	1.2	1.5	341
26/10/2011	13.00	14	0.6	3.4	1.7	5.7	0.7	0.0	42.3	25.5	68.5	0.5	1.2	227
8/11/2011	14.12	14	1.1	2.9	1.2	5.2	1.3	3.0	60.7	13.3	78.3	0.4	1.0	210

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	Chl-a at 50m (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
22/11/2011	14.57	18	1.1	1.9	2.1	5.1	1.2	0.0	44.8	28.1	74.1	0.7	0.9	202
8/12/2011	16.80	18.5	0.9	2.1	1.7	4.7	3.3	0.8	58.9	27.3	90.3	0.6	1.0	292
22/12/2011	18.22	13	0.6	0.4	1.6	2.6	2.0	2.4	63.6	22.9	90.9	0.5	0.9	323
12/01/2012	19.15	16.5	1.3	0.7	1.8	3.8	4.9	0.3	53.8	42.8	101.8	0.4	1.0	304
26/01/2012	19.02	15	0.9	2.1	1.4	4.4	3.7	0.5	41.8	29.4	75.4	0.5	0.9	245
16/02/2012		16	0.6	1.4	1.6	3.6	2.5	0.7	55.8	22.5	81.5	0.6	0.8	235
7/03/2012	18.17	16	0.7	1.3	1.6	3.6	0.8	1.0	54.2	24.5	80.5	0.6	1.2	230
10/04/2012	16.78	17	0.9	1.1	2.5	4.5	1.9	2.3	54.8	26.5	85.5	0.8	1.0	221
7/05/2012	15.06	17	0.8	2.2	1.5	4.5	2.7	0.8	73.5	20.1	97.1	0.7	1.0	235
30/05/2012	13.41	17	3.3	1.7	2.2	7.2	3.4	0.9	59.7	31.6	95.6	1.1	0.8	200
14/06/2012	12.64	14	2.0	3	1.8	6.8	2.6	0.1	54.3	30.1	87.1	1.0	0.8	218
2/07/2012	11.63	15.5	2.3	0	1.7	4	2.8	2.3	91.9	22.5	119.5	1.2	1.8	215
18/07/2012	11.44	17	2.2	1.5	2.1	5.8	2.3	1.3	54.4	34.5	92.5	1.3	1.7	284
1/08/2012	10.85	17	3.7	1.3	1.9	6.9	0.8	8.8	56.4	22.3	88.3	1.5	1.5	140
17/08/2012	11.06	14	2.2	1.6	2.5	6.3	2.6	1.8	48.6	28.2	81.2	1.4	1.2	190
29/08/2012			1.4	2.6	1.8	5.8	4.9	1.7	56.4	30.6	93.6	1.3	1.0	252
20/09/2012	11.14	13	3.4	0	4.0	7.4	0.6	0.4	53	39.0	93	1.1	1.6	576
4/10/2012	11.45	12.5	2.1	0.9	2.6	5.6	0.4	1.1	51.5	26.3	79.3	1.2	2.1	269
24/10/2012	12.25	13.6	1.8	1.2	2.4	5.4	1.0	0.6	45.4	28.1	75.1	1.0	1.3	265
8/11/2012	13.44	17	1.2	2.8	1.8	5.8	1.3	0.6	41.1	17.7	60.7	0.5	1	173
22/11/2012	16.44	18	0.9	3.1	1.6	5.6	2.1	0.3	57.6	21.2	81.2	0.4	1	201
6/12/2012	14.96	19	0.7	1.3	2.3	4.3	0.6	0.8	44.6	23.5	69.45	0.6	0.9	148
19/12/2012	17.75	19	1.0	2	1.6	4.6	1.9	2.5	95.6	28.9	128.85	0.6	1.7	222
23/01/2013	19.00	15.8	0.3	1.7	1.5	3.5	0.5	0.1	53.4	22.3	76.3	0.6	0.9	273
7/02/2013	18.81	15	0.2	1.8	1.9	3.9	1.3	0.4	83.3	42.8	127.8	0.6	1.1	333
21/02/2013	20.41	19	1.1	0.9	2.1	4.1	3.7	0.5	87.8	27.5	119.5	0.3	1.1	242
6/03/2013	20.00	21	1.0	2	1.8	4.8	5.0	1.0	113	35.6	154.6	0.6	1	253
20/03/2013	19.5	14	0.2	2.7	2.4	5.3	4.1	0.2	86.7	39.8	130.8	0.7	0.7	543
4/04/2013	19.57	18	1.3	2.7	2.9	6.9	3.3	0.6	100.1	39.3	143.3	1	0.7	300
22/04/2013	17.48	14.7	6.4	2.6	2.7	11.7	2.0	2.9	73.1	36.9	114.9	1.4	0.7	300
7/05/2013	16.50	14.3	2.4	1.6	2.6	6.6	5.0	1.1	127.9	60.1	194.1	1.5	0.2	398
23/05/2013	15.25	15	1.3	2.7	3	7	1.4	0.6	76	51.8	129.8	1.4	0.5	345
6/06/2013	14.00	14.5	1.1	2.9	2	6	2.5	1.0	95.5	41.3	140.3	1.7	0.5	363
19/06/2013	13.20	15.0	1.2	0.8	2.1	4.1	1.9	0.5	80.6	37.8	120.8	1.2	1.2	318
22/07/2013	11.50	14	1.2	1.5	2.5	5.2	4.0	5.6	70.4	24.4	104.4	1.6	1.8	242
6/08/2013	11.54	12	1.4	0.6	3.5	5.5	2.4	0.6	51.0	31	85	1.9	1.7	223
21/08/2013	11.21	12.8	3.1	0.9	3.1	7.1	2.9	3.5	60.6	41.4	60.6	1.9	1.9	354.5
3/09/2013	11.20	11.5	2.8	2.3	3.7	8.8	2.6	1.1	89.3	50.1	143.1	2.3	2.4	417
18/09/2013	11.56	12	2.2	2.4	3.2	7.8	4.8	0.6	76.6	36.9	118.9	1.8	2.2	166

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	Chl-a at 50m (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
2/10/2013	11.73	12	4.5	0.5	3.1	8.1	1.5	0.2	62.3	33.3	97.3	1.7	2.1	295
21/10/2013	12.81	11	3.3	0.7	3.5	7.5	3.1	1.9	61	32.9	98.9	1.1	1.8	254
7/11/2013	13.53	10	3.0	3	3.6	9.6	1.6	0.7	63.7	48	114	1.3	1.4	380.5
20/11/2013	16.69	9	1.3	3.7	3	8	2.2	0.3	74.5	41.2	118.2	0.9	0.7	356.5
2/12/2013	17.41	10	1.1	3.9	3.1	8.1	2.5	0.4	56.1	38.5	97.5	1.2	0.9	305.5
8/01/2014	18.54	12	1.4	3.6	2	7.0	5.7	0.5	121.8	39.6	167.6	1.1	1.1	347.5
28/01/2014	18.06	13	1.7	1.3	1.3	4.3	3.4	1.4	117.2	19.8	141.8	1.0	0.8	289
12/02/2014	18.55	13.5	1.4	2.6	2.8	6.8	6.8	0.7	110	43.4	160.9	0.9	0.8	382
25/02/2014	19.16	15	0.2	2.8	2.35	5.4	2.9	0.3	76	27.7	106.9	0.8	0.9	256.5
12/03/2014	19.05	18	0.4	2.6	2.45	5.5	11.8	0.9	163.4	34.9	210.9	0.7	1.1	267
27/03/2014	18.21	14.5	0.9	3.1	2.2	6.2	1.9	0.9	92.2	33.8	128.8	1.0	1.1	375
9/04/2014	18.60	16.5	1.0	2	1.9	4.9	6.1	0.8	113.1	28.8	148.8	0.9	0.8	297.5
23/04/2014	17.42	14.8	1.2	1.8	1.8	4.8	1.3	1.1	88.6	20.5	111.5	1.1	0.8	213
8/05/2014	16.32	17.7	0.8	2.2	1.8	4.8	0.7	0.3	50	22.9	73.9	1.0	0.6	210.5
20/05/2014	15.41	16	0.5	2.5	1.6	4.6	2.4	0.2	52.4	18.1	73.1	0.9	0.6	228
5/06/2014	14.01	12	1.1	1.9	1.9	4.9	1.3	0.4	71.3	28.5	101.5	1.1	0.8	318.5
19/06/2014	13.38	14	0.6	2.4	2.15	5.2	3.7	0.9	65.4	32.6	102.6	1.5	1.6	292
1/07/2014	12.86	12.75	0.9	2.1	2	5	2.0	3.0	67.0	26.7	98.7	1.6	1.9	222
21/07/2014	11.76	15.5	2.4	1.6	1.8	5.8	2.7	7.6	38.7	24.6	73.6	1.7	1.1	221
1/08/2014			2.2	1.8	3.5	7.5	1.5	1.8	64.7	45	113	2.7	2.8	353.5
26/08/2014	11.51	11	1.5	1.5	3.4	6.4	4.0	0.8	132.2	46.6	183.6	2.0	3.2	350.5
9/09/2014	12.08	11.25	0.7	2.3	3.0	6	1.0	3.2	47.8	27.5	79.5	3.8	3.4	336.5
8/10/2014	11.15	14	1.1	1.9	1.5	4.5	2.7	0.9	54.4	19.7	77.7	1.4	1.5	413
20/10/2014	12.91	13	0.8	2.2	0.75	3.8	5.1	0.4	78.5	19.5	103.5	0.9	1.7	238.5
5/11/2014	13.34	15	1.6	0.4	0.9	2.9	2.9	1.8	37.3	10.3	52.3	0.8	0.9	166.5
25/11/2014	14.64	12	1.6	1.4	1.3	4.3	2.9	0.4	74.7	20.3	98.3	0.4	0.6	222.5
17/12/2014	15.42	15	0.6	2.5	1.55	4.65	<1	<0.5	52.5	17	71	0.41	0.615	169
15/01/2015	20.36	16	1	2	1.475	4.475	6	1	45.0	23.25	75.25	0.515	0.71	237
29/01/2015	20.91	17.25	<0.5	3.5	1.6	5.6	4	<0.5	71.5	37.5	113.5	0.41	0.55	215.5
12/02/2015	19.47	17	0.6	1.4	1.2	3.2	1.2	0.2	51.6	15.2	68.2	0.6	1.2	220
26/02/2015	20.00	18	0.8	1.2	2	4.0	7.5	0.0	149.5	25.75	182.75	0.5	0.7	199
9/03/2015	20.08	18	1.0	2	1.7	4.7	7.5	1.1	85.4	27.55	121.55	0.6	1.1	254.5
25/03/2015	19.10	18	1.0	2	2	5	0.0	1.3	64.7	26.5	92.5	0.6	0.6	282.5
9/04/2015	no profile		0.8	1.2	1.3	3.3	3.6	0.2	103.2	16.95	123.95	0.9	1.0	233
22/04/2015	17.10	17.25	0.6	2.4	2.3	5.3	1.3	0.5	77.2	26.45	105.45	1.0	1.1	243.5
12/05/2015	15.70	13	1.1	2.9	2.8	6.8	3.7	1.0	98.3	51.2	154.2	1.1	0.84	340
27/05/2015	13.90	12	1.5	1.5	2.25	5.25	3.2	0.6	91.2	33.3	128.3	1.2	1.205	269
18/06/2015	12.30	16.25	1.8	1.2	2.15	5.15	3.7	0.7	89.6	36.8	130.8	1.3	1.2	230.5
2/07/2015	11.59	14.25	1.7	2.3	2.85	6.85	6.8	1.5	95.7	55.55	159.55	1.7	0.8	433.5
30/07/2015	11.04	13.00	2.3	1.7	3.05	7.05	0.8	1.0	35.2	37.55	74.55	2.7	NA	202.5
13/08/2015	10.86	10.00	1.6	3.4	3.15	8.15	3.4	1.7	58.9	38.3	102.3	2.2	2.4	244

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	Chl-a at 50m (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
27/08/2015	10.78	12.50	1.7	2.0	2.25	5.95	1.6	0.1	46.3	21.4	69.4	1.2	1.6	161.5
17/09/2015	10.79	18.5	1.9	1.7	2.35	5.95	0	3.9	51.1	22.85	77.85	1.33	1.23	233
1/10/2015	11.84	17.25	1.2	1.8	2.2	5.2	0	0.1	52.9	20.2	73.2	0.77	1.09	235.5
15/10/2015	12.33	14.5	1.3	1.7	1.6	4.6	0.1	0.1	52.8	15.5	68.5	0.37	1.11	145.5
2/11/2015	13.42	16	1.8	2.2	1.75	5.75	4.6	1.6	97.8	24.3	128.3	0.455	0.8	205
19/11/2015	13.96	14	1.1	2.9	1.9	5.9	0.4	0.5	55.1	22.65	78.65	0.605	1.375	198.5
1/12/2015	16.27	14.5	1.1	1.9	2.25	5.25	1.2	0.8	50	20.25	72.25	0.38	1.03	196.5
7/01/2016	18.30	18	0.8	2.2	1.6	4.6	1.2	0.4	59.4	21.4	82.4	0.385	0.715	184
21/01/2016	19.68	14	1.1	2.6	1.5	5.2	2.9	0.6	117.5	35.2	156.2	0.48	0.685	280.5
3/02/2016	22.21	18	3.3	-0.3	1.4	4.4	3.7	0.4	85.9	28.75	118.75	0.335	0.82	281.5
16/02/2016	22.25	17	1.2	1.4	1.6	4.2	2.8	0.3	56.9	26.6	86.6	0.4	0.8	242
9/03/2016	20.67	no secchi	1.8	2.2	0.95	4.95	0.5	0.2	45.3	9.85	55.85	0.555	0.72	86.5
22/03/2016	19.79	17	1.9	2.1	1.95	5.95	1.6	0.5	66.9	19.3	88.3	0.635	0.845	121
7/04/2016	19.02	15	0.515	3.185	1.7	5.4	8.05	0.2	111.7	20	140	0.78	0.77	243
19/04/2016	18.31	14.75	0.9	1.1	2.15	4.15	2.4	0.5	84.1	28.7	115.7	0.8	0.9	288
5/05/2016	17.11	14.2	0.6	1.4	1.9	3.9	0.8	0.3	65.9	25.05	92.05	1.05	0.74	278.5
2/06/2016	14.63	14.3	0.8	1.2	1.85	3.85	1.5	0.2	65.3	22.25	89.25	1.1	0.965	266.35
6/07/2016	12.56	13	1.5	3.5	2.75	7.8	1.5	0.5	64.0	27.5	93.5	1.4	0.2	264.5
27/07/2016	11.53	12	1.3	2.7	2.35	6.35	3.1	0.6	55.3	28.4	87.4	1.4	1.46	
10/08/2016	11.01	13	2.5	1.5	2.20	6.2	0.2	3.6	55.2	20.1	79.1	1.7	1.68	
23/08/2016	10.95	12.25	1.6	2.4	3.05	7.1	0.0	0.5	57.5	27.9	85.9	1.9	1.72	205.50
12/09/2016	11.17	14.5	2.3	2.7	3.10	8.1	4	1	105.0	33.6	143.6	1.27	1.85	387.50
27/09/2016	11.59	15.5	1.2	1.8	2.10	5.1	5.0	0.9	79.1	33.5	118.5	0.5	0.87	223.83
12/10/2016	12.44	15	1.2	2.4	2.85	6.5	1.2	0.4	53.4	25.5	80.5	0.5	1.10	178.00
1/11/2016	13.54	12	1.3	0.7	2.35	4.4	0.0	0.3	56.7	30.7	87.7	0.5	0.73	234.50
22/11/2016	14.41	12.5	0.6	0.4	2.30	3.3	1.3	0.4	71.3	33.5	106.5	0.8	0.98	238.00
7/12/2016	16.49	15	0.7	2.3	2.30	5.3	0.9	0.6	60.5	36.3	98.3	0.6	0.96	255.50
26/01/2017	17.26	15	0.7	5.3	1.85	7.85	2.2	0.4	65.4	26.2	94.2	0.605	0.79	267.96
16/02/2017	18.66	16	0.7	5.3	1.75	7.75	1.7	0.8	58.5	24.2	85.2	0.485	0.66	664.00
1/03/2017	20.48	16	0.7	1.9	1.35	3.95	1.9	1.1	57.0	24.1	84.1	0.435	0.65	221.00
16/03/2017	19.42	16.25	0.6	2.4	1.85	4.85	1.7	0.7	72.6	27.7	102.7	0.475	0.77	267.00
28/03/2017	18.96	16.5	0.3	1.7	1.6	3.6	2.2	0.3	62.5	22.25	87.25	0.545	0.58	242.50
18/04/2017	17.88	12.3	0.8	2.2	2.25	5.25	2.5	0.4	61.1	32.45	96.45	1.04	0.64	233.00
3/05/2017	16.73	13	0.8	1.2	1.9	3.9	2.2	1.5	63.3	29.25	96.25	1.42	0.51	267.50
16/05/2017	15.315	10.25	0.5	2.5	2.00	5	1.3	0.3	56.4	26.05	84.05	1.04	0.40	328.00
29/05/2017	14.607	11	0.7	2.3	1.85	4.85	6.4	0.5	66.1	28.05	101.05	1.02	0.41	243.00
15/06/2017	13.106	12.5	0.7	1.3	2.15	4.15	2.3	0.5	46.2	23.5	72.5	1.08	1.13	201.00
28/06/2017	12.5	14.5	0.4	1.6	2	4	2.5	0.6	57.9	23.8	84.8	1.14	1.07	265.00

Date Collected	Temp. oC	Secchi m	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH4-N mg m <sup>-3</sup>	NO3-N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	PN mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	Chlorophyll a mg m <sup>-3</sup>	Chl-a at 50m mg m <sup>-3</sup>	PC mg m <sup>-3</sup>
18/07/2017	11.66	12	<1	2	2.4	4.9	1.2	<1	50.3	29.5	81.5	1.89	1.79	170
7/08/2017	11.24	10.75	1.3	1.7	2.7	5.7	2.8	3.3	41.9	26.4	74.4	1.9	1.9	212
21/08/2017	11.33	9.25	1.5	1.5	2.55	5.55	0.4	0.1	45.5	26.4	72.4	3.7	4.0	223
27/09/2017	11.62	9.5	0.9	2.4	2.35	5.65	0.7	0.2	51.1	22.2	74.2	2.9	3.6	249
31/10/2017	13.72	10.25	1.7	1.6	2.6	5.9	1.7	1.0	73.3	41.3	117.3	0.9	1.1	350
14/11/2017	14.54	13	1.2	0.8	1.45	3.45	3.0	2.1	45.9	18.5	69.5	0.4	1.52	195.5
27/11/2017		13.5	1.1	1.9	1.95	4.95	1.6	0.9	53.5	23.2	79.2	0.5	1.8	211.49
9/01/2018	18.76	17	0.3	2.7	2	5	5.5	2.0	56.5	22.1	86.1	0.29	0.63	187
24/01/2018	21.02	15.3	0.7	2.3	1.35	4.35	9.7	0.2	58.1	23.5	91.5	0.42	0.65	236.5
19/02/2018	22.04	11.3	1.1	0.9	1.55	3.55	3	1.4	70.6	29.5	104.5	0.685	0.815	850.5
22/03/2018	19.87	13.75	<1	1.5	1.8	3.8	4	0.5	64.5	25.3	94.3	0.563	0.74	555
5/04/2018	18.83	19	<1	1.5	1.45	3.45	5	2.0	49.0	20.4	76.4	1.29	0.876	247
1/05/2018	15.94		0.22	2.0	1.45	3.65	6.19	0.3	44.5	25.9	76.9	1.04	0.542	369
31/05/2018	13.26	16	0.5	1.8	1.45	3.75	2	0.02	59.0	32.4	93.4	1.27	0.214	304.5
19/06/2018	12.55	14	1.2	0.8	1.75	3.75	2.98	2.1	75.9	25.7	106.7	1.45	0.386	171.5

## Lake Taupo cumulative database of 10 m tube sample data

Samples collected from Kuratau Basin (Site B)

Date Collected	Temp. °C	Secchi m	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	PN mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	Chlorophyll <i>a</i> mg m <sup>-3</sup>	PC mg m <sup>-3</sup>
8/01/2002	18.1	13.5	0.4	2	2.2	4.6	0.4	1.3	48	16.7	66.4	0.9	233
22/01/2002	18.8	12	0.9	2	2.6	5.5	0.9	0.3	41	19.9	62.1	0.9	221
6/03/2002	18.6	14.5	0.3	2	2.3	4.6	1.4	0.5	73	18.3	93.2	0.9	207
4/04/2002	17.4	19.5	0.6	2	1.5	4.1	0.4	0.1	40	11.2	51.7	0.9	162
17/04/2002	16.8	19	0.0	3	1.6	4.6	0.5	0.1	45	12.3	57.9	0.9	143
5/05/2002	15.1	13.2	0.3	1.1			1.6	0.4	40			0.9	
19/06/2002	12.5	15	1.0	1	2.2	4.2	0.4	0.8	48.2	17.4	66.8	1.5	182
1/07/2002	12.1	16	1.5	1.5	1.8	4.8	0.8	1.7	41.5	14.2	58.2	1.6	146
17/07/2002	11.5	12.5	1.8	2.2	2	6	0.8	5.1	51.1	16.1	73.1	1.5	156.5
31/07/2002	11.3	10.5	2.0	3	2.5	7.5	1.5	2.2	81.5	18.5	103.7	2.6	194.5
29/08/2002	11.0	8	1.2	4.8	3.3	9.3	0	0.2	184.0	22.9	207.1	2.3	221
18/09/2002	11.1	11	1.9	2.1	2.1	6.1	0.4	0.6	43.4	14	58.4	1.1	149
9/10/2002	11.7	16	1.4	1.6	1.7	4.7	4.4	0.2	19.6	11.7	35.9	0.5	149
13/11/2002	12.0	14	1	3	2.5	6.5	0.3	0	35	15.2	50.5	1.8	478
28/11/2002	13.8	12.7	0.9	2.9	2	5.8	0	0	40	16.7	56.7	0.7	203.5
18/12/2002	15.2	14	0.6	1.4	2.1	4.1	0	0.1	36	11.2	47.3	0.4	143
30/01/2003	16.8	18	0.5	2.5	1.7	4.7	<1	0.8	43	12.1	55.9	0.6	148.5
13/02/2003	18.8	11	0.7	1.3	1.6	3.6	0.4	0.2	45	9.3	54.9	0.7	131
17/03/2003	18.7	14	0.5	3.5	2	6	<1	0.7	49	16.3	66.0	1.0	208
3/04/2003	19.0	12.8	0.6	3.4	2.1	6.1	<1	0.1	50	19.6	69.7	1.1	239.5
28/04/2003	16.7	13.5	0.6	3.4	1.6	5.6	<1	0.2	57	13.1	70.3	1.4	218.5
15/05/2003	15.7	15.5	0.4	3.6	1.8	5.8	<1	0.2	63	13.5	76.7	1.7	229.5
12/06/2003	12.5	12	1.7	1.3	2.2	5.2	0.1	2.8	39.1	13.9	55.9	1.3	
14/07/2003	11.8	12	1.7	2.3	2.2	6.2	0.9	1.9	39.4	15.9	58.1	1.7	96.5
31/07/2003	11.3	13	2.1	1.9	2.7	6.7	1.2	2.0	43.8	18.0	65.0	2.1	108.5
14/08/2003	11.4	13	1.8	2.2	3.3	7.3	0.3	0.3	33	22.3	55.9	2.5	112.0
26/08/2003	11.3	11.5	3.1	0.9	4.0	8	0.4	0.1	37	22.4	59.9	3.1	148.0
8/09/2003	11.1	11	2.5	1.5	3.3	7.3	0.4	0.1	36	23.5	60.0	1.4	196.5
7/10/2003	11.7	9.5	2.3	1.7	3.0	7.0	0.0	0.1	49.9	20.5	70.5	1.2	185.5

Date Collected	Temp. °C	Secchi m	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	PN mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	Chlorophyll <i>a</i> mg m <sup>-3</sup>	PC mg m <sup>-3</sup>
21/10/2003	13.2	15.0	2.2	0.8	2.7	5.7	0.3	0.2	38.5	14.9	53.9	0.8	155.5
19/11/2003	13.8	17.0	1.6	2.4	2.4	6.4	0.0	0.1	51.0	14.6	65.7	0.6	139.5
4/12/2003	15.6	17.0	1.8	2.2	1.8	5.8	0.2	0.1	44.7	13.5	58.5	0.4	126.5
18/12/2003	17.0	15.0	0.5	3.5	1.9	5.9	0.0	0.2	56.0	12.4	68.6	0.5	145.5
13/01/2004	20.3	16.0	0.4	4.6	1.8	6.8	0.0	0.2	54.0	13.7	67.9	0.5	125.0
26/02/2004	16.8	13.5	1.1	1.9	1.8	4.8	0.6	0.1	42.3	15.8	58.8	0.8	157.0
8/03/2004	17.6	5.0	0.8	2.2	3.1	6.1	1.0	0.3	41.7	17.5	60.5	0.9	172.0
31/03/2004	15.9	11.0	0.8	3.2	1.8	5.8	0.7	0.2	45.1	9.9	55.9	1.4	124.5
14/04/2004	15.0	14.0	0.9	4.1	2.2	7.2	0.6	0.3	52.1	14.9	67.9	1.3	171.5
10/05/2004	14.7	15.5	0.8	2.2	1.7	4.7	0.0	0.2	59.8	15.9	75.9	1.3	179.0
10/06/2004	12.9	12.0	1.4	2.6	2.1	6.1	0.0	0.2	108.8	18.6	127.6	1.2	183.0
13/07/2004	11.4	11.0	2.1	2.9	2.5	7.5	0.0	8.4	40.6	19.3	68.3	1.4	154.0
26/07/2004	11.2	10.0	1.3	2.7	3.2	7.2	0.2	5.8	38.0	25.0	69.0	2.7	204.0
24/08/2004	10.9	10.0	0.7	3.3	3.1	7.1	0.0	0.0	47.0	20.9	67.9	2.5	158.0
7/09/2004	10.8	11.0	0.7	2.3	2.6	5.6	0.0	0.2	44.8	17.1	62.1	1.5	172.5
21/10/2004	11.7	11.0	1.2	1.8	2.1	5.1	0.2	0.0	30.8	16.1	47.1	0.8	172.5
2/11/2004	13.1	15.0	1.0	2.0	1.7	4.7	0.2	0.1	42.7	11.0	54.0	0.5	152.0
22/11/2004	14.9	15.0	0.6	3.4	1.6	5.6	0.6	0.0	33.4	9.5	43.5	0.5	141.5
15/12/2004	13.2	17.2	0.6	3.4	1.6	5.6	0.4	0.1	39.5	12.6	52.6	0.2	120.0

## Lake Taupo cumulative database of 10 m tube sample data

## Samples collected from Western Bays (site C)

Date Collected	Temp.	Secchi	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	PN	TN	Chlorophyll <i>a</i>	PC
	°C	m	mg m <sup>-3</sup>	mg m <sup>-3</sup>									
8/01/2002	18.72	14.5	0.9	4	2.3	7.2	0.9	0.6	88	16.1	105.6	0.8	213
22/01/2002	18.82	15.5	0.7	2	2.2	4.9	0.7	0.0	37	16.8	54.5	0.8	221
6/03/2002	18.68	16	0.2	2	2	4.2	0	0.1	45	16	61.1	0.7	177
4/04/2002	17.47	19	0.6	2	1.4	4	0.0	0.0	38	8.8	46.8	0.9	152
17/04/2002	16.88	18.5	0	3	1.6	4.6	0.7	0.2	44	11.8	56.7	0.9	167
5/05/2002	15.6	15.6	0.4	1			2	0.2	45			1.1	
19/06/2002	12.58	16	0.9	2.1	2	5	0.3	1.2	38.8	15.9	56.2	0.9	161
1/07/2002	12.22	14	1.3	1.7	1.9	4.9	0.3	0.4	45	15	60.7	1.4	148
17/07/2002	11.52	12.5	1.9	2.1	2	6	0.9	4.9	46.1	16.3	68.2	1.5	160
31/07/2002	11.6	12	2.3	2.7	2.3	7.3	1.7	4.0	113.3	16.7	135.7	2.3	150
29/08/2002	11.4	8	1	3	3.2	7.2	0	0	177	22.3	199.3	2.4	217
18/09/2002	11.24	12	2.8	2.2	2	7	1.7	0.4	45.3	11.7	59.1	0.9	152
9/10/2002	12.10	19	1.5	1.5	1.7	4.7	0.3	0.2	28	10.2	38.7	0.4	116
13/11/2002	12.60	16	1.1	2.9	2	6	0.1	0	51	12.2	63.3	0.6	141
28/11/2002	13.90	15.5	0.9	2.1	2	5	0.4	0.4	40	14.4	55.2	0.8	125.5
18/12/2002	15.10	13.5	0.8	2.2	1.9	4.9	0	0.3	45	10.2	55.5	0.5	136.5
30/01/2003	17.60	18.5	0.5	2.5	1.5	4.5	<1	0.1	46	8.6	54.7	0.4	141.5
13/02/2003	19.50	19	0.6	1.4	1.6	3.6	0	0.1	42	8.4	50.5	0.5	104
17/03/2003	18.70	15	0.5	2.5	1.7	4.7	<1	0.4	46	14.6	61.0	1.1	215
3/04/2003	18.80	14.5	0.5	2.5	1.6	4.6	<1	0.4	49	16.5	65.9	1.2	204
28/04/2003	17.00	14.5	0.4	2.6	1.4	4.4	<1	0.4	54	12.2	66.6	1.5	191
15/05/2003	15.60	17	0.1	3.9	2.2	6.2	<1	0.1	56	18	74.1	1.3	197
12/06/2003	13.70	11	1.3	1.7	2	5	0.1	0.9	40	13.8	54.8	1.3	
14/07/2003	11.80	14	1.9	2.1	2	6	1	4.7	39.3	14.9	59.9	1.5	85.0
31/07/2003	11.40	12	3.1	5.9	2.8	11	0.1	4.0	55	20.3	79.4	2.3	101.5
14/08/2003	11.50	14.5	2.4	2.6	2.9	7.9	1.1	3.8	46.1	19.5	70.5	2.8	92.5
26/08/2003	11.30	13	2.8	2.2	3.8	8.8	0.5	0.2	39	25.0	64.7	3.2	174.5
8/09/2003	11.30	12	2.6	0.4	3	6	0.1	0.1	40	19.5	59.7	1.3	233.0
7/10/2003	11.7	12.5	2.7	1.3	2.8	6.8	0.0	0.3	44.7	18.4	63.4	1.5	157.5

Date Collected	Temp. °C	Secchi (m)	DRP (mg m <sup>-3</sup> )	DOP (mg m <sup>-3</sup> )	PP (mg m <sup>-3</sup> )	TP (mg m <sup>-3</sup> )	NH <sub>4</sub> -N (mg m <sup>-3</sup> )	NO <sub>3</sub> -N (mg m <sup>-3</sup> )	DON (mg m <sup>-3</sup> )	PN (mg m <sup>-3</sup> )	TN (mg m <sup>-3</sup> )	Chlorophyll <i>a</i> (mg m <sup>-3</sup> )	PC (mg m <sup>-3</sup> )
21/10/2003	13.0	12.0	1.5	1.5	3.1	6.1	0.3	0.0	44.7	17.4	62.4	1.1	195.0
19/11/2003	14.3	17.2	1.5	1.5	2.3	5.3	0.8	0.0	38.2	14.4	53.4	0.7	123.0
4/12/2003	15.5	17.0	1.7	3.3	1.7	6.7	0.0	0.2	46.8	11.2	58.2	0.5	129.0
18/12/2003	17.0	19.0	0.5	4.5	1.5	6.5	0.0	0.0	47.0	9.9	56.9	0.4	124.5
13/01/2004	20.2	17.5	0.7	4.3	1.6	6.6	0.0	0.1	53.0	11.9	65.0	0.4	118.5
26/02/2004	16.9	14.0	0.9	2.1	2.2	5.2	0.8	0.4	40.8	17.2	59.2	0.7	156.0
8/03/2004	18.4	13.0	0.8	2.2	2.0	5.0	0.7	0.1	34.2	11.1	46.1	0.6	124.0
31/03/2004	16.4	12.5	0.6	3.4	2.0	6.0	0.7	0.3	51.0	12.3	64.3	1.2	175.5
14/04/2004	15.4	16.5	0.9	3.1	2.3	6.3	0.6	0.3	50.1	14.2	65.2	1.2	159.0
10/05/2004	14.9	16.0	0.8	3.2	1.6	5.6	0.0	0.2	48.8	15.4	64.4	1.1	153.0
10/06/2004	13.1	14.0	0.8	2.2	2.0	5.0	0.0	0.2	41.8	16.6	58.6	1.0	151.0
13/07/2004	11.6	12.5	1.3	2.7	2.5	6.5	0.0	5.9	39.1	19.9	64.9	1.6	156.5
26/07/2004	11.5	11.0	1.5	2.5	2.9	6.9	0.3	2.7	46.0	22.2	71.2	2.4	180.5
24/08/2004	10.9	10.0	1.0	3.0	2.9	6.9	0.0	0.4	37.6	18.5	56.5	2.5	161.0
7/09/2004	11.1	12.0	1.2	3.8	2.6	7.6	0.0	0.0	54.0	16.8	70.8	1.5	202.0
21/10/2004	11.7	12.0	1.1	1.9	1.9	4.9	0.2	0.0	35.8	14.8	50.8	0.6	167.5
2/11/2004	12.4	17.0	1.0	3.0	1.7	5.7	0.3	1.2	45.5	16.3	63.3	0.4	173.0
22/11/2004	14.8	16.0	0.5	3.5	1.7	5.7	0.0	0.2	37.8	10.8	48.8	0.5	149.0
15/12/2004	14.2	20.8	0.9	4.1	1.4	6.4	0.0	0.0	42.0	12.2	54.2	0.2	131.0

**Lake Taupo biannual nutrient database**

Collection date 14 November 2017

Secchi Depth= 13 m

2017-2018																				
Collection date 14 November 2017		Secchi Depth= 13 m																		
NIWA ID	Depth (m)	pH pH units	EC @25°C µS/cm	Temp °C	DO g m⁻³	SS g/m³	VSS g/m³	Chla-Av mg/m³	DRP mg/m³	DOP mg/m³	PP mg/m³	TP mg/m³	NH₄-N mg/m³	NO₃-N mg/m³	DON mg/m³	PartN mg/m³	TN mg/m³	DOC mg/m³	PC mg/m³	PN mg/m³
QS1	Surface	7.83	118	14.49	10.30	0.5	<0.5	0.35	0.9	1.1	1.1	3.1	1.7	1.6	71	15.9	90	1313	121.5	13.0
QS2	10 m	7.89	118	14.08	9.87	0.6	<0.5	0.52	1.5	0.5	1.7	3.7	1.8	0.6	33	13.1	48	575	166.0	14.0
QS3	20 m	7.86	118	13.88	9.85	0.7	<0.5	0.56	0.2	1.8	2.0	4.0	0.0	0.0	36	16.8	53	570	180.0	18.3
QS4	30 m	7.88	120	13.48	9.88	0.8	<0.5	0.47	0.5	1.5	1.7	3.7	0.0	0.0	40	14.6	55	994	160.0	13.4
QS5	40 m	7.91	116	11.81	9.55	0.9	<0.5	1.11	0.9	1.1	2.3	4.3	0.0	0.0	33	17.5	51	512	190.5	19.3
QS6	50 m	7.70	118	11.41	8.92	0.9	<0.5	1.55	1.3	1.7	2.4	5.4	0.0	1.8	34	16.2	52	480	159.5	17.2
QS7	60 m	7.70	117	11.27	8.73	0.9	<0.5	1.68	1.2	0.8	2.2	4.2	0.0	1.1	34	15.4	50	593	159.0	15.2
QS8	70 m	7.62	121	11.21	8.65	0.6	<0.5	1.14	1.7	1.3	1.7	4.7	0.4	10.3	31	10.4	52	487	77.6	9.8
QS9	80 m	7.60	119	11.14	8.73	0.5	<0.5	1.01	1.9	1.1	1.7	4.7	0.0	15.4	34	9.5	59	486	63.6	8.6
QS10	90 m	7.50	119	11.12	8.64	<0.5	<0.5	0.75	2.7	1.3	1.6	5.6	1.1	20.0	28	8.3	57	627	53.8	7.1
QS11	100 m	7.52	119	11.09	8.50	0.5	<0.5	0.70	2.0	1.0	1.7	4.7	0.0	14.3	31	8.0	53	566	66.2	7.8
QS12	110 m	7.61	119	11.09	8.40	0.6	<0.5	0.75	1.7	1.3	1.5	4.5	0.9	14.5	33	8.2	56	506	50.0	7.6
QS13	120 m	7.49	119	11.08	8.31	0.6	<0.5	0.85	3.7	1.3	1.8	6.8	0.7	25.7	28	8.4	62	514	64.9	9.1
QS14	130 m	7.51	119	11.07	8.21	1.4	<0.5	0.97	4.0	1.0	2.1	7.1	0.2	27.4	27	8.9	64	452	63.5	9.1
QS15	140 m	7.50	119	11.06	8.05	0.7	<0.5	1.16	4.2	1.8	2.8	8.8	0.9	29.7	27	9.4	67	453	71.4	9.7
QS16	150 m	7.44	119	11.06	7.85	0.7	<0.5	1.13	4.5	2.5	2.9	9.9	1.0	29.2	28	10.0	68	439	68.9	10.7

PartN = by wet digestion method, PN = by combustion furnace method

Collection date 1 May 2018

Secchi Depth (none, was entered in the phone which died)

NIWA ID	Depth (m)	pH pH units	EC @25°C µS/cm	Temp °C	DO g m⁻³	SS g/m³	VSS g/m³	Chla-Av mg/m³	DRP mg/m³	DOP mg/m³	PP mg/m³	TP mg/m³	NH₄-N mg/m³	NO₃-N mg/m³	DON mg/m³	PartN mg/m³	TN mg/m³	DOC mg/m³	PC mg/m³	PN mg/m³
DK1	Surface	7.63	121	15.94	9.12	<0.5	<0.5	1.05	0.3	2.2	1.0	3.5	3.4	0.6	46.9	11.8	63	627	174.5	8.75
DK2	10m	7.80	121	15.88	9.15	<0.5	<0.5	1.20	0.3	1.9	1.3	3.5	5.3	0.1	30.6	14.5	51	597	149	10.45
DK3	20m	7.78	121	15.79	9.11	<0.5	<0.5	1.23	0.5	1.8	1.6	3.9	6.4	0.1	43.5	18.6	69	585	198	11.6
DK4	30m	7.81	120	15.78	9.08	<0.5	<0.5	0.85	0.4	1.6	1.6	3.6	1.8	0.2	39.1	15.8	57	557	113	8.2
DK5	40m	7.69	122	13.60	8.84	<0.5	<0.5	0.76	0.3	1.7	1.2	3.2	1.2	1.0	36.8	10.5	50	494	82.8	5.8
DK6	50m	7.44	122	12.04	8.37	<0.5	<0.5	0.55	0.8	1.5	0.8	3.1	0.2	1.7	46.1	6.6	55	443	44.45	3.9
DK7	60m	7.41	124	11.63	8.17	<0.5	<0.5	0.47	1.4	1.5	0.8	3.7	1.0	4.7	33.3	6.6	46	429	55.75	3.45
DK8	70m	7.23	124	11.43	7.81	<0.5	<0.5	0.33	2.8	0.9	0.7	4.4	2.1	16.6	45.3	5.9	70	460	46.85	3.9
DK9	80m	7.22	123	11.34	7.79	<0.5	<0.5	0.25	2.7	1.3	0.6	4.6	0.8	18.9	29.3	4.9	54	415	73	3.45
DK10	90m	7.33	122	11.29	7.87	<0.5	<0.5	0.20	1.9	1.6	0.6	4.1	0.5	15.7	30.9	5.1	52	444	43.3	2.4
DK11	100m	7.26	125	11.26	7.58	<0.5	<0.5	0.13	3.4	1.5	0.7	5.6	1.8	26.1	31.1	6.5	66	436	45.75	3.8
DK12	110m	7.24	123	11.23	7.34	<0.5	<0.5	0.13	3.8	1.7	0.6	6.1	1.2	27.8	30.0	4.9	64	440	43.15	1.85
DK13	120m	7.38	123	11.22	7.27	<0.5	<0.5	0.11	4.8	1.2	0.6	6.6	2.6	31.6	26.8	4.6	66	440	29.45	3.95
DK14	130m	7.23	123	11.20	7.24	<0.5	<0.5	0.12	4.7	1.3	0.6	6.6	2.2	31.5	23.2	5.1	62	445	50.5	2.55
DK15	140m	7.36	131	11.18	7.10	<0.5	<0.5	0.10	6.1	1.1	0.7	7.9	1.1	38.3	26.6	5.4	71	448	60	2.85
DK16	150m	7.29	126	11.18	6.55	<0.5	<0.5	0.14	6.8	1.9	1.0	9.7	3.4	40.9	27.7	5.0	77	448	41.25	3.45

Lake Taupo biannual nutrient database															2016-2017									
Collection date 8 December 2016				Secchi Depth= 15 m																				
NIWA ID	Depth (m)	pH pH units	EC @25°C µS/cm	Temp °C	DO g m⁻³	SS g/m³	VSS g/m³	Chla-Av mg/m³	DRP mg/m³	DOP mg/m³	PP mg/m³	TP mg/m³	NH₄-N mg/m³	NO₃-N mg/m³	DON mg/m³	Urea mg/m³	PartN mg/m³	TN mg/m³	DOC mg/m³	PC mg/m³	PN mg/m³			
QI1	Surface	8.01	120	16.49	9.66	<0.5	<0.5	0.6	0.2	1.8	1.6	3.6	0.4	0.7	48.9	4	19.5	69.5	644	158	16.7			
QI2	10m	8.02	120	16.04	9.68	<0.5	<0.5	0.5	0.4	1.6	2.3	4.3	0.7	0.1	48.2	<2	19.8	68.8	673	118	12.5			
QI3	20m	8.02	120	14.61	9.73	<0.5	<0.5	0.7	0.2	1.8	1.8	3.8	0.2	0.3	41.6	<2	15.7	57.7	624	141	9.2			
QI4	30m	7.96	120	14.17	9.68	<0.5	<0.5	0.9	0.4	1.6	1.6	3.6	0.4	0.1	42.5	2	14.7	57.7	580	143	11.8			
QI5	40m	7.86	120	12.44	9.23	<0.5	<0.5	0.8	0.1	1.9	1.4	3.4	1.1	0.2	41.7	<2	13.8	56.8	592	107	10.9			
QI6	50m	7.46	121	11.27	8.79	<0.5	<0.5	1.1	1.3	1.7	2.0	5.0	0.0	1.4	50.6	<2	16.6	68.6	584	105	15.0			
QI7	60m	7.45	121	10.96	8.87	<0.5	<0.5	0.7	1.6	1.4	1.5	4.5	0.0	0.7	34.3	<2	16.5	51.5	608	65	6.6			
QI8	70m	7.38	121	10.90	8.95	<0.5	<0.5	0.6	2.0	1.0	1.2	4.2	0.1	3.7	30.2	<2	10.8	44.8	488	58	6.0			
QI9	80m	7.44	122	10.87	8.96	<0.5	<0.5	0.4	1.8	1.2	1.2	4.2	0.0	5.5	31.5	<2	9.4	46.4	544	63	6.8			
QI10	90m	7.45	121	10.85	8.94	<0.5	<0.5	0.3	2.3	0.7	1.2	4.2	0.0	8.1	31.9	<2	5.2	45.2	532	50	4.1			
QI11	100m	7.40	121	10.84	8.95	<0.5	<0.5	0.3	2.0	1.0	1.1	4.1	0.0	9.5	30.5	<2	7.9	47.9	497	37	4.3			
QI12	110m	7.39	121	10.83	8.85	<0.5	<0.5	0.3	2.3	0.7	1.0	4.0	0.0	10.4	31.6	<2	6.8	48.8	493	43	4.7			
QI13	120m	7.37	122	10.82	8.68	<0.5	<0.5	0.2	3.5	0.5	1.1	5.1	0.0	16.7	31.3	<2	5.6	53.6	492	48	4.9			
QI14	130m	7.43	121	10.81	8.54	<0.5	<0.5	0.2	2.8	0.2	1.0	4.0	0.1	14.5	27.5	<2	5.9	47.9	509	45	4.2			
QI15	140m	7.39	122	10.81	8.34	<0.5	<0.5	0.2	4.0	1.0	1.5	6.5	0.0	19.9	29.1	<2	10.2	59.2	505	73	5.1			
QI16	150m	7.36	122	10.81	8.32	<0.5	<0.5	0.3	4.5	2.5	1.3	8.3	0.0	21.5	30.5	<2	7.2	59.2	498	50	5.2			
Collection date 18 April 2017				Secchi Depth= 12.3 m																				
NIWA ID	Depth (m)	pH pH units	EC @25°C µS/cm	Temp °C	DO g m⁻³	SS g/m³	VSS g/m³	Chla-Av mg/m³	DRP mg/m³	DOP mg/m³	PP mg/m³	TP mg/m³	NH₄-N mg/m³	NO₃-N mg/m³	DON mg/m³	Urea mg/m³	PartN mg/m³	TN mg/m³	DOC mg/m³	PC mg/m³	PN mg/m³			
ZT1	Surface	7.73	107	17.520	9.8717	0.78	<0.50	0.395	<0.500	1.75	1.55	3.55	2	<0.500	55.75	10	16.6	74.6	596	148.5	16.5			
ZT2	10m	7.83	106	17.780	8.9363	<0.50	<0.50	1.01	<0.500	1.75	2	4	<1.00	<0.500	39.25	2	19.4	59.4	666	158.5	19.5			
ZT3	20m	7.81	108	17.762	8.8945	<0.50	<0.50	1.36	<0.500	1.75	1.9	3.9	<1.00	<0.500	40.25	1	19.7	60.7	603	154	17.4			
ZT4	30m	7.79	106	17.756	8.8669	0.57	<0.50	1.41	<0.500	1.75	1.85	3.85	1	<0.500	41.75	1	17.4	60.4	612	148.5	15.55			
ZT5	40m	7.59	108	13.840	8.5863	<0.50	<0.50	0.925	0.5	1.5	1.25	3.25	<1.00	1	35.5	1	9.2	46.2	530	83.45	9.22			
ZT6	50m	7.65	107	11.993	8.5589	<0.50	<0.50	1.04	<0.500	1.75	1.25	3.25	<1.00	1	34.5	<1.00	10.5	46.5	521	72.2	8.51			
ZT7	60m	7.59	108	11.410	8.4790	<0.50	<0.50	0.42	1.9	2.1	0.9	4.9	<1.00	3	30.5	1	16.5	50.5	445	50.2	5.065			
ZT8	70m	7.54	108	11.114	8.4577	<0.50	<0.50	0.34	3	1	0.8	4.8	<1.00	8	30.5	<1.00	11.6	50.6	401	38.6	3.545			
ZT9	80m	7.7	109	11.015	8.3852	<0.50	<0.50	0.28	3.8	1.2	0.7	5.7	<1.00	11	26.5	1	11.7	49.7	468	47.05	4.765			
ZT10	90m	7.7	109	10.968	8.3019	<0.50	<0.50	0.19	4.7	1.3	0.75	6.75	1	18	25	<1.00	7.05	51.05	431	41.5	4.27			
ZT11	100m	7.59	109	10.936	8.2271	<0.50	<0.50	0.18	4.9	1.1	0.65	6.65	<1.00	21	25.5	1	7.65	54.65	467	33.45	3.995			
ZT12	110m	7.61	108	10.921	8.0697	<0.50	<0.50	0.175	6.1	0.9	0.65	7.65	1	24	26	1	4.1	55.1	460	34.35	3.375			
ZT13	120m	7.69	109	10.905	7.9872	<0.50	<0.50	0.155	6.4	1.6	0.75	8.75	<1.00	26	21.5	1	3.5	51.5	398	38.4	6.85			
ZT14	130m	7.57	109	10.899	7.9611	<0.50	<0.50	0.135	6.1	1.9	0.9	8.9	<1.00	26	27.5	<1.00	6.2	60.2	433	35.25	5.01			
ZT15	140m	7.55	110	10.899	7.4755	<0.50	<0.50	0.17	7.7	1.3	0.95	9.95	<1.00	30	27.5	1	5.05	63.05	504	41.45	5.585			
ZT16	150m	7.63	109	10.898	7.4908	<0.50	<0.50	0.225	7.8	1.2	1.2	10.2	<1.00	31	32.5	3	8.35	72.35	405	47.2	6.895			
PartN = by wet digestion method, PN = by combustion furnace method																								

