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**Final Report**

# Sediment and Nutrient Deposition in Lake Dora and Lake Eustis

St. Johns River Water Management District
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## EXECUTIVE SUMMARY

A study of sediment and nutrient deposition in Lake Dora and Lake Eustis was undertaken in two phases with the primary goal of quantitatively estimating temporal changes in net nutrient accumulation rates in sediments. A secondary goal was to infer historic lake total phosphorus (TP) concentrations from paleolimnological analyses of sedimentary diatoms. The major purpose of Phase I was to determine the feasibility and to evaluate the methodology necessary to obtain quantitative estimates of net sedimentation and net nutrient accumulation rates for the entire lake basins of Lake Dora and Lake Eustis. Phase II was undertaken after the feasibility of the methodology was demonstrated with results from Phase I. To accomplish the primary goal, a large number of survey and historic cores (approximately 80) were collected from the two lakes to characterize spatial variability over each lake basin, to assess changes in nutrients with depth and to determine whether stratigraphic time-dependent features were present that could be correlated across survey cores. Time-dependent stratigraphic features were determined using ages calculated for six $^{210}$Pb-dated historic cores from each lake.

Lake Dora and Lake Eustis are two lakes in the Harris Chain of Lakes in the upper Ocklawaha River basin. The surface area of Lake Dora is 17.74 x $10^6$ $m^2$, slightly more than half as large as Lake Eustis (surface area of 31.39 x $10^6$ $m^2$). Mean depths are 3.00 m for Lake Dora and 3.46 m for Lake Eustis. Because of the deeper mean depth and larger surface area in Lake Eustis, the volume of Lake Eustis is more than twice as large as that for Lake Dora. Mean hydraulic detention is essentially equal for the two lakes, 0.82 yr for Lake Dora and 0.79 yr for Lake Eustis (Fulton 1995). The reported mean TP in the water column is 138 µg/L in Lake Dora, twice as large as the mean TP (68 µg/L) in Lake Eustis. The reported annual TP retention of 6230 kg/yr in Lake Dora and 17,500 kg/yr in Lake Eustis was obtained from TP mass balances calculated in an earlier study by the St. Johns River Water Management District (SJRWMD). In our study of the two lakes, we estimated TP sedimentation from whole-basin inventories of sediment dry mass and TP.

Our estimate of TP sedimentation in Lake Dora is 15,600 kg/yr, more than twice the estimated TP retention (6,230 kg/yr); but our estimate of TP sedimentation in Lake Eustis is 7,720 kg/yr, less than half the estimated TP retention of 17,500 kg/yr. Calculations based on reported mass balances show that 2.81 times more phosphorus is sedimented in Lake Eustis than in Lake Dora even though the lake surface area is only 1.77 times larger. Results from our study, however, indicate that whole-basin TP sedimentation in Lake Dora is 2.0 times greater than in Lake Eustis. No adequate explanation is immediately available for the discrepancies between TP retention and TP sedimentation rates in Lake Dora and Lake Eustis. An analysis of differences in these estimates is beyond the scope of our investigation.

Data from our study show that the rate of TP sedimentation increased in both lakes during the 20th century with the greatest increase occurring after 1950 in both lakes. Our estimated rates of whole-basin TP sedimentation normalized for lake surface area show that TP sedimentation in recent sediments averaged 87.9 $\mu g\ cm^{-2}\ yr^{-1}$ and 24.6 $\mu g\ cm^{-2}\ yr^{-1}$, respectively, in Lake Dora and Lake Eustis. The mean decadal TP accumulation rate (TPAR) calculated from $^{210}Pb$-dated cores for the most recent decade since core collection was 81.8 and 27.5 $\mu g\ cm^{-2}\ yr^{-1}$, respectively, for Lake Dora and Lake Eustis. A greater TP sedimentation rate is expected in Lake Dora with a greater TP concentration, because TP sedimentation is generally modeled as a function of TP concentration in the water, mean depth and hydraulic residence time. Of these variables, TP concentration differs most between lakes. Thus, our analysis of two data sets shows that the recent, areal TP sedimentation rate is greater in Lake Dora than in Lake Eustis.

We have not attempted to resolve the discrepancies between our estimates of whole-basin TP sedimentation rate in Lake Dora and Lake Eustis with reported estimates of TP retention rate other than to note that our data support a higher areal TP accumulation rate (TPAR) for Lake Dora and a larger whole-basin estimate of TP sedimentation for Lake Dora than indicated by estimated TP retention. It should be recognized, however, that errors in establishing absolute rates of either TP retention or TP sedimentation may be large and that reported discrepancies between the two estimates may be within the range of errors. It should also be recognized that data bases such as those we have provided are an essential component of understanding whole-basin sedimentation of sediment mass or any of its components because they provide direct estimates based on measured sedimentation. Such data applicable to long time periods can be obtained only by using paleolimnological approaches. Therefore, our data will be useful in the future to establish direct estimates of TP sedimentation and to model historic TP accumulation in studies of mass balances or phosphorus dynamics.

Only a limited number of stratigraphic zones in sediment cores could be established with stratigraphic correlation of discontinuities in the sediment record and used to estimate whole-basin dry mass and TP sedimentation. The upcore increase in TP concentration and the upcore decrease in dry density (% dry weight) and TC/TN ratio were used to establish stratigraphic zones using K-means cluster analysis (a multi-variate statistical technique). In Lake Dora, fraction ash was used in the cluster analysis instead of dry density. Stratigraphic changes over depth were subtle; therefore, only one zone in Lake Eustis and two zones in Lake Dora were identified that could be used to estimate whole-basin sedimentation of sediment dry mass and TP. Thus, other approaches and analyses will be required to obtain additional temporal refinement of sediment and nutrient composition.

Sediment characteristics we measured were similar in Lake Dora and Lake Eustis, differing mainly because TP and non-apatite inorganic phosphorus (NAIP) concentrations in Lake Dora sediments were larger. In near-surface sediment samples, TP concentrations in Lake Dora were generally >2.0 mg/g, about twice as large as concentrations in Lake Eustis. Sediments in both lakes were highly organic with means ranging only from 60 to 63% loss on ignition (LOI) among different data sets collected during Phase I and Phase II. Sediments deposited in the last 100 to 150 yr were unconsolidated with the mean % dry weight among different data sets ranging only from 4.5 to 5.4%. The % dry weight in samples from all cores, except for samples near the bottom of cores, was <5.0%.

Several chemical and gravimetric variables measured in sediment cores from Lake Dora and Lake Eustis change predictably from core to core, including an upcore increase in NAIP and TP concentration and an upcore decrease in the total carbon/total nitrogen (TC/TN) ratio and % dry weight. The upcore increase in TP concentration was greater in Lake Dora than in Lake Eustis because maximum TP concentrations in near-surface sediment samples were twice as large as comparable samples from Lake Eustis. These data are interpreted to be the result of increased anthropogenic nutrient loading in both lakes. An increase in TP concentration is a valid proxy for increased TP loading and eutrophication in freshwater systems that are phosphorus limited. Part of the increased decadal TP storage in Lake Dora sediments during the most recent decade (1986-1995) was due to NAIP comprising a greater proportion of TP. Based on studies in Lake Apopka, we have recently found that this change may reflect increased polyphosphate storage by phytoplankton, which is also a proxy for increased phosphorus loading to the system. The importance and time course of this change must be established from direct measurements of polyphosphate that were not undertaken on either Lake Dora or Lake Eustis. The upcore decrease in TC/TN is a proxy for increasing importance of phytoplankton communities and decreasing importance of macrophyte communities in system primary production. The ratio decreases because macrophytes synthesize structural carbon not found in phytoplankton. A shift from macrophytes to phytoplankton is generally indicative of lake eutrophication and decreasing water transparency.

Diatom microfossils in Lake Dora and Lake Eustis shift upcore from benthic forms to planktonic forms as the TC/TN ratio of organic matter decreases. The decrease in TC/TN ratio in Lake Apopka is an inference for a historic shift in the primary producer community from macrophytes to phytoplankton. Therefore, the change in TC/TN ratio in Lake Dora and Lake Eustis also appears to be a proxy for increased abundance of planktonic or meroplanktonic diatoms as the lakes became more eutrophic. Such a change also can be a proxy for decreased water transparency as phytoplankton become more abundant or replace macrophytes.

Limnetic TP inferred from analysis of microfossil diatoms in sediment cores also provides evidence of eutrophication in Lake Dora and Lake Eustis. Inferred limnetic TP in Lake Dora indicates a large increase in TP concentration with time, a peak in TP concentration in the 1970s and a concentration of 95 µg/L in surface sediments. Mean TP concentrations in samples measured by Florida Lake Watch fall within the 95% confidence interval for the inferred TP concentration. However, a mean measured TP of 138 µg/L from samples compiled by SJRWMD is greater than the 95% confidence interval for inferred limnetic TP (127 µg/L). Inferred limnetic TP in Lake Eustis also indicates a large increase in TP concentration with time, with the greatest change occurring after 1950. After the peak period, inferred TP concentrations were relatively constant over the remainder of the sediment record. Total P inferences for the most recent samples are approximately 100 µg/L and are high compared to reported water quality measurements of 68 µg/L (SJRWMD) and 39 µg/L (Florida Lake Watch). Absolute TP inference values may not be reliable for recent decades in Lake Eustis, but overall trends in Lake Dora and Lake Eustis suggest an increase in trophic state documented by distinct qualitative shifts in diatom species composition over time.

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# INTRODUCTION

Lake Dora and Lake Eustis are two of the lakes in the upper Ocklawaha River basin. The headwaters of this basin originate with the Apopka Spring in Lake Apopka. Water from Lake Apopka flows to Lake Beauclair through the Apopka-Beauclair Canal which was completed in 1887 to lower water levels in Lake Apopka. Before the construction of this canal, water flowed from Lake Apopka to Little Lake Harris through Double Run Swamp. Presently, the major hydrologic flow to Lake Dora is from Lake Beauclair whereas the hydrologic flows to Lake Eustis are more complex (Fulton 1995). The major hydrologic flows to Lake Eustis are from Lake Harris-Little Lake Harris through the Dead River, from Lake Dora through the Dora Canal, from Haines Creek periodically and from the drainage basin. The poorest water quality in the upper basin is in Lake Apopka (Fulton 1995). Discharges from Lake Apopka undoubtedly have affected water quality in the downstream lakes, particularly in the last 50 yr as the lake has become phosphorus enriched (Schelske 1997). Studies of sediment and nutrient deposition have been conducted on Lake Griffin, which is downstream from Lake Eustis, and on Lake Apopka (Schelske 1997, 1998). Nutrient loading and retention for lakes in the upper Ocklawaha River basin have been estimated by Fulton (1995).

A study of sediment and nutrient deposition in Lake Dora and Lake Eustis was undertaken in two phases with two major goals: 1) quantitative estimates of temporal changes in net nutrient accumulation rates in sediments and 2) inference of historic lake total phosphorus (TP) concentrations from paleolimnological analyses of sedimentary diatoms. To accomplish this goal, approximately 80 sediment cores (50 during Phase I and 30 during Phase II) were collected at stations located on equal area grids. The major purpose of Phase I was to determine the feasibility and to evaluate the methodology necessary to obtain quantitative estimates of net sedimentation and net nutrient accumulation rates for the entire lake basins of Lake Dora and Lake Eustis. Phase II was undertaken after the feasibility of the methodology was demonstrated with results from Phase I. To accomplish the primary goal of quantitatively estimating temporal changes in net nutrient accumulation rates in sediments, a large number of cores were collected from each lake to characterize spatial variability, to assess changes in nutrients with depth and to determine whether stratigraphic time-dependent features were present that could be correlated across cores. If present these stratigraphic features can be assigned ages by stratigraphic correlation with dated cores. For this purpose historic cores from each lake were aged using $^{210}Pb$, a naturally occurring radionuclide with a 22-yr half-life. The primary goal was divided into two subgoals based on this approach. The first is to quantitatively estimate temporal changes in net nutrient accumulation rates using $^{210}Pb$ dating of the historic cores and the second is to extrapolate these results by stratigraphic correlation or other means to basin-wide estimates using data from the entire suite of cores.

## METHODS

Survey and historic cores were collected in Lake Dora and Lake Eustis. Twenty survey stations were located in Lake Dora on an equal area grid (Fig. 1) and 27 survey stations were located in Lake Eustis on an equal area grid (Fig. 2). Survey stations in Lake Dora were occupied only during Phase I. No appreciable, soft sediment was found at 3 of the Lake Dora survey sites, LD-13S-96, LD-18S-96 and LD-20S-96 (Appendix A). Only historic cores were collected at three of the sites on the equal area grid, LD-3H-95, LD-10H-95 and LD-14H-95 (Appendix B). All of the 27 survey stations were occupied during Phase I and II sampling of Lake Eustis (Appendix C). No appreciable amounts of soft sediment was found at LE-1S and LE-2S during Phase I or Phase II sampling.

Seven historic cores (to be aged using $^{210}Pb$) were collected from each lake at sites shown in Figs. 1 and 2. Historic cores were collected either at sites specified as survey stations or at new sites not positioned on the equal area grid. Five historic cores were collected from Lake Dora during Phase I: LD-3H-95, LD-10H-95 and LD-14H-95 were collected at survey sites and LD-21H-96 and LD-22H-96 were collected at sites not positioned on the equal area grid (Fig. 1). Two additional historic cores, LD-6H-98 and LD-12H-98, positioned at survey sites were collected from Lake Dora during Phase II. Five historic cores were collected from Lake Eustis during Phase I: LE-11H-95, LE-13H-95 and LE-16H-95 were collected at survey sites and LE-28H-96 and LE-29H-96 were collected at sites not positioned on the equal area grid (Fig. 2). Two additional historic cores, LE-3H-98 and LE-27H-98, positioned at survey sites were collected from Lake Eustis during Phase II. A third core, LE-13Pb-97, which was not required by terms of the contract, was collected to represent a high sedimentation site; but when aged using $^{210}Pb$ dating, results showed that Station 13 had been identified incorrectly during Phase I as a high sedimentation site. Data for LE-13S-97 also confirmed that Station 13 was not a high sedimentation site. As a result, LE-13Pb-97 was not used as a historic core and no chemical analyses were undertaken.

Stations were located with a Global Positioning System and latitude and longitude were recorded. Collection date, latitude and longitude, water depth and soft sediment thickness at these stations are listed in Appendices A-D.

At each station, thickness of soft sediment was determined using a steel spudding rod and a Secchi disc. The steel spudding rod calibrated in 5-cm intervals was driven vertically to hard bottom and depth relative to the water surface was recorded. Depth of the water column was determined by lowering a 20-cm Secchi disk to the sediment surface and this depth was subtracted from the spudding value to yield soft-sediment depth. A sediment core of up to 1.5 m in length was collected with a piston corer (Fisher et al. 1992) when sufficient thickness of soft sediment was present. Survey cores were collected using a 1.8-m clear plastic core

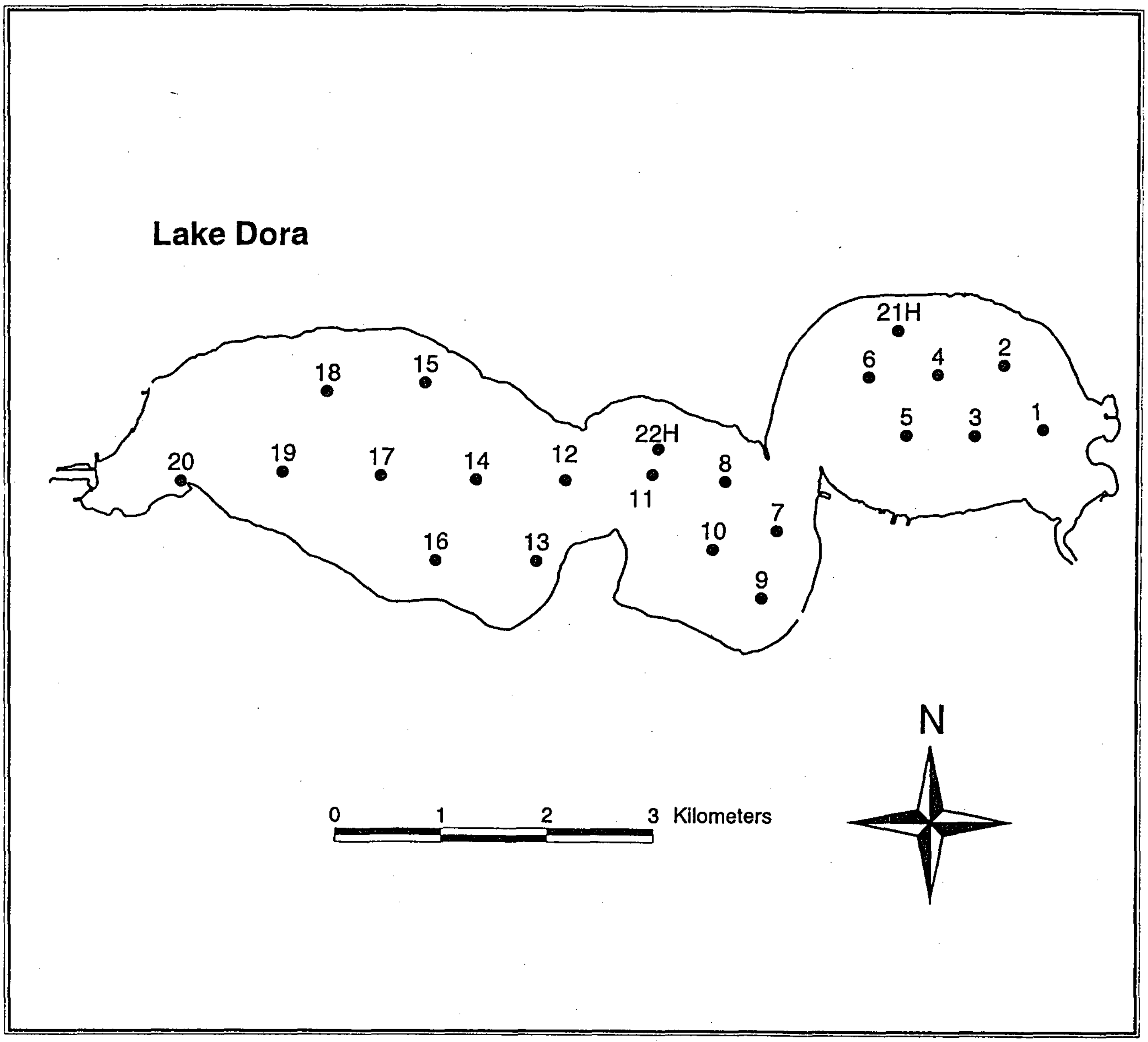


Fig. 1. Map of Lake Dora showing locations of 22 stations. Stations 1-20 were arranged on an equal area grid. Historic stations are designated by an H.

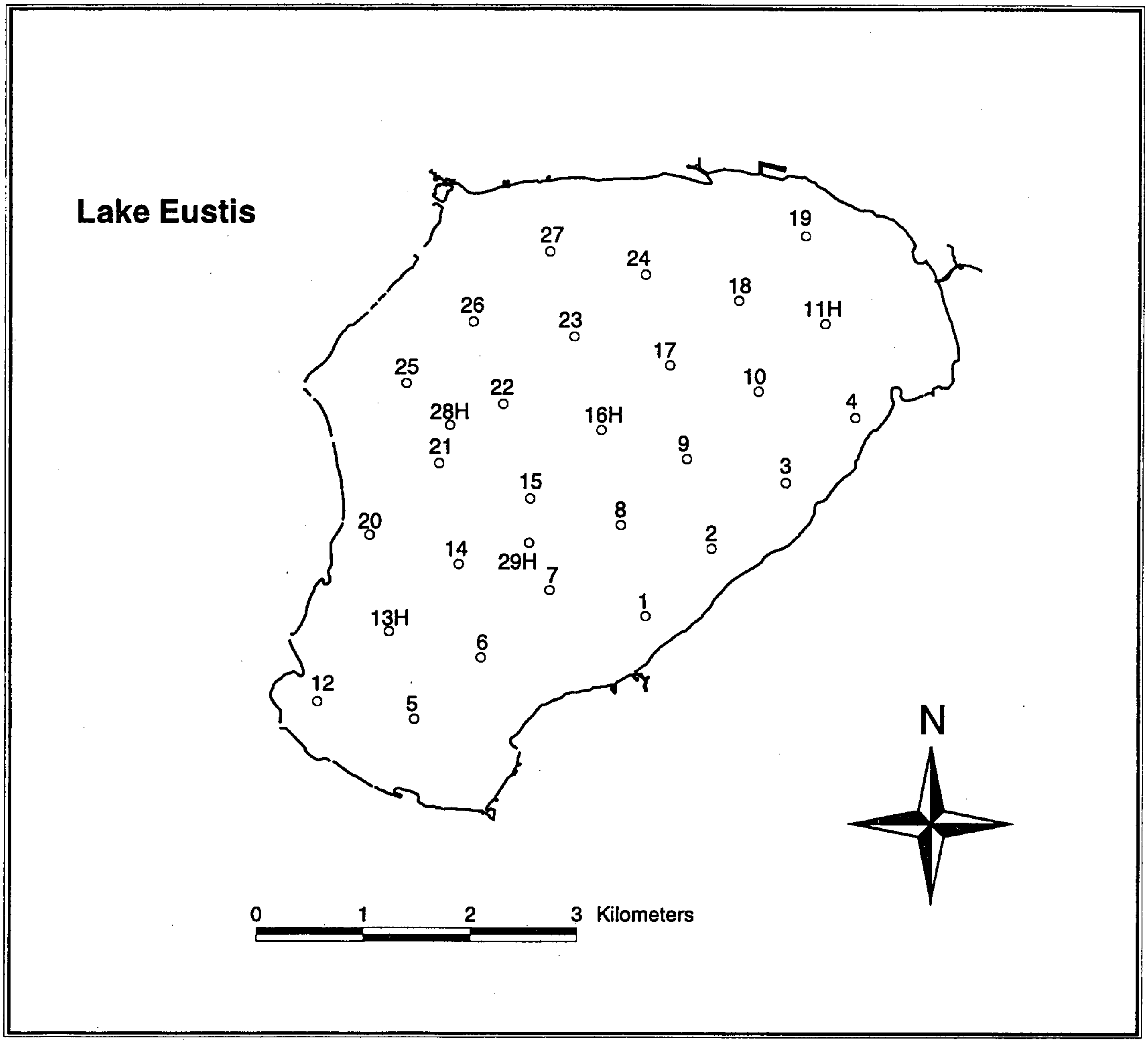


Fig. 2. Map of Lake Eustis showing locations of 29 stations. Stations 1-27 were arranged on an equal area grid. Historic stations are designated by an H.

barrel (4.0-cm inside diameter) and historic cores were collected using a 1.8-m clear plastic core barrel (6.99-cm inside diameter). Depths of stratigraphic features in sediment cores were determined visually on deck after retrieval and measured directly in the core tube when such features were distinguishable visually (see Appendices A-D). Cores were either sectioned at the station immediately after collection or at an onshore site adjacent to the lake. Samples from each section were placed in Whirl-Pak bags which were stored in insulated freezer chests during transit to the laboratory in Gainesville. In the laboratory, samples were stored frozen until they were freeze dried. After freeze drying, dry samples were ground to fine powder using a mortar and pestle.

Cores were sectioned at different intervals during the two phases of the investigation. Survey cores for Phase I were sectioned at finer intervals and to greater depths than at 10-cm intervals to a depth of 50 cm as specified in the Scope of Work. Because the thickness of soft sediments was greater than anticipated, survey cores from Lake Dora were sectioned at 5-cm intervals to approximately 130 cm if adequate soft sediment was present. Survey cores from Lake Eustis were sectioned at 8-cm intervals to a depth of 80 cm. Phase I historic cores from both lakes were sectioned at 2-cm intervals to depths >100 cm. Analysis of results from Phase I demonstrated that some of the 80-cm, survey cores from Lake Eustis were truncated and sectioned too coarsely to infer the stratigraphic patterns found in the historic cores. Therefore, longer survey cores collected during Phase II were sectioned at 4-cm intervals. The four historic cores collected during Phase II (two from each lake) were sectioned at 4-cm intervals.

Gravimetric analyses were conducted by weighing each section before and after freeze drying and calculating the dry weight mass and dry weight fraction (% dry weight). Organic matter content of dried sediments was measured as percent loss on ignition (LOI) at 550°C for 2 hr in a Sybron Thermolyne muffle furnace (Håkanson and Jansson 1983). Inorganic or mineral sediment (ash fraction) was considered to represent the fraction remaining after combustion. Rho (r) was calculated using an equation by Binford (1990)

$$r = \frac{D\,(2.5I_x + 1.6C_x)}{D + (1-D)\,(2.5I_x + 1.6C_x)}$$

where r is dry density (g dry $cm^{-3}$ wet), x is depth in the sediment profile (cm), D is proportion of dry mass in wet sediment (dry mass/wet mass), I is the inorganic proportion of dry mass, with density = 2.5 g $cm^{-3}$ dry, and C is the organic proportion of dry material with density = 1.6 g $cm^{-3}$ dry.

Two forms of phosphorus were measured in dried sediment samples (Schelske et al. 1986, 1988). Total phosphorus (TP) was analyzed using persulfate digestion. Non-apatite inorganic phosphorus (NAIP), a chemically determined form of phosphorus that has been shown to be biologically available (Williams et al. 1976), was leached from small samples for 17 hr at 25$^{o}$C in a solution of 0.1 N NaOH. Phosphate was measured after digestion or leaching with a segmented flow autoanalyzer and an electronic data acquisition system.

Total carbon (TC) and total nitrogen (TN) were measured with a Carlo Erba NA1500 CNS elemental analyzer equipped with an autosampler. Analysis of sediment samples was based on methodology described by Verardo et al. (1990).

Cluster analysis (JMP 1995) on gravimetric and chemical data for survey cores was used to make an objective separation of sediment samples into stratigraphic zones so they could be stratigraphically correlated with temporal changes in historic cores. Cluster analyses utilizes an algorithm that groups data to produce data sets that are statistically different from each other. We used K-means clustering, specifying a specific set of clusters in the analysis of variables that varied with depth. These variables were TP, TC/TN, dry weight density (rho) and fraction ash. Samples from Lake Dora were clustered using TP, TC/TN and fraction ash and those from Lake Eustis were clustered using TP, TC/TN and dry weight density (rho). Employing more variables for either data set resulted in clusters with non-continuous depth distribution. Data for Lake Dora were grouped using three clusters and those for Lake Eustis with two clusters. One cluster (deepest samples) for each lake could not be utilized to resolve time dependence because it included the deepest samples with unknown and probably different ages from core to core. Specifying a larger number of clusters for either data set produced clusters that were randomly distributed with depth. Thus, this analysis also was used to determine whether sediment composition varied directionally or randomly over time. If the variation was directional, sediment types would be expected to group stratigraphically; if not, sediment types would be randomly interspersed with depth in cores. Results obtained from cluster analysis are the mean and standard deviation for each variable in the statistically determined clusters.

Sediments were aged using measurements of the activity of naturally occurring radioisotopes in sediment samples. The method is based on determining the activity of total $^{210}Pb$ (22.3 yr half-life), a decay product of $^{226}Ra$ (half-life 1622 yr) in the $^{238}U$ decay series. Total $^{210}Pb$ represents the sum of excess $^{210}Pb$ and supported $^{210}Pb$ activity in sediments. The ultimate source of excess $^{210}Pb$ is the outgassing of chemically inert $^{222}Rn$ (3.83 d half-life) from continents as $^{226}Ra$ incorporated in soils and rocks decays. In the atmosphere, $^{222}Rn$ decays to $^{210}Pb$ which is deposited at the earth's surface with atmospheric washout as unsupported or excess $^{210}Pb$. Supported $^{210}Pb$ in lake sediments is produced by the decay of $^{226}Ra$ that is deposited as one fraction of erosional inputs. In the sediments gaseous $^{222}Rn$ produced from $^{226}Ra$ is trapped and decays to $^{210}Pb$. By definition, supported $^{210}Pb$ is in secular equilibrium with sedimentary $^{226}Ra$ and is equal to total $^{210}Pb$ activity at depths where excess $^{210}Pb$ activity is not measurable due to decay. Because the decay of excess $^{210}Pb$ activity in sediments provides the basis for estimating sediment ages, it is necessary to make estimates of total and supported $^{210}Pb$ activities so excess $^{210}Pb$ activity can be determined by difference.

Radiometric measurements were made using low-background gamma counting systems with well-type intrinsic germanium detectors (Schelske et al. 1994). To prepare samples for radiometric analysis, dry sediment from each section was packed to a nominal height of 30 mm in a tared polypropylene tube (84 mm high x 14.5 mm outside diameter, 12 mm inside diameter). Sample height was recorded and tubes were weighed to obtain sample mass. Samples in the tubes were sealed with a layer of epoxy resin and polyamine hardener, capped, and stored before counting to ensure equilibrium between $^{226}Ra$ and $^{214}Bi$. Activities for each radionuclide were calculated using empirically derived factors of variation in counting efficiency with sample mass and height (Schelske et al. 1994). Total $^{210}Pb$ activity was obtained from the 46.5 kev photon peak and $^{226}Ra$ activity was obtained from the 609 kev peak of $^{214}Bi$. $^{226}Ra$ activity was assumed to represent supported $^{210}Pb$ activity. Excess $^{210}Pb$ activity was calculated either by subtracting $^{226}Ra$ activity from total $^{210}Pb$ activity at each depth or by subtracting an estimate of supported $^{210}Pb$ activity based on measurements of total $^{210}Pb$ activity at depths where excess $^{210}Pb$ activity is negligible. Excess $^{210}Pb$ activity was corrected for decay from the coring date. The 662 kev photon peak was used to measure $^{137}Cs$ activity. The peak in $^{137}Cs$ activity was measured to evaluate its usefulness as an independent time marker for the peak period of fallout from nuclear weapons testing in 1962-63, but the absence of a sharp peak in activity limited its usefulness as an independent time marker.

Sediment ages were calculated using a CRS model (Appleby and Oldfield 1983). This model calculates ages based on the assumption that the flux of excess $^{210}Pb$ to the lake was constant and therefore that variation in $^{210}Pb$ activity from a pattern of exponential decrease with depth was dependent on variation in rate of sedimentation. For small lakes, the assumption that sedimentation rate was not constant appears to be appropriate. The age of sediments at depth x is given by

$$t = (1/k)\,[\ln (A_o/A)]$$

where t is time in yr, k is 0.03114 (the $^{210}Pb$ decay constant), $A_o$ is the total residual excess $^{210}Pb$ activity in the sediment core, and A is the integrated excess $^{210}Pb$ activity below depth x. Calculations for each depth provide a continuous profile of ages as a function of depth. Mass sedimentation rate (MSR) at depth x is given by

$$MSR = m/t$$

where m is dry mass of sediment (mg $cm^{-2}$) for the sampling interval. Errors in age and mass sedimentation rate were propagated using first-order approximations and calculated according to Binford (1990).

Diatom microfossils were enumerated in two historic cores from each lake, LD-3H-95 and LD-10H-95 from Lake Dora and LE-13H-95 and LE-28H-96 from Lake Eustis. Sedimentary diatom analyses were performed on 15 sediment samples from each historic core. Samples were cleaned of organic matter using the potassium dichromate and hydrogen peroxide method of Van der Werff (1955), then mounted for microscopic analysis. A minimum of 500 diatom valves were counted per sample and identified to the lowest taxon possible. Historic concentrations of TP in the water column were inferred from transfer functions based on relative abundance of diatom microfossils (Whitmore 1989).

A tabulation of field notes taken at the time of core collection in Lake Dora and Lake Eustis is given in Appendices A-D. Gravimetric and chemical data for survey and historic cores from both lakes are listed in Appendices E-H. Data presented include fraction dry weight, organic matter determined by loss on ignition (LOI) at 550$^{o}$ C, TP, NAIP, TC, TN, and TC/TN. In addition, cumulative dry mass (g $cm^{-2}$), cumulative NAIP (mg NAIP $cm^{-2}$) and cumulative TP (mg TP $cm^{-2}$) are presented for each core. Cumulative dry mass (g $cm^{-2}$) was calculated by dividing the sample dry mass for each sediment section by the area of the core tube and summing the results with depth. Cumulative dry mass and the concentration of NAIP and TP for each section were used to calculate TP and NAIP storage with depth in each core; thus storage is determined independently of nominal measurements of section thickness. Missing data were interpolated so cumulative storage of nutrients could be calculated. Missing data resulted primarily from inadequate amounts of sample for all analyses, primarily at the tops of cores. Missing data in approximately 20 samples represent a very small fraction of the more than 1200 samples analyzed. One entire sample, LD-14H-42 cm, was missing, probably due to skipping a sample container while collecting samples in the field or while processing and archiving samples in the laboratory.

Data on radiometric dating are given in Appendices I and J.

Data on enumeration of sedimentary diatoms are given in Appendices K and L.

Data obtained from multi-variate, K-means cluster analysis are presented in Appendix M.

## LAKE DORA

Sediments in Lake Dora can be characterized from a statistical analysis of the large data sets for survey and historic cores (Table 1). These descriptions are based on the mean and standard deviation and maximum and minimum values for selected variables. Data for each data set are tabulated by station in Appendices E and F.

### Gravimetric Results

Sediments in Lake Dora were generally high in water content and highly organic with little difference between samples from survey and historic cores. The % dry weight increased downcore in all cores to values >5% (Appendices E and F). Maximum dry weight ranged from 8.9 to 14% (Table 1), but samples with dry weight >10% were not common and were found only at depth in cores. Mean dry weight ranged only from 4.6 to 4.9%. LOI was high in surface samples with the smallest values at depth. Mean LOI ranged from 60 to 61% and ranged to a maximum of 89% in the survey samples from Phase I; however, only a few samples exceeded 80%. Means for ash fraction ranged among the three data sets ranged from 39.0 to 39.9%.

### Total Carbon and Total Nitrogen

Average values for TC and TN were similar for historic and survey cores. TC ranged from 29.9 to 32.9% for the three sets of data, or roughly half of the % LOI (Table 1). Mean % TC for phase II historic cores was more than half as large as the % LOI. Mean TN ranged from 2.6 to 3.2%. Like % TC for phase II historic cores, % TN was also greater in this data set. The mean TC/TN ratio ranged from 10.7 to 11.8 with the smallest ratio for the phase II historic cores. TC/TN increased downcore in a pattern that closely paralleled that for % dry weight (Appendices E and F).

### Non-Apatite Inorganic and Total Phosphorus

Concentrations of NAIP and TP were largest in near-surface sediments and decreased to minimum values at depth in all cores (Appendices E and F). The maximum TP concentration for near-surface sediments at Phase I stations are plotted in Fig. 3. Stations with the largest TP concentration (>2.5 mg/g) were located in the eastern end of the lake and those with the smallest TP concentration (<2.1 mg/g) were in the western end of the lake. With the exception of LD-5S with the largest TP concentration (3.8 mg/g), TP generally decreased along the east-west axis of the lake. Low TP concentrations (<0.035 mg/g) were found at LD-13S, LD-18S and LD-20S which are erosional sites with sand sediments.

Table 1. Statistical summary of selected sediment variables in survey and historic cores collected from Lake Dora. Data are presented as averages, minima, maxima and standard deviations.

| | Dry (%) | Ash (%) | LOI (%) | NAIP (mg/g) | TP (mg/g) | TN (%) | TC (%) | TC/TN |
|---|---|---|---|---|---|---|---|---|
| Lake Dora Survey Phase I | | | | | | | | |
| Average | 4.56 | 39.70 | 60.06 | 0.361 | 0.869 | 2.74 | 30.17 | 11.37 |
| Minimum | 0.23 | 11.31 | 19.83 | 0.005 | 0.050 | 0.94 | 12.35 | 6.72 |
| Maximum | 14.07 | 80.20 | 88.69 | 1.485 | 5.656 | 4.77 | 39.29 | 16.51 |
| Std. Dev. | 2.22 | 11.00 | 10.66 | 0.345 | 0.829 | 0.65 | 4.15 | 1.83 |
| Lake Dora Historic Phase I | | | | | | | | |
| Average | 4.85 | 39.90 | 60.10 | 0.259 | 0.683 | 2.64 | 29.90 | 11.80 |
| Minimum | 0.19 | 17.10 | 30.20 | 0.010 | 0.049 | 1.08 | 15.60 | 6.03 |
| Maximum | 11.90 | 70.00 | 82.90 | 1.450 | 2.830 | 5.44 | 37.20 | 15.50 |
| Std. Dev. | 1.80 | 10.00 | 9.90 | 0.320 | 0.680 | 0.66 | 3.65 | 2.04 |
| Lake Dora Historic Phase II | | | | | | | | |
| Average | 4.57 | 39.01 | 60.99 | 0.323 | 1.042 | 3.15 | 32.91 | 10.72 |
| Minimum | 0.87 | 21.20 | 36.86 | 0.046 | 0.146 | 1.96 | 25.72 | 8.85 |
| Maximum | 8.92 | 63.14 | 78.80 | 0.929 | 2.844 | 4.31 | 38.21 | 14.08 |
| Std. Dev. | 1.69 | 8.77 | 8.77 | 0.237 | 0.736 | 0.58 | 2.70 | 1.59 |

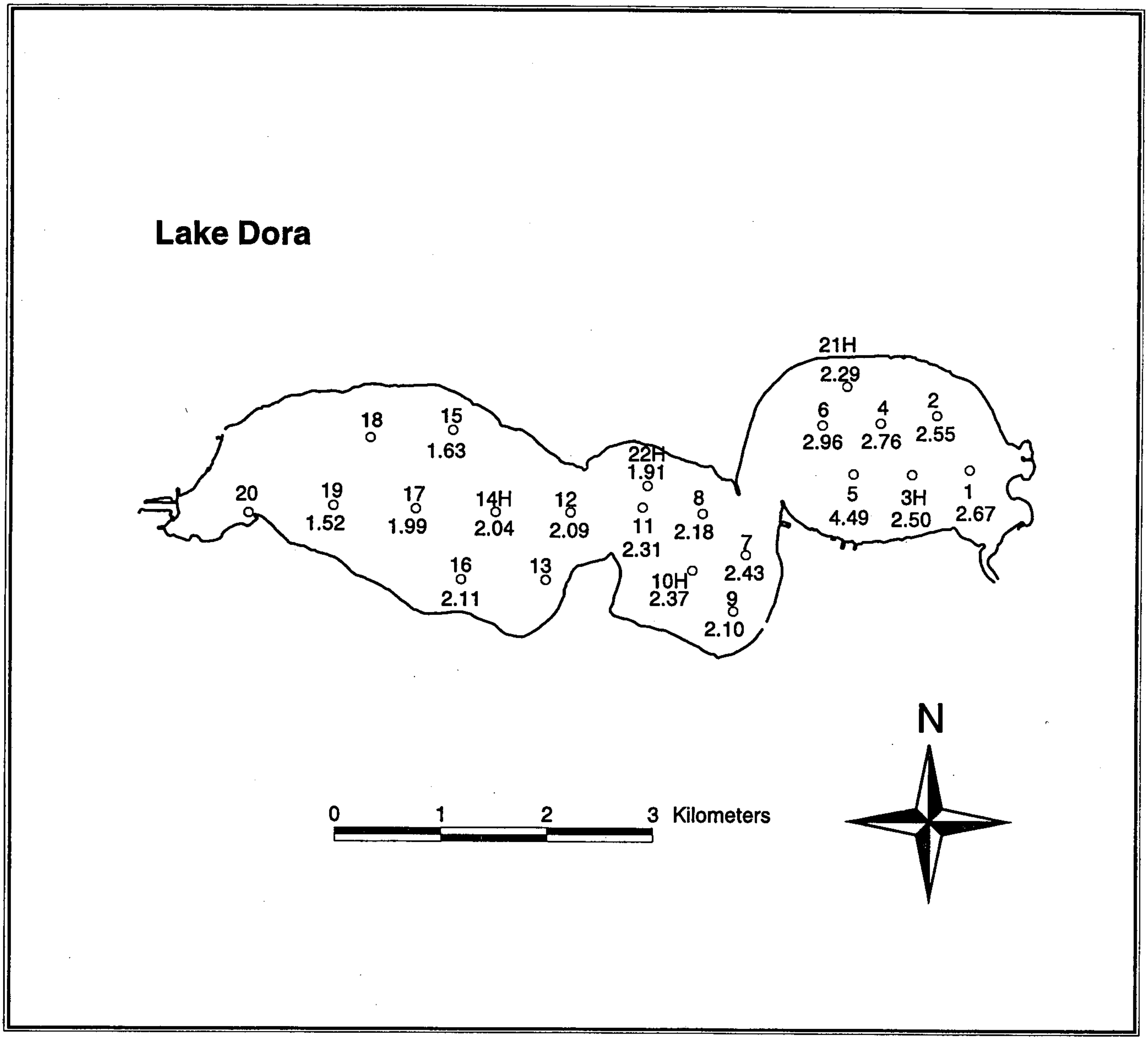


Fig. 3. Maximum TP concentration in near-surface sediments at 22 stations in Lake Dora. Data plotted are the average concentration for the zone of highest concentration at each station. The zone of highest concentration among cores ranged from 5 to 20 cm (see Appendix E).

Mean TP among the three data sets ranged from 0.68 mg/g in the phase I historic cores to 1.04 mg/g in the phase II historic cores (Table 1). Mean NAIP for the three sets of data only ranged from 0.26 to 0.36 mg/g, but standard deviations also were relatively large for this variable. Differences in means for TP are not significant statistically because of the large standard deviations. The two largest concentrations of TP were found in 5 and 10 cm samples from survey stations LD-5S. These values were 3.32 and 5.66 mg TP/g, greater than the maximum concentrations (approximately 3.0 mg/g) at other survey stations (Appendices E and F) and greater than the maximum values for either set of historic stations (2.8 mg/g). The coefficient of variation (standard deviation/mean) was much greater for TP and NAIP concentration than for any other variable shown in Table 1. Large standard deviations in TP and NAIP concentration, as large as the mean in some cases, were the result of the down core variation in both TP and NAIP (Appendices E and F).

Concentrations of TP and NAIP in sediment samples were highly correlated in both the survey and historic cores (Fig. 4). Slopes of the regressions varied among the three data sets. The largest slope was found for samples from the phase II historic cores (LD-H-98). The slope for the survey samples from phase I was larger than for the phase I historic samples. The slope decreased in the same rank order as the range in mean TP concentration (0.68 to 1.04 mg/g, Table 1). Some of these differences can be attributed to the large spatial variation in maximum TP concentrations over the lake basin (Fig. 3).

### Mass Sedimentation Rate

The five historic cores collected during phase I were sectioned at 2-cm intervals and dated with $^{210}Pb$ using a CRS model. Data generated from the model show that the sectioning employed was much finer than necessary because the age difference between sections is small particularly at the stations with the highest mass sedimentation rate (MSR) (Figs. 5 and 6, Appendix I). This conclusion is confirmed by data from the two cores collected during phase II which were sectioned at 4-cm intervals. Adequate resolution was obtained with coarser sectioning in these cores (Appendix I).

MSR for LD-3H, LD-10H, LD-6H-98 and LD-12H-98 was greater than for the other three cores (Figs. 5-7). Ages represented in the upper sections are small, particularly those for the phase I cores, because of the fine sectioning of these cores and the high water content (Table 1). For example, the upper 3 sections in LD-3H and LD-10H accounted for only 0.6 yr (Appendix I). Thus, data from these sections represent a small time interval and a relatively small amount of mass in the core even though MSR was high. The MSR for the remaining three cores was lower and the age span represented by the upper 6 cm was greater (Appendix I).

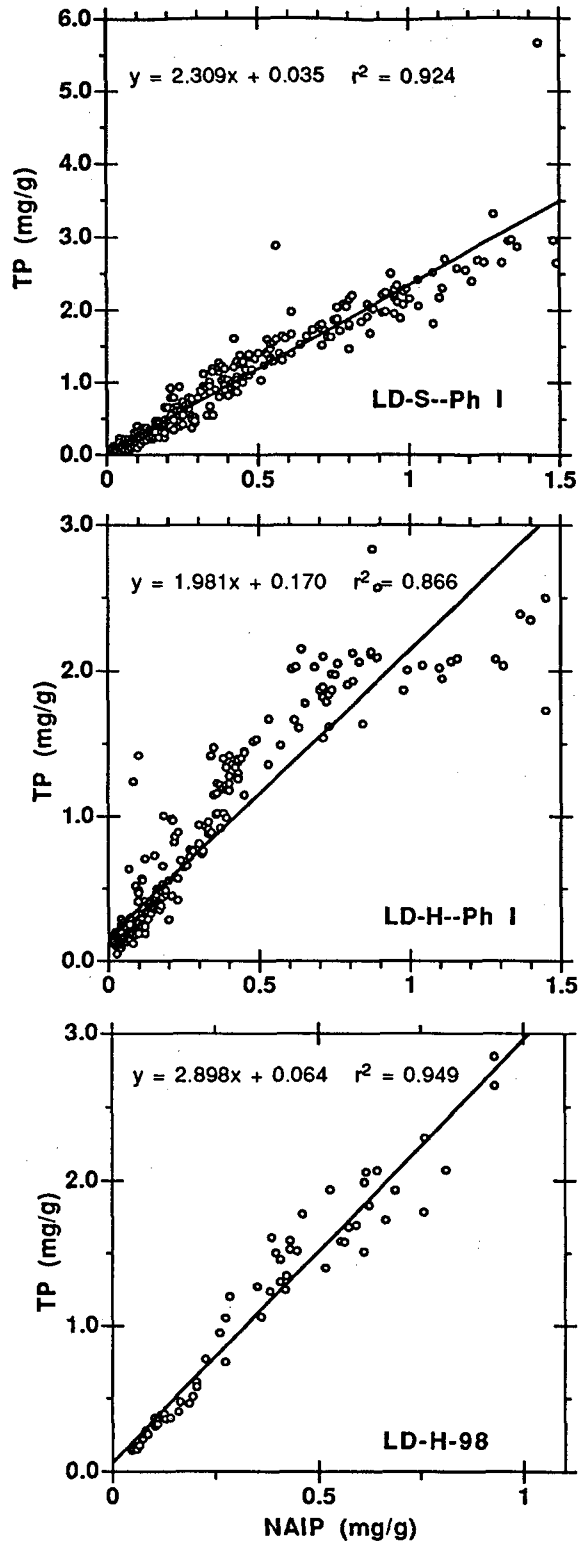


Fig. 4. Correlation of TP and NAIP concentration in sediment samples from Lake Dora. Data for survey cores are plotted in upper panel and data for historic cores in the two lower panels.

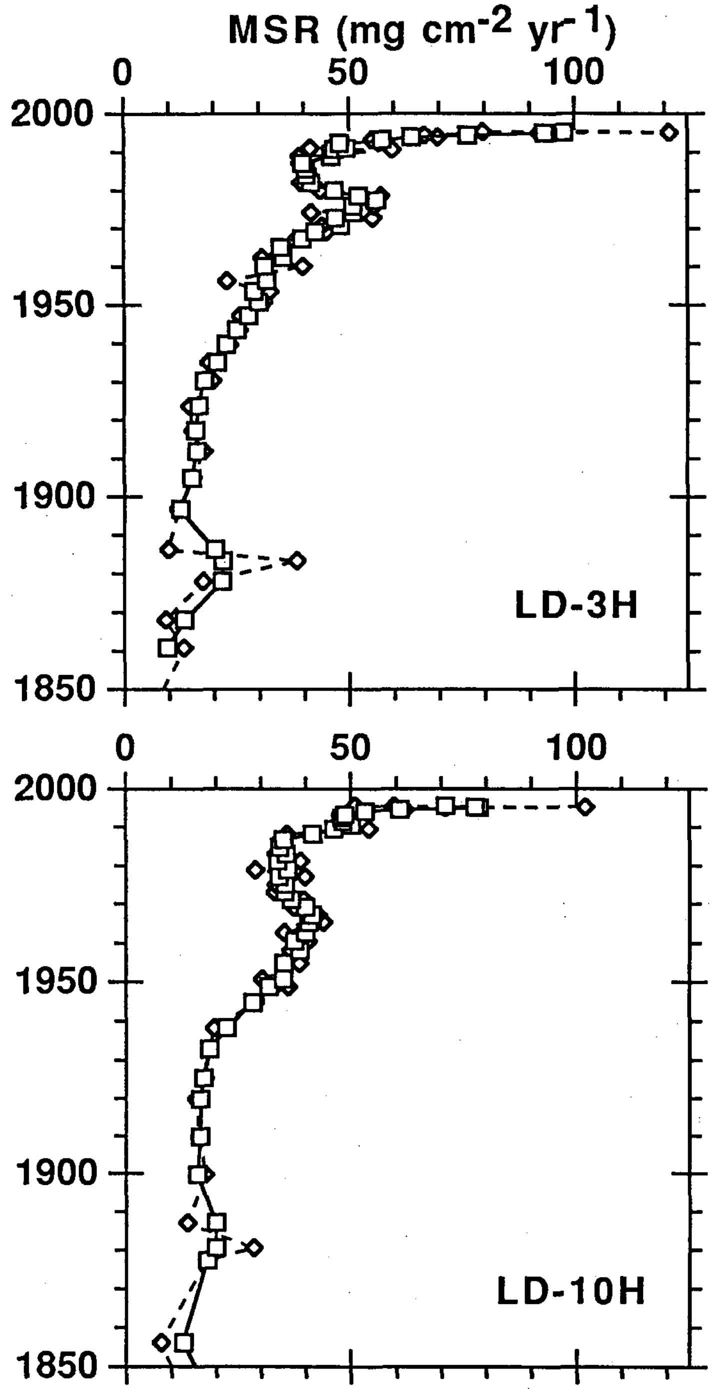


Fig. 5. Mass sedimentation rate (MSR) for historic cores LD-3H and LD-10H collected in Lake Dora. Data for MSR (open diamonds)) are smoothed using a three-point running average (open squares).

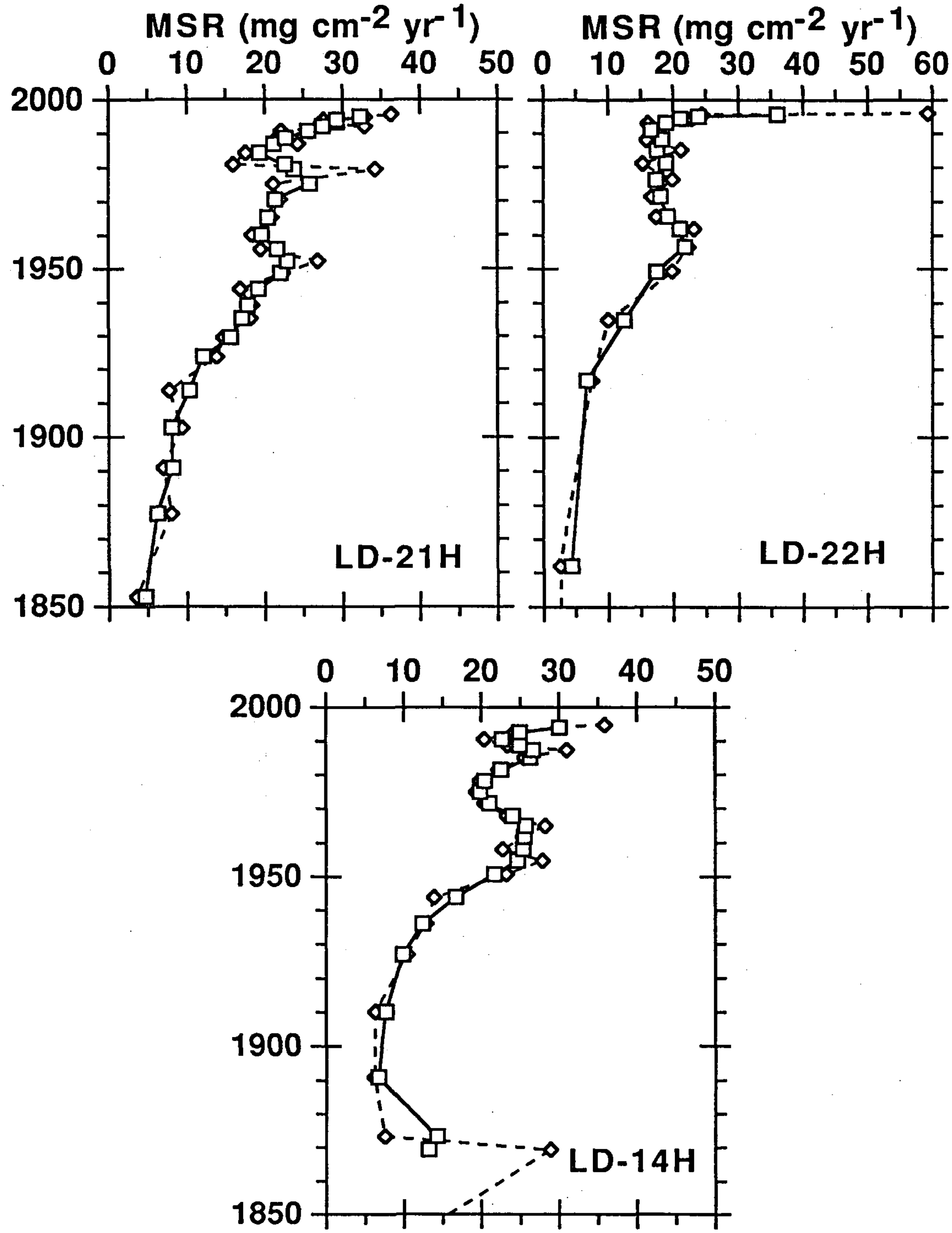


Fig. 6. Mass sedimentation rate (MSR) for historic cores LD-14H, LD-21H, and LD-22H collected in Lake Dora. Data for MSR (open diamonds)) are smoothed using a three-point running average (open squares).

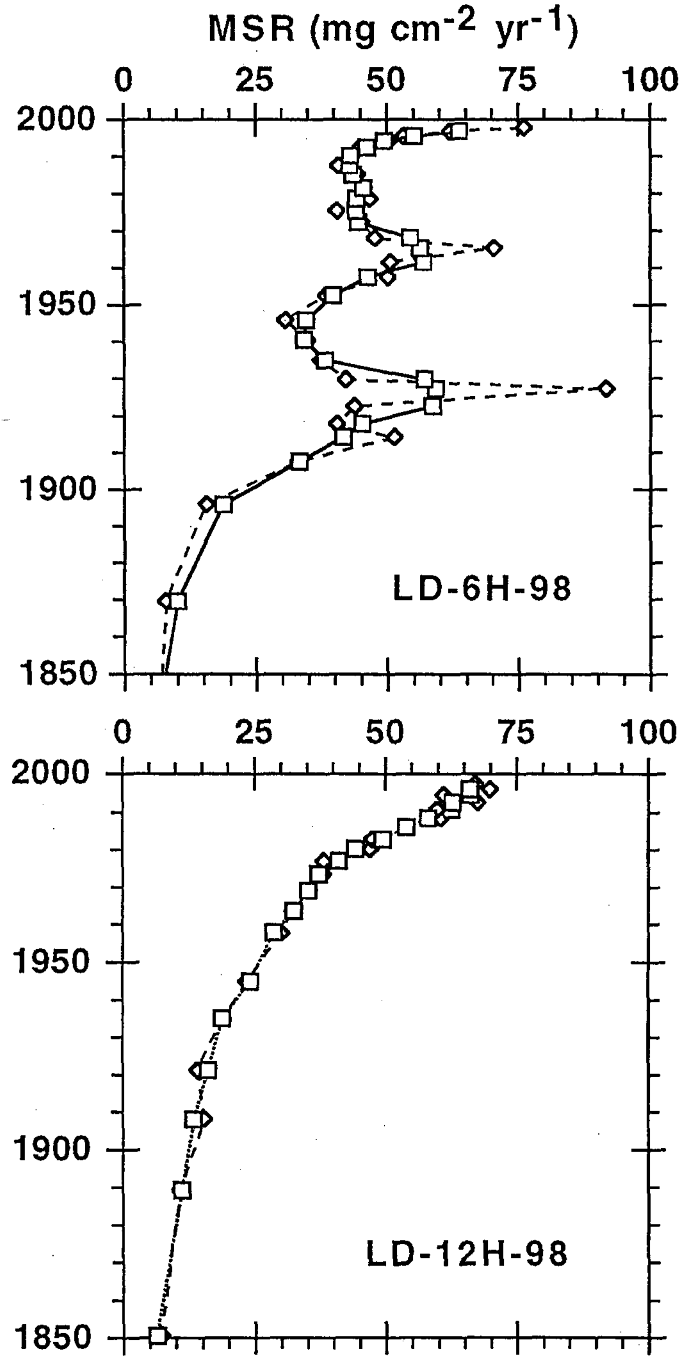


Fig. 7. Mass sedimentation rate (MSR) for historic cores LD-6H-98 and LD-12H-98 collected in Lake Dora. Data for MSR (open diamonds)) are smoothed using a three-point running average (open squares).

MSR varied greatly among the seven historic cores and over depth in individual cores. Data for MSR were smoothed using a three-point moving average. MSR for LD-14H and LD-6H-98, even with smoothing, showed two distinct peaks in MSR in addition to an increase near the surface (Figs. 6 and 7). With smoothing, MSR ranged from roughly 10 mg $cm^{-2}$ $yr^{-1}$ at 1900 to 50 mg $cm^{-2}$ $yr^{-1}$ for sections that date in the early 1990s for cores LD-3H and LD-10H (Fig. 5) and from roughly 10 mg $cm^{-2}$ $yr^{-1}$ at 1900 to 50 mg $cm^{-2}$ $yr^{-1}$ in the 1990s at LD-6H-98 and LD-12H-98 (Fig. 7); thus, ranges for both sets of cores represent an approximate 5-fold increase in MSR during this century. The increase in MSR during the 20th century was less at the remaining stations with lower MSR, ranging only from 2- or 3-fold at LD-21H, LD-22H and LD-14H (Fig. 6). MSR for core LD-21H increased upcore to about 25 mg $cm^{-2}$ $yr^{-1}$, or at least 3-fold from 1900 to the 1990s (Fig. 7). Only one point in core LD-22H was older than 1900 (Appendix I). The lack of data for pre-1920 sediments does not provide adequate data to compare 1990 rates with 1900. However, maxima >20 mg $cm^{-2}$ $yr^{-1}$ for LD-22H (Fig. 6) show that MSR probably increased 2- to 3-fold in this core also. Therefore, the increase in MSR among cores from 1900 to 1990 ranged from approximately 2- or 3-fold to 5-fold.

Decadal MSR were calculated as a means of equally weighting temporal data. MSR for the most recent decade ranged from 19.0 to 63.5 mg $cm^{-2}$ $yr^{-1}$ with a mean of 43.0 mg $cm^{-2}$ $yr^{-1}$ (Table 2). Decadal MSR ranged from 45.7 to 63.5 mg $cm^{-2}$ $yr^{-1}$ in the four cores with the highest MSR and from 19.0 to 25.7 mg $cm^{-2}$ $yr^{-1}$ in the three cores with the lowest MSR. Relative increases in MSR compared to the 10th decade (91-100 yr since core collection) were calculated. Relative increases in MSR for decades 1-8 were much greater for LD-22H than for any other core because lack of data from pre-1920 sediments caused unusually low estimated MSR in the 10th decade. Excluding data for LD-22H, the relative increase in MSR for the most recent decade ranged from 2.91 to 5.82 and averaged 3.85.

Because sediments in Lake Dora are highly organic, the decadal organic matter sedimentation rate (OMSR) was calculated and compared to decadal MSR. The OMSR for the most recent decade ranged from 12.1 to 41.0 mg $cm^{-2}$ $yr^{-1}$ with a mean of 30.0 mg $cm^{-2}$ $yr^{-1}$ (Table 3). Decadal OMSR ranged from 32.9 to 41.0 mg $cm^{-2}$ $yr^{-1}$ in the four cores with the highest OMSR and from 12.1 to 18.5 mg $cm^{-2}$ $yr^{-1}$ in the three cores with the lowest OMSR. The relative increase in OMSR for the most recent decade compared to the 10th decade (91-100 yr since core collected) in LD-22H was 8.27, much greater than that for any core. Therefore, data for this core were not used in calculating the average relative increase in OMSR. The relative increase in OMSR per decade was comparable to that for MSR with the exception of the most recent decade. Average OMSR for the most recent decade was 4.67 which was greater than the average MSR of 3.85 for the most recent decade. The greater relative increase in OMSR is a result of higher organic matter content in recent sediments.

Table 2. Decadal mass sedimentation rates (MSR) in mg $cm^{-2}$ $yr^{-1}$ for Lake Dora historic cores by decades since core collection. MSR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in MSR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LD-22H[1].

| Decade | Avg[1] | 3H | 10H | 14H | 21H | 22H | 6H-98 | 12H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 42.95 | 48.58 | 45.71 | 25.73 | 25.64 | 18.95 | 48.57 | 63.48 |
| 2 | 35.96 | 47.53 | 34.54 | 20.77 | 20.70 | 18.24 | 45.17 | 47.07 |
| 3 | 34.63 | 42.88 | 38.96 | 23.30 | 21.43 | 17.12 | 44.84 | 36.35 |
| 4 | 33.16 | 30.15 | 37.63 | 25.20 | 19.13 | 22.33 | 55.74 | 31.10 |
| 5 | 26.85 | 28.69 | 31.52 | 18.62 | 22.42 | 16.74 | 35.96 | 23.85 |
| 6 | 21.31 | 22.02 | 20.01 | 12.86 | 18.04 | 10.01 | 34.40 | 20.53 |
| 7 | 20.60 | 17.29 | 17.79 | 9.79 | 14.76 | 7.75 | 48.22 | 15.72 |
| 8 | 18.18 | 15.69 | 15.97 | 6.35 | 9.19 | 7.16 | 47.40 | 14.52 |
| 9 | 17.34 | 16.30 | 16.97 | 6.29 | 9.03 | 2.59 | 40.04 | 15.42 |
| 10 | 11.58 | 11.91 | 15.91 | 6.23 | 7.83 | 2.59 | 16.67 | 10.92 |
| 11 | 10.49 | 12.16 | 16.08 | 7.05 | 7.54 | 2.59 | 9.61 | 10.49 |
| 12 | 11.83 | 19.76 | 21.12 | 7.57 | 7.51 | | 7.88 | 7.15 |
| 13 | 8.46 | 10.39 | 7.84 | 14.08 | 3.59 | | 7.73 | 7.15 |
| | | | | | | | | |
| 1 | 3.85 | 4.08 | 2.87 | 4.13 | 3.27 | 7.31 | 2.91 | 5.82 |
| 2 | 3.19 | 3.99 | 2.17 | 3.33 | 2.64 | 7.04 | 2.71 | 4.31 |
| 3 | 3.09 | 3.60 | 2.45 | 3.74 | 2.74 | 6.61 | 2.69 | 3.33 |
| 4 | 2.93 | 2.53 | 2.36 | 4.04 | 2.44 | 8.62 | 3.34 | 2.85 |
| 5 | 2.43 | 2.41 | 1.98 | 2.99 | 2.86 | 6.46 | 2.16 | 2.19 |
| 6 | 1.90 | 1.85 | 1.26 | 2.06 | 2.30 | 3.86 | 2.06 | 1.88 |
| 7 | 1.73 | 1.45 | 1.12 | 1.57 | 1.88 | 2.99 | 2.89 | 1.44 |
| 8 | 1.45 | 1.32 | 1.00 | 1.02 | 1.17 | 2.77 | 2.84 | 1.33 |
| 9 | 1.40 | 1.37 | 1.07 | 1.01 | 1.15 | 1.00 | 2.40 | 1.41 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.94 | 1.02 | 1.01 | 1.13 | 0.96 | 1.00 | 0.58 | 0.96 |
| 12 | 1.05 | 1.66 | 1.33 | 1.22 | 0.96 | | 0.47 | 0.66 |
| 13 | 0.87 | 0.87 | 0.49 | 2.26 | 0.46 | | 0.46 | 0.66 |

1) LD-22H is omitted from the averages because values for relative increases are anomalously high. See text for additional explanation.

Table 3. Decadal organic matter sedimentation rates (OMSR) in mg $cm^{-2}$ $yr^{-1}$ for Lake Dora historic cores by years since core collection. OMSR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in OMSR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LD-22H[1].

| Decade | Avg[1] | 3H | 10H | 14H | 21H | 22H | 6H-98 | 12H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 29.97 | 34.08 | 32.92 | 18.08 | 18.48 | 12.08 | 35.27 | 40.99 |
| 2 | 21.74 | 27.34 | 21.16 | 13.42 | 12.15 | 7.15 | 26.62 | 29.75 |
| 3 | 18.64 | 24.63 | 20.84 | 13.03 | 7.60 | 7.12 | 24.05 | 21.70 |
| 4 | 17.34 | 16.81 | 18.64 | 13.67 | 7.63 | 9.59 | 29.93 | 17.38 |
| 5 | 14.79 | 16.30 | 16.45 | 10.76 | 11.38 | 8.10 | 21.32 | 12.53 |
| 6 | 12.48 | 13.67 | 10.58 | 7.77 | 9.78 | 5.27 | 22.02 | 11.02 |
| 7 | 12.80 | 11.24 | 9.53 | 6.01 | 8.09 | 4.24 | 32.97 | 8.96 |
| 8 | 11.04 | 10.60 | 7.24 | 3.81 | 4.94 | 3.95 | 31.62 | 8.06 |
| 9 | 10.17 | 11.23 | 6.56 | 3.75 | 5.36 | 1.46 | 26.58 | 7.51 |
| 10 | 6.72 | 8.36 | 6.06 | 3.68 | 5.18 | 1.46 | 11.02 | 5.98 |
| 11 | 5.89 | 8.46 | 5.99 | 3.98 | 4.86 | 1.46 | 6.40 | 5.65 |
| 12 | 6.53 | 13.88 | 8.75 | 4.14 | 4.49 | | 5.27 | 2.64 |
| 13 | 4.90 | 7.31 | 3.93 | 8.25 | 2.09 | | 5.19 | 2.64 |
| | | | | | | | | |
| 1 | 4.67 | 4.07 | 5.43 | 4.91 | 3.57 | 8.27 | 3.20 | 6.85 |
| 2 | 3.36 | 3.27 | 3.49 | 3.64 | 2.34 | 4.90 | 2.42 | 4.97 |
| 3 | 2.87 | 2.94 | 3.44 | 3.54 | 1.47 | 4.88 | 2.18 | 3.63 |
| 4 | 2.65 | 2.01 | 3.07 | 3.71 | 1.47 | 6.57 | 2.72 | 2.90 |
| 5 | 2.30 | 1.95 | 2.71 | 2.92 | 2.20 | 5.55 | 1.94 | 2.09 |
| 6 | 1.87 | 1.63 | 1.75 | 2.11 | 1.89 | 3.60 | 2.00 | 1.84 |
| 7 | 1.77 | 1.34 | 1.57 | 1.63 | 1.56 | 2.90 | 2.99 | 1.50 |
| 8 | 1.44 | 1.27 | 1.19 | 1.03 | 0.95 | 2.70 | 2.87 | 1.35 |
| 9 | 1.36 | 1.34 | 1.08 | 1.02 | 1.04 | 1.00 | 2.41 | 1.26 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.92 | 1.01 | 0.99 | 1.08 | 0.94 | 1.00 | 0.58 | 0.94 |
| 12 | 1.00 | 1.66 | 1.44 | 1.12 | 0.87 | | 0.48 | 0.44 |
| 13 | 0.85 | 0.87 | 0.65 | 2.24 | 0.40 | | 0.47 | 0.44 |

1) LD-22H is omitted from the averages because values for relative increases are anomalously high. See text for additional explanation.

Comparing MSR data among cores demonstrates how temporal resolution within cores is affected by patterns of sedimentation in the lake. Sediments with ages of approximately 150 yr (ca. 1850) were found at depths >80 cm at the high sedimentation stations (LD-6H-98, LD-12H-98, LD-3H and LD-10H); whereas at the lowest sedimentation station (LD-22H) sediments this old were found above 38 cm (Appendix I). Cumulative mass also was relatively low for sections with measurable excess $^{210}Pb$ activity at low sedimentation sites compared to sites with high sedimentation rates (Appendix I).

## Stratigraphy of NAIP and TP

Time-dependent trends in phosphorus concentration were obtained by plotting NAIP and TP concentration vs. date for the seven historic cores. NAIP and TP concentration increased upcore at the four stations with the highest sedimentation rate: LD-3H, LD-10H, LD-6H-98 and LD-12H-98 (Fig. 8), but the relative increase was less at LD-12H-98 than at the other stations. The increase in both forms of phosphorus occurred in steps at most of the stations compared to fairly general increase in concentration for LD-14H and LD-12H-98. In all cores the largest increase in concentration occurred after 1950, but a smaller increase in concentration for some cores was also apparent when the 1930s are compared with older sediments. These trends in concentration with time are more pronounced for TP than for NAIP and are not apparent for NAIP in some cores. For example no increase in NAIP was apparent before 1950 in LD-14H, LD-21H and LD-22H. A relative increase in TP concentration was apparent in all cores with an increase of at least 4 fold after 1900 in all cores with the exception of LD-12H-98.

## NAIP and TP Accumulation Rate

Time-dependent relative increases in phosphorus accumulation rate in $^{210}Pb$ dated cores (Fig. 9) were greater than relative increases in phosphorus concentration (Fig. 8), because phosphorus accumulation rates over time were determined by the product of MSR and NAIP or TP concentration which increase upcore. The largest rates of NAIP and TP accumulation, therefore, were found in cores LD-3H, LD-10H, LD-6H-98 and LD-12H-98 or in the cores with the largest MSR (Figs. 5-7). A sharp increase in rates occurred after 1950 with smaller increases from 1900 to 1950. Similar patterns were found for cores LD-14H, LD-21H and LD-22H, but in these cores the maximum accumulation rates were several fold less than that for the other cores. The small sediment mass found in the upper core sections must be considered in establishing maximum rates. Therefore, the maximum flux of practical interest was 100 to 150 $\mu g$ TP $cm^{-2}$ $yr^{-1}$ for cores LD-3H and LD-10H and approximately 100 $\mu g$ TP $cm^{-2}$ $yr^{-1}$ for cores

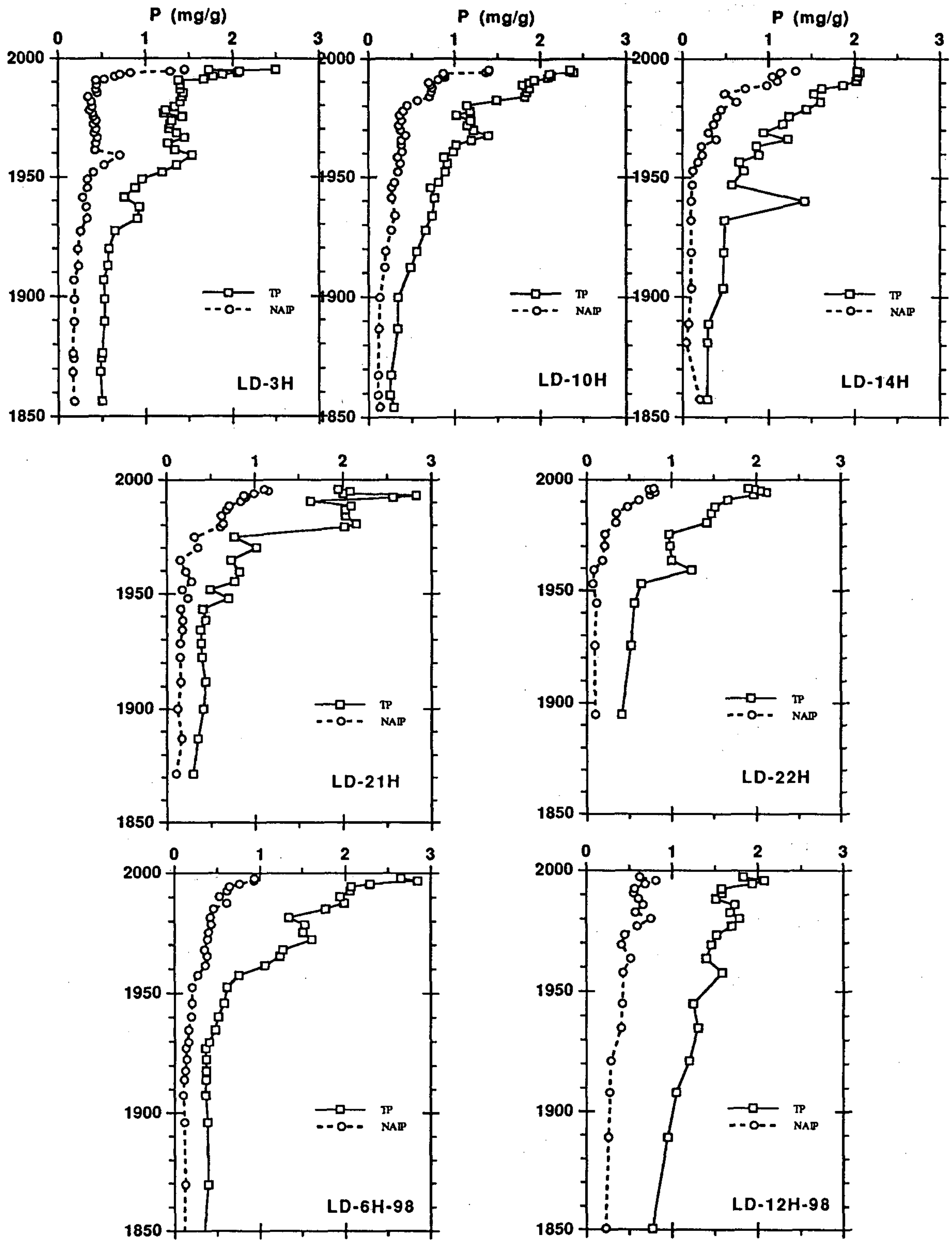


Fig. 8. NAIP and TP concentration plotted vs. sediment date for historic cores LD-3H, LD-10H, LD-14H, LD-21H, LD-22H, LD-6H-98, and LD-12H-98.

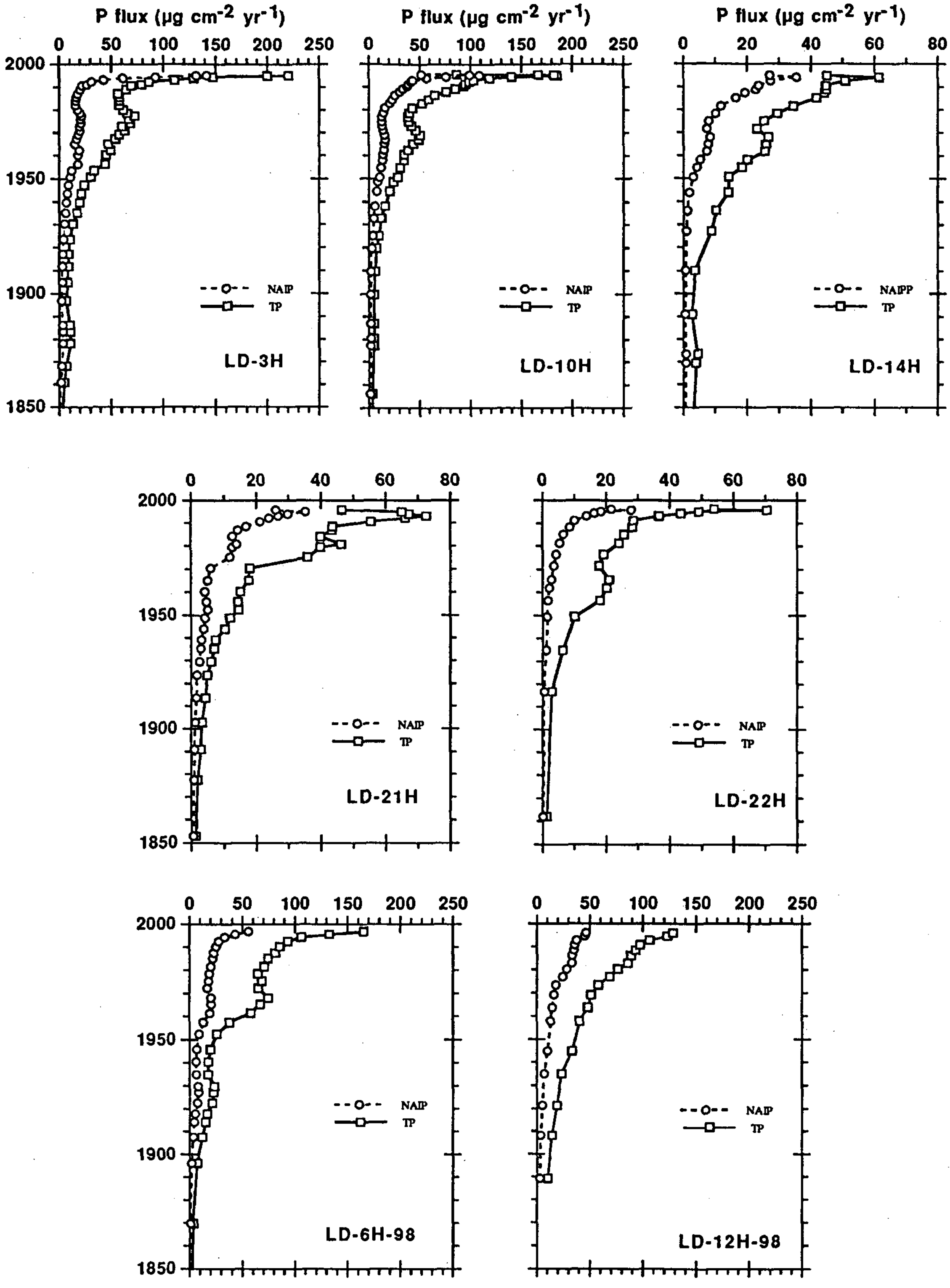


Fig. 9. NAIP and TP accumulation rate plotted vs. sediment date for historic cores LD-3H, LD-10H, LD-14H, LD-21H, LD-22H, LD-6H-98, and LD-12H-98. Data plotted are smoothed using a three-point running average.

LD-6H-98 and LD-12H-98. The maximum accumulation rate in the remaining three cores ranged from approximately 50-70 $\mu g$ TP $cm^{-2}$ $yr^{-1}$ or >40 $\mu g$ TP $cm^{-2}$ $yr^{-1}$ if the upper few sections are excluded. Taken together these data indicate that the phosphorus accumulation rate increased rapidly after 1950 and at a slower rate from 1900 to 1950.

Decadal TP accumulation rate (TPAR) were calculated as a means of equally weighting the large near-surface TP accumulation rates so relative increases in TPAR could be calculated for each core. Decadal TPAR for the most recent decade ranged from 32.4 to 109 $\mu g$ $cm^{-2}$ $yr^{-1}$ with a mean of 81.8 $\mu g$ $cm^{-2}$ $yr^{-1}$ (Table 4). Decadal TPAR for the most recent decade ranged from 82.1 to 109 $\mu g$ $cm^{-2}$ $yr^{-1}$ in the four cores with the highest TPAR and from 32.4 to 54.5 $\mu g$ $cm^{-2}$ $yr^{-1}$ in the three cores with the lowest MSR. Relative increases in TPAR for the most recent decade compared to the 10th decade (91-100 yr since core collected) ranged from 10.5 to 46.8. The largest relative increase for the most recent decade was for LD-22H, a pattern also noted for decadal MSR and decadal OMSR. Therefore, data for this core were not used in calculating the average relative increase in TPAR which was 15.5 for the most recent decade. Relative decadal TPAR for the remaining cores ranged from 10.5 to 18.4 in the most recent decade. Average relative decadal TPAR in the most recent decade increased 57.0% compared to the preceding decade. Another large relative increase of 63.8% was found by comparing the 4th decade (31-40 yr since core collection) to the 5th decade (41-50 yr since core collection).

Relative increases for decadal NAIPAR were similar to those for decadal TPAR. However, the relative increase in decadal NAIPAR for the most recent decade compared to the 10th decade (91-100 yr since core collection) was 20.9 (Table 5), greater than the average relative increase of 15.5 for TPAR (Table 4). Relative decadal NAIPAR in the most recent decade, excluding LD-22H, ranged from 14.1 to 38.0. Average decadal NAIPAR in the most recent decade increased 94.5% compared to the preceding decade, much greater than the 57.0% relative increase for decadal TPAR. The relative increase for the 4th decade (31-40 yr since core collection) compared to the 5th decade (41-50 yr since core collection) was 75.2%, larger than 63.8% relative increase for decadal TPAR. The greater relative increase in NAIPAR is attributed to increased storage of polyphosphate by phytoplankton. A relative increase in polyphosphate storage is attributed to increasing phosphorus enrichment of overlying lake waters and is proposed as an index of nutrient enrichment (Kenney et al. in revision).

Increases and patterns in phosphorus accumulation were different among the seven historic cores (Fig. 9). A peak in accumulation rate of TP was found in the 1960s or 1970s in LD-3H, LD-10H, LD-14H, LD-22H and LD-6H-98. A peak in TP accumulation rate was not obvious in cores LD-21H and LD-12H-98. However, an obvious increase in NAIP and TP concentration after 1980 occurred at 22 and 18 cm in LD-21H and LD-22H, respectively; these sections were dated at 1979 and 1981, respectively (Appendix I). Results from five of the

Table 4. Decadal total phosphorus accumulation rates (TPAR) in µg $cm^{-2}$ $yr^{-1}$ for Lake Dora historic cores by years since core collection. TPAR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in TPAR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LD-22H[1].

| Decade | Avg[1] | 3H | 10H | 14H | 21H | 22H | 6H-98 | 12H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 81.78 | 82.13 | 90.77 | 47.49 | 54.52 | 32.37 | 106.87 | 108.89 |
| 2 | 53.63 | 63.46 | 43.02 | 30.22 | 33.96 | 21.34 | 70.04 | 81.10 |
| 3 | 44.45 | 56.66 | 46.62 | 25.63 | 18.62 | 17.02 | 64.42 | 54.76 |
| 4 | 36.12 | 41.73 | 34.66 | 21.02 | 15.10 | 19.73 | 57.63 | 46.57 |
| 5 | 21.50 | 27.41 | 24.73 | 12.09 | 12.49 | 9.24 | 22.11 | 30.14 |
| 6 | 16.91 | 19.48 | 14.47 | 15.81 | 7.53 | 5.21 | 17.84 | 26.31 |
| 7 | 11.88 | 10.86 | 10.44 | 4.79 | 5.77 | 3.33 | 19.90 | 19.51 |
| 8 | 9.45 | 8.81 | 6.81 | 3.05 | 3.91 | 2.92 | 17.41 | 16.73 |
| 9 | 8.69 | 8.58 | 5.77 | 2.99 | 3.80 | 0.69 | 14.76 | 16.23 |
| 10 | 5.65 | 6.27 | 4.93 | 2.93 | 2.97 | 0.69 | 6.42 | 10.40 |
| 11 | 4.81 | 6.05 | 4.13 | 2.59 | 2.44 | 0.69 | 3.78 | 9.85 |
| 12 | 4.73 | 9.61 | 5.67 | 2.27 | 2.19 | | 3.13 | 5.51 |
| 13 | 3.59 | 5.12 | 2.82 | 4.09 | 0.96 | | 3.00 | 5.51 |
| | | | | | | | | |
| 1 | 15.53 | 13.10 | 18.40 | 16.22 | 18.37 | 46.81 | 16.63 | 10.47 |
| 2 | 9.89 | 10.13 | 8.72 | 10.32 | 11.44 | 30.86 | 10.90 | 7.80 |
| 3 | 8.14 | 9.04 | 9.45 | 8.75 | 6.28 | 24.61 | 10.03 | 5.26 |
| 4 | 6.57 | 6.66 | 7.03 | 7.18 | 5.09 | 28.53 | 8.97 | 4.48 |
| 5 | 4.01 | 4.37 | 5.01 | 4.13 | 4.21 | 13.37 | 3.44 | 2.90 |
| 6 | 3.21 | 3.11 | 2.93 | 5.40 | 2.54 | 7.53 | 2.78 | 2.53 |
| 7 | 2.07 | 1.73 | 2.12 | 1.64 | 1.95 | 4.81 | 3.10 | 1.88 |
| 8 | 1.58 | 1.41 | 1.38 | 1.04 | 1.32 | 4.23 | 2.71 | 1.61 |
| 9 | 1.45 | 1.37 | 1.17 | 1.02 | 1.28 | 1.00 | 2.30 | 1.56 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.84 | 0.97 | 0.84 | 0.88 | 0.82 | 1.00 | 0.59 | 0.95 |
| 12 | 0.87 | 1.53 | 1.15 | 0.78 | 0.74 | | 0.49 | 0.53 |
| 13 | 0.68 | 0.82 | 0.57 | 1.40 | 0.32 | | 0.47 | 0.53 |

1) LD-22H is omitted from the averages because values for relative increases are anomalously high. See text for additional explanation.

Table 5. Decadal non-apatite inorganic phosphorus accumulation rates (NAIPAR) in µg cm $^{-2}$ yr $^{-1}$ for Lake Dora historic cores by years since core collection. NAIPAR (upper half) calculated from $^{210}$Pb geochronology using a CRS model and changes in NAIPAR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LD-22H[1].

| Decade | Avg[1] | 3H | 10H | 14H | 21H | 22H | 6H-98 | 12H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 31.94 | 33.25 | 39.39 | 23.68 | 21.96 | 10.85 | 33.17 | 40.18 |
| 2 | 17.62 | 18.08 | 15.62 | 10.54 | 10.81 | 4.90 | 20.21 | 30.47 |
| 3 | 13.39 | 18.21 | 14.92 | 8.12 | 5.70 | 3.31 | 16.77 | 16.61 |
| 4 | 12.26 | 16.11 | 13.55 | 5.59 | 4.49 | 1.78 | 19.13 | 14.69 |
| 5 | 7.19 | 9.70 | 9.07 | 2.28 | 4.41 | 1.82 | 7.61 | 10.05 |
| 6 | 5.38 | 6.93 | 5.86 | 1.31 | 3.14 | 0.90 | 6.56 | 8.48 |
| 7 | 3.97 | 4.14 | 3.85 | 0.98 | 2.24 | 0.75 | 7.37 | 5.25 |
| 8 | 3.08 | 3.42 | 2.62 | 0.64 | 1.43 | 0.69 | 6.31 | 4.09 |
| 9 | 2.57 | 2.93 | 2.13 | 0.63 | 1.15 | 0.12 | 4.33 | 4.24 |
| 10 | 1.76 | 2.11 | 1.85 | 0.62 | 1.17 | 0.12 | 1.94 | 2.84 |
| 11 | 1.54 | 1.98 | 1.77 | 0.58 | 1.00 | 0.12 | 1.18 | 2.71 |
| 12 | 1.61 | 3.29 | 2.50 | 0.53 | 0.75 | | 0.99 | 1.62 |
| 13 | 1.13 | 1.87 | 1.18 | 0.81 | 0.36 | | 0.96 | 1.62 |
| | | | | | | | | |
| 1 | 20.85 | 15.73 | 21.30 | 38.01 | 18.83 | 91.11 | 17.13 | 14.14 |
| 2 | 10.72 | 8.55 | 8.44 | 16.92 | 9.27 | 41.11 | 10.43 | 10.72 |
| 3 | 8.18 | 8.61 | 8.06 | 13.04 | 4.88 | 27.77 | 8.66 | 5.84 |
| 4 | 7.13 | 7.62 | 7.32 | 8.97 | 3.85 | 14.97 | 9.88 | 5.17 |
| 5 | 4.07 | 4.59 | 4.90 | 3.66 | 3.79 | 15.25 | 3.93 | 3.54 |
| 6 | 2.93 | 3.28 | 3.17 | 2.10 | 2.69 | 7.56 | 3.39 | 2.98 |
| 7 | 2.20 | 1.96 | 2.08 | 1.57 | 1.92 | 6.29 | 3.81 | 1.85 |
| 8 | 1.66 | 1.62 | 1.42 | 1.02 | 1.22 | 5.83 | 3.26 | 1.44 |
| 9 | 1.38 | 1.39 | 1.15 | 1.01 | 0.99 | 1.00 | 2.24 | 1.49 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.87 | 0.94 | 0.96 | 0.93 | 0.86 | 1.00 | 0.61 | 0.95 |
| 12 | 0.91 | 1.56 | 1.35 | 0.85 | 0.64 | 0.00 | 0.51 | 0.57 |
| 13 | 0.70 | 0.88 | 0.64 | 1.30 | 0.31 | 0.00 | 0.50 | 0.57 |

1) LD-22H is omitted from the averages because values are anomalously high for relative increases. See text for additional explanation.

cores, therefore, indicate that phosphorus loading decreased in the late 1960s to 1970s after the peak in TP accumulation rate and then increased rapidly after 1980. These cores with high sedimentation rates taken from the central parts of the lake are considered to provide more reliable records than low sedimentation rate cores LD-21H, LD-22H and LD-12H-98 that were collected closer to the shoreline.

**Stratigraphy of TC/TN and % Dry Weight**

The stratigraphy of NAIP and TP concentration was compared with the stratigraphy of TC/TN and % dry weight (Figs. 10-12) because TC/TN and % dry weight generally increased down core (Appendices E and F). In cores LD-3H, LD-10H, LD-6H-98 and LD-12H-98, TC/TN and % dry weight increased down core to approximately 70 cm (Figs. 10 and 12), or to depths with dates of approximately 1910 (Appendix I). A large increase in TP concentration after 1950 (Fig. 8) in all the cores except LD-12H-98 was not associated with a discontinuity in either TC/TN or % dry weight. The relative increase in TP in LD-12H-98 was much less than in the other three high sedimentation cores (Fig. 8). In the low sedimentation cores (LD-14H, LD-21H and LD-22H), TC/TN and % dry weight also increased down core; but the TC/TN ratio increased to values >11.0 at depths below 40 cm in all cores (Figs. 10 and 11). For cores LD-21H and LD-22H, % dry weight increased with depth, but the increase was step-wise rather than gradual. These results show that the stratigraphy of TC/TN or % dry weight provides a time-dependent stratigraphic marker for a horizon that occurred at approximately 1910 for the high sedimentation cores, but that no discontinuity is obvious across cores for earlier dates.

Data for TC/TN, % dry weight and NAIP and TP concentration were plotted vs. depth for survey cores to determine whether stratigraphic features could be correlated across cores (Figs. 13-17). Discontinuities in TC/TN and TP concentration were in general correlated across cores. At least three zones based on TP concentration with increasing depth were identified in many cores: a zone of high concentration that decreased to a level of approximately 1.0 mg/g, a zone of relatively constant concentration of approximately 1.0 mg/g and a zone in which TP concentration decreased to the baseline concentration. These zones were not present in LD-7S because no sediments with the baseline concentration were found in this truncated core. The zones based on TP concentration, however, also can be identified in the historic cores except for LD-14H and LD-12H-98 (Figs. 10-12). The TC/TN ratio generally varied in a reverse pattern compared to TP concentration. A small TC/TN was found at the top of the core, and the ratio generally increased to a value as large as the maximum at depths at which TP concentration was at the baseline level. Therefore, the TC/TN ratio may provide a stratigraphic marker to correlate with the discontinuities in TP concentration.

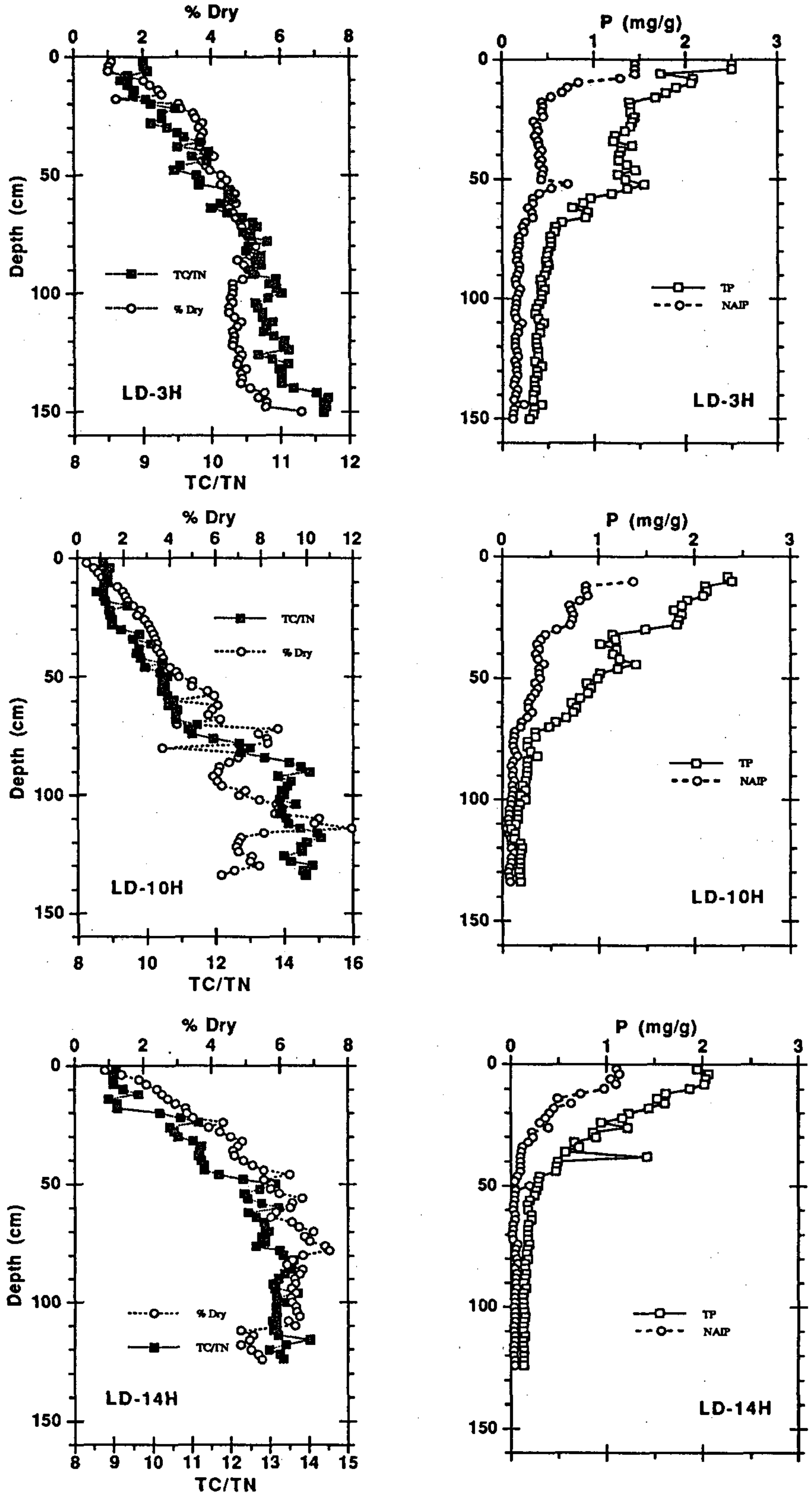


Fig. 10. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for historic cores LD-3H, LD-10H, and LD-14H.

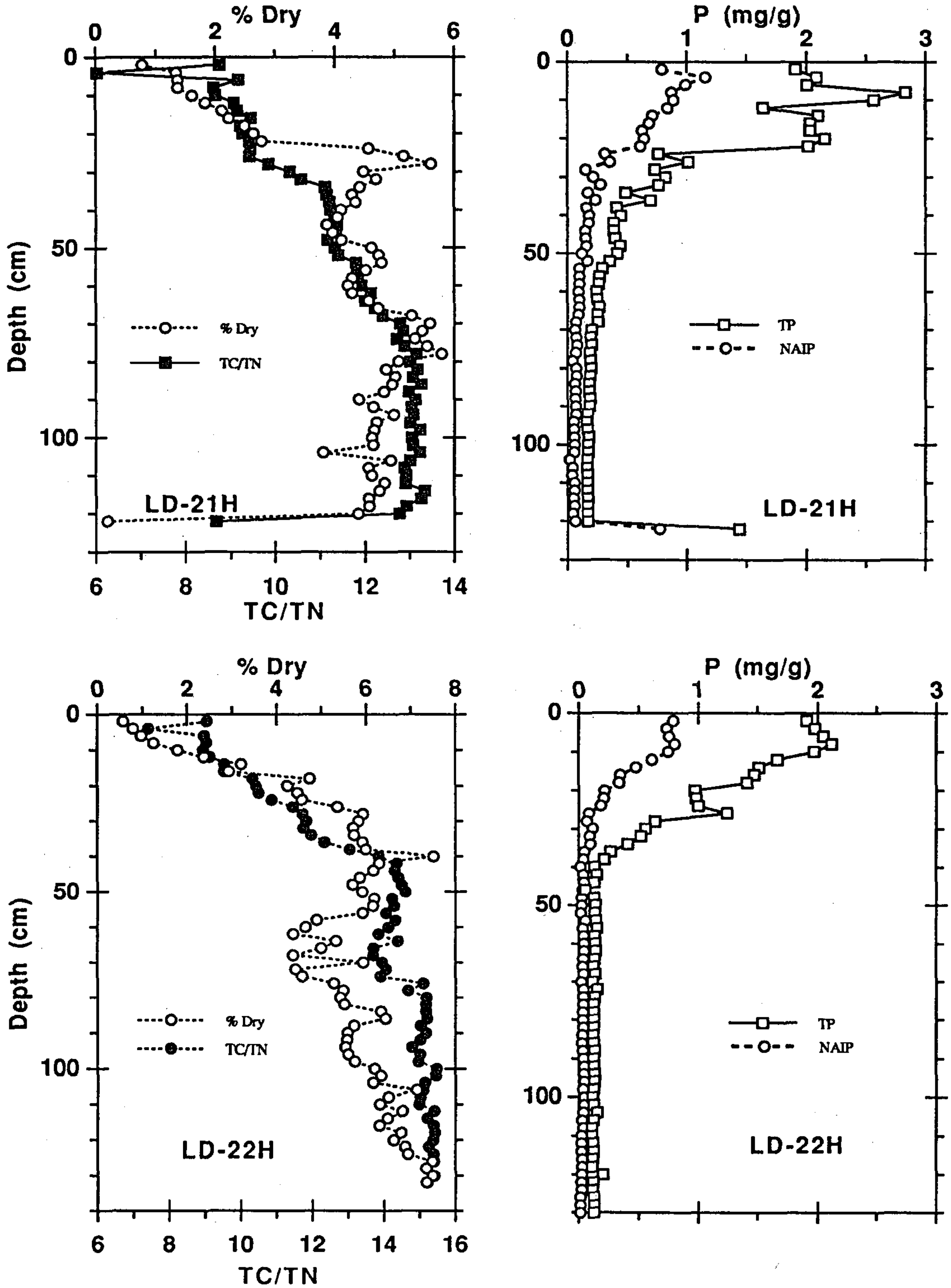


Fig. 11. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for historic cores LD-21H and LD-22H.

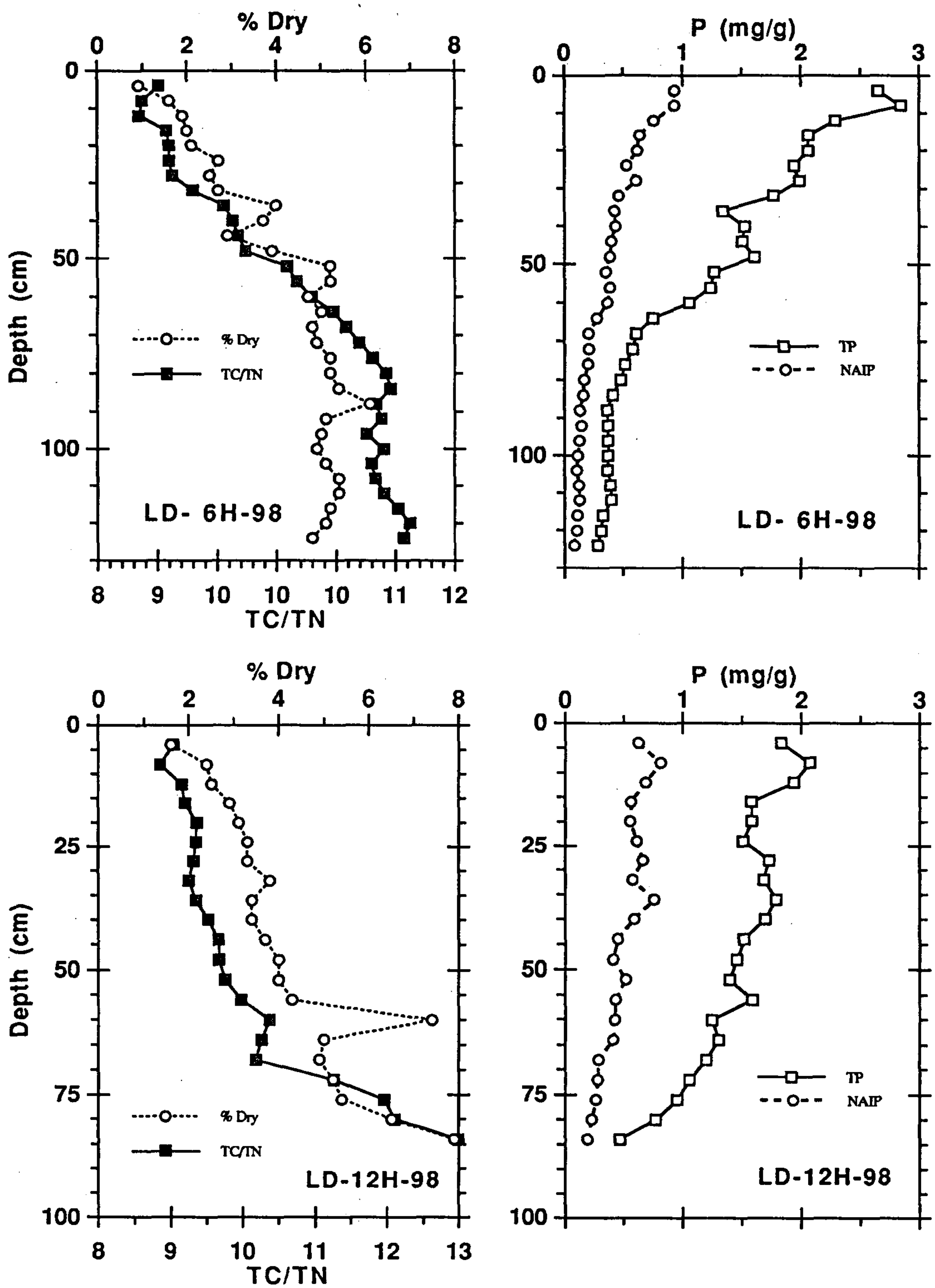


Fig. 12. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for historic cores LD-6H-98 and LD-12H-98.

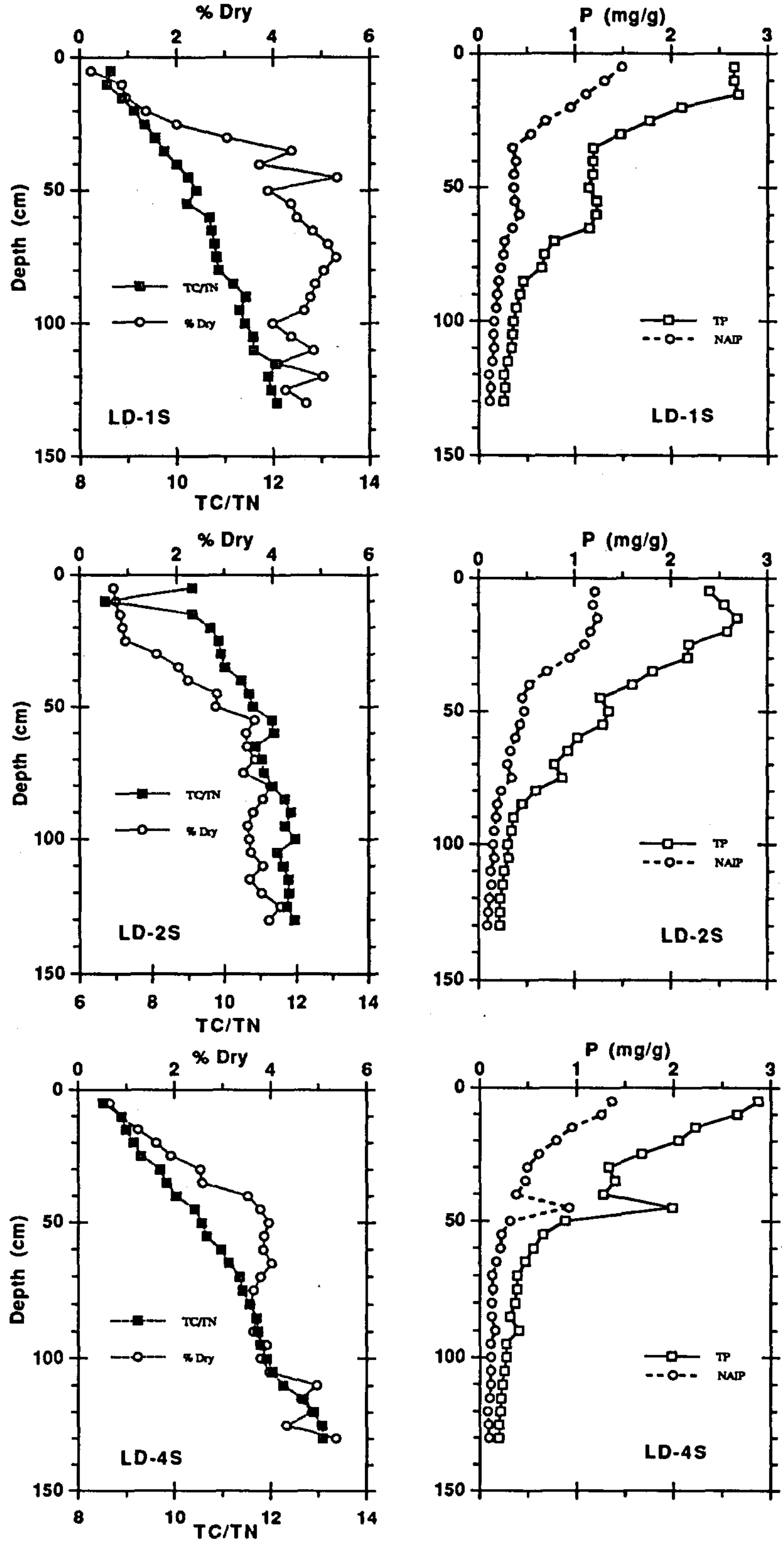


Fig. 13. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for survey cores LD-1S, LD-2S, and LD-4S.

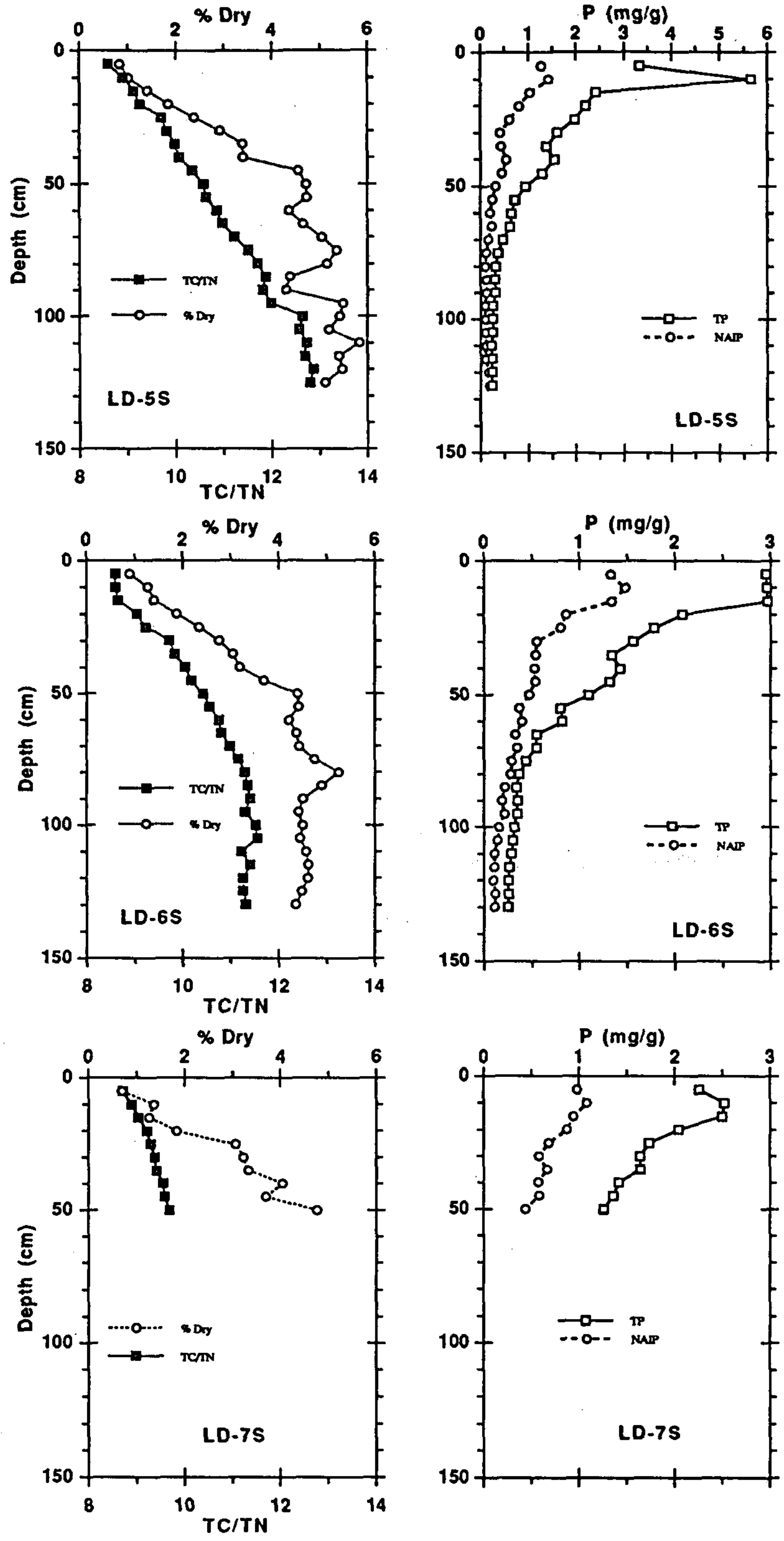


Fig. 14. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for survey cores LD-5S, LD-6S, and LD-7S.

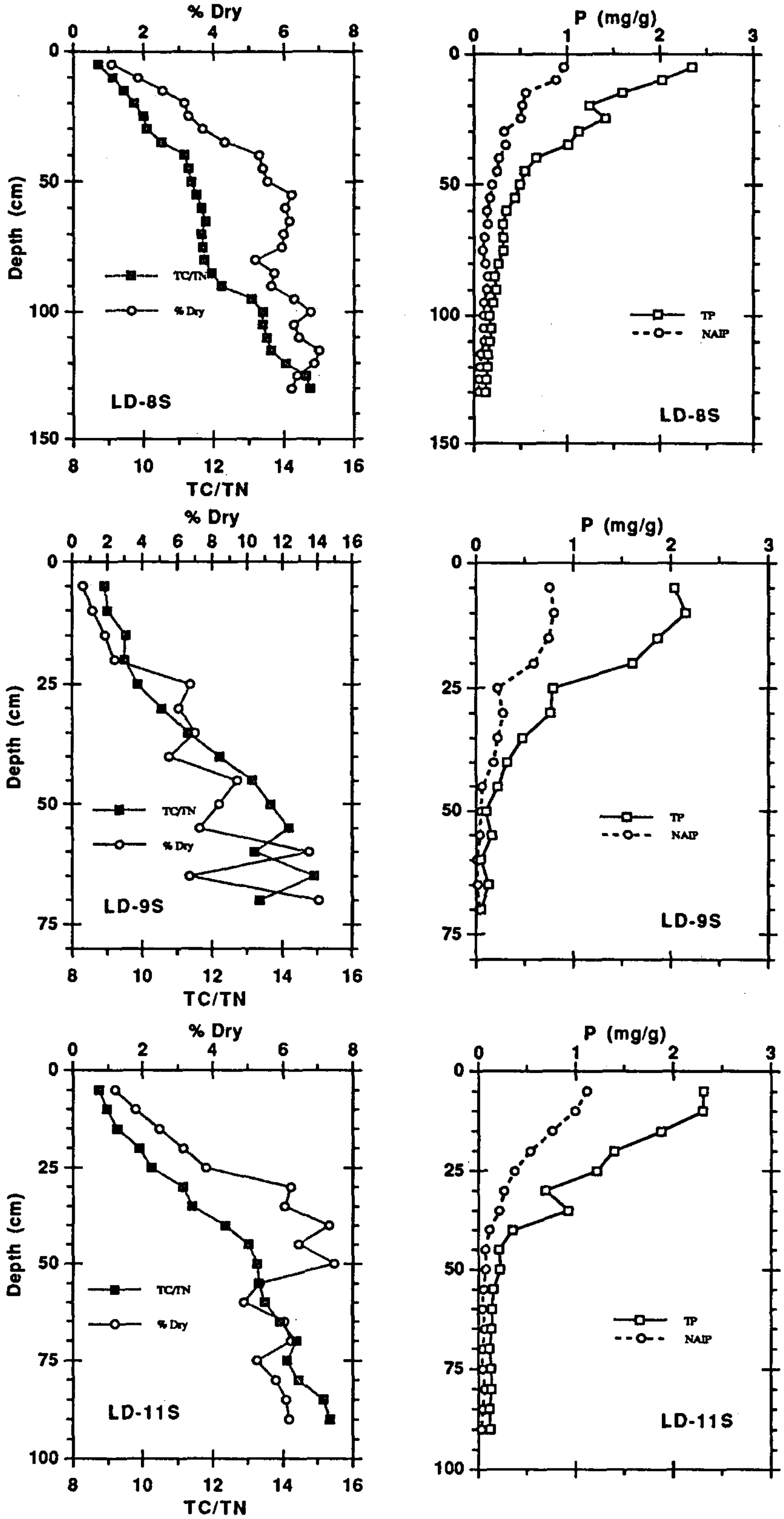


Fig. 15. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for survey cores LD-8S, LD-9S, and LD-11S.

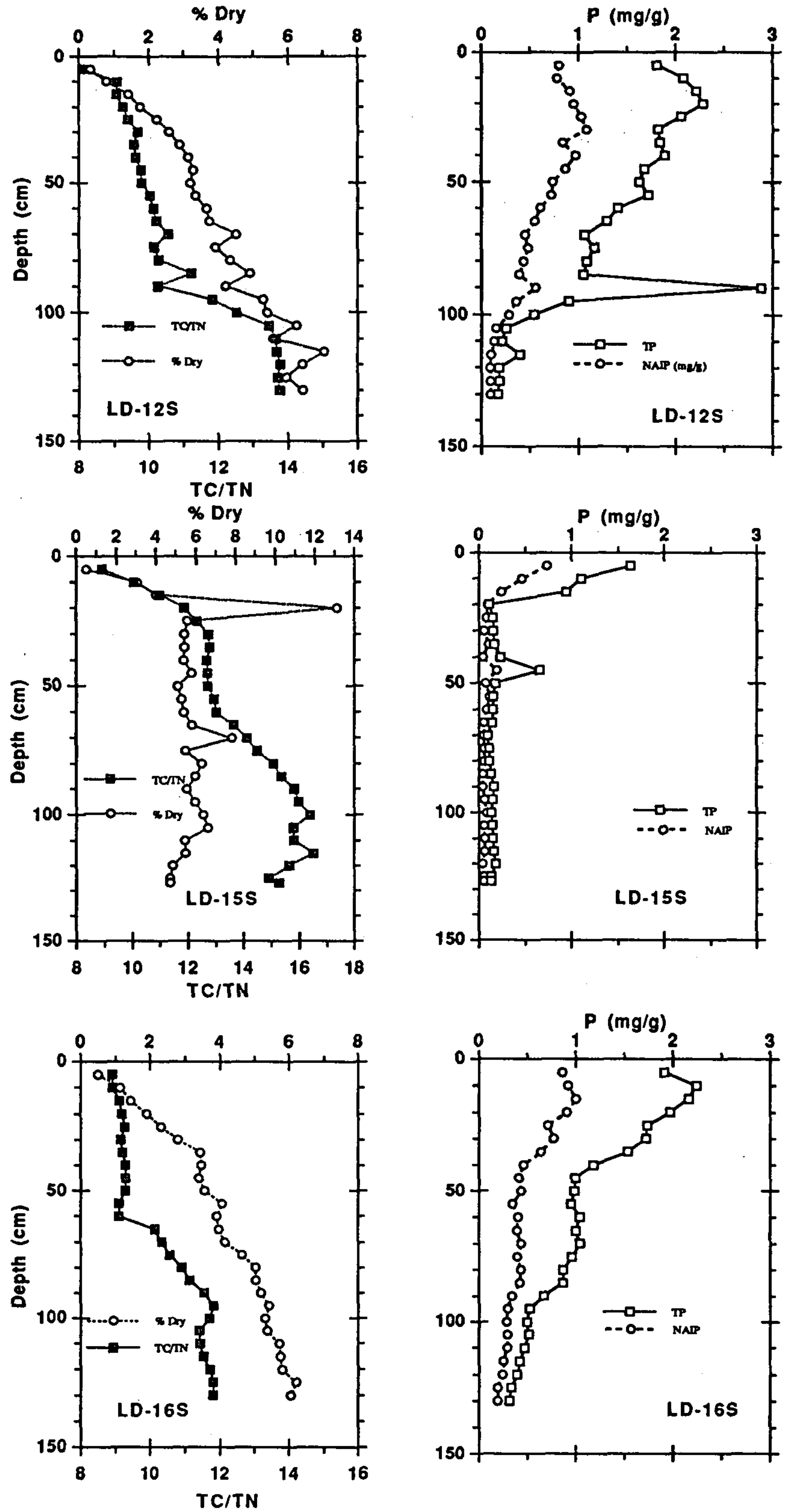


Fig. 16. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for survey cores LD-12S, LD-15S, and LD-16S.

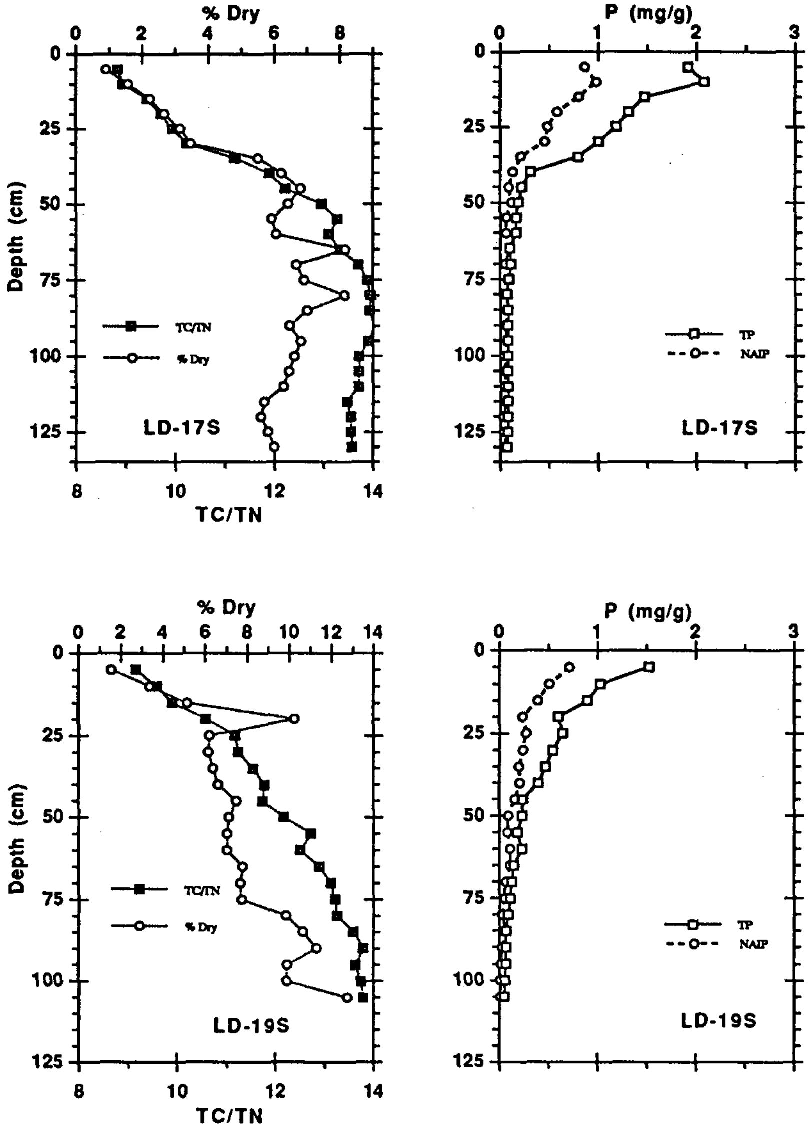


Fig. 17. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for survey cores LD-17S and LD-19S.

## Stratigraphy of Ash Fraction

The stratigraphic record of the fraction of dry sediment remaining after LOI (ash fraction) was plotted vs. date (Fig. 18). The ash fraction peaked at depth in every core except LD-12H-98; but the time dependence of the peak spanned a broad range in dates among the remaining historic cores. In addition, the peak was broad in some cores. Above each peak, the ash fraction decreased to the top of the core showing that LOI increased in these sections. The timing of this decrease was fairly consistent among cores, generally beginning after 1980. These profiles also demonstrated that the largest TP concentrations at the top of the cores were associated with the highest organic matter content as measured by loss on ignition. Therefore, sediments with the largest TP and largest organic matter content were deposited after 1980.

The ash fraction and TP concentration were plotted vs. depth for survey cores to determine whether stratigraphic features could be correlated across cores (Figs. 19 and 20). These plots showed that a low ash fraction was stratigraphically correlated with the zone of high TP concentration at the top of cores. This relationship is not apparent for cores 12S, 15S and 19S; but is valid for 7S, a core with a truncated TP profile. In some cores, a decrease in ash fraction is stratigraphically correlated with depths at which TP concentration first increased and, therefore, may be useful for stratigraphic correlation.

Large values for TP concentration in some cores appear to be outliers. However, it should be pointed out that these values in cores 4S, 5S, 12S and 15S are at depths where NAIP concentration is also relatively high (Figs. 13, 14 and 16). Because the two forms of phosphorus are measured independently, high values for both forms indicate the values truly represent a section with high TP and NAIP concentration and are not analytical errors.

Inspecting data for TP concentration in the survey cores can be used to determine spatial variability in net TP sedimentation (Figs. 19 and 20). Cores in the eastern third of the lake (Stations 1, 2, 3H, 4, 5 and 6, Fig. 1) generally have higher TP concentration and a greater depth of TP concentration above baseline levels, indicating high sedimentation and net TP accumulation. By contrast, the opposite pattern is present in the western third of the lake (Stations 14H, 15, 16, 17 and 19) which indicates low sedimentation and low net TP accumulation. Therefore, TP data for the survey stations show that sediment accumulation and net TP accumulation are highest in the eastern end of the lake.