Lake Taupo biannual nutrient database										2015-2016							Started 27 October 1994																					
Collection date 2 November 2015					Secchi depth = 16 m																																	
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PartP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PartN*	TN	DOC	PC	PN**																	
		m	µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>																										
UK1	1	7.86	119	13.42	10.43	0.51 <0.50		0.43	1.3	1.7	1.1	4.1	0.5	0.4	48.1	4	9.5	58.5	507	98.1	8.6																	
UK2	10	7.87	119	13.04	10.36	0.63 <0.50		0.24	1.2	2.8	1.45	5.5	0.6	0.3	40.1	<3	10.5	51.5	459	102.4	9.3																	
UK3	20	7.91	120	12.89	10.45	0.67 <0.50		0.5	0.9	2.1	2.1	5.1	0.3	0.3	40.4	<3	19	60.0	466	122.0	10.7																	
UK4	30	7.89	119	12.17	10.44	0.78 <0.50		0.5	1.2	1.8	2.2	5.2	0.2	0.2	38.6	<3	17.2	56.2	460	183.5	15.7																	
UK5	40	7.84	119	11.67	10.35	0.65 <0.50		0.71	1.1	1.9	2.75	5.8	0.3	0.1	41.6	<3	20.3	62.3	523	120.5	12.8																	
UK6	50	7.77	119	10.92	10.18	0.75 <0.50		0.885	1.2	1.8	1.9	4.9	0.9	0.4	32.7	<3	14.5	48.5	449	152.0	15.3																	
UK7	60	7.69	119	10.77	9.98	0.76 <0.50		1.29	1.5	1.5	1.85	4.9	0.5	0.2	34.3	<3	12.4	47.4	411	86.1	7.3																	
UK8	70	7.62	120	10.74	9.96	0.63 <0.50		1.59	1.6	1.4	2	5.0	0.4	0.6	37.0	<3	12.5	50.5	426	85.2	6.7																	
UK9	80	7.62	120	10.73	9.85	<0.50	<0.50	1.32	1.9	0.1	1.7	3.7	0.7	1.7	37.6	<3	10.3	50.3	450	74.9	7.1																	
UK10	90	7.62	120	10.72	9.83	<0.50	<0.50	1.5	2	1.0	1.95	5.0	1.2	2	33.8	<3	10.2	47.2	420	68.8	6.5																	
UK11	100	7.61	119	10.71	9.81	0.54 <0.50		1.42	1.7	1.3	2.15	5.2	0.6	2.5	33.9	<3	11.6	48.6	411	59.8	5.9																	
UK12	110	7.6	119	10.71	9.80	0.76 <0.50		1.06	2	2.0	1.9	5.9	0.7	2.5	31.8	<3	13.6	48.6	427	66.8	7.2																	
UK13	120	7.63	119	10.70	9.73	0.78 <0.50		1.26	2.2	0.8	1.95	5.0	0.8	3.7	30.5	<3	9.75	44.8	422	51.1	6.4																	
UK14	130	7.6	120	10.70	9.75	0.69 <0.50		1.45	2.1	0.9	1.7	4.7	0.5	3.9	32.6	<3	8.75	45.8	469	53.4	5.7																	
UK15	140	7.6	119			0.59 <0.50		1.28	2.2	1.8	1.95	6.0	1.1	4.4	31.5	<3	10	47.0	459	64.4	6.6																	
UK16	150	7.52	120			0.58 <0.50		1.26	2.4	0.6	1.4	4.4	2	4.2	30.8	<3	8.3	45.3	436	69.7	7.6																	
NH <sub>4</sub> , NO <sub>3</sub> , DON, Urea all as N					* = PN by wet digestion method, ** = PN by combustion furnace method.																																	
Detection limits: DRP 0.5; NO <sub>3</sub> -N 0.5; NH <sub>4</sub> -N 1.0 mg m <sup>-3</sup>																																						
New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.																																						
FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO <sub>3</sub> -N, and NH <sub>4</sub> -N below nominal detection limit.																																						

Lake Taupo biannual nutrient database					2014-2015								Started 27 October 1994								
Collection date 25 November 2014					Secchi depth = 12 m																
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>						
CK1	1	7.70	118	14.55	10.03	<0.5	<0.5	0.4	0.8	2.2	0.8	3.8	1.0	<0.5	42.0	2	7.0	50.0	546	119.5	13.5
CK2	10	7.75	118	13.58	10.18	0.6	<0.5	0.8	0.8	1.2	1.2	3.2	<1.0	<0.5	47.0	<1	9.3	56.3	563	139.5	13.6
CK3	20	7.75	118	13.44	10.20	0.7	<0.5	0.9	0.9	2.1	1.3	4.3	<1.0	<0.5	40.0	<1	11.0	51.0	748	151.5	16.9
CK4	30	7.73	118	13.32	10.18	<0.5	<0.5	0.9	0.8	2.2	1.4	4.4	<1.0	<0.5	38.0	<1	10.8	48.8	584	119.5	10.6
CK5	40	7.68	118	12.57	9.93	<0.5	<0.5	0.7	1.0	2.0	1.0	4.0	<1.0	<0.5	37.0	<1	7.4	44.4	522	103.7	12.5
CK6	50	7.74	118	11.56	9.88	<0.5	<0.5	0.7	1.0	1.7	1.7	4.4	<1.0	0.5	37.0	<1	10.6	48.1	538	83.7	10.8
CK7	60	7.68	118	11.32	9.79	<0.5	<0.5	0.8	1.1	1.9	1.1	4.1	<1.0	<0.5	40.0	<1	7.4	47.4	715	74.5	8.9
CK8	70	7.68	118	11.25	9.76	<0.5	<0.5	0.7	1.1	1.9	1.4	4.4	<1.0	0.6	36.4	1	8.7	45.7	677	75.0	7.6
CK9	80	7.62	118	11.19	9.69	<0.5	<0.5	0.7	1.1	1.9	1.0	4.0	1.1	0.8	35.1	1	6.0	43.0	663	62.8	7.3
CK10	90	7.55	118	11.15	9.58	<0.5	<0.5	0.8	1.0	1.7	1.1	3.8	<1.0	1.8	35.2	<1	6.5	43.5	505	53.7	7.6
CK11	100	7.55	119	11.13	9.38	<0.5	<0.5	0.8	1.4	2.6	1.3	5.3	<1.0	5.9	36.1	1	7.8	49.8	543	50.2	7.9
CK12	110	7.56	119	11.11	9.27	<0.5	<0.5	0.8	1.5	1.5	1.2	4.2	<1.0	4.4	35.6	<1	7.2	47.2	656	86.3	8.8
CK13	120	7.46	119	11.09	9.15	<0.5	<0.5	0.8	1.9	2.1	1.5	5.5	<1.0	8.6	34.4	<1	8.0	51.0	535	65.9	8.8
CK14	130	7.59	119	11.07	9.11	<0.5	<0.5	0.9	1.8	2.2	1.7	5.7	<1.0	9.0	33.0	1	8.4	50.4	644	62.4	10.1
CK15	140	7.45	118	11.05	8.87	<0.5	<0.5	1.0	2.4	1.6	2.1	6.1	<1.0	13.7	36.3	<1	10.2	60.2	515	58.3	9.5
CK16	150	7.58	119	11.05	8.72	0.5	<0.5	1.1	2.8	2.2	1.7	6.7	<1.0	16.3	33.7	1	8.6	58.6	524	67.5	9.6
Collection date 9 April 2015					Secchi depth = not measured																
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>						
JS1	1	7.8	118	18.11	9.32	<0.5	<0.5	1.0	0.2	0.8	2.0	3.1	0.6	0.2	54.3	3	18.0	73.0	617	107.0	11.3
JS2	10	7.8	118	18.02	9.26	<0.5	<0.5	1.2	0.4	1.4	2.2	4.0	0.3	0.3	53.4	5	18.4	72.4	584	136.5	12.5
JS3	20	7.9	118	17.99	9.32	<0.5	<0.5	1.1	0.5	0.0	2.0	2.5	0.7	0.1	62.2	<1	15.0	78.0	563	108.5	9.8
JS4	30	7.8	118	15.33	9.44	<0.5	<0.5	0.7	0.4	0.9	1.5	2.8	3.4	0.1	51.5	<1	14.7	69.7	540	102.9	8.7
JS5	40	7.7	118	12.99	9.75	<0.5	<0.5	1.5	0.5	0.1	1.7	2.2	0.6	0.0	41.4	1	13.1	55.1	473	111.0	8.2
JS6	50	7.7	118	11.93	9.51	<0.5	<0.5	1.2	1.1	0.0	1.4	2.5	0.0	2.2	37.8	1	10.4	50.4	484	71.4	6.9
JS7	60	7.7	118	11.54	8.88	<0.5	<0.5	1.2	1.2	0.0	1.3	2.5	0.1	1.1	40.8	1	10.8	52.8	437	61.4	6.0
JS8	70	7.6	118	11.34	8.86	<0.5	<0.5	0.8	1.6	0.6	0.9	3.1	0.4	2.4	36.2	1	7.6	46.6	462	62.5	5.1
JS9	80	7.5	118	11.28	8.53	<0.5	<0.5	0.4	2.3	1.3	0.9	4.4	0.0	9.0	31.0	<1	6.5	46.5	440	44.7	3.9
JS10	90	7.5	119	11.23	8.36	<0.5	<0.5	0.3	4.4	0.3	0.9	5.5	0.1	12.3	31.7	1	5.9	49.9	462	50.4	3.5
JS11	100	7.6	118	11.21	8.17	<0.5	<0.5	0.3	2.5	2.2	0.8	5.5	0.0	10.4	31.6	<1	5.5	47.5	415	54.1	3.7
JS12	110	7.5	118	11.18	8.05	<0.5	<0.5	0.2	5.0	0.8	0.7	6.5	0.1	16.1	32.8	<1	5.1	54.1	500	43.0	4.7
JS13	120	7.5	119	11.16	8.07	<0.5	<0.5	0.1	8.2	0.0	1.0	9.2	0.7	24.7	34.7	<1	3.4	63.4	474	28.1	3.1
JS14	130	7.5	119	11.14	7.68	<0.5	<0.5	0.1	6.2	1.7	1.0	8.8	0.0	25.7	38.3	1	3.5	67.5	503	48.0	2.9
JS15	140	7.4	119	11.14	7.23	<0.5	<0.5	0.1	11.1	0.8	1.4	13.2	0.0	30.5	37.4	<1	7.2	75.2	494	69.0	4.9
JS16	150	7.5	119	11.14	7.03	<0.5	<0.5	0.3	15.8	0.0	1.5	17.3	0.0	39.5	37.5	<1	4.9	81.9	563	61.7	4.9

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N      \* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Temp & DO data for 9 April are the average of profiles on 25 March and 21 April

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

No actual profile taken

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database										2013-2014						Started 27 October 1994					
Collection date 7 November 2013					Secchi depth = 10.0 m																
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>									
JK1	1	7.97	120	13.53	10.3	0.6	0.3	0.7	2.3	2.1	2.0	6.4	0.3	1.2	53.5	2	15.2	70.2	563	119.5	12.0
JK2	10	7.90	121	13.42	10.3	0.9	0.4	1.3	2.0	3.1	2.9	8.0	0.0	0.1	43.9	<1	21.0	65.0	570	168.5	17.4
JK3	20	7.84	120	13.12	10.1	0.8	0.4	1.3	1.8	2.1	2.9	6.8	0.0	0.0	45.0	<1	21.2	66.2	547	167.0	18.4
JK4	30	7.84	120	12.23	9.9	0.8	0.4	1.0	1.5	2.6	2.2	6.3	0.3	0.4	46.3	<1	13.5	60.5	512	109.5	10.4
JK5	40	7.77	119	11.81	9.7	0.7	0.3	1.1	1.9	2.7	2.2	6.8	1.0	0.8	37.2	1	13.2	52.2	487	83.4	7.7
JK6	50	7.73	119	11.55	9.7	0.6	0.2	1.2	2.3	1.7	2.4	6.4	0.5	1.2	36.3	1	13.7	51.7	496	101.9	9.4
JK7	60	7.79	121	11.42	9.5	0.6	0.2	1.2	3.3	0.9	2.5	6.7	0.3	6.2	34.5	<1	12.7	53.7	530	57.1	8.9
JK8	70	7.64	121	11.30	9.3	0.6	0.2	1.0	3.8	1.6	2.3	7.7	0.3	8.3	36.4	1	12.2	57.2	477	46.8	7.9
JK9	80	7.66	121	11.23	9.2	0.6	0.2	1.0	4.4	1.2	2.3	7.9	0.2	10.7	34.1	1	11.2	56.2	483	42.5	7.5
JK10	90	7.63	121	11.19	9.0	0.5	0.1	0.9	5.0	1.1	2.3	8.4	0.0	12.3	35.7	<1	10.9	58.9	479	44.4	6.6
JK11	100	7.73	123	11.17	8.9	0.5	0.1	0.9	4.5	2.5	2.2	9.2	0.6	12.5	33.9	1	11.1	58.1	485	68.9	6.3
JK12	110	7.66	121	11.15	8.7	0.4	0.1	0.8	5.3	1.4	2.1	8.8	0.2	13.2	28.6	1	10.0	52.0	484	49.1	7.1
JK13	120	7.69	120	11.14	8.5	0.5	0.1	1.0	4.2	1.2	2.2	7.6	0.2	12.2	35.6	<1	10.0	58.0	483	38.7	7.6
JK14	130	7.67	119	11.13	8.2	0.4	0.2	0.9	4.5	1.3	2.5	8.3	0.4	14.7	34.9	<1	11.8	61.8	484	43.5	7.3
JK15	140	7.69	120	11.12	8.1	0.4	0.1	0.9	5.3	2.0	2.1	9.4	0.0	15.7	38.3	2	10.1	64.1	485	41.7	5.9
JK16	150	7.66	121	11.12	8.0	0.6	0.1	0.9	5.5	1.7	2.2	9.4	0.0	16.1	37.9	<1	11.6	65.6	494	57.2	7.3
Collection date 9 April 2014					Secchi depth = 16.75 m																
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>									
RQ1	1	7.91	119	18.56	9.2	<0.5	<0.5	0.6	0.6	1.4	1.0	3.0	1.9	0.1	75.0	10	11.4	88.4	721	120.5	8.8
RQ2	10	7.92	120	18.53	9.2	<0.5	<0.5	0.9	1.4	0.6	1.7	3.7	0.1	0.0	48.9	<2	16.4	65.4	672	133.5	12.1
RQ3	20	7.89	120	18.52	9.2	<0.5	<0.5	0.5	1.6	0.4	1.5	3.5	0.7	0.0	51.3	<2	14.1	66.1	697	113.0	11.4
RQ4	30	7.83	120	17.76	9.0	<0.5	<0.5	1.0	1.4	0.6	1.5	3.5	0.1	0.1	48.8	<2	14.1	63.1	644	134.5	11.0
RQ5	40	7.69	119	12.99	8.5	<0.5	<0.5	1.2	2.0	3.0	1.5	6.5	0.2	0.5	40.3	<2	13.3	54.3	497	79.7	6.8
RQ6	50	7.56	120	11.87	8.4	<0.5	<0.5	0.7	2.6	1.4	1.2	5.2	0.4	2.5	39.1	<2	8.0	50.0	457	66.8	6.1
RQ7	60	7.66	119	11.58	8.3	<0.5	<0.5	0.5	3.1	0.9	0.9	4.9	0.5	5.3	35.2	<2	5.5	46.5	462	56.5	4.8
RQ8	70	7.60	121	11.45	8.3	<0.5	<0.5	0.3	3.1	0.9	0.7	4.7	0.1	7.7	35.2	<2	4.6	47.6	434	45.5	3.6
RQ9	80	7.52	120	11.38	8.1	<0.5	<0.5	0.2	4.1	0.9	0.7	5.7	0.5	12.5	35.0	<2	5.1	53.1	433	37.8	3.5
RQ10	90	7.73	124	11.35	8.1	<0.5	<0.5	0.2	5.0	1.0	0.7	6.7	0.1	16.6	27.3	<2	5.0	49.0	440	40.4	2.9
RQ11	100	7.68	120	11.33	8.0	<0.5	<0.5	0.1	5.5	1.5	0.6	7.6	0.7	20.9	30.4	<2	4.7	56.7	443	31.2	3.5
RQ12	110	7.64	122	11.31	7.8	<0.5	<0.5	0.1	5.1	1.9	0.7	7.7	0.1	21.9	32.0	<2	4.4	58.4	436	33.2	3.1
RQ13	120	7.44	121	11.30	7.7	<0.5	<0.5	0.1	6.3	1.7	0.6	8.6	0.3	24.1	32.6	<2	4.9	61.9	461	30.3	2.7
RQ14	130	7.56	119	11.28	7.6	<0.5	<0.5	0.1	6.3	1.7	0.6	8.6	0.4	24.4	30.2	2	6.4	61.4	433	29.9	2.7
RQ15	140	7.36	122	11.27	7.2	<0.5	<0.5	0.1	7.9	1.1	0.7	9.7	0.5	32.0	30.5	<2	6.0	69.0	446	29.6	2.5
RQ16	150	7.35	122	11.26	6.7	<0.5	<0.5	0.1	8.3	1.7	1.0	11.0	0.2	35.7	33.1	<2	9.4	78.4	494	38.7	3.4

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N      \* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database										2012-2013										Started 27 October 1994				
Collection date 24 October 2012					Secchi depth = 13.6 m																			
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**			
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>													
RF1	1	7.70	118	12.29	9.63	<0.5	<0.5	0.4	1.3	0.7	1.3	3.3	0.4	1.5	36.1	3	9.6	47.6	502	94.8	9.5			
RF2	10	7.66	118	11.59	9.74	0.9	<0.5	1.0	0.9	1.1	2.4	4.4	0.0	0.0	36.0	<3	14.6	50.6	509	170.5	17.9			
RF3	20	7.56	119	11.55	9.68	0.9	<0.5	1.0	1.4	1.6	2.7	5.7	2.2	0.0	34.8	<3	17.2	54.2	751	159.5	17.1			
RF4	30	7.63	119	11.52	9.64	0.9	<0.5	1.0	0.9	1.1	2.4	4.4	0.0	0.0	34.0	<3	15.7	49.7	608	196.5	18.1			
RF5	40	7.62	118	11.51	9.51	0.9	<0.5	1.0	0.8	2.2	2.3	5.3	0.0	0.0	38.0	<3	13.2	51.2	543	161.0	17.0			
RF6	50	7.72	118	11.49	9.55	0.8	<0.5	1.2	1.0	2.0	2.3	5.3	0.2	0.0	33.8	<3	13.7	47.7	530	155.5	16.8			
RF7	60	7.60	119	11.43	9.34	1.4	0.7	1.3	1.5	1.5	2.5	5.5	0.1	0.0	34.9	<3	14.2	49.2	527	190.5	16.5			
RF8	70	7.65	118	11.37	9.41	0.8	<0.5	1.5	1.1	0.9	2.4	4.4	0.0	0.2	31.8	<3	13.8	45.8	528	134.0	16.7			
RF9	80	7.58	118	11.34	9.28	0.9	<0.5	1.6	1.3	1.7	2.5	5.5	0.2	0.5	34.3	<3	15.4	50.4	511	137.5	15.7			
RF10	90	7.56	119	11.29	9.29	0.9	<0.5	1.5	1.3	0.7	2.5	4.5	0.3	0.2	40.5	<3	14.4	55.4	516	145.0	18.2			
RF11	100	7.49	118	11.25	9.16	0.9	<0.5	1.7	1.4	0.6	2.7	4.7	0.6	0.1	34.3	<3	15.2	50.2	530	136.0	17.4			
RF12	110	7.61	118	11.18	9.13	0.9	<0.5	1.7	1.5	1.5	2.5	5.5	0.0	0.8	55.2	<3	14.6	70.6	543	125.0	17.3			
RF13	120	7.54	119	11.10	8.96	0.7	<0.5	1.6	2.0	1.0	2.3	5.3	1.6	3.4	42.0	<3	12.7	59.7	504	83.1	15.0			
RF14	130	7.54	119	11.00	8.97	0.7	<0.5	1.6	1.7	0.3	2.3	4.3	1.1	3.2	33.7	<3	13.0	51.0	504	105.2	14.1			
RF15	140	7.55	119	10.97	8.77	0.7	<0.5	1.6	2.0	1.0	3.1	6.1	0.7	2.7	33.6	<3	14.1	51.1	503	99.2	16.8			
RF16	150	7.57	119	10.91	8.57	0.8	<0.5	1.6	1.8	1.2	3.0	6.0	0.0	0.7	36.3	<3	22.3	59.3	530	110.0	18.8			
Collection date 4 April 2013					Secchi depth = 18.0 m																			
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**			
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>													
ZE1	1	8.12	119	19.58	9.11	0.3	0.3	1.5	0.0	2.9	1.5	4.4	0.8	0.4	59.8	<3	21.9	82.9	682	154.5	20.1			
ZE2	10	7.97	120	19.48	13.37	0.4	0.3	1.4	0.2	2.2	1.4	3.8	0.0	0.2	51.8	<3	16.5	68.5	619	143.5	16.8			
ZE3	20	7.96	120	19.45	9.73	0.3	0.3	1.4	0.3	2.0	1.2	3.5	0.0	0.0	49.0	<3	14.6	63.6	607	122.5	16.1			
ZE4	30	7.85	121	15.96	10.07	0.4	0.3	1.2	0.3	2.1	1.7	4.1	0.8	0.9	49.3	<3	16.0	67.0	618	134.0	16.3			
ZE5	40	7.73	119	12.95	9.90	0.3	0.2	1.0	0.5	1.4	1.0	2.9	0.5	0.2	42.3	<3	9.4	52.4	527	94.8	11.1			
ZE6	50	7.63	122	11.88	9.38	0.1	0.1	0.6	1.9	0.8	0.7	3.4	0.0	3.9	39.1	<3	5.8	48.8	483	75.7	8.6			
ZE7	60	7.68	120	11.52	9.08	-	-	0.5	2.7	0.5	0.8	4.0	0.0	4.2	35.8	<3	5.1	45.1	477	116.1	9.4			
ZE8	70	7.80	120	11.32	8.74	0.2	0.1	0.5	3.4	0.4	0.9	4.7	0.0	5.6	36.4	<3	5.4	47.4	485	108.0	9.0			
ZE9	80	7.61	120	11.21	8.71	0.2	0.1	0.4	3.6	0.1	0.8	4.5	0.0	7.0	35.0	<3	5.2	47.2	494	100.8	8.6			
ZE10	90	7.53	120	11.13	8.28	0.2	0.1	0.2	4.9	0.0	0.8	5.7	0.0	11.3	34.7	<3	7.6	53.6	473	63.1	5.7			
ZE11	100	7.55	120	11.09	8.06	0.1	0.1	0.2	5.9	0.0	0.8	6.7	0.0	15.7	37.3	<3	6.0	59.0	456	50.1	6.3			
ZE12	110	7.47	120	11.06	7.86	0.1	0.1	0.1	6.9	0.0	0.8	7.7	0.0	18.4	35.6	<3	5.3	59.3	477	54.2	5.9			
ZE13	120	7.50	121	11.05	7.73	0.2	0.1	0.1	9.7	0.0	0.9	10.6	0.0	24.6	36.4	<3	5.5	66.5	468	63.9	6.5			
ZE14	130	7.48	120	11.03	7.69	0.3	0.1	0.1	12.4	0.0	1.4	13.8	0.0	29.9	38.1	<3	6.8	74.8	464	76.8	6.7			
ZE15	140	7.46	120	11.02	7.57	0.3	0.1	0.1	14.4	0.0	1.7	16.1	0.3	32.8	42.9	<3	8.0	84.0	464	65.3	7.5			
ZE16	150	7.58	123	11.00	7.23	0.3	0.1	0.1	13.2	0.0	1.4	14.6	0.0	30.7	35.3	<3	6.5	72.5	474	49.7	6.7			

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N      \* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database				2011-2012												Started 27 October 1994							
Collection date 22 November 2011				Secchi depth = 18.0 m																			
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**		
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>									
ZH1	1	7.95	119.4	14.59	10.32	0.5	0.2	0.5	0.3	1.7	1.3	3.3	0.6	0.0	30.4	<2	10.8	41.8	550	147.4	8.7		
ZH2	10	7.94	119.1	14.55	11.18	0.5	0.3	0.5	0.3	1.7	1.7	3.7	0.3	0.0	35.7	<2	11.6	47.6	552	129.9	7.1		
ZH3	20	7.91	119.5	14.52	11.66	0.4	0.2	0.6	0.3	1.7	1.5	3.5	0.0	0.0	30.0	<2	11.9	41.9	555	122.8	13.1		
ZH4	30	7.91	119.2	14.20	11.57	0.4	0.3	0.6	0.4	1.6	1.6	3.6	0.6	0.0	27.4	<2	12.3	40.3	550	124.9	13.5		
ZH5	40	7.86	119.2	12.23	11.72	0.5	0.2	1.2	0.4	1.6	2.0	4.0	0.0	0.0	25.0	<2	14.1	39.1	542	107.6	9.6		
ZH6	50	7.83	118.0	11.36	11.61	0.3	0.2	1.2	0.4	1.6	1.9	3.9	1.0	0.1	22.9	<2	13.0	37.0	526	105.2	18.2		
ZH7	60	7.78	119.4	11.00	10.84	0.4	0.2	0.9	0.6	1.4	1.5	3.5	0.4	0.3	22.3	<2	11.3	34.3	523	92.2	9.6		
ZH8	70	7.76	119.6	10.89	10.79	0.2	0.1	0.7	0.8	2.2	1.3	4.3	0.3	0.5	28.2	<2	9.7	38.7	528	65.6	5.9		
ZH9	80	7.70	120.0	10.86	10.38	0.3	0.1	0.6	0.9	1.1	1.4	3.4	1.3	0.6	29.1	<2	7.4	38.4	502	61.9	7.7		
ZH10	90	7.65	119.6	10.83	10.30	0.3	0.2	0.6	0.8	1.2	1.3	3.3	1.3	0.9	24.8	<2	7.5	34.5	522	49.7	9.5		
ZH11	100	7.70	119.6	10.82	9.92	0.2	0.1	0.5	0.9	1.1	1.2	3.2	1.5	1.6	24.9	<2	8.3	36.3	478	52.1	10.1		
ZH12	110	7.65	119.2	10.80	9.93	0.2	0.1	0.6	1.0	1	1.3	3.3	0.9	1.1	27.0	<2	8.1	37.1	527	47.3	12.6		
ZH13	120	7.65	119.5	10.79	9.47	0.2	0.1	0.6	1.1	0.9	1.3	3.3	2.8	2.8	29.4	<2	7.2	42.2	516	39.6	6.6		
ZH14	130	7.69	119.5	10.78	9.39	0.3	0.1	0.6	1.1	1.9	1.1	4.1	1.7	2.8	33.5	<2	7.6	45.6	513	44.9	9.1		
ZH15	140	7.69	119.6	10.77	9.13	0.3	0.1	0.5	1.3	1.7	1.3	4.3	5.8	4.4	32.8	<2	7.6	50.6	515	41.5	6.3		
ZH16	150	7.63	119.7	10.76	9.06	0.3	0.1	0.4	1.2	1.8	1.3	4.3	5.7	4.5	30.8	<2	3.7	44.7	544	50.7	6.6		
Collection date 10 April 2012				Secchi depth = 17.0 m																			
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**		
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>									
HC1	1	7.92	119	16.63	9.19	<0.5	<0.5	0.6	0.4	1.6	1.8	3.8	0.4	3.7	54.9	7	15.7	74.7	644	134.5	15.5		
HC2	10	7.90	121	16.44	9.74	<0.5	<0.5	0.6	0.5	1.5	1.9	3.9	3.8	0.6	56.6	3	15.2	76.2	723	131.0	14.5		
HC3	20	7.88	124	16.40	9.39	<0.5	<0.5	0.7	0.4	1.6	1.9	3.9	1.4	0.6	30.0	<2	15.6	47.6	635	131.5	14.8		
HC4	30	7.86	120	16.17	9.44	<0.5	<0.5	0.9	0.5	1.5	1.5	3.5	0.0	0.4	40.6	<2	11.5	52.5	670	114.0	14.9		
HC5	40	7.78	120	14.03	9.55	<0.5	<0.5	1.7	0.4	0.6	2.1	3.1	0.0	0.4	35.6	<2	16.4	52.4	605	134.0	17.1		
HC6	50	7.65	120	11.67	9.34	<0.5	<0.5	1.2	1.6	0.4	2.0	4.0	0.0	1.8	31.2	<2	14.3	47.3	530	100.1	12.9		
HC7	60	7.60	117	10.97	9.46	<0.5	<0.5	0.7	1.2	0.8	1.2	3.2	0.0	1.8	32.2	<2	9.3	43.3	497	66.5	8.2		
HC8	70	7.54	118	10.80	9.37	<0.5	<0.5	0.5	2.4	0.6	1.1	4.1	0.0	6.7	32.3	<2	8.5	47.5	476	66.1	7.9		
HC9	80	7.57	120	10.71	9.11	<0.5	<0.5	0.4	2.6	0.4	1.1	4.1	0.0	8.1	28.9	<2	8.5	45.5	481	53.5	6.7		
HC10	90	7.51	116	10.64	8.83	<0.5	<0.5	0.3	3.5	0.5	1.0	5.0	0.0	11.6	41.4	<2	7.6	60.6	536	62.4	7.0		
HC11	100	7.41	121	10.62	9.04	<0.5	<0.5	0.2	3.4	0.6	1.1	5.1	0.0	13.1	28.9	<2	8.2	50.2	489	48.7	6.0		
HC12	110	7.25	121	10.59	8.55	<0.5	<0.5	0.2	3.8	0.2	0.8	4.8	0.0	13.6	26.4	3	5.0	45.0	557	41.3	4.9		
HC13	120	7.38	112	10.56	8.94	<0.5	<0.5	0.2	4.0	1	0.9	5.9	0.0	15.4	27.6	<2	6.7	49.7	587	45.0	6.7		
HC14	130	7.36	117	10.54	8.66	<0.5	<0.5	0.2	4.8	0.2	1.0	6.0	0.0	16.8	29.2	<2	7.2	53.2	585	50.8	5.7		
HC15	140	7.42	119	10.54	8.72	<0.5	<0.5	0.2	6.3	0.7	1.2	8.2	0.0	22.2	28.8	<2	8.1	59.1	618	48.5	5.8		
HC16	150	7.35	121	10.54	7.92	<0.5	<0.5	0.2	8.2	0	1.7	9.9	0.1	27.4	28.5	<2	8.7	64.7	596	52.2	5.7		
DO sensor failed; indicative data from 14 March																							
NH <sub>4</sub> , NO <sub>3</sub> , DON, Urea all as N				* = PN by wet digestion method, ** = PN by combustion furnace method.																			
Detection limits: DRP 0.5; NO <sub>3</sub> -N 0.5; NH <sub>4</sub> -N 1.0 mg m <sup>-3</sup>																							
New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.																							
FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO <sub>3</sub> -N, and NH <sub>4</sub> -N below nominal detection limit.																							

Lake Taupo biannual nutrient database						2010-2011						Started 27 October 1994															
Collection date 10 November 2010						Secchi depth = 11.5 m																					
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**	SO <sub>4</sub>					
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	g m <sup>-3</sup>								
KD1	1	7.8	121	14.12	9.4	1.0	<0.5	0.7	0.9	2.1	4.6	7.6	0.0	0.2	49.8	<2	20.8	70.8	503	192.0	20.0	7.4					
KD2	10	7.82	120	13.46	9.1	0.8	<0.5	0.7	0.6	2.4	2.0	5.0	0.0	0.1	41.9	<2	12.1	54.1	478	182.5	12.1	7.5					
KD3	20	7.77	120	13.27	9.1	0.8	<0.5	0.8	0.6	1.4	2.1	4.1	0.0	0.0	42.0	<2	14.2	56.2	536	192.5	13.4	7.5					
KD4	30	7.8	119	12.24	9.0	0.7	<0.5	1.1	0.5	1.5	2.2	4.2	0.2	0.0	40.8	<2	14.2	55.2	500	211.0	13.2	7.6					
KD5	40	7.72	120	11.73	9.6	0.6	<0.5	1.3	0.7	1.3	2.5	4.5	0.2	0.0	41.8	<2	14.8	56.8	447	179.0	12.5	7.7					
KD6	50	7.73	119	11.33	9.9	0.9	<0.5	1.6	1.0	1.0	2.6	4.6	0.0	0.0	42.0	<2	14.7	56.7	443	173.5	13.7	7.8					
KD7	60	7.57	120	11.16	9.4	0.9	<0.5	2.3	1.8	1.2	2.8	5.8	0.0	0.2	30.8	<2	13.1	44.1	433	140.5	13.3	7.8					
KD8	70	7.67	120	11.03	8.3	0.9	<0.5	2.5	0.8	2.2	2.8	5.8	0.0	0.2	44.8	<2	13.1	58.1	437	150.0	14.0	7.9					
KD9	80	7.62	119	10.96	8.3	0.8	<0.5	2.0	0.8	2.2	2.9	5.9	0.0	0.2	40.8	<2	14.0	55.0	427	137.5	13.3	7.9					
KD10	90	7.57	120	10.89	8.3	0.6	<0.5	2.2	0.8	3.2	2.7	6.7	0.0	1.6	39.4	<2	13.2	54.2	423	70.3	10.0	8.0					
KD11	100	7.58	119	10.86	8.0	<0.5	<0.5	2.0	0.8	4.2	2.8	7.8	0.0	2.1	42.9	<2	10.5	55.5	436	72.5	9.6	8.2					
KD12	110	7.54	120	10.83	8.0	0.5	<0.5	2.1	1.1	2.9	2.6	6.6	0.0	2.7	40.3	<2	11.7	54.7	428	73.4	9.9	8.0					
KD13	120	7.6	119	10.82	7.9	0.5	<0.5	1.7	1.0	2.0	2.5	5.5	0.0	3.8	47.2	<2	11.3	62.3	440	74.9	9.6	8.6					
KD14	130	7.62	120	10.80	8.1	3.3	<0.5	2.1	0.8	2.2	3.1	6.1	0.0	7.3	37.7	<2	12.8	57.8	432	83.7	10.9	8.6					
KD15	140	7.57	119	10.79	7.8	0.6	<0.5	2.1	1.5	2.5	3.1	7.1	0.0	9.3	39.7	<2	13.5	62.5	430	72.0	12.0	8.1					
KD16	150	7.55	120	10.80	8.1	0.8	<0.5	2.8	1.6	2.4	4.3	8.3	0.0	10.8	41.2	<2	17.0	69.0	442	87.1	14.8	8.0					
(for summations <1 use 0.5)																											
Collection date 13 April 2011						Secchi depth = 17.0 m																					
Code	Depth	pH	EC @25oC	Temp	DO	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub> -N	NO <sub>3</sub> -N	DON	UREA	PN*	TN	DOC	PC	PN**	SO <sub>4</sub>					
	m		µS cm <sup>-1</sup>	°C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	g m <sup>-3</sup>								
RL1	1	7.84	116	17.62	9.2	0.4	0.3	0.46	2.0	0.0	0.8	2.8	0.0	0.1	44.7	<2	8.8	53.6	661	102.0	9.9	7.8					
RL2	10	7.74	116	17.65	9.6	0.4	0.2	0.64	1.9	0.1	1.1	3.1	0.2	0.2	43.1	<2	10.8	54.3	684	109.5	9.5	7.8					
RL3	20	7.73	116	17.62	9.9	0.4	0.3	0.65	1.5	0.5	1.7	3.7	0.0	0.1	40.1	<2	13.6	53.8	713	160.5	17.9	8.2					
RL4	30	7.75	117	17.61	9.9	0.4	0.3	0.59	1.5	0.5	1.3	3.3	0.8	0.1	43.2	<2	12.1	56.2	669	139.0	14.7	8.1					
RL5	40	7.63	117	12.52	10.2	0.2	0.1	0.74	3.2	0.8	1.1	5.1	0.0	1.2	29.2	<2	8.0	38.4	543	62.6	9.4	8.0					
RL6	50	7.68	118	11.63	9.8	0.2	0.2	0.67	3.0	0.0	1.0	4.0	0.0	4.0	27.8	<2	7.3	39.1	587	58.7	5.0	7.9					
RL7	60	7.56	118	11.29	9.7	0.3	0.2	0.46	2.6	0.4	0.9	3.9	0.0	6.1	28.0	<2	6.0	40.1	519	75.1	6.6	8.1					
RL8	70	7.54	118	11.14	9.1	0.2	<0.1	0.18	2.7	0.3	1.0	4.0	0.0	8.7	25.8	<2	6.7	41.2	519	62.5	8.5	8.0					
RL9	80	7.51	118	11.06	9.1	0.2	<0.1	0.16	2.9	0.1	0.8	3.8	0.0	11.8	31.4	<2	5.5	48.7	515	48.6	7.0	8.0					
RL10	90	7.45	118	11.00	8.5	0.2	<0.1	0.15	3.4	0.6	0.9	4.9	0.9	14.0	26.3	<2	5.4	46.6	501	56.4	5.6	7.8					
RL11	100	7.45	118	10.96	8.2	0.2	0.1	0.14	3.2	0.8	0.9	4.9	0.3	15.2	45.6	<2	5.5	66.6	517	86.8	8.0	8.3					
RL12	110	7.40	118	10.92	8.1	0.2	<0.1	0.17	4.4	0.6	0.9	5.9	0.0	20.8	46.4	<2	4.1	71.3	512	41.0	4.2	7.8					
RL13	120	7.43	118	10.90	7.9	0.1	<0.1	0.17	4.0	0.0	0.8	4.8	0.1	20.9	28.1	<2	4.5	53.6	512	51.4	5.8	7.9					
RL14	130	7.45	118	10.88	7.5	0.2	0.1	0.16	4.5	0.5	1.0	6.0	0.8	23.4	43.4	<2	5.3	72.9	532	50.0	7.6						
RL15	140	7.49	117	10.87	7.5	0.2	<0.1	0.17	5.1	0.9	1.0	7.0	0.2	25.1	33.3	<2	5.5	64.1	527	49.8	7.6	7.9					
RL16	150	7.39	118	10.86	7.0	0.3	<0.1	0.27	6.1	0.0	1.4	7.5	0.3	28.7	28.3	<2	6.5	63.8	520	59.2	7.2	8.1					

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N      \* = PN by wet digestion method, \*\* = PN by combustion furnace method.  
 Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>  
 New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.  
 FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database

2009-2010

Started 27 October 1994

Collection date 9 October 2009

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
OT1	1	7.89	118	11.72	11.67	0.6	<0.5	0.3	4.0	<0.5	2.0	6.0	0.8	<0.5	36.0	3	13.2	50.2	553	227.0	18.4
OT2	10	7.87	121	11.25	12.13	0.7	<0.5	0.5	3.5	<0.5	2.2	5.7	0.5	<0.5	39.3	<1	14.0	54.0	538	267.0	20.2
OT3	20	7.78	120	11.24	11.79	0.6	<0.5	0.5	3.8	<0.5	2.2	6.0	0.2	<0.5	33.6	1	14.7	48.7	531	288.0	24.1
OT4	30	7.87	120	11.20	11.78	0.6	<0.5	0.5	4.0	<0.5	2.4	6.4	0.4	<0.5	31.4	1	14.4	46.4	531	264.0	21.3
OT5	40	7.86	120	10.98	11.24	0.6	<0.5	0.6	4.2	<0.5	2.0	6.2	0.4	<0.5	25.4	2	12.3	38.3	522	312.0	18.4
OT6	50	7.73	121	10.67	11.10	<0.5	<0.5	0.7	4.6	<0.5	2.0	6.6	1.0	<0.5	34.8	2	12.1	48.1	521	214.2	18.5
OT7	60	7.65	121	10.58	10.10	<0.5	<0.5	0.6	4.6	<0.5	1.7	6.3	0.9	<0.5	28.9	<1	11.2	41.2	508	161.6	17.4
OT8	70	7.70	121	10.53	10.02	<0.5	<0.5	0.5	4.6	<0.5	1.9	6.5	0.8	1.2	34.0	1	10.2	46.2	505	88.9	22.7
OT9	80	7.67	121	10.50	9.70	<0.5	<0.5	0.5	5.1	<0.5	1.7	6.8	0.8	2.7	30.5	1	9.9	43.9	514	129.3	10.3
OT10	90	7.62	122	10.49	9.72	<0.5	<0.5	0.4	4.9	<0.5	1.4	6.3	0.9	4.7	40.4	2	8.2	54.2	493	121.1	9.4
OT11	100	7.61	121	10.47	9.51	<0.5	<0.5	0.4	5.2	<0.5	1.5	6.7	0.5	7.3	44.2	1	8.1	60.1	493	117.6	8.6
OT12	110	7.62	121	10.46	9.50	<0.5	<0.5	0.2	5.7	<0.5	1.2	6.9	0.8	7.6	34.6	1	7.5	50.5	494	105.6	10.4
OT13	120	7.55	122	10.44	9.20	<0.5	<0.5	0.3	5.5	<0.5	7.7	13.2	0.6	9.3	37.1	2	8.1	55.1	517	114.7	9.1
OT14	130	7.62	122	10.43	9.18	<0.5	<0.5	0.3	5.9	<0.5	1.7	7.6	0.5	12.2	31.3	<1	9.6	53.6	504	125.3	10.1
OT15	140	7.41	122	10.41	8.82	<0.5	<0.5	0.3	6.5	<0.5	1.7	8.2	1.7	13.6	29.7	1	9.0	54.0	503	149.9	13.8
OT16	150	7.71	120	10.41	8.79	<0.5	<0.5	0.5	3.4	0.6	1.6	5.6	0.4	1.0	30.6	1	10	42.0	491	135.0	12.2

Collection date 8 April 2010

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
YZ1	1	7.76	115	17.36	9.48	1.0	<0.5	0.7	0.8	1.2	3.2	5.2	0.0	0.3	69.7	8	19.6	89.6	893	173.0	21.2
YZ2	10	7.78	119	17.35	10.17	<0.5	<0.5	0.6	0.8	1.2	1.6	3.6	0.0	0.2	50.8	<2	11.5	62.5	814	142.5	16.8
YZ3	20	7.83	118	17.35	9.66	0.6	<0.5	0.7	0.8	2.2	1.4	4.4	1.9	0.2	38.9	<2	12.8	53.8	683	121.5	14.2
YZ4	30	7.79	120	17.34	9.43	<0.5	<0.5	0.6	1.1	0.9	1.4	3.4	0.8	0.0	40.2	<2	12.2	53.2	710	115.0	12.6
YZ5	40	7.74	119	12.28	9.04	<0.5	<0.5	1.4	1.0	2.0	1.9	4.9	0.7	0.1	36.2	<2	16.0	53.0	593	117.0	23.8
YZ6	50	7.71	120	11.19	8.57	<0.5	<0.5	1.4	2.2	0.8	1.4	4.4	0.7	0.5	32.8	<2	11.5	45.5	545	88.1	9.4
YZ7	60	7.61	121	10.82	8.31	<0.5	<0.5	0.8	2.2	0.8	1.1	4.1	0.0	0.6	31.4	<2	7.6	39.6	496	53.5	7.7
YZ8	70	7.59	121	10.67	8.11	<0.5	<0.5	0.4	4.4	0.6	0.6	5.6	0.0	7.7	28.3	<2	4.7	40.7	525	62.2	6.4
YZ9	80	7.52	121	10.62	7.97	<0.5	<0.5	0.3	5.2	0.8	0.6	6.6	0.0	16.8	28.2	<2	4.0	49.0	491	43.3	6.3
YZ10	90	7.55	121	10.60	7.74	<0.5	<0.5	0.2	6.2	0.8	0.6	7.6	0.0	20.8	29.2	<2	3.9	53.9	496	42.1	10.1
YZ11	100	7.53	122	10.57	7.43	<0.5	<0.5	0.2	7.2	0.0	0.6	7.8	0.0	23.8	27.2	<2	3.5	54.5	491	38.2	7.8
YZ12	110	7.53	121	10.57	7.27	<0.5	<0.5	0.2	6.5	0.5	0.5	7.5	0.0	24.3	24.7	<2	2.9	51.9	481	26.7	5.9
YZ13	120	7.46	122	10.55	7.11	<0.5	<0.5	0.2	8.3	0.7	0.9	9.9	0.0	29.4	28.6	<2	6.0	64.0	505	43.6	7.3
YZ14	130	7.68	122	10.53	7.09	<0.5	<0.5	0.2	10.1	0.0	1.1	11.2	0.0	31.5	34.5	<2	5.6	71.6	519	43.2	8.1
YZ15	140	7.4	122	10.53	6.82	<0.5	<0.5	0.1	9.3	5.7	1.0	16.0	0.0	33.3	37.7	<2	5.3	76.3	517	48.2	6.6
YZ16	150	7.4	122	10.53	6.75	<0.5	<0.5	0.2	10.4	0.6	1.4	12.4	0.0	33.4	29.6	<2	6.6	69.6	514	49.5	8.5