## Cluster Analyses

Core sections from Phase I survey cores were separated into three groups using K-means cluster analysis of TP concentration, TC/TN ratio and fraction ash, variables with distinct discontinuities in their depth profiles. The three groups, when present in a specific core, clustered in stratigraphic sequence. The shallowest samples were in Group 1 and the

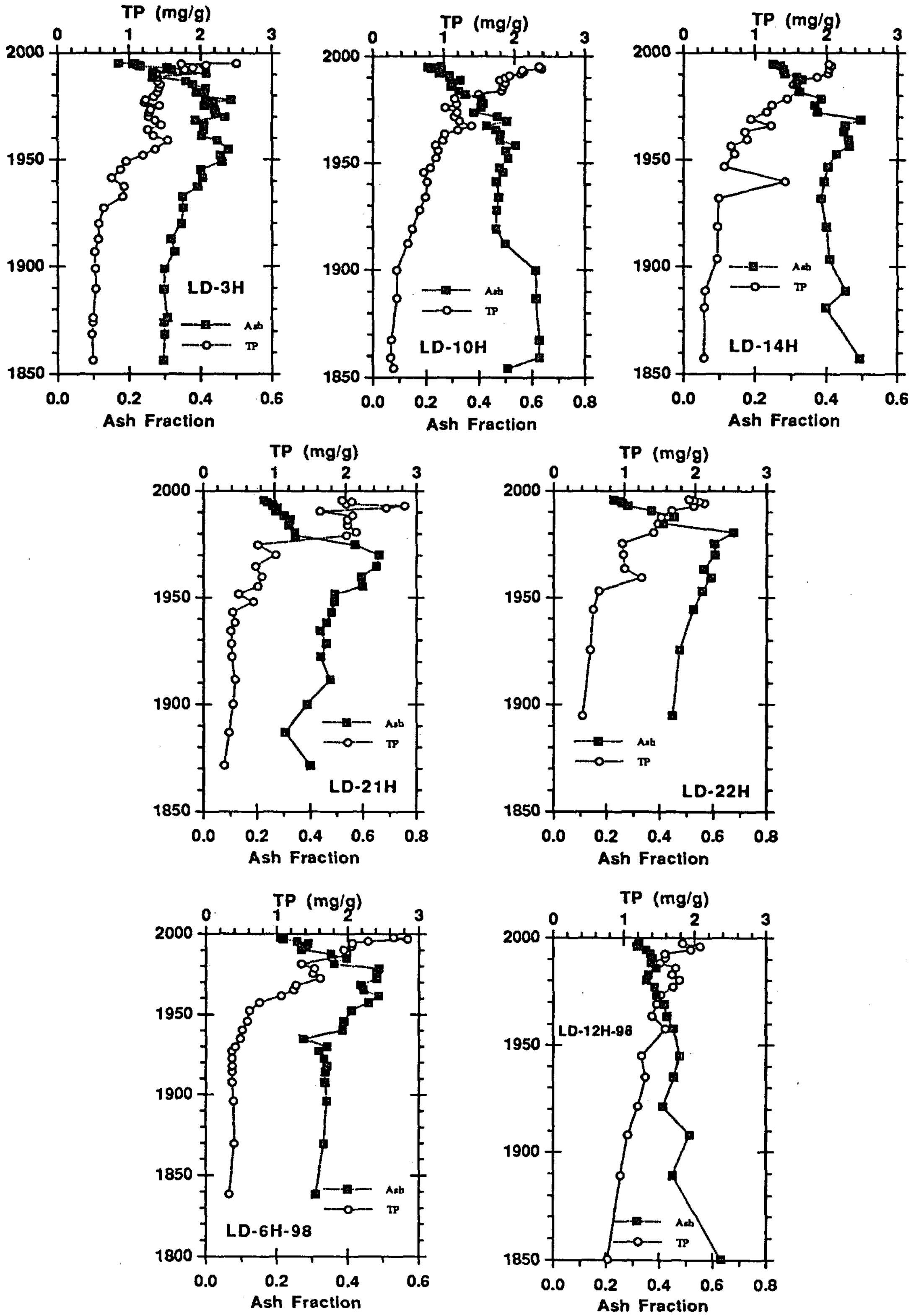


Fig. 18. Ash fraction and TP concentration plotted vs. date for Lake Dora historic cores LD-3H, LD-10H, LD-14H, LD-21H, LD-22H, LD-6H-98, and LD-12H-98.

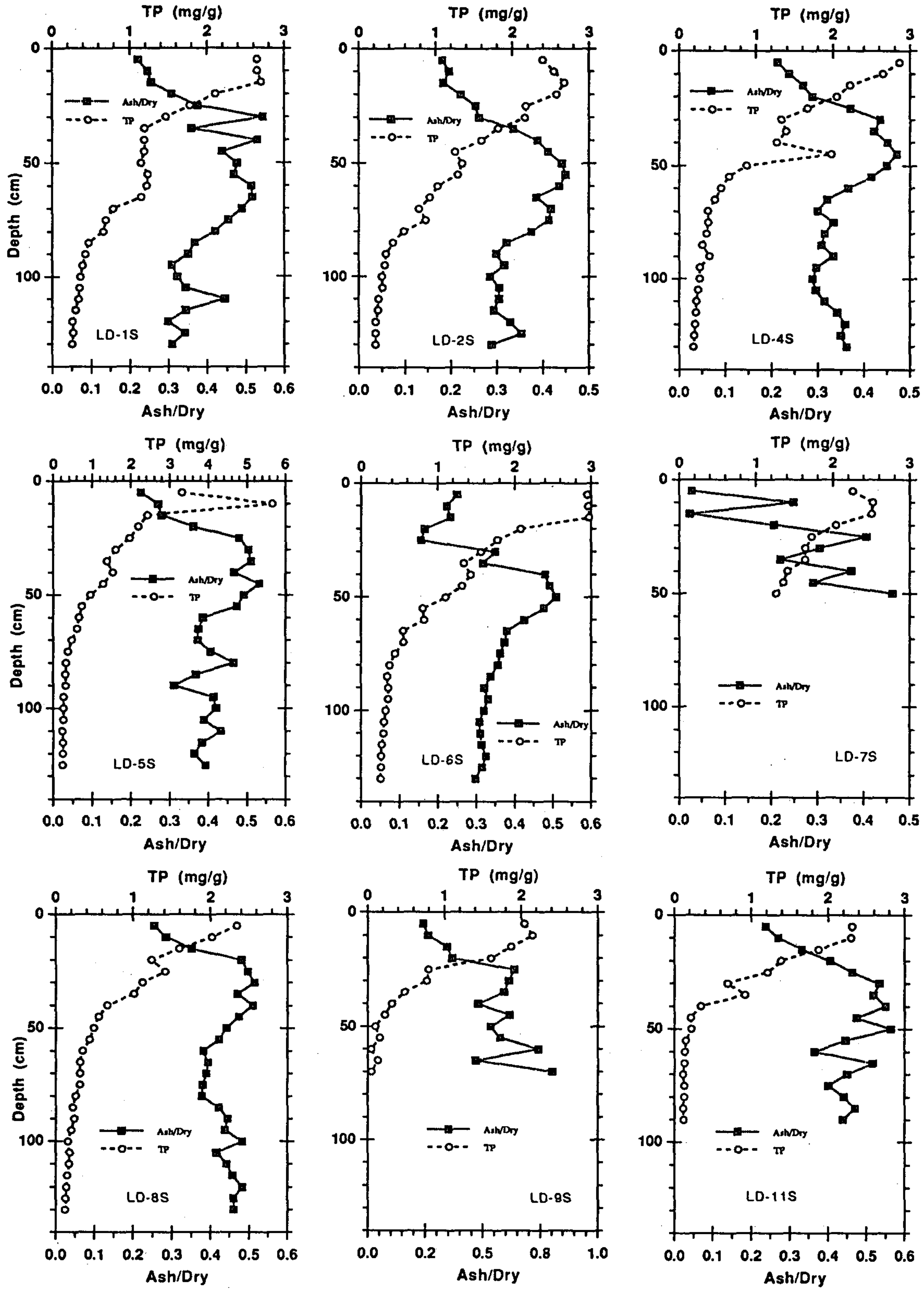


Fig. 19. Ash fraction and TP concentration plotted vs. core depth for survey cores LD-1S, LD-2S, LD-4S, LD-5S, LD-6S, LD-7S, LD-8S, LD-9S, and LD-11S.

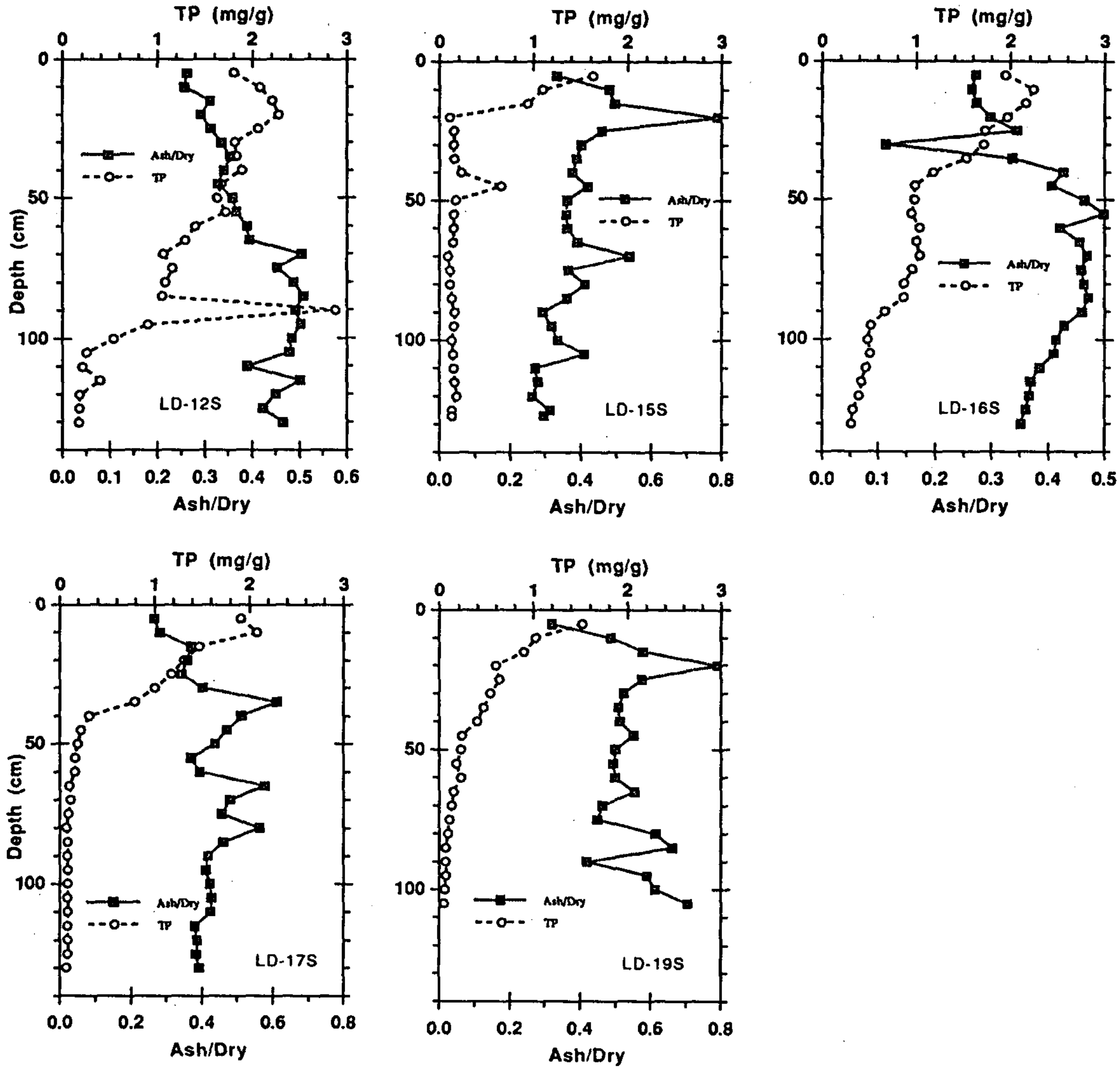


Fig. 20. Ash fraction and TP concentration plotted vs. core depth for survey cores LD-12S, LD-15S, LD-16S, LD-17S, and LD-19S.

deepest samples (when present) were in Group 3. Data from three historic stations LD-3H, LD-10H and LD-14H sampled during Phase 1 were also separated into the three groups by visual examination of the profiles. No data were available for three non-depositional sites (LD-13S, LD-18S and LD-20S). Means and standard deviations for each stratigraphic group identified by cluster analysis are presented in Appendix M.

The three sets of sediment data for Phase 1 survey cores from Lake Dora provided two data sets that could be stratigraphically correlated with $^{210}$Pb-aged sediments in historic cores. The two groups were unconsolidated sediments which stratigraphically were shallower than the underlying, consolidated sediments (Table 6). Identifying these groups was important because the maximum depth for each group could be related to stratigraphic feature of known age in historic cores. For a few stations, ambiguities in the separation were found in that one or two samples that were clearly unconsolidated sediments based on dry weight density (rho) were grouped with the underlying consolidated sediments. In these cases, the deepest unconsolidated sample based on the profiles of dry weight density (rho) or TP was selected to obtain a break point for TP concentration consistent with that in other cores. Variables associated with the maximum depth for unconsolidated sediments are shown in Table 6. Ambiguities between cluster break points and subjectively determined changes in Group 1 were found for the following stations: LD-1S, LD-2S, LD-4S, LD-5S, LD-6S, LD-7S, LD-12S, LD-16S and LD-17S. Ambiguities were fewer in Group 2 samples being found only at LD-5S, LD-8S, LD-11S, LD-15S, LD-17S and LD-19S. Comparing data in Table 6 and Appendices E and F can be used to evaluate decisions used to establish the stratigraphic breaks.

**Sediment and TP Deposition**

Two data sets were identified with cluster analysis of Phase I survey cores. Break points in these cores for ash fraction and TP concentration were compared with similar break points in the dated historic cores (Fig. 18) in an attempt to establish a dated stratigraphic horizons. A horizon dated at approximately 1990 was identified for the bottom age of the most recently deposited samples. This break occurred earlier in LD-10H and LD-21H and was not distinct for LD-12H-98. The second dated horizon was set at approximately 1945; this horizon was determined largely by an increase in TP concentration that was larger than the baseline concentration. Ages for the two stratigraphic groups were set at 5 yr and 45 yr, respectively. Combined the two groups represented 50 years of sedimentation in the lake basin and reflect changes that affected the lake beginning about 1945. Cumulative accumulation of sediment dry mass, TP and NAIP for these age groups (Table 6) were then used to calculate dry mass, TP and NAIP storage for the lake basin for the two time periods (Table 7).

Table 6. Cumulative storage by station of total dry mass, TP and NAIP for two stratigraphic groups of sediments in Lake Dora. Depth of sediments for each group determined from cluster analysis and visual examination of profiles of each station. The first stratigraphic group was assigned an age of 5 yr, the underlying stratigraphic group was assigned an age of 45 yr. See Appendices E and F for data and text for additional explanation.

**Group 1 (5 yr)**

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Mass | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | 1.37 | 0.014 | 69.2 | 3.73 | 34.1 | 9.13 | 0.178 | 0.96 | 0.201 | 2.11 | 0.437 |
| 2 | 30 | 1.59 | 0.016 | 73.9 | 3.64 | 36.0 | 9.90 | 0.297 | 0.95 | 0.330 | 2.17 | 0.709 |
| 3H | 16 | 2.54 | 0.026 | 73.4 | 3.61 | 32.0 | 8.86 | 0.253 | 0.53 | 0.231 | 1.67 | 0.494 |
| 4 | 20 | 1.62 | 0.016 | 71.1 | 3.71 | 34.0 | 9.15 | 0.223 | 0.79 | 0.223 | 2.05 | 0.518 |
| 5 | 15 | 1.40 | 0.014 | 72.1 | 3.81 | 34.7 | 9.12 | 0.167 | 1.03 | 0.205 | 2.42 | 0.616 |
| 6 | 25 | 2.34 | 0.024 | 84.4 | 3.71 | 34.2 | 9.22 | 0.414 | 0.80 | 0.451 | 1.78 | 0.999 |
| 7 | 20 | 1.83 | 0.018 | 79.5 | 3.57 | 32.9 | 9.21 | 0.265 | 0.87 | 0.255 | 2.04 | 0.614 |
| 8 | 15 | 2.54 | 0.026 | 64.9 | 3.52 | 33.2 | 9.44 | 0.294 | 0.56 | 0.221 | 1.60 | 0.558 |
| 9 | 20 | 2.40 | 0.024 | 63.2 | 3.22 | 30.6 | 9.49 | 0.305 | 0.59 | 0.213 | 1.61 | 0.561 |
| 10H | 20 | 2.43 | 0.025 | 71.0 | 3.49 | 33.0 | 9.45 | 0.283 | 0.70 | 0.279 | 1.87 | 0.597 |
| 11 | 15 | 2.48 | 0.025 | 66.8 | 3.57 | 33.1 | 9.27 | 0.298 | 0.76 | 0.277 | 1.88 | 0.635 |
| 12 | 25 | 2.24 | 0.023 | 68.8 | 3.53 | 33.2 | 9.41 | 0.331 | 1.03 | 0.302 | 2.06 | 0.710 |
| 14H | 10 | 2.41 | 0.024 | 68.4 | 3.59 | 33.2 | 9.25 | 0.167 | 0.98 | 0.182 | 1.87 | 0.333 |
| 15 | 5 | 1.55 | 0.016 | 66.7 | 3.46 | 31.7 | 9.17 | 0.073 | 0.73 | 0.053 | 1.63 | 0.119 |
| 16 | 20 | 1.91 | 0.019 | 70.2 | 3.79 | 34.8 | 9.18 | 0.255 | 0.91 | 0.240 | 1.97 | 0.530 |
| 17 | 10 | 1.56 | 0.016 | 71.9 | 3.89 | 34.8 | 8.94 | 0.105 | 0.98 | 0.099 | 2.08 | 0.213 |
| 19 | 5 | 1.54 | 0.016 | 68.0 | 3.58 | 32.8 | 9.15 | 0.108 | 0.71 | 0.077 | 1.52 | 0.164 |
| Mean | 17 | 1.99 | 0.020 | 70.8 | 3.61 | 33.4 | 9.26 | 0.236 | 0.82 | 0.226 | 1.90 | 0.518 |
| Std dev | 6.8 | 0.45 | 0.0046 | 5.2 | 0.16 | 1.32 | 0.24 | 0.091 | 0.16 | 0.095 | 0.24 | 0.219 |

Cluster analysis breaks were 25 cm at 1S, 40 cm at 2S, 25 cm at 4S, 20 cm at 5S, 35 cm at 6S, 45 cm at 7S, 60 cm at 12S, 35 cm at 16S and 25 cm at 17 S.

**Group 2 (45 yr)**

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Mass | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 80 | 5.06 | 0.052 | 58.0 | 2.71 | 29.5 | 10.87 | 2.908 | 0.23 | 1.184 | 0.66 | 3.396 |
| 2 | 75 | 3.39 | 0.034 | 58.7 | 2.49 | 27.6 | 11.09 | 1.744 | 0.34 | 0.934 | 0.87 | 2.388 |
| 3H | 66 | 4.62 | 0.047 | 65.1 | 2.88 | 29.4 | 10.22 | 2.203 | 0.33 | 1.024 | 0.91 | 2.913 |
| 4 | 55 | 3.86 | 0.039 | 58.4 | 2.73 | 29.1 | 10.67 | 1.386 | 0.22 | 0.775 | 0.65 | 1.993 |
| 5 | 65 | 4.65 | 0.048 | 62.5 | 2.76 | 30.3 | 10.96 | 2.123 | 0.23 | 0.953 | 0.61 | 2.880 |
| 6 | 60 | 4.21 | 0.043 | 57.6 | 2.71 | 29.1 | 10.75 | 1.779 | 0.40 | 1.100 | 0.82 | 2.572 |
| 7 | 50 | 4.77 | 0.049 | 53.8 | 2.86 | 27.7 | 09.68 | 1.442 | 0.44 | 0.926 | 1.26 | 2.348 |
| 8 | 45 | 5.40 | 0.056 | 52.7 | 2.32 | 26.2 | 11.28 | 1.596 | 0.25 | 0.674 | 0.55 | 1.779 |
| 9 | 35 | 6.99 | 0.073 | 40.8 | 1.89 | 21.4 | 11.31 | 1.368 | 0.22 | 0.465 | 0.48 | 1.283 |
| 10H | 68 | 6.22 | 0.064 | 53.6 | 2.43 | 26.4 | 10.86 | 2.283 | 0.20 | 1.047 | 0.56 | 2.689 |
| 11 | 35 | 6.04 | 0.062 | 48.2 | 2.10 | 23.9 | 11.39 | 1.374 | 0.21 | 0.612 | 0.92 | 1.694 |
| 12 | 100 | 5.40 | 0.056 | 51.6 | 2.22 | 27.8 | 12.52 | 3.269 | 0.28 | 1.982 | 0.54 | 4.795 |
| 14H | 44 | 5.53 | 0.057 | 59.1 | 2.51 | 28.5 | 11.32 | 1.572 | 0.10 | 0.546 | 0.47 | 1.718 |
| 15 | 15 | 4.01 | 0.041 | 50.4 | 2.36 | 25.9 | 10.99 | 0.411 | 0.24 | 0.170 | 0.94 | 0.463 |
| 16 | 90 | 5.21 | 0.053 | 54.1 | 2.31 | 26.7 | 11.55 | 3.078 | 0.34 | 1.496 | 0.67 | 3.486 |
| 17 | 35 | 5.50 | 0.057 | 39.0 | 2.05 | 23.0 | 11.20 | 0.965 | 0.21 | 0.478 | 0.79 | 1.135 |
| 19 | 30 | 6.13 | 0.063 | 47.7 | 2.19 | 24.6 | 11.24 | 1.788 | 0.24 | 0.578 | 0.54 | 1.322 |
| Mean | 56 | 5.12 | 0.053 | 53.6 | 2.44 | 26.9 | 11.05 | 1.841 | 0.26 | 0.879 | 0.72 | 2.285 |
| Std dev | 22.8 | 0.95 | 0.010 | 7.0 | 0.30 | 2.50 | 0.59 | 0.745 | 0.08 | 0.430 | 0.21 | 1.048 |

Cluster analysis breaks were 60 cm at 5S, 50 cm at 8S, 40 cm at 11S, 20 cm at 15S, 40 cm at 17S and 50 cm at 19S.

Table 7. Whole-basin storage of total dry mass, total phosphorus (TP) and non-apatite inorganic phosphorus (NAIP) for two stratigraphic groups of sediments in Lake Dora. Calculations are based on summing data for cum mass, cum TP and cum NAIP from Table 6 and then averaging sums over the 20 survey stations that were distributed on an equal area grid (this procedure assumes zero storage for erosional sites not included in Table 6). The area of the lake used in the calculations was 17.74 x $10^6$ $m^2$. Units are $10^3$ larger for mass than for phosphorus. Average storage is calculated using assumptions about ages for each stratum. See Table 6 and text for additional explanation.

**5-Yr Period**

| | Dry Mass | TP | NAIP |
|---|---|---|---|
| Sum ($g\ cm^{-2}$) or ($mg\ cm^{-2}$) | 4.017 | 8.808 | 3.838 |
| Average/station ($g\ cm^{-2}$) or ($mg\ cm^{-2}$) | 0.2009 | 0.4404 | 0.1919 |
| Whole Basin Storage ($10^6$ kg) or ($10^6$ g) | 35.63 | 78.12 | 34.04 |
| Average Storage/yr ($10^6$ kg) or ($10^6$ g) | 7.13 | 15.6 | 6.81 |

**45-Yr Period**

| | Dry Mass | TP | NAIP |
|---|---|---|---|
| Sum ($g\ cm^{-2}$) or ($mg\ cm^{-2}$) | 27.27 | 30.05 | 11.11 |
| Average/station ($g\ cm^{-2}$) or ($mg\ cm^{-2}$) | 0.1364 | 0.1502 | 0.5553 |
| Whole Basin Storage ($10^6$ kg) or ($10^6$ g) | 241.9 | 266.5 | 98.51 |
| Average Storage/yr ($10^6$ kg) or ($10^6$ g) | 5.38 | 5.92 | 2.19 |

Whole-basin dry mass accumulation rates calculated for the two stratigraphic sets of data were greater in recent sediments compared to older sediments (Table 7). Rates calculated by dividing the 50-yr record into 5- and 45-yr periods produced average dry mass sedimentation rates that were greater for the 5-yr period than for the older 45-yr period. An increase in sedimentation was anticipated based on other studies of other Ocklawaha lakes (Schelske 1997, 1998) and on data for MSR in historic cores (Figs. 5-7) and in relative increases in decadal MSR and OMSR (Tables 2 and 3). The dry mass sedimentation rate in the 5-yr period was 1.33 times greater than in the 45-yr period (Table 7). Sediments in Lake Dora are highly organic, being greater than 70% LOI in recent sediments, and the proportion of organic matter is greater in recent sediments (Table 6). MSR obtained from $^{210}$Pb-dated cores also increased with time, indicating that the sedimentation of highly organic sediments increased with time. Data from other studies of Ocklawaha lakes (Schelske 1997, 1998) also show similar patterns of increased sedimentation of organic matter with time. Therefore, based on MSR data, we conclude that dry mass sedimentation and production of organic matter in the lake increased with time.

Average whole-basin rates of TP sedimentation also were greater in the recent sediments than in older sediments (Table 7). TP sedimentation increased at a greater rate being 2.64 times greater in the 5-yr period than in the older 45-yr period. An increase in TP sedimentation was anticipated because TP flux and TP concentration increased with time in $^{210}$Pb-dated cores (Figs. 8 and 9) and TP concentration increased upcore in undated survey cores (Appendix E). Likewise, average whole-basin rates of NAIP sedimentation were greater in recent sediments than in older sediments. Average NAIP sedimentation in the recent 5-yr period was 3.11 times greater than in the older 45-yr period. Thus, NAIP sedimentation increased at a greater rate than TP sedimentation. NAIP represents 43.7% of TP in recent sediments and only 37.0% in older sediments. Because NAIP is a measure of bioavailable phosphorus, these results are evidence for anthropogenic nutrient enrichment.

Estimates for TP sedimentation calculated from whole-basin inventories of TP were compared to estimates of TP sedimentation obtained by other methods. Fulton (1995) estimated TP sedimentation (retention) in Lake Dora of 6230 kg/yr from nutrient budgets for lakes in the upper Ocklawaha basin. This estimated retention is less than half of our estimated TP storage (15,600 kg/yr) for the recent 5-yr period (Table 7). We also calculated TP sedimentation rates in $^{210}$Pb-dated cores (Fig. 9) by multiplying MSR (Figs. 5-7) and TP concentration. Maximum TP sedimentation rates ranged from 100 to 200 $\mu$g TP cm$^{-2}$ yr$^{-1}$ in recent sediments of high sedimentation rate cores (LD-3H, LD-10H, LD-6H-98 and LD-12H-98) and from approximately 50 to 150 $\mu$g TP cm$^{-2}$ yr$^{-1}$ if the upper most samples are excluded.

In most cores rates decrease sharply with depth. Rates in recent sediments (deposited since 1990 according to $^{210}$Pb ages) are consistent with the average rate of 88.1 μg TP $cm^{-2}$ $yr^{-1}$ that can be calculated from whole-basin storage (Table 7) and with the average decadal TP storage rate (81.8 μg TP $cm^{-2}$ $yr^{-1}$) for the most recent decade in $^{210}$Pb-dated cores (Table 4). A lower value might be expected from the whole-basin calculation than from that obtained from $^{210}$Pb-dated cores because sedimentation on some areas of the lake bottom is low as evidenced by the large variability in dry mass or TP sedimentation over the lake basin (Table 6); whereas dated cores are collected at sites biased toward high sedimentation rates. However, results are essentially equal for the two methods.

**Diatom Microfossils**

Diatoms at the base of LD-3H in Lake Dora (Fig. 21, Appendix K) are primarily benthic species of *Navicula* and species of *Pinnularia, Neidium, Stauroneis* and *Mastogloia* that suggest shallower conditions, clearer water or inputs to the lake from adjacent wetland areas (Hanna 1933). A shift in the diatom assemblage takes place at approximately 60-70 cm where planktonic species that include *Cyclotella meneghiniana, Aulacoseira italica* and *Aulacoseira ambigua,* suggest deeper water and mesotrophic to eutrophic conditions. Between the 60- and 20-cm levels, the diatom assemblage is dominated by the benthic taxa *Pseudostaurosira brevistriata* and *Staurosirella pinnata* that indicate eutrophic to hypereutrophic conditions (Whitmore 1989). Recent sediments in core LD-3H, between 20 and 0 cm, show a decline in *P. brevistriata* and *S. pinnata*. Increased importance of *Aulacoseira ambigua* and *Stauroneis construens* var. *venter* above the 20-cm level indicates that the lake has been eutrophic in recent years.

Inferred limnetic TP values (Fig. 22) based on diatom assemblages from core LD-3H indicate that Lake Dora began as a mesotrophic lake, proceeded to eutrophic conditions by the 55- to 65-cm levels, and was hypereutrophic in the intervals between the 45- to 5-cm levels. The recent diatom sample indicates an inferred limnetic TP value of 95 μg/L (Table 8). Modern measured means for limnetic TP of 71 μg/L for west Lake Dora and 92 μg/L for east Lake Dora (Canfield et al. 1995) are within the 95% confidence interval for inferred limnetic TP, which suggests that the diatom-based TP predictive model (Brenner et al. 1993) is reliable in Lake Dora. However, a higher mean TP of 138 μg/L for Lake Dora (Fulton 1995) is greater than the 95% confidence interval for inferred limnetic TP (127 μg/L).

Diatom assemblages in core LD-10H from Lake Dora (Fig. 23, Appendix K) show a trend very similar to those from LD-3H, and similar trends of inferred limnetic TP (Table 9, Fig. 24). Benthic diatom assemblages in core LD-10H persist to about the 70-cm level. The peak in *Aulacoseira ambigua* that indicates deeper water and more productive conditions occurs

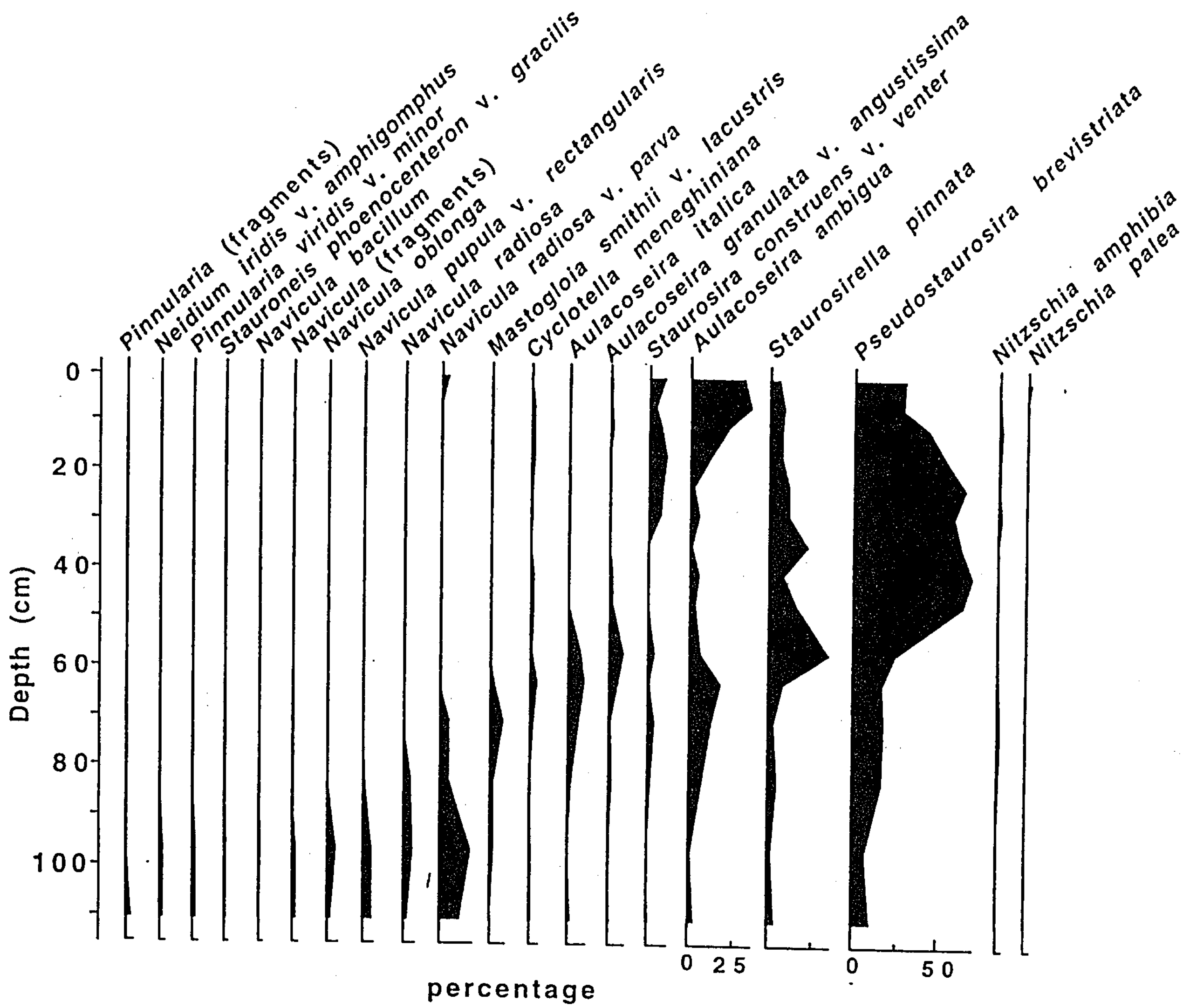


Fig. 21. Diatom assemblages in Lake Dora sediment core LD-3H-95.

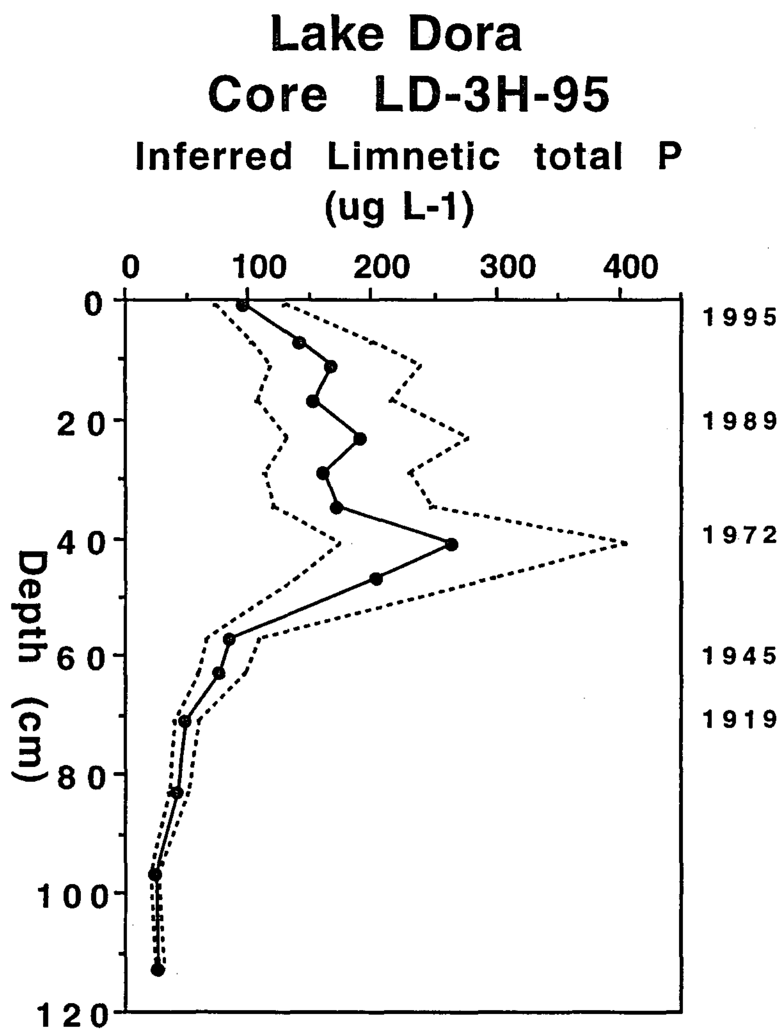


Fig. 22. Inferred limnetic total P based on diatom assemblages in Lake Dora sediment core LD-3H-95 with 95% confidence intervals for the inferences.

Table 8. Inferred limnetic total P with 95% confidence intervals for the inferences for Lake Dora core LD-3H-95.

| Depth Interval (cm) | Inferred total P (ug/L) | Lower bound of 95% c.i. (ug/L) | Upper bound of 95% c.i. (ug/L) |
|---|---|---|---|
| 0-2 | 95 | 71 | 127 |
| 6-8 | 141 | 101 | 198 |
| 10-12 | 167 | 116 | 239 |
| 16-18 | 151 | 107 | 214 |
| 22-24 | 190 | 130 | 277 |
| 28-30 | 160 | 112 | 229 |
| 34-36 | 171 | 119 | 246 |
| 40-42 | 264 | 173 | 404 |
| 46-48 | 203 | 138 | 299 |
| 56-58 | 84 | 64 | 109 |
| 62-64 | 75 | 58 | 97 |
| 70-72 | 48 | 39 | 59 |
| 82-84 | 41 | 34 | 50 |
| 96-98 | 23 | 20 | 27 |
| 110-112 | 27 | 23 | 31 |

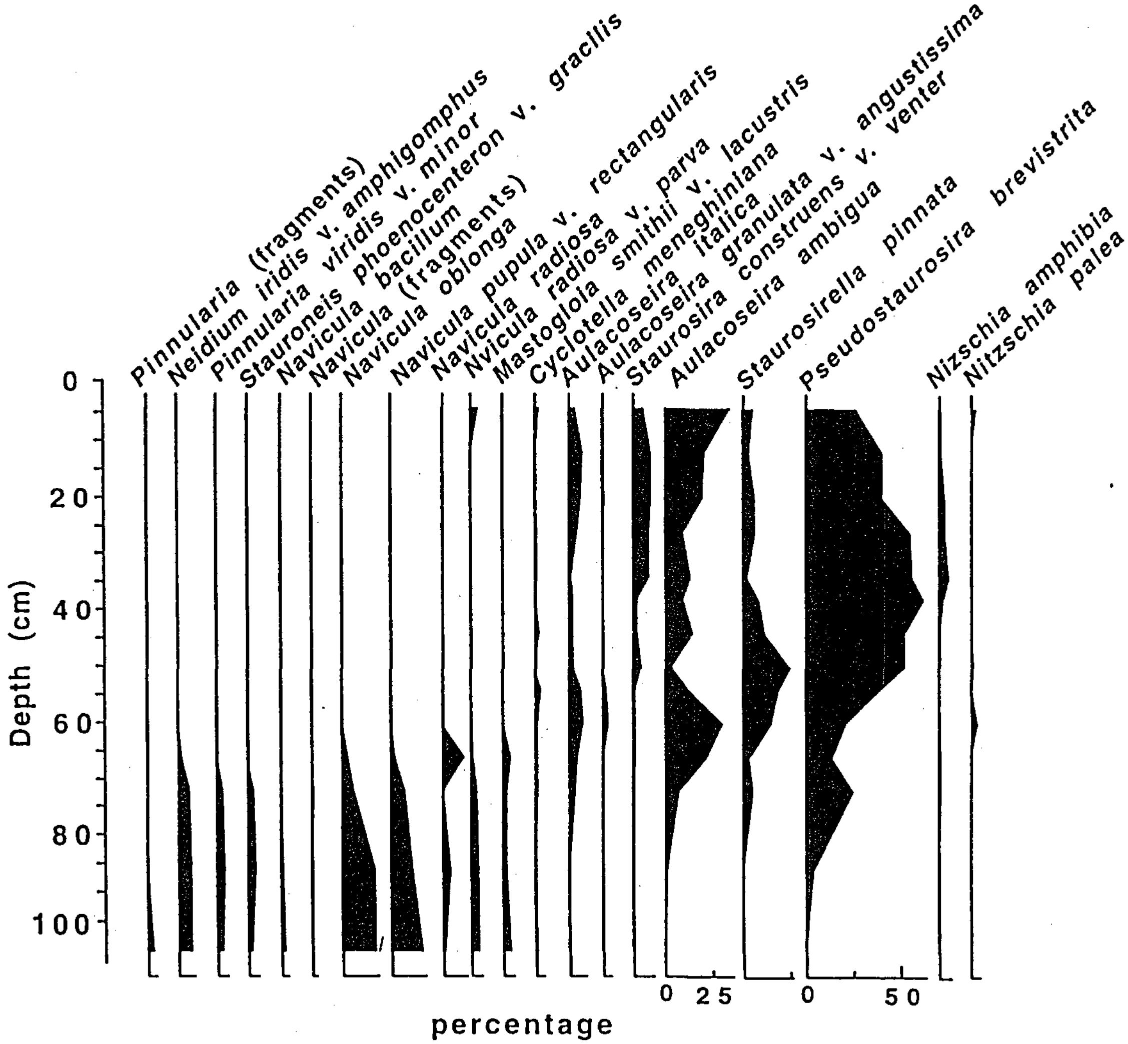


Fig. 23. Diatom assemblages in Lake Dora sediment core LD-10H-95.

Table 9. Inferred limnetic total P with 95% confidence intervals for the inferences for Lake Dora core LD-10H-95.

| Depth Interval (cm) | Inferred total P (ug/L) | Lower bound of 95% c.i. (ug/L) | Upper bound of 95% c.i. (ug/L) |
|---|---|---|---|
| 6-8 | 95 | 72 | 127 |
| 14-16 | 132 | 95 | 183 |
| 22-24 | 127 | 92 | 176 |
| 28-30 | 190 | 130 | 277 |
| 36-38 | 204 | 139 | 301 |
| 40-42 | 213 | 144 | 316 |
| 46-48 | 170 | 118 | 244 |
| 52-54 | 126 | 91 | 174 |
| 56-58 | 126 | 91 | 174 |
| 62-64 | 99 | 74 | 133 |
| 68-70 | 59 | 47 | 74 |
| 74-76 | 42 | 35 | 52 |
| 88-90 | 23 | 20 | 27 |
| 102-104 | 20 | 18 | 24 |

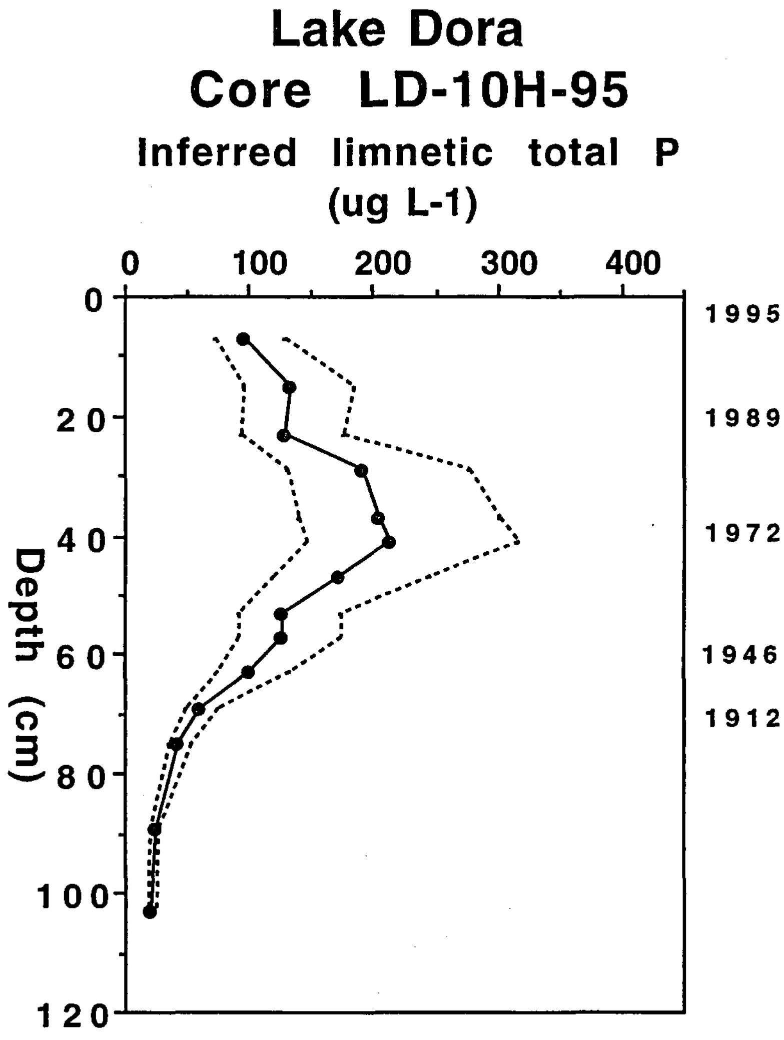


Fig. 24. Inferred limnetic total P based on diatom assemblages in Lake Dora sediment core LD-10H-95 with 95% confidence intervals for the inferences.

at the 60-cm level. The increase in *Pseudostaurosira brevistriata* and *Staurosirella pinnata* occurs lower in LD-10H than in LD-3H, at approximately the 60-cm level. The recent decline in *P. brevistriata* and increase in *A. ambigua* begins at approximately the 25-cm level. Recent limnetic TP inferences for LD-10H were not possible because there was insufficient sediment for diatom analyses in the top sample. The 6-8 cm interval, however, may provide a reliable inference for recent limnetic TP because its $^{210}$Pb age is approximately one year (Appendix I).

**Summary--Lake Dora**

Several chemical and gravimetric variables measured in survey and historic cores change predictably from core to core including an upcore increase in NAIP and TP concentration, an upcore increase in rate of TP and NAIP accumulation and an upcore decrease in TC/TN and % dry weight. In addition, relative increases in decadal MSR, OMSR, TPAR and NAIP calculated for historic cores all increase progressively with time in relation to the base decade (91-100 yr since core collection). These changes were found in depth intervals that were aged with $^{210}$Pb in historic cores and occurred primarily since 1900 or possibly a decade earlier given that errors in $^{210}$Pb ages are relatively large at older ages. Increases in TP and NAIP accumulation accelerated beginning approximately 1945 or in the 50 yr before core collection. The conclusion from these results is that eutrophication has been progressive beginning at least as early as 1900. The general trend is an increase in the rate of eutrophication with time.

Data on NAIP or TP concentration and MSR can be used to estimate historic changes in either TP concentration in lake water or TP loading to the lake basin in the past 100 years. The change in NAIP and TP concentration with time is attributed to an increase in phosphorus loading. Because a large fraction (>60% on average) of lake sediments deposited in the 50 yr before core collection are organic matter as measured by LOI, increases in MSR with time indicate production of organic matter has increased and lake eutrophication has been progressive. These inferred changes are reflected in relative increases in decadal MSR and OMSR (Tables 2 and 3), both of which increase progressively in all decades relative to the base decade (91-100 yr since core collection). Rates of NAIP or TP accumulation, which are the product of MSR and NAIP or TP concentration, increase at a greater rate than MSR because the concentration of both forms of phosphorus increase with time. These increased rates of accumulation (given the implicit assumption in commonly used phosphorus loading models, i.e. that net phosphorus sedimentation is proportional to phosphorus loading) can be used to infer that phosphorus loading to the lake has increased in proportion to the increase in TP accumulation in the sediments. This increase in net phosphorus sedimentation, based on increased rates of TP sedimentation in $^{210}$Pb-dated cores relative to the base period of approximately 1900, is inferred to be as much as 15-fold since 1900, and nearly 4-fold since approximately 1945.

Limnetic TP concentrations inferred from diatom microfossils in core LD-3H-95 and LD-10H-95 also indicate a large increase in phosphorus concentration with time. These inferred TP concentrations indicate that TP in the water column peaked in the 1970s at a time when measured TP in the sediment record had also increased sharply compared to 1950. After the peaks in inferred limnetic TP of 213 μg/L (LD-3H) and 264 μg/L (LD-10H), inferred concentrations decreased to 95 μg/L in surface sediments of both cores; a concentration that is consistent with present TP concentrations in the water column determined by Lakewatch (limnetic TP of 71 μg/L for west Lake Dora and 92 μg/L for east Lake Dora), but the upper 95% confidence interval (127 μg/L) is smaller than the mean TP of 138 μg/L reported by Fulton (1995). Measured TP concentrations in sediments, however, were greater during the 1990s in surface sediments than in the 1970s when inferred limnetic TP concentrations were largest. We believe that polyphosphate storage by phytoplankton, as discussed by Kenney et al. (in revision), may confound predictions of water column TP concentration in some models. Although we have no direct measurements of polyphosphate in Lake Dora sediments, the much larger relative increase in decadal NAIPAR than in decadal TPAR in the most recent decade (Tables 2 and 3) would be expected if polyphosphate storage by phytoplankton had increased in recent sediments.

An upcore change in species composition of microfossil diatoms corresponded to a stratigraphic change in the TC/TN ratio of organic matter. Benthic species of *Navicul*a and species of *Pinnularia, Neidium, Stauroneis* and *Mastogloia* were found in older sediments and indicate pre-disturbance conditions until approximately 1900. A shift in the diatom assemblage begins at approximately 60-70 cm (in the 1920s) when the appearance of planktonic species that include *Cyclotella meneghiniana, Aulacoseira italica* and *Aulacoseira ambigua* indicate a shift from mesotrophic to eutrophic conditions. At the time of this shift, the TC/TN ratio begins to decrease, an inference for a decrease in macrophytes or an increase in planktonic diatoms or both. Because macrophytes produce more structural carbon than single-celled algae, their TC/TN ratio is larger than that of phytoplankton. In Lake Apopka, the well-known shift in the composition of the primary producer community from macrophytes to phytoplankton is accompanied by a sharp decrease in the TC/TN ratio of organic matter (Schelske 1997). The decrease in the TC/TN ratio in Lake Dora is gradual over a long period of time indicating that macrophytes were not replaced rapidly by phytoplankton.

A combination of data for TP concentration, TC/TN ratio, ash fraction and % dry weight provided time-dependent stratigraphic features that were identified by K-means (multivariate) cluster analyses and correlated across survey cores. Three groups of sediments which ordered stratigraphically with depth in each core were identified with this approach. As a result, the two stratigraphic horizons separating these groups were correlated with stratigraphic changes in historic cores. Two time zones were identified based on this approach, the first roughly spans the 45-yr interval from 1945 to 1990 and the second spans a 5-yr interval from 1990 to approximately 1995 (the date of core collection). Accumulation rates for dry mass, TP and NAIP for the two time periods were estimated from whole-basin storage of dry mass, TP and NAIP. Comparing the increase in estimated dry mass sedimentation rate for the 5-yr period relative to the 45-yr period yields an average annual rate that is 1.33 times larger for the 5-yr period (Table 7). A 32% greater annual rate is found by comparing the most recent decadal MSR with an average rate for the 2nd to 5th decades since core collection (Table 2). Thus, annual MSR estimated for recent sediments, either from survey cores (whole-basin storage) or historic ($^{210}$Pb-dated) cores, increased comparably compared to sediments deposited in the previous 45 yr. By comparison, annual TP sedimentation based on whole-basin storage increased at a greater rate, being 2.64 times greater in the 5-yr period than in the earlier 45-yr period (Table 7) or an average decadal TPAR in the most recent decade that is 210% greater than the average rate for the 2nd to 5th decades (Table 4). These data show that the increase in TP sedimentation was roughly twice as large as that for MSR using either set of data.

The annual whole-basin storage of TP for the 5-yr period is 15.6 x $10^6$ g/yr (Table 7), more than twice the annual net TP retention (6.23 x $10^6$ g/yr) calculated by Fulton (1995) using an independent approach and entirely different data. Some of the apparent discrepancy in our estimates may be a result of the time periods selected for each time zone. For example, a one-year change in the time period for the 5-yr period results in a 20% change in either dry mass or TP sedimentation for that period. Whole-basin storage of sediments and nutrients is discussed in greater detail in the final section of the report on Comparison of TP Sedimentation in Lake Dora and Lake Eustis.

## LAKE EUSTIS

Sediments in Lake Eustis can be characterized from a statistical analysis of the large data sets for survey and historic cores (Table 10). These descriptions are based on the mean and standard deviation and maximum and minimum values for selected variables. Data for each data set are tabulated by station in Appendices G and H.

Survey cores collected during Phase I were sampled only to a depth of 80 cm. As a consequence of this truncation, at least three cores (LE-3S, LE-4S and LE-6S) were too short to retrieve the entire post-disturbance sedimentary record of changes in TP concentration (Appendix G). In addition, sectioning these cores at 8-cm intervals was too coarse to resolve adequately some of the changes in phosphorus concentration with depth. Data for the Phase I survey cores are not plotted nor analyzed in great detail because it is evident that data from the Phase II survey provided a better data base to determine lake-basin nutrient storage of either dry mass or phosphorus.

### Gravimetric Results

Sediments in Lake Eustis were generally high in water content and highly organic with little difference in % ash and % LOI among means for the historic and survey cores. Mean LOI ranged from 61 to 63% among the four data sets, and mean % ash ranged from 37 to 39% (Table 10). The % dry weight increased downcore in all cores to values >5% (Appendices G and H). The maximum dry weight ranged from 8.3 to 15.8%, among historic and survey cores (Table 10), but samples with dry weight >10% were not common and were found only at depth in cores (Appendices G and H). Mean dry weight was <5% , or >95% water, with the exception of Phase I historic samples (mean = 5.4%) (Table 10).

### Total Carbon and Total Nitrogen

Means for TC and TN were similar for historic and survey cores. Mean TC ranged from 29.4 to 33.4% for the four data sets, roughly half mean LOI for each data set (Table 10). Mean TC ranged from 48 to 51% of mean LOI excluding Phase II historic cores (mean = 54%). Mean TN ranged from 2.63 to 2.80% for all sets of historic and survey cores. Mean TC/TN ranged from 11.3 to 12.2 among the four data sets with the largest mean for Phase II historic data. Given the relatively large standard deviations, none of these differences would be statistically significant. TC/TN in cores increased downcore in a pattern that closely paralleled that for % dry weight (Appendices G and H).

Table 10. Statistical summary of selected sediment variables in survey and historic cores collected from Lake Eustis. Data are presented as averages, minima, maxima and standard deviations.

| | Dry (%) | Ash (%) | LOI (%) | NAIP (mg/g) | TP (mg/g) | TN (%) | TC (%) | TC/TN |
|---|---|---|---|---|---|---|---|---|
| **Lake Eustis Survey Phase I** | | | | | | | | |
| Average | 4.75 | 39.10 | 60.95 | 0.180 | 0.530 | 2.630 | 29.42 | 11.29 |
| Minimum | 0.87 | 24.70 | 19.72 | 0.020 | 0.090 | 0.840 | 9.21 | 9.57 |
| Maximum | 12.47 | 80.30 | 75.27 | 0.650 | 1.470 | 3.430 | 34.57 | 14.32 |
| Std. Dev. | 1.92 | 10.10 | 10.07 | 0.160 | 0.370 | 0.420 | 3.42 | 1.10 |
| **Lake Eustis Survey Phase II** | | | | | | | | |
| Average | 4.78 | 38.37 | 61.63 | 0.136 | 0.454 | 2.65 | 31.24 | 11.94 |
| Minimum | 0.62 | 16.10 | 22.60 | 0.019 | 0.055 | 0.98 | 12.13 | 8.30 |
| Maximum | 11.86 | 77.40 | 83.90 | 0.715 | 1.461 | 3.88 | 42.43 | 15.32 |
| Std. Dev. | 1.79 | 10.19 | 10.19 | 0.126 | 0.329 | 0.43 | 4.04 | 1.46 |
| **Lake Eustis Historic Phase I** | | | | | | | | |
| Average | 5.42 | 37.80 | 62.24 | 0.140 | 0.450 | 2.680 | 30.86 | 11.64 |
| Minimum | 1.06 | 19.70 | 24.68 | 0.019 | 0.006 | 0.820 | 9.92 | 7.35 |
| Maximum | 15.79 | 75.30 | 80.27 | 0.591 | 1.490 | 4.590 | 42.80 | 14.11 |
| Std. Dev. | 2.21 | 10.80 | 10.84 | 0.119 | 0.323 | 0.480 | 4.88 | 1.32 |
| **Lake Eustis Historic Phase II** | | | | | | | | |
| Average | 4.60 | 37.16 | 62.84 | 0.138 | 0.532 | 2.80 | 33.37 | 12.21 |
| Minimum | 1.08 | 16.18 | 37.86 | 0.015 | 0.126 | 1.48 | 22.61 | 9.06 |
| Maximum | 8.30 | 62.14 | 83.82 | 0.441 | 1.244 | 3.61 | 43.49 | 18.04 |
| Std. Dev. | 1.26 | 9.54 | 9.54 | 0.097 | 0.262 | 0.44 | 4.43 | 2.34 |

**Non-Apatite Inorganic and Total Phosphorus**

Statistical data for NAIP and TP concentration were similar for survey and historic cores. Mean NAIP among the four data sets ranged from 0.14 to 0.18 mg/g, and mean TP ranged from 0.45 to 0.53 mg/g (Table 10). Standard deviations were nearly as large as the means due to the large decrease in concentration with depth (Appendices G and H), and none of the differences would be significant statistically because of the large variation in concentration with depth. Maximum values for NAIP ranged from 0.44 to 0.72 mg/g and for TP ranged from 1.24 to 1.49 mg/g.

Concentrations of NAIP and TP were largest in samples at the tops of cores and decreased to minimum values at depth in historic cores and survey cores collected during Phase II, but not to baseline levels in some truncated survey cores from Phase I (Appendices G and H). The depth zone of high concentration and the minimum concentration varied from core to core. The average or maximum TP concentration of sections near the surface are plotted in Fig. 25. Stations with TP concentration >1.0 mg/g were found in the northeastern and southwestern parts of the lake and stations with a concentration as low as 0.48 mg/g were found in an area between these two zones of high concentration. The TP concentration at 7 stations was 1.00 mg/g or less, not including LE-1S and LE-2S. Very little soft sediment was found at LE-1S and LE-2S along the southeastern shoreline and TP concentrations (<0.1 mg/g) and cumulative TP were small and unimportant in relation to other stations (Appendix G).

Concentrations of TP and NAIP in sediment samples were highly correlated in both the survey and historic cores (Figs. 26 and 27). The low correlation in the initial analysis of Phase II survey cores (LE-S-97/all) resulted from inclusion of outlier samples, generally from depths deeper than 80 cm that were not sampled during Phase I (Fig. 26). When these outliers (Table 11) were removed, linear regressions and correlations coefficients for Phase I and Phase II cores were similar. The slope of the regression for historic samples from Phase I was larger than that for the survey samples, but the slope for Phase II historic samples was similar to that for survey cores (Fig. 27). This difference between the two sets of historic cores is probably an artifact of the small and unequal sample sizes for the two sets of historic cores. It should be noted that NAIP and TP concentrations, as either averages or maxima, were considerably lower in Lake Eustis than in Lake Dora (Tables 1 and 10).

Outlier samples from the Phase II survey (Table 11) differed statistically in many respects from other statistical data and statistical data from the Phase II survey excluding these outliers (Table 10). The outliers were characterized by high % dry weight, only one sample was smaller than the mean % dry weight (5%) for the four data sets in Table 10. In general, these samples contained less organic matter with only three samples with LOI >60%, approximately the mean LOI for the four data sets in Table 10. By contrast, the mean LOI for

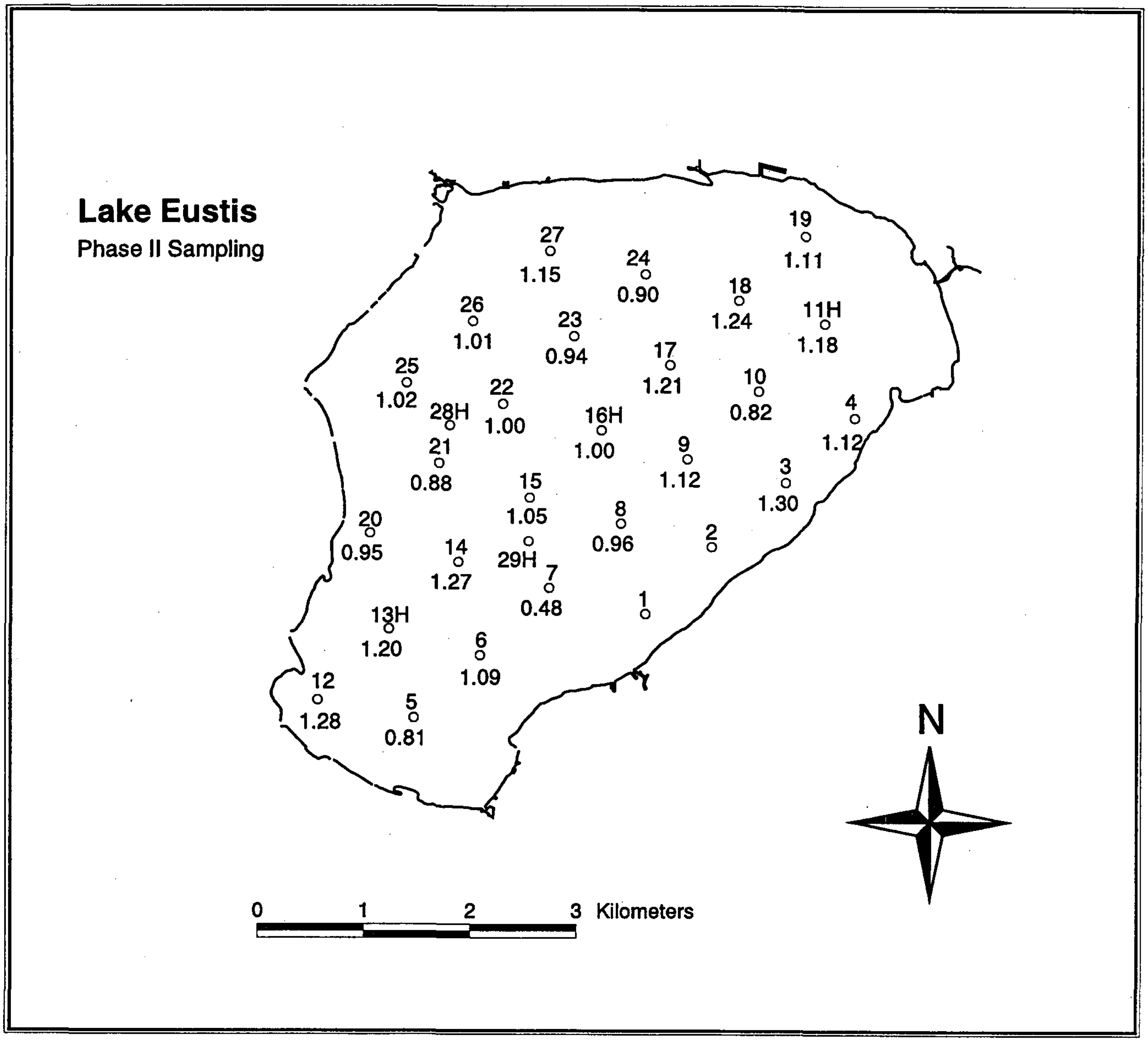


Fig. 25. Maximum TP concentration in near-surface sediments at 27 stations in Lake Eustis. Data plotted are the average concentration for the zone of highest concentration at each station. The zone of highest concentration among cores ranged from 5 to 20 cm (see Appendix G).