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

## Lake Taupo biannual nutrient database

2008-2009

Started 27 October 1994

## Collection date 14 October 2008

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
SZ1	1	7.66	119	12.59	10.29	1.1	<0.5	0.7	1.0	2.0	4.2	7.2	4.1	0.0	70.9	26.1	101.1	816	235.0	24.6	
SZ2	10	7.70	121	12.09	10.29	0.7	<0.5	0.8	0.6	2.4	3.9	6.9	0.1	0.0	39.9	18.7	58.7	690	169.5	23.5	
SZ3	20	7.70	121	11.93	10.50	0.8	<0.5	0.8	0.7	2.3	7.8	10.8	0.0	0.0	59.0	32.7	91.7	638	250.0	33.1	
SZ4	30	7.70	120	11.85	10.46	1.0	0.6	0.7	0.7	2.3	5.6	8.6	0.0	0.0	65.0	24.2	89.2	632	195.5	31.8	
SZ5	40	7.70	120	11.75	10.34	0.7	<0.5	0.9	0.3	1.7	4.6	6.6	0.0	0.0	52.0	16.2	68.2	597	162.5	15.5	
SZ6	50	7.69	120	11.59	10.05	0.5	<0.5	0.9	0.4	2.6	4.5	7.5	0.5	0.0	48.5	15.6	64.6	602	139.5	29.2	
SZ7	60	7.56	120	10.90	9.89	0.8	0.5	0.8	1.0	2.0	5.0	8.0	0.7	1.6	69.7	16.7	88.7	603	94.0	18.2	
SZ8	70	7.52	121	10.76	9.86	0.6	<0.5	0.6	1.2	1.8	3.6	6.6	0.0	2.6	45.4	20.4	68.4	593	77.2	16.8	
SZ9	80	7.45	122	10.71	9.81	0.7	<0.5	0.4	1.3	2.7	3.1	7.1	0.0	4.7	36.3	9.5	50.5	589	61.8	25.9	
SZ10	90	7.49	121	10.69	9.85	0.7	<0.5	0.3	1.8	0.2	2.3	4.3	0.0	5.7	29.3	9.7	44.7	561	57.5	9.1	
SZ11	100	7.23	121	10.68	10.03	0.6	<0.5	0.2	1.5	0.5	2.5	4.5	2.2	6.6	33.2	9.2	51.2	605	71.8	23.1	
SZ12	110	7.32	121	10.66	10.13	<0.5	<0.5	0.3	1.5	1.5	2.2	5.2	3.5	7.4	33.1	8.0	52.0	617	46.8	10.6	
SZ13	120	7.36	122	10.64	10.09	0.7	<0.5	0.2	1.2	2.8	2.5	6.5	1.6	9.5	34.9	9.9	55.9	613	57.6	28.5	
SZ14	130	7.45	121	10.60	9.83	0.8	<0.5	0.2	2.6	0.4	2.1	5.1	1.6	11.7	34.7	7.5	55.5	652	56.6	27.2	
SZ15	140	7.43	120	10.59	9.76	<0.5	<0.5	<0.1	2.9	3.1	2.5	8.5	1.4	17.1	37.5	8.7	64.7	686	46.6	24.1	
SZ16	150	7.40	121	10.59	9.85	<0.5	<0.5	0.2	2.7	2.3	3.5	8.5	2.3	17.3	39.4	11.0	70.0	656	68.9	23.5	

## Collection date 15 April 2009

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
EU1	1	7.89	123	16.60	9.33	<0.5	<0.5	0.7	1.1	0.9	1.7	3.7	4.3	1.4	74.3	17	16.7	96.7	834	187.0	19.2
EU2	10	7.84	122	16.59	10.11	<0.5	<0.5	0.8	1.3	1.7	2.0	5.0	0.1	0.0	26.9	<1	13.1	40.1	669	116.0	16.2
EU3	20	7.83	121	16.59	10.76	<0.5	<0.5	0.9	1.2	2.8	2.0	6.0	0.3	0.0	29.7	1	17.2	47.2	691	152.0	18.4
EU4	30	7.84	123	16.58	10.83	<0.5	<0.5	0.9	0.9	3.1	1.8	5.8	0.8	0.0	38.2	2	15.8	54.8	650	143.0	19.1
EU5	40	7.8	121	12.53	10.39	<0.5	<0.5	1.0	1.4	6.6	1.5	9.5	0.7	0.1	37.3	1	13.0	51.1	627	81.9	13.2
EU6	50	7.79	121	11.56	9.58	<0.5	<0.5	0.7	2.2	3.8	1.2	7.2	0.0	2.0	20.0	<1	9.3	31.3	574	79.5	12.1
EU7	60	7.58	122	11.12	9.06	<0.5	<0.5	0.5	3.9	3.1	1.2	8.2	0.0	8.5	24.5	2	7.4	40.4	581	68.6	11.6
EU8	70	7.49	123	10.98	8.84	<0.5	<0.5	0.3	5.5	4.5	1.1	11.1	0.7	18.7	14.6	2	8.7	42.7	553	59.6	15.2
EU9	80	7.03	124	10.92	8.21	<0.5	<0.5	0.2	6.6	6.4	1.2	14.2	0.0	24.5	26.5	<1	9.3	60.3	635	51.7	11.8
EU10	90	7.03	124	10.88	8.24	12	12	0.1	7.2	2.8	1.1	11.1	0.0	27.0	16.0	1	6.7	49.7	514	46.6	9.4
EU11	100	7.16	123	10.86	8.07	<0.5	<0.5	0.1	6.3	5.7	0.9	12.9	0.0	24.7	32.3	1	5.1	62.1	554	35.9	8.8
EU12	110	7.21	124	10.84	8.12	<0.5	<0.5	0.1	7.0	4	1.0	12.0	0.2	26.3	12.5	<1	6.9	45.9	562	42.7	10.1
EU13	120	7.2	123	10.82	8.02	<0.5	<0.5	0.1	7.1	4.9	1.0	13.0	0.2	26.8	25.0	4	6.8	58.8	549	53.7	10.1
EU14	130	7.61	123	10.79	8.15	<0.5	<0.5	<0.1	7.6	8.4	1.0	17.0	0.0	27.6	<1	2	7.2	34.8	562	45.4	11.8
EU15	140	7.23	122	10.78	8.01	<0.5	<0.5	<0.1	8.1	4.9	1.1	14.1	0.0	29.0	8.0	<1	7.3	44.3	661	50.3	9.8
EU16	150	7.22	122	10.78	7.55	<0.5	<0.5	<0.1	9.0	2	1.3	12.3	1.3	30.6	21.1	1	7.1	60.1	544	42.8	12.7

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database

2007-2008

Started 27 October 1994

Collection date 30 October 2007

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
ZA1	1	7.80	119	12.84	10.18	0.7	<0.5	0.6	1.3	0.7	2.1	4.1	1.5	0.7	79.8	16	20.1	102.1	617	170.0	19.2
ZA2	10	7.83	120	11.83	10.27	<0.5	<0.5	1.0	0.9	1.1	2.5	4.5	0.0	0.0	42.0	<5	18.5	60.5	553	204.0	19.8
ZA3	20	7.79	115	11.76	10.25	0.5	<0.5	1.1	1.1	0.9	2.6	4.6	0.2	0.0	42.8	<5	19.0	62.0	405	169.0	19.4
ZA4	30	7.76	119	11.70	10.07	0.7	<0.5	1.2	0.8	1.2	2.5	4.5	0.0	0.0	49.0	<5	19.1	68.1	417	173.5	19.0
ZA5	40	7.72	120	11.64	10.02	0.7	<0.5	1.1	1.0	1.0	2.6	4.6	0.0	0.0	36.0	<5	16.8	52.8	417	131.5	17.4
ZA6	50	7.61	121	11.51	9.85	0.8	<0.5	1.4	0.9	1.1	3.3	5.3	0.0	0.0	39.0	<5	18.3	57.3	434	140.0	18.1
ZA7	60	7.54	120	11.43	9.52	0.9	<0.5	1.4	1.2	0.8	2.7	4.7	0.2	0.0	32.8	<5	19.5	52.5	414	127.5	17.1
ZA8	70	7.46	123	11.32	9.77	0.8	<0.5	1.5	1.5	0.5	2.7	4.7	0.1	0.3	46.6	<5	19.1	66.1	443	130.0	19.0
ZA9	80	7.42	122	11.23	9.58	0.8	<0.5	1.1	1.9	1.1	2.1	5.1	0.4	2.6	41.0	5	15.8	59.8	422	95.8	14.4
ZA10	90	7.42	121	11.16	9.42	0.7	<0.5	0.9	2.1	0.9	2.1	5.1	0.3	4.8	42.9	<5	13.3	61.3	410	92.0	13.0
ZA11	100	7.38	122	11.07	9.49	<0.5	<0.5	0.7	2.8	0.2	1.8	4.8	0.0	8.5	36.5	<5	11.2	56.2	400	64.0	11.0
ZA12	110	7.40	122	11.04	9.16	0.7	<0.5	0.7	2.9	0.1	1.8	4.8	0.0	9.2	56.8	<5	11.6	77.6	386	68.3	11.1
ZA13	120	7.38	122	11.02	9.27	0.7	<0.5	0.6	2.8	1.2	2.1	6.1	0.0	10.0	46.0	<5	12.7	68.7	359	105.3	12.5
ZA14	130	7.44	120	11.00	9.01	0.6	<0.5	0.6	2.6	1.4	1.9	5.9	0.0	10.4	35.6	<5	10.9	56.9	348	61.8	10.5
ZA15	140	7.44	121	10.98	9.11	0.6	<0.5	0.6	3.0	0.0	1.7	4.7	0.0	10.8	39.2	<5	10.3	60.3	351	64.1	11.2
ZA16	150	7.42	121	10.96	8.91	<0.5	<0.5	0.6	3.5	1.5	1.8	6.8	0.0	13.3	38.7	<5	10.8	62.8	305	63.1	10.6

Collection date 17 April 2008

Secchi depth = 17.8 m

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
KA1	1	7.79	122	17.88	9.49	<0.5	<0.5	0.4	0.8	0.2	0.7	1.7	2.8	0.4	64.8	14	13.3	81.3	656	138.5	8.4
KA2	10	7.87	121	17.87	8.97	<0.5	<0.5	0.8	0.5	0.5	0.7	1.7	1.1	0.3	48.6	<5	12.0	62.0	576	112.5	8.3
KA3	20	7.83	124	17.85	8.46	<0.5	<0.5	0.8	0.9	0.1	0.8	1.8	0.4	0.3	38.3	<5	13.7	52.7	528	142.0	9.4
KA4	30	7.71	122	15.58	8.52	<0.5	<0.5	0.5	1.0	0.0	0.9	1.9	3.1	0.1	27.8	<5	10.9	41.9	526	110.0	9.1
KA5	40	7.58	121	12.38	8.72	<0.5	<0.5	0.6	1.7	1.3	0.8	3.8	1.8	0.8	36.4	<5	14.6	53.6	459	107.0	6.7
KA6	50	7.38	121	11.72	8.48	<0.5	<0.5	0.5	1.9	2.1	0.6	4.6	0.2	3.4	29.4	<5	10.2	43.2	417	75.1	6.1
KA7	60	7.36	122	11.48	8.20	<0.5	<0.5	0.4	3.5	0.5	0.8	4.8	0.6	5.3	32.1	<5	9.6	47.6	353	84.9	6.7
KA8	70	7.31	122	11.34	7.84	<0.5	<0.5	0.3	3.5	1.5	0.7	5.7	0.9	10.8	42.3	<5	10.7	64.7	481	85.4	6.8
KA9	80	7.25	122	11.27	7.71	<0.5	<0.5	0.2	4.2	0.8	1.2	6.2	0.4	14.7	82.9	<5	9.5	107.5	347	97.5	4.9
KA10	90	7.19	122	11.20	7.57	<0.5	<0.5	0.1	5.1	0.0	0.7	5.8	0.3	19.8	43.9	<5	10.2	74.2	370	107.0	5.4
KA11	100	7.18	122	11.17	7.45	<0.5	<0.5	0.1	4.6	0.6	5.2	6.0	21.2	30.2	<5	8.6	60.6	412	59.8	4.0	
KA12	110	7.12	123	11.14	7.29	<0.5	<0.5	<0.1	5.0	1.0	0.6	6.6	0.8	28.2	26.0	<5	4.5	59.5	346	44.6	3.3
KA13	120	7.07	123	11.15	7.29	0.6	<0.5	<0.1	7.4	0.0	0.8	8.2	0.1	30.2	29.7	<5	7.9	67.9	373	85.8	5.8
KA14	130	7.28	123	11.12	7.18	<0.5	<0.5	<0.1	5.6	1.4	0.8	7.8	1.1	29.5	26.4	<5	9.0	66.0	395	89.1	4.4
KA15	140	7.12	123	11.11	7.13	<0.5	<0.5	<0.1	8.4	1.6	1.5	11.5	1.1	36.8	27.1	<5	8.5	73.5	393	72.6	4.1
KA16	150	7.11	123	11.11	6.72	<0.5	<0.5	0.1	8.3	0.7	1.5	10.5	0.4	36.4	27.2	<5	7.2	71.2	379	98.8	4.1

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

## Lake Taupo biannual nutrient database

2006-2007

Started 27 October 1994

## Collection date 1 November 2006

Code	Depth m	pH	EC @ 25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
HW1	1	7.79	118	12.43	10.2	0.5	<0.5	0.5	1.2	0.0	1.7	2.9	0.1	1.0	75.9	13.6	90.6	413	168.0	15.4	
HW2	10	7.77	119	12.27	10.1	0.8	<0.5	0.6	1.0	0.0	1.9	2.9	0.0	0.1	61.9	13.8	75.8	419	187.0	13.8	
HW3	20	7.77	120	12.25	10.1	0.7	<0.5	0.7	0.9	1.1	2.3	4.3	0.0	0.1	32.9	17.8	50.8	373	209.5	17.4	
HW4	30	7.81	119	12.20	10.1	0.9	<0.5	0.6	1.0	0.0	2.7	3.7	0.3	0.0	38.7	22.3	61.3	456	215.5	18.1	
HW5	40	7.78	119	12.10	10.1	0.9	<0.5	0.7	1.1	0.9	2.2	4.2	0.0	0.1	30.9	17.9	48.9	368	227.5	19.8	
HW6	50	7.74	119	11.96	10.0	0.6	<0.5	0.7	1.2	0.0	1.9	3.1	0.0	0.2	29.8	14.0	44.0	468	169.0	13.9	
HW7	60	7.67	120	11.34	9.7	0.7	<0.5	1.1	1.5	0.0	1.8	3.3	0.6	0.1	31.3	13.9	45.9	411	123.5	13.5	
HW8	70	7.64	119	11.17	9.5	<0.5	<0.5	1.3	1.2	1.8	2.0	5.0	0.5	0.1	29.4	14.5	44.5	378	98.0	12.3	
HW9	80	7.57	119	11.06	9.4	0.7	<0.5	1.3	1.3	0.7	2.2	4.2	2.5	1.8	27.7	14.1	46.1	330	91.5	11.2	
HW10	90	7.56	119	10.99	9.3	<0.5	<0.5	1.3	1.2	0.8	2.2	4.2	2.7	2.3	52.0	14.4	71.4	352	122.5	15.3	
HW11	100	7.56	119	10.94	9.3	0.5	<0.5	1.1	1.4	0.0	2.3	3.7	2.9	3.1	43.0	13.4	62.4	378	105.5	13.2	
HW12	110	7.50	121	10.91	9.2	<0.5	<0.5	0.9	1.8	0.0	2.3	4.1	3.7	4.6	73.7	14.3	96.3	382	106.5	12.8	
HW13	120	7.50	119	10.88	9.1	<0.5	<0.5	0.7	1.8	2.2	2.2	6.2	3.7	5.8	52.5	11.5	73.5	421	87.5	11.5	
HW14	130	7.57	120	10.85	9.0	<0.5	<0.5	0.9	1.8	2.2	2.2	6.2	3.3	4.4	38.3	12.0	58.0	354	84.5	11.6	
HW15	140	7.50	119	10.84	8.9	0.6	<0.5	0.8	1.4	0.6	2.3	4.3	3.0	4.5	43.5	13.4	64.4	428	110.5	12.9	
HW16	150	7.49	120	10.84	8.7	<0.5	<0.5	0.7	2.0	3.0	2.4	7.4	4.7	7.6	52.7	12.8	77.8	368	98.0	10.7	

## Collection date 3 April 2007

Code	Depth m	pH	EC @ 25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
HW17	1	7.94	119	18.04	9.4	<0.5	<0.5	0.7	1.6	2.4	1.4	5.4	4.7	0.9	62.4	14.9	82.9	567	122.0	18.4	
HW18	10	8.09	119	18.03	9.5	<0.5	<0.5	0.8	1.1	3.9	1.8	6.8	0.0	0.1	59.9	14.9	74.9	522	317.5	19.2	
HW19	20	8.09	119	17.94	9.4	<0.5	<0.5	0.8	1.2	2.8	1.6	5.6	0.0	0.2	65.8	14.8	80.8	498	177.5	16.8	
HW20	30	7.95	119	16.72	9.3	<0.5	<0.5	1.2	1.0	4.0	2.0	7.0	0.0	0.1	63.9	17.5	81.5	481	133.0	19.6	
HW21	40	7.73	119	13.50	8.9	<0.5	<0.5	1.2	1.8	2.2	1.6	5.6	0.0	0.3	55.7	12.3	68.3	444	76.4	12.1	
HW22	50	7.62	120	12.33	8.9	<0.5	<0.5	0.8	1.5	4.5	1.3	7.3	0.1	0.8	53.2	9.0	63.1	419	68.1	10.1	
HW23	60	7.54	119	11.65	8.8	<0.5	<0.5	0.7	1.2	3.8	1.5	6.5	0.1	3.4	51.5	7.7	62.7	393	49.9	6.3	
HW24	70	7.48	120	11.28	8.8	<0.5	<0.5	0.9	2.0	2.0	1.3	5.3	0.0	9.7	70.2	6.4	86.3	434	68.3	8.6	
HW25	80	7.43	115	11.22	8.5	<0.5	<0.5	0.6	2.0	3.0	1.2	6.2	0.0	14.6	52.4	6.4	73.4	436	58.0	8.3	
HW26	90	7.39	121	11.11	8.5	<0.5	<0.5	0.3	1.7	3.3	1.0	6.0	0.1	16.3	54.7	7.1	78.2	460	62.7	8.4	
HW27	100	7.35	121	11.10	8.2	<0.5	<0.5	0.3	2.5	1.5	1.1	5.1	0.0	19.4	50.5	7.0	76.9	469	48.9	6.7	
HW28	110	7.31	121	11.04	8.2	<0.5	<0.5	0.2	2.7	2.3	0.9	5.9	1.5	20.9	47.1	5.9	75.4	437	40.4	7.5	
HW29	120	7.32	120	11.04	8.0	<0.5	<0.5	0.2	3.0	2.0	0.9	5.9	0.0	23.8	57.7	4.9	86.4	452	48.5	7.8	
HW30	130	7.73	121	11.01	8.1	<0.5	<0.5	0.2	2.7	3.3	0.9	6.9	0.0	24.8	51.2	3.8	79.8	389	42.7	6.7	
HW31	140	7.30	118	11.00	7.7	<0.5	<0.5	0.2	3.7	2.3	1.3	7.3	0.0	24.6	47.4	3.8	75.8	413	43.2	6.4	
HW32	150	7.25	121	10.99	7.4	<0.5	<0.5	0.2	4.5	3.5	1.6	9.6	0.0	30.5	50.5	6.1	87.1	439	51.7	9.5	

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database

2005-2006

Started 27 October 1994

Collection date 25 October 2005

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
QD1	1	7.81	119	13.40	10.1	<0.5	<0.5	0.4	1.0	3.0	1.3	5.3	0.6	0.3	51.1	4	8.5	60.5	613	132.5	11.0
QD2	10	7.88	119	12.88	10.0	0.5	<0.5	0.5	0.7	2.3	1.9	4.9	0.1	0.0	52.9	3	12.8	65.8	623	169.0	13.5
QD3	20	7.74	119	12.17	10.1	0.6	<0.5	0.7	0.6	2.4	2.7	5.7	0.4	0.2	43.4	2	17.0	61.0	625	216.5	20.0
QD4	30	7.77	118	11.65	9.9	0.7	<0.5	0.6	0.6	5.4	2.6	8.6	0.7	0.0	57.3	2	17.3	75.3	566	212.0	16.0
QD5	40	7.68	119	11.49	9.8	<0.5	<0.5	0.9	0.6	3.4	3.1	7.1	0.0	0.2	49.8	2	22.2	72.2	581	229.5	20.5
QD6	50	7.59	119	11.29	9.5	<0.5	<0.5	1.4	0.8	1.2	2.2	4.2	1.4	0.1	35.5	2	15.9	52.9	599	172.5	14.0
QD7	60	7.46	120	11.18	9.2	0.7	<0.5	0.7	1.7	2.3	1.6	5.6	1.7	9.6	41.7	2	9.8	62.8	503	103.5	6.5
QD8	70	7.37	120	11.07	9.0	0.5	<0.5	0.8	1.9	2.1	1.5	5.5	1.6	12.8	56.6	2	9.2	80.2	482	101.5	6.0
QD9	80	7.35	120	11.01	8.8	0.6	<0.5	0.6	2.5	1.5	1.4	5.4	0.6	15.3	30.1	13	9.0	55.0	521	86.5	6.0
QD10	90	7.36	121	10.97	8.8	0.7	<0.5	0.4	2.8	1.2	1.4	5.4	0.3	17.1	47.6	2	7.3	72.3	478	62.5	4.0
QD11	100	7.29	121	10.97	8.6	<0.5	<0.5	0.5	2.8	1.2	1.4	5.4	0.4	17.4	39.2	2	7.8	64.8	476	77.5	4.5
QD12	110	7.34	120	10.94	8.5	<0.5	<0.5	0.5	3.0	1.0	1.3	5.3	1.5	18.7	48.8	2	7.4	76.4	462	92.5	3.0
QD13	120	7.29	121	10.94	8.5	<0.5	<0.5	0.5	2.8	2.2	1.2	6.2	0.8	20.4	42.8	2	6.2	70.2	549	50	
QD14	130	7.32	120	10.93	8.4	<0.5	<0.5	0.5	2.7	1.3	1.3	5.3	0.1	20.3	35.6	3	5.9	61.9	504	69.5	6.0
QD15	140	7.34	121	10.93	8.4	<0.5	<0.5	0.6	3.0	2.0	1.4	6.4	1.4	20.9	34.7	1	7.8	64.8	352	77.5	6.5
QD16	150	7.26	120	10.92	8.2	<0.5	<0.5	0.5	3.8	1.2	1.5	6.5	0.9	23.5	29.6	3	7.1	61.1	533	66.0	6.0

Collection date 12 April 2006

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
ZD1	1	7.9	119	16.72	9.6	<0.5	<0.5	1.2	1.1	0.9	1.9	3.9	0.0	0.2	50.8	2	19.2	70.2	213.5	19.0	
ZD2	10	7.9	118	16.72	9.2	<0.5	<0.5	1.3	0.8	1.2	1.6	3.6	0.0	0.0	38.0	2	16.6	54.6	196.0	13.5	
ZD3	20	7.9	116	16.72	9.0	0.5	<0.5	1.1	0.7	0.3	1.3	2.3	0.0	0.0	42.0	<1	15.65	57.7	235.0	15.5	
ZD4	30	7.88	120	16.71	9.4	<0.5	<0.5	1.2	0.6	1.4	1.6	3.6	0.1	0.0	50.9	<1	15.45	66.5	172.0	13.5	
ZD5	40	7.9	116	16.64	9.2	0.8	0.7	1.3	0.5	1.5	1.55	3.6	0.0	0.0	41.0	2	15.45	56.5	224.5	13.0	
ZD6	50	7.6	119	12.11	8.7	<0.5	<0.5	1.0	0.7	2.3	1.2	4.2	0.0	0.1	33.9	8	11.4	45.4	133.0	8.5	
ZD7	60	7.43	121	11.52	8.5	<0.5	<0.5	1.0	0.7	2.3	1.05	4.1	0.0	0.5	44.5	2	9.15	54.2	171.5	8.0	
ZD8	70	7.49	121	11.31	8.3	<0.5	<0.5	0.9	0.7	2.3	1.15	4.2	0.0	0.7	37.3	6	9.55	47.6	130.5	9.0	
ZD9	80	7.9	120	11.18	8.3	<0.5	<0.5	1.1	0.5	2.5	1.4	4.4	0.3	0.0	50.7	5	16.1	67.1	182.0	12.5	
ZD10	90	7.31	122	11.11	8.1	<0.5	<0.5	0.2	3.0	1	0.45	4.5	0.0	23.0	28.0	2	4.1	55.1	62.5	6.0	
ZD11	100	7.31	122	11.08	8.1	<0.5	<0.5	0.3	3.2	0.8	0.5	4.5	0.1	22.8	24.1	<1	4.95	52.0	68.5	6.5	
ZD12	110	7.91	119	11.05	8.0	0.7	0.5	1.1	3.2	1.8	1.5	6.5	0.1	22.2	25.7	3	16.5	64.5	196.0	15.0	
ZD13	120	7.42	122	11.03	7.9	<0.5	<0.5	0.3	3.1	1.9	0.5	5.5	0.0	21.6	27.4	<1	5.2	54.2	86.5	7.0	
ZD14	130	7.5	121	11.02	7.7	<0.5	<0.5	0.3	3.0	2	0.55	5.6	0.0	19.9	32.1	2	5.45	57.5	69.5	6.5	
ZD15	140	7.3	119	11.02	7.3	<0.5	<0.5	0.2	3.4	1.6	0.55	5.6	0.0	23.1	31.9	2	6.5	61.5	87.0	7.5	
ZD16	150	7.24	122	11.02	7.2	<0.5	<0.5	0.3	2.9	1.1	0.55	4.6	0.2	21.0	28.8	5	5.85	55.9	77.5	7.0	

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient database

2004-2005

Started 27 October 1994

Collection date 21 October 2004

Code	Depth m	pH	EC @25°C mS cm⁻¹	Temp °C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄-N mg m⁻³	NO₃-N mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC mg m⁻³	PC mg m⁻³	PN** mg m⁻³
VZ1	1	7.88	122	11.75	10.4	0.6	0.5	0.6	1.3	2.7	1.6	5.6	0.1	0.4	39.5	19	9.7	49.7	500	110.0	8
VZ2	10	7.82	120	11.61	10.2	0.8	0.6	0.8	1.1	2.9	2.0	6.0	0.2	0.1	35.7	24	12.8	48.8	447	157.0	8.5
VZ3	20	7.87	120	11.59	10.1	0.9	0.7	0.8	1.0	3.0	1.9	5.9	0.0	0.0	33.0	16	11.3	44.3	440	153.0	8.5
VZ4	30	7.91	123	11.59	10.2	1.5	1.0	0.7	1.0	2.0	1.9	4.9	0.0	0.0	34.0	15	11.3	45.3	490	157.5	8
VZ5	40	7.82	117	11.58	10.1	1.1	0.6	0.7	1.4	3.6	2.0	7.0	0.2	0.1	33.7	7	11.2	45.2	445	155.0	10
VZ6	50	7.83	120	11.58	9.9	1.1	0.7	0.9	1.0	4.0	2.1	7.1	0.0	0.1	33.9	9	13.2	47.2	494	197.5	15
VZ7	60	7.79	119	11.15	9.9	1.1	0.7	1.0	1.6	2.4	2.3	6.3	0.5	0.4	34.1	11	26.0	61.0	585	167.0	16
VZ8	70	7.66	118	10.79	9.7	0.7	0.5	1.0	1.9	1.1	1.9	4.9	2.4	0.8	40.8	21	11.5	55.5	468	114.0	11.5
VZ9	80	7.63	118	10.74	9.6	0.6	<0.5	0.9	2.0	1.0	1.7	4.7	2.8	1.3	47.9	16	8.9	60.9	440	103.0	9.5
VZ10	90	7.61	119	10.72	9.5	0.6	<0.5	0.7	2.0	2.0	1.6	5.6	3.9	2.2	28.9	9	9.1	44.1	633	100.5	10
VZ11	100	7.53	118	10.70	9.4	0.7	0.5	0.7	2.3	1.7	1.5	5.5	5.1	3.6	34.3	7	9.0	52.0	570	93.0	10
VZ12	110	7.56	119	10.68	9.4	0.5	<0.5	0.7	2.0	5.0	1.6	8.6	5.3	2.8	28.9	9	9.2	46.2	514	101.5	9
VZ13	120	7.49	119	10.66	9.3	0.5	<0.5	0.7	2.1	1.9	1.5	5.5	5.3	3.9	35.8	6	8.5	53.5	391	91.5	11
VZ14	130	7.48	118	10.65	9.3	<0.5	<0.5	0.6	2.5	1.5	1.6	5.6	5.8	5.3	34.9	5	8.6	54.6	366	73.5	8.5
VZ15	140	7.58	118	10.61	9.2	<0.5	<0.5	0.6	2.9	1.1	1.6	5.6	5.9	7.3	33.8	13	9.1	56.1	491	93.5	10.5
VZ16	150	7.58	119	10.56	9.1	<0.5	<0.5	0.6	2.4	1.6	1.5	5.5	4.5	3.3	35.2	21	8.7	51.7	464	78.0	9

Collection date 14 April 2005

Code	Depth m	pH	EC @25°C mS cm⁻¹	Temp °C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄-N mg m⁻³	NO₃-N mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC mg m⁻³	PC mg m⁻³	PN** mg m⁻³
GC1	1	7.85	119	17.92	9.1	0.4	0.4	0.7	0.8	1.2	1.9	3.9	1.2	0.2	64.6	7	15.1	81.1	690	176.0	19.0
GC2	10	7.86	118	17.96	9.0	0.3	0.4	0.9	0.8	2.2	1.9	4.9	0.0	0.0	46	3	14.1	60.1	580	199.5	19.0
GC3	20	7.9	119	17.95	9.0	0.3	0.3	0.9	0.8	2.2	2.0	5.0	0.0	0.1	55.9	1	14.5	70.5	580	179.0	17.0
GC4	30	7.82	118	15.13	8.4	0.3	0.3	0.9	0.8	2.2	1.8	4.8	0.0	0.3	49.7	2	12.8	62.8	570	176.5	17.0
GC5	40	7.58	121	12.92	8.7	0.2	0.2	0.8	2.3	0.7	1.2	4.2	0.3	0.6	31.1	2	8.9	40.9	510	109.5	14.0
GC6	50	7.51	120	12.00	8.3	0.1	0.1	0.6	3.1	0.9	1.0	5.0	0.0	6.4	39.6	3	6.8	52.8	480	84.0	9.0
GC7	60	7.47	121	11.33	8.2	0.1	0.1	0.5	3.6	1.4	1.1	6.1	0.0	8.3	40.7	2	8.2	57.2	510	78.5	7.5
GC8	70	7.48	120	10.99	8.2	0.1	0.1	0.3	4.2	0.8	0.9	5.9	0.0	15.7	38.3	2	6.5	60.5	490	96.0	7.0
GC9	80	7.39	121	10.88	8.2	0.2	0.2	0.3	3.8	0.2	0.8	4.8	0.1	15.7	36.2	1	4.3	56.3	480	72.5	7.5
GC10	90	7.21	121	10.82	8.3	0.0	0.1	0.1	5.6	1.4	0.9	7.9	0.2	23.8	38	2	5.6	67.6	480	64.0	7.0
GC11	100	7.31	121	10.78	8.0	0.0	0.1	0.1	5.7	1.3	0.8	7.8	0.2	23.6	53.2	2	5.0	82.0	460	78.5	7.0
GC12	110	7.32	121	10.76	7.8	0.1	0.1	0.1	5.7	1.3	0.8	7.8	0.0	25.9	47.1	2	5.6	78.6	470	43.5	6.0
GC13	120	7.33	121	10.76	7.7	0.1	0.1	<0.1	6.4	1.6	0.8	8.8	0.3	26.8	37.9	1	4.9	69.9	450	56.0	6.5
GC14	130	7.33	121	10.74	7.7	0.1	0.1	<0.1	6.1	0	0.8	6.8	0.3	26.7	57	1	4.4	88.4	470	43.5	5.5
GC15	140	7.34	121	10.74	7.6	0.1	0.1	<0.1	6.6	0.4	0.9	7.9	0.2	28.8	39	2	5.8	73.8	490	54.5	6.0
GC16	150	7.36	121	10.72	7.5	0.3	0.1	0.1	7.8	0.2	1.1	9.1	0.0	32.1	51.9	1	6.9	90.9	490	46.0	7.5

NH₄, NO₃, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO₃-N 0.5; NH₄-N 1.0 mg m⁻³

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO₃-N, and NH₄-N below nominal detection limit.

## Lake Taupo biannual nutrient database

2003-2004

Started 27 October 1994

## Collection date 19 November 2003

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH4-N mg m <sup>-3</sup>	NO3-N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
EU1	1	7.84	119	13.96	9.9	<0.5	<0.5	0.8	1.7	2.3	2.3	6.3	8.0	0.8	42.2	1	14.8	65.8	476	90.5	10.5
EU2	10	7.84	120	13.79	9.9	<0.5	<0.5	0.9	1.6	1.4	2.5	5.5	0.3	0.3	52.4	1	14.4	67.4	461	147.5	15.0
EU3	20	7.83	120	13.78	9.8	<0.5	<0.5	0.7	1.8	1.2	3.4	6.4	0.4	0.1	46.5	1	19.4	66.4	466	151.0	20.5
EU4	30	7.84	120	13.70	9.5	<0.5	<0.5	0.9	1.8	2.2	3.8	7.8	0.4	0.3	42.3	1	26.3	69.3	450	133.0	18.5
EU5	40	7.69	120	12.30	9.3	<0.5	<0.5	1.5	2.6	1.4	3.3	7.3	0.7	0.2	35.1	1	20.6	56.6	437	133.0	17.0
EU6	50	7.63	121	11.35	9.0	<0.5	<0.5	1.2	2.8	1.2	1.9	5.9	0.4	0.5	37.1	1	11.9	49.9	470	92.5	11.0
EU7	60	7.58	121	11.28	8.9	<0.5	<0.5	0.7	3.3	0.7	1.5	5.5	1.0	3.2	27.8	2	9.6	41.6	503	69.5	8.0
EU8	70	7.59	121	11.23	8.7	<0.5	<0.5	0.6	3.5	0.5	1.1	5.1	3.4	4.8	25.8	1	6.2	40.2	465	47.0	<6
EU9	80	7.6	121	11.19	8.6	<0.5	<0.5	0.5	3.6	0.4	1.1	5.1	0.6	5.9	29.5	2	5.1	41.1	430	65.0	<6
EU10	90	7.57	121	11.16	8.6	<0.5	<0.5	0.5	3.9	0.1	1.2	5.2	1.0	7.0	27	3	6.4	41.4	391	39.5	<6
EU11	100	7.59	121	11.15	8.6	<0.5	0.7	0.4	4.1	0.9	1.2	6.2	0.8	7.8	33.4	2	4.0	46.0	405	46.5	<6
EU12	110	7.6	121	11.12	8.4	<0.5	<0.5	0.4	4.1	0.9	1.1	6.1	1.1	11.8	29.1	3	3.4	45.4	428	45.5	<6
EU13	120	7.57	120	11.11	8.4	<0.5	<0.5	0.4	4.6	0.4	1.2	6.2	0.7	13.6	32.7	2	3.0	50.0	439	37.0	<6
EU14	130	7.53	121	11.09	8.3	<0.5	<0.5	0.3	5.1	0.4	1.2	6.7	0.8	16.1	32.7	3	3.7	53.3	408	33.0	<6
EU15	140	7.57	121	11.09	8.2	<0.5	<0.5	0.3	5.3	0.7	1.2	7.2	0.4	18.1	32.5	3	5.1	56.1	440	54.5	<6
EU16	150	7.54	120	11.09	8.0	0.5	<0.5	0.5	5.6	1.4	1.5	8.5	2.4	20.7	32.9	4	6.4	62.4	481	44.0	<6

## Collection date 31 March 2004

Secchi depth = 16.0 m

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH4-N mg m <sup>-3</sup>	NO3-N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
MB1	1	7.86	118	16.49	9.2	<0.5	<0.5	0.7	0.9	4.1	1.4	6.4	1	0	69	-	9.7	79.7	622	91.0	-
MB2	10	7.83	118	16.29	9.1	<0.5	<0.5	1.2	0.5	3.5	2.0	6.0	0	0	47	-	12.4	59.4	548	141.5	17.0
MB3	20	7.83	118	16.23	9.0	<0.5	<0.5	1.1	0.6	3.4	2.1	6.1	1	0.2	47.8	-	14.8	63.8	561	140.5	17.0
MB4	30	7.83	118	16.19	9.0	<0.5	<0.5	1.1	0.8	3.2	1.9	5.9	1	0.2	50.8	-	13.5	65.5	749	131.5	15.5
MB5	40	7.66	118	16.15	8.9	<0.5	<0.5	0.9	1.5	1.5	1.9	4.9	1	2.8	71.2	-	11.6	86.6	560	114.5	14.0
MB6	50	7.46	120	12.51	8.2	<0.5	<0.5	0.5	3.3	2.7	1.5	7.5	1	12.1	58.9	-	7.2	79.2	467	109.0	7.5
MB7	60	7.41	121	11.59	8.0	<0.5	<0.5	0.3	4.7	2.3	1.0	8.0	1	18.0	41	-	4.2	64.2	394	54.5	7.0
MB8	70	7.36	121	11.40	8.0	<0.5	<0.5	0.2	4.5	1.5	0.8	6.8	1	19.1	36.9	-	3.7	60.7	404	45.0	<4
MB9	80	7.42	121	11.34	8.0	<0.5	<0.5	0.2	5.0	1.0	0.8	6.8	1	20.2	31.8	-	5.3	58.3	464	41.0	<4
MB10	90	7.36	121	11.30	7.9	<0.5	<0.5	0.1	5.2	1.8	0.7	7.7	3	22.1	35.9	-	3.9	64.9	453	52.0	<4
MB11	100	7.31	122	11.27	7.8	<0.5	<0.5	0.1	5.6	2.4	0.8	8.8	2	23.9	38.1	-	3.0	67.0	477	36.5	<4
MB12	110	7.29	122	11.26	7.7	<0.5	<0.5	<0.1	5.8	2.2	1.0	9.0	1	25.0	30	-	6.2	62.2	392	36.5	5.5
MB13	120	7.31	121	11.24	7.6	<0.5	<0.5	0.1	5.9	3.1	0.8	9.8	1	25.0	59	-	3.6	88.6	373	53.5	<4
MB14	130	7.3	121	11.22	7.5	<0.5	<0.5	<0.1	6.3	2.7	0.9	9.9	0	27.0	35	-	3.3	65.3	393	61.0	<4
MB15	140	7.3	121	11.21	7.4	<0.5	<0.5	<0.1	6.6	3.4	0.8	10.8	0	27.8	46.2	-	3.3	77.3	356	35.0	<4
MB16	150	7.31	120	11.21	7.1	<0.5	<0.5	0.1	7.2	2.8	1.0	11.0	0	30.1	48.9	-	4.0	83.0	394	34.0	<4

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

Lake Taupo biannual nutrient

2002-2003

Started 27 October 1994

Collection date 13 November 2002

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
NZ1	1	7.87	122	12.58	10.2	0.6	<0.5	0.6	1.3	1.7	2.2	5.2	0.8	0.6	65.6	2	15.3	82.3	620	160.0	12.5
NZ2	10	7.86	120	12.58	10.3	0.5	<0.5	0.7	1.2	1.8	2.1	5.1	0.7	0.0	49.3	1	13.7	63.7	573	180.5	13.5
NZ3	20	7.93	120	12.49	10.2	1.0	<0.5	0.7	1.1	1.9	2.2	5.2	0.5	0.1	61.4	1	15.8	77.8	536	157.5	12.0
NZ4	30	7.85	121	12.38	10.2	<0.5	<0.5	0.8	0.9	3.1	2.6	6.6	0.7	0.5	74.8	2	17.7	93.7	657	242.0	14.0
NZ5	40	7.81	119	12.16	10.1	<0.5	<0.5	0.7	1.2	1.8	1.9	4.9	0.6	0.7	58.7	1	12.9	72.9	506	164.5	8.0
NZ6	50	7.83	120	12.00	10.1	<0.5	<0.5	0.7	1.6	1.4	1.7	4.7	1.6	0.0	55.4	1	11.5	68.5	505	170.0	9.5
NZ7	60	7.78	119	11.81	10.0	<0.5	<0.5	0.6	1.5	1.5	1.5	4.5	1.2	0.0	64.8	2	9.5	75.5	531	108.5	6.5
NZ8	70	7.72	120	11.51	9.9	<0.5	<0.5	0.6	2.8	1.2	1.3	5.3	3.4	2.2	42.4	7	7.1	55.1	514	53.5	5.0
NZ9	80	7.67	120	11.32	9.7	<0.5	<0.5	0.4	2.7	1.3	1.1	5.1	3.3	0.9	38.8	2	5.9	48.9	578	61.0	4.5
NZ10	90	7.77	121	11.13	9.6	<0.5	<0.5	0.4	2.8	1.2	1.0	5.0	3.7	0.4	44.9	4	6.6	55.6	487	41.0	<2
NZ11	100	7.53	122	11.08	9.4	<0.5	<0.5	0.2	3.0	2.0	0.8	5.8	4.2	3.7	65.1	5	6.1	79.1	525	31.0	<2
NZ12	110	7.64	121	11.05	9.4	<0.5	<0.5	0.1	3.3	1.7	0.7	5.7	3.4	5.4	57.2	4	4.4	70.4	472	38.0	<2
NZ13	120	7.55	122	11.01	9.3	<0.5	<0.5	0.2	3.6	0.4	1.0	5.0	3.0	7.0	51.0	6	5.9	66.9	473	64.5	4.0
NZ14	130	7.32	123	10.99	9.2	<0.5	<0.5	0.1	3.6	0.4	1.0	5.0	2.9	7.5	45.6	5	6.7	62.7	555	70.5	3.5
NZ15	140	7.47	121	10.97	9.1	0.5	<0.5	0.1	3.7	1.3	0.9	5.9	2.5	10.5	60.0	16	6.7	79.7	460	54.5	3.0
NZ16	150	7.46	121	10.96	9.0	<0.5	<0.5	0.2	4.3	1.7	1.0	7.0	0.5	12.9	58.6	4	6.4	78.4	461	52.5	3.0

Collection date 3 April 2003

Code	Depth m	pH	EC @25oC mS cm <sup>-1</sup>	Temp °C	DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>	NH <sub>4</sub> -N mg m <sup>-3</sup>	NO <sub>3</sub> -N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
UJ1	1	8.01	119	19.20	8.8	3.0	0.5	0.7	0.8	3.2	1.8	5.8	5	0.4	75.6	5	18.8	99.8	546	219.0	19.5
UJ2	10	8.07	146	18.71	8.8	0.7	1.0	1.4	0.9	4.1	2.5	7.5	<1	0.6	45.4	1	24.0	70.0	511	304.5	29.0
UJ3	20	8.15	120	18.60	8.6	1.0	0.7	1.3	0.6	3.4	2.3	6.3	<1	0.6	40.4	1	23.7	64.7	520	270.0	31.5
UJ4	30	7.93	119	16.93	8.3	<0.5	<0.5	1.5	0.8	3.2	1.8	5.8	<1	0.3	39.7	1	20.4	60.4	503	181.0	39.0
UJ5	40	7.66	118	13.31	8.0	<0.5	<0.5	1.3	1.7	3.3	1.7	6.7	<1	0.8	39.2	1	12.2	52.2	443	115.0	54.0
UJ6	50	7.61	122	12.39	7.9	<0.5	1.0	0.7	2.9	2.1	1.3	6.3	<1	4.8	35.2	3	8.6	48.6	410	92.5	5.5
UJ7	60	7.57	138	11.80	7.7	<0.5	<0.5	0.5	3.9	2.1	1.1	7.1	<1	10.7	32.3	1	5.9	48.9	366	86.5	4.5
UJ8	70	7.42	121	11.50	7.6	<0.5	<0.5	0.2	4.4	1.6	0.9	6.9	<1	16.3	27.7	1	6.1	50.1	404	109.5	4.0
UJ9	80	7.39	121	11.32	7.5	<0.5	<0.5	0.1	4.5	1.5	1.0	7.0	<1	19.3	41.7	1	6.2	67.2	365	37.0	4.0
UJ10	90	7.32	121	11.20	7.3	<0.5	<0.5	0.1	4.7	1.3	0.8	6.8	<1	21.9	24.1	2	4.5	50.5	360	40.0	<4
UJ11	100	7.29	121	11.19	7.3	<0.5	<0.5	<0.1	5.3	2.7	0.9	8.9	<1	23.9	27.1	2	4.6	55.6	387	92.5	<4
UJ12	110	7.26	120	11.12	7.2	<0.5	<0.5	<0.1	5.5	0.5	0.7	6.7	<1	25.2	30.8	1	2.9	58.9	366	28.5	<4
UJ13	120	7.33	122	11.11	7.0	<0.5	<0.5	<0.1	6.6	0.4	0.7	7.7	<1	28.8	36.2	5	2.5	67.5	409	40.0	<4
UJ14	130	7.27	123	11.09	6.9	<0.5	<0.5	<0.1	7.7	0.3	0.9	8.9	<1	30.9	29.1	3	3.2	63.2	382	15.5	<4
UJ15	140	7.28	122	11.10	6.8	<0.5	<0.5	<0.1	7.6	0.4	0.8	8.8	<1	30.4	47.6	4	4.3	82.3	384	47.5	<4
UJ16	150	7.29	122	11.09	6.5	<0.5	<0.5	<0.1	9.0	5.0	1.6	15.6	<1	36.4	30.6	2	6.5	73.5	371	38.5	<4

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given as a better indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N below nominal detection limit.

**Lake Taupo biannual nutrient database**

Collection date 12 November 2001

**2001-2002**

Started 27 October 1994

Code	Depth m	pH	EC @25oC µS cm <sup>-1</sup>	Temp °C	Secchi depth = 15.5 m								NH4-N mg m <sup>-3</sup>	NO3-N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
					DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>									
XH1	1	7.85	122	14.23	9.5	0.5	<0.5	0.6	0.9	1.1	1.55	3.6	<1	<0.5	29	2	6	35	500	146.5	12.0
XH2	10	7.86	122	14.16	9.8	0.5	<0.5	0.7	1.1	0.9	4.3	6.3	<1	<0.5	32	2	16.5	49	520	212.0	31.3
XH3	20	7.82	119	13.37	9.4	<0.5	<0.5	1.0	1.1	<0.5	3.5	4.6	<1	<0.5	28	1	20	48	510	340.5	26.8
XH4	30	7.6	116	12.85	9.4	0.6	0.7	1.3	1.6	<0.5	3.1	4.7	<1	1.0	29	1	14.5	45	480	264.5	24.7
XH5	40	7.44	122	11.87	8.9	<0.5	<0.5	1.3	2.2	<0.5	2.8	5.0	1	2.5	25.5	2	11.5	41	470	200.5	21.7
XH6	50	7.46	121	11.57	9.0	<0.5	<0.5	0.9	2.6	<0.5	1.75	4.4	<1	7.2	26.8	2	6	40	470	136.5	12.6
XH7	60	7.41	121	11.24	8.7	1.3	1.2	0.7	2.6	<0.5	1.4	4.0	<1	8.0	24	2	<2	32	440	104.5	9.1
XH8	70	7.4	122	11.13	8.8	<0.5	<0.5	0.5	2.9	<0.5	1.15	4.1	<1	12.3	21.7	2	<2	34	450	142.0	7.2
XH9	80	7.38	122	11.03	8.6	<0.5	<0.5	0.4	3.2	<0.5	1.15	4.4	<1	13.6	29.4	4	<2	43	440	103.0	8.1
XH10	90	7.4	119	11.01	8.8	<0.5	<0.5	0.4	3.2	<0.5	1.05	4.3	<1	15.1	21.9	2	<2	37	420	79.0	6.2
XH11	100	7.35	120	10.99	8.6	<0.5	<0.5	0.3	3.8	<0.5	1.05	4.9	<1	17.8	25.2	2	4	47	460	98.0	6.6
XH12	110	7.36	122	10.97	8.6	<0.5	<0.5	0.3	4.0	<0.5	1.1	5.1	<1	19.5	24.5	2	<2	44	490	116.5	5.8
XH13	120	7.35	126	10.95	8.4	<0.5	<0.5	0.3	4.5	<0.5	1.3	5.8	<1	22.0	22	2	<2	44	490	93.5	5.6
XH14	130	7.38	127	10.94	8.4	<0.5	<0.5	0.3	4.4	<0.5	1.1	5.5	<1	21.1	21.9	2	<2	43	420	113.5	5.5
XH15	140	7.34	126	10.94	8.2	<0.5	<0.5	0.3	5.2	<0.5	1.3	6.5	<1	24.7	25.3	2	<2	50	440	93.5	7.3
XH16	150	7.38	127	10.94	8.1	1.3	0.6	0.3	5.3	<0.5	1.3	6.6	<1	25.2	26.8	3	<2	52	480	83.5	7.7

Collection date 4 April 2002

Code	Depth m	pH	EC @25oC µS cm <sup>-1</sup>	Temp °C	Secchi depth = 19.0 m								NH4-N mg m <sup>-3</sup>	NO3-N mg m <sup>-3</sup>	DON mg m <sup>-3</sup>	UREA mg m <sup>-3</sup>	PN* mg m <sup>-3</sup>	TN mg m <sup>-3</sup>	DOC mg m <sup>-3</sup>	PC mg m <sup>-3</sup>	PN** mg m <sup>-3</sup>
					DO g m <sup>-3</sup>	SS g m <sup>-3</sup>	VSS g m <sup>-3</sup>	Chlor_a mg m <sup>-3</sup>	DRP mg m <sup>-3</sup>	DOP mg m <sup>-3</sup>	PP mg m <sup>-3</sup>	TP mg m <sup>-3</sup>									
EJ1	1	7.91	119	17.45	8.8	<0.5	<0.5	0.72	0.5	0.5	1	2.0	1.1	0.3	44.6	7.85	53.9	0.5	187.0	10.0	
EJ2	10	7.94	118	17.38	8.9	<0.5	<0.5	0.96	0.6	1.4	1.4	3.4	0.2	0.1	44.7	9.4	54.4	0.6	164.5	10.5	
EJ3	20	7.88	119	17.18	8.8	<0.5	<0.5	1.02	0.5	1.5	1.35	3.4	0.3	0.0	38.7	9.45	48.5	0.8	154.5	11.0	
EJ4	30	7.85	119	16.83	8.7	<0.5	<0.5	0.95	0.7	2.3	1.45	4.5	0.4	0.1	40.5	8.4	49.4	0.5	136.5	10.5	
EJ5	40	7.65	121	12.9	8.3	<0.5	<0.5	0.89	1.4	0.6	1.2	3.2	0.4	0.8	32.8	7.95	42.0	0.4	100.0	8.0	
EJ6	50	7.66	120	12.09	8.2	<0.5	<0.5	0.85	2.1	0.9	1.3	4.3	0.4	3.5	35.1	7.8	46.8	0.4	114.0	9.0	
EJ7	60	7.60	123	11.51	8.1	<0.5	<0.5	0.50	3.9	2.1	1	7.0	0.9	12.3	30.8	5.7	49.7	0.4	75.0	6.0	
EJ8	70	7.42	123	11.3	8.0	<0.5	<0.5	0.26	4.5	0.5	0.95	6.0	0.0	20.9	30.1	5.65	56.7	0.5	49.5	4.0	
EJ9	80	7.46	121	11.24	7.9	<0.5	<0.5	0.24	4.6	0.4	1.1	6.1	0.2	24.8	29	7.55	61.6	0.3	50.0	5.0	
EJ10	90	7.38	121	11.19	7.8	<0.5	<0.5	0.19	5.3	<0.5	0.75	6.1	0.3	28.1	23.6	4.45	56.5	0.4	48.0	4.0	
EJ11	100	7.33	121	11.17	7.8	<0.5	<0.5	0.11	5.4	0.6	0.8	6.8	0.1	28.6	30.3	5.05	64.1	0.3	76.0	5.5	
EJ12	110	7.37	122	11.14	7.7	<0.5	<0.5	0.10	6.0	<0.5	0.8	6.8	0.5	31.7	23.8	6.15	62.2	0.6	67.5	7.5	
EJ13	120	7.36	122	11.14	7.7	<0.5	<0.5	0.10	6.3	<0.5	0.6	6.9	0.2	32.2	24.6	3.25	60.3	0.3	46.5	4.0	
EJ14	130	7.32	122	11.13	7.6	<0.5	<0.5	0.09	6.5	<0.5	0.45	7.0	0.1	32.2	26.7	0.8	59.8	0.5	48.0	5.5	
EJ15	140	7.34	122	11.13	7.1	<0.5	<0.5	0.07	7.0	<0.5	0.7	7.7	1.1	34.0	29.9	4.9	69.9	0.4	44.0	4.0	
EJ16	150	7.44	122	11.13	7.0	<0.5	<0.5	0.09	8.7	<0.5	0.9	9.6	0.8	36.3	24.9	4.45	66.5	0.4	75.5	4.0	

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

New Analytical instrument (Flow Injection Analysis) from January 2002, gives greatly improved resolution at low levels.

FIA instrument results are given for Autumn as an indication of likely absolute low levels of DRP, NO<sub>3</sub>-N, and NH<sub>4</sub>-N.

## Lake Taupo biannual nutrient database

2000-2001

Started 27 October 1994

## Collection date 26 October 2000

Code	Depth	pH	EC @25°C	Temp	Secchi depth =		11 m														
					m	μS cm⁻¹	g m⁻³	g m⁻³	VSS	Chlor_a	DRP	DOP	PP	TP	NH4-N	NO3-N	DON	UREA	PN*	TN	DOC
FX1	1	7.87	120	12.5	9.1	0.5	<0.5	0.4	<1	3	2	5.0	1	<1	25	4	9	35	0.5	104.5	4.0
FX2	10	7.85	120	11.5	8.7	0.8	0.5	1.1	1	4	3	8.0	<1	<1	33	2	23	56	0.5	196.0	12.0
FX3	20	7.79	120	11.4	8.7	<0.5	<0.5	1.3	<1	2	4	6.0	<1	<1	41	2	29	70	0.5	237.0	19.0
FX4	30	7.74	120	11.3	8.7	1.1	0.5	1.3	<1	2	3	5.0	<1	<1	36	1	24	60	0.5	183.0	11.0
FX5	40	7.69	119	11.3	9.1	0.9	0.5	1.5	<1	2	3	5.0	1	<1	38	2	18	57	0.5	90.5	7.0
FX6	50	7.63	120	11.3	9.1	0.8	<0.5	1.4	1	2	2	5.0	2	<1	64	2	14	80	0.4	79.5	6.0
FX7	60	7.54	120	11.3	8.7	0.9	<0.5	1.2	1	1	2	4.0	<1	<1	45	2	14	59	0.4	58.0	5.0
FX8	70	7.52	120	11.2	8.7	<0.5	<0.5	1.2	1	1	2	4.0	4	1	38	4	14	57	0.5	61.5	5.0
FX9	80	7.52	120	11.2	8.7	0.9	<0.5	1.1	2	2	2.5	6.5	5	2	44	2	13	64	0.5	44.5	<4
FX10	90	7.59	120	11.2	8.7	0.9	<0.5	1.1	2	2	2	6.0	6	3	37	2	14	60	0.5	58.5	5.5
FX11	100	7.47	120	11.1	8.7	<0.5	<0.5	1.4	1	1	3	5.0	3	4	39	4	16	62	0.4	48.5	6.0
FX12	110	7.41	121	11.1	8.7	0.9	<0.5	1.2	2	2	3	7.0	3	4	38	3	15	60	0.4	29.5	<4
FX13	120	7.40	121	11.0	8.2	0.5	<0.5	0.8	2	2	2	6.0	6	7	38	5	8	59	0.4	104.0	5.5
FX14	130	7.42	121	11.0	8.5	0.6	<0.5	0.2	2	2	2	6.0	6	7	41	4	11	65	0.4	71.0	6.5
FX15	140	7.36	121	11.0	8.6	0.8	<0.5	0.6	4	1	3	8.0	5	11	40	3	11	67	0.4	65.5	5.0
FX16	150	7.32	121	11.0	8.5	0.6	<0.5	1.4	4	2	4	10.0	8	13	47	9	18	86	0.4	110.5	8.0

## Collection date 8 April 2001

Code	Depth	pH	EC @25°C	Temp	Secchi depth =		13.5 m														
					m	μS cm⁻¹	g m⁻³	g m⁻³	VSS	Chlor_a	DRP	DOP	PP	TP	NH4-N	NO3-N	DON	UREA	PN*	TN	DOC
NZ1	1	7.94	120	17.0	8.3	<0.5	<0.5	1.0	<1	2	2	4.0	2	1	40	7	20.0	63.0	0.6	201.0	15.5
NZ2	10	7.97	120	16.9	8.3	<0.5	<0.5	1.4	<1	1	2	3.0	<1	<1	29	1	19.0	48.0	0.6	189.0	13.0
NZ3	20	7.99	120	16.8	8.4	<0.5	<0.5	1.5	<1	1	2	3.0	<1	<1	36	1	19.0	55.0	0.6	208.5	14.5
NZ4	30	7.96	124	15.8	8.0	<0.5	<0.5	1.2	<1	2	2	4.0	1	<1	42	1	16.0	59.0	0.6	156.0	10.5
NZ5	40	7.76	120	13.1	7.8	<0.5	<0.5	1.2	<1	1	1.5	2.5	1	1	22	2	12.0	36.0	0.5	145.0	8.5
NZ6	50	7.69	119	12.4	7.5	<0.5	<0.5	1.0	2	0	1	3.0	1	2	22	2	10.0	35.0	0.5	100.0	5.5
NZ7	60	7.60	120	11.8	7.2	<0.5	<0.5	0.8	1	1	1	3.0	<1	9	16	2	7.0	32.0	0.5	82.0	<2
NZ8	70	7.57	120	11.7	7.1	<0.5	<0.5	0.4	3	0	<1	3.0	<1	19	25	2	5.5	49.5	0.4	80.5	<2
NZ9	80	7.44	121	11.5	6.9	<0.5	<0.5	0.3	3	0	<1	3.0	2	24	15	3	5.0	46.0	0.6	70.0	<2
NZ10	90	7.39	121	11.5	6.9	<0.5	<0.5	0.2	3	1	<1	4.0	2	26	14	4	4.0	46.0	0.5	57.5	<2
NZ11	100	7.38	122	11.4	6.8	<0.5	<0.5	0.2	4	0	<1	4.0	2	29	16	1	4.0	51.0	0.5	47.5	<2
NZ12	110	7.39	122	11.4	6.8	<0.5	<0.5	0.1	4	1	<1	4.0	2	31	18	4	3.5	54.5	0.5	42.5	<2
NZ13	120	7.41	121	11.3	6.7	<0.5	<0.5	0.1	5	0	<1	5.0	1	33	16	4	5.0	55.0	0.4	40.0	<2
NZ14	130	7.42	122	11.3	6.6	<0.5	<0.5	0.1	5	0	<1	5.0	1	33	20	4	5.0	59.0	0.5	42.5	<2
NZ15	140	7.34	123	11.3	6.4	<0.5	<0.5	0.1	6	1	<1	7.0	2	38	12	5	4.5	56.5	0.5	55.0	<2
NZ16	146	7.30	123	11.3	6.3	<0.5	<0.5	0.1	7	2	1	10.0	2	43	22	5	6.5	73.5	0.5	70.5	<2

 $\text{NH}_4^+$ ,  $\text{NO}_3^-$ , DON, Urea all as NDetection limits: DRP 0.5;  $\text{NO}_3^-$  0.5;  $\text{NH}_4^+$  1.0 mg m⁻³

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Lake Taupo biannual nutrient database

Collection date 18 October 1999

1999-2000

Started 27 October 1994

Secchi depth =

14.9 m

Code	Depth m	pH	EC @25°C µS cm⁻¹	Temp °C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a <sup>++</sup> mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄-N mg m⁻³	NO₃-N mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC mg m⁻³	PC mg m⁻³	PN** mg m⁻³
PX1	1	7.71	119	12.8	8.9	0.5	<0.5	0.14	0.5	3	3.7	7.2	<1	<1	41	16	19.4	60.4	441	105.7	8.8
PX2	10	7.74	117	12.7	8.9	<0.5	<0.5	0.39	0.5	4	3.2	7.7	<1	<1	36	4	19.9	55.9	411	160.8	12.9
PX3	20	7.73	122	12.4	8.9	0.6	<0.5	0.80	1	2	5.5	8.5	<1	<1	34	1	37.8	71.8	437	254.7	37.3
PX4	30	7.76	120	11.6	8.9	<0.5	1.9	1.06	1	2	3.9	6.9	<1	<1	36	<1	26.7	62.7	413	198.3	24.2
PX5	40	7.57	117	11.4	8.8	<0.5	<0.5	3.14	2	2	2.4	6.4	5	<1	44	22	14.6	63.6	392	117.2	9.7
PX6	50	7.48	119	11.3	8.6	<0.5	<0.5	2.90	2.5	2	1.7	6.2	8	2	33	5	9.1	52.1	417	87.0	6.6
PX7	60	7.49	118	11.1	8.6	0.5	<0.5	1.45	3	1	1.5	5.5	7	9	36	5	12.6	64.6	449	95.0	11.1
PX8	70	7.41	117	11.1	8.6	<0.5	<0.5	0.65	3.5	1	1.5	6.0	4	15	27	9	5.6	51.6	421	49.9	4.9
PX9	80	7.39	117	11.0	8.5	<0.5	<0.5	0.75	3.5	2	1.4	6.9	4	17	31	7	5.7	57.7	398	42.7	5.7
PX10	90	7.36	118	11.0	8.6	<0.5	<0.5	0.54	4	2	1.3	7.3	3	17	29	2	5.8	54.8	393	51.2	5.7
PX11	100	7.36	118	11.0	8.6	<0.5	<0.5	0.63	4	1	1.6	6.6	4	18	30	2	7.3	59.3	492	56.1	5.8
PX12	110	7.35	118	11.0	8.6	0.5	<0.5	0.65	4	2	1.8	7.8	5	18	46	10	20.1	89.1	547	129.5	21.4
PX13	120	7.33	119	11.0	8.3	0.8	0.7	0.71	4	2	1.7	7.7	6	19	47	20	45.3	117.3	530	222.3	44.3
PX14	130	7.33	119	11.0	7.9	0.6	0.5	0.59	4	2	1.7	7.7	5	19	40	12	15.3	79.3	461	112.9	19.7
PX15	140	7.32	123	11.0	7.5	0.6	<0.5	0.90	4	1	2.3	7.3	4	19	53	12	16.5	92.5	514	84.5	9.7
PX16	150	7.29	119	11.0	7.5	1.6	<0.5	0.67	4.5	2	2.1	8.6	3	19	34	7	9.6	65.6	783	63.9	6.8

Collection date 12 April 2000

Code	Depth m	pH	EC @25°C µS cm⁻¹	Temp °C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄-N mg m⁻³	NO₃-N mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC mg m⁻³	PC mg m⁻³	PN** mg m⁻³
YX1	1	7.86	118	17.4	9.2	0.6		1.3	<1	4	2	6.0	6	2	72	8	16	96.0	542	255.0	31.0
YX2	10	7.88	118	17.3	9.2	1.1		1.3	<1	3	2	5.0	3	1	57	1	21	82.0	472	198.5	16.5
YX3	20	7.88	118	17.2	9.2	1.0		1.4	<1	3	2	5.0	1	<1	59	3	15.5	75.5	599	166.5	12.0
YX4	30	7.79	118	16.7	9.0	1.1		1.3	<1	3	2	5.0	1	<1	59	2	17	77.0	608	154.0	17.5
YX5	40	7.29	119	12.6	8.3	0.6		1.1	2	2	1	5.0	2	2	57	6	9.5	70.5	396	72.0	6.0
YX6	50	7.17	120	11.7	8.0	1.0		0.8	3	2	1	6.0	2	7	42	7	8.5	59.5	403	94.5	7.5
YX7	60	7.18	119	11.4	8.0	0.5		1.0	4	1	<1	5.0	1	16	44	1	4	65.0	402	48.5	<4
YX8	70	7.1	120	11.3	8.0	0.6		<0.1	6	1	<1	7.0	6	29	35	1	6.5	76.5	418	41.0	4.0
YX9	80	7.14	120	11.2	7.9	1.0		<0.1	6	1	<1	7.0	2	32	46	1	12	92.0	451	105.5	8.0
YX10	90	7.11	120	11.2	7.9	0.7		<0.1	7	<1	<1	7.0	1	35	34	2	11	81.0	428	67.5	5.0
YX11	100	7.12	125	11.2	7.7	0.7		<0.1	7	2	<1	9.0	2	37	41	1	8.5	88.5	417	68.5	<4
YX12	110	7.12	120	11.2	7.7	0.9		<0.1	7	2	<1	9.0	2	37	50	3	11	100.0	439	65.0	5.5
YX13	120	7.06	120	11.1	7.7	0.6		<0.1	8	1	<1	9.0	3	39	47	1	6.5	95.5	431	40.5	0.0
YX14	130	7.12	120	11.1	7.5	1.2		<0.1	8	1	<1	9.0	2	40	47	3	9	98.0	453	57.0	5.0
YX15	140	7.08	120	11.1	7.5	1.2		<0.1	9	<1	<1	9.0	2	42	45	2	8	97.0	415	50.5	<4
YX16	146	7.04	120	11.1	7.2	1.7		0.1	10	3	1	14.0	4	43	42	2	10	99.0	429	92.0	4.0

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

++ = from calibrated chlorophyll fluorescence profiler (filters damaged)

**Lake Taupo biannual nutrient database**

Collection date 1 November 1998

Secchi depth =

13.5 m

**1998-1999**

Started 27 October 1994

Code	Depth m	pH	EC @25°C µS cm⁻¹	Temp °C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH4-N mg m⁻³	NO3-N mg m⁻³	DON mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC g m⁻³	PC mg m⁻³	PN** mg m⁻³
DM1	1	7.91	118	13.6	10.4	0.8	<0.5	0.8	0.7	1.5	2.0	4.2	3.4	<0.5	35	10.8	49.2	133.5	12.0	
DM2	10	7.87	117	13.2	10.7	0.8	<0.5	1.0	0.6	1.3	2.6	4.5	2.4	<0.5	36	15.2	53.6	180.5	15.0	
DM3	20	7.82	118	12.7	10.7	0.5	<0.5	1.4	0.6	1.4	2.9	4.9	1.9	1.1	37	18.0	58.0	215.0	23.3	
DM4	30	7.80	118	12.4	10.6	<0.5	<0.5	1.1	0.5	1.3	2.3	4.1	1.9	<0.5	34	14.1	50.0	128.0	13.5	
DM5	40	7.75	118	12.4	10.4	<0.5	<0.5	0.6	0.6	1.2	1.7	3.5	2.5	<0.5	34	9.2	45.7	118.0	10.4	
DM6	50	7.70	118	12.2	10.2	<0.5	<0.5	0.6	0.6	1.2	1.7	3.5	2.6	0.6	31	8.1	42.3	114.5	7.9	
DM7	60	7.46	119	11.7	10.0	<0.5	<0.5	0.4	2.1	1.0	1.4	4.5	1.6	9.5	32	6.0	49.1	73.0	6.0	
DM8	70	7.30	120	11.2	9.6	<0.5	<0.5	0.3	3.3	0.9	1.0	5.2	2.7	16.0	32	3.8	54.5	56.0	2.7	
DM9	80	7.15	121	11.1	9.1	<0.5	<0.5	0.2	3.9	0.8	0.9	5.6	1.5	20.5	29	5.0	56.0	64.5	2.7	
DM10	90	7.07	122	11.1	8.8	<0.5	<0.5	0.2	4.9	0.5	0.9	6.3	2.6	24.8	32	5.0	64.4	45.0	2.9	
DM11	100	7.16	121	11.0	8.5	<0.5	<0.5	0.2	5.0	0.5	0.9	6.4	3.3	26.2	34	3.6	67.1	42.5	2.0	
DM12	110	7.16	122	11.0	8.3	<0.5	<0.5	0.1	6.2	0.4	0.8	7.4	2.0	29.2	30	4.0	65.2	54.0	2.9	
DM13	120	7.11	122	11.0	8.0	<0.5	<0.5	0.1	6.4	0.3	0.8	7.5	2.2	30.6	29	3.3	65.1	63.0	1.8	
DM14	130	7.08	122	11.0	7.8	<0.5	<0.5	0.1	7.0	0.2	0.8	8.0	2.2	31.4	28	3.1	64.7	48.5	2.0	
DM15	140	7.07	123	10.9	7.6	<0.5	<0.5	0.1	7.9	0.0	0.9	8.8	2.0	33.8	32	5.0	72.8	54.0	2.0	
DM16	150	7.10	123	10.9	7.6	2.5	<0.5	0.2	8.2	0.4	3.7	12.3	2.7	35.4	34	12.8	84.9	140.5	10.5	

Collection date 14 April 1999

Secchi depth =

13 m

Code	Depth m	pH	EC @25°C µS cm⁻¹	Temp °C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH4-N mg m⁻³	NO3-N mg m⁻³	DON mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC g m⁻³	PC mg m⁻³	PN** mg m⁻³
II1	1		119	18.3	8.9	<0.5	<0.5	1.2	0.6		1.8	2.4	3	<0.5	43	19.0	65.0	0.6	221.4	19.5
II2	10		118	18.3	8.8	<0.5	<0.5	1.2	0.5		1.8	2.3	1	<0.5	40	19.3	60.3	0.5	216.3	17.6
II3	20		118	18.3	8.8	<0.5	<0.5	1.2	0.5		1.7	2.2	1	2	41	19.0	63.0	0.5	132.3	8.9
II4	30		118	18.1	8.7	<0.5	<0.5	1.2	1.1		1.4	2.5	1	3	34	14.0	52.0	0.6	136.8	9.7
II5	40		118	12.9	8.4	<0.5	<0.5	0.7	2.3		0.9	3.2	1	6	31	8.9	46.9	0.7	91.2	6.5
II6	50		119	11.9	8.1	<0.5	<0.5	0.4	3.1		0.7	3.8	1	14	28	7.9	50.9	0.5	63.1	4.8
II7	60		121	11.6	8.0	<0.5	<0.5	0.3	4.3		0.7	5.0	1	19	33	7.3	60.3	0.6	42.3	5.0
II8	70		121	11.4	8.0	<0.5	<0.5	0.2	5.5		0.8	6.3	1	23	27	8.6	59.6	0.4	48.4	7.0
II9	80		122	11.3	7.8	<0.5	<0.5	0.1	5.9		0.8	6.7	2	28	29	8.3	67.3	0.5	51.5	6.1
II10	90		123	11.2	7.6	<0.5	<0.5	0.1	6.1		0.6	6.7	1	30	31	6.4	68.4	0.5	62.1	4.2
II11	100		122	11.2	7.4	<0.5	<0.5	0.1	6.1		0.5	6.6	2	27	28	6.1	63.1	0.6	33.1	1.5
II12	110		120	11.2	7.2	<0.5	<0.5	0.1	6.6		0.5	7.1	2	28	27	6.1	63.1	0.5	35.7	2.9
II13	120		122	11.2	7.1	<0.5	<0.5	0.1	6.4		0.5	6.9	2	24	26	5.2	57.2	0.6	34.1	2.2
II14	130		122	11.1	6.8	<0.5	<0.5	<0.1	7.5		0.5	8.0	2	28	31	6.3	67.3	0.6	46.9	5.5
II15	140		122	11.1	6.3	<0.5	<0.5	0.1	8.8		0.9	9.7	2	33	31	6.4	72.4	0.5	63.4	3.0
II16	150		116	11.1	5.9	<0.5	<0.5	<0.1	8.6		0.9	9.5	4	28	60	7.7	99.7	0.9	51.1	1.1

NH<sub>4</sub>, NO<sub>3</sub>, DON, Urea all as N

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m⁻³

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Lake Taupo biannual nutrient database

Collection Date 30 October 1997

ID	Depth m	Secchi depth = 12.5 m												1997-1998				Started 27 October 1994				
		pH	EC @25°C μS cm⁻¹	Temp C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄ mg m⁻³	NO₃ mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC g m⁻³	PC mg m⁻³	PN** mg m⁻³	SO₄ g m⁻³
TT1	1	7.70	116.9	12.2	10.7	0.61	0.30	1.28	1.0	1.3	1.5	3.8	2.1	2.9	36	1.1	14.3	55.3	0.71	168.3	17.2	
TT2	10	7.71	117.8	12.0	10.2	0.54	0.29	1.49	0.7	1.9	1.9	4.5	1.3	7.3	32	1.1	18.7	59.7	0.82	160.7	18.8	
TT3	20	7.65	118.1	11.5	10.2	0.59	0.32	1.58	0.8	1.6	1.7	4.0	1.6	0.7	36	1.1	14.0	52.0	0.60	133.0	16.5	
TT4	30	7.64	118.2	11.5	10.0	0.52	0.25	1.19	0.4	1.5	1.9	3.8	1.5	1.3	31	0.9	15.8	49.8	0.60	146.9	16.0	
TT5	40	7.62	117.1	11.4	10.0	0.55	0.28	1.31	0.6	1.5	1.6	3.7	1.7	0.3	33	1.0	14.1	49.1	0.62	126.3	13.4	
TT6	50	7.63	116.9	11.1	9.9	0.37	0.20	1.10	0.4	1.5	1.4	3.2	2.2	0.3	32	0.8	12.3	46.3	0.51	112.1	12.1	
TT7	60	7.54	117.7	11.1	9.8	0.21	0.10	0.93	1.4	0.7	1.5	3.5	3.3	0.7	34	1.6	14.3	52.3	0.74	80.6	9.0	
TT8	70	7.45	117.8	10.8	9.8	0.41	0.12	0.79	1.1	1.1	3.2	8.2	1.3	31	1.5	7.9	47.9	0.65	58.4	4.8		
TT9	80	7.36	118.3	10.7	9.9	0.31	0.04	0.54	1.5	1.1	0.8	3.3	6.1	2.3	31	0.6	6.0	45.0	0.57	57.6	9.0	
TT10	90	7.48	117.8	10.6	9.3	0.44	0.27	0.74	1.1	1.2	1.2	3.5	7.9	4.8	33	0.7	12.4	58.4	0.52	69.3	12.2	
TT11	100	7.29	118.5	10.5	9.2	0.25	0.11	0.40	2.0	1.2	0.8	4.1	8.4	5.0	30	1.1	5.7	48.7	0.63	64.5	8.3	
TT12	110	6.97	119.3	10.4	9.0	0.21	0.06	0.29	2.3	1.0	1.1	4.3	10.8	5.6	29	2.5	6.7	51.7	0.59	53.0	5.5	
TT13	120	7.00	119.1	10.5	9.0	0.29	0.26	0.27	2.0	1.2	1.0	4.1	9.9	6.7	31	6.1	5.8	53.8	0.58	37.5	5.3	
TT14	130	6.80	119.8	10.5	8.8	0.28	0.26	0.28	2.2	1.2	1.3	4.7	10.6	7.1	32	1.5	8.2	58.2	0.56	49.0	6.4	
TT15	140	7.23	117.9	10.4	8.8	0.25	0.20	0.26	2.7	1.4	1.1	5.2	10.8	9.5	37	2.0	10.9	67.9	0.63	66.0	8.5	
TT16	150	7.29	118.9	10.4	8.8	0.50	0.27	0.32	2.5	1.1	1.0	4.5	11.6	9.6	37	3.0	7.6	65.6	0.54	69.0	9.2	

Collection Date:- 7 April 1998

ID	Depth m	Secchi depth = 13.5 m												1997-1998				Started 27 October 1994				
		pH	EC @25°C μS cm⁻¹	Temp C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄ mg m⁻³	NO₃ mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC g m⁻³	PC mg m⁻³	PN** mg m⁻³	SO₄ g m⁻³
YE1	1	8.00	118	17.7	9.1	0.40	0.10	0.67	0.8	1.4	1.3	3.5	2.9	4.6	53	3.7	9.9	70.4	0.83	156.5	14.4	
YE2	10	7.99	119	17.7	9.1	0.49	0.12	1.04	0.9	1.4	1.8	4.1	1.9	2.5	52	4.6	13.7	70.1	0.78	179.5	16.0	
YE3	20	8.00	119	17.7	9.1	0.32	0.32	1.07	0.7	1.5	1.7	3.9	2.4	1.5	48	3.7	12.6	64.5	0.71	162.5	15.2	
YE4	30	7.99	120	17.5	9.1	0.30	0.20	1.06	0.7	1.7	1.6	4.0	2.0	1.2	48	3.7	12.7	63.9	0.78	138.5	14.5	
YE5	40	7.60	120	13.7	9.3	0.13	0.13	1.18	1.2	1.0	1.2	3.4	2.0	3.1	39	4.2	8.2	52.3	0.69	112.5	8.2	
YE6	50	7.50	120	11.5	9.3	0.34	0.00	0.75	2.4	0.9	0.9	4.2	2.5	4.5	52	3.2	6.5	65.5	0.65	88.0	6.7	
YE7	60	7.38	120	11.0	9.3	0.11	0.00	0.49	3.0	0.7	0.8	4.5	1.5	11.7	32	3.2	5.3	50.5	0.72	74.5	5.8	
YE8	70	7.32	121	10.8	9.2	0.20	0.00	0.33	3.1	0.9	0.6	4.6	1.0	17.7	38	3.7	4.0	60.7	0.78	57.5	4.1	
YE9	80	7.23	120	10.6	9.1	0.24	0.24	0.24	3.5	0.6	0.8	4.9	1.4	23.1	43	6.9	5.7	73.2	0.69	49.5	4.5	
YE10	90	7.27	121	10.6	9.1	0.31	0.21	0.17	4.4	0.6	0.7	5.7	1.3	24.1	41	6.5	5.6	72.0	0.68	47.5	4.9	
YE11	100	7.29	121	10.6	9.0	0.32	0.11	0.16	4.5	0.7	0.8	6.0	1.0	24.5	39	3.7	6.8	71.3	0.57	58.0	7.4	
YE12	110	7.29	121	10.5	8.9	0.35	0.35	0.12	4.8	0.7	0.5	6.0	1.3	25.1	40	5.5	6.5	72.9	0.63	52.5	2.6	
YE13	120	7.35	121	10.5	8.9	0.24	0.08	0.37	3.4	0.6	1.2	5.2	1.0	18.9	35	4.6	4.1	59.0	0.75	63.5	3.8	
YE14	130	7.24	122	10.5	8.8	0.32	0.16	0.11	5.7	0.6	0.7	7.0	1.0	27.0	39	6.0	3.5	70.5	0.63	52.0	3.9	
YE15	140	7.21	122	10.5	8.6	0.45	0.05	0.15	6.4	0.6	1.0	8.0	4.2	29.1	65	10.6	6.7	105.0	0.74	60.5	5.9	
YE16	150	7.49	121	10.5	8.4	0.80	0.15	0.62	3.3	1.1	1.6	6.0	2.5	13.0	62	9.7	14.2	91.7	0.70	135.5	13.6	

NH₄, NO₃, DON, Urea all as N

Detection limits: DRP 0.5; NO₃-N 0.5; NH₄-N 1.0 mg m⁻³

\* = PN by wet digestion method, \*\* = PN by combustion furnace method.

Lake Taupo biannual nutrient database

Collection Date 24 October 1996

ID	Depth m	Secchi depth = 12.6 m																		1996-1997			Started 27 October 1994				
		pH	EC @ 25°C μS cm⁻¹	Temp C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄ mg m⁻³	NO₃ mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC g m⁻³	PC mg m⁻³	PN** mg m⁻³	SO₄ g m⁻³					
IG1	1			12.4	10.3	0.45	0.34	0.27	0.6	2.1	1.7	4.4	3.0	0.5	59.3	1.4	13.9	76.7	0.86	171	14.5	7.82					
IG2	10			12.3	10.3	0.72	0.42	0.47	0.7	2.3	2.2	5.2	2.4	0.4	64.5	1.0	14.5	81.8	0.88	201	16.8	7.90					
IG3	20			12.3	10.2	0.67	0.40	0.45	0.8	2.8	2.9	6.5	2.6	0.4	75.8	0.6	18.7	97.5	0.91	232	19.8	7.87					
IG4	30			12.3	9.9	0.85	0.49	0.64	0.6	2.3	3.1	6.0	3.3	0.5	73.6	0.4	20.6	98.0	0.95	198	15.7	7.86					
IG5	40			11.9	9.9	0.71	0.46	0.56	0.5	1.8	2.5	4.8	2.6	1.2	64.8	0.3	14.6	83.2	0.80	183	12.8	7.84					
IG6	50			11.6	9.8	0.62	0.34	0.45	1.1	3.1	2.1	6.3	2.9	0.6	71.2	0.9	13.2	87.9	0.92	157	14.9	7.95					
IG7	60			11.1	9.7	0.77	0.32	0.70	0.9	1.8	2.3	5.0	4.4	13.2	175.4	3.5	14.3	207.3	1.29	151	14.1	10.67					
IG8	70			10.6	9.4	0.65	0.28	0.54	0.8	1.5	1.9	4.2	2.9	0.8	59.3	1.5	9.2	72.2	0.78	116	10.2	7.85					
IG9	80			10.5	9.3	0.51	0.27	0.55	0.9	2.5	1.8	5.2	3.0	3.0	76.1	1.3	9.8	91.9	0.95	103	10.8	7.80					
IG10	90			10.4	9.3	0.49	0.23	0.50	0.6	1.8	1.8	4.2	2.1	1.0	52.3	1.4	10.9	66.3	0.73	95	11.0	7.69					
IG11	100			10.4	9.2	0.50	0.21	0.51	0.5	1.5	1.8	3.8	1.8	3.6	53.9	4.5	9.6	68.9	1.04	106	12.8	7.85					
IG12	110			10.4	9.2	0.43	0.23	0.49	0.4	1.3	2.0	3.7	2.5	5.2	54.0	6.0	9.3	71.0	0.80	94	11.5	7.85					
IG13	120			10.4	9.0	0.47	0.21	0.47	0.8	1.4	1.8	4.0	3.7	9.6	61.9	6.9	8.0	83.2	0.78	78	9.7	7.97					
IG14	130			10.3	8.9	0.44	0.18	0.38	1.1	1.5	2.3	4.9	4.5	9.7	52.4	4.6	12.0	78.6	1.00	83	8.7	7.99					
IG15	140			10.3	8.9	0.49	0.22	0.51	1.5	1.6	2.5	5.6	4.3	12.9	57.8	5.0	10.4	85.4	0.99	80	8.9	8.14					
IG16	150			10.3	8.9	1.13	0.26	0.57	1.2	2.3	3.5	7.0	5.1	13.6	65.9	4.8	14.5	99.1	0.91	121	13.4	8.15					

Collection Date:- 2 April 1997

ID	Depth m	Secchi depth = 16.0 m																		1996-1997			Started 27 October 1994				
		pH	EC @ 25°C μS cm⁻¹	Temp C	DO g m⁻³	SS g m⁻³	VSS g m⁻³	Chlor_a mg m⁻³	DRP mg m⁻³	DOP mg m⁻³	PP mg m⁻³	TP mg m⁻³	NH₄ mg m⁻³	NO₃ mg m⁻³	DON mg m⁻³	UREA mg m⁻³	PN* mg m⁻³	TN mg m⁻³	DOC g m⁻³	PC mg m⁻³	PN** mg m⁻³	SO₄ g m⁻³					
NA1	1	8.02	118.4	17.3	9.4	0.30	0.30	0.63	0.9	2.2	1.5	4.6	4.0	0.6	67.4	4.9	18.1	90.1	0.82	186.5	17.3	7.80					
NA2	10	8.01	118.3	17.3	9.2	0.20	0.10	0.69	0.9	1.3	1.6	3.8	1.7	0.3	51.0	3.3	14.4	67.4	0.77	190.0	17.1	7.86					
NA3	20	8.03	118.2	17.2	8.9	0.40	0.30	0.63	0.6	1.2	1.6	3.4	1.8	0.3	51.8	2.2	17.6	71.5	0.75	192.0	19.1	7.85					
NA4	30	7.98	118.4	17.2	8.8	0.40	0.40	0.52	0.7	1.0	1.5	3.2	2.5	0.6	47.5	2.7	15.2	65.8	0.56	207.5	20.3	7.90					
NA5	40	7.52	118.5	14.2	8.8	0.20	0.20	0.72	0.8	1.8	1.4	4.0	2.7	0.3	53.2	4.1	13.3	69.5	0.69	158.0	15.2	7.91					
NA6	50	7.32	119.3	11.3	8.6	0.00	0.00	0.39	1.5	1.4	1.0	3.9	11.2	3.1	54.7	4.5	9.7	78.7	0.62	116.5	10.6	7.88					
NA7	60	7.18	120.2	10.9	8.6	0.20	0.20	0.16	1.7	1.3	0.8	3.8	3.7	10.1	48.9	2.1	10.5	73.2	0.86	100.0	13.8	7.88					
NA8	70	7.13	119.6	10.6	8.5	0.10	0.10	0.12	1.9	1.7	0.8	4.4	4.3	11.8	58.3	2.2	8.0	82.4	0.83	75.0	8.7	7.87					
NA9	80	7.12	120.1	10.5	8.5	0.10	0.10	0.05	3.3	1.4	0.7	5.4	6.9	26.9	82.4	16.9	6.7	122.9	0.98	77.5	9.9	7.90					
NA10	90	7.12	120.4	10.5	8.5	0.00	0.00	0.25	3.6	2.2	0.7	6.5	28.9	22.9	108.3	7.4	8.1	168.2	0.63	110.5	8.8	8.00					
NA11	100	7.10	120.4	10.5	8.4	0.20	0.20	0.04	4.4	1.2	0.8	6.4	10.7	22.5	72.0	5.2	7.1	112.3	0.85	71.0	8.3	7.97					
NA12	110	7.07	120.6	10.4	8.3	0.20	0.20	0.02	3.7	2.0	0.8	6.5	2.9	21.9	52.5	3.8	6.4	83.7	1.01	77.0	9.6	7.93					
NA13	120	7.07	120.5	10.4	8.2	0.30	0.20	0.02	3.3	2.4	0.8	6.5	6.4	22.8	56.4	4.2	13.0	98.6	0.70	113.5	15.4	7.88					
NA14	130	7.08	120.4	10.4	8.0	0.20	0.20	0.01	4.3	1.6	0.8	6.7	6.2	27.9	56.7	6.2	8.2	99.0	0.81	118.5	11.0	7.97					
NA15	140	7.10	121.1	10.4	7.6	0.40	0.40	0.04	4.5	1.7	1.2	7.4	3.9	28.9	58.5	7.9	24.7	116.0	0.80	212.5	28.8	7.91					
NA16	150	7.10	122.1	10.4	7.5	1.20	0.40	0.07	5.0	1.0	2.7	8.7	8.6	29.0	61.5	11.8	20.2	119.3	2.07	234.5	22.1	7.97					

NH₄, NO₃, DON, Urea all as N

Detection limits: DRP 0.5; NO₃-N 0.5; NH₄-N 1.0 mg m⁻³

\* = analysed by wet digestion method, \*\* = analysed by CHN combustion furnace method.

Lake Taupo biannual nutrient database

Collection Date:- 30 October 1995

ID	Depth	pH	EC @25°C μS cm⁻¹	Temp C	DO g m⁻³	BOD <sub>5</sub>	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub>	NO <sub>3</sub>	DON	UREA	PN*	TN	DOC	PC	PN**
						g m⁻³	g m⁻³	g m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	g m⁻³	mg m⁻³	mg m⁻³	
ZH1	1	7.40	115.1	13.7	10.3	0.80	0.60	0.38	0.45	<0.2	2.4	1.27	3.67	<0.2	<0.1	55.7	3	6.89	62.69	0.75	123	10.3
ZH2	10	7.59	116.1	11.9	10.5	0.40	0.95	0.53	0.96	<0.2	0.8	1.94	2.74	<0.2	<0.1	48.0	3	14.69	62.69	0.61	217	18.0
ZH3	20	7.39	117.8	11.4	10.6	-0.05	1.09	0.59	1.18	0.3	1.5	2.41	4.21	0.2	<0.1	51.5	4	19.47	71.17	0.58	285	22.3
ZH4	30	7.58	116.6	11.2	10.7	-0.15	1.15	0.58	1.26	0.2	0.7	2.21	3.11	<0.2	<0.1	44.6	2	17.83	62.43	0.45	242	19.4
ZH5	40	7.48	116.2	10.9	10.7	0.00	0.91	0.57	1.22	<0.2	1.1	1.88	2.98	<0.2	<0.1	41.9	2	13.00	54.90	0.44	183	15.8
ZH6	50	7.36	117.0	10.8	10.3	0.25	0.69	0.42	1.10	<0.2	0.8	1.71	2.51	<0.2	<0.1	41.7	3	8.55	50.25	0.43	116	10.3
ZH7	60	7.28	117.2	10.7	10.3	0.70	0.49	0.28	1.03	<0.2	0.8	1.55	2.35	<0.2	0.1	41.1	3	7.75	48.95	0.40	110	10.3
ZH8	70	7.25	117.8	10.5	10.2	0.50	0.64	0.43	1.03	<0.2	0.6	1.50	2.10	<0.2	0.2	40.4	2	7.27	47.87	0.38	108	9.9
ZH9	80	7.25	117.5	10.5	10.2	0.40	0.72	0.43	1.19	<0.2	0.8	1.58	2.38	<0.2	0.7	41.4	2	7.19	49.39	0.48	115	12.1
ZH10	90	7.30	118.0	10.5	10.1	0.00	0.72	0.40	1.27	0.3	0.6	1.59	2.49	<0.2	1.5	38.5	3	7.30	47.30	0.47	101	12.1
ZH11	100	7.25	117.5	10.5	10.0	0.15	0.71	0.39	1.30	<0.2	0.2	1.77	1.97	<0.2	2.4	36.4	3	10.67	49.47	0.49	107	12.5
ZH12	110	7.25	117.5	10.5	9.9	0.35	0.71	0.38	1.32	<0.2	0.9	1.69	2.59	0.5	4.6	44.3	3	10.26	59.66	0.52	93	13.1
ZH13	120	7.23	117.3	10.5	9.9	0.30	0.70	0.41	1.35	<0.2	1.3	1.55	2.85	0.5	5.6	51.3	9	7.99	65.39	0.51	99	12.9
ZH14	130	7.25	117.3	10.5	9.8	0.20	0.69	0.47	1.32	<0.2	0.4	1.89	2.29	1.3	6.6	49.7	7	13.42	71.02	0.55	112	18.5
ZH15	140	7.25	117.3	10.5	9.6	0.40	0.97	0.47	1.60	<0.2	0.2	2.54	2.74	5.7	11.7	60.6	9	11.77	89.77	0.57	113	15.8
ZH16	150	7.25	117.5	10.5	9.2	0.40	1.77	0.91	1.77	0.7	0.4	3.05	4.15	8.3	13.2	90.9	15	48.30	160.70	0.69	357	55.1

Collection Date:- 28 March 1996

ID	Depth	pH	EC @25°C μS cm⁻¹	Temp C	DO g m⁻³	BOD <sub>5</sub>	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub>	NO <sub>3</sub>	DON	UREA	PN*	TN	DOC	PC	PN**
						g m⁻³	g m⁻³	g m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	mg m⁻³	g m⁻³	mg m⁻³	mg m⁻³	
DR1	1	8.02	117.4	16.8	8.7	0.15	0.31	0.18	0.48	1.3	1.8	0.93	4.03	<0.2	4.7	91.0	1.4	12.69	108.39	0.35	118	9.7
DR2	10	8.02	117.4	16.7	8.7	0.20	0.44	0.25	0.81	1.3	1.5	1.43	4.23	<0.2	7.4	111.0	6.2	12.60	131.00	0.42	149	12.3
DR3	20	7.95	117.6	16.6	8.8	0.25	0.34	0.23	0.76	1.0	1.8	1.30	4.10	0.6	<0.1	60.0	2.0	11.70	72.30	0.35	126	11.7
DR4	30	7.59	119.0	13.7	9.0	0.25	0.39	0.15	1.13	1.5	1.7	1.51	4.71	0.5	0.2	64.0	2.0	11.72	76.42	0.26	101	12.8
DR5	40	7.43	118.9	12.4	8.8	0.25	0.35	0.16	0.97	1.3	1.4	1.41	4.11	1.1	<0.1	51.0	2.2	11.77	63.87	0.22	68	8.6
DR6	50	7.34	119.5	11.6	8.6	0.10	0.32	0.14	0.71	1.8	1.5	1.17	4.47	0.8	5.0	68.0	3.5	8.76	82.56	0.18	60	6.4
DR7	60	7.32	119.4	11.4	8.5	0.25	0.27	0.10	0.48	2.2	1.0	1.06	4.26	1.8	5.9	59.0	1.8	8.32	75.02	0.17	46	5.7
FR8	70	7.29	120.4	11.6	8.5	0.25	0.23	0.13	0.28	2.3	1.5	0.80	4.60	<0.2	14.1	87.0	3.4	6.65	107.75	0.26	48	6.4
DR9	80	7.20	120.8	11.2	8.3	0.20	0.30	0.14	0.17	2.9	1.3	0.83	5.03	1.5	10.0	68.0	1.4	5.15	84.65	0.23	45	5.5
DR10	90	7.20	121.2	11.3	8.2	0.20	0.39	0.14	0.12	2.7	2.1	0.89	5.69	2.5	11.5	55.0	1.4	5.34	74.34	0.17	51	6.7
DR11	100	7.24	121.3	10.9	8.2	0.05	0.45	0.19	0.10	2.8	1.8	0.93	5.53	2.2	11.4	72.0	8.1	9.25	94.85	0.22	46	6.9
DR12	110	7.32	122.1	10.8	8.1	0.25	0.25	0.15	0.08	2.7	1.8	0.88	5.38	1.0	11.5	68.0	1.6	5.86	86.36	0.23	52	8.1
DR13	120	7.39	120.2	10.7	8.3	0.15	0.24	0.11	0.09	2.8	1.2	0.74	4.74	2.2	11.2	75.0	3.8	3.91	92.31	0.26	34	5.3
DR14	130	7.47	120.3	10.7	8.3	0.25	0.31	0.15	0.08	3.1	1.5	0.70	5.30	1.5	12.4	70.0	2.5	3.43	87.33	0.27	45	3.8
DR15	140	7.43	121.1	10.7	8.0	0.15	0.33	0.15	0.08	4.6	1.4	0.96	6.96	2.9	16.0	88.0	5.7	4.28	111.18	0.26	51	7.4
DR16	150	7.52	120.1	10.6	7.8	0.75	0.75	0.63	0.07	4.7	1.5	2.13	8.33	3.2	15.9	140.0	32.4	69.74	228.84	0.52	349	70.7

NH<sub>4</sub>, NO<sub>3</sub>, DON, UREA all as N

Detection limits: DRP 0.5; NO<sub>3</sub>-N 0.5; NH<sub>4</sub>-N 1.0 mg m<sup>-3</sup>

\* = analysed by wet digest method, \*\* = analysed by CHN combustion furnace method.