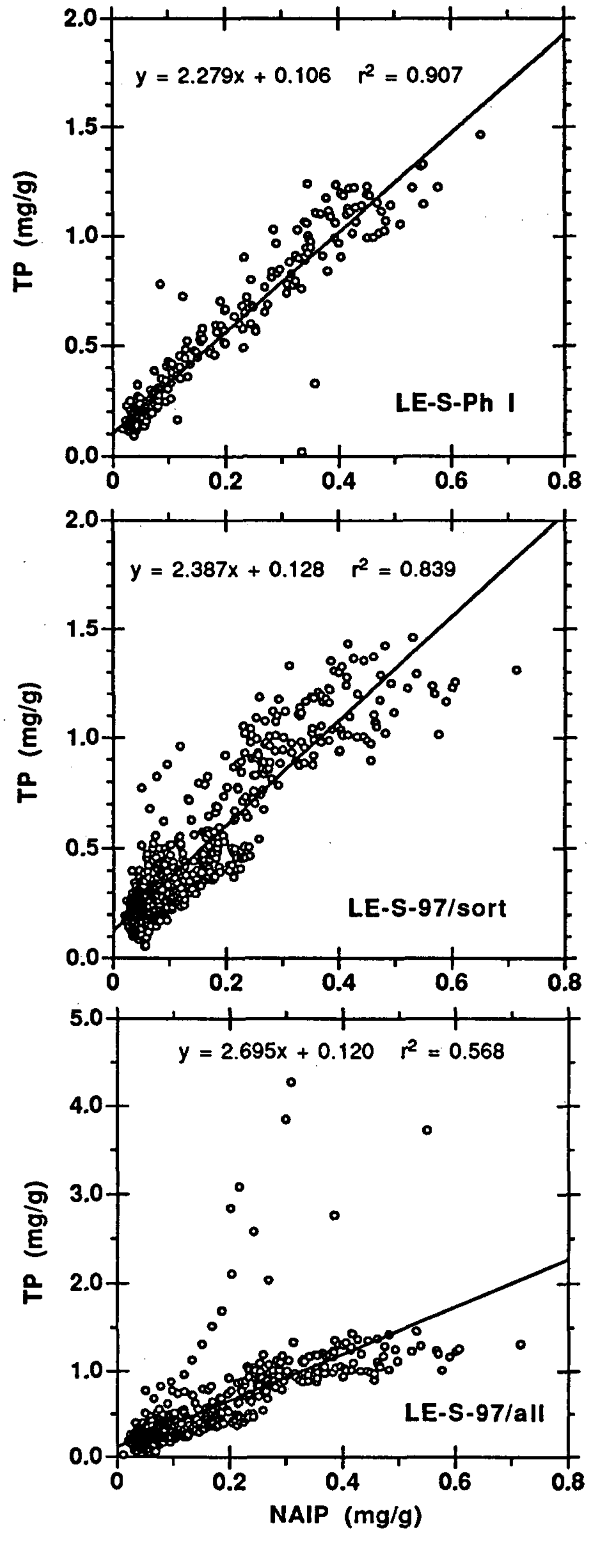


Fig. 26. Correlation of TP and NAIP concentration in sediment samples from Lake Eustis survey cores. Data for phase I cores are plotted in upper panel, data for phase II/sort are plotted in middle panel and data for all phase II samples are plotted in the lower panel.

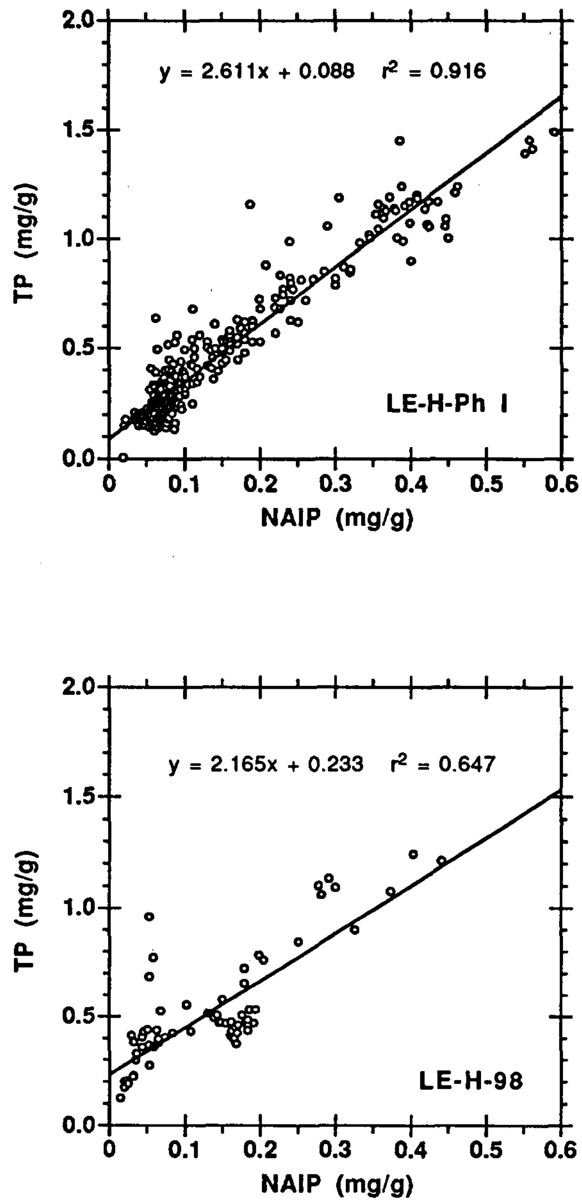


Fig. 27. Correlation of TP and NAIP concentration in sediment samples from Lake Eustis historic cores. Data for phase I historic cores are plotted in upper panel and data for phase II historic cores are plotted in the lower panel.

Table 11. Tabulation by station of statistical outliers in phase 2 Lake Eustis survey cores. Data were omitted in analyses for LE/sort. See Table 6 and text for additional explanation.

| Station | Depth (cm) | Dry (% ) | Fraction Ash | Fraction LOI | TN (% ) | TC (% ) | TC/TN | NAIP (mg/g) | TP (mg/g) |
|---|---|---|---|---|---|---|---|---|---|
| LE- 4-97 | 16 | 24.11 | 0.936 | 0.064 | 0.37 | 3.41 | 9.22 | 0.069 | 0.069 |
| LE- 7-97 | 52 | 13.09 | 0.678 | 0.322 | 1.11 | 14.15 | 12.75 | 0.043 | 0.043 |
| LE-10-97 | 92 | 13.25 | 0.705 | 0.295 | 1.28 | 16.51 | 12.9 | 0.030 | 0.075 |
| LE-14-97 | 52 | 12.83 | 0.717 | 0.283 | 1.14 | 14.61 | 12.81 | 0.045 | 0.246 |
| LE-14-97 | 88 | 6.99 | 0.511 | 0.489 | 1.78 | 28.82 | 16.2 | 0.385 | 2.767 |
| LE-14-97 | 92 | 6.43 | 0.453 | 0.547 | 1.82 | 30.48 | 16.76 | 0.203 | 2.111 |
| LE-14-97 | 96 | 6.70 | 0.464 | 0.536 | 1.78 | 30.4 | 17.11 | 0.300 | 3.850 |
| LE-14-97 | 100 | 7.51 | 0.483 | 0.517 | 1.69 | 29.84 | 17.68 | 0.309 | 4.275 |
| LE-14-97 | 104 | 8.47 | 0.551 | 0.449 | 1.53 | 26.89 | 17.56 | 0.216 | 3.088 |
| LE-14-97 | 108 | 10.07 | 0.635 | 0.365 | 1.27 | 23.69 | 18.63 | 0.242 | 2.584 |
| LE-14-97 | 112 | 11.27 | 0.679 | 0.321 | 1.08 | 22.76 | 21.17 | 0.269 | 2.040 |
| LE-14-97 | 116 | 13.26 | 0.742 | 0.258 | 0.87 | 20.01 | 23.09 | 0.169 | 1.517 |
| LE-14-97 | 120 | 12.78 | 0.699 | 0.301 | 1.01 | 21.93 | 21.79 | 0.151 | 1.309 |
| LE-14-97 | 128 | 16.05 | 0.731 | 0.269 | 0.95 | 19.59 | 20.56 | 0.108 | 0.743 |
| LE-14-97 | 132 | 19.36 | 0.767 | 0.233 | 0.8 | 18.29 | 22.81 | 0.098 | 0.777 |
| LE-14-97 | 136 | 20.97 | 0.763 | 0.237 | 0.88 | 17.49 | 19.89 | 0.120 | 0.764 |
| LE-14-97 | 140 | 14.12 | 0.728 | 0.272 | 0.98 | 21.27 | 21.75 | 0.133 | 1.129 |
| LE-18-97 | 120 | 5.22 | 0.326 | 0.674 | 2.35 | 33.67 | 14.33 | 0.201 | 2.848 |
| LE-20-97 | 28 | 74.52 | 0.993 | 0.007 | 0.16 | 0.53 | 3.31 | 0.011 | 0.026 |
| LE-24-97 | 80 | 24.64 | 0.874 | 0.126 | 0.55 | 6.48 | 11.78 | 0.036 | 0.068 |
| LE-24-97 | 84 | 15.87 | 0.76 | 0.24 | 0.79 | 8.57 | 10.85 | 0.031 | 0.127 |
| LE-24-97 | 104 | 3.71 | 0.188 | 0.812 | 2.89 | 41 | 14.19 | 0.550 | 3.728 |
| LE-26-97 | 112 | 17.26 | 0.806 | 0.194 | 1.11 | 14.33 | 12.91 | 0.033 | 0.148 |
| LE-27-97 | 72 | 5.44 | 0.347 | 0.653 | 2.47 | 34.28 | 13.88 | 0.186 | 1.690 |
| Average | | 15.16 | 0.65 | 0.35 | 1.28 | 20.79 | 16.00 | 0.16 | 1.50 |
| Maximum | | 74.52 | 0.99 | 0.81 | 2.89 | 41.00 | 23.09 | 0.55 | 4.28 |
| Minimum | | 3.71 | 0.19 | 0.01 | 0.16 | 0.53 | 3.31 | 0.01 | 0.03 |
| St Deviation | | 13.92 | 0.20 | 0.20 | 0.66 | 10.15 | 4.85 | 0.13 | 1.38 |

the outlier samples was only 35%. In addition, most of these samples were from depths >80 cm, the maximum depth sampled in the Phase I survey. Exceptions were 16 cm at LE-4-97, the deepest sample at this low-depositional site; 52 cm at LE-7-97, a low deposition site based on NAIP and TP concentrations; 52 cm at LE-14-97, a sample from baseline NAIP and TP concentrations; 28 cm at LE-20-97, the deepest sample at this low sedimentation site; and 72 cm at LE-27-97, a sample with high TP in the baseline zone that exists below 36 cm. It will be shown in the section on NAIP and TP Accumulation Rate that baseline concentrations were found in sediments deposited more than 100 to 150 years before core collection. Thus, exclusion of these outliers will not affect calculations of nutrient and sediment deposition during the 20th century or in the last half of the 19th century.

**Sediment Dating**

The five historic cores collected during Phase I were sectioned at 2-cm intervals whereas the three cores collected during Phase II were sectioned at 4-cm intervals. Data generated from excess $^{210}Pb$ using a CRS model show that the sectioning employed during Phase I was generally finer than necessary because the age difference between sections is small (Appendix J). This is particularly evident for LE-13H where excess $^{210}Pb$ activity was found at 88 cm and to a lesser extent at LE-28H where excess $^{210}Pb$ activity was found at 52 cm.

MSR at all stations, with the possible exceptions of LE-16H and LE-27H, increased over time (Figs. 28 and 29). MSR increased at least 3-fold in cores LE-11H, LE-28H and LE-29H in the interval from 1900 to the 1990s and at least 6-fold in core LE-13H and LE-3H-98 in the same time interval. These increases, except those for LE-13H and LE-3H-98, were relatively small compared to those found in historic cores from Lake Dora.

Age/depth and chemical data for LE-13H, an historic core collection during Phase I (Appendices J and H), were not consistent with chemical data obtained at LE-13S, either during Phase I or Phase II (Appendix G). The TP concentration for LE-13S reached baseline levels at 28 and 32 cm for Phase I and II cores, respectively; where chemical data for LE-13H showed a long record of TP and NAIP enrichment (to 90 cm) consistent with excess $^{210}Pb$ activity to a depth of 88 cm. A second historic core, LE-13Pb-98, collected at Station 13 during Phase II was used to check the age/depth relationship for LE-13H. Results showed that the MSR for LE-13H (Fig. 28) was much greater than that for LE-13Pb-98 (Fig. 29). Therefore, data collected during Phase II verified that Station 13 was a low sedimentation site compared to that for data given for LE-13H. MSR at LE-13H in fact was larger than any other Lake Eustis historic station. MSR at only one other station, LE-3H-98, was comparable. No explanation can be given for this discrepancy except to note that data from the historic cores and nutrient and other profiles at the survey sites indicate that sedimentation rate does vary

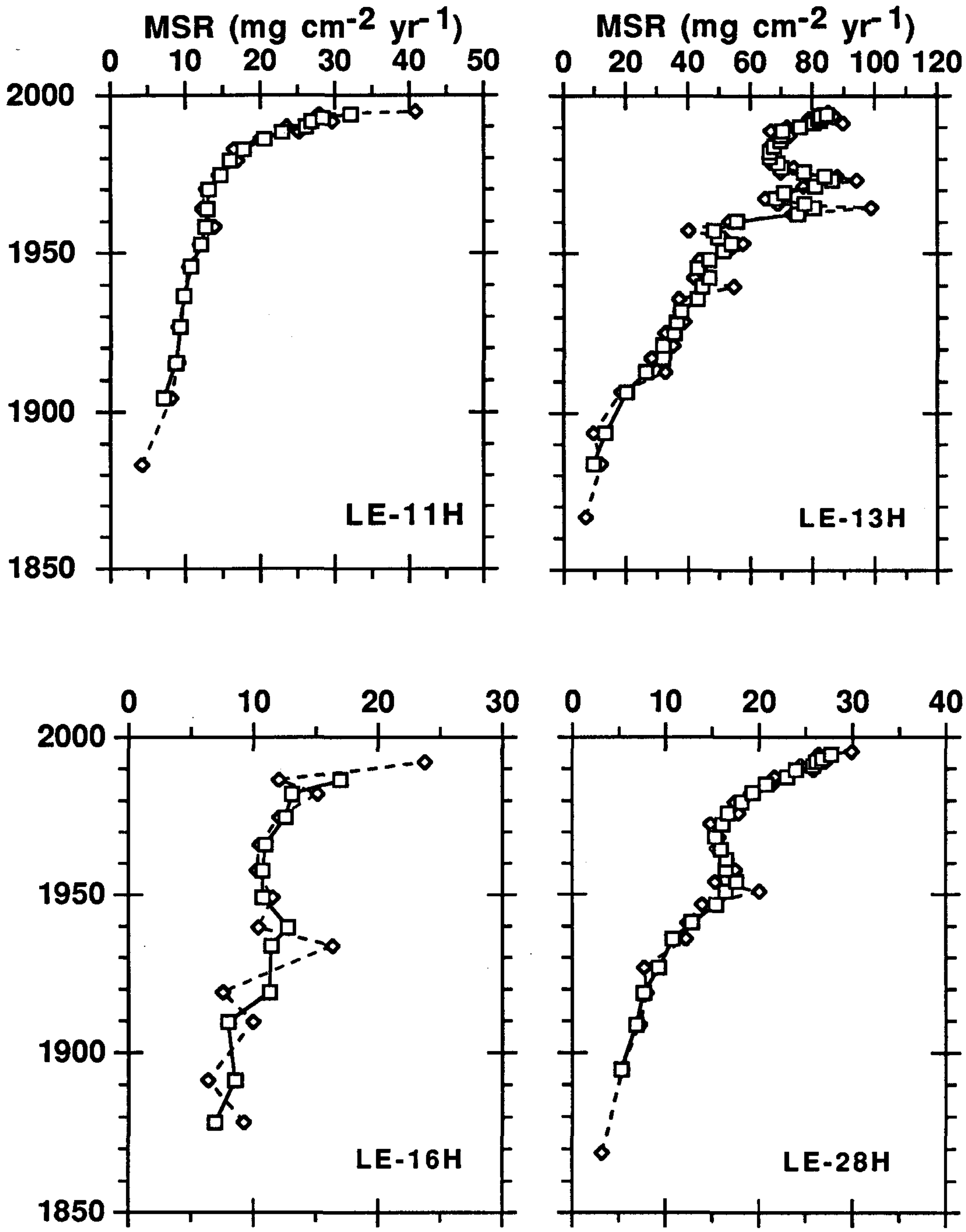


Fig. 28. Mass sedimentation rate (MSR) for historic cores LE-11H, LE-13H, LE-16H, and LE-28H collected in Lake Eustis. Data for MSR (open diamonds) are smoothed using a three-point running average (open squares).

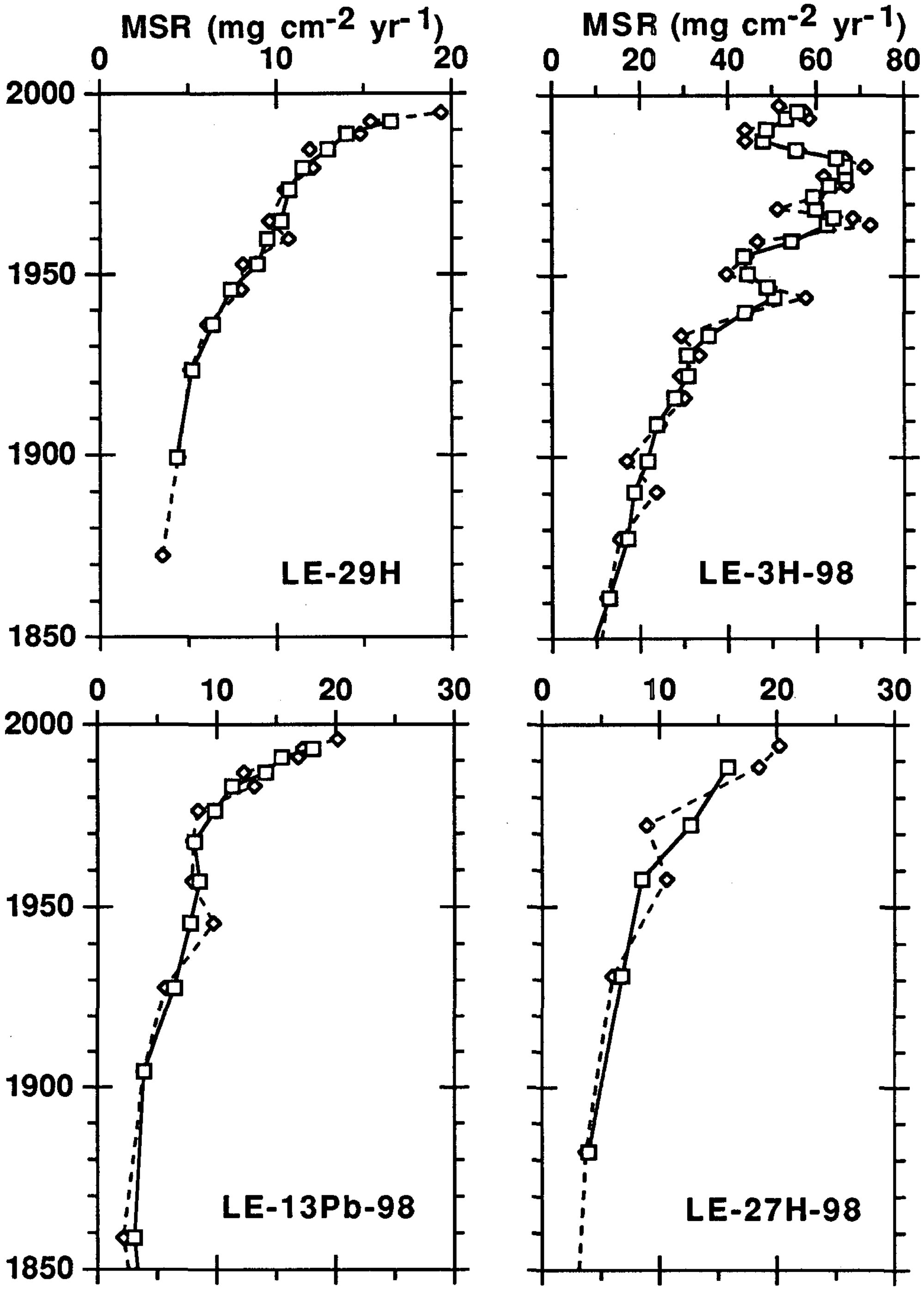


Fig. 29. Mass sedimentation rate (MSR) for historic cores LE-29H, LE-3H-98, LE-13Pb-98, and LE-27H-98 collected in Lake Eustis. Data for MSR (open diamonds) are smoothed using a three-point running average (open squares).

greatly over the lake. We have concluded that $^{210}Pb$ dates from this core are not valid and believe that a laboratory error resulted in selection of the wrong samples for analysis. Because data from LE-13H were atypical in many respects, results from this core were not used in quantitative assessments of dry mass, NAIP and TP accumulation for the lake basin.

Because core LE-13Pb-98 represented a low sedimentation site, no chemical analyses were run on this core. It had been sectioned at 2-cm intervals so it could be used to obtain a high-resolution stratigraphy. However, as pointed out above, two survey cores at this site confirmed that LE-13S was a low sedimentation site (Appendix G).

Maximum rates for MSR were >80 mg $cm^{-2}$ $yr^{-1}$ in core LE-13H, but were >60 mg $cm^{-2}$ $yr^{-1}$ in only one other core LE-3H-98 (Fig. 28 and 29). Rates were generally <20 mg $cm^{-2}$ $yr^{-1}$ for cores LE-16H, LE-29H and LE-27H-98 and ranged to as large as 30 mg $cm^{-2}$ $yr^{-1}$ in LE-28H. In cores LE-11H, LE-28H and LE-29H, MSR increased sharply about 1950. In LE-13H, MSR also increased sharply, but the increase was earlier, about 1920. MSR in LE-13H also differed from other cores with the exception of LE-3H-98 in that values were high and variable after 1960. Stations LE-28H and LE-29H were found in the zone of low average TP concentration in surface sediments (Fig. 25). LE-16H is near the center of the lake, at a site where the lowest maximum MSR might not be expected. However, sites with low MSR were also found near the center of Lake Apopka (Schelske 1997). Mid-lake sites in shallow lakes with sufficient fetch for wind-induced resuspension, therefore, may be in non-depositional areas of the lake basin. LE-11H and LE-3H-98 were cores collected in the northeastern end of the lake where surface TP is high. In all cores, MSR increased with time.

Decadal MSR were calculated for the historic cores as a means of equally weighting temporal data (Table 12). Data for LE-13H were tabulated even though data from this core are not considered here and were omitted in whole-basin calculations of dry mass and phosphorus sedimentation. MSR for the most recent decade ranged from 14.7 to 49.8 mg $cm^{-2}$ $yr^{-1}$ with a mean of 24.9 mg $cm^{-2}$ $yr^{-1}$ (Table 12). Decadal MSR in the most recent decade was 49.8 mg $cm^{-2}$ $yr^{-1}$ in LE-3H-98, the core with the highest MSR, and only ranged from 14.7 to 25.9 mg $cm^{-2}$ $yr^{-1}$ in the five cores with lower MSR. Relative increases in MSR for the most recent decade compared to the 10th decade (91-100 yr since core collection) ranged from 1.82 to 5.18 with an average of 3.80 for all cores (excluding LE-13H).

Because sediments in Lake Eustis are highly organic, the decadal organic matter sedimentation rate (OMSR) was calculated and compared to decadal MSR. The OMSR for the most recent decade ranged from 9.0 to 29.5 mg $cm^{-2}$ $yr^{-1}$ (excluding LE-13H) with a mean of 16.5 mg $cm^{-2}$ $yr^{-1}$ (Table 13). Decadal OMSR was 29.5 mg $cm^{-2}$ $yr^{-1}$ in LE-3H-98, the core with the highest OMSR, and ranged from 9.0 to 18.8 mg $cm^{-2}$ $yr^{-1}$ in the five cores with lower OMSR. Relative increases in OMSR for the most recent decade compared to the 10th decade

Table 12. Decadal mass sedimentation rates (MSR) in mg $cm^{-2}$ $yr^{-1}$ for Lake Eustis historic cores by decades since core collection. MSR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in MSR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LE-13H[1].

| | Avg[1] | LE-11H | LE-13H | LE-16H | LE-28H | LE-29H | LE- 3H-98 | LE-27H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 24.94 | 25.91 | 75.67 | 14.67 | 25.31 | 14.80 | 49.79 | 19.16 |
| 2 | 21.70 | 16.44 | 68.93 | 12.46 | 18.81 | 11.48 | 62.08 | 8.96 |
| 3 | 19.63 | 13.19 | 76.41 | 9.83 | 15.93 | 9.85 | 59.30 | 9.69 |
| 4 | 19.40 | 14.02 | 57.00 | 9.05 | 17.22 | 9.62 | 55.86 | 10.60 |
| 5 | 15.89 | 11.61 | 48.93 | 9.74 | 16.55 | 8.05 | 43.09 | 6.27 |
| 6 | 15.18 | 11.08 | 43.64 | 8.97 | 12.20 | 6.23 | 46.67 | 5.96 |
| 7 | 12.49 | 11.41 | 36.60 | 12.67 | 8.90 | 5.14 | 31.49 | 5.32 |
| 8 | 10.65 | 11.13 | 32.41 | 5.90 | 8.88 | 4.64 | 29.64 | 3.70 |
| 9 | 8.89 | 7.03 | 20.07 | 6.03 | 7.11 | 4.45 | 25.05 | 3.70 |
| 10 | 7.39 | 5.54 | 9.90 | 8.05 | 5.34 | 4.16 | 17.54 | 3.70 |
| 11 | 8.07 | 5.47 | 12.34 | 4.60 | 4.81 | 3.54 | 21.91 | |
| 12 | 6.99 | 7.89 | 7.92 | 4.35 | 3.82 | 3.54 | 15.35 | |
| 13 | 7.76 | 4.74 | 6.01 | 5.89 | | | 12.64 | |
| | | | | | | | | |
| 1 | 3.80 | 4.68 | 7.64 | 1.82 | 4.74 | 3.55 | 2.84 | 5.18 |
| 2 | 2.79 | 2.97 | 6.96 | 1.55 | 3.52 | 2.76 | 3.54 | 2.42 |
| 3 | 2.49 | 2.38 | 7.72 | 1.22 | 2.98 | 2.37 | 3.38 | 2.62 |
| 4 | 2.54 | 2.53 | 5.76 | 1.12 | 3.22 | 2.31 | 3.19 | 2.86 |
| 5 | 2.08 | 2.10 | 4.94 | 1.21 | 3.10 | 1.93 | 2.46 | 1.69 |
| 6 | 1.86 | 2.00 | 4.41 | 1.11 | 2.28 | 1.50 | 2.66 | 1.61 |
| 7 | 1.63 | 2.06 | 3.70 | 1.57 | 1.67 | 1.24 | 1.80 | 1.44 |
| 8 | 1.37 | 2.01 | 3.27 | 0.73 | 1.66 | 1.11 | 1.69 | 1.00 |
| 9 | 1.14 | 1.27 | 2.03 | 0.75 | 1.33 | 1.07 | 1.43 | 1.00 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.91 | 0.99 | 1.25 | 0.57 | 0.90 | 0.85 | 1.25 | |
| 12 | 0.88 | 1.43 | 0.80 | 0.54 | 0.72 | 0.85 | 0.88 | |
| 13 | 0.77 | 0.86 | 0.61 | 0.73 | | | 0.72 | |

1) LE-13H is omitted from the averages because values are anomalously high. See text for additional explanation.

Table 13. Decadal organic matter sedimentation rates (OMSR) in mg $cm^{-2}$ $yr^{-1}$ for Lake Eustis historic cores by years since core collection. OMSR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in OMSR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LE-13H[1].

| | Avg[1] | LE-11H | LE-13H | LE-16H | LE-28H | LE-29H | LE- 3H-98 | LE-27H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 16.45 | 18.81 | 50.79 | 10.15 | 17.87 | 9.04 | 29.53 | 13.30 |
| 2 | 12.88 | 11.22 | 40.71 | 8.50 | 12.98 | 6.50 | 32.34 | 5.71 |
| 3 | 12.45 | 8.29 | 45.18 | 6.60 | 10.91 | 4.69 | 38.17 | 6.03 |
| 4 | 12.13 | 8.61 | 35.12 | 5.97 | 11.82 | 5.45 | 34.51 | 6.40 |
| 5 | 10.16 | 7.29 | 31.72 | 6.49 | 11.14 | 4.98 | 27.20 | 3.85 |
| 6 | 9.74 | 6.83 | 28.80 | 6.15 | 8.14 | 3.86 | 29.81 | 3.67 |
| 7 | 8.23 | 7.37 | 23.78 | 8.69 | 5.90 | 3.05 | 21.11 | 3.26 |
| 8 | 6.96 | 7.42 | 20.99 | 4.00 | 6.00 | 2.33 | 19.81 | 2.21 |
| 9 | 5.81 | 4.72 | 13.43 | 4.09 | 4.83 | 2.05 | 16.97 | 2.21 |
| 10 | 4.76 | 3.57 | 6.80 | 5.50 | 3.58 | 1.91 | 11.77 | 2.21 |
| 11 | 5.10 | 3.49 | 8.38 | 3.00 | 3.21 | 1.62 | 14.19 | |
| 12 | 4.40 | 5.09 | 5.18 | 2.82 | 2.54 | 1.62 | 9.92 | |
| 13 | 5.01 | 3.14 | 3.84 | 3.62 | | | 8.28 | |
| | | | | | | | | |
| 1 | 4.23 | 5.27 | 7.46 | 1.85 | 4.99 | 4.72 | 2.51 | 6.02 |
| 2 | 2.84 | 3.14 | 5.98 | 1.55 | 3.62 | 3.39 | 2.75 | 2.59 |
| 3 | 2.50 | 2.32 | 6.64 | 1.20 | 3.04 | 2.45 | 3.24 | 2.73 |
| 4 | 2.58 | 2.41 | 5.16 | 1.09 | 3.30 | 2.84 | 2.93 | 2.90 |
| 5 | 2.17 | 2.04 | 4.66 | 1.18 | 3.11 | 2.60 | 2.31 | 1.74 |
| 6 | 1.92 | 1.91 | 4.23 | 1.12 | 2.27 | 2.02 | 2.53 | 1.66 |
| 7 | 1.69 | 2.06 | 3.50 | 1.58 | 1.65 | 1.59 | 1.79 | 1.47 |
| 8 | 1.40 | 2.08 | 3.08 | 0.73 | 1.67 | 1.22 | 1.68 | 1.00 |
| 9 | 1.15 | 1.32 | 1.97 | 0.74 | 1.35 | 1.07 | 1.44 | 1.00 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.89 | 0.98 | 1.23 | 0.55 | 0.90 | 0.85 | 1.21 | |
| 12 | 0.87 | 1.42 | 0.76 | 0.51 | 0.71 | 0.85 | 0.84 | |
| 13 | 0.75 | 0.88 | 0.56 | 0.66 | | | 0.70 | |

1) LE-13H is omitted from the averages because values are anomalously high. See text for additional explanation.

(91-100 yr since core collection) ranged from 1.85 to 6.02 with an average of 4.23. Relative increases in average OMSR per decade were comparable to those for MSR with the exception of the most recent decade. Average OMSR for the most recent decade was 4.23 which was greater than the average MSR of 3.80 (Table 12). The greater relative increase in OMSR in the most recent decade is a result of higher organic matter content in recent sediments.

### Stratigraphy of NAIP and TP

The time dependence of changes in phosphorus concentration were obtained by plotting NAIP and TP concentration vs. date for the seven historic cores (Fig. 30). The redundancy in sampling is evident for stations LE-13H and LE-28H where many samples of fairly uniform TP concentration represented an age of approximately 10 yr, or 7 sediment sections (Appendix J). This redundancy in sampling was found to a lesser extent for LE-11H where dates since 1980 were represented by 8 sections. NAIP and TP concentration increased upcore at all stations; but other than larger concentrations after 1950 no pattern was obvious. The change in concentration was least at LE-27H-98, the station with the smallest MSR. In addition, poor temporal resolution precluded determining changes in concentration with time at this low sedimentation site where effects of sediment mixing would be greater than at higher sedimentation sites.

### NAIP and TP Accumulation Rate

Time-dependent relative increases in phosphorus accumulation rate (Fig. 31) in $^{210}$Pb dated cores were greater than relative increases in phosphorus concentration (Fig. 30), because phosphorus accumulation rates over time were determined by the product of MSR and NAIP or TP concentration which increase upcore. The largest rates of NAIP and TP accumulation were found in cores with high sedimentation rates (LE-11H, LE-13H, LE-28H and LE-3H-98) and lower rates of TP and NAIP accumulation were found in the cores with low sedimentation rates (LE-16H, LE-29H and LE-27H-98). Maximum accumulation rates ranged from approximately 90 $\mu$g TP cm$^{-2}$ yr$^{-1}$ for LE-13H to 15 $\mu$g TP cm$^{-2}$ yr$^{-1}$ for LE-16H and LE-27H-98. The greatest increase in rates in all cores occurred after 1950 with smaller increases from 1900 to 1950.

Phosphorus accumulation rates increased sharply after 1950 in all historic cores with at least a 3-fold relative increase at most stations (Fig. 31). A small increase in TP accumulation rate was found in the 1930s or 1940s in all cores. These patterns cannot be resolved in the core with the lowest sedimentation rate (LE-27H-98). It should be noted that stations or areas of the lake with low sedimentation rates are not important in determining historic, basin-wide sedimentation of nutrients because nutrient storage at these sites is low (Appendix H).

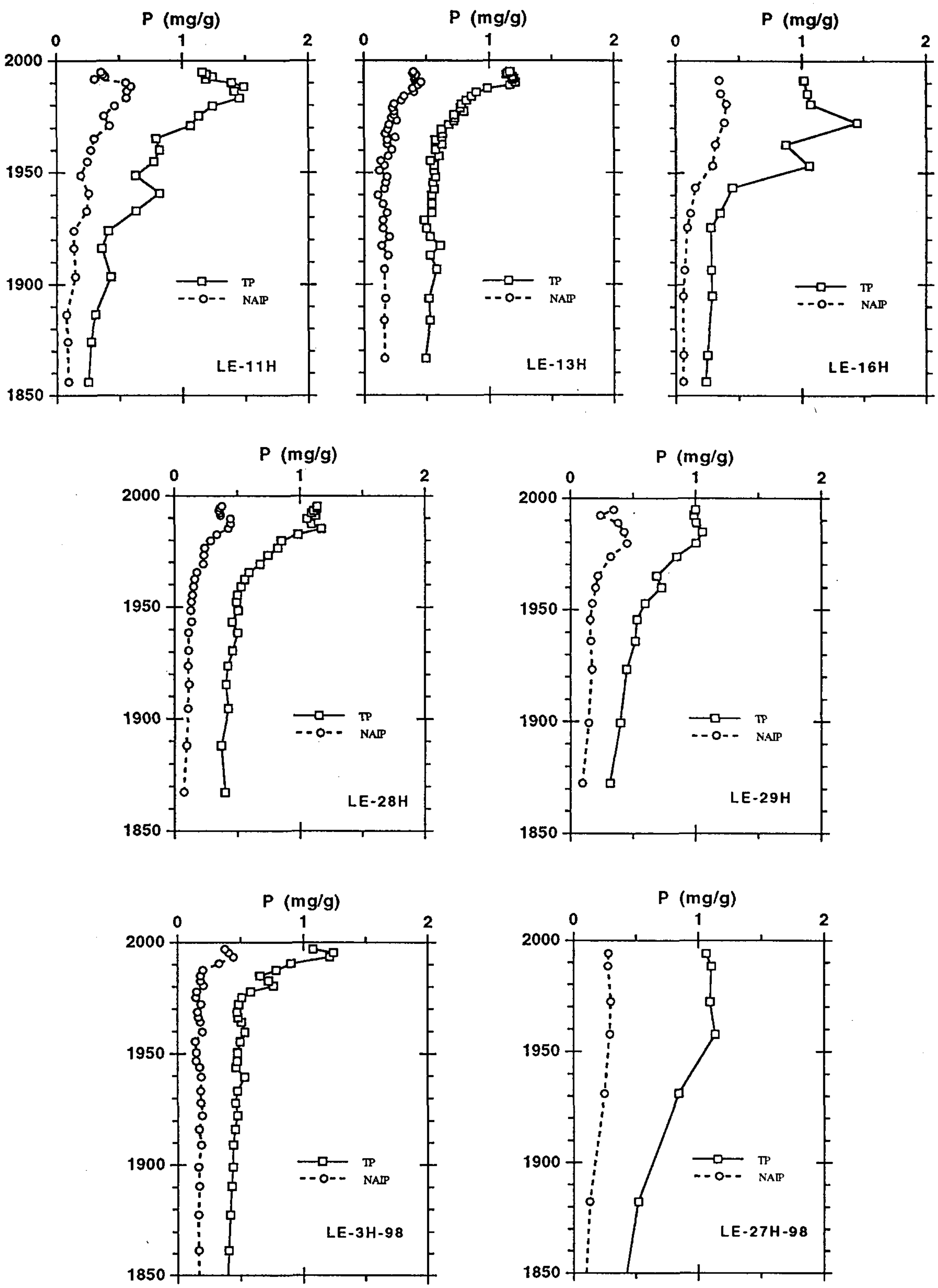


Fig. 30. NAIP and TP concentration plotted vs. sediment date for historic cores LE-11H, LE-13H, LE-16H, LE-28H, LE-29H, LE-3H-98, and LE-27H-98.

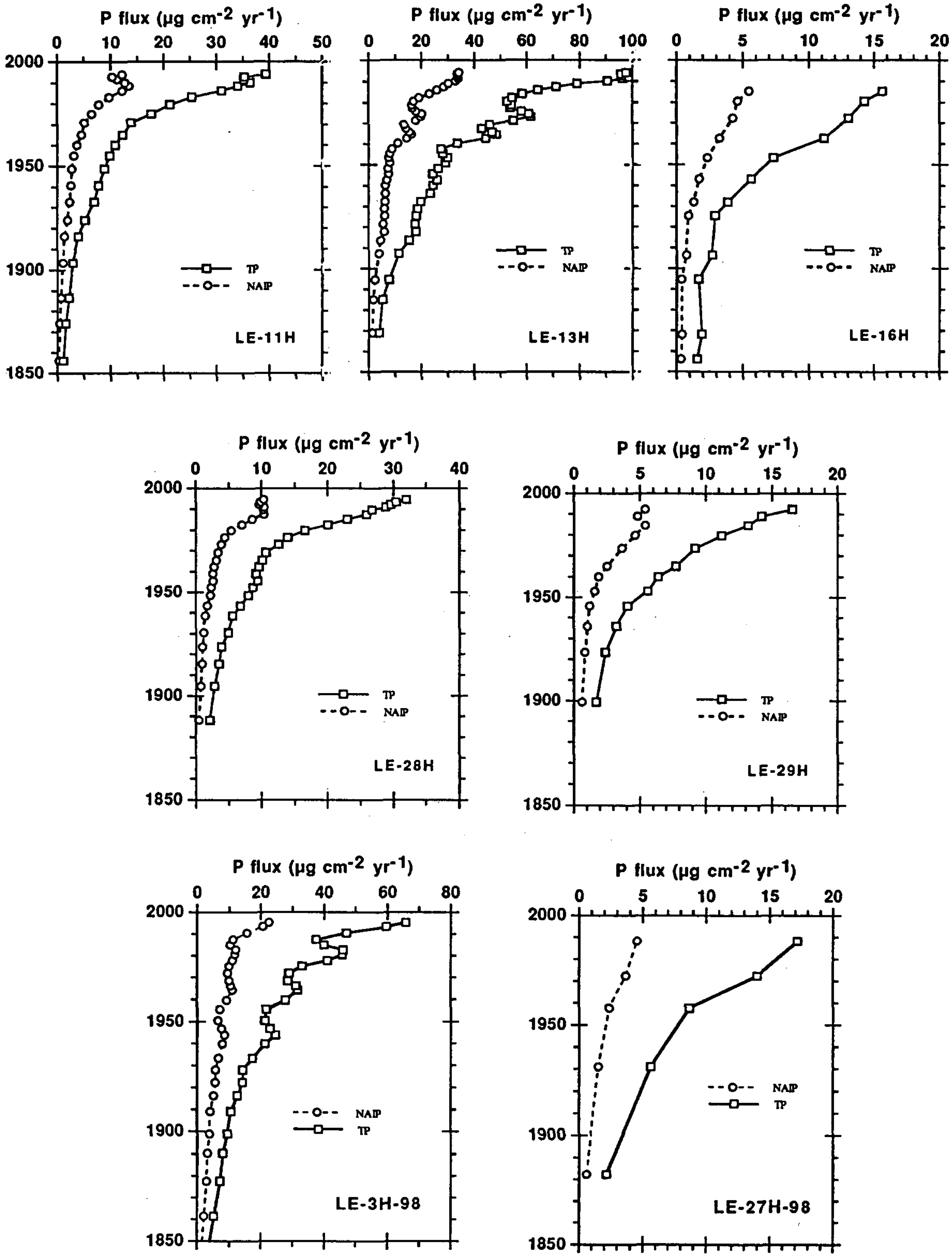


Fig. 31. NAIP and TP accumulation rate plotted vs. sediment date for historic cores LE-11H, LE-13H, LE-16H, LE-28H, LE-29H, LE-3H-98, and LE-27H-98. Data plotted are smoothed using a three-point running average.

Decadal TP accumulation rates (TPAR) were calculated as a means of equally weighting the large near-surface TP accumulation rates so relative increases in TPAR could be calculated for each core. Decadal TPAR for the most recent decade, excluding LE-13H, ranged from 15.0 to 51.5 $\mu g\ cm^{-2}\ yr^{-1}$ with a mean of 27.5 $\mu g\ cm^{-2}\ yr^{-1}$ (Table 14). Decadal TPAR for the most recent decade ranged from 28.2 to 51.5 $\mu g\ cm^{-2}\ yr^{-1}$ in the three cores with the highest TPAR and from 15.0 to 20.8 $\mu g\ cm^{-2}\ yr^{-1}$ in the three cores with the lowest TPAR. Relative increases in TPAR for the most recent decade compared to the 10th decade (91-100 yr since core collection) ranged from 6.54 to 18.3 with a mean of 11.0. Average relative increase in decadal TPAR in the most recent decade was 50.3% compared to the preceding decade. Another large average relative increase of 49.5% was found by comparing the 4th decade (31-40 yr since core collection) to the 5th decade (41-50 yr since core collection).

Average relative increases for decadal NAIPAR were similar to those for decadal TPAR, but the relative increase for NAIPAR was greater for every decade (Table 15). The average relative increase in decadal NAIPAR for the most recent decade compared to the 10th decade (91-100 yr since core collection) was 13.2, greater than the average relative increase of 11.0 for TPAR (Table 14). Average relative increase in decadal NAIPAR in the most recent decade was 50.3% compared to the preceding decade, equal to the 50.3% average relative increase for decadal TPAR. The relative increase for the 4th decade (31-40 yr since core collection) compared to the 5th decade (41-50 yr since core collection) also was essentially the same for NAIPAR and TPAR, 49.6% and 49.5%, respectively.

Three of the historic cores, LE-16H, LE-28H and LE-29H, were located in the area of the lake where the TP concentration of surface sediments is low (Fig. 25). This fact and the relatively small depth range of high TP concentration for LE-16H and LE-29H (Figs. 32 and 33) indicate that the site selection for historic cores may have biased the data toward sites with low sedimentation rate. Even with this possible bias, the rate of TP accumulation at stations in Lake Eustis was low compared to those in Lake Dora (see Tables 4 and 14) because of the much lower TP concentration in Lake Eustis sediments (see Tables 1 and 10).

### Stratigraphy of TC/TN and % Dry Weight

The stratigraphy of NAIP and TP concentration in the seven historic cores was compared with the stratigraphy of TC/TN and % dry weight to determine if the downcore increase in TC/TN or % dry weight was stratigraphically correlated with upcore variability in NAIP or TP concentration (Figs. 32-34). An increase in TP concentration, and possibly NAIP concentration, from the baseline appeared to be correlated stratigraphically with an inflection point in the TC/TN profile in some cores, but the discontinuity was deeper than 1850 and therefore could not be dated. Time-dependent changes in phosphorus concentration (Fig. 30),

Table 14. Decadal total phosphorus accumulation rates (TPAR) in $\mu g\ cm^{-2}\ yr^{-1}$ for Lake Eustis historic cores by years since core collection. TPAR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in TPAR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LE-13H[1].

| | Avg[1] | LE-11H | LE-13H | LE-16H | LE-28H | LE-29H | LE- 3H-98 | LE-27H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 27.48 | 34.36 | 83.15 | 15.11 | 28.15 | 14.96 | 51.50 | 20.78 |
| 2 | 19.46 | 20.50 | 54.29 | 15.50 | 17.10 | 11.01 | 42.89 | 9.79 |
| 3 | 13.39 | 12.06 | 50.27 | 10.43 | 10.71 | 7.19 | 29.16 | 10.77 |
| 4 | 12.73 | 11.15 | 33.13 | 9.09 | 9.20 | 6.51 | 28.40 | 12.02 |
| 5 | 8.72 | 8.04 | 27.39 | 5.56 | 8.11 | 4.44 | 20.67 | 5.51 |
| 6 | 8.07 | 7.92 | 23.79 | 3.34 | 5.87 | 3.22 | 22.99 | 5.04 |
| 7 | 5.69 | 5.32 | 18.53 | 3.73 | 3.95 | 2.31 | 14.66 | 4.15 |
| 8 | 4.50 | 4.13 | 18.05 | 1.66 | 3.67 | 1.92 | 13.72 | 1.91 |
| 9 | 3.74 | 3.03 | 11.20 | 1.70 | 3.02 | 1.77 | 11.04 | 1.91 |
| 10 | 2.88 | 1.87 | 5.15 | 2.31 | 2.03 | 1.57 | 7.61 | 1.91 |
| 11 | 3.00 | 1.65 | 6.53 | 1.17 | 1.80 | 1.12 | 9.27 | |
| 12 | 2.45 | 2.15 | 3.90 | 1.08 | 1.53 | 1.12 | 6.35 | |
| 13 | 2.58 | 1.22 | 2.93 | 1.43 | | | 5.09 | |
| | | | | | | | | |
| 1 | 10.99 | 18.33 | 16.15 | 6.54 | 13.84 | 9.56 | 6.77 | 10.88 |
| 2 | 7.31 | 10.93 | 10.54 | 6.71 | 8.41 | 7.03 | 5.64 | 5.13 |
| 3 | 5.05 | 6.43 | 9.76 | 4.51 | 5.27 | 4.59 | 3.83 | 5.64 |
| 4 | 4.77 | 5.95 | 6.43 | 3.94 | 4.52 | 4.16 | 3.73 | 6.30 |
| 5 | 3.19 | 4.29 | 5.32 | 2.41 | 3.99 | 2.83 | 2.72 | 2.89 |
| 6 | 2.71 | 4.23 | 4.62 | 1.45 | 2.89 | 2.06 | 3.02 | 2.64 |
| 7 | 2.00 | 2.84 | 3.60 | 1.61 | 1.94 | 1.48 | 1.93 | 2.17 |
| 8 | 1.46 | 2.20 | 3.51 | 0.72 | 1.80 | 1.23 | 1.80 | 1.00 |
| 9 | 1.24 | 1.62 | 2.18 | 0.74 | 1.49 | 1.13 | 1.45 | 1.00 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.84 | 0.88 | 1.27 | 0.51 | 0.88 | 0.72 | 1.22 | |
| 12 | 0.78 | 1.15 | 0.76 | 0.47 | 0.75 | 0.72 | 0.84 | |
| 13 | 0.65 | 0.65 | 0.57 | 0.62 | | | 0.67 | |

1) LE-13H is omitted from the averages because values are anomalously high. See text for additional explanation.

Table 15. Decadal non-apatite inorganic phosphorus accumulation rates (NAIPAR) in $\mu g\ cm^{-2}\ yr^{-1}$ for Lake Eustis historic cores by years since core collection. NAIPAR (upper half) calculated from $^{210}Pb$ geochronology using a CRS model and changes in NAIPAR (bottom half) relative to the base decade (91-100 yrs) are shown for seven historic cores. Averages (Avg) by decade for both sets of data are presented for six cores excluding LE-13H[1].

| | Avg[1] | LE-11H | LE-13H | LE-16H | LE-28H | LE-29H | LE- 3H-98 | LE-27H-98 |
|---|---|---|---|---|---|---|---|---|
| 1 | 9.20 | 12.17 | 30.90 | 5.14 | 10.09 | 5.16 | 17.29 | 5.34 |
| 2 | 6.07 | 7.43 | 17.86 | 4.89 | 5.58 | 4.64 | 11.21 | 2.68 |
| 3 | 4.36 | 4.68 | 16.13 | 3.29 | 3.37 | 2.43 | 9.53 | 2.87 |
| 4 | 3.95 | 3.63 | 10.35 | 2.68 | 2.62 | 1.86 | 9.81 | 3.08 |
| 5 | 2.60 | 2.47 | 7.67 | 1.78 | 2.22 | 1.31 | 6.24 | 1.60 |
| 6 | 2.66 | 2.73 | 6.13 | 1.13 | 1.47 | 1.00 | 8.13 | 1.49 |
| 7 | 1.98 | 1.85 | 5.86 | 1.22 | 0.99 | 0.88 | 5.75 | 1.20 |
| 8 | 1.59 | 1.54 | 5.75 | 0.42 | 1.02 | 0.71 | 5.38 | 0.48 |
| 9 | 1.31 | 1.06 | 3.42 | 0.41 | 0.77 | 0.64 | 4.48 | 0.48 |
| 10 | 0.91 | 0.54 | 1.68 | 0.47 | 0.52 | 0.54 | 2.87 | 0.48 |
| 11 | 1.04 | 0.44 | 1.98 | 0.27 | 0.44 | 0.33 | 3.69 | |
| 12 | 0.80 | 0.66 | 1.27 | 0.26 | 0.28 | 0.33 | 2.47 | |
| 13 | 0.94 | 0.42 | 0.99 | 0.34 | | | 2.07 | ß |
| | | | | | | | | |
| 1 | 13.21 | 22.57 | 18.36 | 10.82 | 19.34 | 9.47 | 6.02 | 11.02 |
| 2 | 8.79 | 13.79 | 10.61 | 10.29 | 10.70 | 8.51 | 3.90 | 5.54 |
| 3 | 5.96 | 8.68 | 9.58 | 6.94 | 6.47 | 4.46 | 3.32 | 5.91 |
| 4 | 5.10 | 6.73 | 6.15 | 5.64 | 5.03 | 3.42 | 3.41 | 6.36 |
| 5 | 3.41 | 4.59 | 4.56 | 3.74 | 4.25 | 2.40 | 2.17 | 3.29 |
| 6 | 3.00 | 5.07 | 3.64 | 2.37 | 2.82 | 1.84 | 2.83 | 3.07 |
| 7 | 2.33 | 3.43 | 3.48 | 2.57 | 1.91 | 1.61 | 2.00 | 2.49 |
| 8 | 1.64 | 2.85 | 3.41 | 0.87 | 1.95 | 1.30 | 1.87 | 1.00 |
| 9 | 1.34 | 1.96 | 2.03 | 0.87 | 1.48 | 1.18 | 1.56 | 1.00 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.83 | 0.82 | 1.18 | 0.57 | 0.85 | 0.61 | 1.29 | |
| 12 | 0.75 | 1.22 | 0.75 | 0.54 | 0.54 | 0.61 | 0.86 | |
| 13 | 0.74 | 0.78 | 0.59 | 0.71 | | | 0.72 | |

1) LE-13H is omitted from the averages because values are anomalously high. See text for additional explanation.

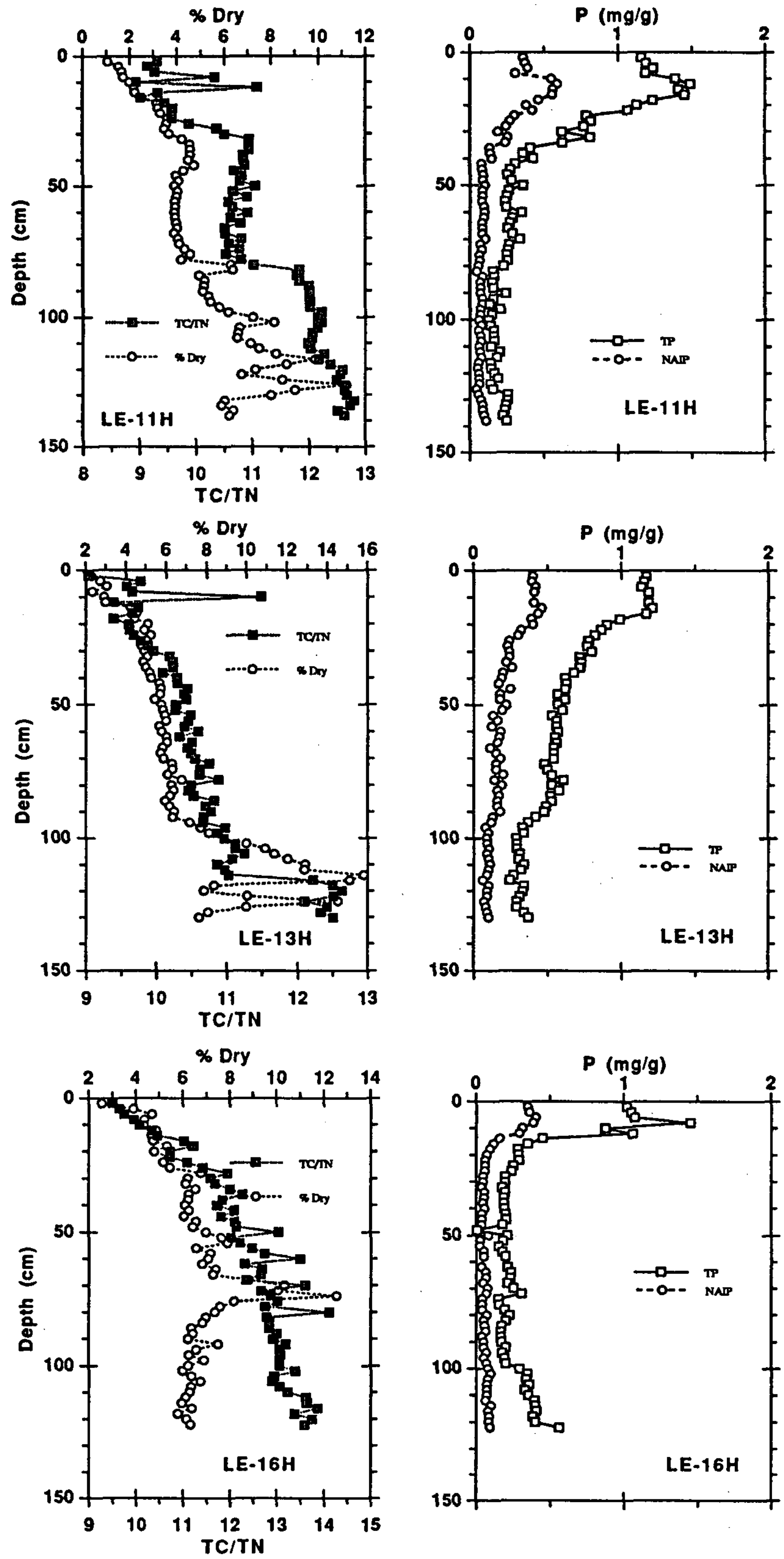


Fig. 32. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for historic cores LE-11H, LE-13H, and LE-16H.

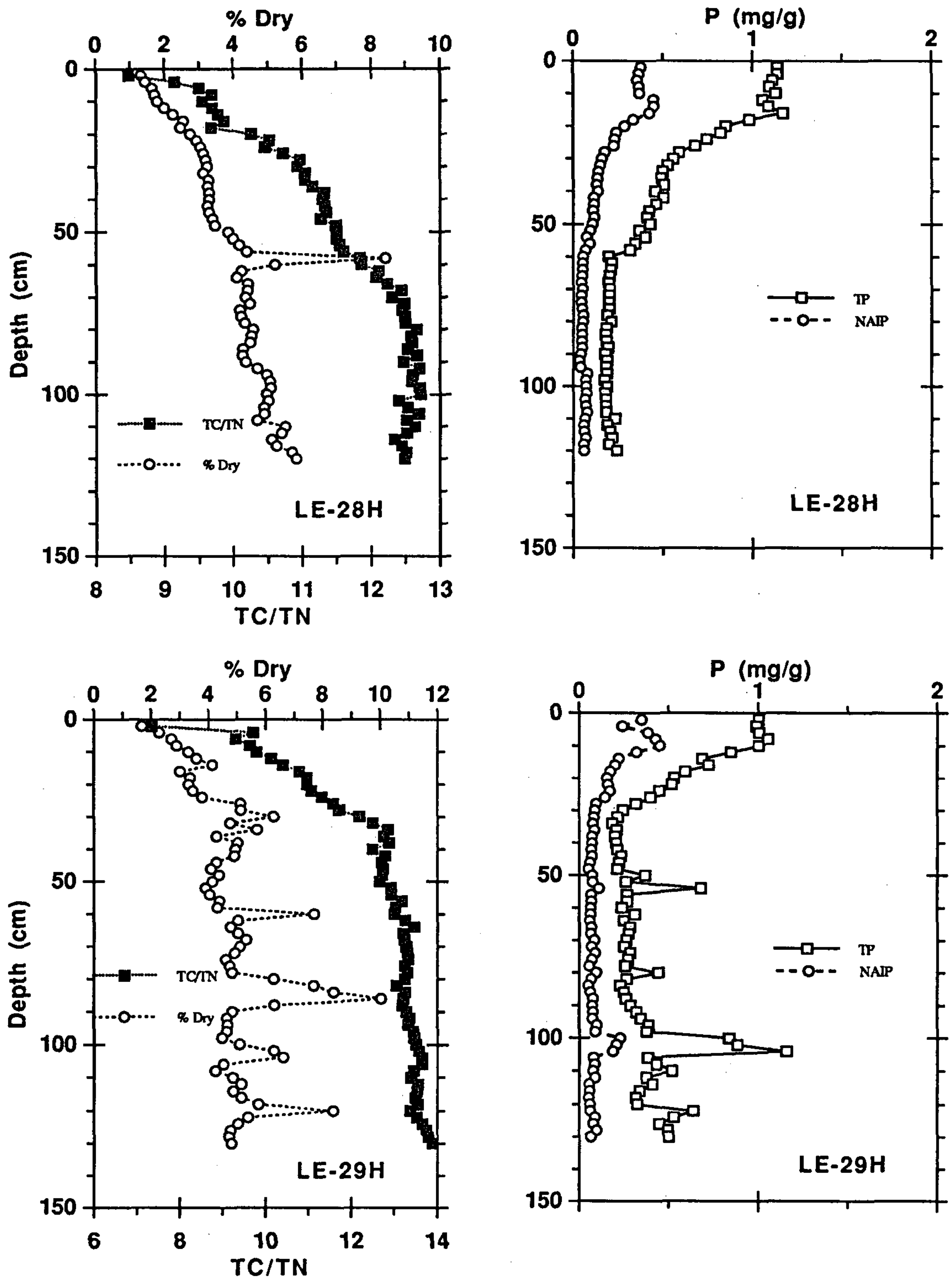


Fig. 33. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for historic cores LE-28H and LE-29H.

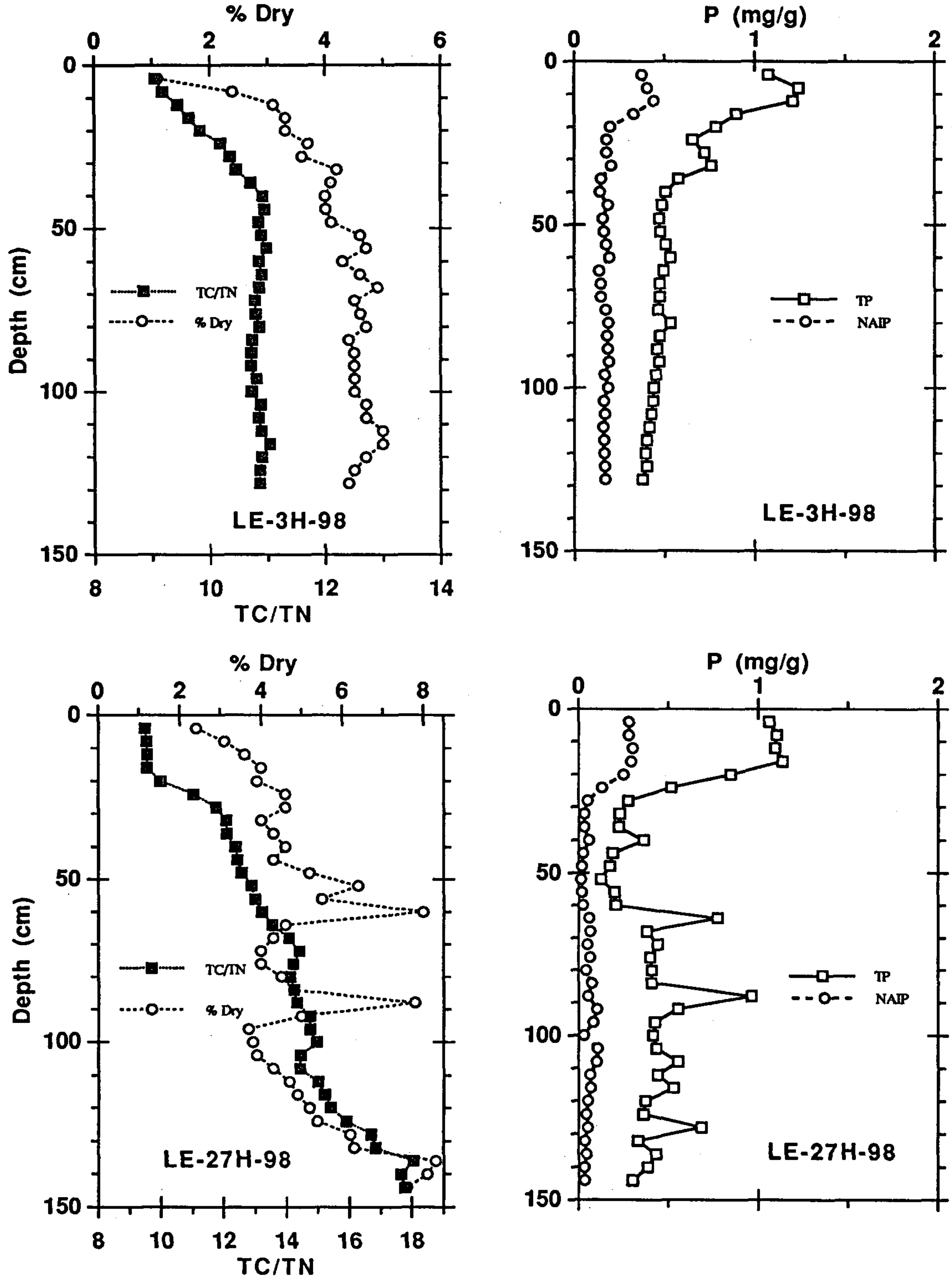


Fig. 34. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for historic cores LE-3H-98 and LE-27H-98.

that could be correlated with stratigraphic changes in TC/TN and % dry weight occurred after 1950 in some cores. Some of the sharpest discontinuities in TC/TN or TP, such as 80 cm for LE-11H, 90 cm for LE-13H, 60 cm for 28H and 34 cm for 29H occurred in sediments too old to be aged with $^{210}Pb$. Therefore, only one time horizon for TP concentration or TC/TN and % dry weight can be correlated stratigraphically across cores.