Lake Taupo biannual nutrient database

Collection date:- 27 October 1994

1994-1995

		Secchi Depth = 11.7 m																			
ID	Depth	Temp	DO	BOD <sub>5</sub>	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub>	NO <sub>3</sub>	DON	UREA	PN*	TN	DOC	PC	PN**	LEAD
	m	C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>										
MM1	1	11.7	10.5	0.30	0.93	0.55	1.16	1.6	0.7	2.5	4.8	1.1	0.2	61	0.1	16.6	78.9	0.67	193.3	20.3	0.22
MM2	10	11.5	10.6	0.35	0.86	0.49	0.97	1.5	0.4	2.5	4.4	2.2	0.1	50	<0.1	15.2	67.5	0.42	203.8	19.0	
MM3	20	11.5	10.8	0.70	0.87	0.58	0.92	1.2	1.1	2.8	5.1	5.1	<0.1	49	0.2	17.4	71.5	0.40	254.5	19.6	
MM4	30	11.3	10.7	0.30	0.86	0.54	0.99	1.2	0.0	2.3	3.5	<0.4	2.5	88	8.3	13.7	104.2	0.64	199.1	18.9	
MM5	40	10.9	10.5	0.05	0.83	0.49	0.97	1.0	1.4	2.1	4.5	0.4	<0.1	49	1.6	12.4	61.8	0.55	193.7	17.5	
MM6	50	10.9	10.4	0.15	0.85	0.48	0.83	1.0	0.9	2.2	4.1	<0.4	1.1	70	6.4	14.9	86.0	0.37	182.0	16.6	
MM7	60	10.8	10.4	0.00	1.04	0.53	0.88	1.1	0.9	2.1	4.1	<0.4	<0.1	47	1.0	13.6	60.6	0.46	184.6	20.0	
MM8	70	10.7	10.4	0.10	1.23	0.54	1.18	1.1	1.2	2.3	4.6	2.6	0.4	57	1.6	14.7	74.7	0.96	198.7	23.0	
MM9	80	10.6	10.4	0.35	1.07	0.45	1.37	1.0	1.4	2.4	4.8	1.2	0.1	47	1.0	15.3	63.6	0.51	154.4	22.6	
MM10	90	10.5	10.4	0.10	1.24	0.48	1.79	1.0	1.1	1.9	4.0	1.5	<0.1	43	1.3	15.6	60.1	0.48	152.0	22.0	
MM11	100	10.5	10.2	0.10	1.22	0.49	1.76	1.2	1.0	2.5	4.7	1.5	0.4	58	1.8	17.9	77.8	1.21	183.7	33.9	
MM12	110	10.5	10.3	0.45	1.15	0.48	1.78	1.4	0.4	3.0	4.8	1.4	0.4	52	1.9	16.8	70.6	0.65	105.8	28.4	
MM13	120	10.4	10.2	0.00	0.96	0.41	1.94	1.1	0.7	2.8	4.6	<0.4	0.6	61	1.6	16.7	78.4	1.00	106.7	29.8	
MM14	130	10.4	9.8	0.00	1.07	0.41	2.37	1.0	1.2	2.6	4.8	6.8	0.9	73	5.5	20.8	101.5	0.53	157.6	23.7	
MM15	140	10.4	9.8	0.00	1.63	0.57	2.32	1.1	1.1	2.3	4.5	3.7	0.9	61	1.9	20.6	86.2	0.44	176.0	19.2	0.36
MM16	150	10.3	9.9	0.25	1.73	0.75	2.49	1.8	0.8	2.3	4.9	4.2	1.9	60	12.1	39.6	105.7	0.57	303.6	44.0	1.09
MM17	Tube				0.99	0.53	0.84	1.3	1.0	2.0	4.3	0.5	0.2	39	3.1	15.9	55.6	0.53			
Collection date:- 19 April 1995																					
		Secchi Depth = 16.1 m																			
ID	Depth	Temp	DO	BOD <sub>5</sub>	SS	VSS	Chlor_a	DRP	DOP	PP	TP	NH <sub>4</sub>	NO <sub>3</sub>	DON	UREA	PN*	TN	DOC	PC	PN**	LEAD
	m	C	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	g m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>	mg m <sup>-3</sup>										
SZ1	1	18.4	9.2	0.10	0.22	0.22	0.95	3.3	1.7	1.3	6.3	3.6	0.9	83	7.7	14.6	102.1	0.70	160.5	16.8	<0.5
SZ2	10	18.2	9.3	0.15	0.28	0.28	0.89	2.2	1.2	1.5	4.9	2.0	0.8	59	6.5	13.5	75.3	0.68	189.0	18.1	<0.5
SZ3	20	18.2	9.2	0.25	0.24	0.24	0.80	1.3	0.0	1.4	2.7	1.0	1.0	56	4.5	10.7	68.7	0.60	153.5	14.5	
SZ4	30	16.5	9.3	0.50	0.26	0.26	1.35	1.3	1.0	1.6	3.9	1.2	0.7	55	8.4	13.4	70.3	0.60	151.5	14.7	<0.5
SZ5	40	12.5	9.7	0.45	0.16	0.16	0.98	1.1	0.2	1.2	2.5	2.0	1.0	47	4.4	8.0	58.0	0.60	111.0	8.6	
SZ6	50	11.6	9.5	0.60	0.10	0.10	0.86	2.0	0.5	1.2	3.7	1.7	1.3	47	5.3	8.8	58.8	0.60	119.0	10.5	
SZ7	60	11.1	9.5	0.30	0.07	0.07	0.73	1.0	1.1	1.2	3.3	0.5	5.4	40	5.3	7.0	52.9	0.50	83.8	9.0	
SZ8	70	10.9	9.5	0.55	0.04	0.04	0.45	1.4	0.7	1.3	3.4	0.5	7.7	39	6.2	8.7	55.9	0.55	97.4	11.1	
SZ9	80	10.8	9.0	0.40	0.10	0.10	0.35	1.6	0.0	1.0	2.6	0.5	11.3	36	3.2	6.1	53.9	0.53	75.5	8.2	
SZ10	90	10.7	8.7	0.30	0.07	0.07	0.25	1.3	0.5	1.4	3.2	0.5	15.7	40	6.1	9.8	66.0	0.50	92.5	9.6	
SZ11	100	10.7	8.6	0.75	0.01	0.01	0.23	2.8	0.1	0.8	3.7	0.4	18.4	37	6.3	8.2	64.0	0.60	68.7	6.3	
SZ12	110	10.7	8.3	0.50	0.09	0.09	0.20	2.1	1.0	1.3	4.4	0.5	20.4	41	4.4	12.4	74.3	0.55	99.0	14.0	
SZ13	120	10.7	8.2	0.40	0.05	0.05	0.16	2.5	0.0	0.9	3.4	0.5	22.0	37	3.5	4.8	64.3	0.50	62.1	4.5	
SZ14	130	10.7	8.0	0.70	0.00	0.00	0.17	3.1	0.0	1.0	4.1	0.6	26.5	45	3.5	5.9	78.0	0.55	77.0	7.4	
SZ15	140	10.6	7.8	1.00	0.28	0.25	0.17	4.1	0.0	1.7	5.8	0.5	30.7	44	3.6	11.2	86.4	0.60	133.5	12.4	<0.5
SZ16	150	10.6	7.5	2.05	49.47	5.58	64.05	38.9	1.4	*	40.3	1.7	40.9	48	11.4	*	90.6	0.75	*	*	10.5
Surficial sediment																					
* = Sediment contamination, sample not filtered for analysis.																					
NH <sub>4</sub> , NO <sub>3</sub> , DON, UREA all as N																					
Detection limits: DRP 0.5; NO <sub>3</sub> -N 0.5; NH <sub>4</sub> -N 1.0 mg m <sup>-3</sup>																					
* = analysed by wet digestion method, ** = analysed by CHN combustion furnace method.																					



## Appendix 4 - Phytoplankton data

In this report phytoplankton abundance is reported in cell counts per ml and as biovolume (cubic microns per ml). Units of biomass are listed as “ $\mu\text{m}^3$ ” in the following tables. The units are actually  $\mu\text{m}^3 \text{ mL}^{-1}$ . In the reporting system used until 2007 algal dominance (rank 1 = dominant to rank 10 = rare) was calculated from algal biovolume.

Cell counts may be reported as “0” despite a large biovolume where the algal species is large or colonial, e.g., *Botryococcus braunii*.

Name changes: The genus of planktonic species of *Anabaena* has changed to *Dolichospermum* as of August 2009.

From August 2008 phytoplankton data have been provided from a depth of 50m, which generally coincides with the deep chlorophyll *a* maxima in the lake. These samples were collected by van Dorn bottle and are placed in a separate table from the 10-m tube samples.

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2017-2018																																		
From Site A (Mid Lake)																																		
10 m tube																																		
Sample code	Site A	Site A																																
Sampling date	HJ1	HJ1	IR1	IR1	JW1	JW1	NB1	NB1	QA1	QA1	QA4	QA4	QA7	QA7	UX1	UX1	UX4	UX4	YK1	YK1	BZ1	BZ1	DD1	DD1	FP1	FP1	FP4	FP4	KE1	KE1				
	(per ml)	( $\mu\text{m}^3$ )																																
<b>Blue greens (Cyanophyceae)</b>																																		
Aphanizomenon sp.	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.19	3.61	0.0	0	0.0	0	4.7	90	4.4	83	0.0	0	1.0	18	0.3							
Aphanocapsa sp.	0.0	0	0	0	4.4	39.6	0.0	0	0	0	0	0	0.0	0	0.0	0	0.1	1	0.0	0	0.5	5	0.4	3	5.3	48	7.3	6						
Chroococcus sp.	0.0	0	0	0	0	0.0	0	0	0	0	0	0	0.1	2	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0					
Dolichospermum c. lemmermannii (formerly Anabaena c.f. lemmermannii)	0.8	95	1.68	194.88	1.62	187.92	2.5	292	15.86	1839.76	7.7	893.2	3.13	363.08	0	0	0.4	44	1.7	196	4.3	500	4.6	530	7.2	839	3.5	407	1.8	20				
Dolichospermum circinale	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.98	201.88	0.4	91	0.2	45	0.7	134	0.7	152	1.8	367	0.4	72	1.0	20						
Dolichospermum planctonicum	0.7	106	0	0	0	0	0.2	24	0	0	0.11	17.6	0.92	147.2	0.3	48	1.2	184	2.1	341	0.3	40	1.3	214	0.7	114	0.0	0	0.0					
Microcystis sp.	0.0	0	0	0	0	0	0.0	0	0	2.35	427.7	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0					
Phormidium sp.	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.34	7.14	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0					
Pseudanabaena sp.	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.37	7.03	0.4	7	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0					
Snowella sp.	0.9	22	9.44	236	6.43	160.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
Woronichinia naegeliana	3.8	76	0	0	0	0	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0				
<b>Greens (Chlorophyceae)</b>																																		
Botryococcus braunii (colonies)	0	0	0.03	4290	0.02	2340	0.01	13979	0.01	2884.14	0	0	0	0	0	0	0	0.0	15863	0.01	4635	0	0	0.0	0	0	0.0	0.01	971					
Crucigeniella sp.	0	0	3.51	228.15	0	0	5	304	1.17	76.05	0	0	0	0	0	2	152	0	0	0	4	228	0	0	0	0	0	0	0	4	22			
Dictyosphaerium sp.	3	145	2.1	115.5	0	0	1	50	0	0	0	0	0.04	2.2	0	0	0	0	0	0	0	0	0	0	1	33	0							
Elakothrix gelatinosa	0	0	0	0	2.34	245.7	4	369	7.605	798.525	1.755	184.275	0	0	9.36	982.8	35	3624	1	123	2	246	1	123	1	61	2	184	2	18				
Eudorina elegans	1	174	0.23	58.88	0.78	199.68	0	0	0	7.02	1797.12	9.36	2396.16	16.38	4193.28	0	0	33	8387	27	6889	8	2097	0	0	0	0	0	0	0				
Lagerheimia sp.	1	76	0	0	1.17	152.1	0	0	1.17	152.1	4.68	608.4	0.585	76	2.925	380.25	1	76	1	152	2	228	2	304	1	76	3	380	4	45				
Monoraphidium sp. / Ankistrodesmus falcatus	8	344	8.775	368.55	0	0	17	713	32.175	1351.35	9.945	417.69	13.455	565.11	7.02	294.84	1	49	0	0	2	74	2	98	11	442	35	1474	22	90				
Nephrocystum agardhianum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Nephrocystum lunatum	0	0	0	9.36	1544.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Oocystis sp.	11	1495	15.795	2242.89	5.85	830.7	17	2409	34.515	4901.13	36.27	5150.34	19.89	2824.38	22.815	3239.73	12	1744	1	166	4	581	6	914	12	1744	13	1828	6	91				
Gregiolaria lacustris	0	0	2.34	383.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Scenedesmus sp.	0	0	4.68	243.36	0	0	0	0	4.68	243.36	0	0	0	0	0	0	0	0	0	1	61	0	0	0	0	0	0	0	5	24				
Sphaerotilus schroeteri	0	0	0	0	0	0	0	25	5031	0	0	14.04	2808	4.68	1000	16.38	0	0	0	0	0	0	0	0	0	0	0	0	5	936	5	93		
Stictochoccus contortus	281	5065	279.63	5033.34	58.5	1053	2	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	25		
Tetraedron gracile	1	129	11.115	1222.65	2.925	321.75	2	257	0	0	0	0	0.585	64.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
unidentified Colonial green	0	0	3.51	491.4	0	0	0	0	0	0	0	0	0.585	43.875	0	0	0	0	0	3	410	0	0	0	0	0	0	0	0	1	4			
Volvox aureus	0	0	0.88	52.8	0	0	0	0	0	0	0	0	0	0	0	0	6	360	0	0	2.0	120	15.0	900	193.1	11583	0.0	0	0.0					
Westella boydioides	0	0	9.36	608.4	8.19	532.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	243			
<b>Diatoms (Bacillariophyceae)</b>																																		
Asterionella formosa	25	7043	4.095	1146.6	33.93	9500.4	314	87797	104.715	29320.2	14.625	4095	16.965	4750.2	3.51	982.8	0	0	0	0	0	0	0	0	0	5	1310	61	17035	178	4995			
Attheya sp.	4	1053	6.435	1930.5	15.21	4563	7	2106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Aulacoseira granulata	7	2176	93.6	29016	86.58	26839.8	63	19404	40.95	12694.5	21.645	6709.95	7.605	2357.55	0	0	0	11	3446	0	0	0	0	0	0	0	7	2176	15	4534	50	1541		
Aulacoseira granulata var. angustissima	22	5780	22.23	5779.8	25.74	6692.4	19	5019	15.795	4106.7	2.34	608.4	0	0	0.585	152.1	0	0	0	8	2129	2	456	0	0	0	3	761	0					
Cocconeis	0	0	0	0	0	0	0	0	0.585	305.955	0.585	305.955	0	0	0	0	0	1	187	2	374	2	374	11	1778	7	112							
Cyclotella stelligera	5	749	4.095	655.2	7.02	1123.2	1	187	2.925	468	1.755	280.8	0.585	93.6	4.095	655.2	1	187	6	936														
Fragilaria cratoniensis	0	0	40.18	14384.44	2.25	805.5	1	251	0.67	239.86	21.06	7539.48	40.365	14450.67	57.33	20524.14	183	65552	297	106181	235	83981	132	47122	0	0	48	17173	0					
Lindavia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	187	1	18
Nitzschia sp.	7	2738	5.85	2281.5	0	0	2	913	4.68	1825.2	4.095	1597.05	3.51	1368.9	1.17	456.3	0	0	0	0	0	1	456	1	228	1	228	17	6616	2	91			
Small unknown diatom sp.	1	64	0	0	0	0	0	0	0	0	0	0.585	64.35	0	0	0.585	64.35	0	0	0	0	0	0	0	0	0	0	0	0	0				
Synedra sp.	47	18439	97.11	38261.34	277.875	109482.8	2	922	1.755	691.47	0	0	0.585	2340	0	0	0.585	2340	3.51	14040	12	49140	0	0	1	4680	2	7020	1	4680	0			
<b>Desmids (Mesotaeniaceae, Desmidaceae)</b>																																		
Cladotriopsis sp.	3	1103	1.17	441.09	8.775	3																												

Lake Taupo phytoplankton species composition and biovolume (50 m) 2017-2018																																	
From Site A (Mid Lake) 18/07/2017-19/06/2018																																	
		HJ3	HJ3	IR3	IR3	JW3	JW3	NB3	NB3	QA3	QA3	QAE	QAE	QA9	QA9	UX3	UX3	UX6	UX6	YK3	YK3	BZ3	BZ3	D03	D03	FP3	FP3	FP6	FP6	KE3	KE3		
		18/07/2017	18/07/2017	9/08/2017	9/08/2017	21/08/2017	21/08/2017	27/09/2017	27/09/2017	31/10/2017	31/10/2017	14/11/2017	14/11/2017	27/11/2017	27/11/2017	10/01/2018	10/01/2018	24/01/2018	24/01/2018	19/02/2018	19/02/2018	22/03/2018	22/03/2018	5/04/2018	5/04/2018	1/05/2018	1/05/2018	31/05/2018	31/05/2018	19/06/2018	19/06/2018		
		Cell (per ml)	Biovolume (µm³)																														
<b>Blue greens (Cyanophyceae)</b>																																	
Aphanizomenon sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Aphanocapsa sp.	0	0	0	0	0	0	2	18	0	0	1.8	16.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11			
Dolichospermum cf lemmermannii (formerly Anabaena cf lemmermannii)	1	72	0	0	0	0	0	0	0	8.22	953.52	2.32	269.12	0	0	0	0	6	668	0	5	7	821	0	0	0	0	0	0	0			
Dolichospermum circinale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	334	0	49	1	183	0.8	155	0	0	1	222				
Dolichospermum planctonicum	1	99	0.38	60.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	85				
Microcystis sp.	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Pseudanabaena sp.	0	0	0	0	0	0	0	0	0	0	0.27	51.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7			
Snowella sp.	3	83	10.22	255.5	9.55	238.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Woronichinia nageleiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7		
<b>Greens (Chlorophyceae)</b>																																	
Botryococcus braunii (colonies)	0	250	0	0	0.06	12285	0	7078	0	0	0	0	0	0.01	8093.25	0	0	0	2184	0	1251	0	5739	0	0	0	0	0	0	0			
Crucigenella sp.	0	0	4.68	304.2	0	0	0	0	1.17	76.05	0	0	0	0	0	1	76	0	0	0	0	0	0	0	0	0	0	0	1	76			
Dictyosphaerium sp.	5	253	102.96	5662.8	52.65	2895.75	66	3636	14.04	772.2	7.02	386.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Elakatothrix gelatinosa	1	123	0	0	0	0	0	0	5.85	614.25	1.17	122.85	2.34	245.7	1.755	184.275	0	0	0	0	0	0	0	0	0	0	0	0	0				
Eudorina elegans	0	0	21.06	5391.36	77.22	19768.32	0	0	0	0	0	0	0	9.36	2396.16	11.7	2995.2	15	3894	0	0	0	0	1	225	0	0	0	0	0			
Chlamydomonas planctonica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Lagerheimia sp.	0	0	1.755	228.15	0	0	0	0	4.68	608.4	2.34	304.2	0.585	76	1.755	228.15	0	0	1	76	2	304	2	228	1	71	1	76	0	0			
Monoraphidium sp. / Ankistrodesmus falcatus	8	319	5.85	245.7	7.02	294.84	10	418	46.8	1965.6	14.625	614.25	12.285	515.97	21.645	2109.09	35	1450	26	1106	59	2457	20	860	32	1360	6	270	5	197			
Nephrocystis lunatum	2	386	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Oocysts sp.	7	997	10.53	1495.26	9.36	1329.12	23	3240	22.23	3156.66	12.285	1744.47	14.04	1993.68	11.7	1661.4	8	1163	2	332	2	332	5	665	3	390	3	415	3	415	0	0	
Gregiodioris laevis	0	0	1.17	191.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Scenedesmus sp.	2	122	14.04	730.08	0	0	0	0	2	468	11.7	2340	0	4.68	1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Sphaero耆 rotiferi	0	0	0	0	0	0	0	0	0	0	1.755	91.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Stichococcus contortus	259	4654	269.685	4854.33	66.105	1189.89	0	0	0	2.34	42.12	10.53	1895.4	2.34	42.12	2.34	42.12	0	0	0	0	0	0	0	0	0	0	0	0	0			
Tetraedron gracile	3	322	5.265	579.15	3.51	386.1	3	322	0.585	64.35	1.755	193.05	1.17	128.7	2.925	321.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
unidentified Colonial green	4	263	0.44	61.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Volvox aureus	6	366	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Diatoms (Bacillariophyceae)</b>																																	
Asterionella formosa	29	8190	29.25	8190	114.66	32104.8	262	73382	28.15	63982	36.27	10155.6	26.325	7371	5.265	1474.2	4	983	2	655	2	655	7	1966	0	123	9	2457	26	7371			
Attheya sp.	6	1931	16.965	5089.5	5.85	1755	10	2984	0.585	175.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Aulacoseira granulata	0	0	73.71	2285.01	59.085	18316.35	111	34457	9.28	30466.8	94.77	29378.7	117.585	36451.35	29.25	9067.5	10	3083	6	1995	9	2720	9	2902	0	0	5	1451	10	3083			
Aulacoseira granulata var. angustissima	46	11864	0	0	62.01	16122.6	55	14297	43.29	66924	18.135	4715.1	15.21	3954.6	16	4107	3	761	0	0	3	676	0	0	2	608	0	0	0	0	0		
Cyclotella stelligera	6	936	10.53	1684.8	18.72	2995.2	11	1685	5.85	936	4.095	655.2	2.925	468	4.095	655.2	6	1030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fragilaria crotonensis	37	13210	164.58	58919.64	52.98	18966.84	1	430	1.28	458.24	20.475	7330.05	10.53	3769.74	0	0	21	7539	46	16545	8	2723	19	6702	3	945	0	0	9	3141			
Fragilaria sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	5026	0	0	0	0	0	0	0	0	0	0				
Lindavia sp.																																	
Nitzschia sp.	6	2282	0	0	0	0	0	8	2966	3.51	1368.9	1.755	684.45	1.755	684.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Small unknown diatom sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Synedra sp.	32	12677	84.825	33421.05	235.755	92887.47	0	0	2.34	921.96	2.34	921.96	1.755	691.47	0.585	230.49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Desmids (Mesaeniaceae, Desmidaceae)																																	
Closteriopsis sp.																																	
Closterium acutum var. variable	2	662	2.925	1102.725	12.285	4631.445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Staurodesmus unicornis	0	0	0.01	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>Chrysophyta (Chrysophyceae)</b>																																	

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2016-2017			
From Site A (Mid Lake)			
10 m tube			
Sample code	Site A H11	Site A H14	
Sampling date	6/07/2016	27/07/2016	
Cell per mL	Cell Biovolume ( $\mu\text{m}^3$ ) (per mL)	Cell Biovolume ( $\mu\text{m}^3$ ) (per mL)	
Blue greens (Cyanophyceae)			
Dolichospermum c. f. lemmermannii (formerly Anabaena f. lemmermannii)	0.4	44	1.2
Dolichospermum planctonicum (formerly Anabaena planctonica)	0.0	0	0.0
Dolichospermum circinale (formerly Dolichospermum circinale)	0.0	0	0.0
Planktothrix sp.	0.0	0	0.0
Dolichospermum sp.	0.0	0	0.0
Anabaena flos-aquae	0.0	0	0.0
Schizothrix sp.	0.0	0	0.0
Chroococcus sp.	0.0	0	0.0
Aphaneotrichia sp.	4.7	42	0.5
Microcoleus sp.	0.0	0	0.3
Snowella sp.	0.0	0	0.0
Phormidium sp.	0.0	0	0.0
Acinetobacter sp.	0.0	0	0.0
Arctomonas sp.	0.4	7	0.0
Pseudanabaena sp.	0.3	6	0.0
Gloeoxygen sp.	0.0	0	0.0
Scytonema sp.			
Greens (Chlorophyceae)			
Actinostemum harringtonii	0	0	0
Monogymnium sp. / Asteroleucus	34	1414	37
Monogymnium sp.	0	0	0
Kirchneriella contorta	0	0	0
Bacillus brauni (coleoform)	0	0	0
Cylindrospermum sp.	1	95	0
Ditytomyces sp.	0	0	7
Gloeoctenium planctonicum	0	0	0
Eukeratina elegans	40	121	1
Eudorina elegans	0	5	1312
Pandorus sp.	0	0	0
Lagerheimia sp.	0	0	0
Nephrocytis sp.	0	0	0
Nephrocystis lumassanii	0	0	0
Oscillatoria sp.	15	2183	10
Planktothrix galatheae	0	0	0
Quodogonium sp.	0	0	0
Scenedesmus sp.	0	0	0
Sphaerotilis schreiteri	7	8	0
Tetraselmis sp.	0	0	0
Volvic amans	0	0	0
Westella botryodes	0	0	0
unidentified Colonial green	0	0	0
Small cyanobacteria	0	0	0
Pseudochloris sp.	0	0	0
Diatoms (Bacillariophyceae)			
Asterionella formosa	69	19266	57
Aulacoseira granulata var. angustissima	1	3290	15
Aulacoseira granulata var. angustissima	1	3971	24
Aleurone sp.	0	0	0
Ceratoneura sp.	0	0	1
Cyclotella stellaris	13	2108	15
Cyclotella sp.			
Fragilaria sp.	36	12921	17
Fragilaria sp.	0	0	12
Nitzschia sp.	1	426	4
Sivertia sp.	0	0	144
Stephanodiscus sp.	0	0	0
Eudinobryopsis sp.			
Eunotia sp.	0	0	0
Solenaria minima	0	0	0
Small eudinobryopsis	0	0	0
Desmidaceae, Desmidales			
Cladotomus aciculare	0	219	0
Cladotomus aciculare var. variegata	0	0	0
Clevea sp.			
Ceratistes staurastrum	0	0	0
Monactinia sp.	0	0	0
Spirula sp.	0	0	0
Staurastrum sp.	0	0	505
Staurastrum tangaroense	0	0	0
Staurastrum unicorne var. gracilis	0	0	0
Chrysophyta (Chrysophyceae)			
Dioscorenia sp.	38	2267	0
Cryptomonas sp.	1	105	0
Syrava sp.	0	0	3
Dinoflagellates (Dinophyceae)			
Ceratium sp.	0	0	0
Ceratium hirundinella	0	0	0
Cymatopleura sp.	0	0	0
Peridinium sp.	0	0	0
Gonyaulax sp.	0	0	0
Flagellates 5μm			
Flagellates <5μm/cells	53	7214	18
Flagellates <5μm/cells	30	4101	32
Flagellates <5μm/cells	32	4348	16
Flagellates <5μm/cells	26	3459	29
Flagellates <5μm/cells	36	3903	36
Flagellates <5μm/cells	41	4793	20
Flagellates <5μm/cells	29	3949	29
Flagellates <5μm/cells	29	2311	149
Flagellates <5μm/cells	160	11946	160
Flagellates <5μm/cells	46	3697	54
Flagellates <5μm/cells	44	4352	44
Flagellates <5μm/cells	30	2434	53
Flagellates <5μm/cells	53	4263	49
Flagellates <5μm/cells	33	3904	33

## Lake Taupo phytoplankton enumeration (50 m van Dorn) 2016-17 Cell counts and biovolume

Lake Taupo Long-Term Monitoring Programme









Lake Taupo phytoplankton enumeration (50 m van Dorne) 2013-14		
Cell counts and biovolume		
Cells per ml numbers may be affected by rounding		
Sample code	GA3	GA3
Sampling date	8/10/2013	21/10/2013
Species composition by class	Cell (per ml) ( $\mu\text{m}^3$ )	Cell (per ml) ( $\mu\text{m}^3$ )
<b>Blue greens (Cyanophyceae)</b>		
<i>Dolichospermum c. lemmermannii</i> (formerly <i>Anabaena c. lemmermannii</i> )	0.1	9
<i>Leptolyngbya</i> sp.	0.0	0
<i>Anabaena planitincta/Dolichospermum planctonicum</i>	0.0	0
<i>Anabaena flos-aquae</i>	0.0	0
<i>Anabaena</i> sp./ <i>Dolichospermum</i> sp.	0.0	0
<i>Anabaena circinalis</i> / <i>Dolichospermum circinalis</i>	0.0	0
<i>Chroococcid</i> sp.	0.0	0
<i>Aphanocapsa</i> sp.	0.0	0
<i>Heterotrichia</i> sp.	0.0	0
<i>Microcoleus</i> sp.	0.0	0
<i>Sauvella</i> sp.	0.0	0
<i>Phormidium</i> sp.	0.0	0
<i>Aphanothrix</i> sp.	0.0	0
<i>Apatomia</i> sp.	0.0	0
<i>Pseudanabaena</i> sp.	0.0	0
<i>Gloeoctenia</i> sp.	0.0	0
<b>Greens (Chlorophyceae)</b>		
<i>Acetinella hantzschii</i>	0	0
<i>Monoraphidium</i> sp./ <i>Acetinella foliatum</i>	56	2354
<i>Stichococcus contortus</i>	0	0
<i>Kirchneria contorta</i>	0	0
<i>Bacillus caeruleus (colonies)</i>	0.0	0
<i>Chlamydomonas</i> sp.	0	0
<i>Ceratium</i> sp.	0	0
<i>Gloeoctenia</i> sp.	0	0
<i>Elatostethix gelatinosa</i>	0	0
<i>Eudorina elegans</i>	0	28
<i>Lagerheimia</i> sp.	0	0
<i>Nephroscoptis luteum</i>	0	0
<i>Oscillatoria</i> sp.	1	166
<i>Planktothrix gelatinosa</i>	0	0
<i>Quadrigea lacustris</i>	0	0
<i>Scenedesmus</i> sp.	0	0
<i>Sphaerotilus</i> sp.	0	0
<i>Tetraselmis gracile</i>	0	0
<i>Volvox aureus</i>	0	11
<i>Westella botryoides</i>	0	0
unidentified Colonial green	6	0
<i>Aloyctis</i> sp.	0	0
<i>Paulisicula</i> sp.	0	0
<b>Diatoms (Bacillariophyceae)</b>		
<i>Asterionella formosa</i>	18	4914
<i>Aduscosira granulata</i>	10	3083
<i>Anaducosira granulata var. granulata</i>	5	1369
<i>Asteria</i> sp.	1	351
<i>Cocconeis</i>	0	0
<i>Cyclotella stellaris</i>	3	468
<i>Fragilaria crotonensis</i>	0	0
<i>Fragilaria</i> sp.	0	0
<i>Nitzschia</i> sp.	2	694
<i>Synedra</i> sp.	1	230
<i>Amphora</i> sp.	0	0
<i>Eunotia</i> sp.	0	0
<i>Staurosira minima</i>	0	0
Small uniden. diatom sp.	1	129
<b>Desmid (Mastocystaceae)</b>		
<i>Cladotrichia exsicculare</i>	0	0
<i>Cladotrichia acutum var. variabile</i>	0	0
<i>Craterularia staurastroides</i>	0	0
<i>Mesotaenium</i> sp.	0	0
<i>Spirogyra</i> sp.	0	0
<i>Staurastrum</i> sp.	0	0
<i>Staurastrum tangaroa</i>	0	0
<i>Staurodesmus unicolor</i> var. <i>gracilis</i>	0	0
<b>Chrysophyta (Chrysophyceae)</b>		
<i>Dinobryon</i> sp.	0	0
<i>Cryptomonas</i> sp.	0	0
<i>Synura</i> sp.	0	0
<b>Dinoflagellates (Dinophyceae)</b>		
<i>Cruciglenia hirsutella</i>	0.10	2160
<i>Gymnodinium</i> sp. 1	0	2
<i>Gymnodinium</i> sp. 2	0.03	600
<i>Peridinium</i> sp.	0	0
<i>Gonyaulax</i> sp.	0	0
<b>Flagellates 5μm</b>		
Flagellates < 5μm/ncells	7	246
	177	6204
	171	5979
	67	2354
	14	491
	20	696
	19	676
	15	532
	16	573
	16	553
	15	532
	12	430
	15	532
	16	553
	18	614
	12	410
	20	717
	20	717
	33	1167
	43	1496

Lake Taupo phytoplankton enumeration (10-m tube) 2012-13		
Cell counts and biovolume	Cells per ml numbers may be affected by rounding	
Sample code	NA1 1/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	NA1 1/10/2012 Cell (per ml)
Species composition by class	NA4 1/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	NA4 1/10/2012 Cell (per ml)
	QH1 2/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	QH1 2/10/2012 Cell (per ml)
	PO1 4/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	PO1 4/10/2012 Cell (per ml)
	QL1 6/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	QL1 6/10/2012 Cell (per ml)
	RW1 8/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	RW1 8/10/2012 Cell (per ml)
	RW4 22/10/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	RW4 22/10/2012 Cell (per ml)
	SY1 6/12/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	SY1 6/12/2012 Cell (per ml)
	SY4 19/12/2012 Biosolume (per ml) ( $\mu\text{m}^3$ )	SY4 19/12/2012 Cell (per ml)
	VK1 23/01/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	VK1 23/01/2013 Cell (per ml)
	WD1 7/02/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	WD1 7/02/2013 Cell (per ml)
	WD4 21/02/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	WD4 21/02/2013 Cell (per ml)
	XL1 6/03/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	XL1 6/03/2013 Cell (per ml)
	XL4 20/03/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	XL4 20/03/2013 Cell (per ml)
	ZB1 4/04/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	ZB1 4/04/2013 Cell (per ml)
	ZB4 22/04/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	ZB4 22/04/2013 Cell (per ml)
	BC1 2/05/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	BC1 2/05/2013 Cell (per ml)
	BC4 23/05/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	BC4 23/05/2013 Cell (per ml)
	DF1 4/06/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	DF1 4/06/2013 Cell (per ml)
	DF4 19/06/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	DF4 19/06/2013 Cell (per ml)
	FK1 25/06/2013 Biosolume (per ml) ( $\mu\text{m}^3$ )	FK1 25/06/2013 Cell (per ml)
Blue green (Cyanophyceae)		
<i>Dolichospermum</i> (formally <i>Anabaena c.f. lemnemannii</i> )	0.0	0.0
<i>Anabaena planktonica/Dolichospermum</i>	0.0	0.0
<i>planktonicum</i>	0.0	0.0
<i>Anabaena flos-aquae</i>	0.0	0.0
<i>Anabaena</i> sp./ <i>Dolichospermum</i> sp.	0.0	0.0
<i>Anabaena circinalis</i> / <i>Dolichospermum</i> circinalis	0.0	0.0
<i>Chroococcidiopsis</i> sp.	0.0	0.0
<i>Aphanocapsa</i> sp.	0.0	0.0
<i>Heteroleibidium</i> sp/cf	4.4	40
<i>Microcoleus</i> sp.	6.5	137
<i>Microcoleus</i> sp.	0.0	0.0
<i>Microcoleus</i> sp.	0.0	0.0
<i>Phormidium</i> sp.	0.0	0.0
<i>Aphanotkeo</i> sp.	0.0	0.0
<i>Aphanizomenon</i> sp.	0.0	0.0
<i>Pseudanabaena</i> sp.	0.4	7
<i>Gloeoctena</i> sp.	0.0	0.0
Greens (Chlorophyceae)		
<i>Actinostrum hantzschii</i>	0	0
<i>Monoraphidium</i> sp./ <i>Aleuronecladus falcatus</i>	88	3681
<i>Spirulina</i> sp.	30	356
<i>Kirchneriella contorta</i>	0	0
<i>Bوتروسکوس brasilianus</i> (colonies)	0.0	0.0
<i>Chlamydomonas</i> sp.	1	227
<i>Cyclotella</i> sp.	0	0
<i>Dicerosphaerium</i>	5	268
<i>Gloeoctena planctonica</i>	0	0
<i>Elakothrix gelatinosa</i>	0	3
<i>Eudorina elegans</i>	0	0
<i>Lagurus</i> sp.	0	0
<i>Nephrectenia apertissima</i>	0	0
<i>Nephrectenia lunatum</i>	0	0
<i>Oscitia</i> sp.	6	622
<i>Plantagoella gelatinosa</i>	0	0
<i>Quedipeltula locusta</i>	0	0
<i>Scenedesmus</i> sp.	2	84
<i>Sphaerotilis schneiteri</i>	4	0
<i>Tetraselmis gracile</i>	0	0
<i>Volvox</i> sp.	0	0
<i>Wetella botryoides</i>	0	10
<i>Apicomis</i> sp.	0	0
<i>Pauhuclisia</i> sp.	0	0
Diatoms (Bacillariophyceae)		
<i>Asterionella formosa</i>	65	18329
<i>Alacosciera granulata</i>	17	587
<i>Alacosciera granulata</i> var. <i>angustissima</i>	2	563
<i>Aleuria</i> sp.	0	0
<i>Cosmarium</i>	0	0
<i>Cyclotella stelligera</i>	4	692
<i>Fragilaria entomiae</i>	62	2273
<i>Frigularia</i> sp.	0	0
<i>Nitzschia</i> sp.	3	1655
<i>Synedra</i> sp.	0	0
<i>Amphora</i> sp.	0	0
<i>Eunotia</i> sp.	0	0
<i>Staurosira tangaroana</i>	0	0
<i>Small unkenidiatinae</i> sp.	2	238
Desmid (Mesotrichaceae)		
<i>Cladotrichia aculeata</i>	0	0
<i>Closterium acutum</i> var. <i>aristatum</i>	1	204
<i>Centrotrichia nanostriata</i>	0	0
<i>Mesotrichia</i> sp.	0	0
<i>Spirogyra</i> sp.	0	0
<i>Staurotrichia</i> sp.	0	0
<i>Staurosira uncinata</i> var. <i>raciciliata</i>	0	0
Chrysophyta (Chrysophyceae)		
<i>Dinobryon</i> sp.	0	1
<i>Cryptomonas</i> sp.	0	0
<i>Syrna</i> sp.	0	1
Dinoflagellates (Dinophyceae)		
<i>Ceratium hirundinella</i>	0	0
<i>Gymnodinium</i> sp. 1	1	595
<i>Gymnodinium</i> sp. 2	0	0
<i>Pavlova</i> sp.	0	0
<i>Gonyaulax</i> sp.	0	0
Flagellates < 5µm		
Flagellates < 5µm (cells)	17	606
	161	5643
	287	10054
	76	2670
	221	7744
	132	4620
	133	4639
	106	3711
	77	2682
	184	6429
	77	2703
	142	4075
	34	1188
	41	1433
	166	5815
	30	1065
	141	4942
	252	8825
	159	5569
	24	833
	15	530

Lake Taupo phytoplankton enumeration (50 m van Dorne) 2012-13		
Cell counts and biovolume		
Cells per ml numbers may be affected by rounding		
Sample code	NA3	NA3
Sampling date	1/08/2012	1/08/2012
<b>Blue greens (Cyanophyceae)</b>		
<i>Dolichospermum c.f. lemmermannii</i> (formerly Anabaena c.f. lemmermannii)	0.0	0.0
<i>Lapotangpha</i> sp.	0.0	0.0
<i>Anabaena planktonica/Dolichospermum planctonicum</i>	0.0	0.3
<i>Anabaena flos-aquae</i>	0.0	0.0
<i>Anabaena</i> sp./ <i>Dolichospermum</i> sp.	0.0	0.0
<i>Anabaena circinalis/Dolichospermum circinalis</i>	0.0	0.0
<i>Chroococcus</i> sp.	0.0	0.0
<i>Aphanizomenon</i> sp.	0.0	0.0
<i>Heterotrichia</i> sp.	0.0	1.9
<i>Mecocycla</i> sp.	0.0	0.0
<i>Snowella</i> sp.	0.0	0.0
<i>Phormidium</i> sp.	0.0	0.0
<i>Aphanothice</i> sp.	0.0	0.7
<i>Aphanizomenon</i> sp.	0.0	0.0
<i>Pseudanabaena</i> sp.	0.0	0.0
<i>Gloeoxygena</i> sp.	0.0	0.0
<b>Greens (Chlorophyceae)</b>		
<i>Astianthus hantzschii</i>	0.0	0.0
<i>Monoraphidium</i> sp. / <i>Akinetodes</i> <i>falcatus</i>	71	2073
<i>Stictochoccus contortus</i>	52	397
<i>Kirchneriella contorta</i>	0	0
<i>Bacropedia</i> sp.	0.0	0.0
<i>Chloromonas</i> sp.	1	246
<i>Chlorogonium</i> sp.	5	304
<i>Dityrophypharium</i>	42	217
<i>Eukolysys</i> sp.	2	246
<i>Eudora elegans</i>	0	0
<i>Lagerheimia</i> sp.	0	0
<i>Nephrosynes agardhianum</i>	0	0
<i>Nephrotomatina</i> sp.	0	0
<i>Oscyliopsis</i> sp.	5	745
<i>Planktophypha gelatinosa</i>	0	0
<i>Quadrula lacustris</i>	0	0
<i>Scenedesmus</i> sp.	0	0
<i>Sphaeroplea schenckii</i>	0	0
<i>Tetraselmis gracilis</i>	0	0
<i>Volvox aureus</i>	0	0
<i>Wetella botryoides</i>	0	0
<i>Apicomplex</i> sp.	0	0
<i>Padiachlaena</i> sp.	0	0
<b>Diatoms (Bacillariophyceae)</b>		
<i>Asterionella formosa</i>	111	30958
<i>Academia granulata</i>	19	5603
<i>Aulacoseira granulata</i> var. <i>varicula</i>	0	13
<i>Anatoxina</i> sp.	0	0
<i>Andesina</i> sp.	0	0
<i>Cocconeis</i> sp.	0	0
<i>Cyclotella stelligera</i>	2	374
<i>Fragilaria crocea</i>	37	13404
<i>Fragilaria</i> sp.	0	0
<i>Fregularia</i> sp.	0	0
<i>Nitzschia</i> sp.	2	684
<i>Syndra</i> sp.	0	0
<i>Amphora</i> sp.	4	1836
<i>Elliptio</i> sp.	0	0
<i>Selenastrum minutum</i>	0	0
<i>Small unknown diatom sp.</i>	3	322
<b>Desmids (Mesotaxaceae, Desmidaceae)</b>		
<i>Cladophora</i> sp.	0	0
<i>Cladotaxa</i> var. <i>variabile</i>	1	221
<i>Ceratostrebla</i> sp.	0	0
<i>Mesotaenia</i> sp.	0	0
<i>Staurastrum</i> sp.	0	0
<i>Staurastrum turgidum</i>	0	0
<i>Staurastrum unicorne</i> var. <i>praelic</i>	0	0
<b>Chrysophyta (Chrysophyceae)</b>		
<i>Dinobryon</i> sp.	19	1130
<i>Cryptomonas</i> sp.	0	0
<i>Syrna</i> sp.	0	0
<b>Dinoflagellates (Dinophyceae)</b>		
<i>Ceratium hirundinella</i>	0	0
<i>Gymnodinium</i> sp. 1	0	0
<i>Gymnodinium</i> sp. 2	0	0
<i>Peridinium</i> sp.	0	0
<i>Gonyaulax</i> sp.	0	0
<b>Flagellates 5µm</b>		
Flagellates < 5µm/ncells	67	2334
	195	6830
	215	7514
	52	1822
	197	6890
	130	4546
	125	4382
	125	4361
	194	6798
	227	7944
	84	2948
	120	4197
	20	717
	33	1147
	66	2293
	15	532
	7	246
	71	2468
	22	778
	27	962
	9	328