An upcore increase in TP concentration for survey cores from Phase II was correlated stratigraphically with an inflection point in the TC/TN profile (Figs. 35-42). Survey cores from Phase I could not be used to test the feasibility of stratigraphic correlation because they were truncated above the depths that could be aged with $^{210}Pb$. Data for LE-20S-97 (Fig. 42) is presented to illustrate a truncated TP profile at a low sedimentation site. The inflection point in Phase II survey cores was at a TP concentration larger than the baseline concentration and appears to be stratigraphically correlated with discontinuities in TC/TN ratio and % dry weight that occurred after 1950 in historic cores (Figs 32-34).

## Stratigraphy of Ash Fraction

The stratigraphic records of ash fraction and TP concentration were plotted vs. date for the seven historic cores (Fig. 43) to evaluate ash fraction as another proxy for stratigraphic correlation. No relationship between high TP and low ash fraction in surface sediments such as that found in Lake Dora sediments was found in Lake Eustis historic cores. Only two Lake Eustis historic cores (LE-11H and LE-13H) clearly showed this relationship, when plotted either in relation to date (Fig. 43) or depth (Fig. 44). The ash fraction in historic cores from Lake Eustis, therefore, appeared to have little utility for stratigraphic correlation, particularly to establish a time horizon.

Although a relationship between high TP and low ash fraction in surface sediments such as that found in Lake Dora sediments was not found consistently in Lake Eustis historic cores (Figs. 43 and 44), the pattern was fairly consistent in Lake Eustis survey cores from Phase II (Figs. 45-47). In fact, high TP concentration and low ash fraction were found in 20 of the 22 cores shown in Figs. 45-47. This relationship was most pronounced in cores with largest TP concentrations in surface and near-surface samples. Therefore, the set of data collected from Phase II survey cores also supports the hypothesis that the highest TP concentrations occur in sediments with high LOI or high organic matter content (low ash fraction).

## Cluster Analyses

Core sections from Phase II survey cores were separated into two groups using K-means cluster analysis of TP concentration, TC/TN and dry density (rho). The two groups

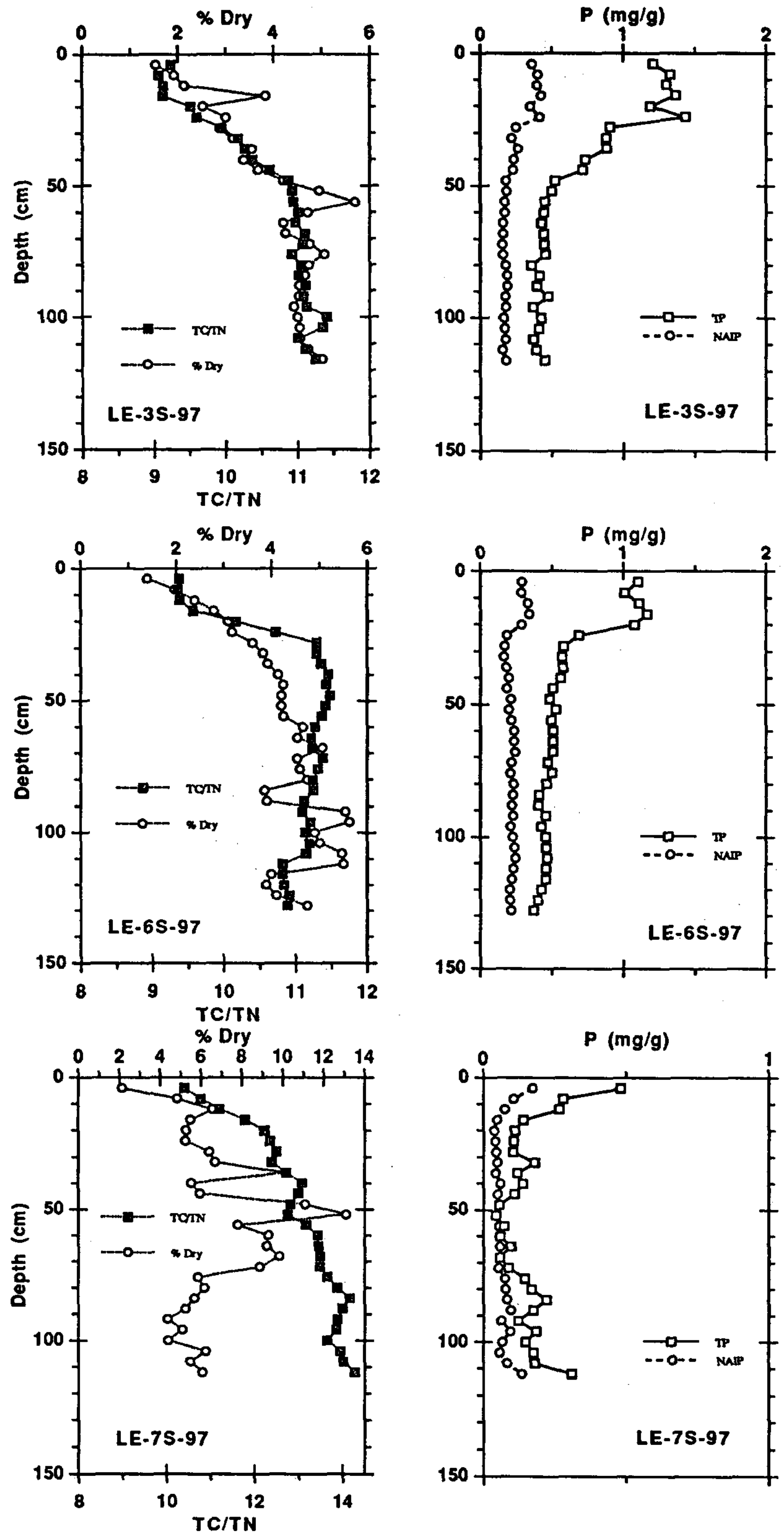


Fig. 35. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth or Lake Eustis Phase II survey cores LE-3S-97, LE-6S-97, and LE-7S-97.

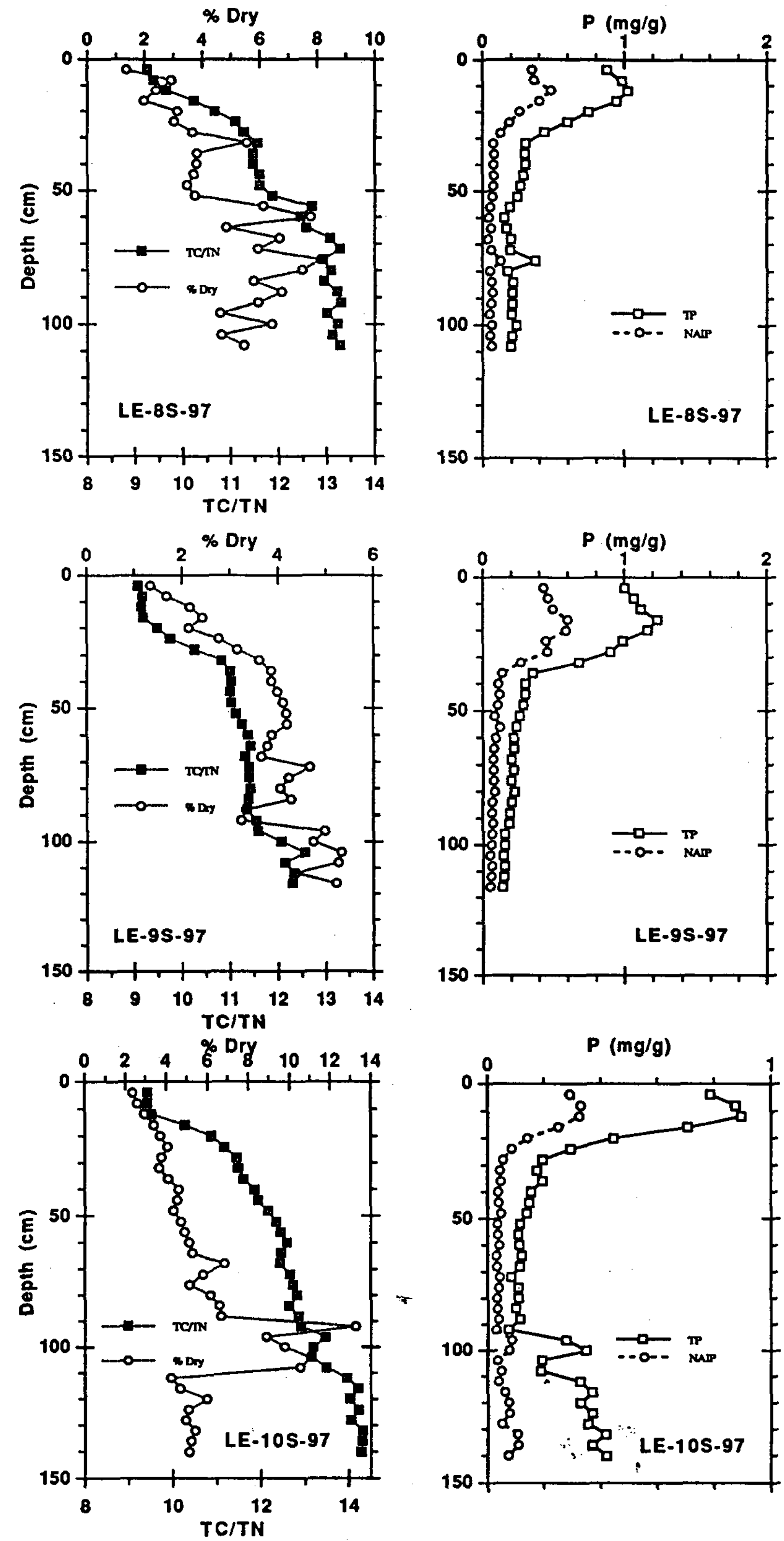


Fig. 36. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-8S-97, LE-9S-97, and LE-10S-97.

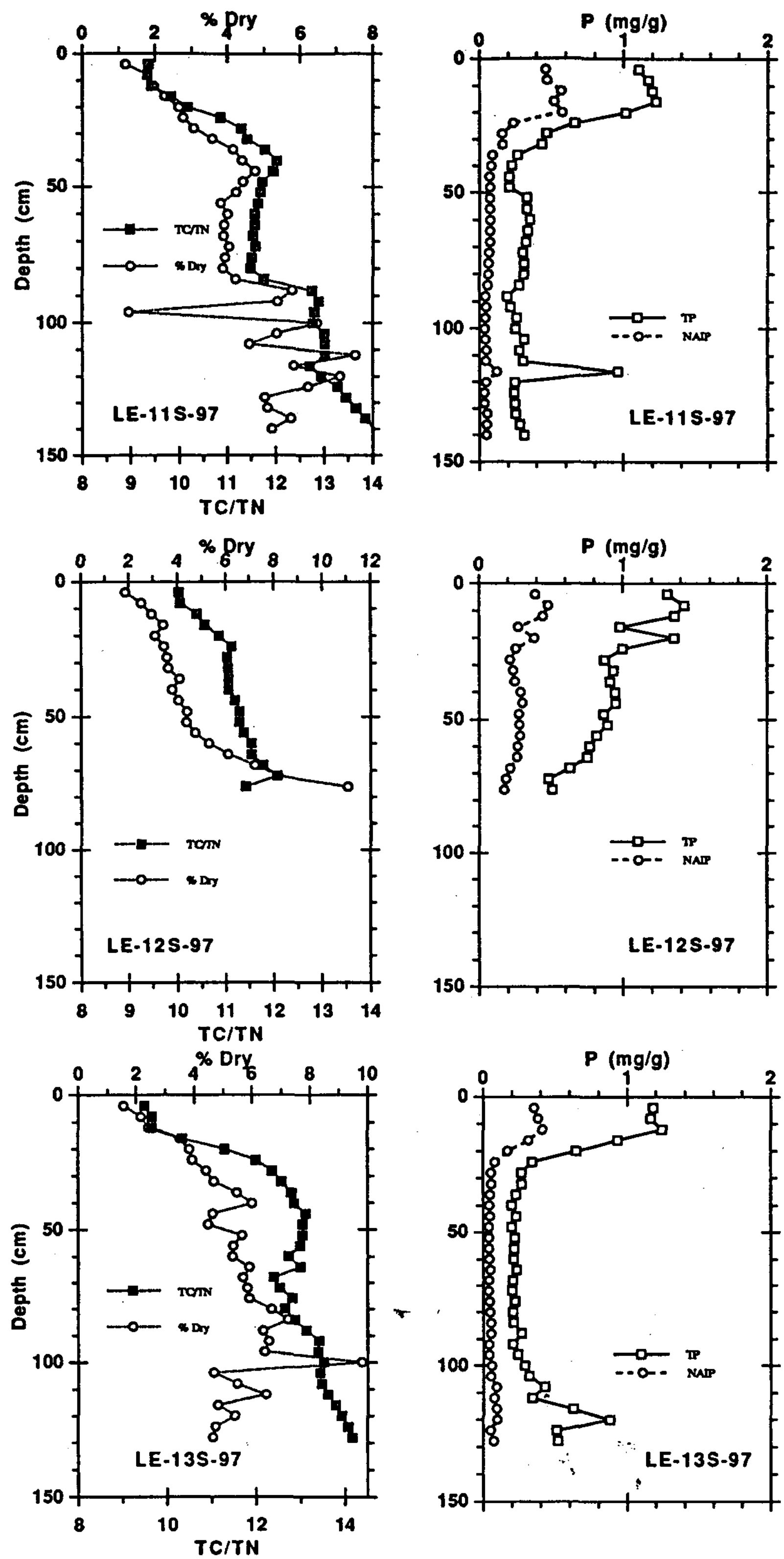


Fig. 37. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-11S-97, LE-12S-97, and LE-13S-97.

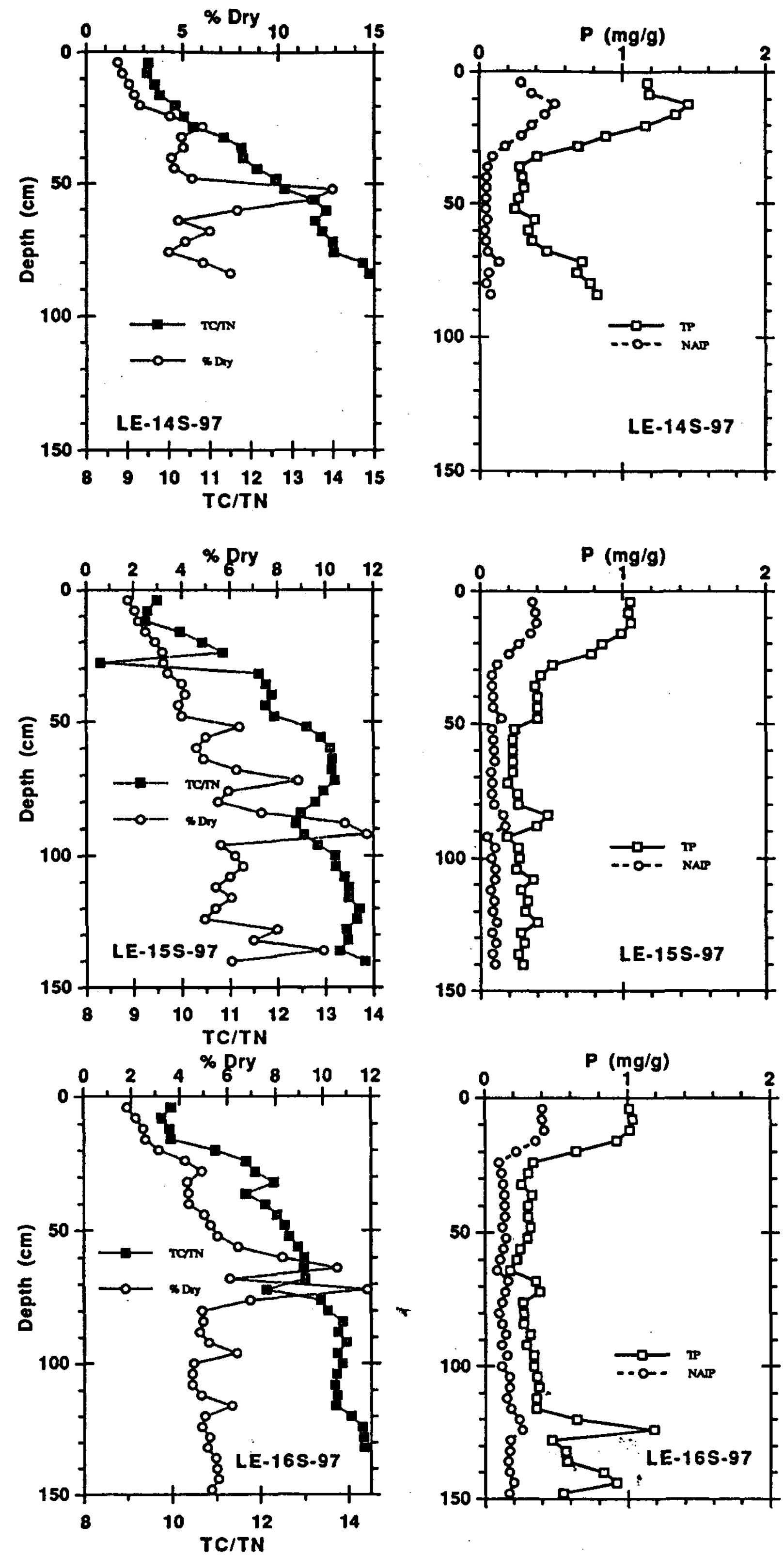


Fig. 38. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-14S-97, LE-15S-97, and LE-16S-97.

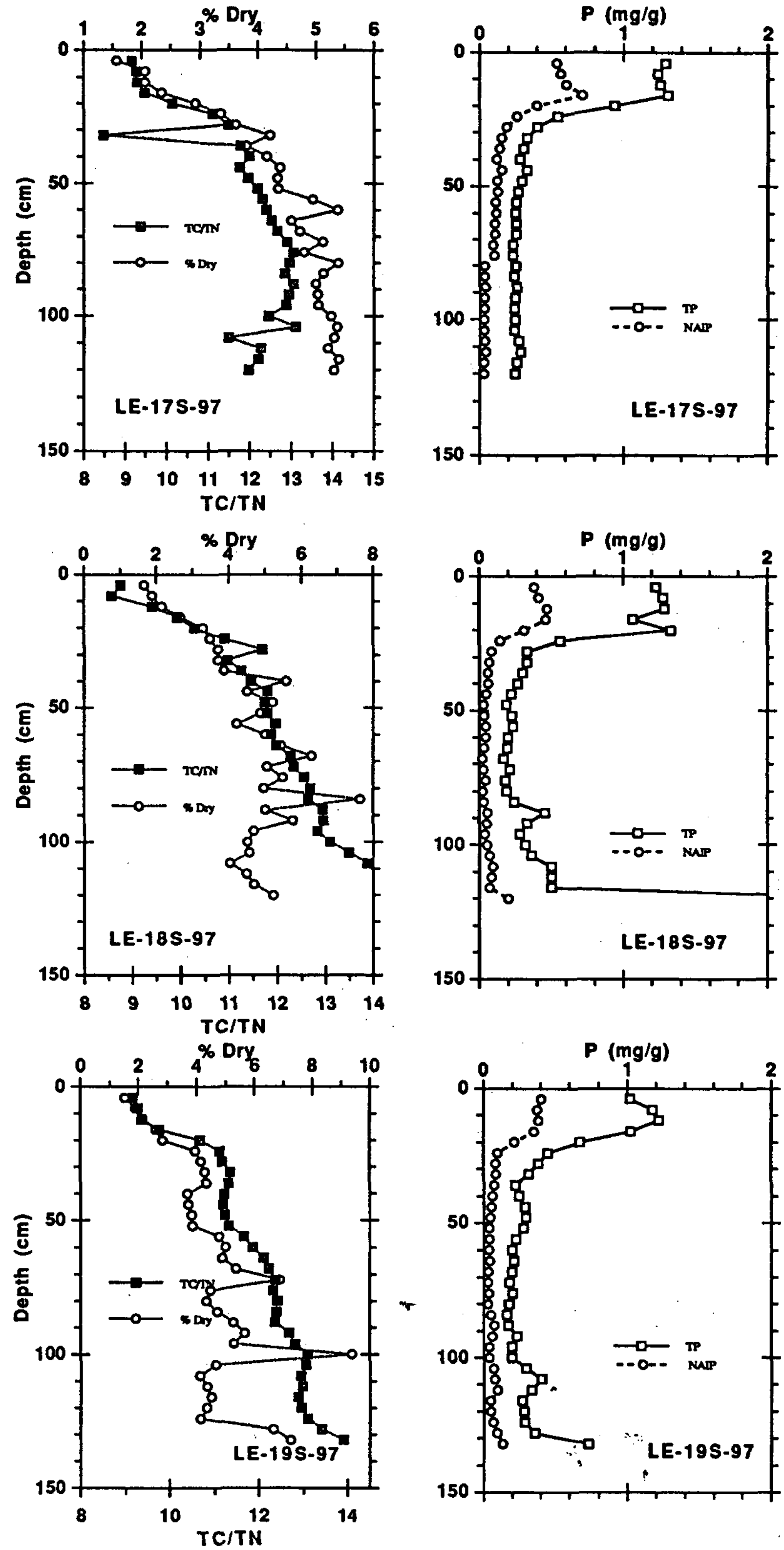


Fig. 39. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-17S-97, LE-18S-97, and LE-19S-97.

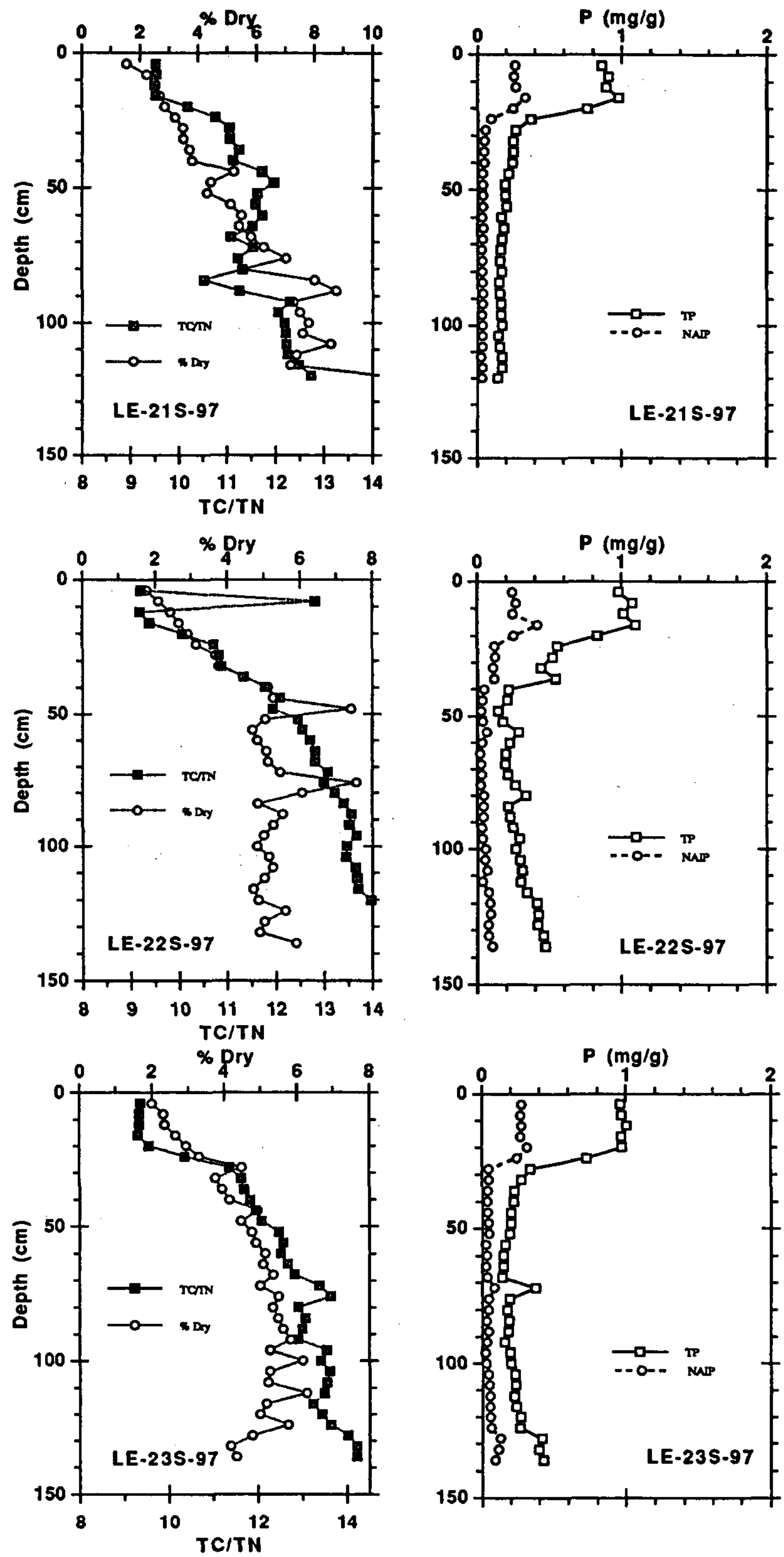


Fig. 40. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-21S-97, LE-22S-97, and LE-23S-97.

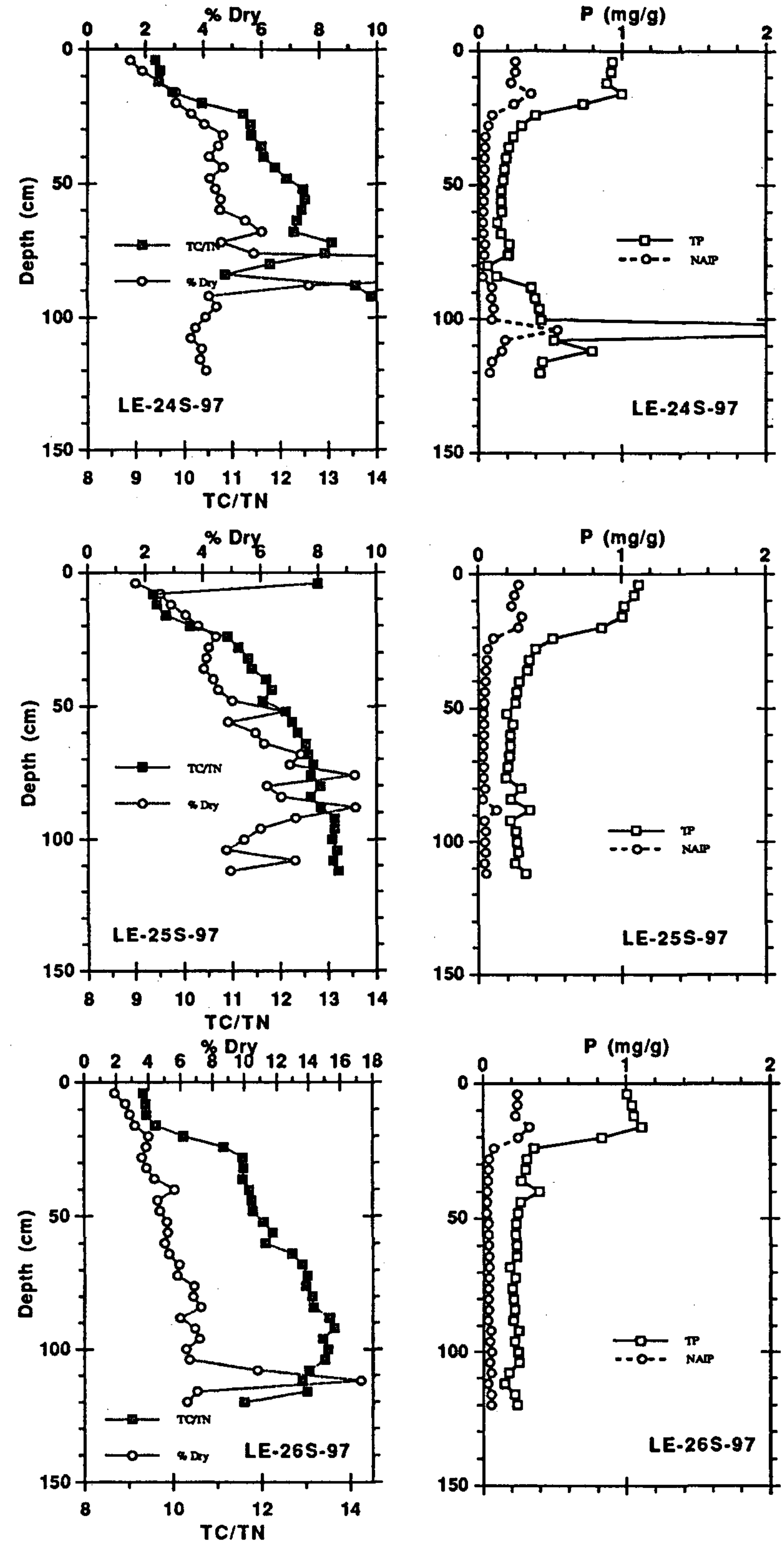


Fig. 41. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-24S-97, LE-25S-97, and LE-26S-97.

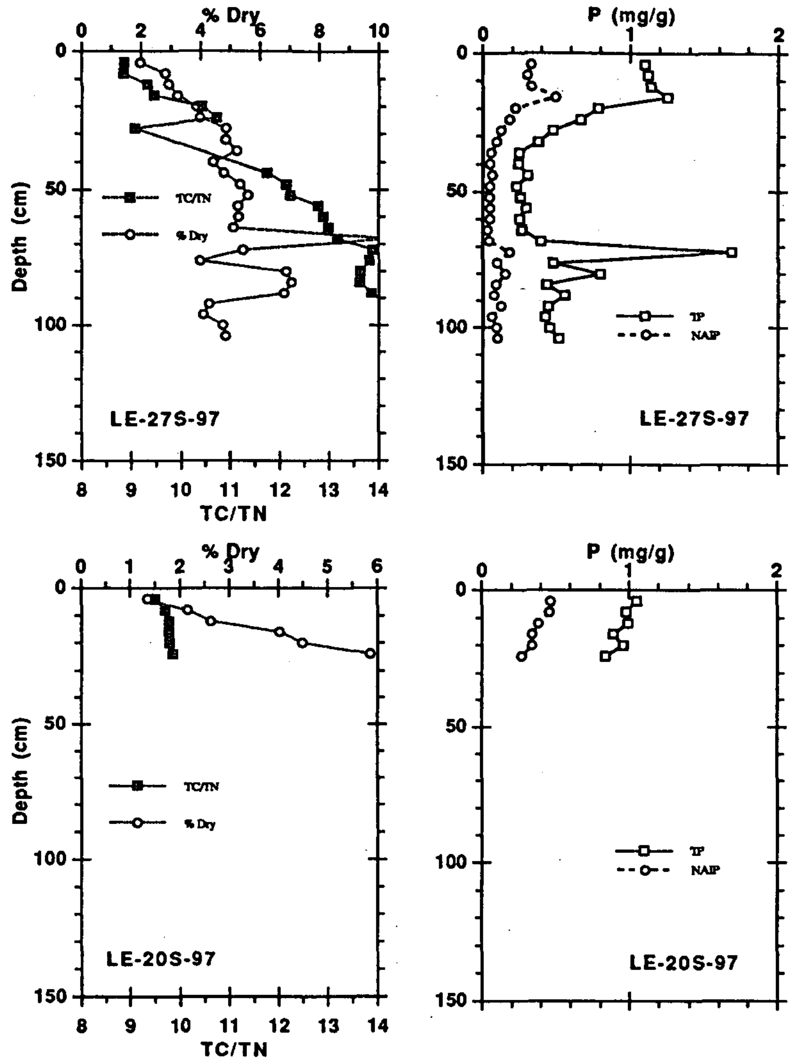


Fig. 42. TC/TN, % dry weight and NAIP and TP concentration plotted vs. core depth for Lake Eustis Phase II survey cores LE-27S-97 and LE-20S-97.

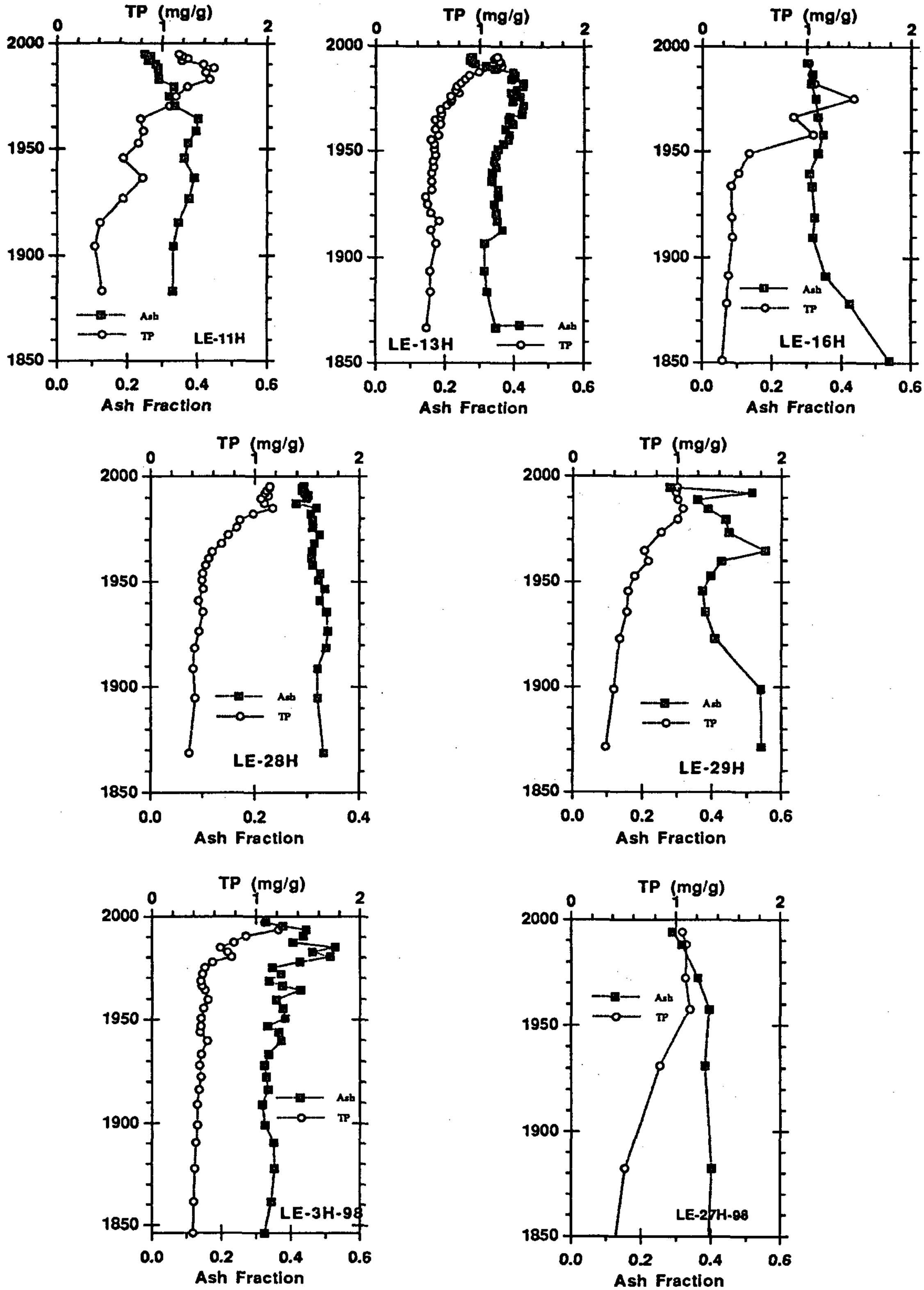


Fig. 43. Ash fraction and TP concentration plotted vs. date for Lake Eustis historic cores LE-11H, LE-13H, LE-16H, LE-28H, LE-29H, LE-3H-98, and LE-27H-98.

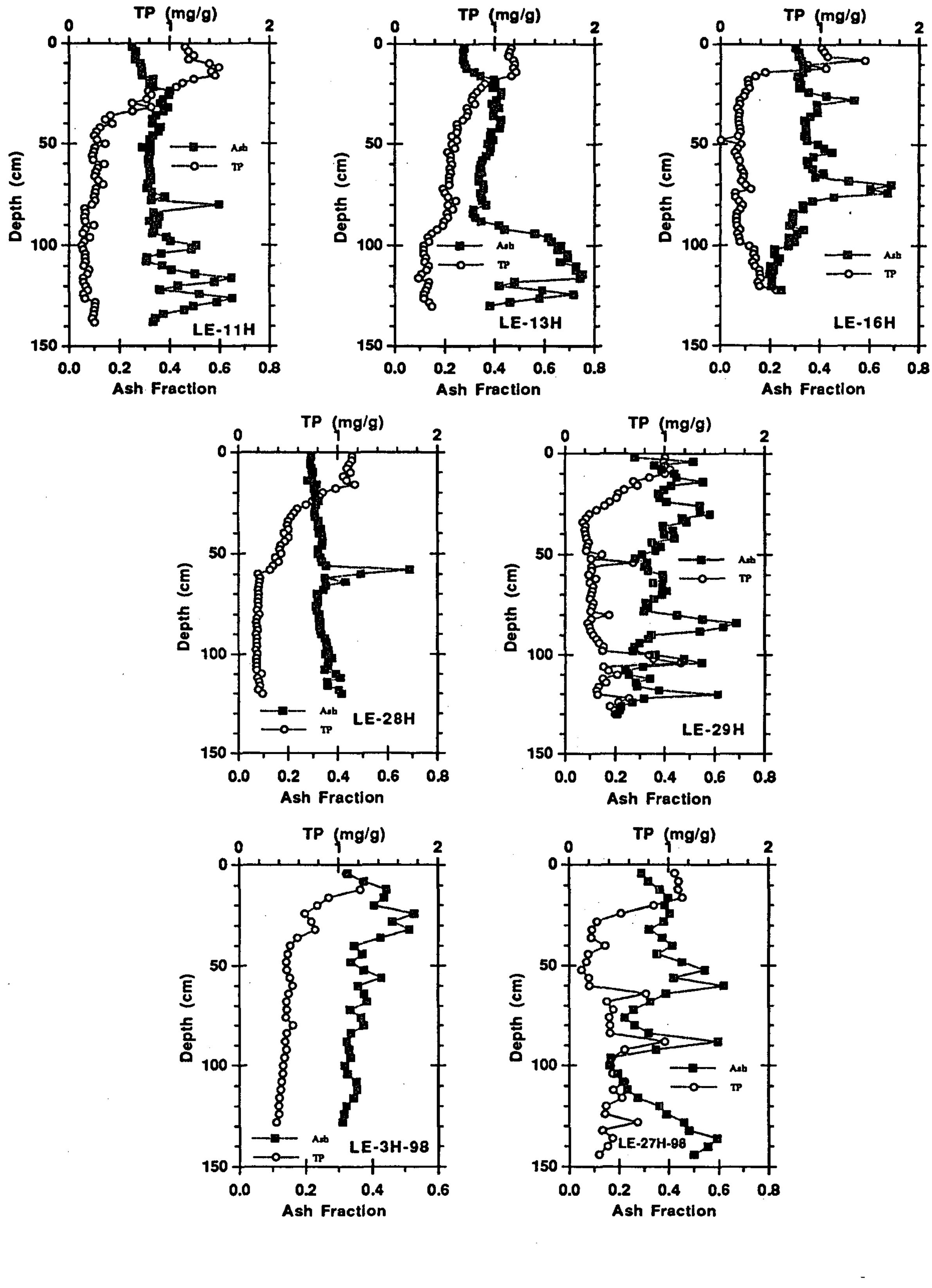


Fig. 44. Ash fraction and TP concentration plotted vs. depth for Lake Eustis historic cores LE-11H, LE-13H, LE-16H, LE-28H, LE-29H, LE-3H-98, and LE-27H-98.

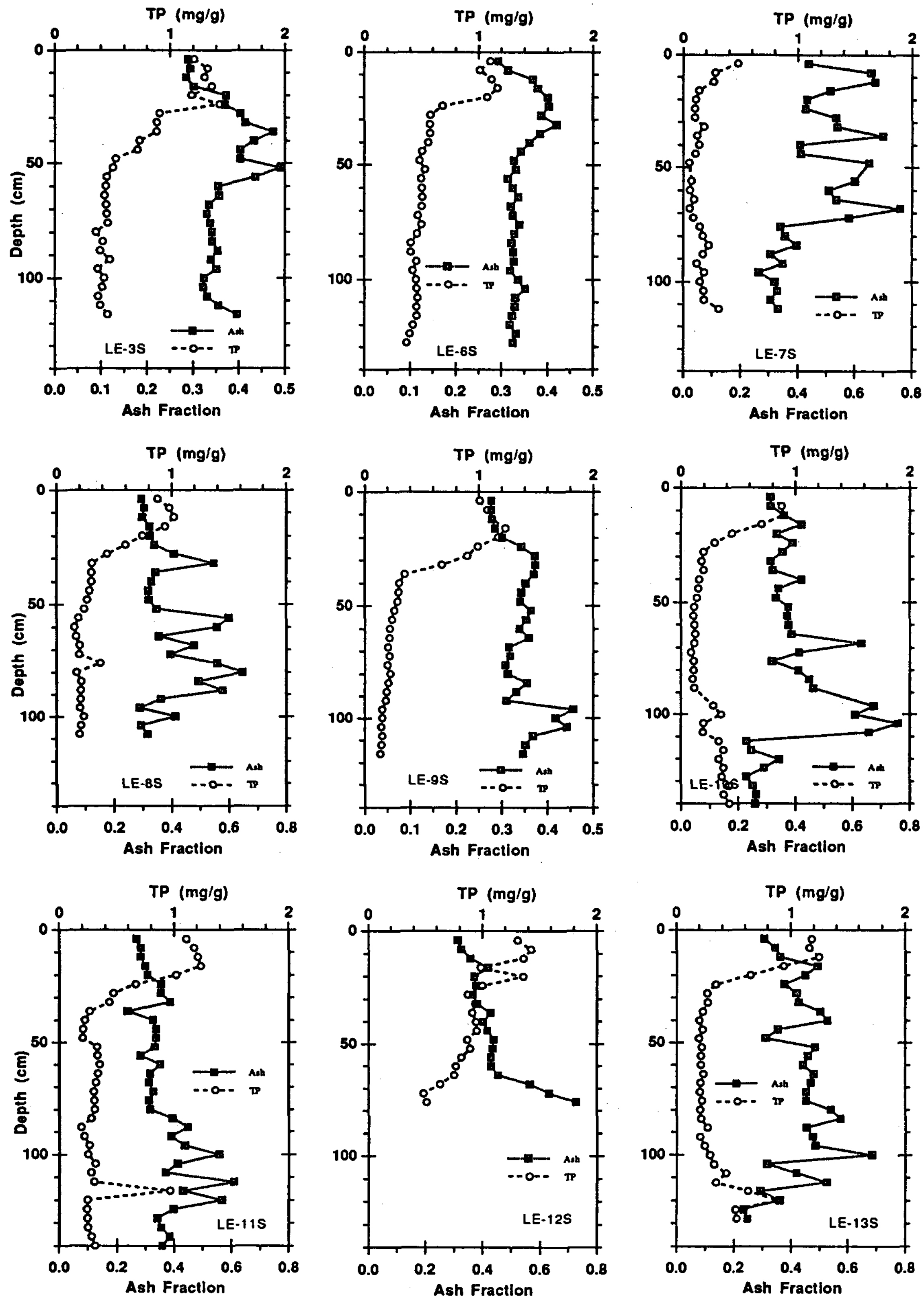


Fig. 45. Ash fraction and TP concentration plotted vs. depth for Lake Eustis survey cores LE-3S-97, LE-6S-97, LE-7S-97, LE-8S-97, LE-9S-97, LE-10S-97, LE-11S-97, LE-12S-97, and LE-13S-97.

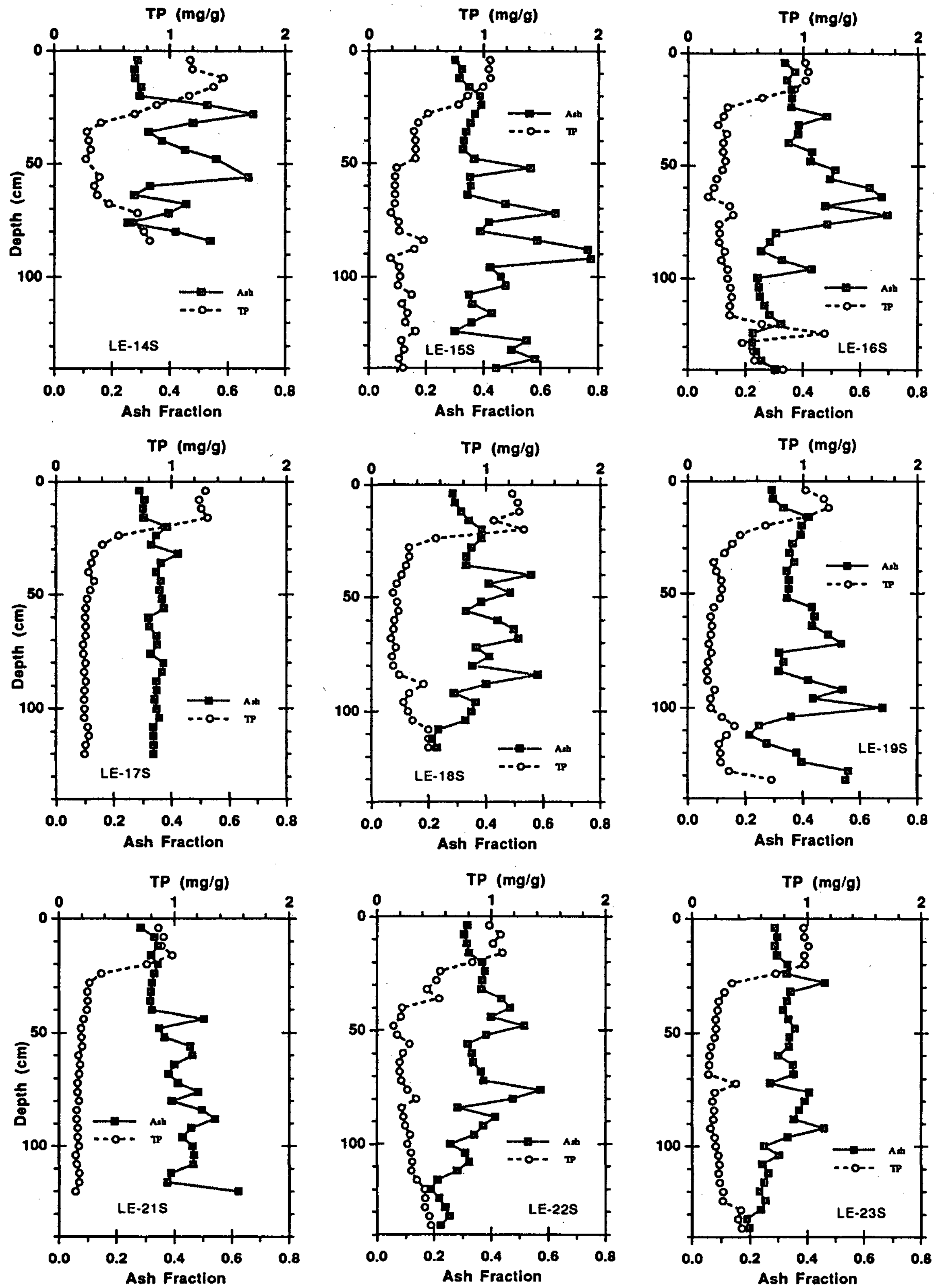


Fig. 46. Ash fraction and TP concentration plotted vs. depth for Lake Eustis survey cores LE-14S-97, LE-15S-97, LE-16S-97, LE-17S-97, LE-18S-97, LE-19S-97, LE-21S-97, LE-22S-97, and LE-23S-97.

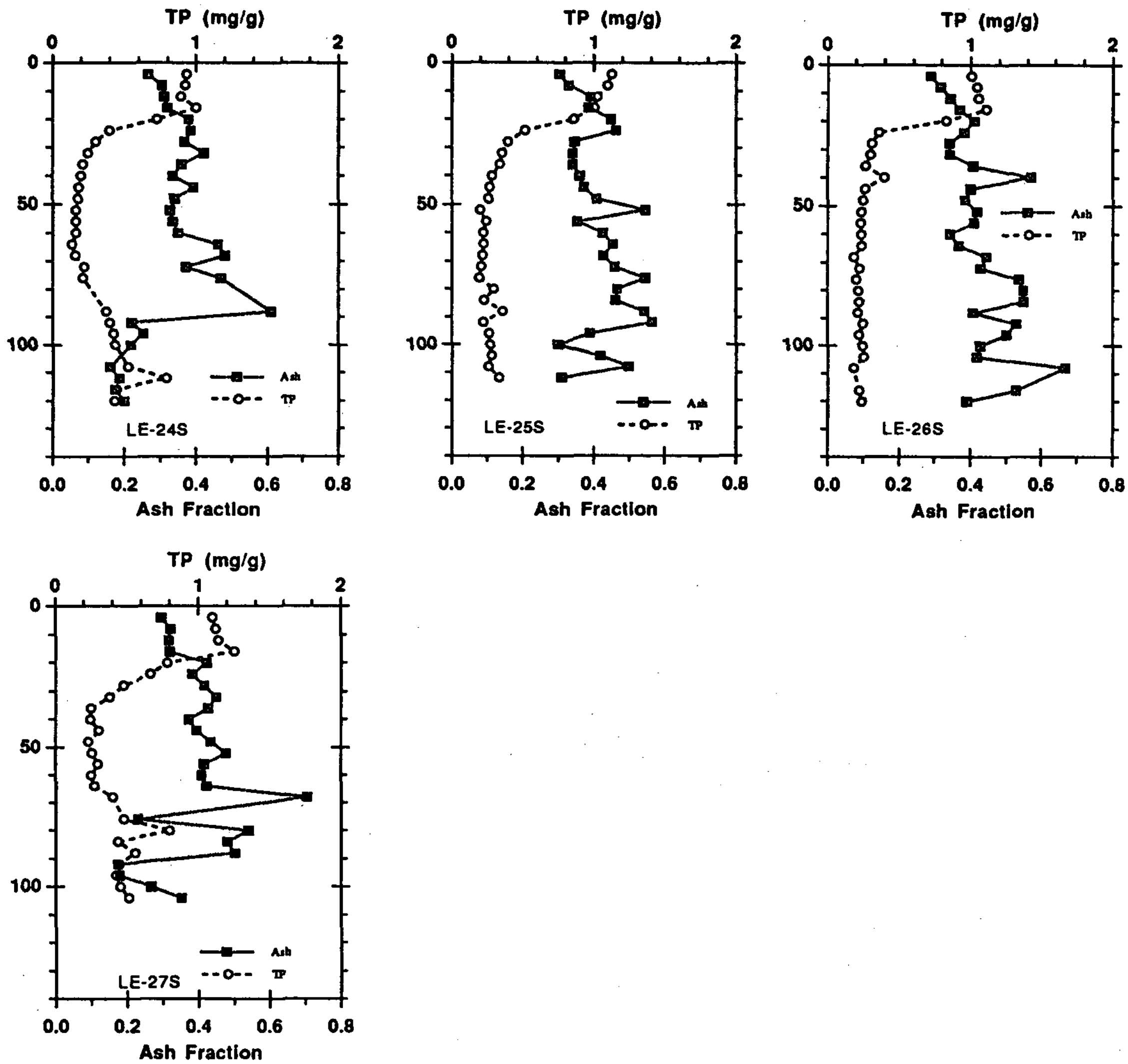


Fig. 47. Ash fraction and TP concentration plotted vs. depth for Lake Eustis survey cores LE-24S-97, LE-25S-97, LE-26S-97, and LE-27S-97.

clustered in stratigraphic sequence in each core. The shallower samples were in Group 1 and the deeper samples were in Group 2. Neither cluster analysis nor visual inspection of data provided a means of establishing another distinct stratigraphic break. Because only two groups of sediments were identified, only one stratigraphic horizon was established and only one group of data is presented in Table 16. Only one ambiguity between visually determined breaks and the cluster-analysis separation was found in that two samples at LE-12S that were clearly unconsolidated sediments based on dry density were grouped with underlying, more consolidated sediments (Table 16). In this instance, the deepest unconsolidated sample based on dry density was selected for the stratigraphic break. Means and standard deviations for each stratigraphic group are presented in Appendix M.

Identifying a group of unconsolidated sediments by cluster analysis was important because the stratigraphic features could be correlated with an age in historic cores. Similar to the historic cores for Lake Dora, the age for the stratigraphic break point in the Lake Eustis cores was variable. In Lake Eustis the date for the break point ranged from approximately 1950 to 1970. Break depths (the deepest core section) that identified the upper, stratigraphic group of samples were inspected to determine whether this separation represented a distinct break point in the TP profile for each core. The break point for TP concentration was consistent among all cores in the group with no exceptions other than the adjustment noted above for LE-12S (see Table 16). Variables associated with the maximum depth for this set of unconsolidated sediments are shown in Table 16.

### Sediment and TP Deposition

Only one stratigraphic group of samples was identified with cluster analysis of Phase II survey cores (Table 16). Although the age for the stratigraphic break point in historic cores was variable, ranging from approximately 1950 to 1970, recent ages for the break point are more realistic because these ages were found for cores with larger sedimentation rates than the cores with an older age for the break point. This result is expected because temporal resolution in high sedimentation cores generally should be better than in low sedimentation cores. Cumulative accumulation of sediment dry mass, NAIP and TP at the break point at each station (Table 16) was then used to calculate dry mass, NAIP and TP storage for the lake basin for two time periods (25 and 45 yr) since core collection (Table 17). The two time periods roughly span the dates, 1950 to 1970, for the break points in the historic cores.

Estimating total dry mass, NAIP and TP sedimentation in Lake Eustis from Phase II survey cores is confounded by the lack of stratigraphic features that can be correlated among cores. Only one such stratigraphic break was determined using K-means cluster analysis. In

Table 16. Cumulative storage by station of total dry mass, TP and NAIP for one stratigraphic group of sediments in Lake Eustis. Depth of sediments in this group determined from cluster analysis and visual examination of profiles from each station. This stratigraphic group was assigned two ages, 25 and 45 yr, to bracket the range of probable ages. See Appendix G for data and text for additional explanation.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Mass | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 44 | 3.679 | 0.037 | 59.7 | 2.77 | 29.4 | 10.61 | 1.385 | 0.23 | 0.441 | 0.72 | 1.480 |
| 4 | 12 | 3.290 | 0.033 | 52.5 | 2.57 | 24.6 | 9.55 | 0.300 | 0.44 | 0.126 | 1.01 | 0.324 |
| 5 | 16 | 2.667 | 0.027 | 53.7 | 2.13 | 22.5 | 10.58 | 0.382 | 0.14 | 0.070 | 0.63 | 0.275 |
| 6 | 24 | 3.170 | 0.032 | 59.7 | 2.66 | 28.5 | 10.72 | 0.616 | 0.19 | 0.171 | 0.69 | 0.612 |
| 7 | 4 | 2.125 | 0.021 | 56.3 | 2.47 | 25.7 | 10.41 | 0.100 | 0.17 | 0.017 | 0.48 | 0.048 |
| 8 | 24 | 3.008 | 0.031 | 66.0 | 2.79 | 30.9 | 11.09 | 0.612 | 0.19 | 0.200 | 0.60 | 0.513 |
| 9 | 32 | 3.610 | 0.037 | 62.7 | 2.71 | 29.3 | 10.82 | 0.817 | 0.27 | 0.375 | 0.68 | 0.812 |
| 10 | 16 | 3.379 | 0.034 | 58.0 | 2.84 | 29.2 | 10.26 | 0.467 | 0.25 | 0.138 | 0.71 | 0.377 |
| 11 | 24 | 2.768 | 0.028 | 64.6 | 2.78 | 30.2 | 10.85 | 0.520 | 0.24 | 0.240 | 0.66 | 0.536 |
| 12 | 64 | 6.104 | 0.063 | 54.6 | 2.34 | 27.0 | 11.54 | 2.628 | 0.26 | 0.765 | 0.75 | 2.512 |
| 13 | 20 | 3.824 | 0.039 | 55.1 | 2.32 | 26.2 | 11.29 | 0.560 | 0.17 | 0.171 | 0.65 | 0.543 |
| 14 | 24 | 4.369 | 0.045 | 47.2 | 2.07 | 21.5 | 10.38 | 0.630 | 0.30 | 0.239 | 0.88 | 0.735 |
| 15 | 28 | 3.250 | 0.033 | 63.1 | 3.65 | 30.31 | 8.304 | 0.744 | 0.12 | 0.209 | 0.51 | 0.642 |
| 16 | 20 | 3.120 | 0.032 | 64.1 | 2.87 | 31.45 | 10.96 | 0.501 | 0.22 | 0.175 | 0.64 | 0.453 |
| 17 | 24 | 3.354 | 0.034 | 65.4 | 2.81 | 31.18 | 11.1 | 0.595 | 0.26 | 0.290 | 0.54 | 0.615 |
| 18 | 24 | 3.477 | 0.035 | 61.6 | 2.80 | 30.56 | 10.91 | 0.640 | 0.14 | 0.220 | 0.56 | 0.695 |
| 19 | 20 | 2.840 | 0.029 | 60.5 | 2.86 | 30.51 | 10.67 | 0.461 | 0.22 | 0.154 | 0.67 | 0.460 |
| 20 | 24 | 5.847 | 0.060 | 34.1 | 1.38 | 13.59 | 9.848 | 0.829 | 0.27 | 0.284 | 0.84 | 0.762 |
| 21 | 20 | 2.849 | 0.029 | 65.8 | 3.13 | 31.9 | 10.18 | 0.475 | 0.25 | 0.131 | 0.76 | 0.418 |
| 22 | 28 | 3.672 | 0.037 | 63.3 | 2.85 | 30.8 | 10.82 | 0.797 | 0.12 | 0.184 | 0.52 | 0.659 |
| 23 | 24 | 3.311 | 0.034 | 67.2 | 3.07 | 31.8 | 10.36 | 0.645 | 0.25 | 0.177 | 0.73 | 0.594 |
| 24 | 20 | 3.053 | 0.031 | 62.1 | 2.92 | 30.3 | 10.37 | 0.495 | 0.25 | 0.136 | 0.73 | 0.439 |
| 25 | 20 | 3.822 | 0.039 | 55.3 | 2.98 | 30.2 | 10.12 | 0.626 | 0.28 | 0.169 | 0.86 | 0.626 |
| 26 | 20 | 4.020 | 0.041 | 59.0 | 2.83 | 29.0 | 10.23 | 0.608 | 0.25 | 0.158 | 0.83 | 0.604 |
| 27 | 28 | 4.851 | 0.050 | 58.4 | 3.48 | 31.6 | 9.066 | 0.995 | 0.12 | 0.263 | 0.48 | 0.870 |
| Mean | 24.2 | 3.578 | 0.036 | 58.8 | 2.72 | 28.3 | 10.44 | 0.697 | 0.22 | 0.220 | 0.68 | 0.664 |
| Std dev | 11 | 0.916 | 0.010 | 7.1 | 0.45 | 4.2 | 0.7 | 0.469 | 0.07 | 0.144 | 0.13 | 0.463 |

Cluster analysis break was 56 cm at 12S.

Table 17. Whole-basin storage of total dry mass, total phosphorus (TP) and non-apatite inorganic phosphorus (NAIP) for the recent stratigraphic group of sediments in Lake Eustis. Calculations are based on summing data for cum mass, cum TP and cum NAIP from Table 16 and then averaging sums over the 27 survey stations that were distributed on an equal area grid (this procedure assumes zero storage for erosional sites not included in Table 16). The area of the lake used in the calculations was 31.39 x $10^6$ $m^2$. Units are $10^3$ larger for mass than for phosphorus. Two estimates are based on probable sediment ages ranging from 25 to 45 yr for this stratum. See Table 16 and text for additional explanation.

| | | Dry Mass | TP | NAIP |
|---|---|---|---|---|
| Sum<br>(g $cm^{-2}$) or (mg $cm^{-2}$) | | 17.43 | 16.60 | 5.503 |
| Average/station<br>(g $cm^{-2}$) or (mg $cm^{-2}$) | | 0.6455 | 0.6149 | 0.2038 |
| Whole Basin Storage<br>($10^6$ kg) or ($10^6$ g) | | 202.6 | 193.0 | 63.98 |
| Average Storage/yr | (25 yr) | 8.11 | 7.72 | 2.56 |
| ($10^6$ kg) or ($10^6$ g) | (45 yr) | 4.50 | 4.29 | 1.42 |

addition, no clear stratigraphic break to identify a baseline TP concentration was found consistently among cores. Such a feature was present in the Lake Dora cores and in cores from other Ocklawaha lakes (Schelske 1997, 1998).

Whole-basin dry mass and TP accumulation rates were calculated for the probable range in sediment ages for the stratigraphic set of data (Table 17). Rates calculated for 25- and 45-yr periods yielded average, annual TP sedimentation of 7800 and 4330 kg, respectively. The larger estimate is considered to be more reliable because a later age horizon occurs in cores with a high sedimentation rate than in cores with a lower sedimentation rate (Fig. 30). This generality is important because the greatest accumulation of sediment and TP occurs at high sedimentation sites based on other studies of Ocklawaha lakes (Schelske 1997, 1998).

Estimates for TP sedimentation calculated from whole-basin inventories of TP were compared to estimates of TP sedimentation obtained by other methods. Fulton (1995) estimated TP sedimentation (retention) in Lake Eustis of 17,490 kg/yr from nutrient budgets. This is more than twice as large as our high estimate of 7720 kg/yr for the 25-yr period (Table 17). Our high estimate may be low compared to recent estimates of TP sedimentation because it is based on a 25-year period during which TP accumulation increased more than 2-fold in dated historic cores (Fig. 31) and average decadal TPAR also increased more than 2-fold when the most recent decade is compared to the third decade (Table 14). In addition, the selection of a somewhat arbitrary time period of 25 yr is only one estimate that could be used in calculation. Selecting a shorter time period would increase the sedimentation rate. Our decadal averages for TPAR can be used to calculate an average for the most recent 25-yr period. This calculation shows that the 25-yr average is 22% smaller than the average TPAR for the most recent decade. We conclude that our average estimate for the 25-yr period may underestimate TP storage in the 1990s, but by less than a factor of two difference necessary to reconcile our estimate with that calculated by Fulton (1995).

### Diatom Microfossils

Diatom assemblages show very similar trends in cores LE-13H and LE-28H (Figs. 48 and 49) from Lake Eustis. Diatom preservation is poor at the base of both cores, and broken fragments of *Navicula sp.* and *Pinnularia sp.* are common. *Cyclotella stelligera,* which is found in oligotrophic to eutrophic conditions, is relatively common throughout both cores. *Navicula radiosa* and *Navicula radiosa* var. *parva* also indicate oligotrophic to eutrophic conditions and are abundant in both cores to approximately the 40-cm level. A shift in the diatom assemblages of both cores takes place at approximately the 60-cm level. *Aulacoseira ambigua,* which indicates eutrophic conditions, begins to increase at the 60-cm level. *Pseudostaurosira*

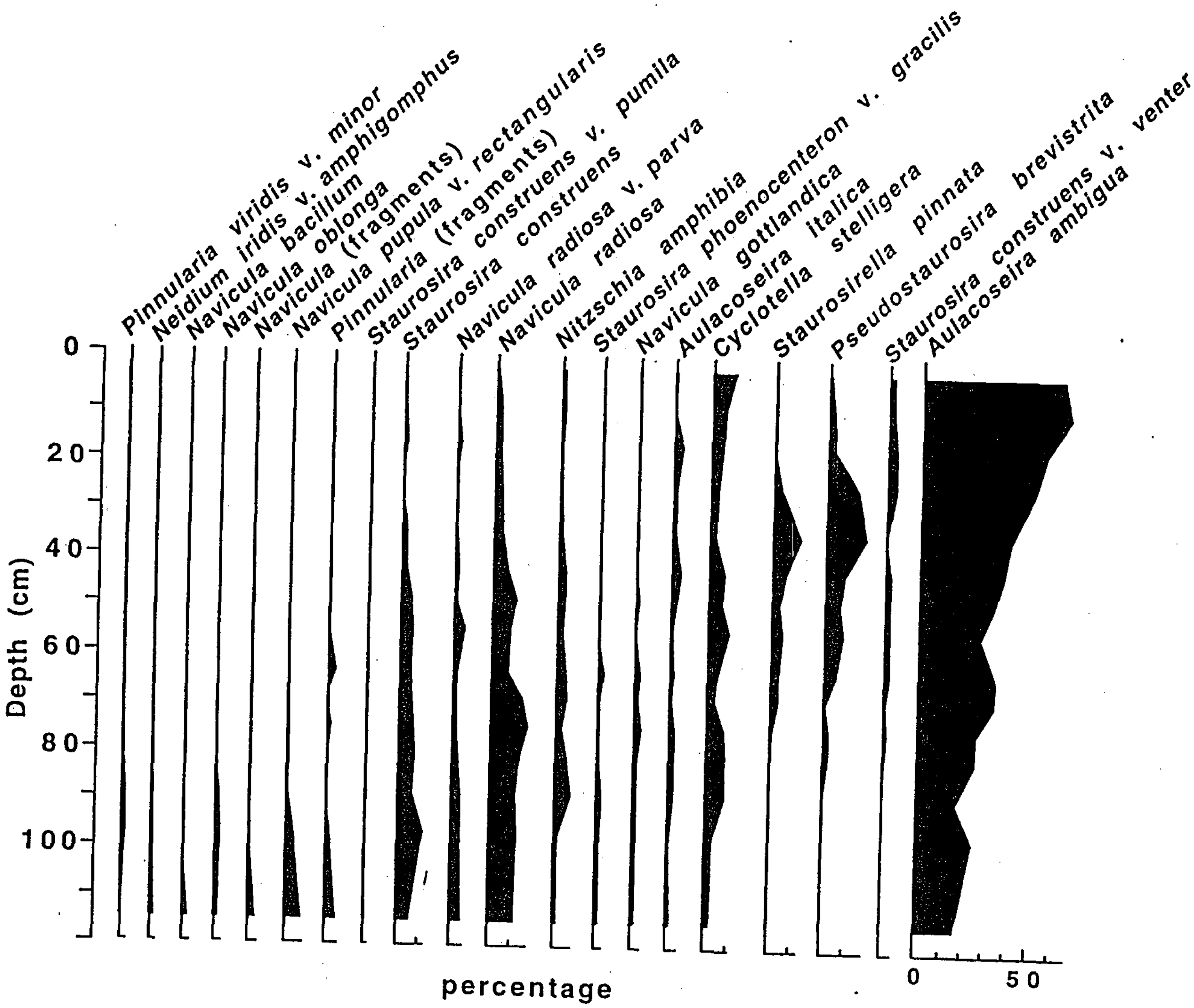


Fig. 48. Diatom assemblages in Lake Eustis sediment core LE-13H-95.

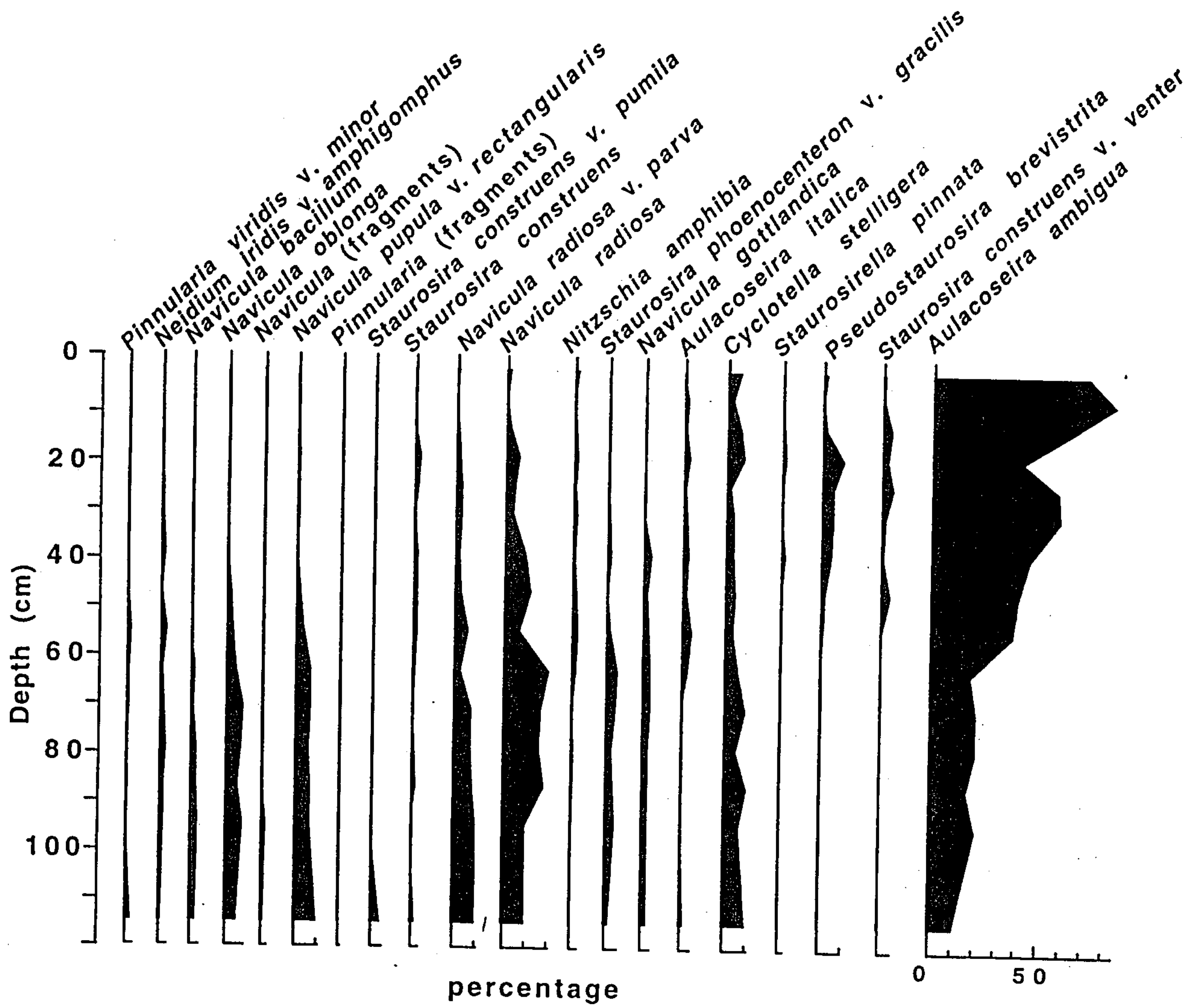


Fig. 49. Diatom assemblages in Lake Eustis sediment core LE-28H-96.

*brevistriata* and *Staurosirella pinnata* are eutrophic to hypereutrophic taxa (Whitmore 1989) that increase in abundance at the 50-cm level, but decline again near the 10-cm level. *Aulacoseira ambigua* shows a significant increase in both cores proceeding upward. High percentages of *Aulacoseira ambigua* in uppermost samples from both cores (e.g. 85% at the 8-cm level in 28H) is a distinct indication of eutrophic conditions.

Limnetic TP reconstructions for cores LE-13H and LE-28H (Figs. 50 and 51, Tables 18 and 19, respectively) indicate that Lake Eustis has proceeded from mesotrophic to eutrophic conditions during the last century. Total P inferences for the most recent (2-cm level) samples are approximately 100 µg/L and are high with respect to means from reported water quality measurements of 68 µg/L (Fulton 1995) and 39 µg/L (Canfield et al. 1995). Recent limnetic TP inferences are high as the result of the high representation of the eutrophic species *Aulacoseira ambigua*. Absolute TP inference values may not be reliable for recent decades in Lake Eustis, but overall trends (Figs. 50 and 51) suggest an increase in trophic state that is substantiated by distinct qualitative shifts seen in the diatom assemblages over time (Figs. 48 and 49).

### Summary--Lake Eustis

Several variables measured in historic cores change predictably from core to core including upcore increases in NAIP and TP concentration, upcore increases in rate of TP and NAIP accumulation and upcore decreases in TC/TN and % dry weight. These changes were found in depth intervals that were aged with $^{210}Pb$ in historic cores and occurred primarily since the 1930s, with the largest changes occurring after 1950. No clear stratigraphic indicator of earlier changes, including an increase in TP concentration from baseline levels, could be identified in all historic cores (dated) or in all survey cores (undated). Such a stratigraphic discontinuity was found in dated and undated cores from Lake Dora and dated and undated cores from other Ocklawaha lakes studied previously (Schelske 1997, 1998).

This study provides several lines of evidence that phosphorus loading to Lake Eustis increased historically. First, data on NAIP or TP concentration increased upcore in the past 100 to 150 yr. An increase in TP concentration in lake water or TP loading to the lake basin is inferred from the upcore increase in TP concentration of sediments. Second, because a large fraction (>60% on average) of the lake sediments are organic matter as measured by LOI, increases in MSR with time indicate production of organic matter has increased and lake eutrophication has been progressive. These inferred changes are reflected in relative increases in decadal MSR and OMSR (Tables 12 and 13), both of which increase progressively in all decades relative to the base decade (91-100 yr since core collection) with the exception of a

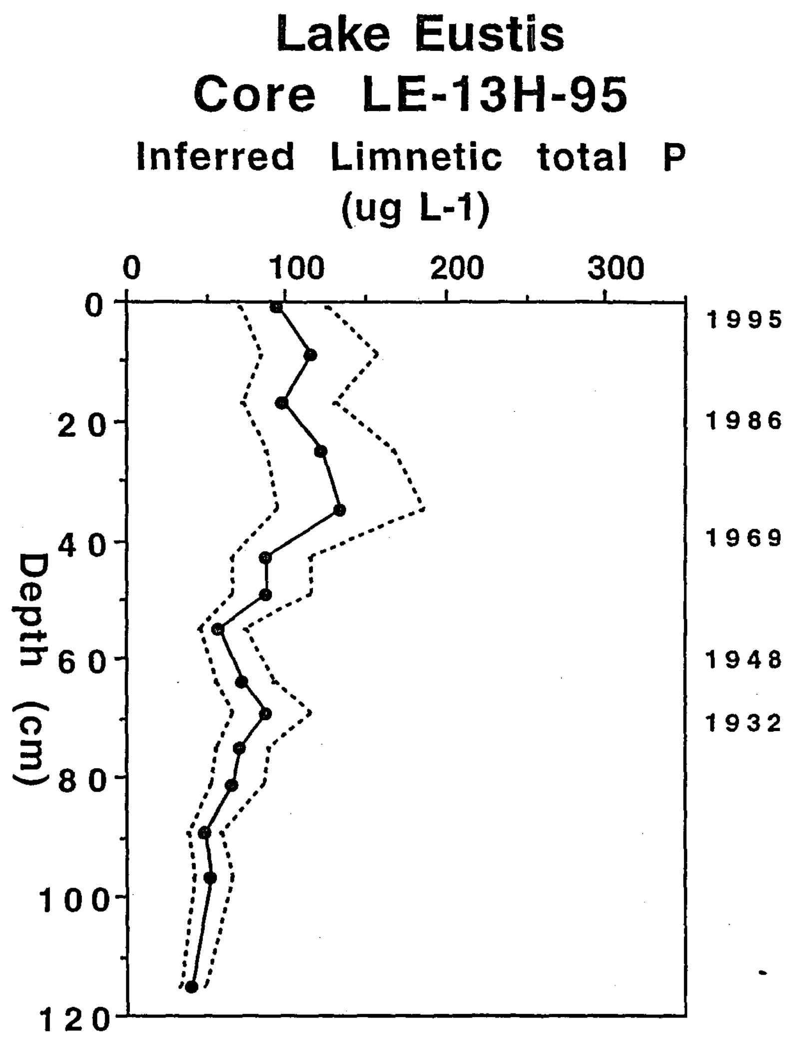


Fig. 50. Inferred limnetic total P based on diatom assemblages in Lake Eustis sediment core LE-13H-95 with 95% confidence intervals for the inferences.

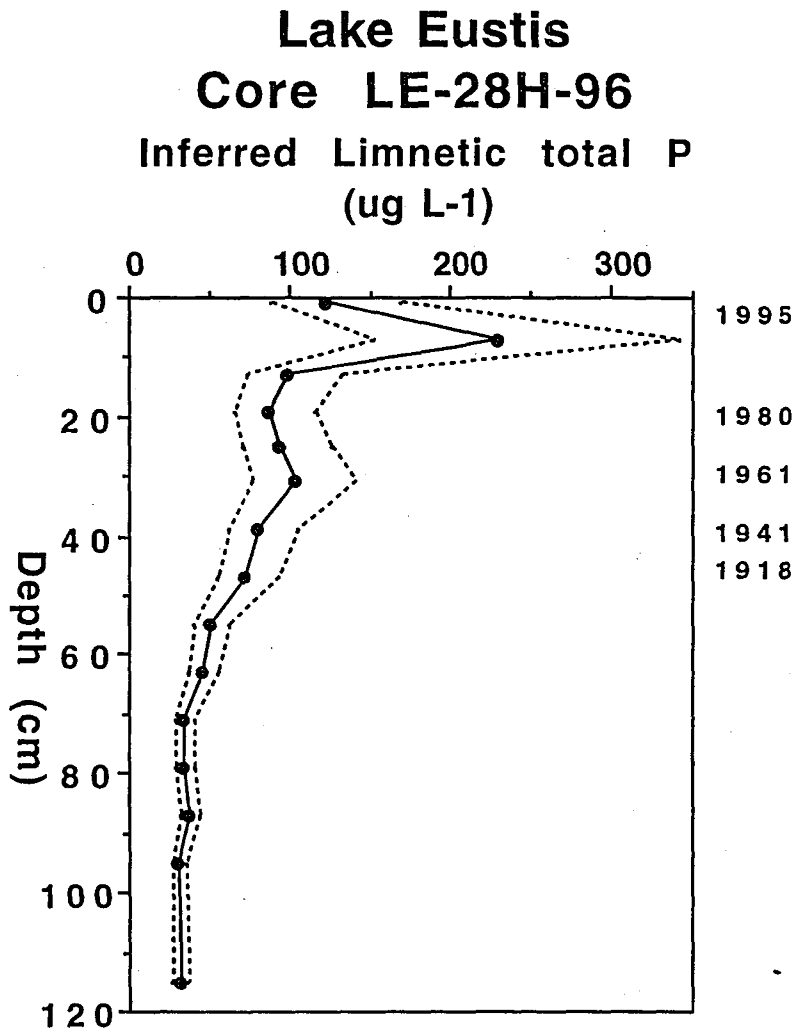


Fig. 51. Inferred limnetic total P based on diatom assemblages in Lake Eustis sediment core LE-28H-96 with 95% confidence intervals for the inferences.

Table 18. Inferred limnetic total P with 95% confidence intervals for the inferences for Lake Eustis core LE-13H-95.

| Depth Interval (cm) | Inferred total P (ug/L) | Lower bound of 95% c.i. (ug/L) | Upper bound of 95% c.i. (ug/L) |
|---|---|---|---|
| 0-2 | 94 | 71 | 125 |
| 8-10 | 114 | 84 | 156 |
| 16-18 | 97 | 73 | 129 |
| 24-26 | 121 | 88 | 166 |
| 34-36 | 133 | 95 | 185 |
| 42-44 | 87 | 66 | 115 |
| 48-50 | 87 | 66 | 115 |
| 54-56 | 58 | 46 | 74 |
| 62-66 | 72 | 56 | 93 |
| 68-70 | 87 | 66 | 115 |
| 74-76 | 70 | 55 | 90 |
| 80-82 | 66 | 53 | 86 |
| 88-90 | 48 | 39 | 59 |
| 96-98 | 53 | 42 | 65 |
| 114-116 | 40 | 33 | 49 |

Table 19. Inferred limnetic total P with 95% confidence intervals for the inferences for Lake Eustis core LE-28H-96.

| Depth Interval (cm) | Inferred total P (ug/L) | Lower bound of 95% c.i. (ug/L) | Upper bound of 95% c.i. (ug/L) |
|---|---|---|---|
| 0-2 | 123 | 89 | 169 |
| 6-8 | 229 | 153 | 342 |
| 12-14 | 99 | 74 | 133 |
| 18-20 | 87 | 66 | 115 |
| 24-26 | 94 | 71 | 125 |
| 30-32 | 104 | 77 | 140 |
| 37-38 | 81 | 62 | 106 |
| 46-48 | 72 | 56 | 93 |
| 54-56 | 50 | 41 | 62 |
| 62-64 | 45 | 37 | 55 |
| 70-72 | 34 | 29 | 41 |
| 78-80 | 34 | 29 | 41 |
| 86-88 | 37 | 31 | 44 |
| 94-96 | 30 | 26 | 36 |
| 114-116 | 31 | 26 | 37 |

slight decrease in MSR and OMSR from the 4th decade to the third decade. Third, rates of NAIP or TP accumulation in historic cores, which are the product of MSR and NAIP or TP concentration, increase at the greater rate than MSR because the concentration of both forms of phosphorus increase with time. On a decadal scale, TPAR and NAIPAR increase progressively from decade to decade. Finally, these increased rates of TP and NAIP accumulation (given the implicit assumption in commonly used phosphorus loading models, i.e. that net phosphorus sedimentation is proportional to phosphorus loading) indicate that phosphorus loading to the lake has increased in proportion to the increase in TP accumulation in the sediments. This increase in net phosphorus sedimentation is inferred to be at least three-fold since the 1950s.

Inferences from analysis of microfossil diatoms in two sediment cores also provide evidence of eutrophication in Lake Eustis. A shift in the composition of the microfossil provides evidence of progressive eutrophication. In addition, limnetic TP concentrations inferred from diatom microfossils indicate a large increase in phosphorus concentration with time, with the greatest change after 1950 in LE-28H and after 1970 in LE-13H. These inferred TP concentrations indicate that TP in the water column increased in the 1950s and 1970s at a time when measured TP in the sediment record increased. After this increase, inferred TP concentrations were relatively constant over the remainder of the sediment record with the exception of one large value for LE-28H. Inferred limnetic TP in surface sediments was greater than reported mean TP concentrations in the water column with the lower bound for the 95% confidence interval in both cores being greater than the reported mean of 68 μg/L. Diatom microfossils also shift upcore from benthic forms to planktonic forms as the TC/TN ratio of organic matter decreases. The decrease in TC/TN ratio was used to infer a shift in the phytoplankton community from macrophytes to phytoplankton in Lake Apopka (Schelske 1997).

A combination of data for TP concentration, TC/TN ratio and dry density provided a time-dependent stratigraphic horizon that was identified by K-means (multi-variate) cluster analysis and correlated across cores. Data for ash fraction, which was used successfully in the Lake Dora analysis, were not useful in the analysis of Lake Eustis samples. Only one time zone was identified using a combination of multi-variate cluster analysis and subjective analysis. Based on stratigraphic features in dated historic cores, the probable age span for this zone ranged from 25 to 45 yr. The shorter time period, based on sediment ages at high sedimentation sites, is considered to be more reliable. The relatively low MSR and NAIP and TP concentration in Lake Eustis sediments, compared to Lake Dora, limits the ability to resolve stratigraphic features and thus to estimate temporal changes in basin-wide storage of sediments or nutrients in Lake Eustis.

Accumulation rates for dry mass, NAIP and TP were estimated from estimated whole-basin storage of sediment dry mass, TP and NAIP in the single stratigraphic group of sediments identified from K-means cluster analysis. TP sedimentation estimated from the whole-basin inventory of TP was compared to estimated TP sedimentation obtained by other methods. Fulton (1995) estimated recent TP retention (sedimentation) in Lake Eustis of 17,490 kg/yr from nutrient budgets. This is more than twice as large as our high estimate of 7,720 kg/yr for the 25-yr period (Table 17). Our high estimate may be low compared to recent estimates of TP sedimentation because it is the average of a 25-yr period during which TP accumulation increased more than 2-fold in dated historic cores (Fig. 31) and average decadal TPAR also increased more than 2-fold when the most recent decade is compared to the third decade (Table 14). We conclude that our estimate for the 25-yr period may underestimate TP storage in the 1990s, but by less than a factor of two difference necessary to reconcile our estimate with that calculated by Fulton (1995). Whole-basin storage of sediments and nutrients is discussed in the final section of the report on Comparison of TP Sedimentation in Lake Dora and Lake Eustis.

## COMPARISON OF TP SEDIMENTATION AND OTHER CHARACTERISTICS IN LAKE DORA AND LAKE EUSTIS

Lake Dora and Lake Eustis are two of the lakes in the Harris Chain of Lakes in the upper Ocklawaha River basin (Fulton 1995). Lake Dora with a mean depth of 3.00 m has less than half the surface area of Lake Eustis with a mean depth of 3.46 m (Table 20). Because of the deeper mean depth and larger surface area in Lake Eustis, the volume of Lake Eustis is more than twice as large as that for Lake Dora. Mean hydraulic detention is essentially equal for the two lakes, 0.82 yr for Lake Dora and 0.79 yr for Lake Eustis (Fulton 1995). The mean TP in the water column is 138 μg/L in Lake Dora, twice as large as the mean TP (68 μg/L) in Lake Eustis (Table 20). Annual TP retention (net TP sedimentation) of 6230 kg/yr in Lake Dora and 17,500 kg/yr in Lake Eustis was obtained from TP mass balances (Fulton 1995). Our estimate of TP sedimentation in Lake Dora obtained from whole basin storage is 15,600 kg/yr, more than twice as large as estimated TP retention; but our estimate of TP sedimentation in Lake Eustis is 7720 kg/yr, less than half the estimated TP retention of 17,500 kg/yr (Table 20). Calculations based on the mass balances by Fulton (1995) show that 2.81 times more phosphorus is sedimented in Lake Eustis than in Lake Dora (Table 20) even though the lake surface area is only 1.77 times larger. These data indicate that areal TP sedimentation is greater in Lake Eustis than in Lake Dora. Results from our study, however, indicate that annual whole-basin TP sedimentation in Lake Dora is 2.02 times greater in than in Lake Eustis, that annual whole-basin TP sedimentation in Lake Dora is greater than TP retention reported by Fulton (1995), that annual whole-basin TP sedimentation in Lake Eustis is smaller than TP retention reported by Fulton (1995) and that the areal TP sedimentation rate is larger in Lake Dora than in Lake Eustis. Some of the differences and similarities in the results we obtained for the two lakes will be used to address the apparent discrepancies in estimated TP retention and sedimentation for Lake Dora and Lake Eustis.

Sediments in Lake Dora and Lake Eustis were similar in most of the measured characteristics, but differed markedly in TP concentration (Tables 1 and 10, Appendices E-H) and in MSR and TPAR in $^{210}$Pb-dated historic cores (Tables 2, 4, 12 and 14; Appendices I and J). Comparison of mean values for the different gravimetric and chemical data sets collected during Phase I and Phase II shows some of the similarities and differences (Tables 1 and 10). Mean values for % dry weight for both lakes ranged from 4.5 to 5.4%, with only one mean being >5.0% (Phase I, Lake Eustis). Likewise, mean % LOI was similar for both lakes, ranging only from 60-61% in Lake Dora and from 61 to 63% in Lake Eustis. By contrast, mean TP concentration in Lake Dora ranged from 0.68 to 1.04 mg/g and only from 0.45 to 0.53 mg/g in Lake Eustis. These comparisons for TP concentration are biased by data from historic cores that are relatively small data sets compared to the survey cores. The mean for

Table 20. Comparison of morphometric data and whole-basin storage and retention of total phosphorus (TP) in Lake Dora and Lake Eustis. Average storage is calculated from data in Tables 7 and 17. Morphometric data and data for TP and whole-basin retention are from Fulton (1995).

| | Lake Dora | Lake Eustis |
|---|---|---|
| Area ($10^6$ $m^2$) | 17.74 | 31.39 |
| Volume ($10^6$ $m^3$) | 53.28 | 108.6 |
| Mean Depth (m) | 3.00 | 3.46 |
| Mean TP (mg $L^{-1}$) | 0.138 | 0.068 |
| Average Whole-Basin Storage ($10^6$ g $yr^{-1}$) | 15.6 | 7.72 |
| Average Areal Whole-Basin Storage (g $m^{-2}$ $yr^{-1}$) | 0.879 (5 yr) | 0.246 (25 yr) |
| Whole-Basin Retention ($10^6$ g $yr^{-1}$) | 6.23 | 17.5 |
| Average Areal Whole-Basin Retention (g $m^{-2}$ $yr^{-1}$) | 0.351 | 0.558 |

the survey cores from Lake Dora was 0.87 mg/g, much greater than the means for survey cores from Lake Eustis which ranged from 0.45 to 0.53 mg/g. The large difference in TP concentration is also evident by comparing data on TP concentrations in near-surface sediments of the two lakes (Figs. 3 and 25). This comparison shows that TP concentrations in Lake Dora surface sediments are generally >2.0 mg/g, approximately twice as large as those in Lake Eustis. Finally, several variables measured in survey and historic cores from Lake Dora and Lake Eustis change predictably from core to core, including an upcore increase in NAIP and TP concentration and an upcore decrease in the TC/TN ratio and % dry weight. The upcore increase in TP concentration was greater in Lake Dora cores than in Lake Eustis cores, indicating a greater temporal change in water-column TP concentrations in Lake Dora.

We used two approaches to estimate TP sedimentation in Lake Dora and Lake Eustis. The first is based on MSR and TP concentration in $^{210}$Pb-dated historic cores and the second is based on estimating whole-basin storage from TP inventories in undated survey cores. Comparison of MSR obtained from $^{210}$Pb-dated historic cores, which varied greatly among cores, indicates values generally were greater in Lake Dora than in Lake Eustis, particularly if LE-13H is excluded in the comparison (Tables 2 and 12). Average decadal MSR in the most recent decade (1986-95) was 43.0 mg cm$^{-2}$ yr$^{-1}$ in Lake Dora, 1.73 times greater than the average of 24.9 mg cm$^{-2}$ yr$^{-1}$ in Lake Eustis (Table 21). Because TP concentrations were greater in Lake Dora, average TPAR in the most recent decade (1986-95) in Lake Dora was 81.8 $\mu$g cm$^{-2}$ yr$^{-1}$, roughly three times as large as in Lake Eustis (27.5 $\mu$g cm$^{-2}$ yr$^{-1}$). Thus, based on $^{210}$Pb-dated cores, whole-basin TP sedimentation should be greater in Lake Dora because the Lake Dora TP sedimentation rate is roughly three times as large as that for Lake Eustis; whereas, the surface area of Lake Eustis is roughly twice as large as Lake Dora.

Estimates based on whole-basin storage also indicate that TP sedimentation is greater in Lake Dora than in Lake Eustis. Recent TP sedimentation calculated from whole-basin storage is 15,600 kg/yr in Lake Dora and 7,720 kg/yr in Lake Eustis (Table 20). Areal estimates of recent TP sedimentation obtained from whole-basin storage were 87.9 $\mu$g cm$^{-2}$ yr$^{-1}$ in Lake Dora and 24.6 $\mu$g cm$^{-2}$ yr$^{-1}$ in Lake Eustis (Table 20), values that are similar to the most recent average decadal TPAR for the two lakes (Table 21). Values for Lake Eustis are probably underestimated because a 25-yr period of storage was used in the calculation, whereas only a 5-yr period was used to estimate recent storage in Lake Dora. Even given problematic estimates, which will be discussed below, both approaches indicate that recent whole-basin TP sedimentation in Lake Dora is greater than in Lake Eustis.

TP sedimentation apparently is greater in Lake Dora than in Lake Eustis even though whole-basin dry mass sedimentation is larger in Lake Eustis. The estimated whole-basin dry mass sedimentation rate of 8.11 x $10^6$ kg/yr in Lake Eustis is 1.38 times greater than the rate of

Table 21. Comparison of average and relative increases in decadal mass sedimentation rate (MSR), organic matter sedimentation rate (OMSR), total phosphorus accumulation rate (TPAR) and non-apatite inorganic phosphorus accumulation rate (NAIPAR) for Lake Dora and Lake Eustis historic cores. Data are averages (upper half) and increases (bottom half) relative to the base decade (91-100 yr) since core collection. Units are mg $cm^{-2}$ $yr^{-1}$ for MSR and OMSR and $\mu g$ $cm^{-2}$ $yr^{-1}$ for TPAR and NAIPAR. Averages are from Tables 2-5 and 12-15.

| | Lake Dora | | | | Lake Eustis | | | |
|---|---|---|---|---|---|---|---|---|
| Decade | MSR | OMSR | TPAR | NAIPAR | MSR | OMSR | TPAR | NAIPAR |
| 1 | 42.95 | 29.97 | 81.78 | 31.94 | 24.94 | 16.45 | 27.48 | 9.20 |
| 2 | 35.96 | 21.74 | 53.63 | 17.62 | 21.70 | 12.88 | 19.46 | 6.07 |
| 3 | 34.63 | 18.64 | 44.45 | 13.39 | 19.63 | 12.45 | 13.39 | 4.36 |
| 4 | 33.16 | 17.34 | 36.12 | 12.26 | 19.40 | 12.13 | 12.73 | 3.95 |
| 5 | 26.85 | 14.79 | 21.50 | 7.19 | 15.89 | 10.16 | 8.72 | 2.60 |
| 6 | 21.31 | 12.48 | 16.91 | 5.38 | 15.18 | 9.74 | 8.07 | 2.66 |
| 7 | 20.60 | 12.80 | 11.88 | 3.97 | 12.49 | 8.23 | 5.69 | 1.98 |
| 8 | 18.18 | 11.04 | 9.45 | 3.08 | 10.65 | 6.96 | 4.50 | 1.59 |
| 9 | 17.34 | 10.17 | 8.69 | 2.57 | 8.89 | 5.81 | 3.74 | 1.31 |
| 10 | 11.58 | 6.72 | 5.65 | 1.76 | 7.39 | 4.76 | 2.88 | 0.91 |
| 11 | 10.49 | 5.89 | 4.81 | 1.54 | 8.07 | 5.10 | 3.00 | 1.04 |
| 12 | 11.83 | 6.53 | 4.73 | 1.61 | 6.99 | 4.40 | 2.45 | 0.80 |
| 13 | 8.46 | 4.90 | 3.59 | 1.13 | 7.76 | 5.01 | 2.58 | 0.94 |
| 1 | 3.85 | 4.67 | 15.53 | 20.85 | 3.80 | 4.23 | 10.99 | 13.21 |
| 2 | 3.19 | 3.36 | 9.89 | 10.72 | 2.79 | 2.84 | 7.31 | 8.79 |
| 3 | 3.09 | 2.87 | 8.14 | 8.18 | 2.49 | 2.50 | 5.05 | 5.96 |
| 4 | 2.93 | 2.65 | 6.57 | 7.13 | 2.54 | 2.58 | 4.77 | 5.10 |
| 5 | 2.43 | 2.30 | 4.01 | 4.07 | 2.08 | 2.17 | 3.19 | 3.41 |
| 6 | 1.90 | 1.87 | 3.21 | 2.93 | 1.86 | 1.92 | 2.71 | 3.00 |
| 7 | 1.73 | 1.77 | 2.07 | 2.20 | 1.63 | 1.69 | 2.00 | 2.33 |
| 8 | 1.45 | 1.44 | 1.58 | 1.66 | 1.37 | 1.40 | 1.46 | 1.64 |
| 9 | 1.40 | 1.36 | 1.45 | 1.38 | 1.14 | 1.15 | 1.24 | 1.34 |
| 10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 11 | 0.94 | 0.92 | 0.84 | 0.87 | 0.91 | 0.89 | 0.84 | 0.83 |
| 12 | 1.05 | 1.00 | 0.87 | 0.91 | 0.88 | 0.87 | 0.78 | 0.75 |
| 13 | 0.87 | 0.85 | 0.68 | 0.70 | 0.77 | 0.75 | 0.65 | 0.74 |

7.13 x $10^6$ kg/yr in Lake Dora (Tables 7 and 17). However, the areal rate of dry mass sedimentation calculated from these data for Lake Dora (40.2 mg $cm^{-2}$ $yr^{-1}$) is 1.56 times larger than that for Lake Eustis (25.8 mg $cm^{-2}$ $yr^{-1}$). Average decadal dry mass sedimentation rates calculated from $^{210}Pb$-dated cores for the most recent decade are 43.0 and 24.9 mg $cm^{-2}$ $yr^{-1}$ for Lake Dora and Lake Eustis, respectively (Table 21), 1.73 times larger for Lake Dora. TP sedimentation is greater in Lake Dora, either as an areal or whole-basin estimate, because TP concentrations in recent Lake Dora sediments are more than twice as large as in Lake Eustis sediments.

Other factors, however, may be important in determining the accuracy of estimated whole-basin storage of dry mass and phosphorus. It is possible that site selection for historic cores in Lake Eustis was biased toward stations with low MSR or that Lake Dora data were biased by selecting sites with high MSR. In addition, the relatively low MSR and TP concentration and accumulation rate in Lake Eustis sediments limit the ability to resolve stratigraphic features; thus determining ages for specific stratigraphic features and estimating temporal changes in basin-wide storage of sediments or nutrients in Lake Eustis is more problematic than in Lake Dora which generally has higher MSR and TP concentrations. Finally, uncertainty in absolute ages for stratigraphic zones is undoubtedly a potential source of error in estimating storage rates. For example, a one-yr error in age for the recent stratigraphic zone in Lake Dora (5 yr) amounts to a 20% error in calculations and for Lake Eustis amounts to a 4% error in calculations (25 yr). Additional analysis is needed to resolve the discrepancies for Lake Dora and Lake Eustis between our whole-basin estimate of annual TP sedimentation calculated directly from historic accumulation in sediment cores and the estimate by Fulton (1995) of whole-basin TP retention calculated from mass balances.

Because a large fraction of lake sediments is organic matter as measured by LOI (>60% on average), increases in MSR and OMSR with time (Tables 2, 3, 12 and 13) indicate photosynthetic production of organic matter has increased and lake eutrophication has been progressive. Average relative increases in MSR and OMSR by decade for Lake Dora and Lake Eustis historic cores were comparable over the past 80 yr which indicates that organic matter production contributed to increased MSR of both lakes (Table 21). Finally, average decadal OMSR in the most recent decade in both lakes increased at a greater rate than average decadal MSR which is the expected result of primary production being driven by increasing TP concentrations. These comparisons indicate that photosynthetic production of organic matter contributed to the increased MSR of both lakes, but that organic matter is not fully degraded and therefore is high in recent sediments. Diagenesis in deeper sediments has largely reduced organic matter to refractory compounds.

Data on NAIP or TP concentration and MSR can be used to calculate NAIP or TP storage and then to infer changes in TP concentration in lake water or TP loading to the lake basin in the past 100 years. Decadal rates of NAIP or TP accumulation (Tables 4, 5, 14, and 15), which are the product of MSR and NAIP or TP concentration, increase at a greater rate than MSR because the concentration of both forms of phosphorus increase with time. Average decadal TPAR in Lake Dora increased 15.5 fold and in Lake Eustis increased 11.0 fold compared to the base period (Table 21). The increase in TPAR since 1945 is more than 3-fold in Lake Eustis, and possibly as much as 4-fold in Lake Dora (Table 21). However, the relative increase in NAIPAR was greater than the relative increase in TPAR for both lakes. Since 1945, NAIPAR increased 5-fold in Lake Dora and nearly 4-fold in Lake Eustis. These increased rates of phosphorus accumulation (given the implicit assumption in commonly used phosphorus loading models, i.e., that net phosphorus sedimentation is proportional to phosphorus loading) can be used to infer that phosphorus loading to both lakes increased in proportion to the increase in TP accumulation in the sediments.

Estimating TP sedimentation rates from whole-basin storage depended first on identifying stratigraphic sets of data and second on determining the age represented by each stratigraphic zone of sedimented material. K-means cluster analysis of TP concentration, TC/TN ratio and ash fraction was used to identify two stratigraphic groups of sediments in Lake Dora. Ages for these time-dependent stratigraphic zones were estimated in dated historic cores; the first roughly spanned the interval from 1990 to present (5 yr) and the second from 1945 to 1990 (45 yr). Then the stratigraphic features that identified boundaries between zones were correlated across survey cores. In Lake Eustis, TP concentration, TC/TN ratio and dry density (rho) were used as input variables in K-means cluster analysis to establish stratigraphic zones. Only one zone could be identified and correlated with age-dependent stratigraphic features in dated historic cores. Because establishing an age for this zone was problematic, probable ages ranging from 25 to 45 yr were used in the calculations of TP sedimentation.

Our unpublished results on K-means cluster analysis for Lake Apopka and other Florida lakes have shown that only a few variables are needed to separate sediment samples into stratigraphic groups, either from individual cores or from larger data sets for individual lakes, into two or more groups. Sediment variables used in these studies include TP concentration, % dry weight or dry density (rho), TC/TN ratio and ash fraction. TP concentration was used because phosphorus is the major limiting nutrient for fresh-water phytoplankton or macrophytes. In addition, TP concentration generally increases upcore (Schelske 1997, 1998), and an upcore increase in TP is an inference for TP enrichment of surface waters and a proportional increase in phosphorus loading. The % dry weight or dry density is an important variable because it generally increases downcore as the result of sediment compaction and may increase with a change in other sediment characteristics. For example, % dry weight increases sharply in Lake Apopka at the boundary between sediments produced during the phytoplankton phase and sediments produced during the older macrophyte phase (Schelske 1997). If phytoplankton is the major source of sedimented organic matter, the TC/TN ratio will be lower than if macrophytes are the source because macrophytes contain structural carbon not found in phytoplankton. The TC/TN ratio, therefore, is a proxy for the source of organic matter in sediments. Finally, ash fraction is an important variable to use in cluster analysis of highly organic sediments because its relative variation is greater than that of organic matter determined by LOI (see Tables 1 and 10). The ash fraction is an important variable because recent sediments in the eutrophic or hypereutrophic Ocklawaha lakes are probably derived largely from byproducts of phytoplankton production (Schelske 1997). Such sediments are highly organic (relatively small ash fraction) compared to deeper sediments.

The composition of diatom microfossils in the two lakes is similar in that the pre-disturbance community (at least an age of 100 yr) is composed of benthic and periphytic species that are associated with moderate nutrient enrichment. This microfossil flora found at depth is more diverse and generally is used to infer a macrophyte-dominated lake, lake water with a lower nutrient content than at present, or some combination of both. It is characterized by benthic taxa including the genera *Pinnularia, Nitzschia, Navicula, Amphora, Epithemia, Gomphonema, Stauroneis* and *Cymbella*. By contrast, the community in surface sediments of Lake Eustis is composed mainly of *Aulacoseira ambigua*, a meroplanktonic taxon that is associated with eutrophic or hypereutrophic conditions. A similar meroplankton species, *Aulacoseira italica*, is dominant in near-surface sediment assemblages in Lake Apopka (Schelske 1997). The meroplanktonic *A. ambigua* is much less abundant in the surface assemblage in Lake Dora than in Lake Eustis. Dominant taxa in Lake Dora surface sediments are *Pseudostaurosira brevistriata, Staurosirella pinnata* and several subspecies of *Staurosira construens*. These taxa are also indicators of eutrophic to hypereutrophic conditions in which macrophytes are relatively unimportant (Whitmore 1989). Historic diatom assemblages in many eutrophic or hypereutrophic Florida lakes are similar to those found in the surface sediments of Lake Dora and Lake Eustis.

Diatom microfossils in Lake Dora and Lake Eustis also shift upcore from benthic forms to planktonic forms as the TC/TN ratio of organic matter decreases. The decrease in TC/TN ratio was used to infer a primary producer community shift from macrophytes to phytoplankton in Lake Apopka (Schelske 1997). Therefore, the change in TC/TN ratio in Lake Dora and Lake Eustis appears to be a proxy for increased abundance of planktonic or meroplanktonic diatoms as the lakes became more eutrophic. Such a change also can be a proxy for decreased water transparency as phytoplankton become more abundant or replace macrophytes.

Inferences of limnetic TP from analysis of microfossil diatoms in historic sediment cores also provide evidence of eutrophication in Lake Dora and Lake Eustis. Inferences of limnetic TP in Lake Dora indicate a large increase in TP concentration with time, a peak in TP concentration in the 1970s and a concentration of 95 µg/L in surface sediments. Modern measured means for limnetic TP of 71 µg/L for west Lake Dora and 92 µg/L for east Lake Dora (Canfield et al. 1995) are within the 95% confidence interval for inferred limnetic TP, which suggests that the diatom-based TP predictive model (Brenner et al. 1993) is reliable in Lake Dora. However, a higher mean measured TP of 138 µg/L for Lake Dora (Fulton 1995) is greater than the 95% confidence interval for inferred limnetic TP (127 µg/L). Inferences of limnetic TP in Lake Eustis also indicate a large increase in phosphorus concentration with time, with the greatest change after 1950 in LE-28H-98 and after 1970 in LE-13H. These inferred TP concentrations indicate that water column TP increased and peaked in the 1950s and 1970s. After this increase, inferred TP concentrations over the remainder of the sediment record were relatively constant with the exception of one large value for LE-28H. Total P inferences for the most recent samples of approximately 100 µg/L are high compared to means from reported water quality measurements of 68 µg/L (Fulton 1995) and 39 µg/L (Canfield et al. 1995). Absolute TP inference values may not be reliable for recent decades in Lake Eustis, but overall trends suggest an increase in trophic state that is documented by distinct qualitative shifts in the diatom assemblages over time.

Two different diatom communities are found in surface sediments of eutrophic or hypereutrophic Florida lakes which for purposes of convenience have been termed Case 1 and Case 2 lakes (Schelske 1998). Case 1 lakes are those in which either *A. italica* or *A. ambigua* is dominant in surface sediments and Case 2 lakes are those in which one or more taxa of *Pseudostaurosira brevistriata*, *Staurosirella pinnata* and several subspecies of *Staurosira construens* are dominant in surface sediments. Lake Eustis is a Case 1 lake because *A. ambigua* in two cores from this lake comprised from 64 to 85% of the surface microfossil assemblage. Case 2 species were found at deeper depths. By contrast, *A. ambigua* comprises only 33% of surface microfossil assemblage in Lake Dora; by including *P. brevistriata*, the two species combined comprise more than half of the surface microfossil community. Case 1 and Case 2 lakes cannot be separated on the basis of trophic state (Schelske 1998). For example, Case 1 lakes such as Lake Apopka and Lake Griffin are more phosphorus enriched than Lake Eustis; and Lake Dora which is a Case 2 lake is more phosphorus enriched than Lake Eustis. Biological, physical or morphometric factors in addition to nutrient enrichment may play a role in determining whether the surface diatom assemblage fits the Case 1 or Case 2 category. Polyphosphate storage by meroplanktonic algae (Kenney et al. in revision, Schelske 1997) may provide one important mechanism for this distinction.

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## LIST OF APPENDICES

# APPENDIX A

## LAKE DORA
## SURVEY SITES

Field core description and station location
for survey cores collected during
Phase I, Lake Dora.

### Key to Field Notes

**Station Location Data** for stations are latitude and longitude values obtained from a Trimble Navigation Global Positioning System Pathfinder. Station locations were stored as waypoint values on the system. An initial reading was taken after anchoring on station and a second reading was taken when work was completed. Only one reading is recorded here.

**Sediment Survey Data** include information on water depth, sediment thickness, and descriptions of the sediment cores retrieved.

Depth of the water column was determined by sounding with a Secchi disc on a metered line.

Depth to hard bottom was measured by inserting metered electrical conduit rods into the sediment until they bottomed on hard, sandy deposits.

Soft sediment thickness was estimated by subtracting the depth of the water column from the depth to hard bottom.

Sediment core length was determined by measuring the retrieved core with a meter stick.

Sediment core descriptions were made before sediment cores were extruded. Additional descriptions were made as the cores were sectioned.

# LAKE DORA PHASE I SURVEY

**Station #1**

| | |
|---|---|
| Core ID: | LD-1S-96 |
| Collected: | 23 January 1996 |
| Location: | 28° 47′ 37.3" N<br>81° 39′ 01.0" W |
| Length: | 130 cm |
| Description: | 0-23 cm unconsolidated floc. No visible stratigraphy |
| Water Depth: | 360 cm |
| Soft Sediment Thickness: | 613 cm |

**Station #2**

| | |
|---|---|
| Core ID: | LD-2S-96 |
| Collected: | 23 January 1996 |
| Location: | 28° 47′ 57.9" N<br>81° 39′ 16.0" W |
| Length: | 165 cm, sectioned to 130 cm. |
| Description: | 0-33 cm unconsolidated red brown floc. 65-115 cm light grey brown<br>115 cm brown<br>164/165 cm blue grey |
| Water Depth: | 370 cm |
| Soft Sediment Thickness: | 585 cm |

**Station #4**

| | |
|---|---|
| Core ID: | LD-4S-96 |
| Collected: | 23 January 1996 |
| Location: | 28° 47′ 54.7" N<br>81° 39′ 36.5" W |
| Length: | 130 cm |
| Description: | 0-43 cm unconsolidated floc. Red-brown floc to 52 cm, blue-grey sediment from 52 to 95 cm, dark grey-brown below 95 cm |
| Water Depth: | 390 cm |
| Soft Sediment Thickness: | 585 cm |

**Station #5**

| | |
|---|---|
| Core ID: | LD-5S-96 |
| Collected: | 23 January 1996 |
| Location: | 28° 47′ 35.3" N<br>81° 39′ 49.0" W |
| Length: | 125 cm |
| Description: | 0-25 cm unconsolidated floc. Red-brown floc to 63 cm, blue-grey to 94 cm, dark grey-brown below |
| Water Depth: | 420 cm |
| Soft Sediment Thickness: | 464 cm |

**Station #6**

| | |
|---|---|
| Core ID: | LD-6S-96 |
| Collected: | 23 January 1996 |
| Location: | 28° 47′ 53.2" N<br>81° 40′ 00.6" W |
| Length: | 130 cm |
| Description: | 0-27 cm unconsolidated floc. Red-brown floc to 63 cm, blue-grey to 71 cm, darker grey-brown below |
| Water Depth: | 400 cm |
| Soft Sediment Thickness: | 414 cm |

**Station #7**

| | |
|---|---|
| Core ID: | LD-7S-96 |
| Collected: | 25 January 1996 |
| Location: | 28° 47′ 04.6" N<br>81° 40′ 31.9" W |
| Length: | 55 cm |
| Description: | 0-37 cm unconsolidated floc. Red-brown floc to 52 cm, sand below |
| Water Depth: | 390 cm |
| Soft Sediment Thickness: | 55 cm |

**Station #8**

Core ID: LD-8S-96

Collected: 26 January 1996
Location: 28° 47′ 20.9" N
81° 40′ 48.5" W
Length: 130 cm
Description: 0-41 cm unconsolidated floc. Red-brown floc to 41 cm, green smoother sediments to 122 cm, lighter green mottled below

Water Depth: 360 cm

Soft Sediment Thickness: 220 cm

**Station #9**

Core ID: LD-9S-96

Collected: 25 January 1996
Location: 28° 46′ 44.7" N
81° 40′ 38.5" W
Length: 70 cm
Description: 0-21 cm unconsolidated floc.Red-brown floc to 21 cm, light green brown to 32 cm, dark green to 70 cm, sand below

Water Depth: 350 cm

Soft Sediment Thickness: 60 cm

**Station #11**

Core ID: LD-11S-96

Collected: 26 January 1996
Location: 28° 47′ 22.5" N
81° 41′ 14.4" W
Length: 90 cm (lost bottom on extrusion)
Description: 0-42 unconsolidated floc. Red-brown floc to 42 cm, dark green smother textured sediment to 113 cm, darker green mottled below

Water Depth: 400 cm

**Station #12**

Core ID: LD-12S-96

Collected: 6 February 1996
Location: 28° 47′ 20.4" N
81° 41′ 46.0" W
Length: 130 cm
Description: 0-18 cm unconsolidated floc. Light brown floc to 87 cm, darker brown with some sand to 100 cm, darker (chocolate) brown below

Water Depth: 410 cm

Soft Sediment Thickness: 170 cm

**Station #13**

Core ID: LD-13S-96

Collected: 6 February 1996
Location: 28° 46′ 53.0" N
81° 41′ 56.2" W
Length: 5 cm
Description: Sand

Water Depth: 290 cm

**Station #15**

Core ID: LD-15S-96

Collected: 6 February 1996
Location: 28° 47′ 50.3" N
81° 42′ 34.0" W
Length: 127 cm
Description: Light red-brown floc to 17 cm, green-brown sediments with some sand below

Water Depth: 320 cm

Soft Sediment Thickness: 165 cm

**Station #16**

| | |
|---|---|
| Core ID: | LD-16S-96 |
| Collected: | 6 February 1996 |
| Location: | 28° 46′ 55.0" N<br>81° 42′ 28.5" W |
| Length: | 130 cm |
| Description: | Light brown floc to 67 cm, darker green-grey sediments to 114 cm, dark brown below |
| Water Depth: | 360 cm |
| Soft Sediment Thickness: | 248 cm |

**Station #17**

| | |
|---|---|
| Core ID: | LD-17S-96 |
| Collected: | 6 February 1996 |
| Location: | 28° 47′ 21.4" N<br>81° 42′ 50.8" W |
| Length: | 130 cm |
| Description: | 0-38 cm unconsolidated floc. Red-brown floc with plant fibers to 42 cm, grey-green smoother sediments below |
| Water Depth: | 340 cm |
| Soft Sediment Thickness: | 275 cm |

**Station #18**

| | |
|---|---|
| Core ID: | LD-18S-96 |
| Collected: | 8 February 1996 |
| Location: | 28° 47′ 47.5" N<br>81° 43′ 07.8" W |
| Length: | 0 cm |
| Description: | Loose sand, No samples |
| Water Depth: | 360 cm |
| Soft Sediment Thickness: | 45 cm |

**Station #19**

| | |
|---|---|
| Core ID: | LD-19S-96 |
| Collected: | 8 February 1996 |
| Location: | 28° 47′ 22.0" N<br>81° 43′ 23.4" W |
| Length: | 115 cm |
| Description: | Dark green-grey sediments lighten down core |
| Water Depth: | 340 cm |
| Soft Sediment Thickness: | 125 cm |

**Station #20**

| | |
|---|---|
| Core ID: | LD-20S-96 |
| Collected: | 8 February 1996 |
| Location: | 28° 47′ 18.5" N<br>81° 43′ 57.8" W |
| Length: | 5 cm |
| Description: | Approximately 7 cm of sand mixed with dark organic sediment, layer of gastropod shells followed by pure sand below |
| Water Depth: | 220 cm |
| Soft Sediment Thickness: | 15 cm |

# APPENDIX B

## LAKE DORA HISTORIC SITES

Field core description and station location
for historic cores collected during
Phase I and Phase II, Lake Dora.

### Key to Field Notes

**Station Location Data** for stations are latitude and longitude values obtained from a Trimble Navigation Global Positioning System Pathfinder. Station locations were stored as waypoint values on the system. An initial reading was taken after anchoring on station and a second reading was taken when work was completed. Only one reading is recorded here.

**Sediment Survey Data** include information on water depth, sediment thickness, and descriptions of the sediment cores retrieved.

Depth of the water column was determined by sounding with a Secchi disc on a metered line.

Depth to hard bottom was measured by inserting metered electrical conduit rods into the sediment until they bottomed on hard, sandy deposits.

Soft sediment thickness was estimated by subtracting the depth of the water column from the depth to hard bottom.

Sediment core length was determined by measuring the retrieved core with a meter stick.

Sediment core descriptions were made before sediment cores were extruded. Additional descriptions were made as the cores were sectioned.

**Station #3**

Core ID: LD-3H-95

Collected: 26 May 1995
Location: 28° 47' 35" N
81° 39' 37" W
Length: 150 cm

**Station #10**

Core ID: LD-10H-95

Collected: 26 May 1995
Location: 28° 46' 59" N
81° 40' 54" W
Length: 136 cm

**Station #14**

Core ID: LD-14H-95

Collected: 26 May 1995
Location: 28° 47' 20" N
81° 42' 16" W
Length: 124 cm

Water Depth: 300 cm

**Station #21**

Core ID: LD-21H-96

Collected: 13 February 1996
Location: 28° 48' 07.6" N
81° 39' 51.0" W
Length: 122 cm
Description: 26-28 cm and 54-56 cm, sand
0-58 cm, red-brown floc
58-end darker brown-green 75-76 cm and 95-97 cm, plant fibers

Water Depth: 340 cm

Soft Sediment Thickness: 299 cm

**Station #22**

Core ID: LD-22H-96

Collected: 13 February 1996
Location: 28° 47' 29.9" N
81° 41' 13.1" W
Length: 130 cm
Description: 20-24 cm and 38-40 cm, sand
0-45 cm red-brown
45-end darker brown
66-78 cm plant fibers

Water Depth: 360 cm

Soft Sediment Thickness: 225 cm

**Station #6**

| | |
|---|---|
| Core ID: | LD-6H-98 |
| Collected: | 24 March 1998 |
| Location: | 28° 47' 54.8" N<br>81° 40' 00.7" W |
| Length: | 136 cm |
| Description: | dark organic sediment "floc" to 36 cm, consolidated single peds below 60 cm |
| Water Depth: | 410 cm |
| Soft Sediment Thickness: | 480 cm |

**Station #12**

| | |
|---|---|
| Core ID: | LD-12H-98 |
| Collected: | 24 March 1998 |
| Location: | 28° 47' 21.8" N<br>81° 41' 43.5" W |
| Length: | 124 cm |
| Description: | dark brown organic sediment, gas formation in core tube, color is darker below 75 cm, color darkens with $H_2S$ smell at 68-72 cm |
| Water Depth: | 425 cm |
| Soft Sediment Thickness: | 225 cm |

# APPENDIX C

## LAKE EUSTIS
## SURVEY SITES

Field core description and station location
for survey cores collected during
Phase I and Phase II, Lake Eustis.

### Key to Field Notes

**Station Location Data** for stations are latitude and longitude values obtained from a Trimble Navigation Global Positioning System Pathfinder. Station locations were stored as waypoint values on the system. An initial reading was taken after anchoring on station and a second reading was taken when work was completed. Only one reading is recorded here.

**Sediment Survey Data** include information on water depth, sediment thickness, and descriptions of the sediment cores retrieved.

Depth of the water column was determined by sounding with a Secchi disc on a metered line.

Depth to hard bottom was measured by inserting metered electrical conduit rods into the sediment until they bottomed on hard, sandy deposits.

Soft sediment thickness was estimated by subtracting the depth of the water column from the depth to hard bottom.

Sediment core length was determined by measuring the retrieved core with a meter stick.

Sediment core descriptions were made before sediment cores were extruded. Additional descriptions were made as the cores were sectioned.

# LAKE EUSTIS PHASE I SURVEY

**Station #1**

Core ID: LE-1S-95

Collected: 26 July 95
Location: 28° 49' 47.0" N
81° 42' 11.6" W
Length: 0 cm
Description: No soft sediments, sand and shells

Water Depth: 450 cm

**Station #2**

Core ID: LE-2S-95

Collected: 26 July 95
Location: 28° 50'14.5" N
81° 42' 47.3" W
Length: 0 cm
Description: No soft sediments, sand and shells

Water Depth: 530 cm

**Station #3**

Core description and location are missing.

**Station #4**

Core ID: LE-4S-95

Collected: 25 July 95
Location: 28° 50' 59" N ±2 "
81° 41' 51" W ±2 "
Length: 80 cm
Description: No data

Water Depth: No data

Soft Sediment Thickness: No data

**Station #5**

Core ID: LE-5S-95

Collected: 26 July 95
Location: 28° 49' 13.4" N
81° 44' 46.1" W
Length: 40 cm
Description: Sand at 36 cm

Water Depth: 300 cm

**Station #6**

Core ID: LE-6S-95

Collected: 26 July 95
Location: 28° 49' 33.2" N
81° 44' 15.1" W
Length: 72 cm
Description: Sand at 76 cm

Water Depth: 310 cm

**Station #7**

Core ID: LE-7S-95

Collected: 26 July 95
Location: 28° 49' 58.5" N
81° 43' 50.7" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 390 cm

**Station #8**

Core ID: LE-8S-95

Collected: 26 July 95
Location: 28° 50' 20.2" N
81° 43' 23.3" W
Length: 80 cm
Description: Sand at 84-86 cm

Water Depth: 380 cm

**Station #9**

Core ID: LE-9S-95

Collected: 26 July 95
Location: 28° 50' 43.5" N
81° 42' 57.8" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 370 cm

**Station #10**

Core ID: LE-10S-95

Collected: 26 July 95
Location: 28° 51' 07.8" N
81° 42' 29.8" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 320 cm

**Station #11**

Core description and location are missing.

**Station #12**

Core ID: LE-12S-95

Collected: 26 July 95
Location: 28° 49' 18.5" N
81° 45' 22.1" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 250 cm

**Station #13**

Core ID: LE-13S-95

Collected: 26 July 95
Location: 28° 49' 43.7" N
81° 44' 53.9" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 340 cm

**Station #14**

Core ID: LE-14S-95

Collected: 26 July 95
Location: 28° 50' 07.4" N
81° 44' 27.8" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 440 cm

**Station #15**

Core ID: LE-15S-95

Collected: 26 July 95
Location: 28° 50' 30.2" N
81° 43' 59.0" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 350 cm

**Station #16**

Core ID: LE-16S-95

Collected: 26 July 95
Location: 28° 50' 53.6" N
81° 43' 31.5" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 350 cm

**Station #17**

Core ID: LE-17S-95

Collected: 26 July 95
Location: 28° 51' 16.9" N
81° 43' 04.7" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 380 cm

**Station #18**

Core ID: LE-18S-95

Collected: 26 July 95
Location: 28° 51' 40.7" N
81° 42' 38.4" W
Length: 80 cm
Description: Sand at 92 cm

Water Depth: 310 cm

**Station #19**

Core ID: LE-19S-95

Collected: 26 July 95
Location: 28° 52' 03.6" N
81° 42' 11.8" W
Length: 80 cm
Description: Sand at 46 cm

Water Depth: 250 cm

**Station #20**

Core ID: LE-20S-95

Collected: 26 July 95
Location: 28° 50' 18.5" N
81° 45' 00.6" W
Length: 56 cm
Description: Sand at 50 cm

Water Depth: 350 cm

**Station #21**

Core ID: LE-21S-95

Collected: 26 July 95
Location: 28° 50' 42.3" N
81° 44' 35.9" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 290 cm

**Station #22**

Core ID: LE-22S-95

Collected: 26 July 95
Location: 28° 51' 03.2" N
81° 44' 10.0" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 330 cm

**Station #23**

Core ID: LE-23S-95

Collected: 26 July 95
Location: 28° 51' 26.6" N
81° 43' 42.7" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 320 cm

**Station #24**

Core ID: LE-24S-95

Collected: 26 July 95
Location: 28° 51' 49.7" N
81° 43' 14.0" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 330 cm

**Station #25**

Core ID: LE-25S-95

Collected: 26 July 95
Location: 28° 51' 10.7" N
81° 44' 48.2" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 310 cm

**Station #26**

Core ID: LE-26S-95

Collected: 26 July 95
Location: 28° 51' 34.0" N
81° 44' 20.5" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 290 cm

**Station #27**

Core ID: LE-27S-95

Collected: 26 July 95
Location: 28° 51' 57.6" N
81° 43' 52.3" W
Length: 80 cm
Description: No visible stratigraphy

Water Depth: 300 cm

## LAKE EUSTIS PHASE II SURVEY

**Station LE-1**

Core ID: LE-1S-97

Collected: 19 December 1997
Location: 28° 49' 48.2" N
81° 43' 13.7" W
Length: 10 cm, no samples.
Description: Sand with organic material.
0-10 cm, sand mixed with organic matter, white/brown

Water Depth: 515 cm
Soft Sediment Thickness: 5 cm

**Station LE-2**

Core ID: LE-2S-97

Collected: 19 December 1997
Location: 28° 50' 14.0" N
81° 42' 44.6" W
Length: 10 cm, no samples.
Description: Floc over sand over clay
0-1 cm floc, 1-6 cm sand and organic matter, 6-10 cm grey clay and sand.