Lake Taupo phytoplankton enumeration (10-m tube) 2011-12		
Cell counts and biovolume		
Cells per ml numbers may be affected by rounding		
Sample code	XX1	XX1
Sampling date	24/08/2011	24/08/2011
Cell Biovolume	7/09/2011	7/09/2011
XY1	XY1	XY1
Cell Biovolume	28/09/2011	28/09/2011
ZY1	ZY1	ZY1
Cell Biovolume	25/10/2011	25/10/2011
ZG1	ZG1	ZG1
Cell Biovolume	8/11/2011	8/11/2011
ZY1	ZY1	ZY1
Cell Biovolume	22/11/2011	22/11/2011
ZY4	ZY4	ZY4
Cell Biovolume	8/12/2011	8/12/2011
BC1	BC1	BC1
Cell Biovolume	22/12/2011	22/12/2011
BC4	BC4	BC4
Cell Biovolume	12/01/2012	12/01/2012
CL1	CL1	CL1
Cell Biovolume	26/01/2012	26/01/2012
CL4	CL4	CL4
Cell Biovolume	16/02/2012	16/02/2012
ED1	ED1	ED1
Cell Biovolume	7/03/2012	7/03/2012
FH1	FH1	FH1
Cell Biovolume	10/04/2012	10/04/2012
HD1	HD1	HD1
Cell Biovolume	17/05/2012	17/05/2012
JAI	JAI	JAI
Cell Biovolume	31/05/2012	31/05/2012
JAA	JAA	JAA
Cell Biovolume	14/06/2012	14/06/2012
KW1	KW1	KW1
Cell Biovolume	3/07/2012	3/07/2012
LTI	LTI	LTI
Cell Biovolume	18/07/2012	18/07/2012
LT4	LT4	LT4
Cell Biovolume	18/07/2012	18/07/2012
LT6	LT6	LT6
Cell Biovolume	1/08/2012	1/08/2012
NA1	NA1	NA1
Cell Biovolume	1/08/2012	1/08/2012
Blue greens (Cyanophyceae)		
<i>Dolichospermum c.f. lemmermannii</i> (formally: <i>Anabaena c.f. lemmermannii</i> )	0.0	0
<i>Leptolyngbya</i> sp.	0.0	0
<i>Anabaena planktonica/Dolichospermum</i>		
<i>planktonicum</i>	0.0	0
<i>Anabaena flos-aquae</i>	0.0	0
<i>Anabaena</i> sp./ <i>Dolichospermum</i> sp.	0.0	0
<i>Anabaena circinalis</i> / <i>Dolichospermum circinalis</i>	0.0	0
<i>Chlorococcus</i> sp.	0.0	1
<i>Aphanizomenon</i> sp.	0.0	0
<i>Heterotrichia</i> sp.	0.0	0
<i>Microcoleus</i> sp.	0.0	2.2
<i>Snowella</i> sp.	0.0	1.0
<i>Phormidium</i> sp.	0.0	0
<i>Ectothrix</i> sp.	0.0	0
<i>Aphanothecace</i> sp.	0.0	0
<i>Aphanizomenon</i> sp.	0.0	0
<i>Pseudanabaena</i> sp.	0.0	0
Greens (Chlorophyceae)		
<i>Actinostem hantzschii</i>	0	0
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	20	841
<i>Stichococcus contortus</i>	4	78
<i>Kirchneriella contorta</i>	0	0
<i>Bryothrix braunii</i> (colonies)	0.0	0
<i>Chlorococcum</i> sp.	0	0
<i>Ceratoneuria</i> sp.	0	0
<i>Dictyosphaerion</i>	0	0
<i>Gloeoctysis</i> <i>planctica</i>	0	0
<i>Elakothrix gelatinosa</i>	5	568
<i>Eudorina elegans</i>	28	7063
<i>Nephrocystis agardhianum</i>	0	0
<i>Nephrocystis</i> <i>luminans</i>	0	0
<i>Oscovia</i> sp.	9	1229
<i>Planktosphera gelatinosa</i>	0	0
<i>Quadrula lacustris</i>	0	1
<i>Scenedesmus</i> sp.	0	0
<i>Sphaerotilis schreiteri</i>	0	0
<i>Tetraselmis</i> sp.	0	0
<i>Volvic</i> <i>arvensis</i>	0	0
<i>Westella botryoides</i>	0	0
<i>Aciocystis</i> sp.	0	0
<i>Paulschulzia</i> sp.	0	0
Diatoms (Bacillariophyceae)		
<i>Asterionella formosa</i>	365	102098
<i>Aulacoseira granulata</i>	0	0
<i>Aulacoseira variabilis</i>	47	12271
<i>Brachysira</i> sp.	0	0
<i>Cocconeis</i> sp.	0	0
<i>Cyclotella stelligera</i>	6	952
<i>Fragilaria cruentorum</i>	120	42803
<i>Fragilaria</i> sp.	0	0
<i>Nitzschia</i> sp.	3	1265
<i>Spirula</i> sp.	1	213
<i>Asperula</i> sp.	1	566
<i>Eunotia</i> sp.	0	0
<i>Selenastrum minutum</i>	Small unknown diatom sp.	3
Desmids (Mesotaeniaceae, Desmidaceae)		
<i>Cleistothecium acutum</i>	0	0
<i>Cladotrichia variabile</i>	2	816
<i>Ceratostira stroblioides</i>	0	0
<i>Mougeotia</i> sp.	0	0
<i>Staurastrum</i> sp.	0	0
<i>Staurastrum tangaroai</i>	0	0
<i>Stauridessmus unicrus gracilis</i>	0	0
Chrysophyta (Chrysophyceae)		
<i>Dinobryon</i> sp.	4	255
<i>Cryptomonas</i> sp.	0	0
<i>Syrura</i> sp.	0	0
Dinoflagellates (Dinophyceae)		
<i>Ceratium hirundinella</i>	0	0
<i>Gymnodinium</i> sp.1	0	0
<i>Gymnodinium</i> sp.2	0	0
<i>Peridinium</i> sp.	0	0
<i>Gonyaulax</i> sp.	0	0
Flagellates 5μm		
Flagellates < 5μm/cells	18	625
121	4241	
17	587	
162	5672	
121	4218	
103	3598	
76	2662	
159	5567	
77	2682	
94	3296	
90	3153	
85	2973	
78	2746	
45	1591	
30	1060	
127	4431	
52	1818	
162	5662	
163	5692	
17	606	

Lake Taupo phytoplankton enumeration (50 m van Dorne) 2011-

### **Cell counts and biovolume**

## Lake Taupo phytoplankton enumeration (10-m tube) 2010-11

### **Cell counts and biovolume**

Cells per ml numbers may be affected by rounding			
	Sample code	EY1	EY1

Lake Taupo phytoplankton enumeration (50 m van Dorne) 2010-11

Lake Taupo phytoplankton enumeration (10-m tube) 2009-10

Cell counts and biovolume

Cells per ml numbers may be affected by rounding

Sample code	PH1 Sampling date	PH1 19/10/2009	PH1 19/10/2009	QJ1 12/11/2009	QJ1 12/11/2009	TT1 13/01/2010	TT1 13/01/2010	VA1 2/02/2010	VA1 2/02/2010	VA3 18/02/2010	VA3 18/02/2010	XF1 10/03/2010	XF1 10/03/2010	ZD1 8/04/2010	ZD1 8/04/2010	BX1 20/05/2010	BX1 20/05/2010	CU1 3/06/2010	CU1 3/06/2010	CU3 23/06/2010	CU3 23/06/2010
Species composition by class	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	
<b>Blue greens (Cyanophyceae)</b>																					
<i>Dolichospermum c.f. lemmermannii</i> (formerly; <i>Anabaena c.f. lemmermannii</i> )	0.0	0	77.4	6964	3.0	270	17.6	1582	182.5	21172	4.2	492	5.6	652	3.6	418	4.6	531	1.9	218	
<i>Dolichospermum planctonicum</i> (formerly; <i>Anabaena plancktonica</i> )	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.3	100	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Dolichospermum sp.</i> (formerly; <i>Anabaena sp.</i> )	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0.0	0	0.0	0	0
<i>Dolichospermum circinalis</i> (formerly; <i>Anabaena circinalis</i> )	6.9	1429	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Chroococcus sp.</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.8	11	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Microcystis sp.</i>	0.0	0	0.6	13	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Leptolyngbya sp.</i>	17.1	188	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.6	7	0.0	0.0	0	0.0	0
<i>Snowella sp.</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Pseudanabaena sp.</i>	0.7	14	0.0	0	0.2	4	0.0	0	0.0	0	0.1	2	0.1	1	0.8	15	0.0	0.4	7	0.0	0
<i>Phormidium sp.</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.2	5	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Aphanocapsa sp.</i>	4.0	36	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	2.0	18	
<i>Aphanothecce sp.</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<i>Aphanizomenon sp.</i>	0.3	6	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
<b>Greens (Chlorophyceae)</b>																					
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>	67	2818	32	1341	5	227	21	863	0	0	2	68	18	750	14	591	27	1113	11	477	
<i>Stichococcus contortus</i>	11	204	0	0	0	0	9	166	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Botryococcus braunii</i> (colonies)	0	0	0.002	3900	0.000	1950	0	0	0	0	0	0	0	0	0	0	0.0	3248	0.0	1570	
<i>Clamydomonas sp.</i>	2	341	0	0	1	227	0	0	0	0	0	0	0	0	0	2	454	0	0	3	568
<i>Elaktothrix gelatinosa</i>	4	454	3	341	1	114	4	454	0	0	1	114	0	0	15	1591	6	682	2	170	
<i>Eudorina elegans</i>	8	2077	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Nephrocystum lunatum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Oocystis sp.</i>	9	1229	12	1690	22	3150	36	5070	45	6376	10	1383	34	4840	11	1613	11	1613	6	845	
<i>Tetradon gracile</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pauschulia sp.</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<i>Dictyosphaerium</i>	45	0	0	0	0	6	0	8	0	0	0	0	0	0	0	0	4	238	0	0	0
<i>Cruigenella sp.</i>	17	1090	18	1160	77	4993	48	3095	8	492	0	0	0	0	0	0	1	70	0	0	0
<i>Kirchneriella contorta</i>	10	321	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	214	0	0	0
<i>Planktosphaeria gelatinosa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Scenedesmus sp.</i>	0	0	0	0	4	225	0	0	0	0	0	0	0	0	0	0	4	225	0	0	0
<i>Volvox aureus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	325	19476	173	10387	498	29863
<b>Diatoms (Bacillariophyceae)</b>																					
<i>Asterionella formosa</i>	186	51958	31	8786	3	757	0	0	0	0	4	1060	0	0	4	1212	10	2727	9	2575	
<i>Aulacoseira granulata</i>	21	6541	23	7044	6	2013	0	0	0	0	0	0	0	0	12	3857	9	2683	9	2851	
<i>Aulacoseira granulata var. angustissima</i>	54	13925	4	1125	1	281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Aulacoseira sp.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cyclotella stelligera</i>	10	1558	3	519	4	606	2	346	1	173	0	0	0	0	0	0	0	0	2	346	
<i>Fragilaria crotonensis</i>	158	56554	121	43190	60	21498	98	35249	8	2905	15	5229	12	4261	22	7941	57	20336	135	48226	
<i>Nitzschia sp.</i>	2	844	1	211	2	633	3	1266	0	0	1	211	2	844	7	2743	2	633	0	0	
<i>Synedra sp.</i>	1	426	0	0	1	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Amphora sp.</i>	0	0	0	0	2	849	0	0	0	0	0	0	0	0	0	0	0	1	566	1	283
<i>Cocconeis</i>	1	566	0	0	0	0	0	2	849	0	0	6	3112	0	0	6	3395	8	3961	7	3678
Small unknown diatom sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	238	1	60	1	119
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>																					
<i>Cladotrichium aciculare</i>	0	0	1	648	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Cladotrichium acutum var. variable</i>	1	408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	204	1	408
<i>Staurastrum sp.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	74	1	74	0	0
<b>Chrysophyta (Chrysophyceae)</b>																					
<i>Dinobryon sp.</i>	98	5809	289	17077	16	926	37	2202	29	1692	4	223	4	223	25	1468	0	0	6	383	
<i>Cryptomonas sp.</i>	1	78	0	0	1	78	0	0	0	0	1	156	0	0	1	78	2	234	1	156	
<b>Dinoflagellates (Dinophyceae)</b>																					
<i>Cratium hirundinella</i>	0	0	0	0	1	11361	1	22722	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Gymnodinium sp. I</i>	0	0	0	0	0	0	0	0	1	1190	0	0	0	0	1	595	1	595	0	0	
<i>Gymnodinium sp. 2</i>	0	0	0	0	2	40575	0	0	1	27050	0	0	0	0	0	0	0	0	0	0	0
<i>Peridinium sp.</i>	0	0	0	0	0	0	0	0	0	0	4	15148	0	0	3	12984	0	0	1	2164	
<i>Gonyaulax sp.</i>	0	0	0	0	0	0	0	0	1	2164	0	0	3	6492	0	0	0	0	0	0	0
Flagellates 5µm	Flagellates <5µm/unicells	153	5340	61	2140	43	1496	42	1477	85	2973	34</									

Lake Taupo phytoplankton enumeration (10-m tube) 2009-10 (continued)

Cell counts and biovolume		Cells per ml numbers may be affected by rounding					
Species composition by class	Sample code	EX1 Sampling date 13/07/2010	EX1 Cell (per ml)	EX1 Biovolume (µm³)	FY1 10/08/2010	FY1 Cell (per ml)	FY1 Biovolume (µm³)
<b>Blue greens (Cyanophyceae)</b>							
<i>Dolichospermum c.f. lemmermannii</i> (formerly; <i>Anabaena c.f. lemmermannii</i> )		0.2	22	0.8	87		
<i>Dolichospermum planctorium</i> (formerly; <i>Anabaena planctoria</i> )		0.0	0	0.0	0		
<i>Dolichospermum sp.</i> (formerly; <i>Anabaena sp.</i> )		0.0	0	0.0	0		
<i>Dolichospermum circinalis</i> (formerly; <i>Anabaena circinalis</i> )		0.0	0	0.3	67		
<i>Chroococcus sp.</i>		0.0	0	0.0	0		
<i>Microcystis sp.</i>		0.0	0	0.4	8		
<i>Leptolyngya sp.</i>		0.0	0	1.3	14		
<i>Snowella sp.</i>		0.0	0	0.0	0		
<i>Pseudanabaena sp.</i>		0.5	9	0.0	0		
<i>Phormidium sp.</i>		0.3	5	0.0	0		
<i>Aphanocapsa sp.</i>		2.4	22	1.0	9		
<i>Aphanothecce sp.</i>		0.0	0	0.0	0		
<i>Aphanizomenon sp.</i>		0.0	0	0.0	0		
<b>Greens (Chlorophyceae)</b>							
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>		68	2863	72	3022		
<i>Schizococcus contortus</i>		0	0	29	526		
<i>Botryococcus braunii</i> (colonies)		0.0	0	0.0	6160		
<i>Chlamydomonas sp.</i>		0	0	2	341		
<i>Eukeratothrix gelatinosa</i>		6	625	6	682		
<i>Eudorina elegans</i>		0	0	16	4155		
<i>Nephrocystium lunatum</i>		0	0	0	0		
<i>Oocystis sp.</i>		4	538	3	384		
<i>Tetraedon gracile</i>		0	0	0	0		
<i>Paulschulzia sp.</i>		0	0	0	0		
<i>Dictyosphaerium</i>		0	0	9	506		
<i>Crucigeniella sp</i>		0	0	3	211		
<i>Kirchneriella contorta</i>		0	0	0	0		
<i>Planktosphaeria gelatinosa</i>		0	0	0	0		
<i>Scenedesmus sp.</i>		2	113	0	0		
<i>Volvox aureus</i>		87	5194	0	0		
<b>Diatoms (Bacillariophyceae)</b>							
<i>Asterionella formosa</i>		39	11058	155	43323		
<i>Aulacoseira granulata</i>		23	7044	52	16268		
<i>Aulacoseira granulata var. angustissima</i>		0	0	57	14910		
<i>Aulacoseria sp.</i>		17	0	0	0		
<i>Cyclotella stelligera</i>		8	1212	11	1818		
<i>Fragilaria crotonensis</i>		62	22273	108	38542		
<i>Nitzschia sp.</i>		1	422	3	1266		
<i>Synedra sp.</i>		1	213	6	2345		
<i>Amphora sp.</i>		0	0	0	0		
<i>Cocconeis</i>		4	2264	5	2829		
		4	417	4	417		
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>							
<i>Cladostelium aciculare</i>		0	0	2	1296		
<i>Cladostelium acutum var. variable</i>		0	0	0	0		
<i>Staurastrum sp.</i>		0	0	0	0		
<b>Chrysophyta (Chrysophyceae)</b>							
<i>Dinobryon sp.</i>		0	0	5	287		
<i>Cryptomonas sp.</i>		4	623	3	390		
<b>Dinoflagellates (Dinophyceae)</b>							
<i>Ceratium hirundinella</i>		0	0	0	0		
<i>Gymnodinium sp. 1</i>		1	595	0	0		
<i>Gymnodinium sp. 2</i>		0	0	0	0		
<i>Peridinium sp.</i>		0	0	0	0		
<i>Gonyaulax sp.</i>		0	0	0	0		
<b>Flagellates 5µm</b>							
Flagellates < 5µm/unicells		59	2064	70	2443		

Lake Taupo phytoplankton enumeration (10-m tube) 2008-09

Cell counts and biovolume

Cells per ml numbers may be affected by rounding

Sample code	RL4 Sampling date 16/09/2008	RL4 16/09/2008	SV2 14/10/2008	SV2 14/10/2008	UP4 26/11/2008	UP4 22/12/2008	XE2 22/12/2008	XZ2 13/01/2009	XZ2 13/01/2009	XZ1 28/01/2009	XZ1 28/01/2009	AH2 11/02/2009	AH2 11/02/2009	AH4 25/02/2009	AH4 25/02/2009	DU1 26/03/2009	DU1 26/03/2009	EW2 15/04/2009	EW2 15/04/2009	GV2 7/05/2009	GV2 7/05/2009	
Species composition by class																						
	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )		
<b>Blue greens (Cyanophyceae)</b>																						
<i>Anabaena lemmermannii</i>	0.0	0	0.0	0	46.5	1905	16.3	670	1.3	116	1.3	120	7.4	669	75.6	41	1.4	126	27.7	2495	13.6	
<i>Pseudanabaena limnetica</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.1	2	0.0	4.4	0	0.0	0.0	0	0.0	
<i>Anabaena planktonica</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.8	299	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
<i>Anabaena</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
<i>Anabaena circinalis</i>	0.0	0	8.9	581	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
<i>Chroococcus</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.3	4	
<i>Microcystis</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	
<i>Leptolyngbya</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2.1	23	
<i>Snowella</i> sp.																				0.0	0	
<b>Greens (Chlorophyceae)</b>																						
<i>Monoraphidium</i> sp./ <i>Ankistrodesmus falcatus</i>	94	3956	4	172	4	172	16	688	53	2236	139	5848	56	2359	0	0	0	0	1	49	5	221
<i>Stichococcus contortus</i>	12	211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Botryococcus braunii</i>	0.0	218	0.0	0	0.0	8877	0.0	127636	0.0	0	0.0	1908	0.0	0	0.0	543	0	0	0.0	4213	0.0	6058
<i>Chlamydomonas</i> sp.	0	0	1	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Elaktothrix gelatinosa</i>	4	369	0	0	0	0	0	0	5	491	12	1229	16	1720	18	1843	0	0	1	114	0	0
<i>Eudorina elegans</i>	0	0	0	0	0	0	0	0	6	1647	0	0	0	0	0	0	0	0	3	674	0	0
<i>Nephrocytum lunatum</i>	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Oocystis</i> sp.	14	1994	8	1163	5	748	5	665	0	0	2	249	5	665	0	0	0	0	5	748	4	498
<i>Tetradon gracile</i>	0	0	0	0	0	0	0	20	2252	9	1030	1	64	0	0	0	0	0	0	0	0	
<i>Pauschulia</i> sp.	0	0	0	0	0	0	0	0	0	18	0	7	0	0	0	0	0	0	0	0	0	
<i>Dictyosphaerium</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	
<i>Cruicigenella</i> sp	0	0	0	0	7	456	4	228	2	152	0	0	0	0	0	0	0	30	1969	53	3422	
<b>Diatoms (Bacillariophyceae)</b>																						
<i>Asterionella formosa</i>	64	18018	42	11794	29	8190	3	819	22	6061	35	9828	5	1310	1	328	4	1147	11	3112	19	5242
<i>Aulacoseira granulata</i>	15	4534	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2539	0	0	0	0	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	1	304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Aulacoseira</i> sp.	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Cyclotella stelligera</i>	15	2340	2	374	7	1123	0	0	1	187	1	187	1	187	0	0	1	187	1	187	4	655
<i>Fragilaria crotonensis</i>	37	13194	33	11728	99	35603	66	23456	70	25132	21	7539	48	17173	16	5864	2	838	21	7539	8	2723
<i>Nitzschia</i> sp.	0	0	0	0	0	0	4	1369	0	0	4	1597	2	913	2	913	0	0	0	0	0	0
<i>Synecha</i> sp.	1	230	0	0	0	0	0	2	691	0	0	0	0	0	0	0	0	1	230	0	0	
<i>Amphora</i> sp.	0	0	0	0	0	0	1	306	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Cocconeis</i>	1	306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>																						
<i>Closterium aciculare</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Closterium acutum</i> var. <i>variable</i>	1	441	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Chrysophyta (Chrysophyceae)</b>																						
<i>Dinobryon</i> sp.	0	0	53	3106	313	18466	23	1381	0	0	2	104	38	2243	53	3141	0	0	11	621	13	794
<i>Cryptomonas</i> sp.	0	0	0	0	1	168	0	0	0	0	0	1	84	0	0	0	0	0	0	0	0	
<b>Dinoflagellates (Dinophyceae)</b>																						
<i>Ceratium hirundinella</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Gymnodinium</i> sp. 1	0	0	0	0	1	205	1	205	4	4505	4	4505	3	3218	0	0	1	1287	1	644		
<i>Gymnodinium</i> sp. 2	0	0	0	0	1	14625	0	0	0	0	0	0	0	0	0	0	0	150	0	50	25	
<i>Peridinium</i> sp.	0	0	0	0	0	0	0	0	0	2	4680	1	2340	0	0	0	0	1	2340	0	0	
<i>Gonyaulax</i> sp.																1	1170	1	1170	0	0	
<b>Flagellates 5μm</b>																						
Flagellates < 5μm/unicells	113	3972	68	2375	78	2723	249	8722	182	6368	57	2007	51	1781	83	2907	37	1290	51	1781	145	5078

Lake Taupo phytoplankton enumeration (10-m tube) 2008-09 continued

Species composition by class	Sample code	GV4	GV4	JO1	JO1	KI1	KI1	NEW NAMES INTRODUCED				LT1	LT1	ND1	ND1
	Sampling date	27/05/2009	27/05/2009	18/06/2009	18/06/2009	6/07/2009	6/07/2009	August 2009				13/08/2009	13/08/2009	7/09/2009	7/09/2009
	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )		Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )
<b>Blue greens (Cyanophyceae)</b>															
<i>Anabaena lemmermannii</i>	9.4	849		5.8	41	0.3	28	<i>Dolichospermum c.f. lemmermannii</i>	(formerly; <i>Anabaena c.f. lemmermannii</i> )	0.1	10	0.1	11		
<i>Pseudanabaena limnetica</i>	0.0	0		0.0	0	1.0	19	<i>Pseudanabaena sp.</i>	(formerly; <i>Dolichospermum planctonicum</i> )	0.0	0	0.0	0		
<i>Anabaena planktonica</i>	0.2	88		0.0	0	0.0	0	<i>Anabaena planktonica</i>	(formerly; <i>Anabaena sp.</i> )	0.0	0	0.0	0		
<i>Anabaena</i> sp.	2.1	188		0.3	23	0.5	46	<i>Dolichospermum circinalis</i>	(formerly; <i>Anabaena circinalis</i> )	0.0	0	0.0	0		
<i>Anabaena circinalis</i>	0.0	0		0.0	0	0.0	0	<i>Chroococcus</i> sp.	0.0	0	0.0	0			
<i>Chroococcus</i> sp.	0.1	1		0.0	0	0.0	0	<i>Microcystis</i> sp.	0.0	0	2.5	53			
<i>Microcystis</i> sp.	0.0	0		0.0	0	0.0	0	<i>Leptolyngbya</i> sp.	0.0	0	120.0	1320			
<i>Leptolyngbya</i> sp.	0.6	6		0.1	2	0.0	0	<i>Snowella</i> sp.	3.3	83	222.9	5572			
<i>Snowella</i> sp.	0.1	3		0.0	0	0.0	0			0.0	0				
<b>Greens (Chlorophyceae)</b>															
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus</i> <i>falcatus</i>	14	590		42	1744	42	1750	<i>Monoraphidium</i> sp. / <i>Ankistrodesmus</i> <i>falcatus</i>	24	1022	225	9459			
<i>Stichococcus contortus</i>	0	0		3	53	0	0	<i>Stichococcus contortus</i>	19	351	63	1141			
<i>Botryococcus braunii</i>	0.0	15954		0.0	14315	0.0	30946	<i>Botryococcus braunii</i> (colonies)	0.0	0	0.0	205716			
<i>Chlamydomonas</i> sp.	0	0		0	0	0	0	<i>Chlamydomonas</i> sp.	0	0	0	0			
<i>Elakothrix gelatinosa</i>	0	0		0	0	0	0	<i>Elakothrix gelatinosa</i>	1	114	8	819			
<i>Eudorina elegans</i>	0	0		0	0	0	0	<i>Eudorina elegans</i>	0	0	0	0			
<i>Nephrocystum lunatum</i>	0	0		0	0	0	0	<i>Nephrocystum lunatum</i>	0	0	0	0			
<i>Ocysts</i> sp.	0	0		4	498	0	0	<i>Ocysts</i> sp.	15	2151	0	0			
<i>Tetradon</i> <i>gracile</i>	0	0		0	0	0	0	<i>Tetradon</i> <i>gracile</i>	0	0	0	0			
<i>Paulschulzia</i> sp.	0	0		0	0	0	0	<i>Paulschulzia</i> sp.	0	0	0	0			
<i>Dictyosphaerium</i> sp.	0	0		0	0	0	0	<i>Dictyosphaerium</i>	0	0	12	295			
<i>Crucigeniella</i> sp.	36	2358		11	722	9	598	<i>Crucigeniella</i> sp.	2	141	0	0			
<b>Diatoms (Bacillariophyceae)</b>															
<i>Asterionella formosa</i>	10	2785		22	6143	55	15299	<i>Asterionella formosa</i>	366	102400	215	60333			
<i>Aulacoseira granulata</i>	7	2176		0	0	102	31529	<i>Aulacoseira granulata</i>	30	9392	18	5441			
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0		15	3955	0	0	<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	4	1014			
<i>Aulacoseira</i> sp.	0	0		0	0	0	0	<i>Aulacoseira</i> sp.	0	0	0	0			
<i>Cyclotella stelligera</i>	1	187		9	1404	2	346	<i>Cyclotella stelligera</i>	5	866	21	3432			
<i>Fragilaria crotonensis</i>	18	6492		35	12566	24	8716	<i>Fragilaria crotonensis</i>	0	0	34	12217			
<i>Nitzschia</i> sp.	1	456		2	913	2	844	<i>Nitzschia</i> sp.	5	2110	1	380			
<i>Synedra</i> sp.	0	0		0	0	0	0	<i>Synedra</i> sp.	1	213	0	0			
<i>Amphora</i> sp.	0	0		0	0	0	0	<i>Amphora</i> sp.	0	0	0	0			
<i>Cocconeis</i>	0	1		306	0	0	0	<i>Cocconeis</i>	0	0	0	0			
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>															
<i>Closterium aciculare</i>	0	0		1	350	0	0	<i>Closterium aciculare</i>	0	0	0	0			
<i>Closterium acutum</i> var. <i>variable</i>	0	0		0	0	1	204	<i>Closterium acutum</i> var. <i>variable</i>	0	0	1	368			
<b>Chrysophyta (Chrysophyceae)</b>															
<i>Dinobryon</i> sp.	8	449		0	0	0	0	<i>Dinobryon</i> sp.	0	0	0	0			
<i>Cryptomonas</i> sp.	0	0		1	84	1	78	<i>Cryptomonas</i> sp.	0	0	0	0			
<b>Dinoflagellates (Dinophyceae)</b>															
<i>Ceratium hirundinella</i>	0	0		0	0	0	0	<i>Ceratium hirundinella</i>	0	0	0	0			
<i>Gymnodinium</i> sp. 1	1	1287		1	644	2	1785	<i>Gymnodinium</i> sp. 1	0	0	0	0			
<i>Gymnodinium</i> sp. 2	0	0		0	2925	0	0	<i>Gymnodinium</i> sp. 2	0	0	0	0			
<i>Peridinium</i> sp.	0	0		0	0	0	0	<i>Peridinium</i> sp.	0	0	0	0			
<i>Gonyaulax</i> sp.	1	2340		1	1170	0	0	<i>Gonyaulax</i> sp.	0	0	0	0			
<b>Flagellates 5<math>\mu\text{m}</math></b>															
Flagellates < 5 $\mu\text{m}$ /unicells	67	2334		51	1781	76	2651	Flagellates < 5 $\mu\text{m}$	328	11494	193	6757			

Lake Taupo phytoplankton enumeration (10-m tube) 2007-08

Cell counts and biovolume

Cells per ml numbers may be affected by rounding

	Sample code	TZ2 8/08/2007	TZ2 8/08/2007	TZ4 23/08/2007	TZ4 23/08/2007	WF2 11/09/2007	WF2 11/09/2007	XX1 9/10/2007	XX1 9/10/2007	XX4 30/10/2007	XX4 30/10/2007	AM1 15/11/2007	AM1 15/11/2007	BM1 4/12/2007	BM1 4/12/2007	BM3 20/12/2007	BM3 20/12/2007	DT1 17/01/2008	DT1 17/01/2008	EO1 31/01/2008	EO1 31/01/2008	EO3 14/02/2008	EO3 14/02/2008	EO5 27/02/2008	EO5 27/02/2008		
Species composition by class																											
Blue greens (Cyanophyceae)		Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )	Cell (per ml)	Biovolume ( $\mu\text{m}^3$ )		
<i>Anabaena lemmermannii</i>	2	64	3	108	1	27	17	696	51	2100	18	725	1	27	29	1175	28.7	1175	21.3	875	25.0	1025	85.8	3518			
<i>Pseudanabaena limnetica</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	2	0.0	0	0.0	0	0.5	0	9		
<i>Chroococcus</i> sp.	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0		
<i>Microcystis</i> sp.	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0		
<i>c.f Rivularia</i> sp.	0	0	0	0	0	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Aphanodessus</i> sp.	0	0	1	15	0	1	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0		
<i>Aphanizomenon</i> sp.	2	30	0	0	0	0	0	0	0	0	0	2	32	3	48	4	78	0.0	0	0.0	0	0.0	0	4.0	76		
<i>Leptolyngbya</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	0.0	0	0.0	0	0.0	0	0.0	0		
Greens (Chlorophyceae)		Monoraphidium	sp./Ankistrodesmus	falcatus	20	639	17	695	3	123	6	247	10	418	28	1189	18	737	114	4785	66	2764	0	0	0	0	0
<i>Schizothrix</i> sp.	175	0	97	1749	25	453	0	0	0	0	0	0	0	0	3	53	0	0	0	0	0	0	0	0	0	0	
<i>Kirchneriella</i> contorta	0	0	0	0	56	1853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Bryotrococcus braunii</i>	0	0	0	0	4800	0	0	0	0	0	0	0	0	0	0	1100	1	92840	0	0	0	0	0	0	259720	0	
<i>Chlamydomonas</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Elatosothrix gelatinosa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	532	0	0	0	0	0	0	2	246		
<i>Eudorina elegans</i>	0	0	0	0	0	0	0	0	1	300	0	0	0	0	0	0	0	2	624	4	1108	0	0	3	749	0	
<i>Lagerheimia</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Oocystis</i> sp.	0	0	0	0	0	1	166	5	758	5	665	0	0	1	166	6	839	2	277	0	0	0	0	0	0	0	
<i>Planktothrix gelatinosa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Quadrigula lacustris</i>	0	0	5	788	3	480	0	0	0	0	0	0	0	0	0	3	554	0	0	0	0	0	0	0	0		
<i>Westella hoytoldei</i>	10	634	29	1909	0	0	0	0	9	608	0	0	0	0	0	0	0	17	1077	0	0	0	0	0	0	0	
<i>Paudschalia</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Diatoms (Bacillariophyceae)		<i>Asterionella</i> formosa	275	77123	292	81787	753	210974	124	34838	62	17363	15	4187	4	983	2	473	50	14060	11	3181	0	0	2	655	0
<i>Aulacoseira</i> granulata	0	0	0	0	13	3990	0	0	16	5078	3	993	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Aulacoseira</i> granulata var. angustissima	52	13436	11	2777	0	0	0	0	3	761	0	0	0	0	2	507	0	0	0	0	0	0	0	0	0		
<i>Cyclotella</i> stelligera	14	2184	11	1709	8	1310	9	1452	11	1685	0	0	0	0	0	1	156	0	0	0	0	0	0	0	0		
<i>Fragilaria crotonensis</i>	57	20419	27	9750	0	0	0	0	0	2	574	1	209	9	3324	19	6806	5	1743	0	0	13	4607	0			
<i>Nitzschia</i> sp.	0	0	5	2083	1	228	0	0	0	0	0	0	0	1	456	14	5596	1	380	0	0	0	2	684	0		
<i>Synechra</i> sp.	1	0	0	0	1	1638	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Small unknown diatom sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	60	0	0	0	0	0		
Desmids (Mesotaeniaceae, Desmidiaeae)		<i>Cladostelum aciculare</i>	0	0	0	0	0	160	0	0	1	320	1	350	1	506	0	0	0	0	0	0	0	0	0		
<i>Cladostelum aciculare</i> var. <i>variable</i>	1	551	1	201	1	221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Chrysophyta (Chrysophyceae)		<i>Dinobryon</i> sp.	21	1266	2	126	0	0	146	8633	297	17534	81	4789	76	4487	8	448	7	431	6	383	32	1915	73	4314	0
<i>Cryptomonas</i> sp.	0	0	1	77	0	0	1	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Mallomonas</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dinoflagellates (Dinophyceae)		<i>Gymnodinium</i> sp. 1	0	1463	0	0	0	1	3204	1	1755	0	0	1	1755	1	2532	0	0	6	17853	4	10820	16	49140	0	
		<i>Gymnodinium</i> sp. 2	0	12188	1	13350	0	0	6675	0	0	0	0	0	0	7313	3	63300	0	6094	0	0	0	3	73125	0	
Flagellates $< 5\mu\text{m}$ /unicells	153	6582	296	10354	112	3911	129	4504	93	3256	78	2729	125	4382	526	18403	83	2901	99	3465	39	1373	60	2109	0		

	Sample code	HT1 13/03/2008	HT1 13/03/2008	HT3 26/03/2008	KB1 17/04/2008	KB1 17/04/2008	LB1 7/05/2008	LB1 7/05/2008	LB3 22/05/2008	LB3 22/05/2008	MW1 5/06/2008	MW1 5/06/2008	MW3 18/06/2008	MW3 18/06/2008	OL1 1/07/2008	OL1 1/07/2008	OL3 15/07/2008	OL3 15/07/2008	QA2 7/08/2008	QA2 7/08/2008	QA4 20/08/2008	QA4 20/08/2008	QA4 20/08/2008	RL2 4/09/2008	RL2 4/09/2008			
	Sampling date	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)	Cell (per ml)	Biovolume (µm³)			
<b>Blue greens (Cyanophyceae)</b>																												
<i>Anabaena lemmermannii</i>	92	3778	7.0	288	56.6	2319	120.6	4946	2.2	91	1.1	46	1.7	71	12.2	500	9.8	403	0.8	32	0.2	7	0.9	37	0.0	0		
<i>Pseudanabaena limnetica</i>	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	2.8	53	0.3	5	0.0	0	0.0	0	0		
<i>Chroococcus</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0	0	0.0	0	0.0	0	0.0	0	0		
<i>Microcystis</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0		
<i>c. Rivularia</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Aphanothecce</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0		
<i>Aphanizomenon</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0		
<i>Leptolyngbya</i> sp.	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0	0	0.0	0	0.0	0	0.0	0	1.4	0.0	0		
<b>Greens (Chlorophyceae)</b>																												
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	0	0	0	0	0	0	5	197	0	0	0	0	0	0	188	7907	0	0	73	3047	73	3071	130	5479	0	0		
<i>Stichococcus contortus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	474	0	0		
<i>Kirchneriella contorta</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Botryococcus braunii</i>	0.1	469151	0	14435	0.04	259837	0	104870	0	28871	0	132806	0.0	3609	0	5774	0.1	226456	0.0	5413	0	0	0	0	0	17746	0	0
<i>Chlamydomonas</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Elaktothrix gelatinosa</i>	2	246	6	676	1	123	4	369	2	246	1	123	0	0	1	114	0	0	0	0	0	0	0	0	0	0		
<i>Eudorina elegans</i>	8	2097	0	0	0	0	0	0	0	0	0	11	2696	0	0	0	0	0	0	0	0	9	2246	0	0			
<i>Lagerheimia</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1797	0	0		
<i>Oocystis</i> sp.	0	0	0	0	0	1	166	5	665	2	332	0	0	0	6	914	0	0	5	665	7	997	0	0	0	0		
<i>Planktosphaeria gelatinosa</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1412	0		
<i>Quadrigula lacustris</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Westella botryoides</i>	0	0	0	0	0	0	0	15	951	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<i>Paulschulzia</i> sp.	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Diatoms (Bacillariophyceae)</b>																												
<i>Asterionella formosa</i>	19	5242	12	3276	5	1310	10	2785	28	7862	25	6880	22	6061	25	7043	102	28501	191	53399	79	22113	94	26208	0	0		
<i>Aulacoseira granulata</i>	0	0	0	0	0	0	0	2	725	12	3808	13	4171	2	725	0	0	35	10700	151	46788	0	0	18	5622	0	0	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	0	0	0	0	0	4	913	0	0	0	0	0	25	6388	0	0	0	0	57	14754	0	0	0	0	0	0
<i>Cyclotella stelligera</i>	0	0	0	0	0	0	0	3	468	1	187	2	374	1	94	4	562	1	94	1	187	12	1872	18	2902	0	0	
<i>Fragilaria crotonensis</i>	0	0	0	15	5445	4	1466	0	0	57	20315	61	21781	84	29948	46	16545	30	10890	18	6283	49	17592	59	20943	0	0	
<i>Nitzchia</i> sp.	1	228	1	342	3	1141	2	684	2	913	0	0	1	228	4	1369	4	1597	1	456	0	0	2	684	0	0		
<i>Synedra</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Small unknown diatom sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>																												
<i>Cladostelum aciculare</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1051	0	0	
<i>Cladostelum acutum</i> var. <i>variable</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	221	0	0	1	441	0	0	0	0	0	0	0	0
<b>Chrysophyta (Chrysophyceae)</b>																												
<i>Dinobryon</i> sp.	26	1519	2	104	4	242	8	483	8	466	9	518	0	0	9	518	0	0	0	0	0	0	0	0	20	1208	0	0
<i>Cryptomonas</i> sp.	1	84	0	0	1	84	1	168	1	84	2	337	0	0	2	337	0	0	0	0	0	0	0	0	0	0	0	0
<i>Mallomonas</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1053	0	0	0	0	0	0	0	0	0	0	0	0
<b>Dinoflagellates (Dinophyceae)</b>																												
<i>Gymnodinium</i> sp. 1	6	19305	42	126360	12	36855	5	1843	35	12285	5	1638	4	1229	0	0	6	2048	0	0	0	0	0	0	0	0	0	0
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0	0	0	0	0	1	29250	0	7313	0	0	1	14625	0	0	0	0	0	0	0	0	0	0
<b>Flagellates 5µm</b>																												
Flagellates < 5µm/unicells	57	1986	56	1945	73	2539	131	4586	47	1638	63	2191	111	3890	121	4238	115	4013	87	3030	207	7228	104	3645	0	0		

Lake Taupo phytoplankton dominance plus enumeration (10-m tube) 2006-07

Dominance by biovolume (rank 1 = dominant,...rank 10 = rare), plus cell counts and biovolume from May 2007

	Sample code Sampling date	EM8 26/09/2006	EM10 18/10/2006	EM13 1/11/2006	EM17 5/12/2007	EM20 14/12/2007	EM23 9/01/2007	EM27 8/02/2007	EM29 21/02/2007	EM31 21/03/2007	EM34 3/04/2007	EM36 19/04/2007	EM38 8/05/2007	EM40 22/05/07	EM40 22/05/07	EM42 14/06/07	EM42 14/06/07	EM42 14/06/07	RY2 27/06/07	RY2 27/06/07	RY2 18/07/2007	RY5 18/07/2007	RY5 18/07/2007				
<b>Species composition by class</b>																											
<b>Blue greens (Cyanophyceae)</b>	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Biovolume ( $\mu\text{m}^3$ )	cell (per ml)	Rank	Biovolume ( $\mu\text{m}^3$ )	cell (per ml)	Rank	Biovolume ( $\mu\text{m}^3$ )	cell (per ml)					
<i>Anabaena lemmermannii</i>	5	5	5	5	9	5	9	9	3	4	5	4	6	303	10	8	450	15	5	1091	36	4	3652	17			
<i>Anabaena</i> sp.														0	0		0	0	10	29	0	0	0	0			
<i>Aphanizomenon</i> sp.								8	8	7	7	9	10	10	5	0	0	0	0	0	0	0	0	1			
<i>Phormidium</i> sp.														0	0		0	0		0	0	0	0	0			
<b>Greens (Chlorophyceae)</b>																											
<i>Ankistrodesmus falcatus/ Schroederia</i> sp.																											
<i>Botryococcus braunii</i>	7	2	2	3	3	1	1	1	1	1	5	3	1	1014600	0	1	38448	1	9	120	5	0	0	0			
<i>Chlorosarcinopsis</i> sp.	10	10													6	342	4	0	0	0	0	0	0	0	0		
<i>Elakothrix gelatinosa</i>															0	0	0	0	0	0	0	0	0	0			
<i>Eudorina elegans</i>	9	9	10	10	10										10		157	7	0	0	0	10	21	1			
<i>Kirchneriella contorta</i>															0	0	0	0	0	0	0	0	0	0			
<i>Monoraphidium</i> sp/ <i>Ankistrodesmus falcatus</i>	10	10	10	10	10	10	10	10	8	8	9	7	5	561	19	2	20456	259	2	5061	46	5	2574	12			
<i>Oocytsis</i> sp.	7	8	9	9	9	10	7	7	10	10	10	9	9	43	1	6	3210	11	4	1605	5	9	293	1			
<i>Quadrigula lacustris</i>	9														0	0	0	0	0	0	0	0	0	0			
<i>Sizichococcus contortus</i>															0	0	0	0	0	7	534	4	6	1073			
<i>Westella botryoidea</i>	9	9	9	10	10	10	10	10							0	0	0	0	0	0	0	0	0	0			
<b>Diatoms (Bacillariophyceae)</b>																											
<i>Asterionella formosa</i>	2	2	6	4	4	4	4	5							0	0	6	3173	10	3	4414	14	2	25087	81		
<i>Aulacoseira granulata</i>	3	1	1	1	2	9	6	2	2	2	1				0	0	4	6760	22	1	7863	25	2	29167	94		
<i>Aulacoseira granulata</i> var. <i>angustissima</i>															0	0	0	0	0	0	0	0	0	0			
<i>Cyclotella stelligera</i>	5	5	9	7	6	6	5	6						2	3	5590	8	0	0	0	0	0	0	0	3		
<i>Fragilaria crotonensis</i>	1	4	7				6	7	6	6				7	4	2294	6	3	13382	37	10	33	0	1	109152	107	
<i>Gomphonema</i> sp.															5	5559	14	5	1042	3	7	952	2				
unknown diatom sp.	10	10	10	10	10	10	10	10	10	10	10	7	8		8	155	1	0	0	0	0	0	0	0	0		
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>																											
<i>Cladotrichum acutum</i>	9	10	10	9	9	7	8	8	10	10					0	0	7	1335	3	6	668	1	0	0	0		
<i>Cladotrichum acutum</i> var. <i>variable</i>	10	10	10	9	8	8	8	8						0	0	0	0	0	0	0	7	731	1	0	0		
<i>Mougeotia</i> sp.	10													0	0	0	0	0	0	0	0	0	0	0	0		
<i>Staurastrum</i> sp.	10	10					10							9	6		0	0	0	0	0	0	0	0	0		
<b>Chrysophyta (Chrysophyceae)</b>																											
<i>Cryptomonas</i> sp.	10	10	10				10	10	10	10					0	0	9	267	1	9	196	1	9	293	1		
<i>Dinobryon</i> sp.	9	3	3	2	1	2	6	8	3	5	2	1	7	256	1	0	0	0	0	0	0	0	0	0	0		
<b>Dinoflagellates (Dinophyceae)</b>															0	0	0	0	0	0	0	0	0	0	0		
<i>Ceratium hirundinella</i>	5	10	10	10	10	5	7	3	3	4	6	4		2	0	0	1	0	0	0	0	0	0	0	0		
<i>Gymnodinium</i> sp.														8		11748	1	0	0	0	0	3	4450	0	0	0	0
<i>Gymnodinium</i> sp. 2														0	0	0	0	0	0	0	0	0	0	0	0		
<b>Flagellates 5µm</b>																											
Flagellates < 5µm/unicells	3	6	8	6	6	6	2	4	5	4	3	4	4	2138	50	3	16227	381	1	7521	177	3	4133	97			