Water Depth: 545 cm
Soft Sediment Thickness: 5 cm

**Station LE-3**

Core ID: LE-3S-97

Collected: 18 December 1997
Location: 28° 50' 36.5" N
81° 42' 18.2" W
Length: 116 cm
Description: Dark-brown sediment. Floc with worm casings to 27 cm, dark-brown organic matter below 27 cm.
0-24 cm, suspension with worm casings to 36 cm. White particles 40-44 cm. Extruded as single ped below 52 cm. Plant material at 56-60 and 64-68 cm.

Water Depth: 330 cm
Soft Sediment Thickness: 270 cm

## Station LE-4

| | |
|---|---|
| Core ID: | LE-4S-97 |
| Collected: | 18 December 1997 |
| Location: | 28° 50' 59.4" N<br>81° 41' 51.9" W |
| Length: | 16 cm |
| Description: | Dark-brown organic matter over sand. Floc to 6 cm with shells at 5 cm. Change in consistency at 11 cm. Green algae at sediment water interface. $H_2S$ smell and sandy at 12-16 cm. |
| Water Depth: | 340 cm |
| Soft Sediment Thickness: | 30 cm |

## Station LE-6

| | |
|---|---|
| Core ID: | LE-6S-97 |
| Collected: | 8 December 1997 |
| Location: | 28° 49' 34.7" N<br>81° 44' 16.8" W |
| Length: | 135 cm |
| Description: | Loose unconsolidated floc to 18 cm with a gradual change over the next 18 cm in color and consistency. 4-8 cm, worm-like tubes, 8-12 cm, shells. Sediment becoming lumpy at 16-20 cm, at 28-32 cm much stiffer. Extruded as single ped from 36-40 cm. Few shells at 56-60 cm. Less consolidated at 100 cm. |
| Water Depth: | 315 cm |
| Soft Sediment Thickness: | 90 cm |

## Station LE-5

| | |
|---|---|
| Core ID: | LE-5-937 |
| Collected: | 8 December 1997 |
| Location: | 28° 49' 14.1" N<br>81° 44′ 43.6" W |
| Length: | 16 cm |
| Description: | Unconsolidated organic matter to 13 cm. Interbedded sand and mud from 13 to 31 cm with distinct bands at 15, 19 and 24 cm with a thick band at 26-28 cm. 31-43 cm pure fine white sand, difficult to extrude. First 16 cm saved as composite sample. |
| Water Depth: | 315 cm |
| Soft Sediment Thickness: | 60 cm |

## Station LE-7

| | |
|---|---|
| Core ID: | LE-7S-97 |
| Collected: | 8 December 1997 |
| Location: | 28° 49' 56.7" N<br>81° 43' 49.5" W |
| Length: | 116 cm |
| Description: | Entire core is dark brown soft sediment with no distinct stratigraphy to 46 cm where scattered sand veins are found to 69 cm. 0-4 cm, worm-like structures. Algae (green color), 4-8 cm. Shells to 20 cm where sediments become stiffer. Plant fibers and single ped at 20-24 cm. Sand at 28 cm with scattered large sand grains at 32-36 and 44-48 cm. 72-76 cm, red oval structures, probably of plant origin. |
| Water Depth: | 400 cm |
| Soft Sediment Thickness: | 315 cm |

**Station LE-8**

Core ID: LE-8S-97

Collected: 8 December 1997
Location: 28° 50' 22.2" N
81° 43' 23.4" W
Length: 110 cm
Description: Core is mostly soft sediment with some evidence of sand. Worm-like structures 0-8 cm. 24-28 cm sediment becoming lumpy. 28-32 cm single ped, jelly-like texture. 52-56 cm shells, white fragments or precipitate.
Water Depth: 370 cm
Soft Sediment Thickness: 375 cm

**Station LE-9**

Core ID: LE-9S-97

Collected: 8 December 1997
Location: 28° 50' 44.8" N
81° 42' 58.0" W
Length: 115 cm
Description: Soft brown sediment over entire core with a few shells at 28 cm. Sediment similar to LE-8.
0-4 cm worm-like structures. 28-36 cm clumpy. 36-40 single ped.
Water Depth: 380 cm
Soft Sediment Thickness: 340 cm

**Station LE-10**

Core ID: LE-10S-97

Collected: 18 December 1997
Location: 28° 51' 08.0" N
81° 42' 28.6" W
Length: 140 cm
Description: Dark-brown sediment with floc and few worm casings to 17 cm. White particles at 9 cm, shells at 22 cm, plant fibers at 60 cm. Sand at 93-95, 98-193 and 106-107 cm. Red"rust" particles at 95-98 cm and plant material at 132 cm.
0-20 cm suspension with worm casings to 38 cm. Shells 4-8 cm, white particles 20-24 cm with live chironomid at 24 cm. Extruded as single ped below 28 cm. Large sand grains 68-72 cm and sand present 92-104 cm.

Water Depth: 340 cm
Soft Sediment Thickness: 270 cm

**Station LE-11**

Core ID: LE-11S-97

Collected: 9 December 1997
Location: 28° 51' 32.6" N
81° 42' 02.6" W
Length: 143 cm
Description: Same dark-brown organic material as found in previous cores. Color change at 34.5 cm. Plant fiber at 85 and 111 cm. Sand at 95, 100, and 119 cm.
12-16 cm, large plant fragment. Unconsolidated sediment becoming stiffer from 28-36 cm. Ped section at 36-40 cm contains plant material at surface.
Water Depth: 290 cm
Soft Sediment Thickness: 435 cm

## Station LE-12

| | |
|---|---|
| Core ID: | LE-12S-97 |
| Collected: | 10 December 1997 |
| Location: | 28° 49' 19.6" N<br>81° 45' 22.3" W |
| Length: | 77 cm |
| Description: | Soft-brown organic sediment except bottom with sand at bottom.<br>0-8 cm, worm-like material. 8-16 cm no longer suspension, plant fragments. 16-24 cm, orange particles, smooth oblong shapes, possible mineral material. 24-28 cm, ped-like section. 44-48 cm, some consistency but not single ped. Macrophytes, 68 cm to bottom. |
| Water Depth: | 250 cm |
| Soft Sediment Thickness: | 150 cm |

## Station LE-14

| | |
|---|---|
| Core ID: | LE-14S-97 |
| Collected: | 18 December 1997 |
| Location: | 28° 50' 06.5" N<br>81° 44' 27.1" W |
| Length: | 140 cm |
| Description: | Dark-brown sediments over lighter color material. 0-18 cm floc with worm casings, 28 cm darker brown, 49-56 small sand layer, 63 cm sand, 70 cm lighter brown, 93 cm down shells intermixed, 96-108 mottled matrix (dark and light brown), 108-125 light brown with shells, 125-130 clay-like material, 130-140 similar to 108-125.<br>0-12 cm suspension, 24-28 small white particles, 28-32 extruded as single ped, 44-48 plant fragments, 84-88 texture change, 88-92 shells, and 96-100 many shells. |
| Water Depth: | 525 cm |
| Soft Sediment Thickness: | 545 cm |

## Station LE-13

| | |
|---|---|
| Core ID: | LE-13S-97 |
| Collected: | 19 December 1997 |
| Location: | 28° 49' 42.0" N<br>81° 44' 55.4" W |
| Length: | 131 cm |
| Description: | Dark-brown sediment. 0-17 cm floc with sand at 37, 51, 74, 83 and 97 cm. Hydra-like"critters" and green algae at sed/water interface. 0-4 cm worm-like casts, live red worm at 8 cm. Suspension above 12 cm. Extruded as single ped below 28 cm. 28-32 cm plant fibers. Sand grains present below 32 cm and plant fibers below 92 cm. |
| Water Depth: | 330 cm |
| Soft Sediment Thickness: | 275 cm |

## Station LE-15

| | |
|---|---|
| Core ID: | LE-15S-97 |
| Collected: | 18 December 1997 |
| Location: | 28° 50' 30.5" N<br>81° 43' 58.6" W |
| Length: | 140 cm |
| Description: | Dark-brown sediment with floc and worm casings to 22 cm. Sand at 63, 86-89 and 91 cm. Plant fibers at 79, 106, 131 cm. Gas formation throughout core.<br>0-12 cm worm casings. 0-16 cm suspension, extruded as single ped below 52 cm. 64-76 cm very sandy, plant fibers from 112-116 cm. |
| Water Depth: | 375 cm |
| Soft Sediment Thickness: | 305 cm |

**Station LE-16**

Core ID: LE-16S-97

Collected: 18 December 1997
Location: 28° 50' 53.7" N
81° 43' 32.3" W
Length: 148 cm
Description: Dark-brown sediment with change in consistency at 18 cm. 47 cm plant material, 53 cm white particles. Sand at 57, 64-65 and 72 cm. Plant material and sand at 61 cm. Rust-colored particle at 67 cm. 133-145 cm mottled brown and black. 145 cm and below light brown with shells.
0-4 cm algae and worm casts. Suspension above 16 cm. Plant fibers 16-20 cm. Extruded as single ped below 32-36 cm. 48-52 cm $H_2S$ smell. Plant fibers 72-76 cm.

Water Depth: 370 cm
Soft Sediment Thickness: 320 cm

**Station LE-17**

Core ID: LE-17S-97

Collected: 18 December 1997
Location: 28° 51' 17.8" N
81° 43' 02.4" W
Length: 123 cm
Description: Dark-brown sediment. Floc from 0-20 cm with worm casings to 16 cm. with suspension above 12 cm. White particles at 25 cm. Rust-colored particles at 93 cm.
0-12 cm suspension with invertebrates (Daphnia?) at sed/water interface. Below 32 cm extruded as single ped. $H_2S$ smell at 62 cm.

Water Depth: 395 cm
Soft Sediment Thickness: 420 cm

**Station LE-18**

Core ID: LE-18S-97

Collected: 9 December 1997
Location: 28° 51' 40.0" N
81° 42' 37.4" W
Length: 120 cm
Description: Dark-brown sediment like other stations with thin sand layer at 41 cm and small amount of sand at 64 and 67 cm.
16-24 cm, slightly clumped. First, jelly-like ped at 24-28 cm. Fish vertebrae at 116-120 cm
Water Depth: 320 cm
Soft Sediment Thickness: 270 cm

**Station LE-19**

Core ID: LE-19S-97

Collected: 9 December 1997
Location: 28° 52' 02.0" N
81° 42' 12.1" W
Length: 130 cm
Description: Green glob (ball) at surface with one shell at 15 cm. Sand at 59, 67, 84, 90 and 99 cm. Sharp contact and distinct color, more orange at 125 cm. Bottom orange-colored section contains gelatinous and spongy plant material.
24-28 cm lumpy, extracted as ped. 28-36 cm lumpy with first ped section at 36-40 cm.
Water Depth: 265 cm
Soft Sediment Thickness: 275 cm

**Station LE-20**

| | |
|---|---|
| Core ID: | LE-20S-97 |
| Collected: | 19 December 1997 |
| Location: | 28° 50' 15.8" N<br>81° 44' 59.7" W |
| Length: | 40 cm |
| Description: | Dark brown organic sediments to 23 cm. 0-10 cm floc with green algae and worm castings. 10-17 cm somewhat consolidated. Floc 17-23 cm. 23-34 cm fine sand with organic matter and shells. 34-36 cm dark layer. 36-40 cm coarse sand with very little organic matter. |
| Water Depth: | 370 cm |
| Soft Sediment Thickness: | 65 cm |

**Station LE-22**

| | |
|---|---|
| Core ID: | LE-22S-97 |
| Collected: | 18 December 1997 |
| Location: | 28° 51' 04.4" N<br>81° 44' 09.2" W |
| Length: | 136 cm |
| Description: | Dark-brown sediment with floc and worm castings to 23 cm. Sand at 75-77 cm. Mottled light and dark brown at 129 cm.<br>0-16 cm suspension with worm castings to 36 cm. Extruded as single ped below 36 cm. Plant fibers at 4-8 and 32-36 cm. Sand at 56-64 cm. $H_2S$ smell at 120 cm. |
| Water Depth: | 360 cm |
| Soft Sediment Thickness: | 320 cm |

**Station LE-21**

| | |
|---|---|
| Core ID: | LE-21S-97 |
| Collected: | 9 December 1997 |
| Location: | 28° 50' 41.3" N<br>81° 44' 35.2" W |
| Length: | 120 cm |
| Description: | Very little visible stratigraphy. Sand visible at 42, 57, 85, 92 and 117 cm.<br>Lost approximately 1 cm surface flocculent material. Worm-like structures at 4-20 cm. 16-20 cm sediments becoming clumpy, 20-24 more consolidated and jelly-like to 32 cm. 28-32 cm, single ped. |
| Water Depth: | 310 cm |
| Soft Sediment Thickness: | 600 cm |

**Station LE-23**

| | |
|---|---|
| Core ID: | LE-23S-97 |
| Collected: | 18 December 1997 |
| Location: | 28° 51' 26.7" N<br>81° 43' 40.6" W |
| Length: | 136 cm |
| Description: | Dark-brown sediment with floc to 23.5 cm and worm casings to 33 cm. Sand at 77, 103, and 126 cm and plant fibers at 96 cm.<br>0-16 cm suspension with worm castings to 36 cm. Extruded as single ped below 32 cm. Plant fibers at 80-84 cm. $H_2S$ smell at 104-108 cm. |
| Water Depth: | 345 cm |
| Soft Sediment Thickness: | 610 cm |

**Station LE-24**

Core ID: LE-23S-97

Collected: 9 December 1997
Location: 28° 51' 51.6" N
81° 43' 13.2" W
Length: 125 cm
Description: Dark-brown sediment with sand layers at 70 and 80-84 cm and some sand at 89 cm. 0-8 cm, worm-like structures and small balls of green algae like balls at LE-7. Clumpy at 24-28 cm and a single ped at 32-36 cm. Part of leaf, possibly Vallisneria or sedge at 92-96 cm.
Water Depth: 330 cm
Soft Sediment Thickness: 230 cm

**Station LE-26**

Core ID: LE-26S-97

Collected: 9 December 1997
Location: 28° 51' 32.1" N
81° 44' 22.3" W
Length: 120 cm
Description: Dark-brown sediment with very little stratigraphy, sand layer at 106 cm and sand from 107-120 cm but no layer. 0-8 cm, worm-like structures, sediment becoming clumpy from 12-20 cm. 24-28 cm jelly-like sediment. $H_2S$ odor at 84-88 cm.
Water Depth: 300 cm
Soft Sediment Thickness: 345 cm

**Station LE-25**

Core ID: LE-25S-97

Collected: 9 December 1997
Location: 28° 51' 09.5" N
81° 44' 47.0" W
Length: 115 cm
Description: Dark brown sediment, like other cores, little visible stratigraphy, small shells at 11 cm, sand at 73 and 91 cm. 0-4 cm, worm-like structures. 16-26 cm, still loose sediment with jelly-like ped at 22-24 and 24-28 cm.
Water Depth: 310 cm
Soft Sediment Thickness: 335 cm

**Station LE-27**

Core ID: LE-27S-97

Collected: 9 December 1997
Location: 28° 51' 56.7" N
81° 43' 51.5" W
Length: 110 cm
Description: Dark-brown sediment, with sand layers at 47, 66 and 80 cm and a pocket of sand at 70 cm. 0-12 cm, worm-like structures. Nearly ped-like and fairly loose sediment from 20-36 cm. Single ped section, 36-40 cm.
Water Depth: 315 cm
Soft Sediment Thickness: 215 cm

# APPENDIX D

## LAKE EUSTIS HISTORIC SITES

Field core description and station location for historic cores collected during Phase I and Phase II, Lake Eustis.

### Key to Field Notes

**Station Location Data** for stations are latitude and longitude values obtained from a Trimble Navigation Global Positioning System Pathfinder. Station locations were stored as waypoint values on the system. An initial reading was taken after anchoring on station and a second reading was taken when work was completed. Only one reading is recorded here.

**Sediment Survey Data** include information on water depth, sediment thickness, and descriptions of the sediment cores retrieved.

Depth of the water column was determined by sounding with a Secchi disc on a metered line.

Depth to hard bottom was measured by inserting metered electrical conduit rods into the sediment until they bottomed on hard, sandy deposits.

Soft sediment thickness was estimated by subtracting the depth of the water column from the depth to hard bottom.

Sediment core length was determined by measuring the retrieved core with a meter stick.

Sediment core descriptions were made before sediment cores were extruded. Additional descriptions were made as the cores were sectioned.

## LAKE EUSTIS PHASE I HISTORIC

**Station #11**

| | |
|---|---|
| Core ID: | LE-11H-95 |
| Collected: | 26 May 1995 |
| Location: | 28° 51' 32.6" N<br>81° 42' .013" W |
| Length: | 138 cm |

**Station #13**

| | |
|---|---|
| Core ID: | LE-13H-95 |
| Collected: | 19 May 1995 |
| Location: | 28° 49' 46.6" N<br>81° 44' 54.2" W |
| Length: | 130 cm |
| Water Depth: | 340 cm |

**Station #16**

| | |
|---|---|
| Core ID: | LE-16H-95 |
| Collected | 26 May 1995 |
| Location: | 28° 50' 54" N<br>81° 43' 43.34" W |
| Length: | 122 cm |
| Water Depth: | 120 cm |

**Station #28**

| | |
|---|---|
| Core ID: | LE-28H-96 |
| Collected: | 20 February 1996 |
| Location: | 28° 50' 55.4" N<br>81° 44' 30.9" W |
| Length: | 120 cm |
| Description: | sand layers at 57 cm and 79 cm<br>no other stratigraphy |
| Water Depth: | 330 cm |
| Soft Sediment Thickness: | 615 cm |

**Station #29**

| | |
|---|---|
| Core ID | LE-29H-96 |
| Collected: | 20 February 1996 |
| Location: | 28° 50' 14.5" N<br>81° 43' 59.4" W |
| Length: | 130 cm |
| Description: | sand at 65 cm,<br>no other stratigraphy |
| Water Depth: | 430 cm |
| Soft Sediment Thickness: | 220 cm |

**Station #3**

Core ID LE-3H-98

Collected: 24 March 1998
Location: 28° 50' 36.0" N
81° 42' 17.3" W
Length: 134 cm
Description: dark brown organic matter "floc" to 26 cm
worm-like castings to 10 cm
some gas development at and below 46 cm
single ped, $H_2S$ below 28 cm
plant fibers below 128 cm

Water Depth: 365 cm

Soft Sediment Thickness: 265 cm

**Station LE-13**

Core ID: LE-13Pb-97

Collected: 19 December 1997
Location: 28° 49' 42.0" N
81° 44' 55.3" W
Length: 131 cm
Description: Dark-brown sediment. Green algae at sed/water interface. Suspension above 16 cm. Worm cases visible to 16 cm. Extruded as single ped below 22 cm. 10-12 cm few sand grains. 30-32 cm coarse sand grains. 32 cm live red worm. 32-34 cm fine sand grains and plant fibers to 40 cm. 38-40 plant fragment. 40-48 cm vertical sand vein. 64-68 cm few sand grains. 68-108 cm organic matter intermixed with sand grains. 108-110 cm sand pocket. 114-116 and 128-130 cm terrestrial leaf.

Water Depth: 330 cm
Soft Sediment Thickness: 275 cm

**Station #27**

Core ID LE-27H-98

Collected: 24 March 1998
Location: 28° 51' 57.6" N
81° 43' 52.6" W
Length: 146 cm
Description: dark brown organic matter over banded mineral seds ~1.1 m, worm-like castings to 10 cm, thin sand layer at ~18 cm, "floc" above 22 cm, sand layer at 61-63 cm, red-colored plant material 64-68 cm, sand layer with plant material 75 cm, sand layer ~80-86 cm, transition to pink materials ~106 cm, light band of sediment ~120-123 cm, dark band of sediment 125-130 cm, dark band of sediment 130-140 cm, shell layer 140-146
cm, invertebrates at sed/water interface, single ped below 24 cm, plant fibers below 124 cm

Water Depth: 345 cm

Soft Sediment Thickness: 210 cm

# APPENDIX E

## PHYSICAL AND CHEMICAL DATA
## LAKE DORA
## SURVEY CORES

Gravimetric and chemical data, Lake Dora survey cores, Phase I.
See Appendix A for collection date, location and description of cores.

CODES:
- Depth is depth (cm)
- Dry is % dry weight
- Rho is dry weight density (g dry/g cc wet)
- LOI is % loss on ignition
- TN is total nitrogen (%)
- TC is total carbon (%)
- TC/TN is TC/TN mass ratio
- Cum weight is cumulative mass (g $cm^{-2}$)
- NAIP is non-apatite inorganic phosphorus (mg $g^{-1}$),
- Cum NAIP is cumulative NAIP (mg $cm^{-2}$)
- TP is total phosphorus (mg $g^{-1}$)
- Cum TP is cumulative TP (mg $cm^{-2}$)

Lake Dora Survey Cores

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 0.232 | 0.002 | 77.8 | 4.11 | 35.5 | 8.64 | 0.013 | 1.49 | 0.019 | 2.65 | 0.034 |
| 1 | 10 | 0.875 | 0.009 | 75.4 | 4.24 | 36.3 | 8.57 | 0.054 | 1.31 | 0.073 | 2.65 | 0.144 |
| 1 | 15 | 0.956 | 0.010 | 74.5 | 3.99 | 35.4 | 8.88 | 0.108 | 1.12 | 0.134 | 2.70 | 0.289 |
| 1 | 20 | 1.365 | 0.014 | 69.2 | 3.73 | 34.1 | 9.13 | 0.178 | 0.96 | 0.201 | 2.11 | 0.437 |
| 1 | 25 | 1.997 | 0.020 | 62.4 | 3.31 | 30.9 | 9.34 | 0.283 | 0.70 | 0.274 | 1.78 | 0.624 |
| 1 | 30 | 3.039 | 0.031 | 45.5 | 2.91 | 27.8 | 9.56 | 0.445 | 0.54 | 0.361 | 1.47 | 0.863 |
| 1 | 35 | 4.375 | 0.045 | 64.1 | 2.81 | 27.4 | 9.74 | 0.673 | 0.35 | 0.440 | 1.19 | 1.134 |
| 1 | 40 | 3.724 | 0.038 | 47.0 | 2.74 | 27.4 | 10.00 | 0.866 | 0.39 | 0.514 | 1.19 | 1.363 |
| 1 | 45 | 5.326 | 0.055 | 56.1 | 2.30 | 23.6 | 10.24 | 1.162 | 0.37 | 0.623 | 1.19 | 1.714 |
| 1 | 50 | 3.903 | 0.040 | 52.3 | 2.64 | 27.5 | 10.41 | 1.368 | 0.37 | 0.699 | 1.15 | 1.950 |
| 1 | 55 | 4.372 | 0.045 | 53.2 | 2.42 | 24.7 | 10.22 | 1.586 | 0.38 | 0.783 | 1.23 | 2.218 |
| 1 | 60 | 4.490 | 0.046 | 48.6 | 2.37 | 25.3 | 10.67 | 1.827 | 0.42 | 0.885 | 1.22 | 2.512 |
| 1 | 65 | 4.821 | 0.049 | 48.3 | 2.40 | 25.7 | 10.72 | 2.082 | 0.35 | 0.975 | 1.15 | 2.807 |
| 1 | 70 | 5.139 | 0.053 | 51.0 | 2.34 | 25.3 | 10.79 | 2.350 | 0.27 | 1.047 | 0.79 | 3.019 |
| 1 | 75 | 5.314 | 0.055 | 54.6 | 2.47 | 26.8 | 10.83 | 2.619 | 0.26 | 1.118 | 0.69 | 3.204 |
| 1 | 80 | 5.057 | 0.052 | 58.0 | 2.71 | 29.5 | 10.87 | 2.908 | 0.23 | 1.184 | 0.66 | 3.396 |
| 1 | 85 | 4.877 | 0.050 | 63.2 | 2.90 | 32.4 | 11.18 | 3.169 | 0.21 | 1.239 | 0.47 | 3.520 |
| 1 | 90 | 4.767 | 0.049 | 64.9 | 2.86 | 32.7 | 11.43 | 3.422 | 0.19 | 1.288 | 0.43 | 3.629 |
| 1 | 95 | 4.641 | 0.047 | 69.2 | 2.93 | 33.1 | 11.30 | 3.680 | 0.18 | 1.333 | 0.39 | 3.731 |
| 1 | 100 | 3.991 | 0.041 | 67.8 | 2.81 | 32.1 | 11.42 | 3.881 | 0.16 | 1.366 | 0.36 | 3.804 |
| 1 | 105 | 4.366 | 0.045 | 65.6 | 2.62 | 30.3 | 11.58 | 4.112 | 0.15 | 1.401 | 0.35 | 3.885 |
| 1 | 110 | 4.838 | 0.050 | 55.4 | 2.41 | 28.0 | 11.60 | 4.376 | 0.16 | 1.444 | 0.34 | 3.974 |
| 1 | 115 | 4.103 | 0.042 | 65.6 | 2.73 | 32.9 | 12.04 | 4.599 | 0.14 | 1.475 | 0.30 | 4.041 |
| 1 | 120 | 5.029 | 0.051 | 70.2 | 2.63 | 31.3 | 11.89 | 4.872 | 0.10 | 1.503 | 0.26 | 4.113 |
| 1 | 125 | 4.253 | 0.043 | 65.8 | 2.76 | 33.0 | 11.96 | 5.089 | 0.12 | 1.528 | 0.27 | 4.171 |
| 1 | 130 | 4.679 | 0.048 | 69.1 | 2.75 | 33.2 | 12.08 | 5.347 | 0.11 | 1.557 | 0.26 | 4.237 |

Lake Dora Survey Cores

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 5 | 0.697 | 0.007 | 81.8 | 3.93 | 35.8 | 9.11 | 0.036 | 1.21 | 0.044 | 2.40 | 0.086 |
| 2 | 10 | 0.752 | 0.008 | 80.4 | 4.77 | 32.1 | 6.72 | 0.076 | 1.19 | 0.091 | 2.55 | 0.188 |
| 2 | 15 | 0.829 | 0.008 | 81.7 | 3.92 | 35.7 | 9.11 | 0.120 | 1.23 | 0.145 | 2.68 | 0.306 |
| 2 | 20 | 0.877 | 0.009 | 77.9 | 3.79 | 36.4 | 9.60 | 0.167 | 1.16 | 0.200 | 2.58 | 0.426 |
| 2 | 25 | 0.941 | 0.009 | 74.6 | 3.65 | 35.9 | 9.83 | 0.213 | 1.10 | 0.251 | 2.18 | 0.527 |
| 2 | 30 | 1.589 | 0.016 | 73.9 | 3.64 | 36.0 | 9.90 | 0.297 | 0.95 | 0.330 | 2.17 | 0.709 |
| 2 | 35 | 2.036 | 0.021 | 66.5 | 3.38 | 33.8 | 10.01 | 0.404 | 0.71 | 0.406 | 1.81 | 0.902 |
| 2 | 40 | 2.242 | 0.023 | 61.2 | 2.94 | 30.8 | 10.47 | 0.518 | 0.53 | 0.467 | 1.60 | 1.085 |
| 2 | 45 | 2.836 | 0.029 | 58.8 | 3.02 | 32.3 | 10.68 | 0.679 | 0.45 | 0.539 | 1.26 | 1.289 |
| 2 | 50 | 2.795 | 0.028 | 55.8 | 2.53 | 27.3 | 10.77 | 0.819 | 0.47 | 0.604 | 1.35 | 1.477 |
| 2 | 55 | 3.616 | 0.037 | 55.1 | 2.44 | 27.6 | 11.30 | 1.014 | 0.43 | 0.688 | 1.29 | 1.728 |
| 2 | 60 | 3.453 | 0.035 | 56.4 | 2.45 | 27.9 | 11.37 | 1.197 | 0.38 | 0.757 | 1.03 | 1.917 |
| 2 | 65 | 3.471 | 0.035 | 61.4 | 2.59 | 28.1 | 10.86 | 1.365 | 0.33 | 0.812 | 0.93 | 2.073 |
| 2 | 70 | 3.629 | 0.037 | 58.2 | 2.61 | 28.8 | 11.05 | 1.563 | 0.30 | 0.872 | 0.79 | 2.230 |
| 2 | 75 | 3.390 | 0.034 | 58.7 | 2.49 | 27.6 | 11.09 | 1.744 | 0.34 | 0.934 | 0.87 | 2.388 |
| 2 | 80 | 3.937 | 0.040 | 62.5 | 2.70 | 30.6 | 11.33 | 1.932 | 0.23 | 0.977 | 0.59 | 2.499 |
| 2 | 85 | 3.792 | 0.039 | 67.9 | 2.83 | 33.0 | 11.65 | 2.150 | 0.19 | 1.019 | 0.45 | 2.597 |
| 2 | 90 | 3.592 | 0.037 | 70.1 | 2.86 | 33.8 | 11.83 | 2.357 | 0.18 | 1.057 | 0.36 | 2.672 |
| 2 | 95 | 3.484 | 0.035 | 68.5 | 2.80 | 32.7 | 11.68 | 2.525 | 0.16 | 1.084 | 0.34 | 2.728 |
| 2 | 100 | 3.522 | 0.036 | 71.5 | 2.86 | 34.2 | 11.96 | 2.717 | 0.15 | 1.113 | 0.30 | 2.787 |
| 2 | 105 | 3.553 | 0.036 | 69.5 | 2.90 | 33.3 | 11.47 | 2.909 | 0.16 | 1.143 | 0.31 | 2.847 |
| 2 | 110 | 3.787 | 0.039 | 69.5 | 2.87 | 33.3 | 11.61 | 3.110 | 0.12 | 1.168 | 0.26 | 2.898 |
| 2 | 115 | 3.515 | 0.036 | 70.7 | 2.89 | 34.0 | 11.77 | 3.293 | 0.13 | 1.191 | 0.25 | 2.944 |
| 2 | 120 | 3.774 | 0.038 | 67.2 | 2.86 | 33.7 | 11.78 | 3.481 | 0.11 | 1.211 | 0.22 | 2.986 |
| 2 | 125 | 4.159 | 0.042 | 64.7 | 2.76 | 32.4 | 11.72 | 3.707 | 0.10 | 1.233 | 0.22 | 3.035 |
| 2 | 130 | 3.932 | 0.040 | 71.1 | 2.82 | 33.7 | 11.94 | 3.921 | 0.09 | 1.253 | 0.22 | 3.082 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 5 | 0.635 | 0.006 | 78.7 | 4.35 | 37.0 | 8.51 | 0.028 | 1.36 | 0.037 | 2.87 | 0.079 |
| 4 | 10 | 0.889 | 0.009 | 76.2 | 4.10 | 36.5 | 8.90 | 0.072 | 1.25 | 0.094 | 2.65 | 0.197 |
| 4 | 15 | 1.240 | 0.012 | 73.2 | 3.90 | 35.1 | 8.99 | 0.138 | 0.95 | 0.156 | 2.22 | 0.343 |
| 4 | 20 | 1.622 | 0.016 | 71.1 | 3.71 | 34.0 | 9.15 | 0.223 | 0.79 | 0.223 | 2.05 | 0.518 |
| 4 | 25 | 1.919 | 0.019 | 62.9 | 3.44 | 32.0 | 9.31 | 0.318 | 0.61 | 0.281 | 1.67 | 0.675 |
| 4 | 30 | 2.530 | 0.026 | 56.5 | 3.15 | 30.6 | 9.70 | 0.451 | 0.49 | 0.346 | 1.33 | 0.853 |
| 4 | 35 | 2.571 | 0.026 | 57.8 | 2.83 | 27.8 | 9.83 | 0.588 | 0.47 | 0.411 | 1.39 | 1.044 |
| 4 | 40 | 3.516 | 0.036 | 54.9 | 2.66 | 26.6 | 10.02 | 0.776 | 0.37 | 0.480 | 1.27 | 1.281 |
| 4 | 45 | 3.783 | 0.039 | 52.8 | 2.50 | 26.0 | 10.41 | 0.976 | 0.92 | 0.665 | 1.98 | 1.678 |
| 4 | 50 | 3.960 | 0.040 | 55.0 | 2.63 | 27.8 | 10.56 | 1.187 | 0.31 | 0.730 | 0.88 | 1.864 |
| 4 | 55 | 3.855 | 0.039 | 58.4 | 2.73 | 29.1 | 10.67 | 1.386 | 0.22 | 0.775 | 0.65 | 1.993 |
| 4 | 60 | 3.853 | 0.039 | 63.4 | 2.88 | 31.6 | 10.96 | 1.597 | 0.21 | 0.818 | 0.55 | 2.108 |
| 4 | 65 | 4.022 | 0.041 | 67.9 | 2.89 | 32.2 | 11.13 | 1.814 | 0.17 | 0.854 | 0.47 | 2.211 |
| 4 | 70 | 3.787 | 0.039 | 69.9 | 2.95 | 33.5 | 11.35 | 2.013 | 0.12 | 0.878 | 0.38 | 2.287 |
| 4 | 75 | 3.642 | 0.037 | 66.6 | 2.89 | 33.0 | 11.41 | 2.207 | 0.13 | 0.904 | 0.38 | 2.361 |
| 4 | 80 | 3.577 | 0.036 | 68.5 | 2.96 | 34.2 | 11.56 | 2.392 | 0.12 | 0.927 | 0.36 | 2.427 |
| 4 | 85 | 3.707 | 0.038 | 69.1 | 2.87 | 33.6 | 11.71 | 2.590 | 0.12 | 0.950 | 0.31 | 2.487 |
| 4 | 90 | 3.643 | 0.037 | 66.6 | 2.83 | 33.2 | 11.74 | 2.784 | 0.16 | 0.981 | 0.40 | 2.565 |
| 4 | 95 | 3.918 | 0.040 | 70.3 | 2.94 | 34.6 | 11.78 | 2.990 | 0.11 | 1.003 | 0.27 | 2.620 |
| 4 | 100 | 3.791 | 0.039 | 71.1 | 2.90 | 34.5 | 11.91 | 3.195 | 0.11 | 1.026 | 0.27 | 2.675 |
| 4 | 105 | 3.974 | 0.040 | 70.4 | 2.86 | 34.4 | 12.04 | 3.422 | 0.11 | 1.052 | 0.25 | 2.731 |
| 4 | 110 | 4.962 | 0.051 | 68.5 | 2.73 | 33.5 | 12.26 | 3.680 | 0.11 | 1.079 | 0.23 | 2.792 |
| 4 | 115 | 4.635 | 0.047 | 65.8 | 2.63 | 33.3 | 12.68 | 3.935 | 0.10 | 1.104 | 0.22 | 2.848 |
| 4 | 120 | 4.857 | 0.050 | 64.1 | 2.54 | 32.7 | 12.89 | 4.183 | 0.08 | 1.124 | 0.21 | 2.900 |
| 4 | 125 | 4.327 | 0.044 | 65.0 | 2.52 | 32.9 | 13.06 | 4.393 | 0.09 | 1.142 | 0.20 | 2.941 |
| 4 | 130 | 5.346 | 0.055 | 63.7 | 2.45 | 32.1 | 13.08 | 4.735 | 0.09 | 1.172 | 0.19 | 3.005 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 5 | 0.845 | 0.008 | 77.4 | 4.24 | 36.5 | 8.60 | 0.044 | 1.28 | 0.056 | 3.32 | 0.146 |
| 5 | 10 | 1.018 | 0.010 | 73.1 | 3.91 | 34.9 | 8.91 | 0.097 | 1.43 | 0.132 | 5.66 | 0.446 |
| 5 | 15 | 1.397 | 0.014 | 72.1 | 3.81 | 34.7 | 9.12 | 0.167 | 1.03 | 0.205 | 2.42 | 0.616 |
| 5 | 20 | 1.836 | 0.019 | 63.9 | 3.62 | 33.5 | 9.25 | 0.264 | 0.81 | 0.283 | 2.20 | 0.830 |
| 5 | 25 | 2.378 | 0.024 | 52.0 | 2.76 | 26.8 | 9.70 | 0.387 | 0.61 | 0.357 | 1.98 | 1.073 |
| 5 | 30 | 2.922 | 0.030 | 49.7 | 2.89 | 28.4 | 9.81 | 0.541 | 0.42 | 0.422 | 1.61 | 1.321 |
| 5 | 35 | 3.392 | 0.035 | 49.0 | 2.88 | 28.8 | 9.99 | 0.719 | 0.44 | 0.501 | 1.38 | 1.567 |
| 5 | 40 | 3.389 | 0.034 | 53.4 | 2.84 | 28.6 | 10.06 | 0.900 | 0.54 | 0.599 | 1.54 | 1.845 |
| 5 | 45 | 4.549 | 0.047 | 46.8 | 2.51 | 26.0 | 10.34 | 1.140 | 0.45 | 0.707 | 1.29 | 2.156 |
| 5 | 50 | 4.716 | 0.048 | 50.9 | 2.60 | 27.5 | 10.58 | 1.392 | 0.32 | 0.788 | 0.95 | 2.394 |
| 5 | 55 | 4.729 | 0.048 | 52.7 | 2.51 | 26.7 | 10.63 | 1.640 | 0.25 | 0.851 | 0.73 | 2.575 |
| 5 | 60 | 4.373 | 0.045 | 61.4 | 2.85 | 30.9 | 10.86 | 1.869 | 0.20 | 0.896 | 0.66 | 2.726 |
| 5 | 65 | 4.649 | 0.048 | 62.5 | 2.76 | 30.3 | 10.96 | 2.123 | 0.23 | 0.953 | 0.61 | 2.880 |
| 5 | 70 | 5.036 | 0.052 | 62.8 | 2.78 | 31.2 | 11.22 | 2.388 | 0.16 | 0.994 | 0.47 | 3.004 |
| 5 | 75 | 5.355 | 0.055 | 59.4 | 2.64 | 30.4 | 11.50 | 2.682 | 0.12 | 1.030 | 0.37 | 3.112 |
| 5 | 80 | 5.147 | 0.053 | 53.5 | 2.70 | 31.6 | 11.71 | 2.958 | 0.10 | 1.058 | 0.32 | 3.200 |
| 5 | 85 | 4.389 | 0.045 | 63.2 | 2.78 | 33.0 | 11.87 | 3.190 | 0.13 | 1.088 | 0.31 | 3.272 |
| 5 | 90 | 4.301 | 0.044 | 69.0 | 2.89 | 34.1 | 11.81 | 3.416 | 0.12 | 1.114 | 0.31 | 3.341 |
| 5 | 95 | 5.480 | 0.056 | 58.7 | 2.44 | 29.2 | 11.98 | 3.726 | 0.09 | 1.142 | 0.26 | 3.422 |
| 5 | 100 | 5.415 | 0.056 | 58.0 | 2.47 | 31.2 | 12.64 | 4.040 | 0.10 | 1.173 | 0.26 | 3.502 |
| 5 | 105 | 5.187 | 0.053 | 61.1 | 2.51 | 31.6 | 12.58 | 4.271 | 0.11 | 1.199 | 0.26 | 3.563 |
| 5 | 110 | 5.833 | 0.060 | 56.8 | 2.46 | 31.3 | 12.73 | 4.589 | 0.12 | 1.237 | 0.23 | 3.637 |
| 5 | 115 | 5.388 | 0.055 | 61.7 | 2.53 | 32.1 | 12.69 | 4.907 | 0.10 | 1.269 | 0.24 | 3.714 |
| 5 | 120 | 5.460 | 0.056 | 63.6 | 2.44 | 31.4 | 12.87 | 5.212 | 0.17 | 1.322 | 0.24 | 3.786 |
| 5 | 125 | 5.110 | 0.052 | 60.7 | 2.46 | 31.5 | 12.80 | 5.441 | 0.19 | 1.365 | 0.24 | 3.840 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 5 | 0.889 | 0.009 | 75.0 | 4.19 | 36.0 | 8.60 | 0.050 | 1.33 | 0.067 | 2.95 | 0.148 |
| 6 | 10 | 1.269 | 0.013 | 77.7 | 4.34 | 37.3 | 8.60 | 0.121 | 1.48 | 0.172 | 2.96 | 0.359 |
| 6 | 15 | 1.398 | 0.014 | 76.7 | 4.20 | 36.4 | 8.66 | 0.196 | 1.34 | 0.272 | 2.97 | 0.581 |
| 6 | 20 | 1.883 | 0.019 | 83.4 | 3.62 | 32.8 | 9.05 | 0.294 | 0.86 | 0.356 | 2.08 | 0.785 |
| 6 | 25 | 2.344 | 0.024 | 84.4 | 3.71 | 34.2 | 9.22 | 0.414 | 0.80 | 0.451 | 1.78 | 0.999 |
| 6 | 30 | 2.753 | 0.028 | 65.2 | 2.92 | 28.3 | 9.71 | 0.561 | 0.55 | 0.532 | 1.56 | 1.228 |
| 6 | 35 | 3.037 | 0.031 | 68.3 | 2.84 | 27.9 | 9.83 | 0.724 | 0.54 | 0.621 | 1.34 | 1.447 |
| 6 | 40 | 3.184 | 0.032 | 52.0 | 2.79 | 28.0 | 10.05 | 0.894 | 0.53 | 0.710 | 1.43 | 1.689 |
| 6 | 45 | 3.686 | 0.038 | 50.8 | 2.48 | 25.2 | 10.18 | 1.081 | 0.54 | 0.812 | 1.32 | 1.936 |
| 6 | 50 | 4.395 | 0.045 | 49.2 | 2.22 | 23.1 | 10.42 | 1.325 | 0.47 | 0.925 | 1.10 | 2.204 |
| 6 | 55 | 4.412 | 0.045 | 52.4 | 2.50 | 26.4 | 10.56 | 1.560 | 0.37 | 1.012 | 0.80 | 2.393 |
| 6 | 60 | 4.213 | 0.043 | 57.6 | 2.71 | 29.1 | 10.75 | 1.779 | 0.40 | 1.100 | 0.82 | 2.572 |
| 6 | 65 | 4.372 | 0.045 | 62.0 | 2.87 | 31.0 | 10.80 | 2.005 | 0.33 | 1.175 | 0.55 | 2.696 |
| 6 | 70 | 4.426 | 0.045 | 62.8 | 2.79 | 30.6 | 10.97 | 2.256 | 0.35 | 1.262 | 0.55 | 2.835 |
| 6 | 75 | 4.752 | 0.049 | 63.8 | 2.95 | 32.9 | 11.15 | 2.502 | 0.29 | 1.333 | 0.44 | 2.942 |
| 6 | 80 | 5.241 | 0.054 | 64.4 | 2.90 | 32.7 | 11.28 | 2.804 | 0.28 | 1.416 | 0.37 | 3.054 |
| 6 | 85 | 4.885 | 0.050 | 66.3 | 2.89 | 32.8 | 11.34 | 3.057 | 0.22 | 1.471 | 0.34 | 3.141 |
| 6 | 90 | 4.507 | 0.046 | 68.0 | 2.91 | 33.2 | 11.40 | 3.287 | 0.19 | 1.515 | 0.35 | 3.221 |
| 6 | 95 | 4.416 | 0.045 | 67.0 | 2.93 | 33.1 | 11.30 | 3.525 | 0.22 | 1.568 | 0.35 | 3.305 |
| 6 | 100 | 4.512 | 0.046 | 68.1 | 2.86 | 33.0 | 11.52 | 3.772 | 0.16 | 1.608 | 0.32 | 3.385 |
| 6 | 105 | 4.438 | 0.045 | 69.2 | 2.92 | 33.7 | 11.54 | 4.013 | 0.14 | 1.642 | 0.30 | 3.457 |
| 6 | 110 | 4.572 | 0.047 | 69.0 | 2.91 | 32.6 | 11.21 | 4.276 | 0.11 | 1.671 | 0.29 | 3.532 |
| 6 | 115 | 4.623 | 0.047 | 68.7 | 2.92 | 33.3 | 11.40 | 4.497 | 0.11 | 1.696 | 0.27 | 3.592 |
| 6 | 120 | 4.605 | 0.047 | 67.5 | 2.89 | 32.5 | 11.26 | 4.746 | 0.10 | 1.722 | 0.26 | 3.657 |
| 6 | 125 | 4.486 | 0.046 | 68.5 | 3.00 | 33.8 | 11.26 | 4.993 | 0.12 | 1.751 | 0.26 | 3.722 |
| 6 | 130 | 4.345 | 0.044 | 70.3 | 3.00 | 33.9 | 11.30 | 5.238 | 0.11 | 1.777 | 0.25 | 3.784 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 5 | 0.704 | 0.007 | ... | 3.94 | 34.3 | 8.71 | 0.036 | 0.98 | 0.035 | 2.26 | 0.081 |
| 7 | 10 | 1.353 | 0.014 | 75.3 | 3.97 | 35.3 | 8.89 | 0.109 | 1.08 | 0.114 | 2.52 | 0.265 |
| 7 | 15 | 1.251 | 0.013 | ... | 4.02 | 36.3 | 9.03 | 0.172 | 0.94 | 0.174 | 2.50 | 0.424 |
| 7 | 20 | 1.827 | 0.018 | 79.5 | 3.57 | 32.9 | 9.21 | 0.265 | 0.87 | 0.255 | 2.04 | 0.614 |
| 7 | 25 | 3.064 | 0.031 | 59.4 | 3.32 | 30.8 | 9.28 | 0.424 | 0.68 | 0.362 | 1.73 | 0.889 |
| 7 | 30 | 3.222 | 0.033 | 69.6 | 2.86 | 26.8 | 9.38 | 0.599 | 0.58 | 0.464 | 1.64 | 1.175 |
| 7 | 35 | 3.322 | 0.034 | 78.1 | 3.37 | 31.7 | 9.40 | 0.764 | 0.66 | 0.573 | 1.64 | 1.445 |
| 7 | 40 | 4.044 | 0.041 | 62.7 | 2.55 | 24.3 | 9.54 | 0.987 | 0.57 | 0.699 | 1.41 | 1.759 |
| 7 | 45 | 3.686 | 0.038 | 70.9 | 3.17 | 30.3 | 9.57 | 1.160 | 0.58 | 0.800 | 1.36 | 1.993 |
| 7 | 50 | 4.771 | 0.049 | 53.8 | 2.86 | 27.7 | 9.68 | 1.442 | 0.44 | 0.926 | 1.26 | 2.348 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 5 | 1.074 | 0.011 | 74.6 | 3.96 | 34.4 | 8.69 | 0.064 | 0.96 | 0.062 | 2.34 | 0.150 |
| 8 | 10 | 1.844 | 0.019 | 71.6 | 3.82 | 34.8 | 9.11 | 0.159 | 0.88 | 0.145 | 2.02 | 0.342 |
| 8 | 15 | 2.537 | 0.026 | 64.9 | 3.52 | 33.2 | 9.44 | 0.294 | 0.56 | 0.221 | 1.60 | 0.558 |
| 8 | 20 | 3.164 | 0.032 | 52.0 | 3.06 | 29.8 | 9.73 | 0.450 | 0.52 | 0.302 | 1.24 | 0.752 |
| 8 | 25 | 3.269 | 0.033 | 50.4 | 2.78 | 27.8 | 9.99 | 0.625 | 0.50 | 0.390 | 1.41 | 0.998 |
| 8 | 30 | 3.673 | 0.037 | 48.7 | 2.66 | 26.8 | 10.08 | 0.808 | 0.32 | 0.449 | 1.12 | 1.204 |
| 8 | 35 | 4.307 | 0.044 | 53.0 | 2.56 | 26.9 | 10.50 | 1.041 | 0.34 | 0.529 | 1.01 | 1.440 |
| 8 | 40 | 5.286 | 0.054 | 49.0 | 2.25 | 25.1 | 11.16 | 1.313 | 0.27 | 0.603 | 0.67 | 1.623 |
| 8 | 45 | 5.400 | 0.056 | 52.7 | 2.32 | 26.2 | 11.28 | 1.596 | 0.25 | 0.674 | 0.55 | 1.779 |
| 8 | 50 | 5.524 | 0.057 | 55.9 | 2.42 | 27.5 | 11.34 | 1.876 | 0.19 | 0.726 | 0.49 | 1.917 |
| 8 | 55 | 6.218 | 0.064 | 57.8 | 2.71 | 31.2 | 11.50 | 2.199 | 0.17 | 0.781 | 0.44 | 2.058 |
| 8 | 60 | 6.030 | 0.062 | 61.8 | 2.54 | 29.6 | 11.65 | 2.496 | 0.14 | 0.823 | 0.35 | 2.161 |
| 8 | 65 | 6.163 | 0.064 | 60.7 | 2.60 | 30.6 | 11.76 | 2.807 | 0.15 | 0.871 | 0.31 | 2.257 |
| 8 | 70 | 5.989 | 0.062 | 61.1 | 2.66 | 31.0 | 11.65 | 3.127 | 0.11 | 0.906 | 0.31 | 2.356 |
| 8 | 75 | 5.934 | 0.061 | 62.0 | 2.62 | 30.6 | 11.69 | 3.429 | 0.09 | 0.934 | 0.31 | 2.449 |
| 8 | 80 | 5.183 | 0.053 | 62.2 | 2.67 | 31.3 | 11.73 | 3.713 | 0.12 | 0.967 | 0.26 | 2.523 |
| 8 | 85 | 5.724 | 0.059 | 57.9 | 2.45 | 29.3 | 11.95 | 4.013 | 0.15 | 1.011 | 0.22 | 2.589 |
| 8 | 90 | 5.637 | 0.058 | 55.6 | 2.39 | 29.2 | 12.23 | 4.314 | 0.14 | 1.054 | 0.24 | 2.662 |
| 8 | 95 | 6.281 | 0.065 | 56.3 | 2.15 | 28.1 | 13.07 | 4.655 | 0.10 | 1.087 | 0.20 | 2.730 |
| 8 | 100 | 6.759 | 0.070 | 51.8 | 2.14 | 28.7 | 13.39 | 5.003 | 0.10 | 1.122 | 0.16 | 2.786 |
| 8 | 105 | 6.276 | 0.065 | 58.4 | 2.21 | 29.6 | 13.39 | 5.339 | 0.10 | 1.157 | 0.18 | 2.848 |
| 8 | 110 | 6.432 | 0.066 | 55.9 | 2.14 | 28.9 | 13.52 | 5.684 | 0.11 | 1.193 | 0.17 | 2.906 |
| 8 | 115 | 7.009 | 0.073 | 54.3 | 2.14 | 29.2 | 13.63 | 6.063 | 0.07 | 1.218 | 0.15 | 2.962 |
| 8 | 120 | 6.863 | 0.071 | 51.8 | 2.06 | 28.9 | 14.04 | 6.435 | 0.06 | 1.239 | 0.14 | 3.014 |
| 8 | 125 | 6.369 | 0.066 | 54.1 | 1.95 | 28.5 | 14.63 | 6.766 | 0.05 | 1.254 | 0.13 | 3.055 |
| 8 | 130 | 6.225 | 0.064 | 54.1 | 1.94 | 28.6 | 14.74 | 7.094 | 0.05 | 1.270 | 0.12 | 3.096 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 5 | 0.609 | 0.006 | 75.9 | 3.89 | 34.7 | 8.93 | 0.029 | 0.76 | 0.022 | 2.04 | 0.058 |
| 9 | 10 | 1.152 | 0.012 | 73.8 | 3.89 | 35.0 | 9.00 | 0.089 | 0.80 | 0.070 | 2.15 | 0.187 |
| 9 | 15 | 1.868 | 0.019 | 65.6 | 3.60 | 34.3 | 9.53 | 0.183 | 0.75 | 0.141 | 1.87 | 0.364 |
| 9 | 20 | 2.400 | 0.024 | 63.2 | 3.22 | 30.6 | 9.49 | 0.305 | 0.59 | 0.213 | 1.61 | 0.561 |
| 9 | 25 | 6.723 | 0.070 | 36.5 | 2.28 | 22.5 | 9.88 | 0.724 | 0.22 | 0.305 | 0.79 | 0.892 |
| 9 | 30 | 6.095 | 0.063 | 38.8 | 2.08 | 22.0 | 10.57 | 1.007 | 0.28 | 0.385 | 0.77 | 1.109 |
| 9 | 35 | 6.987 | 0.073 | 40.8 | 1.89 | 21.4 | 11.31 | 1.368 | 0.22 | 0.465 | 0.48 | 1.283 |
| 9 | 40 | 5.536 | 0.057 | 52.0 | 2.30 | 28.1 | 12.22 | 1.669 | 0.18 | 0.520 | 0.32 | 1.380 |
| 9 | 45 | 9.410 | 0.099 | 38.5 | 0.94 | 12.4 | 13.14 | 2.206 | 0.06 | 0.553 | 0.22 | 1.498 |
| 9 | 50 | 8.391 | 0.088 | 46.7 | 1.16 | 15.8 | 13.65 | 2.660 | 0.05 | 0.576 | 0.10 | 1.545 |
| 9 | 55 | 7.284 | 0.076 | 42.5 | 1.94 | 27.5 | 14.18 | 3.032 | 0.04 | 0.590 | 0.16 | 1.605 |
| 9 | 60 | 13.519 | 0.146 | 25.7 | 0.95 | 12.5 | 13.20 | 3.745 | 0.01 | 0.600 | 0.05 | 1.641 |
| 9 | 65 | 6.686 | 0.069 | 53.2 | 1.87 | 27.9 | 14.91 | 4.105 | 0.02 | 0.607 | 0.13 | 1.687 |
| 9 | 70 | 14.068 | 0.153 | 19.8 | 1.08 | 14.4 | 13.34 | 4.695 | 0.03 | 0.625 | 0.05 | 1.717 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 5 | 1.204 | 0.012 | 76.3 | 4.11 | 35.9 | 8.74 | 0.080 | 1.11 | 0.089 | 2.31 | 0.184 |
| 11 | 10 | 1.789 | 0.018 | 73.0 | 3.95 | 35.4 | 8.96 | 0.177 | 0.99 | 0.185 | 2.30 | 0.408 |
| 11 | 15 | 2.481 | 0.025 | 66.8 | 3.57 | 33.1 | 9.27 | 0.298 | 0.76 | 0.277 | 1.88 | 0.635 |
| 11 | 20 | 3.142 | 0.032 | 59.4 | 2.81 | 27.8 | 9.90 | 0.482 | 0.53 | 0.375 | 1.39 | 0.891 |
| 11 | 25 | 3.799 | 0.039 | 53.8 | 2.70 | 27.7 | 10.24 | 0.679 | 0.37 | 0.449 | 1.21 | 1.130 |
| 11 | 30 | 6.233 | 0.064 | 46.7 | 1.82 | 20.3 | 11.14 | 1.006 | 0.26 | 0.535 | 0.69 | 1.354 |
| 11 | 35 | 6.036 | 0.062 | 48.2 | 2.10 | 23.9 | 11.39 | 1.374 | 0.21 | 0.612 | 0.92 | 1.694 |
| 11 | 40 | 7.323 | 0.076 | 45.0 | 2.28 | 28.2 | 12.36 | 1.775 | 0.11 | 0.658 | 0.35 | 1.835 |
| 11 | 45 | 6.455 | 0.067 | 52.6 | 2.11 | 27.5 | 13.03 | 2.184 | 0.07 | 0.685 | 0.21 | 1.922 |
| 11 | 50 | 7.471 | 0.078 | 43.7 | 2.01 | 26.7 | 13.26 | 2.693 | 0.07 | 0.723 | 0.22 | 2.031 |
| 11 | 55 | 5.344 | 0.055 | 55.5 | 2.27 | 30.2 | 13.32 | 3.061 | 0.05 | 0.742 | 0.15 | 2.086 |
| 11 | 60 | 4.901 | 0.050 | 63.5 | 2.37 | 31.9 | 13.48 | 3.342 | 0.04 | 0.754 | 0.14 | 2.126 |
| 11 | 65 | 6.031 | 0.062 | 48.5 | 2.05 | 28.5 | 13.90 | 3.701 | 0.06 | 0.776 | 0.13 | 2.173 |
| 11 | 70 | 6.222 | 0.064 | 55.1 | 2.08 | 29.9 | 14.38 | 4.046 | 0.04 | 0.789 | 0.11 | 2.212 |
| 11 | 75 | 5.260 | 0.054 | 59.9 | 2.25 | 31.8 | 14.12 | 4.353 | 0.04 | 0.801 | 0.13 | 2.251 |
| 11 | 80 | 5.781 | 0.060 | 55.9 | 2.11 | 30.4 | 14.43 | 4.710 | 0.06 | 0.821 | 0.13 | 2.297 |
| 11 | 85 | 6.086 | 0.063 | 53.1 | 1.92 | 29.1 | 15.16 | 5.039 | 0.04 | 0.834 | 0.11 | 2.334 |
| 11 | 90 | 6.181 | 0.064 | 56.2 | 1.96 | 30.1 | 15.35 | 5.374 | 0.03 | 0.846 | 0.12 | 2.373 |