Lake Taupo phytoplankton species composition, cell numbers and biovolume ( $\mu\text{m}^3$ ) 2017-2018													
From Site A (Mid Lake) 1/5/2018													
	Surface	10m	20m	50m	100m	150m		Surface	10m	20m	50m	100m	150m
	DK1	DK2	DK3	DK6	DK11	DK16		DK1	DK2	DK3	DK6	DK11	DK16
	1/05/2018	1/05/2018	1/05/2018	1/05/2018	1/05/2018	1/05/2018		1/05/2018	1/05/2018	1/05/2018	1/05/2018	1/05/2018	1/05/2018
	Cell	Cell	Cell	Cell	Cell	Cell		Biovolume	Biovolume	Biovolume	Biovolume	Biovolume	Biovolume
	(per ml)		( $\mu\text{m}^3$ )										
<b>Blue greens (Cyanophyceae)</b>													
<i>Aphanizomenon sp.</i>	0.5	0	0	0	0	0		10	5	2	9	0	3
<i>Aphanocapsa sp.</i>	1.6	0	0	0	0	0		14	4	0	0	0	0
<i>Dolichospermum c.f lemmermannii</i> (formerly <i>Anabaena c.f lemmermannii</i> )	5.0	2	1	0	0	0		579	249	160	10	0	0
<i>Dolichospermum circinale</i>	0.1	1	0	0	0	0		23	109	12	23	0	0
<i>Dolichospermum planconicum</i>	0.4	1	0	0	0	0		62	224	0	26	75	0
<i>Pseudanabaena sp.</i>	0.0	1	0	0	2	0		0	12	0	4	30	6
<i>Woronichinia naegeliana</i>	0	0	0	0	0	0.31		0	0	0	0	0	0
<i>Botryococcus braunii</i> (colonies)	0	0	0	0	0	0		2884	7541	0	0	0	1700
<i>Crucigeniella sp.</i>	0	1	0	0	0	0		0	76	0	0	0	0
<i>Elakatothrix gelatinosa</i>	0	4	4	0	0	1		0	369	369	0	0	123
<i>Eudorina elegans</i>	0	25	14	0	0	0		0	6290	3594	0	0	0
<i>Chlamydoccapsa planconica</i>	0	0	9	0	5	2		0	0	749	0	374	187
<i>Lagerheimia sp.</i>	2	0	1	0	0	0		0	0	0	0	0	0
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>	33	23	30	47	11	6		1400	958	1278	1990	442	246
<i>Oocystis sp.</i>	8	6	8	8	1	0		1080	914	1080	1080	166	0
<i>Sphaerocystis schroeteri</i>	9	8	5	0	0	0		0	0	0	0	0	0
<i>Stichococcus contortus</i>	0	2	0	0	0	0		0	42	0	0	0	0
unidentified Colonial green	0	1	1	0	0	0		0	44	44	0	0	0
<i>Volvox aureus</i>	0	293	0	0	0	0		0	17550	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	1	6	5	0	1	1		328	1638	1310	0	164	328
<i>Aulacoseira granulata</i>	4	6	0	4	12	13		1088	1814	0	1269	3808	3990
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	0	0	0	8		0	0	0	0	0	1977
<i>Cocconeis</i>	1	0	0	0	0	0		306	0	0	0	0	0
<i>Cyclotella sp.</i>	8	3	9	3	1	2		1217	468	1404	468	187	374
<i>Epithemia sp.</i>	0	0	0	0	0	1		0	0	0	0	0	0
<i>Fragilaria crotonensis</i>	47	0	17	0	2	1		16754	0	6073	0	838	419
<i>Fragilaria sp.</i>	0	0	0	6	0	2		0	0	0	2304	0	628
<i>Lindavia sp.</i>	0	0	0	2	0	1		0	0	0	421	0	105
<i>Nitzschia sp.</i>	1	1	0	0	0	1		456	456	0	0	0	228
<i>Rhopalodia sp.</i>	0	0	0	0	0	1		0	0	0	0	0	0
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>													
<i>Cladotriopsis sp.</i>	1	0	0	2	1	0		424	0	0	635	424	0
<i>Staurastrum sp.</i>	0	1	0	1	0	0		0	807	0	807	0	0
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon sp.</i>	53	33	54	2	0	0		3141	1967	3175	104	0	0
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium sp.</i>	0	0	1	0	0	0		0	0	16380	0	0	0
<i>Gymnodinium sp.</i>	0	0	2	0	0	0		0	0	1931	0	0	0
<i>Peridinium sp.</i>	2	2	0	0	0	0		7020	7020	0	0	0	0
<b>Flagellates 5µm</b>													
<i>Cryptomonas sp.</i>	0	2	2	3	0	0		0	253	253	421	0	0
Flagellates < 5µm/unicells	87	63	53	12	9	4		6926	5054	4259	936	749	281

Lake Taupo phytoplankton species composition, cell numbers and biovolume ( $\mu\text{m}^3$ ) 2017-2018													
From Site A (Mid Lake) 14/11/2017													
	Surface	10m	20m	50m	100m	150m		Surface	10m	20m	50m	100m	150m
	QS1	QS2	QS3	QS6	QS11	QS16		14/11/2017	14/11/2017	14/11/2017	14/11/2017	14/11/2017	
	Cell	Cell	Cell	Cell	Cell	Cell		Biovolume	Biovolume	Biovolume	Biovolume	Biovolume	
	(per ml)		( $\mu\text{m}^3$ )										
<b>Blue greens (Cyanophyceae)</b>													
<i>Aphanizomenon</i> sp.	0.1	0	0	0	0	0		2	0	0	0	0	
<i>Dolichospermum c.f lemmermannii</i> (formerly <i>Anabaena c.f lemmermannii</i> )	3.1	12	6	7	2	0		356	1431	638	836	283	
<i>Dolichospermum planctonicum</i>	0.1	0	0	0	0	0		13	0	0	0	0	
<i>Dolichospermum</i> sp. (formerly <i>Anabaena</i> sp.)	3.0	0	3	0	0	0		456	36	450	0	0	
<i>Pseudanabaena</i> sp.	0.0	0	0	0	0	1		0	0	0	0	3	
<b>Greens (Chlorophyceae)</b>													
<i>Crucigeniella</i> sp	0	2	0	0	0	0		0	152	0	0	0	
<i>Elakatothrix gelatinosa</i>	0	1	4	1	1	0		0	123	430	123	61	
<i>Eudorina elegans</i>	0	0	9	16	0	0		0	0	2396	4193	0	
<i>Lagerheimia</i> sp.	6	4	5	0	0	0		0	0	0	0	0	
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	11	8	8	27	4	4		442	344	319	1155	172	
<i>Oocystis</i> sp.	44	37	39	25	4	6		6230	5233	5483	3489	498	
<i>Sphaerocystis schroeteri</i>	7	0	7	0	0	2		0	0	0	0	0	
<i>Stichococcus contortus</i>	0	0	0	7	4	2		0	0	0	126	74	
<i>Tetraedron gracile</i>	1	0	1	4	4	2		129	0	64	450	386	
unidentified Colonial green	0	0	0	1	0	0		0	0	0	44	0	
<i>Volvox aureus</i>	0	0	0	176	0	0		0	0	0	10530	0	
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	9	16	16	39	11	5		2621	4586	4586	10811	3112	
<i>Aulacoseira granulata</i>	4	36	43	107	94	95		1088	11244	13420	33187	29016	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	19	11	25	14	34		0	5019	2738	6540	3650	
<i>Cyclotella</i> sp.	1	1	3	3	1	2		187	187	468	468	94	
<i>Epithemia</i> sp.	0	0	1	1	0	0		0	0	0	0	0	
<i>Fragilaria crotonensis</i>	53	67	46	35	0	25		18849	24084	16336	12356	0	
<i>Fragilaria</i> sp.	0	0	0	13	0	2		0	0	0	4817	0	
<i>Lindavia</i> sp.	1	2	1	1	0	0		771	1157	771	386	0	
<i>Nitzschia</i> sp.	2	2	3	2	1	1		684	684	1141	684	228	
<i>Rhoicosphenia</i> sp.	0	1	0	1	0	0		0	0	0	0	0	
<i>Rhopalodia</i> sp.	0	0	1	0	0	0		0	0	0	0	0	
Small unknown diatom sp.	0	0	0	1	0	1		0	0	0	64	0	
<i>Synedra</i> sp.	2	1	1	2	1	2		691	230	461	691	230	
<b>Desmids (Mesotaeniaceae, Desmidaceae)</b>													
<i>Closteriopsis</i> sp.	1	2	1	4	2	2		212	635	212	1482	847	
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon</i> sp.	38	68	63	19	0	0		2243	4038	3728	1139	0	
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium</i> sp.	0	1	0	0	0	0		0	16380	0	0	0	
<i>Peridinium</i> sp.	4	0	0	0	0	0		14040	0	0	0	0	
<b>Flagellates 5<math>\mu\text{m}</math></b>													
<i>Cryptomonas</i> sp.	0	1	0	1	1	0		0	168	0	168	84	
Flagellates < 5 $\mu\text{m}$ /unicells	22	41	25	20	10	9		1778	3276	1966	1638	796	

Lake Taupo phytoplankton species composition, cell numbers and biovolume ( $\mu\text{m}^3$ ) 2016-2017													
From Site A (Mid Lake) 18/4/2017													
	Surface	10m	20m	50m	100m	150m		Surface	10m	20m	50m	100m	150m
	ZT1	ZT2	ZT3	ZT6	ZT11	ZT16		ZT1	ZT2	ZT3	ZT6	ZT11	ZT16
	18/04/2017	18/04/2017	18/04/2017	18/04/2017	18/04/2017	18/04/2017		18/04/2017	18/04/2017	18/04/2017	18/04/2017	18/04/2017	18/04/2017
	Cell	Cell	Cell	Cell	Cell	Cell		Biovolume	Biovolume	Biovolume	Biovolume	Biovolume	Biovolume
	(per ml)		( $\mu\text{m}^3$ )										
2016-17 list													
Blue greens (Cyanophyceae)													
<i>Dolichospermum c.f. lemmermannii</i> (formerly <i>Anabaena c.f. lemmermannii</i> )	15.9	9.8	7.1	1.4	0.0	0.0		1844	1131	828	162	0	0
<i>Dolichospermum planctonicum</i>	0.0	0.0	1.0	0.0	0.0	0.0		0	0	395	0	0	0
<i>Aphanizomenon</i> sp.	0.0	0.0	0.0	0.5	0.0	0.5		0	0	0	10	0	10
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.7	0.2	1.6		0	0	0	14	5	31
Greens (Chlorophyceae)													
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	13	6	9	30	0	4		565	270	369	1253	0	147
<i>Stichococcus contortus</i>	19	20	23	0	4	5		337	358	421	0	63	84
<i>Botryococcus braunii</i> (colonies)	0.0	0.0	0.0	0.0	0.0	0.0		0	0	0	2509	0	0
<i>Crucigeniella</i> sp	0	0	4	0	0	0		0	0	228	0	0	0
<i>Dictyosphaerium</i>	40	32	28	0	0	0		2188	1737	1544	0	0	0
<i>Elakothothrix gelatinosa</i>	12	6	11	2	1	0		1229	676	1106	184	123	0
<i>Oocystis</i> sp.	43	32	53	7	2	4		6064	4569	7559	997	249	581
<i>Scenedesmus</i> sp.	0	0	0	0	2	0		0	0	0	0	122	0
<i>Sphaerocystis schroeteri</i>	2	6	16	0	0	0		0	0	0	0	0	0
<i>Tetraedon gracile</i>	0	0	1	1	1	0		0	0	129	129	64	0
<i>unidentified Colonial green</i>	0	0	0	1	0	1		0	0	0	0	0	0
Diatoms (Bacillariophyceae)													
<i>Asterionella formosa</i>	0	5	2	1	0	7		0	1310	655	328	0	1966
<i>Aulacoseira granulata</i>	0	0	0	0	6	8		0	0	0	0	1814	2539
<i>Cocconeis</i>	0	0	0	0	0	1		0	0	0	0	0	306
<i>Cyclotella stelligera</i>	9	7	14	9	1	2		1498	1123	2246	1404	187	281
<i>Fragilaria crotonensis</i>	53	54	84	4	4	4		18849	19268	30158	1466	1257	1257
<i>Nitzschia</i> sp.	4	4	8	15	1	1		1597	1597	2966	5704	456	228
<i>Synedra</i> sp.	1	2	1	1	0	0		230	691	230	461	0	0
<i>Eunotia</i> sp.	0	0	0	1	0	0		0	0	0	0	0	0
<i>Small unknown diatom</i> sp.	0	0	0	1	0	1		0	0	0	64	0	64
Desmids (Mesotaeniaceae, Desmidiaceae)													
<i>Closteriopsis</i> sp.	0	0	0	0	0	1		0	0	0	0	0	0
<i>Staurastrum</i> sp.	0	0	0	0	0	0		0	0	0	0	0	14
Chrysophyta (Chrysophyceae)													
<i>Dinobryon</i> sp.	5	45	12	0	0	0		311	2658	725	0	0	0
<i>Cryptomonas</i> sp.	0	2	0	0	1	0		0	253	0	0	84	0
Dinoflagellates (Dinophyceae)													
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		0	840	630	0	0	0
<i>Gymnodinium</i> sp. 1	1	0	0	0	0	0		1287	0	0	0	0	0
<i>Peridinium</i> sp.	1	1	1	0	1	0		4680	2340	4680	0	2340	0
Flagellates 5µm													
<i>Flagellates &lt; 5µm/unicells</i>	48	40	23	20	8	6		1679	1392	819	696	287	225

Lake Taupo phytoplankton species composition, cell numbers and biovolume ( $\mu\text{m}^3$ ) 2016-2017													
From Site A (Mid Lake) 8/12/2016													
	Surface QI1 8/12/2016	10m QI2 8/12/2016	20m QI3 8/12/2016	50m QI6 8/12/2016	100m QI11 8/12/2016	150m QI16 8/12/2016		Surface QI1 8/12/2016	10m QI2 8/12/2016	20m QI3 8/12/2016	50m QI6 8/12/2016	100m QI11 8/12/2016	150m QI16 8/12/2016
	Cell (per ml)	Cell (per ml)	Cell (per ml)	Cell (per ml)	Cell (per ml)	Cell (per ml)		Biovolume ( $\mu\text{m}^3$ )					
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> (formerly <i>Anabaena c.f. lemmermannii</i> )	3.8	3.1	18.2	47.1	0.0	0.0		443	358	2114	5466	0	0
<b>Greens (Chlorophyceae)</b>													
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	4	19	9	8	3	2		182	811	369	319	123	74
<i>Stichococcus contortus</i>	2	0	2	0	9	0		39	0	32	0	168	0
<i>Botryococcus braunii</i> (colonies)	0.0	0.0	0.0	0.0	0.0	0.0		0	0	2509	0	0	0
<i>Crucigeniella</i> sp	0	0	0	1	0	0		0	0	0	76	0	0
<i>Dictyosphaerium</i>	0	0	5	0	0	0		0	0	257	0	0	0
<i>Elakothrix gelatinosa</i>	1	2	1	1	0	0		114	246	123	123	0	0
<i>Eudorina elegans</i>	0	0	9	0	0	0		0	0	2246	0	0	0
<i>Oocytsis</i> sp.	14	22	21	5	3	4		1921	3074	2991	665	415	581
<i>Sphaerocystis schroeteri</i>	97	100	45	18	0	0		0	0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	32	11	20	52	10	11		9089	3112	5569	14578	2785	3112
<i>Aulacoseira granulata</i>	0	8	11	29	13	16		0	2539	3446	8886	4171	5078
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	2	0	6	6	10		0	456	0	1673	1673	2586
<i>Cyclotella stelligera</i>	19	19	21	17	7	8		3030	2995	3370	2714	1123	1217
<i>Fragilaria crotonensis</i>	95	3	63	27	19	6		34087	1047	22618	9634	6702	2304
<i>Fragilaria</i> sp.	0	0	0	0	0	2		0	0	0	0	0	838
<i>Nitzschia</i> sp.	0	1	1	1	1	0		0	456	228	456	228	0
Small unknown diatom sp.	0	0	0	1	0	0		0	0	0	64	0	0
<b>Desmids (Mesotaeniaceae, Desmidaceae)</b>													
<i>Closterium aciculare</i>	0	0	0	0	1	1		0	0	0	0	350	701
<i>Closterium acutum</i> var. <i>variable</i>	0	0	0	1	0	0		0	0	0	221	0	0
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon</i> sp.	39	15	37	0	0	0		2330	863	2174	0	0	0
<i>Cryptomonas</i> sp.	1	1	2	2	0	0		78	168	253	253	0	0
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		420	210	0	0	0	0
<i>Gymnodinium</i> sp. 1	1	0	0	0	0	1		595	0	0	0	0	644
<i>Peridinium</i> sp.	2	0	0	0	0	0		6492	0	0	0	0	0
<b>Flagellates 5<math>\mu\text{m}</math></b>													
Flagellates < 5 $\mu\text{m}$ /unicells	13	11	27	21	10	8		454	369	962	737	348	287

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2015-2016													
From Site A (Mid Lake) 2/11/2015													
	Surface UK1	10m UK2	20m UK3	50m UK6	100m UK11	150m UK16		Surface UK1	10m UK2	20m UK3	50m UK6	100m UK11	150m UK16
	2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015		2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015	2/11/2015
	Cell	Cell	Cell	Cell	Cell	Cell	Biovolume	Biovolume	Biovolume	Biovolume	Biovolume	Biovolume	Biovolume
	(per ml)	(per ml)	(per ml)	(per ml)	(per ml)	(per ml)	( $\mu\text{m}^3$ )						
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	1.7	1.0	10.8	0.0	0.0	0.0	194	115	0	0	0	0	0
<i>Dolichospermum sp.</i>	0.0	0.0	0.0	0.0	0.4	0.0	0	0	0	0	0	61	0
<i>Aphanocapsa sp.</i>	0.0	0.0	0.0	0.0	0.0	1.6	0	0	0	0	0	0	14
<i>Snowella sp.</i>	0.0	0.2	0.0	0.0	0.0	1.2	0	4	0	0	0	0	30
<b>Greens (Chlorophyceae)</b>													
<i>Monoraphidium sp./Ankistrodesmus falcatus</i>	49	51	32	62	38	39	2068	2138	1351	2604	1597	1646	
<i>Stichococcus contortus</i>	2	1	0	0	6	0	39	21	0	0	105	0	
<i>Botryococcus braunii</i> (colonies)	0.0	0.0	0.0	0.0	0.0	0.0	0	2509	0	2509	0	0	
<i>Crucigeniella sp</i>	3	5	2	4	5	1	211	304	152	228	304	76	
<i>Dictyosphaerium</i>	0	2	0	0	0	0	0	129	0	0	0	0	
<i>Elakothrix gelatinosa</i>	3	6	1	3	0	0	341	676	123	307	0	0	
<i>Eudorina elegans</i>	0	12	0	0	0	0	0	3145	0	0	0	0	
<i>Oocystis sp.</i>	22	16	13	12	5	6	3073	2243	1828	1661	748	914	
<i>Scenedesmus sp.</i>	0	0	0	0	5	0	0	0	0	0	243	0	
<i>Sphaerocystis schroeteri</i>	0	9	9	9	0	0	0	0	0	0	0	0	
<i>Asterionella formosa</i>	11	6	5	20	8	5	3030	1802	1310	5569	2129	1310	
<i>Aulacoseira granulata</i>	27	22	18	33	75	52	8218	6891	5622	10156	23213	16140	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	4	5	24	15	2	2	985	1369	6236	3803	608	608	
<i>Aulacoseria sp.</i>	0	0	0	8	0	0	0	0	0	0	0	0	
<i>Cyclotella stelligera</i>	4	6	6	8	10	9	692	936	936	1217	1591	1404	
<i>Fragilaria crotonensis</i>	0	34	0	7	9	17	0	12147	0	2513	3351	6073	
<i>Fragilaria sp.</i>	1	0	1	0	0	0	387	0	209	0	0	0	
<i>Nitzschia sp.</i>	0	0	0	4	2	1	0	0	0	1597	913	228	
<i>Synedra sp.</i>	1	0	0	0	2	2	213	0	0	0	691	691	
<i>Amphora sp.</i>	0	0	0	0	0	1	0	0	0	0	0	306	
<i>Eunotia sp.</i>	0	0	0	0	0	1	0	0	0	0	0	0	
<b>Small unknown diatom sp.</b>	0	1	1	1	0	0	0	129	64	64	0	0	
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>													
<i>Cladophora acutum</i> var. <i>variable</i>	1	0	1	0	0	1	204	0	221	0	0	441	
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon sp.</i>	52	46	21	12	0	0	3096	2727	1243	725	0	0	
<i>Cryptomonas sp.</i>	0	0	1	1	2	0	0	0	84	168	253	0	
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium hirundinella</i>	0	0	0	0	0	0	0	0	0	420	0	0	
<i>Gymnodinium sp. 1</i>	0	0	0	0	0	1	0	0	0	0	0	644	
<i>Peridinium sp.</i>	0	1	0	0	0	0	0	2340	0	0	0	0	
<b>Flagellates 5μm</b>													
<b>Flagellates &lt; 5μm/unicells</b>	42	42	42	26	6	7	1458	1474	1474	921	225	246	

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2014-2015													
From Site A (Mid Lake) 25/4/2015													
	Surface JS1 22/04/2015	10m JS2 22/04/2015	20m JS3 22/04/2015	50m JS6 22/04/2015	100m JS11 22/04/2015	150m JS16 22/04/2015		Surface JS1 22/04/2015	10m JS2 22/04/2015	20m JS3 22/04/2015	50m JS6 22/04/2015	100m JS11 22/04/2015	150m JS16 22/04/2015
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> (formerly <i>Anabaena c.f. lemmermannii</i> )	7.9	9.8	1.1	0.5	0.0	0.2		913	1131	0	58	5	27
<i>Leptolyngbya</i> sp.	0.0	0.0	6.6	0.0	0.0	0.0		0	0	73	0	0	0
<i>Dolichospermum</i> sp.	6.9	0.3	0.0	0.0	0.0	0.0		1101	53	0	0	0	0
<b>Greens (Chlorophyceae)</b>													
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	7	11	13	63	23	6		295	467	565	2654	983	246
<i>Stichococcus contortus</i>	0	14	9	16	9	0		0	253	168	295	168	0
<i>Botryococcus braunii</i> (colonies)	0	0.0	0.0	0.0	0.0	0.0		0	0	0	18152	18152	0
<i>Chlamydomonas</i> sp.	0	0	1	0	1	1		0	0	246	0	123	123
<i>Crucigeniella</i> sp.	0	1	0	2	1	0		0	76	0	152	76	0
<i>Elakothrix gelatinosa</i>	5	1	1	0	0	0		553	123	123	0	0	0
<i>Eudorina elegans</i>	6	0	14	0	0	0		1647	0	3594	0	0	0
<i>Oocystis</i> sp.	10	5	5	9	2	2		1412	748	665	1246	332	332
<i>Sphaerocystis schroeteri</i>	19	5	5	15	12	0		0	0	0	0	0	0
unidentified Colonial green	0	0	0	1	0	0		0	0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	0	4	0	16	10	22		0	1147	0	4423	2785	6224
<i>Aulacoseira granulata</i>	0	6	7	2	6	22		0	1814	2176	725	1995	6891
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	0	0	0	9		0	0	0	0	0	2434
<i>Cocconeis</i>	0	0	0	0	0	1		0	0	0	0	0	612
<i>Cyclotella stelligera</i>	2	1	3	1	2	10		374	187	468	187	281	1591
<i>Fragilaria crotonensis</i>	2	0	0	0	0	4		838	0	0	0	0	1466
<i>Fragilaria</i> sp.	0	15	0	0	0	0		0	5236	0	0	0	0
<i>Nitzschia</i> sp.	6	4	5	0	3	2		2510	1369	2053	0	1141	913
<i>Synedra</i> sp.	0	0	1	4	4	1		0	0	230	1383	1383	461
<i>Amphora</i> sp.	1	0	0	0	0	0		306	0	0	0	0	0
Small unknown diatom sp.	1	0	1	1	1	0		64	0	129	64	64	0
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>													
<i>Closterium acutum</i> var. <i>variable</i>	1	0	0	2	3	1		221	0	0	662	1103	441
<i>Staurastrum</i> sp.	0	0	0	0	0	0		0	0	0	14	0	0
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon</i> sp.	0	5	0	0	0	0		0	276	0	0	0	0
<i>Cryptomonas</i> sp.	0	0	1	3	1	1		0	0	168	421	84	84
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		0	210	210	0	0	0
<i>Gymnodinium</i> sp. 1	3	2	3	1	1	0		3218	2574	3218	1287	644	0
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0		0	0	0	0	0	0
<i>Peridinium</i> sp.	4	2	6	7	0	0		16380	7020	25740	28080	0	0
<b>Flagellates 5μm</b>													
Flagellates <5μm/unicells	35	26	30	43	13	15		1229	921	1044	1495	471	512

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2014-2015																	
From Site A (Mid Lake) 25/11/2014																	
	Surface	10m	20m	50m	100m	150m		Surface	10m	20m	50m	100m	150m				
	CK1	CK2	CK3	CK6	CK11	CK16		CK1	CK2	CK3	CK6	CK11	CK16				
	25/11/2014	25/11/2014	25/11/2014	25/11/2014	25/11/2014	25/11/2014		25/11/2014	25/11/2014	25/11/2014	25/11/2014	25/11/2014	25/11/2014				
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$				
Blue greens (Cyanophyceae)																	
<i>Dolichospermum c.f. lemmermannii</i> (formerly <i>Anabaena c.f. lemmermannii</i> )	11.9	30.5	33.3	10.4	0.0	0.0		1379	3543	3863	1211	0	0				
Greens (Chlorophyceae)																	
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	11	15	14	22	13	13		477	614	590	909	541	541				
<i>Stichococcus contortus</i>	4	2	0	27	13	9		78	42	0	484	242	168				
<i>Botryococcus braunii</i> (colonies)	0.0	0.0	0.0	0.0	0.0	0.0		0	0	0	0	18152	18152				
<i>Crucigeniella</i> sp	2	0	4	1	2	2		141	0	228	76	152	152				
<i>Elakothrix gelatinosa</i>	0	3	1	0	0	0		0	307	123	0	0	0				
<i>Eudorina elegans</i>	0	0	5	0	0	0		0	0	1198	0	0	0				
<i>Ocycysis</i> sp.	9	8	7	6	5	1		1306	1163	997	831	748	166				
<i>Scenedesmus</i> sp.	0	0	5	0	0	0		0	0	243	0	0	0				
<i>Sphaerocystis schroeteri</i>	23	26	17	5	0	5		0	0	0	0	0	0				
Diatoms (Bacillariophyceae)																	
<i>Asterionella formosa</i>	8	16	13	11	3	2		2121	4586	3767	2948	819	655				
<i>Aulacoseira granulata</i>	0	14	14	41	40	72		0	4352	4352	12695	12332	22306				
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	2	22	7	0	3	7		563	5780	1825	0	761	1825				
<i>Coccconeis</i>	1	0	1	1	1	0		283	0	306	306	306	0				
<i>Cyclotella stelligera</i>	3	13	11	6	6	6		519	2153	1778	936	1030	936				
<i>Fragilaria crotonensis</i>	22	36	93	16	4	10		7941	12775	33299	5864	1257	3560				
<i>Nitzschia</i> sp.	2	3	1	0	1	1		633	1141	456	0	228	228				
<i>Synedra</i> sp.	1	1	1	2	1	1		213	230	461	922	230	461				
<i>Amphora</i> sp.	0	2	1	0	0	0		0	1224	306	0	0	0				
<i>Eunotia</i> sp.	0	0	1	0	0	0		0	0	0	0	0	0				
Small unknown diatom sp.	2	2	1	4	1	2		179	257	129	386	129	193				
Desmids (Mesotaeniaceae, Desmidaceae)																	
<i>Cladophora acutum</i> var. <i>variable</i>	0	0	0	1	1	1		0	0	0	441	221	441				
<i>Cerasterias staurastroides</i>	1	0	0	0	0	0		0	0	0	0	0	0				
Chrysophyta (Chrysophyceae)																	
<i>Dinobryon</i> sp.	101	145	82	11	0	0		5969	8560	4832	656	0	0				
<i>Cryptomonas</i> sp.	0	2	2	1	0	0		0	253	253	84	0	0				
Dinoflagellates (Dinophyceae)																	
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		0	210	420	0	0	0				
<i>Gymnodinium</i> sp. 1	1	0	0	1	0	1		1190	0	0	1287	0	644				
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0		0	0	0	0	0	0				
<i>Peridinium</i> sp.	3	2	2	0	1	0		10820	9360	9360	0	2340	0				
Flagellates 5 $\mu\text{m}$																	
Flagellates < 5 $\mu\text{m}$ /unicells	15	36	28	26	5	8		530	1269	983	901	164	266				

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2013-2014													
From Site A (Mid Lake) 9/04/2014		Surface RQ1 9/04/2014 Cells/ml	10m RQ2 9/04/2014 Cells/ml	20m RQ3 9/04/2014 Cells/ml	50m RQ6 9/04/2014 Cells/ml	100m RQ11 9/04/2014 Cells/ml	150m RQ16 9/04/2014 Cells/ml	Surface RQ1 9/04/2014 $\mu\text{m}^3$	10m RQ2 9/04/2014 $\mu\text{m}^3$	20m RQ3 9/04/2014 $\mu\text{m}^3$	50m RQ6 9/04/2014 $\mu\text{m}^3$	100m RQ11 9/04/2014 $\mu\text{m}^3$	150m RQ16 9/04/2014 $\mu\text{m}^3$
		9/04/2014	9/04/2014	9/04/2014	9/04/2014	9/04/2014	9/04/2014		9/04/2014	9/04/2014	9/04/2014	9/04/2014	9/04/2014
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )													
		15.3	18.7	24.2	2.2	0.0	0.4		1778	2174	2805	260	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0.0	0.0	0.0	0.0	0.0	3.4		0	0	0	0	0
<b>Greens (Chlorophyceae)</b>													
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>													
		1	3	1	31	4	1		45	123	49	1302	172
		Stichococcus contortus	0	0	0	7	9	0		0	0	0	126
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0.01	0.00	0.00	0.00	0.00	0.00		22337	0	0	0	0
		<i>Botryococcus braunii</i> (colonies)	Crucigeniella sp	Dictyosphaerium	Elakothrix gelatinosa	Oocysts sp.	Sphaerocystis schroeteri		141	0	152	152	76
		0	2	3	0	1	0		357	0	161	0	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0	0	1	0	0	0		0	0	123	0	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>													
		0	2	0	12	3	5		0	655	0	3440	819
		<i>Aulacoseira granulata</i>	0	0	5	4	5	4		0	0	1451	1269
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml			$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0	0	0	0	0	3		0	0	0	0	761
		<i>Aulacoseira granulata</i> var. <i>angustissima</i>	Cyclotella stelligera	Fragilaria crotonensis	Fragilaria sp.	Nitzschia sp.	Small unknown diatom sp.		433	842	842	749	94
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		75	87	207	104	21	30		26921	31205	73929	37279	7539
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0	0	0	6	0	0		0	0	0	2094	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0	1	1	0	0	0		0	456	228	0	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Desmids (Mesotaeniaceae, Desmidiaceae)</b>													
<i>Closterium acutum</i> var. <i>variable</i>													
		0	0	0	2	1	0		0	0	0	882	221
		<i>Chrysophyta</i> (Chrysophyceae)	Dinobryon sp.	Cryptomonas sp.									
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		989	0	621	0	0
		0	0	1	1	0	0		0	0	84	84	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium hirundinella</i>													
		0	0	0	0	0	0		0	0	210	0	0
		<i>Gymnodinium</i> sp. 1	0	1	2	0	0		0	1287	1931	0	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
		0	0	0	0	0	0		0	0	0	0	0
		<i>Gymnodinium</i> sp. 2	Peridinium sp.						4328	0	2340	2340	0
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Flagellates 5<math>\mu\text{m}</math></b>													
Flagellates < 5 $\mu\text{m}$ /unicells		24	29	37	17	9	9		833	1003	1290	594	328
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2013-2014													
From Site A (Mid Lake) 7/11/2013													
	Surface JK1	10m JK2	20m JK3	50m JK6	100m JK11	150m JK16		Surface JK1	10m JK2	20m JK3	50m JK6	100m JK11	150m JK16
	7/11/2013	7/11/2013	7/11/2013	7/11/2013	7/11/2013	7/11/2013		7/11/2013	7/11/2013	7/11/2013	7/11/2013	7/11/2013	7/11/2013
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> (formerly; <i>Anabaena c.f. lemmermannii</i> )	19.4	31.6	31.7	0.1	0.0	0.0		2249	3670	3680	48	0	0
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.0	1.8	2.3		0	0	0	0	35	44
<b>Greens (Chlorophyceae)</b>													
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	18	9	14	5	5	11		750	393	590	221	221	467
<i>Stichococcus contortus</i>	8	9	0	5	13	9		136	168	0	84	232	168
<i>Botryococcus braunii</i> (colonies)	0.00	0.00	0.01	0.01	0.00	0.00		0	0	18152	18152	0	0
<i>Chlamydomonas</i> sp.	0	0	0	1	0	0		0	0	0	123	0	0
<i>Dictyosphaerium</i>	0	9	0	0	0	0		0	515	0	0	0	0
<i>Eudorina elegans</i>	0	0	0	0	0	0		20	0	0	0	0	0
<i>Oocysts</i> sp.	13	25	13	10	3	5		1844	3572	1828	1412	415	748
<i>Scenedesmus</i> sp.	0	0	5	5	0	5		0	0	243	243	0	243
<i>Sphaerocystis schroeteri</i>	35	46	60	25	0	0		0	0	0	0	0	0
<i>Tetraedon gracile</i>	1	1	0	1	0	0		60	129	0	64	0	0
<i>Volvox aureus</i>	0	4	0	0	0	0		0	216	0	0	0	0
<i>unidentified Colonial green</i>	14	9	0	0	0	0		0	0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	29	22	40	5	6	0		8028	6061	11302	1474	1638	0
<i>Aulacoseira granulata</i>	29	27	17	85	39	43		8889	8523	5259	26477	12150	13420
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	2	0	6	13	11	13		422	0	1673	3346	2890	3346
<i>Cyclotella stelligera</i>	4	4	6	11	5	11		606	562	936	1685	749	1778
<i>Fragilaria crotonensis</i>	58	57	28	27	1	4		20724	20524	10053	9843	419	1257
<i>Fragilaria</i> sp.	0	16	0	0	7	0		0	5864	0	0	2513	0
<i>Nitzschia</i> sp.	5	11	1	2	1	1		1899	4335	456	913	456	228
<i>Synedra</i> sp.	1	0	1	2	1	0		426	0	230	922	230	0
<i>Eunotia</i> sp.	0	0	1	1	0	0		0	0	0	0	0	0
<i>Small unknown diatom</i> sp.	2	2	1	0	1	0		179	193	129	0	64	0
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>													
<i>Closterium acutum</i> var. <i>variable</i>	3	2	1	1	1	2		1224	662	441	441	441	662
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon</i> sp.	38	21	0	0	0	0		2234	1243	0	0	0	0
<i>Cryptomonas</i> sp.	0	2	5	4	1	2		0	337	674	505	168	253
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		0	210	210	420	0	0
<i>Gymnodinium</i> sp. 1	0	2	1	1	0	0		0	2574	644	644	0	0
<i>Peridinium</i> sp.	8	4	4	1	1	0		32460	16380	14040	2340	2340	0
<b>Flagellates 5<math>\mu\text{m}</math></b>													
<i>Flagellates &lt; 5<math>\mu\text{m}/unicells</math></i>	48	49	54	15	6	8		1685	1720	1884	532	225	287

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2012-2013											
From Site A (Mid Lake) 22/04/2013											
	Surface ZE1	10m ZE2	50m ZE6	100m ZE11	150m ZE16		Surface ZE1	10m ZE2	50m ZE6	100m ZE11	150m ZE16
	22/04/2013	22/04/2013	22/04/2013	22/04/2013	22/04/2013		22/04/2013	22/04/2013	22/04/2013	22/04/2013	22/04/2013
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>											
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	25.6	26.4	5.6	5.6	2.0		2968	3065	645	644	226
<i>Aphanocapsa</i> sp.	0.0	0.0	0.0	0.0	1.3		0	0	0	0	11
<i>Phormidium</i> sp.	0.0	0.0	0.0	0.0	0.2		0	0	0	0	5
<i>Pseudanabaena</i> sp.	0.3	0.0	0.0	0.0	2.4		5	0	0	0	45
<b>Greens (Chlorophyceae)</b>											
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	0	0	4	1	1		0	0	147	49	49
<i>Stichococcus contortus</i>	0	0	0	0	2		0	0	0	0	32
<i>Elakothrix gelatinosa</i>	8	5	0	0	1		795	491	0	0	61
<i>Oocysts</i> sp.	17	23	5	4	2		2458	3240	748	581	332
<i>Volvox aureus</i>	0	10	0	0	0		0	570	0	0	0
<i>unidentified Colonial green</i>	0	0	2	6	2		0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>					0						0
<i>Asterionella formosa</i>	0	0	8	0	2		0	0	2293	0	491
<i>Aulacoseira granulata</i>	3	6	1	6	8		1006	1995	363	1995	2539
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	4	6	1		0	0	913	1673	304
<i>Aulacoseria</i> sp.	5	0	0	0	0		0	0	0	0	0
<i>Cocconeis</i>	1	0	0	0	1		283	0	0	0	306
<i>Cyclotella stelligera</i>	0	1	2	1	1		0	94	281	187	94
<i>Fragilaria crotonensis</i>	15	11	2	19	5		5423	3770	838	6911	1675
<i>Fragilaria</i> sp.	0	0	9	0	0		0	0	3141	0	0
<i>Nitzschia</i> sp.	2	4	1	1	1		844	1369	456	228	456
<i>Synedra</i> sp.	0	1	0	0	1		0	230	0	0	230
<i>Amphora</i> sp.	0	1	1	0	1		0	306	612	0	306
<i>Small unknown diatom</i> sp.	2	1	1	0	1		179	129	129	0	64
<b>Desmids (Mesotaeniaceae, Desmidiaceae)</b>											
<i>Closterium acutum</i> var. <i>variable</i>	0	0	1	1	1		0	0	221	441	221
<b>Chrysophyta (Chrysophyceae)</b>											
<i>Dinobryon</i> sp.	88	61	0	1	0		5171	3624	0	69	0
<i>Cryptomonas</i> sp.	1	4	3	1	0		156	590	421	84	0
<b>Dinoflagellates (Dinophyceae)</b>											
<i>Ceratium hirundinella</i>	0	0	0	0	0		0	0	420	210	210
<i>Gymnodinium</i> sp. 1	1	0	0	0	0		1190	0	0	0	0
<i>Peridinium</i> sp.	2	2	0	0	1		8656	9360	0	0	2340
<b>Flagellates 5<math>\mu\text{m}</math></b>											
Flagellates < 5 $\mu\text{m}$ /unicells	31	42	16	8	9		1079	1474	553	266	307

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2012-2013													
From Site A (Mid Lake) 24/10/2012													
	Surface RF1	10m RF2	20m RF3	50m RF6	100m RF11	150m RF16		Surface RF1	10m RF2	20m RF3	50m RF6	100m RF11	150m RF16
	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012		24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$	Biovolume $\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	31.1	38.8	20.9	15.0	4.1	2.7		3610	4501	2429	1735	473	312
<i>Aphanocapsa</i> sp.	1.5	0.9	0.0	1.6	2.4	2.5		13	8	0	15	22	23
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.0	1.5	12.8		0	0	0	0	28	242
<b>Greens (Chlorophyceae)</b>				0						0			
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>				0									
<i>Monoraphidium</i> sp.	21	29	5	15	14	9		863	1229	197	614	590	393
<i>Stichococcus contortus</i>	2	0	5	0	0	0		29	0	84	0	0	0
<i>Botryococcus braunii</i> (colonies)	0.0	0.0	0.0	0.0	0.0	0.0		58590	0	0	51006	0	0
<i>Crucigeniella</i> sp	4	0	0	0	0	0		281	0	0	0	0	0
<i>Elakothrix gelatinosa</i>	2	2	2	6	2	0		227	184	246	614	246	0
<i>Eudorina elegans</i>	0	29	13	9	20	0		10	7488	3295	2396	5092	0
<i>Nephrocytium lunatum</i>	0	0	0	0	0	2		0	0	0	0	0	0
<i>Oocysts</i> sp.	5	11	5	17	4	5		768	1495	748	2409	581	748
<i>Scenedesmus</i> sp.	0	5	0	0	0	0		0	243	0	0	0	0
<i>Westella botryoides</i>	0	32	23	27	25	0		8	2053	1521	1749	1635	0
<i>unidentified Colonial green</i>	6	4	0	6	5	0		0	0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	104	101	147	85	107	122		29236	28337	41114	23915	29975	34234
<i>Aulacoseira granulata</i>	0	46	105	74	95	84		0	14327	32643	23031	29560	25933
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	13	32	16	40	14	4		3376	8366	4107	10495	3650	913
<i>Cyclotella stelligera</i>	6	4	2	7	5	10		952	562	374	1123	842	1591
<i>Fragilaria</i> sp.	0	1	0	0	0	0		0	209	0	0	0	0
<i>Nitzschia</i> sp.	0	0	1	1	1	2		0	0	228	228	456	913
<i>Cladophora acutum</i> var. <i>variable</i>	1	1	0	1	1	0		204	221	0	221	221	0
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon</i> sp.	34	39	34	50	6	16		2011	2313	2002	2968	380	966
<i>Cryptomonas</i> sp.	0	0	0	2	1	0		0	0	0	337	84	0
<b>Dinoflagellates (Dinophyceae)</b>			0							0			
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		0	420	0	210	420	0
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0		0	200	1600	400	2400	0
<b>Flagellates 5<math>\mu\text{m}</math></b>													
<i>Flagellates &lt; 5<math>\mu\text{m}/\text{unicells}</math></i>	28	147	148	109	68	82		985	5160	5180	3808	2396	2867

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2011-2012											
From Site A (Mid Lake) 10/04/2012		Surface HC1	10m HC2	50m HC6	100m HC11	150m HC16	Surface HC1	10m HC2	50m HC6	100m HC11	150m HC16
		10/04/2012	10/04/2012	10/04/2012	10/04/2012	10/04/2012	10/04/2012	10/04/2012	10/04/2012	10/04/2012	
		Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>											
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	16.66	5.5	0.8	0	0.3	1933	636	92	0	32	
<i>Anabaena planktonica</i>	0	0	1.1	0	0	0	0	439	0	0	
<i>Anabaena sp.</i>	0	0	0	0	0.6	0	0	0	0	51	
<i>Snowella sp.</i>	0	0	0.2	0.1	0	0	0	5	3	0	
<i>Phormidium sp.</i>	0	0	0.7	0	0.1	0	0	14	0	3	
<i>Aphanothecce sp.</i>	0	0.7	0	0	0	0	6	0	0	0	
<i>Pseudanabaena sp.</i>	2.8	0	0	0	0.2	54	0	0	0	3	
<b>Greens (Chlorophyceae)</b>											
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>	49	45	35	3	4	2039	1892	1474	123	147	
<i>Botryococcus braunii</i> (colonies)	0	0	0	0	0	0	38315	0	0	0	
<i>Dictyosphaerium</i>	0	0	0	0	0	0	10	7	0	0	
<i>Elakotothrix gelatinosa</i>	0	0	1	0	0	0	0	123	0	0	
<i>Eudorina elegans</i>	0	4	0	0	0	0	899	0	0	0	
<i>Nephrocytium lunatum</i>	0	2	0	0	0	0	0	0	0	0	
<i>Oocysts</i> sp.	7	8	6	0	1	997	1163	831	0	166	
<i>Scenedesmus</i> sp.	0	0	0	0	1	0	0	0	0	61	
<b>Diatoms (Bacillariophyceae)</b>											
<i>Asterionella formosa</i>	8	0	9	3	4	2293	0	2457	819	1147	
<i>Aulacoseira granulata</i>	0	0	9	0	15	0	0	2720	0	4534	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	4	0	2	17	0	1065	0	608	4411	
<i>Cyclotella stelligera</i>	1	0	1	0	1	94	0	187	0	187	
<i>Fragilaria crotonensis</i>	47	111	13	31	41	16754	39792	4817	11100	14660	
<i>Nitzschia</i> sp.	8	10	18	6	8	2966	3879	7073	2282	2966	
<i>Synedra</i> sp.	1	0	0	0	0	230	0	46	0	0	
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>											
<i>Cladophora aciculare</i>	0	0	0	0	1	0	0	0	0	350	
<i>Cladophora acutum</i> var. <i>variable</i>	1	1	1	2	1	221	221	221	662	441	
<b>Chrysophyta (Chrysophyceae)</b>											
<i>Dinobryon</i> sp.	11	20	5	0	0	621	1208	276	0	0	
<i>Cryptomonas</i> sp.	0	1	1	0	0	0	168	168	0	0	
<b>Dinoflagellates (Dinophyceae)</b>											
<i>Gymnodinium</i> sp. 1	1	2	0	0	0	644	2574	0	0	0	
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0	0	260	0	20	
<i>Gonyaulax</i> sp.	4	4	0	0	0	7020	7020	0	0	0	
<b>Flagellates 5<math>\mu\text{m}</math></b>											
Flagellates < 5 $\mu\text{m}$ /unicells	94	178	75	12	22	3276	6245	2641	410	778	

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2011-2012													
From Site A (Mid Lake) 25/10/2011													
	Surface ZH1	10m ZH2	20m ZH16	50m ZH3	100m ZH6	150m ZH11		Surface ZH1	10m ZH2	20m ZH16	50m ZH3	100m ZH6	150m ZH11
	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011		25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>													
<i>Dolichospermum c.f. lemmermannii</i> <i>(formally; Anabaena c.f. lemmermannii)</i>	4.1	0.0	0.0	4.6	0.0	0.1		478	0	0	529	0	10
<b>Greens (Chlorophyceae)</b>													
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus</i> <i>falcatus</i>	0	1	3	3	27	3		0	25	123	123	1155	123
<i>Stichococcus contortus</i>	0	0	0	0	36	0		0	0	0	0	653	0
<i>Botryococcus braunii</i> (colonies)	0.0	0.0	0.0	0.0	0.0	0.0		0	18152	0	0	0	18152
<i>Dictyosphaerium</i>	0	0	0	2	0	0		0	0	0	129	0	0
<i>Elakothrix gelatinosa</i>	1	1	0	2	2	1		114	123	0	246	184	123
<i>Oocystis</i> sp.	5	2	0	3	4	5		768	332	0	415	498	665
<i>Sphaerocystis schroeteri</i>	0	0	0	0	24	10		0	0	0	0	0	0
<i>unidentified Colonial green</i>	4	2	0	2	2	0		0	0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>													
<i>Asterionella formosa</i>	4	4	0	2	9	6		1060	1147	0	655	2621	1802
<i>Aulacoseira granulata</i>	6	6	11	23	25	16		1845	1995	3446	7073	7617	5078
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	17	24	11	26	30	20		4501	6236	2738	6692	7757	5171
<i>Cocconeis</i>	0	1	0	0	0	0		0	306	0	0	0	0
<i>Cyclotella stelligera</i>	10	7	5	6	14	11		1645	1123	842	1030	2246	1685
<i>Fragilaria crotonensis</i>	13	18	0	31	20	11		4648	6283	0	11100	7121	3770
<i>Nitzschia</i> sp.	1	1	1	0	2	3		422	456	228	0	913	1141
<i>Synedra</i> sp.	0	0	1	1	1	2		0	0	230	230	461	922
<i>Amphora</i> sp.	0	0	1	0	0	1		0	0	306	0	0	306
<i>Small unknown diatom</i> sp.	0	0	0	1	1	1		0	0	0	129	64	129
<b>Desmids (Mesotaeniaceae, Desmidiaceae)</b>													
<i>Closterium acutum</i> var. <i>variable</i>	1	0	2	1	1	0		204	0	662	221	221	0
<b>Chrysophyta (Chrysophyceae)</b>													
<i>Dinobryon</i> sp.	14	32	0	30	12	0		798	1898	0	1795	725	0
<i>Cryptomonas</i> sp.	0	0	0	2	1	1		0	0	0	337	168	168
<b>Dinoflagellates (Dinophyceae)</b>													
<i>Ceratium hirundinella</i>	0	0	0	0	0	0		210	0	0	210	0	0
<b>Flagellates 5<math>\mu\text{m}</math></b>													
<i>Flagellates &lt; 5<math>\mu\text{m}</math>/unicells</i>	23	25	11	24	22	8		795	880	389	839	778	287

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2010-2011												
From Site A (Mid Lake) 10/11/2010												
Sample code Depth	KD1	KD2	KD3	KD6	KD11	KD16	KD1	KD2	KD3	KD6	KD11	KD16
	Surface	10m	20m	50m	100m	150m	Surface	10m	20m	50m	100m	150m
	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
Blue greens (Cyanophyceae)												
<i>Anabaena c.f. lemmermannii</i>	11.4	48.7	25.5	6.1	0.0	0.0	1023	4387	2293	547	0	0
<i>Aphanocapsa</i> sp.	0.0	0.0	0.0	0.0	0.0	8.2	0	0	0	0	0	74
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.0	0.1	40.6	0	0	0	0	0	772
Greens (Chlorophyceae)												
<i>Actinastrum hantzschii</i>	0	0	0.0	0	0	0.2	0	0	0	0	0	0
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	382	539	235	115	38	0.4	16042	22631	9884	4817	1593	15
<i>Stichococcus contortus</i>	0	0	0	18	9	0.0	0	0	0	321	160	0
<i>Botryococcus braunii</i> (colonies)	0.0	0	0	0	0	0	0	0	0	0	110	0
<i>Dictyosphaerium</i> sp.	1	20	2	9	0	0	0	0	0	0	0	0
<i>Eudorina elegans</i>	1	1	1	1	0	0	277	150	138	300	0	0
<i>Oocystsia</i> sp.	4	2	2	9	2	0	615	332	307	1246	229	0
<i>Scenedesmus</i> sp.	0	2	0	2	0	10	0	122	0	122	0	504
Diatoms (Bacillariophyceae)												
<i>Asterionella formosa</i>	102	129	73	104	10	6	28630	36036	20450	29156	2711	1582
<i>Aulacoseira granulata</i>	18	137	76	235	88	140	5534	42436	23479	72903	27390	43274
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	0	18	5	0	0	0	0	4715	1259	0
<i>Cyclotella stelligera</i>	2	2	2	4	0	4	346	374	346	655	0	581
<i>Fragilaria crotonensis</i>	16	15	6	4	0	0	5810	5236	2130	1257	0	0
<i>Nitzschia</i> sp.	0	5	3	2	4	4	0	1825	1266	684	1573	1731
<i>Synedra</i> sp.	3	0	0	1	1	0	1279	0	0	461	318	0
Desmids (Mesotaeniaceae, Desmidiaceae)												
<i>Closterium acutum</i> var. <i>variable</i>	0	0	0	2	0	1	0	0	0	662	152	456
<i>Mougeotia</i> sp.	0	0	0	2	0	0	0	0	0	0	0	0
<i>Staurastrum tangaroaii</i>	0	1	1	0	0	0	0	0	0	0	0	0
Chrysophyta (Chrysophyceae)												
<i>Dinobryon</i> sp.	62	191	145	13	0	0	3639	11252	8554	759	0	0
<i>Cryptomonas</i> sp.	0	0	0	1	1	0	0	0	0	168	116	0
Dinoflagellates (Dinophyceae)												
<i>Gymnodinium</i> sp. 1	0	1	1	0	0	1	0	644	1190	0	0	888
<i>Gymnodinium</i> sp. 2	0	0	1	1	0	0	0	0	27050	14625	0	0
<i>Gonyaulax</i> sp.	207	2	4	0	0	0	413324	4680	7574	0	0	0
Flagellates 5 $\mu\text{m}$												
Flagellates < 5 $\mu\text{m}$ /unicells	214	205	188	147	26	28	7498	7166	6589	5160	918	988

Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2010-2011											
From Site A (Mid Lake) 13/04/2011											
Sample code	RL1	RL2	RL6	RL11	RL16		RL1	RL2	RL6	RL11	RL16
Depth	0m	10m	50m	100m	150m		0m	10m	50m	100m	150m
	13/04/2011	13/04/2011	13/04/2011	13/04/2011	13/04/2011		13/04/2011	13/04/2011	13/04/2011	13/04/2011	13/04/2011
	Cells/ml	Cells/ml	Cells/ml	Cells/ml	Cells/ml		$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$	$\mu\text{m}^3$
<b>Blue greens (Cyanophyceae)</b>											
<i>Dolichospermum c.f. lemmermannii</i>											
(formally; <i>Anabaena c.f. lemmermannii</i> )	16.7	5.0	0.4	0.0	0.0		1933	580	42	0	0
<i>Gloeocapsa sp.</i>	0.0	0.0	0.2	0.0	0.0		0	0	2	0	0
<i>Snowella sp.</i>	0.0	0.0	0.0	0.2	0.0		0	0	0	5	0
<i>Pseudanabaena sp.</i>	2.8	0.0	0.0	0.0	0.0		54	0	0	0	0
<b>Greens (Chlorophyceae)</b>											
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>	2	1	5	1	2		74	49	217	49	74
<i>Botryococcus braunii (colonies)</i>	0	1	0	0	0		8760	512447	0	0	0
<i>Dictyosphaerium</i>	2	2	2	0	0		97	97	97	0	0
<i>Elakothrix gelatinosa</i>	2	0	0	0	0		227	0	0	0	0
<i>Eudorina elegans</i>	0	0	0	0	0		18	0	0	0	0
<i>Oocystis sp.</i>	44	55	1	0	0		6223	7808	166	0	0
<b>Diatoms (Bacillariophyceae)</b>											
<i>Asterionella formosa</i>	3	3	2	1	2		746	819	655	328	655
<i>Aulacoseira granulata</i>	6	1	4	2	2		1753	363	1088	544	725
<i>Aulacoseira granulata var. angustissima</i>	0	3	18	19	15		0	760	4563	4867	3802
<i>Cyclotella stelligera</i>	3	2	1	2	1		420	374	187	281	94
<i>Fragilaria crotonensis</i>	14	23	0	0	0		4889	8377	0	0	0
<i>Fragilaria sp.</i>	0	0	1	0	0		0	0	209	0	0
<i>Nitzschia sp.</i>	0	0	1	0	0		0	0	228	0	0
<i>Synedra sp.</i>	0	1	0	0	0		0	230	0	0	0
<i>Rhoicosphenia sp.</i>	0	0	1	0	0		0	0	306	0	0
<b>Small unknown diatom sp.</b>	0	0	1	0	0		0	0	129	0	0
<b>Desmids (Mesotaeniaceae, Desmidiaceae)</b>											
<i>Cladophora acutum var. variable</i>	0	1	1	0	0		0	221	221	0	0
<b>Chrysophyta (Chrysophyceae)</b>											
<i>Dinobryon sp.</i>	13	13	0	1	1		751	794	0	35	35
<i>Cryptomonas sp.</i>	0	1	2	0	0		0	84	253	0	0
<b>Dinoflagellates (Dinophyceae)</b>											
<i>Gymnodinium sp. 1</i>	1	1	0	0	0		595	643	0	0	0
<b>Flagellates 5<math>\mu\text{m}</math></b>											
<b>Flagellates &lt; 5<math>\mu\text{m}</math>/unicells</b>	35	32	28	6	3		1214	1106	983	225	102

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2009-2010**

From Site A (Mid Lake) 19/10/2009

Sample code	OT1 Depth	OT2 Surface Cell (per ml)	OT3 10m Cell (per ml)	OT6 20m Cell (per ml)	OT8 50m Cell (per ml)	OT11 70m Cell (per ml)	OT16 100m Cell (per ml)	OT1 150m Cell (per ml)	OT1 Surface Biovolume ( $\mu\text{m}^3$ )	OT2 10m Biovolume ( $\mu\text{m}^3$ )	OT3 20m Biovolume ( $\mu\text{m}^3$ )	OT6 50m Biovolume ( $\mu\text{m}^3$ )	OT8 70m Biovolume ( $\mu\text{m}^3$ )	OT11 100m Biovolume ( $\mu\text{m}^3$ )	OT16 150m Biovolume ( $\mu\text{m}^3$ )
<b>Blue greens (Cyanophyceae)</b>															
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	27.4	6.8	1.1	0.4	0.0	0.0	0.1	2470	610	99	40	0	0	0	9
<i>Chroococcus</i> sp.	0.2	0.0	0.0	0.0	0.0	0.0	0.0	2	0	0	0	0	0	0	0
<i>Microcystis</i> sp.	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0	19	0	0	0	0	0	0
<i>Dictyosphaerium</i> sp.	18.0	31.6	31.3	7.4	2.7	0.4	0.0	451	789	782	186	67	11	0	0
<i>Phormidium</i> sp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0	0	0	0	0	4	0	0
<b>Greens (Chlorophyceae)</b>															
<i>Monoraphidium</i> sp./ <i>Ankistrodesmus falcatus</i>	2	4	0	0	12	0	0	68	147	0	0	491	0	0	0
<i>Botryococcus braunii</i> (colonies)	0.0	0	0	0	0	0	0	30946	0	950	0	0	0	0	1900
<i>Crucigeniella</i> sp	4	8	0	0	0	2	0	281	494	0	0	0	0	152	0
<i>Dictyosphaerium</i> sp.	0	0	0	0	0	0	9	0	0	0	0	0	0	0	658
<i>Eudorina elegans</i>	0	0	0	11	0	0	0	0	0	0	0	2696	0	0	0
<i>Nephrocystium agarhianum</i>	0	11	5	0	0	0	0	0	790	351	0	0	0	0	0
<i>Oocysts</i> sp.	0	7	5	0	2	2	0	0	997	665	0	332	332	0	0
<i>Westella botryoides</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Paulschulzia</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>															
<i>Asterionella formosa</i>	128	218	97	78	26	4	43	35749	60934	27191	21785	7207	983	12121	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	17	49	43	21	65	40	36	4360	12624	11103	5476	16883	10343	9278	
<i>Cyclotella stelligera</i>	4	5	1	2	11	15	18	692	842	187	374	1778	2340	2808	
<i>Fragilaria crotonensis</i>	267	467	352	153	76	32	47	95677	167335	126077	54871	27226	11519	16754	
<i>Nitzschia</i> sp.	1	0	1	0	0	0	0	422	0	228	0	0	0	0	
<i>Synedra</i> sp.	1	2	0	0	0	0	2	213	922	0	0	0	0	691	
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>															
<i>Cladophora aciculare</i>	0	1	1	0	0	0	0	0	350	350	0	0	0	0	0
<i>Cladophora acutum</i> var. <i>variable</i>	2	1	0	1	2	1	1	612	441	0	441	662	221	441	
<b>Chrysophyta (Chrysophyceae)</b>															
<i>Dinobryon</i> sp.	23	70	140	89	3	0	0	1373	4142	8284	5246	173	0	0	
<i>Cryptomonas</i> sp.	0	0	0	1	1	0	0	0	0	0	84	168	0	0	
<b>Dinoflagellates (Dinophyceae)</b>															
<i>Gymnodinium</i> sp. 1	1	0	0	0	0	0	0	595	0	0	0	0	0	0	
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0	0	0	0	2925	2925	0	0	0	
<i>Peridinium</i> sp.	0	0	0	0	0	0	0	0	0	0	1170	0	0	0	
<i>Gonyaulax</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Flagellates 5<math>\mu\text{m}</math></b>															
Flagellates < 5 $\mu\text{m}$ /unicells	144	294	211	172	159	79	102	5037	10299	7371	6020	5569	2764	3583	

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2009-2010**

From Site A (Mid Lake) 7/04/2010

Sample code	YZ1 Depth Surface (per ml)	YZ2 10m Cell (per ml)	YZ3 20m Cell (per ml)	YZ6 50m Cell (per ml)	YZ11 100m Cell (per ml)	YZ16 150m Cell (per ml)	YZ1 Surface Biovolume ( $\mu\text{m}^3$ )	YZ2 10m Biovolume ( $\mu\text{m}^3$ )	YZ3 20m Biovolume ( $\mu\text{m}^3$ )	YZ6 50m Biovolume ( $\mu\text{m}^3$ )	YZ11 100m Biovolume ( $\mu\text{m}^3$ )	YZ16 150m Biovolume ( $\mu\text{m}^3$ )
<b>Blue greens (Cyanophyceae)</b>												
<i>Anabaena c.f. lemmermannii</i>	10.2	27.6	15.4	5.3	0.3	0.6	921	2482	1390	475	27	53
<i>Dolichospermum planctonicum</i> (formerly;												
<i>Anabaena planktonica</i>	0.6	0.0	0.0	0.0	0.0	0.0	242	0	0	0	0	0
<i>Aphanocapsa</i> sp.	0.0	0.0	0.0	0.0	0.4	0.0	0	0	0	0	4	0
<i>cf Heteroleibleinia</i> sp.	0.0	0.0	0.3	0.0	0.0	0.0	0	0	5	0	0	0
<i>Phormidium</i> sp.	0.0	0.0	0.0	0.0	0.0	0.4	0	0	0	0	0	8
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.0	2.3	0.3	0	0	0	0	44	6
<b>Greens (Chlorophyceae)</b>												
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	0	0	0	111	0	0	0	0	0	4643	0	0
<i>Botryococcus braunii</i> (colonies)	0.0	0	0	0	0	0	1200	76	6621	0	76	76
<i>Elakothrix gelatinosa</i>	1	0	0	0	0	0	157	0	0	0	0	0
<i>Eudorina elegans</i>	0	0	4	0	0	0	96	0	930	0	0	0
<i>Nephrocytium agardhianum</i>	10	2	2	2	0	0	182	0	0	0	0	0
<i>Nephrocytium lunatum</i>	0	5	0	0	0	0	784	387	121	121	0	0
<i>Oocystis</i> sp.	16	28	12	23	2	15	2225	4010	1719	3208	344	2177
<i>Quadrigula lacustrus</i>	1	0	0	0	0	0	245	0	0	0	0	0
<i>Scenedesmus</i> sp.	0	2	0	3	0	0	0	84	0	168	0	0
<b>Diatoms (Bacillariophyceae)</b>												
<i>Asterionella formosa</i>	0	0	0	0	1	0	0	0	0	0	226	0
<i>Aulacoseira granulata</i>	0	0	0	0	0	8	116	0	0	0	0	2626
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	0	1	5	0	0	0	0	210	1259	0
<i>Cocconeis</i>	0	0	0	0	0	0	0	0	0	211	0	0
<i>Cyclotella stelligera</i>	4	0	0	2	0	1	716	0	0	323	0	194
<i>Fragilaria crotonensis</i>	0	23	7	8	2	1	134	8088	2600	2744	578	433
<i>Nitzschia</i> sp.	2	4	4	0	1	0	873	1416	1416	0	315	0
<i>Eunotia</i> sp.	4	0	0	0	0	0	0	0	0	0	0	0
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>												
<i>Cladophora acutum</i> var. <i>variable</i>	0	0	0	1	1	0	0	0	0	304	456	152
<i>Staurastrum</i> sp.	0	0	0	0	0	0	0	0	0	1	0	0
<b>Chrysophyta (Chrysophyceae)</b>												
<i>Dinobryon</i> sp.	42	13	61	6	0	0	2487	738	3618	381	0	0
<i>Cryptomonas</i> sp.	0	0	0	2	0	0	0	0	58	232	0	0
<b>Dinoflagellates (Dinophyceae)</b>												
<i>Ceratium hirundinella</i>	0	0	2	4	0	0	126	147	246	369	0	0
<i>Gymnodinium</i> sp. 1	0	1	0	0	0	0	0	888	0	0	444	0
<i>Gymnodinium</i> sp. 2	0	1	0	0	0	0	0	20172	0	0	0	0
<i>Gonyaulax</i> sp.	6	5	3	0	0	0	12686	10490	5648	0	0	0
<b>Flagellates 5<math>\mu\text{m}</math></b>												
Flagellates < 5 $\mu\text{m}$ /unicells	47	59	56	40	11	19	1658	2062	1949	1384	395	650

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2008-2009**

From Site A (Mid Lake) 15/04/2009

Sample code	SZ1 Depth	SZ1 Surface Cell (per ml)	SZ2 10m Cell (per ml)	SZ3 20m Cell (per ml)	SZ6 50m Cell (per ml)	SZ11 100m Cell (per ml)	SZ16 150m Cell (per ml)	SZ1 Surface Biovolume ( $\mu\text{m}^3$ )	SZ2 10m Biovolume ( $\mu\text{m}^3$ )	SZ3 20m Biovolume ( $\mu\text{m}^3$ )	SZ6 50m Biovolume ( $\mu\text{m}^3$ )	SZ11 100m Biovolume ( $\mu\text{m}^3$ )	SZ16 150m Biovolume ( $\mu\text{m}^3$ )
<b>Species composition by class</b>													
Blue greens (Cyanophyceae)													
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	0.0	1.3	0.0	0.8	0.0	0.0	0	0	51	0	31	0	0
<i>Aphanothecace sp.</i>	0.0	0.0	0.0	0.0	7.3	0.0	0	0	0	0	0	66	0
<i>Pseudanabaena sp.</i>	0.0	0	0.0	0.0	22.2	5.3	0	0	0	0	0	422	100
Greens (Chlorophyceae)													
<i>Monoraphidium sp. / Ankistrodesmus falcatus</i>	68	71	0.5	55	13	6	2875	2998	22	2318	545	273	
<i>Stichococcus contortus</i>	0	0	0.0	0	17	15	0	0	0	0	0	302	263
<i>Kirchneriella contorta</i>	0	0	0.0	1	0	0	0	0	0	0	36	0	0
<i>Botryococcus braunii</i> (colonies)	0.0	0	0.0	0.0	0	0	0	0	21653	16240	76507.95	0	
<i>Elakothrix gelatinosa</i>	5	10	2	2	0	0	491	1044	227	227	0	0	
<i>Nephrocytium agardhianum</i>	2	0	0	0	0	0	0	0	0	0	0	0	0
<i>Oocystsis sp.</i>	6	1	4	1	4	1	831	166	581	166	498	166	
<i>Quadrigula lacustris</i>	2	0	0	0	0	0	384	0	0	0	0	0	
Diatoms (Bacillariophyceae)													
<i>Asterionella formosa</i>	94	71	102	71	6	2	26372	19820	28501	19984	1802	655	
<i>Aulacoseira granulata</i>	0	0	0	1	3	1	0	0	0	0	363	907	363
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	1	22	8	8	0	0	304	5628	2129	1977	0	0	
<i>Cyclotella stelligera</i>	5	4	11	4	2	2	842	562	1685	562	374	281	
<i>Fragilaria crotonensis</i>	151	42	9	183	15	7	54033	14870	3141	65552	5236	2513	
<i>Synedra sp.</i>	1	0	0	0	0	0	0	0	0	0	0	0	
<i>Eunotia sp.</i>	0	1	0	0	0	0	0	0	0	0	0	0	
Desmids (Mesotaeniaceae, Desmidiaeae)													
<i>Closterium aciculare</i>	1	1	0	1	0	0	701	701	0	701	0	0	
<i>Closterium acutum</i> var. <i>variable</i>	0	0	1	0	1	1	0	0	221	0	221	221	
Chrysophyta (Chrysophyceae)													
<i>Dinobryon sp.</i>	1	0	32	3	0	0	69	0	1898	173	0	0	
<i>Cryptomonas sp.</i>	0	1	0	1	0	0	0	84	0	84	0	0	
Dinoflagellates (Dinophyceae)													
<i>Gymnodinium sp. 2</i>	1	0	1	0	0	0	14625	0	14625	0	0	0	
Flagellates 5µm													
Flagellates < 5µm/unicells	132	201	111	140	24	13	4607	7023	3870	4914	839	450	

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2008-2009**

From Site A (Mid Lake) 14/10/2008

	Sample code Depth	EU1 Surface Cell (per ml)	EU2 10m Cell (per ml)	EU6 50m Cell (per ml)	EU8 70m Cell (per ml)	EU11 100m Cell (per ml)	EU16 150m Cell (per ml)	EU1 Surface Biovolume ( $\mu\text{m}^3$ )	EU2 10m Biovolume ( $\mu\text{m}^3$ )	EU6 50m Biovolume ( $\mu\text{m}^3$ )	EU8 70m Biovolume ( $\mu\text{m}^3$ )	EU11 100m Biovolume ( $\mu\text{m}^3$ )	EU16 150m Biovolume ( $\mu\text{m}^3$ )
<b>Species composition by class</b>													
Blue greens (Cyanophyceae)													
<i>Dolichospermum c.f. lemmermannii</i> (formally; <i>Anabaena c.f. lemmermannii</i> )	1.2	8.5	1.6	0.0	0.0	0.0	104	767	143	4	0	0	0
<i>Dolichospermum sp.</i> (formally; <i>Anabaena</i> sp.)	0.5	0.9	0.0	0.0	0.0	0.0	49	83	0	0	0	0	0
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	1.7	0.3	0.6	0	0	0	33	5	11	
Greens (Chlorophyceae)													
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	0	0	54	2	19	2	0	0	2260	66	786	82	
<i>Botryococcus braunii</i> (colonies)	0.0	1	0	0	1	0	123784	1111500	370500	0	741000	0	
<i>Crucigeniella</i> sp	52	53	5	3	0	0	3399	3448	304	203	0	0	
<i>Elakothrix gelatinosa</i>	1	0	0	0	0	0	76	0	0	0	0	0	
<i>Eudorina elegans</i>	0	11	2	0	0	0	0	2796	599	0	0	0	
<i>Oocystis</i> sp.	3	0	2	0	1	0	410	0	222	0	111	0	
<i>Westella botryooides</i>	0	5	3	2	0	0	0	304	203	152	0	0	
<i>Paulschulzia</i> sp.	2	0	0	0	0	0	0	0	0	0	0	0	
Diatoms (Bacillariophyceae)													
<i>Asterionella formosa</i>	3	6	4	4	1	1	707	1638	1201	1092	218	218	
<i>Aulacoseira granulata</i>	0	2	4	9	5	1	0	605	1209	2660	1693	242	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	2	6	0	0	2	0	507	1622	0	0	406	
<i>Cyclotella stelligera</i>	1	1	4	1	0	0	115	187	686	125	62	62	
<i>Fragilaria crotonensis</i>	6	10	0	0	0	1	2066	3630	0	0	0	419	
<i>Nitzschia</i> sp.	0	0	0	0	0	0	70	152	0	0	0	152	
Desmids (Mesotaeniaceae, Desmidiaceae)													
<i>Closterium aciculare</i>	0	0	0	0	0	0	0	0	117	0	0	0	
<i>Closterium acutum</i> var. <i>variable</i>	0	0	0	2	0	0	0	0	147	735	0	0	
Chrysophyta (Chrysophyceae)													
<i>Dinobryon</i> sp.	7	2	0	0	0	0	426	138	0	0	0	0	
<i>Cryptomonas</i> sp.	0	0	1	0	0	0	0	0	168	0	0	0	
Dinoflagellates (Dinophyceae)													
<i>Gymnodinium</i> sp. 1	0	2	0	0	0	0	0	2145	0	0	0	0	
<i>Gymnodinium</i> sp. 2	0	1	0	0	0	0	0	19500	0	0	0	0	
<i>Gonyaulax</i> sp.	1	1	0	0	0	0	2164	1560	0	0	0	0	
Flagellates 5 $\mu\text{m}$													
Flagellates < 5 $\mu\text{m}$ /unicells	34	46	27	22	10	9	1174	1611	956	778	355	300	

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2007-2008**  
 From Site A (Mid Lake) 30/10/2007

	Sample code	ZА1	ZА2	ZА3	ZА6	ZA8	ZA11	ZА16	ZА1	ZА2	ZА3	ZА6	ZА8	ZА11	ZА16
	Depth	Surface	10m	20m	50m	70m	100m	150m	Surface	10m	20m	50m	70m	100m	150m
Species composition by class		cell (per ml)	Biovolume ( $\mu\text{m}^3$ )												
<b>Blue greens (Cyanophyceae)</b>															
<i>Anabaena lemmermannii</i>		18.7	22.0	2.9	0.4	0.0	0.0	1.6	1683	1976	257	33	0	0	140
<i>Chroococcus</i> sp.		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0	0	0	1	0	0	0
<i>Aphanocapsa</i> sp.		0.0	0.0	0.0	6.9	0.0	5.8	6.6	0	0	0	62	0	52	59
<i>Planktolyngbya</i> sp.		21.3	0.0	0.0	0.0	0.0	0.0	0.0	192	0	0	0	0	0	0
<i>Pseudanabaena</i> sp.		0.0	0.0	0.0	0.0	0.0	4.9	0.3	0	0	0	0	0	94	6
<b>Greens (Chlorophyceae)</b>															
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>		52	21	29	15	6	0	0	2187	885	1229	614	270	0	0
<i>Stichococcus contortus</i>		39	6	13	15	6	2	4	706	116	242	274	116	42	63
<i>Botryococcus braunii</i> (colonies)		0	0	0	1	0	0	0	0	0	0	235139	0	804	0
<i>Eudorina elegans</i>		13	3	7	0	0	0	0	3295	749	1797	0	0	0	0
<i>Crucigeniella</i> sp.		0	2	8	5	5	0	0	0	152	532	304	0	0	0
<i>Nephrocystium agardhianum</i>		0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Oocysts</i> sp.		9	4	0	1	0	9	1	1246	498	0	166	0	1246	166
<b>Diatoms (Bacillariophyceae)</b>															
<i>Asterionella formosa</i>		33	73	102	62	34	4	14	9173	20311	28665	17363	9500	983	3931
<i>Aulacoseira granulata</i>		15	37	91	25	9	25	13	4715	11606	28109	7617	2902	7617	4171
<i>Aulacoseira granulata</i> var. <i>angustissima</i>		0	0	0	0	0	3	0	0	0	0	0	0	761	0
<i>Cyclotella stelligera</i>		6	8	22	9	5	9	10	1030	1217	3557	1404	842	1404	1591
<i>Fragilaria crotonensis</i>		11	14	22	7	7	20	2	3770	5026	7958	2513	2513	7330	838
<i>Nitzschia</i> sp.		0	0	0	0	0	1	0	0	0	0	0	0	228	0
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>															
<i>Closterium aciculare</i>		1	1	0	1	1	1	1	701	350	0	526	526	350	350
<i>Closterium acutum</i> var. <i>variable</i>		1	1	0	0	0	0	0	221	265	0	44	0	0	0
<b>Chrysophyta (Chrysophyceae)</b>															
<i>Dinobryon</i> sp.		275	182	227	135	108	1	0	16222	10734	13392	7938	6351	69	0
<i>Cryptomonas</i> sp.		0	0	1	1	0	0	0	0	0	168	168	0	0	0
<b>Dinoflagellates (Dinophyceae)</b>															
<i>Gymnodinium</i> sp. 1		0	1	1	1	1	0	0	0	3510	3510	1755	1755	0	0
<i>Gymnodinium</i> sp. 2		0	1	0	1	0	0	0	0	14044	26750	1463	0	0	0
<b>Flagellates 5<math>\mu\text{m}</math></b>															
Flagellates < 5 $\mu\text{m}$ /unicells		139	404	406	243	144	25	13	4853	14148	14210	8497	5037	860	450

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2007-2008**

From Site A (Mid Lake) 17/04/2008

Species composition by class	Sample code	KA1	KA2	KA3	KA6	KA11	KA16	KA1	KA2	KA3	KA6	KA11	KA16	
	Depth	Surface	10m	20m	50m	100m	150m	Surface	Biovolume	10m	20m	50m	100m	Biovolume
		(per ml)	( $\mu\text{m}^3$ )		( $\mu\text{m}^3$ )									
<b>Blue greens (Cyanophyceae)</b>														
<i>Anabaena lemmermannii</i>	44.8	46.9	24.3	0.0	6.5	1.4	4031	4220	2183	0	584	16		
<i>Pseudanabaena</i> sp.	0.0	0.0	0.0	0.0	0.0	17.4	0	0	0	0	0	331		
<b>Greens (Chlorophyceae)</b>														
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	14	3	8	8	0	1	590	123	344	344	0	49		
<i>Stichococcus contortus</i>	6	26	6	0	0	0	116	463	116	0	0	0		
<i>Botryococcus braunii</i> (colonies)	0	0	0	0	0	1	54	31352	6431	26908	1608	156759		
<i>Elakothrix gelatinosa</i>	0	1	1	0	1	0	0	154	123	0	123	0		
<i>Eudorina elegans</i>	0	6	0	0	0	0	75	1498	75	0	0	0		
<i>Crucigeniella</i> sp.	0	0	0	1	0	0	0	0	0	0	76	0		
<i>Oocysts</i> sp.	2	10	2	0	2	1	332	1412	332	0	332	83		
<i>Westella botryooides</i>	0	0	0	0	0	0	0	0	0	0	8	0		
<b>Diatoms (Bacillariophyceae)</b>														
<i>Asterionella formosa</i>	12	23	32	12	3	4	3276	6552	8935	3276	819	983		
<i>Aulacoseira granulata</i>	5	16	5	12	5	9	1484	4946	1484	3808	1632	2720		
<i>Cyclotella stelligera</i>	2	6	2	5	1	1	340	936	340	749	94	94		
<i>Fragilaria crotonensis</i>	4	10	39	1	1	1	1523	3427	14089	419	419	209		
<i>Nitzschia</i> sp.	0	0	22	0	0	0	0	0	8442	0	0	0		
Small unknown diatom sp.	0	0	0	0	1	0	0	0	0	0	64	0		
<b>Desmids (Mesotaeniaceae, Desmidiaceae)</b>														
<i>Cladotrichum aciculare</i>	0	1	0	0	1	0	105	701	105	0	350	4		
<i>Cladotrichum acutum</i> var. <i>variable</i>	0	1	2	2	0	0	0	221	662	662	0	22		
<b>Chrysophyta (Chrysophyceae)</b>														
<i>Dinobryon</i> sp.	64	164	101	0	0	0	3797	9664	5971	0	0	0		
<i>Cryptomonas</i> sp.	1	1	1	3	0	0	84	84	84	421	0	0		
<b>Dinoflagellates (Dinophyceae)</b>														
<i>Gymnodinium</i> sp. 1	1	1	1	0	0	0	3191	3191	3191	0	0	0		
<i>Gymnodinium</i> sp. 2	0	0	0	0	0	0	0	0	0	146	134	0		
<b>Flagellates 5<math>\mu\text{m}</math></b>														
Flagellates < 5 $\mu\text{m}$ /unicells	46	126	196	37	7	3	1619	4411	6850	1290	246	102		

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2006-2007**  
 From Site A (Mid Lake) 1/11/2006

	Sample code Depth	HW1 surface cell (per ml)	HW3 20 m cell (per ml)	HW6 50 m cell (per ml)	HW11 100 m cell (per ml)	HW16 150 m cell (per ml)	HW1 surface Biovolume ( $\mu\text{m}^3$ )	HW3 20 m Biovolume ( $\mu\text{m}^3$ )	HW6 50 m Biovolume ( $\mu\text{m}^3$ )	HW11 100 m Biovolume ( $\mu\text{m}^3$ )	HW16 150 m Biovolume ( $\mu\text{m}^3$ )
<b>Species composition by class</b>											
<b>Blue greens (Cyanophyceae)</b>											
<i>Anabaena lemmermannii</i>	63	25	0	0	0		3488.1	1367	25	15	0
<i>Aphanocapsa</i> sp.	0	0	2	3	0		0	0	14	31	0
<b>Greens (Chlorophyceae)</b>											
<i>Botryococcus braunii</i> (colonies)	0	0	0	0	0		5151	5901	7321	0	0
<i>Chlorosarcinopsis</i> sp.	3	0	2	2	0		259	0	182	208	0
<i>Eudorina elegans</i>	2	5	6	0	0		621	1198	1498	0	0
<i>Kirchneriella contorta</i>	5	4	0	0	0		176	116	0	0	0
<i>Lagerheimia</i> sp.	0	1	1	0	0		0	125	166	0	0
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	3	0	0	0	0		143	0	0	0	0
<i>Oocystis</i> sp.	7	6	6	6	3		1034	872	831	831	415
<i>Westella botryooides</i>	0	0	7	0	0		0	0	0	0	0
<b>Diatoms (Bacillariophyceae)</b>											
<i>Asterionella formosa</i>	14	8	7	8	2		3806	2129	1884	2211	573
<i>Aulacoseira granulata</i>	63	54	49	47	54		19413	16866	15052	14689	16594
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	2	3	0		0	0	456	837	0
<i>Cyclotella stelligera</i>	46	8	4	7	4		7301	1264	562	1123	655
<i>Fragilaria crotonensis</i>	5	0	2	8	3		1912	0	628	2723	1047
<i>Nitzschia</i> sp.	2	1	1	0	0		947	342	342	0	0
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>											
<i>Closterium aciculare</i>	0	0	0	0	0		0	35	175	0	0
<i>Closterium acutum</i> var. <i>variable</i>	0	0	0	0	0		0	0	110	0	0
<b>Chrysophyta (Chrysophyceae)</b>											
<i>Dinobryon</i> sp.	8	4	6	0	0		458	242	362	0	0
<b>Dinoflagellates (Dinophyceae)</b>											
<i>Gymnodinium</i> sp. 1	0	1	0	0	0		0	2633	1316	0	88
<i>Gymnodinium</i> sp. 2	0	0	0	0	0		6068	0	0	0	0
<b>Flagellates 5<math>\mu\text{m}</math></b>											
Flagellates < 5 $\mu\text{m}$ /unicells	50	19	31	23	4		1750	676	1085	788	143

**Lake Taupo phytoplankton species composition and biovolume ( $\mu\text{m}^3$ ) 2006-2007**  
 From Site A (Mid Lake) 2/04/2007

Sample code	HW17 Depth	surface cell (per ml)	HW18 10 m	HW19 20 m	HW22 50 m	HW27 100 m	HW32 150 m	HW17 surface Biovolume ( $\mu\text{m}^3$ )	HW18 10 m Biovolume ( $\mu\text{m}^3$ )	HW19 20 m Biovolume ( $\mu\text{m}^3$ )	HW22 50 m Biovolume ( $\mu\text{m}^3$ )
<b>Species composition by class</b>											
<b>Blue greens (Cyanophyceae)</b>											
<i>Anabaena lemmermannii</i>	36	65	56	0	2	0	1493	2655	2286	5	
<b>Greens (Chlorophyceae)</b>											
<i>Botryococcus braunii</i> (colonies)	1	0	0	0	0	0	27630	0	0	41446	
<i>Monoraphidium</i> sp. / <i>Ankistrodesmus falcatus</i>	49	17	17	0	1	0	2064	725	725	0	
<i>Oocystis</i> sp.	2	1	1	0	1	0	332	166	125	0	
<i>Stichococcus contortus</i>	0	0	0	0	0	1	0	0	0	0	
<b>Diatoms (Bacillariophyceae)</b>											
<i>Asterionella formosa</i>	0	0	1	0	0	1	0	82	246	0	
<i>Aulacoseira granulata</i>	2	0	0	5	11	8	544	0	0	1541	
<i>Aulacoseira granulata</i> var. <i>angustissima</i>	0	0	0	0	7	2	0	0	0	76	
<i>Cyclotella stelligera</i>	1	1	1	1	2	1	168	94	94	234	
<i>Eunotia</i> sp.	0	0	0	0	4	0	0	0	0	0	
<i>Fragilaria crotonensis</i>	0	0	0	0	0	1	0	0	0	0	
<i>Nitzschia</i> sp.	2	0	1	0	0	0	799	114	228	0	
Small unknown diatom sp.	0	0	0	0	1	0	0	0	0	0	
<b>Desmids (Mesotaeniaceae, Desmidiaeae)</b>											
<i>Closterium aciculare</i>	0	0	0	1	4	0	0	0	0	350	
<i>Closterium acutum</i> var. <i>variable</i>	0	0	0	1	0	0	0	0	0	331	
<b>Chrysophyta (Chrysophyceae)</b>											
<i>Cryptomonas</i> sp.	0	1	1	4	0	0	0	211	126	590	
<i>Dinobryon</i> sp.	0	0	0	1	0	0	0	0	0	86	
<b>Dinoflagellates (Dinophyceae)</b>											
<i>Gymnodinium</i> sp. 1	1	0	0	0	0	0	2106	878	878	176	
<i>Gymnodinium</i> sp. 2	1	1	1	0	0	0	14625	21938	14625	0	
<b>Flagellates 5<math>\mu\text{m}</math></b>											
Flagellates < 5 $\mu\text{m}$ /unicells	185	97	84	127	16	10	6470	3389	2928	4433	

## Appendix 5 - Historical data

Historical data held by NIWA have frequently been referred to and included in analysis or comparison with the data from the long-term monitoring programme. To ensure that these data are always readily available, the relevant historical data are included in this report. These data are the spring and autumn profiles of NO<sub>3</sub>-N and DRP from 1974 to 1990. The nitrate data for 27 September 1979 was taken from Vincent (1983). The more recent data can be found in the previous appendices.

The profiles given are separated by season with the spring data above the data of the following autumn. The earlier profiles were to a depth of 110 m rather than 150 m. Also, as there was no March or April data collected in 1976, for completeness the last available profile in that series (12 January 1976) has been included.

The elapsed time given is the number of days between the spring profile in about October and the autumn profile in March/April of the following year.

The historical data also include an un-paired profile from July 1987. As there were no data for April 1987 and the lake was still stratified in July, when the next period of monitoring began, the July 1987 data may be used to indicate the total mass of nutrients accumulated in the hypolimnion in that year.

**Historical data from Site A in Lake Taupo**

**Nitrate concentrations (mg m<sup>-3</sup>)**

**Spring**

Date	18/11/1974	16/10/1975	4/10/1977	10/10/1978	27/09/1979	5/10/1987	17/10/1988	6/10/1989
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**Depth (m)**

0	0.8	0.3	1.1	0.0	0.0	0.3	2.6	1.2
10	0.3	0.4	1.2	1.4	0.0	0.4	2.7	1.8
20	0.0	0.0	0.6	0.8	0.5	0.5	2.8	1.0
30	0.3	0.4	0.0	0.7	0.5	0.4	2.8	1.4
40	0.8	0.0	0.1	0.6	1.0	0.6	3.0	1.3
50	2.1	0.3	0.6	0.7	1.0	0.8	2.9	1.0
60	4.9	0.0	1.0	0.8	0.5	1.2	2.5	0.8
70	4.1	0.4	1.1	0.8	1.0	1.0	2.9	1.6
80	5.3	0.0	3.2	1.2	1.5	1.4	2.9	1.6
90	5.4	0.0	1.3	1.2	1.0	1.5	2.5	1.7
100	8.4	1.8	3.3	1.4	1.5	1.2	2.6	1.7
110	12.0	4.1	2.8	1.4	1.5	6.0	2.4	0.8
120			2.8	1.7	2.5	0.7	2.7	1.6
130			2.7	2.1	5.0	1.2	2.7	1.1
140			1.7	2.1	6.0	1.2	3.1	1.1
150			1.4	2.5	7.0	1.1	2.4	0.3

**Autumn**

Date	14/04/1975	12/01/1976	14/03/1978	10/04/1979	10/03/1980	7/07/1987	5/04/1988	4/04/1989	10/04/1990
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**Depth (m)**

0	0.8	0.5	0.0	0.3	0.0	2.0	1.1	2.1	0.1
10	0.4	1	0.0	0.0	0.3	1.6	1.3	2.5	0.6
20	0.2	0.2	0.0	0.0	0.0	1.0	1.3	2.4	1.3
30	0.1	0	0.0	0.0	0.0	0.2	1.1	2.5	1.2
40	0.3	0.2	0.0	0.3	0.2	0.9	2.2	2.4	1.7
50	0.5	0.3	0.0	1.0	0.8	1.1	4.0	4.9	4.9
60	4.2	1.3	0.0	7.3	4.9	14.5	12.3	5.2	3.4
70	5.6	1.5	2.2	11.1	6.2	16.4	14.6	5.1	12.0
80	9.2	8.3	4.9	12.7	9.4	16.1	16.9	10.9	11.2
90	11.2	11.1	5.8	13.5	13.5	18.5	19.0	13.5	12.4
100	12.4	14	7.4	15.0	14.4	19.8	20.7	17.1	17.1
110	16.0		9.2	14.8	15.7	20.2	19.1	20.4	16.2
120			10.1	15.0	16.7	20.9	18.6	23.3	18.2
130			8.0	16.6	18.9	21.9	21.5	24.2	17.9
140			11.0	17.3	19.4	22.1	25.4	27.1	22.4
150			14.2	19.7	19.9	21.5	27.0	28.6	24.2

**DRP concentrations (mg m<sup>-3</sup>)**

**Spring**

Date	18/11/1974	16/10/1975	4/10/1977	10/10/1978	???	5/10/1987	17/10/1988	6/10/1989
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**Depth (m)**

0	8.7	1.1	0.3	0.6		0.2	0.2	0.0
10	8.0	1.2	0.0	0.6		0.1	0.1	0.2
20	8.3	1.1	0.1	0.5		0.2	0.0	0.1
30	7.5	0.9	0.0	0.3		0.3	0.1	0.0
40	8.4	0.8	0.3	0.2		0.2	0.1	0.0
50	7.6	0.8	0.2	0.3		0.4	0.1	0.0
60	8.3	0.7	0.0	0.3		0.3	0.2	0.0
70	7.7	0.7	1.1	0.4		0.3	0.2	0.0
80	8.1	0.8	0.7	0.5		0.3	0.2	0.3
90	7.9	1.0	0.8	0.4		0.2	0.3	0.1
100	8.5	1.7	0.4	0.4		0.2	0.3	0.1
110	9.8	1.6	0.4	0.4		0.4	0.5	0.1
120			0.5	0.4		0.4	0.4	0.0
130			0.4	0.3		0.4	0.4	0.2
140			0.6	0.3		0.4	0.5	0.3
150			0.5	0.4		0.3	0.5	0.2

**Autumn**

Date	14/04/1975	12/01/1976	14/03/1978	10/04/1979	10/03/1980	7/07/1987	5/04/1988	4/04/1989	10/04/1990
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**Depth (m)**

0	0.8	1.4	0.2	0.1	0.7	1.9	0.1	0.0	0.2
10	0.5	1.4	0.2	0.1	0.4	2.2	0.1	0.0	0.0
20	0.5	7.0	0.2	0.1	0.3	0.9	0.2	0.0	0.1
30	0.5	2.5	0.2	0.1	0.2	1.0	0.2	0.0	0.2
40	0.5	0.2	0.2	0.4	0.5	0.9	0.6	0.2	0.5
50	0.5	0.9	0.7	1.0	0.7	0.7	1.1	0.5	1.1
60	1.0	0.1	0.7	1.6	1.0	3.4	2.0	0.6	0.9
70	1.0	0.8	1.0	2.0	1.1	3.7	2.2	0.9	1.9
80	1.7	1.2	1.5	2.2	1.6	3.6	2.7	1.1	1.7
90	2.0	2.0	1.8	2.4	2.2	4.1	2.9	1.3	1.8
100	2.2	3.3	1.9	2.7	2.4	4.6	3.1	1.9	2.6
110	2.9		2.4	2.8	2.6	4.5	2.9	2.7	2.1
120			2.7	2.9	2.7	4.7	3.0	3.4	2.5
130			2.1	3.0	3.7	5.1	3.4	3.8	2.4
140			2.8	3.6	3.6	5.3	4.4	4.5	3.5
150			0.9	3.8	3.8	5.0	4.6	4.8	4.0

**Elapsed period (days)**

147	88	161	182	165	270*	183	169	186
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??? = possible analytical problem (e.g., Si interference)

\* = average period of 165 days plus 3 months