# Lake Dora Survey Cores

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 5 | 0.317 | 0.003 | 73.8 | 3.59 | 29.1 | 8.10 | 0.013 | 0.80 | 0.010 | 1.81 | 0.024 |
| 12 | 10 | 0.783 | 0.008 | 74.3 | 3.78 | 34.3 | 9.08 | 0.048 | 0.78 | 0.027 | 2.08 | 0.097 |
| 12 | 15 | 1.410 | 0.014 | 68.9 | 3.73 | 33.8 | 9.06 | 0.125 | 0.91 | 0.097 | 2.21 | 0.266 |
| 12 | 20 | 1.762 | 0.018 | 70.8 | 3.71 | 34.3 | 9.25 | 0.218 | 0.95 | 0.186 | 2.28 | 0.477 |
| 12 | 25 | 2.243 | 0.023 | 68.8 | 3.53 | 33.2 | 9.41 | 0.331 | 1.03 | 0.302 | 2.06 | 0.710 |
| 12 | 30 | 2.576 | 0.026 | 66.5 | 3.49 | 33.7 | 9.67 | 0.468 | 1.08 | 0.450 | 1.82 | 0.960 |
| 12 | 35 | 2.884 | 0.029 | 64.6 | 3.43 | 32.8 | 9.57 | 0.620 | 0.84 | 0.577 | 1.84 | 1.239 |
| 12 | 40 | 3.125 | 0.032 | 66.0 | 3.57 | 34.4 | 9.63 | 0.765 | 0.97 | 0.717 | 1.89 | 1.512 |
| 12 | 45 | 3.275 | 0.033 | 67.2 | 3.52 | 34.4 | 9.78 | 0.929 | 0.87 | 0.861 | 1.68 | 1.788 |
| 12 | 50 | 3.194 | 0.032 | 64.2 | 3.33 | 32.6 | 9.80 | 1.041 | 0.74 | 0.943 | 1.63 | 1.971 |
| 12 | 55 | 3.325 | 0.034 | 63.4 | 3.18 | 31.9 | 10.03 | 1.219 | 0.72 | 1.071 | 1.72 | 2.277 |
| 12 | 60 | 3.653 | 0.037 | 61.1 | 3.09 | 31.3 | 10.13 | 1.407 | 0.61 | 1.185 | 1.40 | 2.539 |
| 12 | 65 | 3.733 | 0.038 | 60.7 | 2.87 | 29.3 | 10.22 | 1.617 | 0.55 | 1.300 | 1.29 | 2.811 |
| 12 | 70 | 4.508 | 0.046 | 49.6 | 2.68 | 28.3 | 10.56 | 1.834 | 0.45 | 1.398 | 1.06 | 3.040 |
| 12 | 75 | 3.915 | 0.040 | 54.7 | 2.81 | 28.6 | 10.16 | 2.032 | 0.48 | 1.492 | 1.16 | 3.271 |
| 12 | 80 | 4.326 | 0.044 | 51.3 | 2.62 | 27.0 | 10.29 | 2.248 | 0.43 | 1.585 | 1.08 | 3.505 |
| 12 | 85 | 4.896 | 0.050 | 49.2 | 2.30 | 25.8 | 11.21 | 2.502 | 0.39 | 1.685 | 1.05 | 3.770 |
| 12 | 90 | 4.197 | 0.043 | 51.0 | 2.44 | 25.1 | 10.27 | 2.724 | 0.56 | 1.808 | 2.88 | 4.408 |
| 12 | 95 | 5.285 | 0.054 | 49.8 | 2.14 | 25.3 | 11.83 | 2.986 | 0.36 | 1.903 | 0.90 | 4.643 |
| 12 | 100 | 5.401 | 0.056 | 51.6 | 2.22 | 27.8 | 12.52 | 3.269 | 0.28 | 1.982 | 0.54 | 4.795 |
| 12 | 105 | 6.225 | 0.064 | 52.2 | 2.05 | 27.6 | 13.44 | 3.587 | 0.15 | 2.030 | 0.25 | 4.875 |
| 12 | 110 | 5.569 | 0.057 | 61.1 | 2.22 | 30.3 | 13.64 | 3.903 | 0.13 | 2.070 | 0.21 | 4.941 |
| 12 | 115 | 7.037 | 0.073 | 49.9 | 2.00 | 27.3 | 13.67 | 4.289 | 0.10 | 2.109 | 0.40 | 5.095 |
| 12 | 120 | 6.410 | 0.066 | 55.1 | 2.03 | 28.0 | 13.78 | 4.600 | 0.09 | 2.137 | 0.18 | 5.151 |
| 12 | 125 | 5.943 | 0.061 | 57.7 | 2.19 | 30.0 | 13.69 | 4.909 | 0.09 | 2.166 | 0.18 | 5.207 |
| 12 | 130 | 6.409 | 0.066 | 53.6 | 2.04 | 28.1 | 13.76 | 5.206 | 0.09 | 2.193 | 0.17 | 5.257 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 5 | 1.549 | 0.016 | 66.7 | 3.46 | 31.7 | 9.17 | 0.073 | 0.73 | 0.053 | 1.63 | 0.119 |
| 15 | 10 | 3.041 | 0.031 | 52.0 | 2.72 | 27.3 | 10.04 | 0.233 | 0.46 | 0.127 | 1.10 | 0.295 |
| 15 | 15 | 4.005 | 0.041 | 50.4 | 2.36 | 25.9 | 10.99 | 0.411 | 0.24 | 0.170 | 0.94 | 0.463 |
| 15 | 20 | 13.118 | 0.142 | 21.2 | 1.46 | 17.3 | 11.87 | 1.174 | 0.09 | 0.237 | 0.11 | 0.548 |
| 15 | 25 | 5.572 | 0.057 | 54.1 | 2.17 | 26.7 | 12.30 | 1.481 | 0.08 | 0.261 | 0.15 | 0.593 |
| 15 | 30 | 5.412 | 0.056 | 59.8 | 2.35 | 29.9 | 12.72 | 1.765 | 0.05 | 0.275 | 0.15 | 0.637 |
| 15 | 35 | 5.421 | 0.056 | 61.1 | 2.42 | 30.9 | 12.77 | 2.053 | 0.10 | 0.303 | 0.16 | 0.683 |
| 15 | 40 | 5.384 | 0.055 | 62.4 | 2.45 | 31.0 | 12.67 | 2.348 | 0.04 | 0.315 | 0.23 | 0.751 |
| 15 | 45 | 5.786 | 0.060 | 58.0 | 2.24 | 28.5 | 12.71 | 2.640 | 0.19 | 0.372 | 0.66 | 0.942 |
| 15 | 50 | 5.085 | 0.052 | 63.8 | 2.48 | 31.5 | 12.71 | 2.924 | 0.07 | 0.391 | 0.17 | 0.990 |
| 15 | 55 | 5.274 | 0.054 | 64.0 | 2.41 | 31.2 | 12.93 | 3.212 | 0.11 | 0.422 | 0.15 | 1.033 |
| 15 | 60 | 5.377 | 0.055 | 63.7 | 2.44 | 31.7 | 13.01 | 3.506 | 0.08 | 0.445 | 0.15 | 1.076 |
| 15 | 65 | 5.803 | 0.060 | 61.0 | 2.27 | 31.0 | 13.64 | 3.797 | 0.05 | 0.461 | 0.14 | 1.116 |
| 15 | 70 | 7.828 | 0.082 | 46.2 | 1.65 | 23.3 | 14.14 | 4.248 | 0.05 | 0.484 | 0.09 | 1.156 |
| 15 | 75 | 5.462 | 0.056 | 63.5 | 2.22 | 32.2 | 14.49 | 4.534 | 0.05 | 0.498 | 0.11 | 1.187 |
| 15 | 80 | 6.290 | 0.065 | 58.9 | 2.00 | 30.1 | 15.07 | 4.866 | 0.05 | 0.516 | 0.11 | 1.223 |
| 15 | 85 | 5.962 | 0.061 | 63.8 | 2.22 | 34.1 | 15.36 | 5.171 | 0.04 | 0.528 | 0.13 | 1.262 |
| 15 | 90 | 5.535 | 0.057 | 70.7 | 2.44 | 38.6 | 15.84 | 5.479 | 0.04 | 0.539 | 0.16 | 1.311 |
| 15 | 95 | 5.958 | 0.061 | 68.2 | 2.31 | 36.9 | 15.99 | 5.779 | 0.06 | 0.556 | 0.15 | 1.357 |
| 15 | 100 | 6.346 | 0.065 | 66.4 | 2.30 | 37.7 | 16.38 | 6.146 | 0.08 | 0.584 | 0.13 | 1.406 |
| 15 | 105 | 6.590 | 0.068 | 59.1 | 2.09 | 33.0 | 15.79 | 6.461 | 0.05 | 0.599 | 0.14 | 1.449 |
| 15 | 110 | 5.446 | 0.056 | 72.8 | 2.43 | 38.4 | 15.81 | 6.759 | 0.06 | 0.617 | 0.15 | 1.495 |
| 15 | 115 | 5.489 | 0.056 | 72.1 | 2.38 | 39.3 | 16.51 | 7.070 | 0.06 | 0.636 | 0.16 | 1.544 |
| 15 | 120 | 4.864 | 0.050 | 73.7 | 2.46 | 38.5 | 15.66 | 7.314 | 0.04 | 0.646 | 0.18 | 1.589 |
| 15 | 125 | 4.701 | 0.048 | 68.6 | 2.48 | 37.0 | 14.90 | 7.565 | 0.05 | 0.659 | 0.13 | 1.622 |
| 15 | 127 | 4.714 | 0.048 | 70.4 | 2.40 | 36.7 | 15.28 | 7.760 | 0.05 | 0.660 | 0.13 | 1.622 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 5 | 0.490 | 0.005 | 72.8 | 4.00 | 35.5 | 8.90 | 0.023 | 0.95 | 0.022 | 1.95 | 0.045 |
| 16 | 10 | 1.120 | 0.011 | 73.6 | 3.98 | 35.5 | 8.91 | 0.083 | 0.92 | 0.077 | 2.24 | 0.179 |
| 16 | 15 | 1.437 | 0.014 | 72.7 | 3.92 | 35.7 | 9.11 | 0.148 | 1.00 | 0.142 | 2.16 | 0.319 |
| 16 | 20 | 1.912 | 0.019 | 70.2 | 3.79 | 34.8 | 9.18 | 0.255 | 0.91 | 0.240 | 1.97 | 0.530 |
| 16 | 25 | 2.310 | 0.023 | 65.6 | 3.52 | 32.6 | 9.25 | 0.368 | 0.71 | 0.320 | 1.73 | 0.726 |
| 16 | 30 | 2.800 | 0.028 | 88.7 | 3.68 | 33.6 | 9.14 | 0.504 | 0.77 | 0.425 | 1.72 | 0.961 |
| 16 | 35 | 3.430 | 0.035 | 66.3 | 3.66 | 33.7 | 9.20 | 0.674 | 0.64 | 0.533 | 1.53 | 1.219 |
| 16 | 40 | 3.467 | 0.035 | 57.4 | 3.33 | 30.9 | 9.29 | 0.847 | 0.46 | 0.613 | 1.18 | 1.423 |
| 16 | 45 | 3.395 | 0.035 | 59.4 | 3.26 | 30.3 | 9.29 | 1.025 | 0.41 | 0.685 | 0.99 | 1.598 |
| 16 | 50 | 3.550 | 0.036 | 53.6 | 3.23 | 29.9 | 9.26 | 1.202 | 0.43 | 0.762 | 0.98 | 1.772 |
| 16 | 55 | 4.065 | 0.042 | 50.2 | 3.02 | 27.5 | 9.10 | 1.422 | 0.34 | 0.837 | 0.95 | 1.981 |
| 16 | 60 | 3.909 | 0.040 | 57.9 | 3.13 | 28.5 | 9.09 | 1.631 | 0.40 | 0.922 | 1.04 | 2.199 |
| 16 | 65 | 3.975 | 0.041 | 54.5 | 2.64 | 26.8 | 10.14 | 1.820 | 0.39 | 0.995 | 1.00 | 2.389 |
| 16 | 70 | 4.138 | 0.042 | 53.1 | 2.49 | 25.7 | 10.33 | 2.043 | 0.43 | 1.091 | 1.04 | 2.619 |
| 16 | 75 | 4.637 | 0.047 | 54.2 | 2.51 | 26.5 | 10.56 | 2.277 | 0.39 | 1.181 | 0.96 | 2.843 |
| 16 | 80 | 5.044 | 0.052 | 53.7 | 2.33 | 25.4 | 10.91 | 2.541 | 0.43 | 1.294 | 0.87 | 3.073 |
| 16 | 85 | 5.051 | 0.052 | 52.9 | 2.31 | 25.7 | 11.13 | 2.803 | 0.42 | 1.404 | 0.87 | 3.302 |
| 16 | 90 | 5.209 | 0.053 | 54.1 | 2.31 | 26.7 | 11.55 | 3.078 | 0.34 | 1.496 | 0.67 | 3.486 |
| 16 | 95 | 5.427 | 0.056 | 57.2 | 2.35 | 27.8 | 11.82 | 3.347 | 0.29 | 1.574 | 0.52 | 3.626 |
| 16 | 100 | 5.323 | 0.055 | 58.6 | 2.48 | 29.0 | 11.70 | 3.628 | 0.28 | 1.651 | 0.49 | 3.763 |
| 16 | 105 | 5.382 | 0.055 | 59.1 | 2.58 | 29.5 | 11.42 | 3.917 | 0.29 | 1.734 | 0.51 | 3.910 |
| 16 | 110 | 5.731 | 0.059 | 61.5 | 2.62 | 29.9 | 11.43 | 4.247 | 0.29 | 1.829 | 0.47 | 4.065 |
| 16 | 115 | 5.762 | 0.059 | 63.1 | 2.64 | 30.4 | 11.53 | 4.522 | 0.25 | 1.896 | 0.42 | 4.179 |
| 16 | 120 | 5.799 | 0.060 | 63.4 | 2.65 | 31.0 | 11.71 | 4.826 | 0.24 | 1.969 | 0.39 | 4.297 |
| 16 | 125 | 6.204 | 0.064 | 64.0 | 2.64 | 31.2 | 11.81 | 5.159 | 0.19 | 2.031 | 0.33 | 4.406 |
| 16 | 130 | 6.052 | 0.062 | 64.9 | 2.64 | 31.2 | 11.81 | 5.474 | 0.19 | 2.092 | 0.31 | 4.504 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 5 | 0.903 | 0.009 | 73.5 | 3.96 | 35.0 | 8.83 | 0.035 | 0.86 | 0.030 | 1.91 | 0.066 |
| 17 | 10 | 1.559 | 0.016 | 71.9 | 3.89 | 34.8 | 8.94 | 0.105 | 0.98 | 0.099 | 2.08 | 0.213 |
| 17 | 15 | 2.226 | 0.022 | 63.3 | 3.42 | 32.2 | 9.43 | 0.212 | 0.80 | 0.184 | 1.47 | 0.369 |
| 17 | 20 | 2.672 | 0.027 | 64.2 | 3.33 | 32.4 | 9.71 | 0.345 | 0.58 | 0.261 | 1.31 | 0.543 |
| 17 | 25 | 3.153 | 0.032 | 65.7 | 3.18 | 31.6 | 9.94 | 0.500 | 0.48 | 0.336 | 1.18 | 0.725 |
| 17 | 30 | 3.459 | 0.035 | 59.9 | 2.85 | 29.2 | 10.23 | 0.693 | 0.45 | 0.422 | 1.00 | 0.919 |
| 17 | 35 | 5.503 | 0.057 | 39.0 | 2.05 | 23.0 | 11.20 | 0.965 | 0.21 | 0.478 | 0.79 | 1.135 |
| 17 | 40 | 6.217 | 0.064 | 48.9 | 2.02 | 24.0 | 11.90 | 1.310 | 0.13 | 0.523 | 0.31 | 1.242 |
| 17 | 45 | 6.811 | 0.071 | 53.0 | 2.04 | 24.9 | 12.23 | 1.647 | 0.09 | 0.554 | 0.22 | 1.318 |
| 17 | 50 | 6.438 | 0.067 | 56.3 | 2.15 | 27.9 | 12.96 | 1.999 | 0.12 | 0.596 | 0.19 | 1.386 |
| 17 | 55 | 5.916 | 0.061 | 63.2 | 2.45 | 32.5 | 13.27 | 2.329 | 0.06 | 0.615 | 0.16 | 1.438 |
| 17 | 60 | 6.057 | 0.062 | 60.7 | 2.26 | 29.6 | 13.10 | 2.629 | 0.06 | 0.632 | 0.16 | 1.485 |
| 17 | 65 | 8.154 | 0.085 | 42.3 | 1.66 | 22.1 | 13.32 | 3.059 | 0.10 | 0.676 | 0.10 | 1.526 |
| 17 | 70 | 6.676 | 0.069 | 52.2 | 2.19 | 30.0 | 13.71 | 3.418 | 0.05 | 0.695 | 0.11 | 1.565 |
| 17 | 75 | 6.906 | 0.072 | 54.4 | 2.20 | 30.6 | 13.89 | 3.773 | 0.08 | 0.724 | 0.09 | 1.596 |
| 17 | 80 | 8.126 | 0.085 | 43.9 | 2.07 | 28.9 | 13.95 | 4.251 | 0.07 | 0.758 | 0.07 | 1.627 |
| 17 | 85 | 6.999 | 0.073 | 54.0 | 2.03 | 28.3 | 13.93 | 4.612 | 0.07 | 0.782 | 0.08 | 1.654 |
| 17 | 90 | 6.475 | 0.067 | 58.3 | 2.12 | 30 | 14.04 | 4.987 | 0.05 | 0.802 | 0.08 | 1.685 |
| 17 | 95 | 6.811 | 0.070 | 59.0 | 2.05 | 28.5 | 13.90 | 5.336 | 0.07 | 0.826 | 0.08 | 1.714 |
| 17 | 100 | 6.618 | 0.068 | 57.8 | 2.14 | 29.4 | 13.72 | 5.687 | 0.04 | 0.840 | 0.08 | 1.742 |
| 17 | 105 | 6.463 | 0.067 | 57.3 | 2.13 | 29.2 | 13.72 | 5.992 | 0.06 | 0.858 | 0.08 | 1.767 |
| 17 | 110 | 6.279 | 0.065 | 57.7 | 2.19 | 30.0 | 13.70 | 6.385 | 0.04 | 0.873 | 0.08 | 1.798 |
| 17 | 115 | 5.693 | 0.059 | 62.0 | 2.30 | 31.0 | 13.46 | 6.651 | 0.06 | 0.888 | 0.08 | 1.819 |
| 17 | 120 | 5.594 | 0.058 | 61.4 | 2.26 | 30.6 | 13.55 | 6.956 | 0.03 | 0.899 | 0.08 | 1.844 |
| 17 | 125 | 5.802 | 0.060 | 61.7 | 2.27 | 30.8 | 13.55 | 7.266 | 0.04 | 0.912 | 0.08 | 1.868 |
| 17 | 130 | 6.000 | 0.062 | 60.8 | 2.22 | 30.2 | 13.58 | 7.575 | 0.06 | 0.930 | 0.07 | 1.890 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 5 | 1.542 | 0.016 | 68.0 | 3.58 | 32.8 | 9.15 | 0.108 | 0.71 | 0.077 | 1.52 | 0.164 |
| 19 | 10 | 3.362 | 0.034 | 51.4 | 3.15 | 30.2 | 9.59 | 0.277 | 0.51 | 0.162 | 1.03 | 0.338 |
| 19 | 15 | 5.153 | 0.053 | 42.3 | 2.24 | 22.2 | 9.91 | 0.556 | 0.39 | 0.270 | 0.90 | 0.589 |
| 19 | 20 | 10.256 | 0.109 | 21.2 | 2.37 | 25.1 | 10.59 | 1.126 | 0.24 | 0.408 | 0.60 | 0.933 |
| 19 | 25 | 6.190 | 0.064 | 42.6 | 2.29 | 25.6 | 11.17 | 1.437 | 0.27 | 0.493 | 0.64 | 1.131 |
| 19 | 30 | 6.135 | 0.063 | 47.7 | 2.19 | 24.6 | 11.24 | 1.788 | 0.24 | 0.578 | 0.54 | 1.322 |
| 19 | 35 | 6.366 | 0.066 | 49.2 | 2.30 | 26.6 | 11.54 | 2.112 | 0.20 | 0.644 | 0.47 | 1.473 |
| 19 | 40 | 6.611 | 0.068 | 48.9 | 2.16 | 25.4 | 11.78 | 2.428 | 0.21 | 0.708 | 0.40 | 1.598 |
| 19 | 45 | 7.480 | 0.078 | 44.9 | 2.32 | 27.2 | 11.74 | 2.868 | 0.16 | 0.779 | 0.24 | 1.702 |
| 19 | 50 | 7.096 | 0.074 | 47.4 | 2.02 | 24.6 | 12.17 | 3.143 | 0.09 | 0.805 | 0.23 | 1.765 |
| 19 | 55 | 7.034 | 0.073 | 50.7 | 2.13 | 27.1 | 12.73 | 3.499 | 0.08 | 0.833 | 0.18 | 1.831 |
| 19 | 60 | 7.025 | 0.073 | 50.2 | 2.23 | 27.9 | 12.51 | 3.796 | 0.11 | 0.866 | 0.23 | 1.898 |
| 19 | 65 | 7.773 | 0.081 | 44.7 | 2.09 | 27.0 | 12.90 | 4.305 | 0.11 | 0.921 | 0.15 | 1.976 |
| 19 | 70 | 7.668 | 0.080 | 53.9 | 2.21 | 29.0 | 13.13 | 4.702 | 0.07 | 0.950 | 0.13 | 2.027 |
| 19 | 75 | 7.705 | 0.080 | 55.1 | 2.14 | 28.3 | 13.21 | 5.120 | 0.05 | 0.969 | 0.11 | 2.071 |
| 19 | 80 | 9.845 | 0.104 | 38.7 | 1.88 | 24.9 | 13.25 | 5.659 | 0.03 | 0.986 | 0.09 | 2.118 |
| 19 | 85 | 10.651 | 0.113 | 33.9 | 1.77 | 24.1 | 13.59 | 6.235 | 0.07 | 1.024 | 0.07 | 2.160 |
| 19 | 90 | 11.292 | 0.120 | 58.2 | 1.67 | 23.0 | 13.79 | 6.866 | 0.03 | 1.040 | 0.07 | 2.205 |
| 19 | 95 | 9.904 | 0.105 | 41.1 | 1.71 | 23.3 | 13.63 | 7.434 | 0.02 | 1.051 | 0.07 | 2.245 |
| 19 | 100 | 9.872 | 0.104 | 38.8 | 1.78 | 24.5 | 13.74 | 7.973 | 0.01 | 1.055 | 0.06 | 2.278 |
| 19 | 105 | 12.739 | 0.137 | 29.6 | 1.54 | 21.2 | 13.78 | 8.653 | 0.01 | 1.059 | 0.05 | 2.315 |

# APPENDIX F

## PHYSICAL AND CHEMICAL DATA
## LAKE DORA
## HISTORIC CORES

Gravimetric and chemical data, Lake Dora historic cores, Phase I and Phase II.
See Appendix B for collection date, location and description of cores.

CODES:
- Depth is depth (cm)
- Dry is % dry weight
- Rho is dry weight density (g dry/g cc wet)
- LOI is % loss on ignition
- TN is total nitrogen (%)
- TC is total carbon (%)
- TC/TN is TC/TN mass ratio
- Cum weight is cumulative mass (g $cm^{-2}$)
- NAIP is non-apatite inorganic phosphorus (mg $g^{-1}$),
- Cum NAIP is cumulative NAIP (mg $cm^{-2}$)
- TP is total phosphorus (mg $g^{-1}$)
- Cum TP is cumulative TP (mg $cm^{-2}$)

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3H | 2 | 1.093 | 0.011 | 82.9 | 3.90 | 35.1 | 9.01 | 0.016 | ... | ... | ... | ... |
| 3H | 4 | 1.020 | 0.010 | 78.4 | 3.85 | 34.7 | 9.02 | 0.035 | ... | ... | 2.50 | 0.048 |
| 3H | 6 | 1.002 | 0.010 | 78.9 | 3.84 | 34.8 | 9.07 | 0.055 | 1.45 | 0.030 | 1.73 | 0.083 |
| 3H | 8 | 1.494 | 0.015 | 77.4 | 3.95 | 34.7 | 8.79 | 0.085 | 1.28 | 0.068 | 2.08 | 0.145 |
| 3H | 10 | 2.009 | 0.020 | 76.9 | 4.07 | 35.3 | 8.67 | 0.123 | 0.83 | 0.099 | 2.06 | 0.223 |
| 3H | 12 | 2.194 | 0.022 | 69.4 | 3.86 | 33.9 | 8.78 | 0.164 | 0.71 | 0.129 | 1.89 | 0.301 |
| 3H | 14 | 2.439 | 0.025 | 68.1 | 3.75 | 33.3 | 8.87 | 0.205 | 0.65 | 0.156 | 1.78 | 0.375 |
| 3H | 16 | 2.539 | 0.026 | 73.4 | 3.61 | 32.0 | 8.86 | 0.253 | 0.53 | 0.181 | 1.67 | 0.455 |
| 3H | 18 | 1.220 | 0.012 | 58.4 | 2.94 | 26.5 | 9.04 | 0.277 | 0.43 | 0.191 | 1.38 | 0.488 |
| 3H | 20 | 3.030 | 0.031 | 73.4 | 3.34 | 30.4 | 9.11 | 0.347 | 0.44 | 0.222 | 1.40 | 0.585 |
| 3H | 22 | 3.100 | 0.031 | 64.1 | 3.26 | 30.8 | 9.47 | 0.417 | 0.43 | 0.252 | 1.40 | 0.683 |
| 3H | 24 | 3.455 | 0.035 | 62.2 | 3.19 | 29.5 | 9.27 | 0.480 | 0.45 | 0.280 | 1.44 | 0.773 |
| 3H | 26 | 3.532 | 0.036 | 58.6 | 3.16 | 29.3 | 9.27 | 0.545 | 0.34 | 0.302 | 1.42 | 0.866 |
| 3H | 28 | 3.726 | 0.038 | 61.2 | 3.45 | 31.4 | 9.11 | 0.626 | 0.38 | 0.333 | 1.40 | 0.979 |
| 3H | 30 | 3.627 | 0.037 | 58.8 | 3.12 | 29.1 | 9.35 | 0.711 | 0.39 | 0.367 | 1.34 | 1.094 |
| 3H | 32 | 3.754 | 0.038 | 51.6 | 2.68 | 25.4 | 9.50 | 0.793 | 0.36 | 0.396 | 1.23 | 1.194 |
| 3H | 34 | 3.677 | 0.037 | 56.4 | 2.85 | 27.4 | 9.60 | 0.860 | 0.39 | 0.422 | 1.21 | 1.275 |
| 3H | 36 | 3.704 | 0.038 | 58.9 | 2.87 | 28.2 | 9.83 | 0.941 | 0.40 | 0.455 | 1.42 | 1.391 |
| 3H | 38 | 3.663 | 0.037 | 56.2 | 2.83 | 26.9 | 9.50 | 1.011 | 0.43 | 0.485 | 1.30 | 1.482 |
| 3H | 40 | 3.795 | 0.039 | 55.9 | 2.68 | 26.7 | 9.96 | 1.089 | 0.40 | 0.516 | 1.28 | 1.581 |
| 3H | 42 | 4.071 | 0.042 | 53.3 | 2.59 | 25.1 | 9.71 | 1.176 | 0.43 | 0.553 | 1.27 | 1.691 |
| 3H | 44 | 3.722 | 0.038 | 61.5 | 2.77 | 27.5 | 9.93 | 1.250 | 0.41 | 0.584 | 1.36 | 1.792 |
| 3H | 46 | 3.826 | 0.039 | 59.1 | 2.92 | 27.8 | 9.54 | 1.326 | 0.45 | 0.618 | 1.45 | 1.902 |
| 3H | 48 | 3.936 | 0.040 | 59.2 | 2.97 | 28.1 | 9.45 | 1.406 | 0.43 | 0.652 | 1.26 | 2.004 |
| 3H | 50 | 4.257 | 0.043 | 59.7 | 2.80 | 27.4 | 9.77 | 1.486 | 0.42 | 0.686 | 1.34 | 2.111 |
| 3H | 52 | 4.420 | 0.045 | 55.4 | 2.66 | 26.2 | 9.83 | 1.573 | 0.71 | 0.747 | 1.54 | 2.244 |
| 3H | 54 | 4.246 | 0.043 | 52.4 | 2.90 | 28.4 | 9.81 | 1.662 | 0.53 | 0.795 | 1.36 | 2.365 |
| 3H | 56 | 4.526 | 0.046 | 54.5 | 2.49 | 25.5 | 10.25 | 1.755 | 0.40 | 0.832 | 1.19 | 2.476 |
| 3H | 58 | 4.656 | 0.048 | 54.0 | 2.50 | 25.5 | 10.23 | 1.843 | 0.33 | 0.861 | 0.96 | 2.561 |
| 3H | 60 | 4.495 | 0.046 | 59.9 | 2.74 | 28.2 | 10.30 | 1.934 | 0.33 | 0.891 | 0.88 | 2.641 |
| 3H | 62 | 4.701 | 0.048 | 59.4 | 2.74 | 27.8 | 10.12 | 2.027 | 0.28 | 0.917 | 0.76 | 2.712 |
| 3H | 64 | 4.501 | 0.046 | 60.8 | 2.83 | 28.2 | 9.99 | 2.118 | 0.32 | 0.946 | 0.93 | 2.796 |
| 3H | 66 | 4.615 | 0.047 | 65.1 | 2.88 | 29.4 | 10.22 | 2.203 | 0.33 | 0.974 | 0.91 | 2.874 |
| 3H | 68 | 4.686 | 0.048 | 64.8 | 2.91 | 30.4 | 10.44 | 2.298 | 0.25 | 0.998 | 0.65 | 2.936 |
| 3H | 70 | 4.823 | 0.049 | 65.3 | 2.91 | 30.8 | 10.59 | 2.399 | 0.22 | 1.020 | 0.58 | 2.994 |
| 3H | 72 | 4.858 | 0.050 | 68.3 | 2.98 | 31.7 | 10.65 | 2.496 | 0.23 | 1.043 | 0.57 | 3.049 |
| 3H | 74 | 5.043 | 0.052 | 67.2 | 3.08 | 32.2 | 10.45 | 2.591 | 0.18 | 1.059 | 0.52 | 3.098 |
| 3H | 76 | 5.030 | 0.052 | 70.0 | 3.11 | 32.8 | 10.56 | 2.699 | 0.18 | 1.079 | 0.53 | 3.156 |
| 3H | 78 | 5.161 | 0.053 | 70.4 | 3.03 | 32.7 | 10.80 | 2.795 | 0.18 | 1.096 | 0.53 | 3.207 |
| 3H | 80 | 5.281 | 0.054 | 69.3 | 3.10 | 32.7 | 10.53 | 2.901 | 0.16 | 1.113 | 0.50 | 3.260 |
| 3H | 82 | 5.127 | 0.053 | 70.3 | 3.18 | 33.4 | 10.49 | 3.012 | 0.17 | 1.132 | 0.49 | 3.314 |
| 3H | 84 | 5.109 | 0.052 | 70.1 | 3.11 | 33.3 | 10.71 | 3.105 | 0.16 | 1.147 | 0.48 | 3.359 |
| 3H | 86 | 4.735 | 0.048 | 70.4 | 3.13 | 33.3 | 10.63 | 3.198 | 0.18 | 1.164 | 0.50 | 3.405 |
| 3H | 88 | 4.923 | 0.050 | 70.2 | 3.09 | 33.1 | 10.71 | 3.294 | 0.18 | 1.181 | 0.48 | 3.451 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3H | 90 | 5.030 | 0.052 | 69.7 | 3.15 | 33.2 | 10.55 | 3.398 | 0.16 | 1.198 | 0.46 | 3.499 |
| 3H | 92 | 5.249 | 0.054 | 70.6 | 3.10 | 32.8 | 10.58 | 3.497 | 0.14 | 1.212 | 0.41 | 3.540 |
| 3H | 94 | 4.877 | 0.050 | 70.9 | 3.11 | 34.0 | 10.92 | 3.604 | 0.15 | 1.227 | 0.42 | 3.585 |
| 3H | 96 | 4.592 | 0.047 | 71.5 | 3.13 | 33.8 | 10.83 | 3.696 | 0.19 | 1.245 | 0.46 | 3.627 |
| 3H | 98 | 4.602 | 0.047 | 73.4 | 3.22 | 35.2 | 10.93 | 3.784 | 0.17 | 1.260 | 0.42 | 3.664 |
| 3H | 100 | 4.588 | 0.047 | 72.7 | 3.14 | 34.6 | 11.01 | 3.859 | 0.15 | 1.271 | 0.42 | 3.696 |
| 3H | 102 | 4.532 | 0.046 | 71.9 | 3.23 | 34.9 | 10.81 | 3.961 | 0.15 | 1.287 | 0.40 | 3.736 |
| 3H | 104 | 4.593 | 0.047 | 71.9 | 3.23 | 34.3 | 10.63 | 4.047 | 0.14 | 1.299 | 0.37 | 3.768 |
| 3H | 106 | 4.495 | 0.046 | 72.0 | 3.26 | 34.7 | 10.66 | 4.140 | 0.13 | 1.311 | 0.36 | 3.802 |
| 3H | 108 | 4.492 | 0.046 | 71.6 | 3.15 | 33.8 | 10.73 | 4.229 | 0.15 | 1.324 | 0.39 | 3.837 |
| 3H | 110 | 4.638 | 0.047 | 69.4 | 3.15 | 33.8 | 10.73 | 4.328 | 0.21 | 1.345 | 0.45 | 3.881 |
| 3H | 112 | 4.852 | 0.050 | 68.4 | 3.02 | 32.8 | 10.88 | 4.418 | 0.17 | 1.360 | 0.41 | 3.918 |
| 3H | 114 | 4.731 | 0.048 | 68.7 | 3.05 | 32.9 | 10.79 | 4.511 | 0.17 | 1.376 | 0.41 | 3.956 |
| 3H | 116 | 4.602 | 0.047 | 70.0 | 3.16 | 33.9 | 10.75 | 4.613 | 0.14 | 1.390 | 0.37 | 3.994 |
| 3H | 118 | 4.642 | 0.047 | 70.1 | 3.13 | 34.1 | 10.90 | 4.693 | 0.14 | 1.401 | 0.37 | 4.023 |
| 3H | 120 | 4.616 | 0.047 | 70.5 | 3.13 | 34.6 | 11.06 | 4.779 | 0.14 | 1.413 | 0.38 | 4.056 |
| 3H | 122 | 4.604 | 0.047 | 70.5 | 3.04 | 33.6 | 11.04 | 4.858 | 0.16 | 1.426 | 0.39 | 4.087 |
| 3H | 124 | 4.782 | 0.049 | 69.7 | 3.05 | 34.0 | 11.12 | 4.968 | 0.17 | 1.445 | 0.39 | 4.130 |
| 3H | 126 | 4.864 | 0.050 | 70.0 | 3.12 | 33.3 | 10.67 | 5.050 | 0.13 | 1.455 | 0.35 | 4.158 |
| 3H | 128 | 4.769 | 0.049 | 71.5 | 3.15 | 34.2 | 10.87 | 5.146 | 0.15 | 1.470 | 0.42 | 4.199 |
| 3H | 130 | 4.723 | 0.048 | 71.4 | 3.09 | 34.3 | 11.10 | 5.239 | 0.15 | 1.484 | 0.37 | 4.233 |
| 3H | 132 | 4.966 | 0.051 | 71.2 | 3.14 | 34.5 | 10.97 | 5.336 | 0.16 | 1.499 | 0.38 | 4.270 |
| 3H | 134 | 4.827 | 0.049 | 70.2 | 3.10 | 34.1 | 11.01 | 5.431 | 0.13 | 1.512 | 0.34 | 4.302 |
| 3H | 136 | 4.862 | 0.050 | 69.7 | 3.08 | 33.9 | 11.01 | 5.540 | 0.12 | 1.525 | 0.34 | 4.339 |
| 3H | 138 | 4.817 | 0.049 | 71.2 | 3.06 | 33.6 | 11.01 | 5.632 | 0.16 | 1.539 | 0.36 | 4.372 |
| 3H | 140 | 5.093 | 0.052 | 67.9 | 3.01 | 33.7 | 11.18 | 5.735 | 0.14 | 1.554 | 0.33 | 4.407 |
| 3H | 142 | 5.510 | 0.057 | 67.3 | 2.88 | 33.2 | 11.51 | 5.840 | 0.12 | 1.566 | 0.33 | 4.441 |
| 3H | 144 | 5.334 | 0.055 | 66.4 | 2.79 | 32.6 | 11.68 | 5.939 | 0.23 | 1.589 | 0.42 | 4.483 |
| 3H | 146 | 5.577 | 0.057 | 64.7 | 2.83 | 32.9 | 11.62 | 6.040 | 0.12 | 1.601 | 0.34 | 4.517 |
| 3H | 148 | 5.552 | 0.057 | 69.1 | 2.76 | 32.2 | 11.66 | 6.169 | 0.11 | 1.616 | 0.33 | 4.560 |
| 3H | 150 | 6.591 | 0.068 | 64.1 | 2.74 | 31.9 | 11.62 | 6.326 | 0.11 | 1.633 | 0.29 | 4.605 |

Note: In calculations of cumulative NAIP and TP in the text, cumulative NAIP and TP were increased by 0.050 and 0.039, respectively, to account for missing data at 2 and 4 cm for NAIP and 2 cm for TP. Values of 1.45 and 2.50, respectively, were used for missing NAIP and TP data. Cumulative NAIP and TP reported in these appendix tables do not include this adjustment.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10H | 2 | 0.395 | 0.004 | 74.4 | 3.92 | 34.3 | 8.74 | 0.010 | ... | ... | ... | ... |
| 10H | 4 | 0.709 | 0.007 | 79.2 | 3.86 | 34.5 | 8.93 | 0.023 | ... | ... | ... | ... |
| 10H | 6 | 0.900 | 0.009 | 77.0 | 3.90 | 34.5 | 8.85 | 0.039 | ... | ... | ... | ... |
| 10H | 8 | 1.074 | 0.011 | 78.1 | 3.88 | 34.5 | 8.89 | 0.058 | ... | ... | 2.35 | 0.046 |
| 10H | 10 | 1.208 | 0.012 | 77.9 | 3.95 | 35.1 | 8.89 | 0.083 | 1.37 | 0.034 | 2.39 | 0.105 |
| 10H | 12 | 1.739 | 0.018 | 74.2 | 3.83 | 33.6 | 8.77 | 0.109 | 0.87 | 0.057 | 2.11 | 0.161 |
| 10H | 14 | 1.965 | 0.020 | 75.1 | 4.13 | 35.4 | 8.56 | 0.150 | 0.87 | 0.092 | 2.13 | 0.246 |
| 10H | 16 | 2.091 | 0.021 | 75.1 | 3.89 | 34.1 | 8.77 | 0.188 | 0.89 | 0.127 | 2.09 | 0.327 |
| 10H | 18 | 2.193 | 0.022 | 71.3 | 3.82 | 33.7 | 8.82 | 0.233 | 0.81 | 0.163 | 1.93 | 0.413 |
| 10H | 20 | 2.434 | 0.025 | 71.0 | 3.49 | 33.0 | 9.45 | 0.283 | 0.70 | 0.198 | 1.87 | 0.506 |
| 10H | 22 | 2.759 | 0.028 | 67.1 | 3.50 | 31.3 | 8.93 | 0.335 | 0.72 | 0.235 | 1.79 | 0.600 |
| 10H | 24 | 2.598 | 0.026 | 70.0 | 3.76 | 33.7 | 8.96 | 0.382 | 0.74 | 0.270 | 1.87 | 0.688 |
| 10H | 26 | 2.921 | 0.030 | 70.5 | 3.70 | 33.3 | 9.01 | 0.437 | 0.73 | 0.310 | 1.84 | 0.788 |
| 10H | 28 | 3.090 | 0.031 | 67.5 | 3.58 | 32.2 | 9.01 | 0.503 | 0.71 | 0.357 | 1.82 | 0.909 |
| 10H | 30 | 3.192 | 0.032 | 65.1 | 3.44 | 31.9 | 9.28 | 0.557 | 0.57 | 0.388 | 1.49 | 0.989 |
| 10H | 32 | 3.312 | 0.034 | 59.4 | 3.08 | 30.2 | 9.80 | 0.632 | 0.45 | 0.422 | 1.15 | 1.075 |
| 10H | 34 | 3.394 | 0.035 | 58.6 | 3.26 | 31.3 | 9.61 | 0.697 | 0.40 | 0.448 | 1.18 | 1.152 |
| 10H | 36 | 3.441 | 0.035 | 59.5 | 2.72 | 27.5 | 10.11 | 0.764 | 0.36 | 0.472 | 1.02 | 1.221 |
| 10H | 38 | 3.425 | 0.035 | 62.1 | 2.97 | 29.0 | 9.76 | 0.834 | 0.38 | 0.498 | 1.19 | 1.304 |
| 10H | 40 | 3.603 | 0.037 | 53.3 | 2.83 | 27.4 | 9.69 | 0.898 | 0.35 | 0.521 | 1.15 | 1.378 |
| 10H | 42 | 3.702 | 0.038 | 49.6 | 2.65 | 26.0 | 9.82 | 0.973 | 0.37 | 0.549 | 1.22 | 1.470 |
| 10H | 44 | 3.713 | 0.038 | 57.3 | 2.48 | 25.9 | 10.44 | 1.050 | 0.43 | 0.582 | 1.39 | 1.576 |
| 10H | 46 | 4.009 | 0.041 | 53.7 | 2.64 | 26.2 | 9.94 | 1.131 | 0.38 | 0.612 | 1.20 | 1.674 |
| 10H | 48 | 4.293 | 0.044 | 51.9 | 2.56 | 26.6 | 10.38 | 1.212 | 0.38 | 0.643 | 1.02 | 1.756 |
| 10H | 50 | 4.398 | 0.045 | 52.2 | 2.25 | 23.9 | 10.61 | 1.307 | 0.39 | 0.680 | 0.99 | 1.850 |
| 10H | 52 | 5.013 | 0.051 | 46.4 | 2.23 | 23.3 | 10.46 | 1.392 | 0.34 | 0.709 | 0.88 | 1.925 |
| 10H | 54 | 4.966 | 0.051 | 50.1 | 2.33 | 24.6 | 10.54 | 1.481 | 0.37 | 0.742 | 0.92 | 2.007 |
| 10H | 56 | 5.652 | 0.058 | 49.1 | 2.35 | 24.6 | 10.44 | 1.611 | 0.34 | 0.786 | 0.89 | 2.123 |
| 10H | 58 | 5.955 | 0.061 | 52.4 | 2.43 | 25.8 | 10.61 | 1.736 | 0.30 | 0.824 | 0.81 | 2.224 |
| 10H | 60 | 3.966 | 0.040 | 51.1 | 2.31 | 24.9 | 10.78 | 1.806 | 0.27 | 0.843 | 0.72 | 2.274 |
| 10H | 62 | 6.100 | 0.063 | 53.5 | 2.48 | 26.3 | 10.63 | 1.924 | 0.27 | 0.874 | 0.77 | 2.365 |
| 10H | 64 | 5.874 | 0.061 | 52.6 | 2.42 | 26.4 | 10.90 | 2.050 | 0.31 | 0.914 | 0.74 | 2.458 |
| 10H | 66 | 5.687 | 0.059 | 53.4 | 2.36 | 25.6 | 10.84 | 2.148 | 0.26 | 0.939 | 0.66 | 2.523 |
| 10H | 68 | 6.220 | 0.064 | 53.6 | 2.43 | 26.4 | 10.86 | 2.283 | 0.20 | 0.966 | 0.56 | 2.598 |
| 10H | 70 | 4.316 | 0.044 | 50.3 | 1.99 | 22.8 | 11.47 | 2.368 | 0.19 | 0.982 | 0.49 | 2.640 |
| 10H | 72 | 8.743 | 0.092 | 38.7 | 1.73 | 19.4 | 11.22 | 2.531 | 0.13 | 1.003 | 0.34 | 2.696 |
| 10H | 74 | 7.878 | 0.082 | 38.6 | 1.72 | 19.4 | 11.31 | 2.707 | 0.12 | 1.025 | 0.34 | 2.756 |
| 10H | 76 | 8.234 | 0.086 | 37.3 | 1.97 | 23.5 | 11.93 | 2.880 | 0.11 | 1.044 | 0.26 | 2.801 |
| 10H | 78 | 8.276 | 0.087 | 37.2 | 1.56 | 19.8 | 12.68 | 3.066 | 0.11 | 1.064 | 0.25 | 2.847 |
| 10H | 80 | 3.659 | 0.037 | 49.3 | 1.51 | 19.7 | 13.01 | 3.124 | 0.13 | 1.072 | 0.29 | 2.864 |
| 10H | 82 | 7.042 | 0.073 | 50.1 | 2.02 | 25.7 | 12.74 | 3.291 | 0.15 | 1.097 | 0.36 | 2.924 |
| 10H | 84 | 6.993 | 0.072 | 52.9 | 1.97 | 26.5 | 13.43 | 3.439 | 0.11 | 1.113 | 0.26 | 2.962 |
| 10H | 86 | 6.583 | 0.068 | 55.9 | 2.05 | 29.0 | 14.15 | 3.559 | 0.09 | 1.124 | 0.25 | 2.992 |
| 10H | 88 | 6.162 | 0.064 | 61.0 | 2.21 | 32.0 | 14.48 | 3.693 | 0.11 | 1.138 | 0.26 | 3.027 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10H | 90 | 6.111 | 0.063 | 58.9 | 2.05 | 30.3 | 14.74 | 3.807 | 0.10 | 1.150 | 0.25 | 3.056 |
| 10H | 92 | 5.899 | 0.061 | 60.1 | 2.21 | 30.5 | 13.81 | 3.920 | 0.12 | 1.163 | 0.24 | 3.083 |
| 10H | 94 | 6.075 | 0.063 | 57.0 | 2.13 | 30.2 | 14.20 | 4.040 | 0.10 | 1.175 | 0.21 | 3.108 |
| 10H | 96 | 6.272 | 0.065 | 56.4 | 2.16 | 30.4 | 14.10 | 4.166 | 0.11 | 1.189 | 0.24 | 3.138 |
| 10H | 98 | 7.303 | 0.076 | 50.8 | 1.86 | 25.9 | 13.92 | 4.341 | 0.10 | 1.207 | 0.19 | 3.171 |
| 10H | 100 | 7.016 | 0.073 | 48.1 | 1.75 | 24.5 | 14.01 | 4.460 | 0.09 | 1.217 | 0.24 | 3.200 |
| 10H | 102 | 7.920 | 0.083 | 43.8 | 1.62 | 22.5 | 13.86 | 4.647 | 0.09 | 1.234 | 0.18 | 3.234 |
| 10H | 104 | 8.657 | 0.091 | 41.7 | 1.63 | 23.4 | 14.35 | 4.820 | 0.07 | 1.246 | 0.16 | 3.261 |
| 10H | 106 | 8.737 | 0.092 | 40.0 | 1.49 | 20.8 | 13.94 | 4.989 | 0.07 | 1.258 | 0.16 | 3.288 |
| 10H | 108 | 8.611 | 0.090 | 41.7 | 1.69 | 23.5 | 13.87 | 5.181 | 0.06 | 1.270 | 0.16 | 3.319 |
| 10H | 110 | 10.534 | 0.112 | 34.2 | 1.30 | 18.2 | 14.06 | 5.414 | 0.07 | 1.286 | 0.14 | 3.352 |
| 10H | 112 | 10.330 | 0.109 | 35.6 | 1.42 | 20.0 | 14.14 | 5.635 | 0.04 | 1.295 | 0.09 | 3.372 |
| 10H | 114 | 11.955 | 0.128 | 30.2 | 1.08 | 15.6 | 14.47 | 5.869 | 0.06 | 1.309 | 0.13 | 3.402 |
| 10H | 116 | 8.095 | 0.084 | 48.3 | 1.72 | 25.8 | 14.96 | 6.040 | 0.08 | 1.323 | 0.12 | 3.423 |
| 10H | 118 | 7.099 | 0.074 | 56.9 | 1.99 | 30.0 | 15.06 | 6.166 | 0.09 | 1.334 | 0.18 | 3.445 |
| 10H | 120 | 6.975 | 0.072 | 56.1 | 1.96 | 28.7 | 14.65 | 6.302 | 0.09 | 1.346 | 0.20 | 3.473 |
| 10H | 122 | 6.904 | 0.072 | 55.3 | 2.01 | 29.1 | 14.48 | 6.439 | 0.12 | 1.363 | 0.19 | 3.499 |
| 10H | 124 | 6.984 | 0.072 | 56.2 | 1.99 | 28.9 | 14.52 | 6.589 | 0.09 | 1.376 | 0.18 | 3.526 |
| 10H | 126 | 7.573 | 0.079 | 52.8 | 1.93 | 27.1 | 13.99 | 6.776 | 0.09 | 1.393 | 0.18 | 3.559 |
| 10H | 128 | 7.512 | 0.078 | 56.4 | 2.07 | 29.4 | 14.19 | 6.940 | 0.07 | 1.404 | 0.18 | 3.589 |
| 10H | 130 | 7.911 | 0.082 | 54.0 | 1.92 | 28.5 | 14.82 | 7.101 | 0.06 | 1.414 | 0.17 | 3.616 |
| 10H | 132 | 6.816 | 0.071 | 60.3 | 2.14 | 31.2 | 14.56 | 7.235 | 0.07 | 1.424 | 0.18 | 3.640 |
| 10H | 134 | 6.259 | 0.065 | 62.1 | 2.21 | 32.4 | 14.63 | 7.349 | 0.08 | 1.433 | 0.19 | 3.662 |

Note: In calculations of cumulative NAIP and TP in the text, cumulative NAIP and TP were increased by 0.081 and 0.091, respectively, to account for missing data at 2, 4, 6 and 8 cm for NAIP and 2, 4 and 6 cm for TP. Values of 1.40 and 2.35, respectively, were used for missing NAIP and TP data. Cumulative NAIP and TP reported in these appendix tables do not include this adjustment.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14H | 2 | 0.894 | 0.009 | 75.0 | 3.85 | 34.9 | 9.06 | 0.025 | 1.31 | 0.033 | 2.03 | 0.051 |
| 14H | 4 | 1.380 | 0.014 | 72.9 | 3.70 | 33.2 | 8.98 | 0.046 | 1.14 | 0.057 | 2.07 | 0.094 |
| 14H | 6 | 1.884 | 0.019 | 72.2 | 3.76 | 33.8 | 8.98 | 0.085 | 1.04 | 0.097 | 2.04 | 0.173 |
| 14H | 8 | 2.090 | 0.021 | 71.8 | 3.69 | 33.2 | 9.00 | 0.125 | 1.10 | 0.141 | 2.02 | 0.254 |
| 14H | 10 | 2.406 | 0.024 | 68.4 | 3.59 | 33.2 | 9.25 | 0.167 | 0.98 | 0.182 | 1.87 | 0.333 |
| 14H | 12 | 2.550 | 0.026 | 66.8 | 3.32 | 32.0 | 9.64 | 0.210 | ... | ... | 1.62 | 0.403 |
| 14H | 14 | 2.723 | 0.028 | 68.5 | 3.65 | 32.4 | 8.88 | 0.266 | 0.49 | 0.210 | 1.53 | 0.489 |
| 14H | 16 | 2.946 | 0.030 | 67.5 | 3.70 | 33.6 | 9.09 | 0.346 | 0.63 | 0.260 | 1.61 | 0.616 |
| 14H | 18 | 3.251 | 0.033 | 61.6 | 3.38 | 30.7 | 9.10 | 0.412 | 0.45 | 0.290 | 1.44 | 0.712 |
| 14H | 20 | 3.277 | 0.033 | 63.3 | 2.73 | 27.8 | 10.18 | 0.476 | 0.40 | 0.316 | 1.23 | 0.791 |
| 14H | 22 | 3.449 | 0.035 | 62.6 | 2.40 | 26.0 | 10.70 | 0.544 | 0.36 | 0.340 | 1.16 | 0.870 |
| 14H | 24 | 4.342 | 0.044 | 50.5 | 2.16 | 24.1 | 11.17 | 0.630 | 0.30 | 0.366 | 0.94 | 0.950 |
| 14H | 26 | 3.911 | 0.040 | 54.8 | 2.59 | 27.0 | 10.42 | 0.712 | 0.39 | 0.398 | 1.22 | 1.051 |
| 14H | 28 | 4.241 | 0.043 | 55.0 | 2.47 | 26.0 | 10.54 | 0.796 | 0.22 | 0.416 | 0.86 | 1.123 |
| 14H | 30 | 4.557 | 0.047 | 53.9 | 2.52 | 26.8 | 10.64 | 0.879 | 0.23 | 0.436 | 0.89 | 1.197 |
| 14H | 32 | 4.897 | 0.050 | 53.7 | 2.36 | 26.0 | 11.02 | 0.969 | 0.18 | 0.452 | 0.66 | 1.256 |
| 14H | 34 | 4.766 | 0.049 | 57.3 | 2.47 | 27.8 | 11.24 | 1.062 | 0.12 | 0.463 | 0.71 | 1.322 |
| 14H | 36 | 4.634 | 0.047 | 59.5 | 2.62 | 29.3 | 11.19 | 1.157 | 0.11 | 0.473 | 0.57 | 1.376 |
| 14H | 38 | 4.669 | 0.048 | 60.6 | 2.72 | 30.4 | 11.17 | 1.258 | 0.10 | 0.483 | 1.42 | 1.519 |
| 14H | 40 | 4.933 | 0.051 | 61.5 | 2.63 | 29.6 | 11.24 | 1.352 | 0.10 | 0.493 | 0.49 | 1.565 |
| 14H | 42 | 5.200 | 0.050 | 60.0 | ... | ... | ... | 1.452 | ... | ... | ... | ... |
| 14H | 44 | 5.527 | 0.057 | 59.1 | 2.51 | 28.5 | 11.32 | 1.572 | 0.10 | 0.504 | 0.47 | 1.670 |
| 14H | 46 | 6.291 | 0.065 | 54.7 | 2.33 | 27.2 | 11.69 | 1.706 | 0.07 | 0.513 | 0.30 | 1.710 |
| 14H | 48 | 5.533 | 0.057 | 60.1 | 2.27 | 27.9 | 12.31 | 1.818 | 0.04 | 0.518 | 0.29 | 1.742 |
| 14H | 50 | 5.753 | 0.059 | 50.6 | 1.75 | 23.0 | 13.14 | 1.938 | 0.20 | 0.542 | 0.29 | 1.777 |
| 14H | 52 | 5.730 | 0.059 | 61.6 | 2.45 | 31.3 | 12.74 | 2.033 | 0.05 | 0.546 | 0.27 | 1.802 |
| 14H | 54 | 5.990 | 0.062 | 58.0 | 2.33 | 28.8 | 12.35 | 2.160 | 0.04 | 0.551 | 0.25 | 1.834 |
| 14H | 56 | 6.670 | 0.069 | 54.3 | 2.16 | 26.9 | 12.43 | 2.314 | 0.04 | 0.558 | 0.20 | 1.865 |
| 14H | 58 | 6.384 | 0.066 | 53.1 | 2.14 | 27.3 | 12.79 | 2.416 | 0.03 | 0.561 | 0.17 | 1.882 |
| 14H | 60 | 6.303 | 0.065 | 55.1 | 1.62 | 21.3 | 13.22 | 2.547 | 0.02 | 0.563 | 0.17 | 1.904 |
| 14H | 62 | 5.878 | 0.061 | 56.3 | 2.26 | 28.1 | 12.43 | 2.687 | 0.04 | 0.569 | 0.21 | 1.934 |
| 14H | 64 | 5.731 | 0.059 | 56.9 | 2.35 | 29.7 | 12.63 | 2.795 | 0.04 | 0.573 | 0.21 | 1.957 |
| 14H | 66 | 6.349 | 0.066 | 55.3 | 2.31 | 29.6 | 12.83 | 2.928 | 0.02 | 0.576 | 0.18 | 1.981 |
| 14H | 68 | 6.563 | 0.068 | 55.8 | 2.32 | 29.9 | 12.87 | 3.050 | 0.02 | 0.578 | 0.17 | 2.001 |
| 14H | 70 | 6.977 | 0.072 | 56.1 | 1.99 | 25.9 | 12.98 | 3.205 | 0.01 | 0.580 | 0.17 | 2.028 |
| 14H | 72 | 6.726 | 0.070 | 56.8 | 2.23 | 28.5 | 12.77 | 3.347 | 0.02 | 0.583 | 0.17 | 2.052 |
| 14H | 74 | 6.868 | 0.071 | 57.3 | 2.30 | 29.6 | 12.89 | 3.490 | 0.07 | 0.593 | 0.19 | 2.079 |
| 14H | 76 | 7.317 | 0.076 | 56.8 | 2.37 | 29.9 | 12.63 | 3.637 | 0.05 | 0.600 | 0.17 | 2.104 |
| 14H | 78 | 7.447 | 0.077 | 55.5 | 2.08 | 27.6 | 13.26 | 3.803 | 0.04 | 0.607 | 0.16 | 2.131 |
| 14H | 80 | 6.678 | 0.069 | 58.1 | 2.27 | 30.3 | 13.35 | 3.932 | 0.06 | 0.615 | 0.18 | 2.154 |
| 14H | 82 | 6.376 | 0.066 | 61.4 | 2.25 | 30.6 | 13.60 | 4.065 | 0.07 | 0.624 | 0.15 | 2.174 |
| 14H | 84 | 6.212 | 0.064 | 60.5 | 2.24 | 30.2 | 13.49 | 4.188 | 0.04 | 0.629 | 0.15 | 2.192 |
| 14H | 86 | 6.672 | 0.069 | 59.5 | 2.20 | 29.8 | 13.54 | 4.329 | 0.06 | 0.637 | 0.16 | 2.215 |
| 14H | 88 | 6.596 | 0.068 | 60.9 | 2.26 | 30.3 | 13.37 | 4.466 | 0.05 | 0.644 | 0.15 | 2.235 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14H | 90 | 6.437 | 0.066 | 60.6 | 2.26 | 29.9 | 13.22 | 4.585 | 0.05 | 0.650 | 0.14 | 2.252 |
| 14H | 92 | 6.461 | 0.067 | 60.5 | 2.32 | 30.3 | 13.09 | 4.723 | 0.06 | 0.658 | 0.16 | 2.274 |
| 14H | 94 | 6.354 | 0.066 | 60.3 | 2.31 | 30.3 | 13.14 | 4.856 | 0.04 | 0.664 | 0.14 | 2.293 |
| 14H | 96 | 6.483 | 0.067 | 59.8 | 2.18 | 29.9 | 13.72 | 4.976 | 0.04 | 0.668 | 0.13 | 2.308 |
| 14H | 98 | 6.344 | 0.065 | 60.4 | 2.28 | 30.0 | 13.18 | 5.113 | 0.04 | 0.674 | 0.13 | 2.326 |
| 14H | 100 | 6.356 | 0.066 | 59.7 | 2.23 | 30.0 | 13.43 | 5.241 | 0.03 | 0.678 | 0.13 | 2.343 |
| 14H | 102 | 6.473 | 0.067 | 60.9 | 2.33 | 30.7 | 13.15 | 5.375 | 0.04 | 0.683 | 0.14 | 2.361 |
| 14H | 104 | 6.498 | 0.067 | 59.6 | 2.30 | 30.3 | 13.15 | 5.501 | 0.04 | 0.688 | 0.15 | 2.380 |
| 14H | 106 | 6.582 | 0.068 | 54.5 | 2.34 | 30.9 | 13.17 | 5.645 | 0.04 | 0.694 | 0.14 | 2.400 |
| 14H | 108 | 6.254 | 0.065 | 59.8 | 2.33 | 30.4 | 13.06 | 5.779 | 0.03 | 0.698 | 0.13 | 2.418 |
| 14H | 110 | 6.451 | 0.067 | 60.7 | 2.30 | 30.3 | 13.17 | 5.901 | 0.03 | 0.702 | 0.13 | 2.434 |
| 14H | 112 | 4.854 | 0.050 | 60.1 | 2.30 | 30.1 | 13.08 | 5.987 | 0.04 | 0.705 | 0.15 | 2.447 |
| 14H | 114 | 5.214 | 0.053 | 65.0 | 2.18 | 28.8 | 13.21 | 6.095 | 0.04 | 0.709 | 0.13 | 2.461 |
| 14H | 116 | 5.113 | 0.052 | 60.6 | 2.11 | 29.7 | 14.03 | 6.206 | 0.03 | 0.713 | 0.13 | 2.475 |
| 14H | 118 | 4.848 | 0.050 | 60.0 | 2.21 | 29.6 | 13.40 | 6.292 | 0.03 | 0.715 | 0.14 | 2.487 |
| 14H | 120 | 5.154 | 0.053 | 62.5 | 2.25 | 29.2 | 12.97 | 6.387 | 0.03 | 0.718 | 0.14 | 2.500 |
| 14H | 122 | 5.373 | 0.055 | 71.1 | 2.25 | 29.9 | 13.26 | 6.501 | 0.04 | 0.723 | 0.14 | 2.516 |
| 14H | 124 | 5.482 | 0.056 | 61.9 | 2.24 | 29.9 | 13.35 | 6.612 | 0.04 | 0.727 | 0.14 | 2.532 |

Note: In calculations of cumulative NAIP and TP in the text, cumulative NAIP was increased by 0.032 from 12 to 42 cm and by 0.043 from 42 to 124 cm, and TP was increased by 0.048 to account for missing data at 12 and 42 cm for NAIP and 42 cm for TP. Values of 0.73 and 0.100, respectively, were used for missing NAIP data, and a value of 0.470 was used for missing TP datum. Cumulative NAIP and TP reported in these appendix tables do not include this adjustment.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21H | 2 | 0.783 | 0.008 | 77.4 | 4.11 | 36.0 | 8.77 | 0.016 | 1.11 | 0.018 | 1.95 | 0.031 |
| 21H | 4 | 1.352 | 0.014 | 76.0 | 5.44 | 32.8 | 6.03 | 0.041 | 1.16 | 0.047 | 2.08 | 0.084 |
| 21H | 6 | 1.380 | 0.014 | 74.2 | 4.05 | 37.2 | 9.18 | 0.069 | 0.99 | 0.075 | 2.01 | 0.140 |
| 21H | 8 | 1.382 | 0.014 | 74.1 | 3.93 | 34.0 | 8.64 | 0.093 | 0.88 | 0.095 | 2.83 | 0.207 |
| 21H | 10 | 1.618 | 0.016 | 72.4 | 3.64 | 31.6 | 8.68 | 0.124 | 0.89 | 0.123 | 2.57 | 0.288 |
| 21H | 12 | 1.845 | 0.019 | 73.1 | 3.85 | 35.0 | 9.09 | 0.159 | 0.84 | 0.152 | 1.64 | 0.344 |
| 21H | 14 | 2.114 | 0.021 | 69.8 | 2.96 | 27.1 | 9.15 | 0.203 | 0.71 | 0.184 | 2.10 | 0.437 |
| 21H | 16 | 2.222 | 0.022 | 67.5 | 3.71 | 35.1 | 9.45 | 0.245 | 0.68 | 0.212 | 2.03 | 0.522 |
| 21H | 18 | 2.492 | 0.025 | 67.9 | 3.82 | 35.3 | 9.23 | 0.292 | 0.62 | 0.242 | 2.03 | 0.617 |
| 21H | 20 | 2.641 | 0.027 | 65.8 | 3.73 | 34.6 | 9.27 | 0.345 | 0.64 | 0.275 | 2.15 | 0.731 |
| 21H | 22 | 2.777 | 0.028 | 65.5 | 3.74 | 35.2 | 9.42 | 0.395 | 0.61 | 0.306 | 2.02 | 0.833 |
| 21H | 24 | 4.559 | 0.047 | 43.2 | 2.76 | 26.1 | 9.45 | 0.487 | 0.31 | 0.335 | 0.76 | 0.902 |
| 21H | 26 | 5.155 | 0.053 | 34.1 | 3.16 | 29.8 | 9.43 | 0.588 | 0.36 | 0.371 | 1.01 | 1.005 |
| 21H | 28 | 5.606 | 0.058 | 35.0 | 2.22 | 21.9 | 9.86 | 0.699 | 0.15 | 0.388 | 0.73 | 1.087 |
| 21H | 30 | 4.479 | 0.046 | 40.7 | 2.20 | 22.8 | 10.33 | 0.792 | 0.22 | 0.408 | 0.82 | 1.163 |
| 21H | 32 | 4.688 | 0.048 | 40.3 | 2.71 | 28.7 | 10.58 | 0.876 | 0.28 | 0.432 | 0.77 | 1.228 |
| 21H | 34 | 4.422 | 0.045 | 50.8 | 2.39 | 26.6 | 11.12 | 0.970 | 0.17 | 0.448 | 0.49 | 1.273 |
| 21H | 36 | 4.294 | 0.044 | 50.9 | 2.52 | 28.1 | 11.16 | 1.050 | 0.24 | 0.467 | 0.70 | 1.329 |
| 21H | 38 | 4.354 | 0.045 | 52.1 | 2.41 | 27.0 | 11.21 | 1.129 | 0.16 | 0.479 | 0.41 | 1.362 |
| 21H | 40 | 4.101 | 0.042 | 53.8 | 2.75 | 30.9 | 11.23 | 1.217 | 0.18 | 0.495 | 0.44 | 1.401 |
| 21H | 42 | 4.042 | 0.041 | 56.3 | 2.71 | 30.7 | 11.32 | 1.289 | 0.18 | 0.508 | 0.38 | 1.428 |
| 21H | 44 | 3.858 | 0.039 | 53.9 | 2.47 | 28.1 | 11.37 | 1.374 | 0.15 | 0.520 | 0.39 | 1.461 |
| 21H | 46 | 3.961 | 0.040 | 56.0 | 2.34 | 26.6 | 11.36 | 1.454 | 0.15 | 0.532 | 0.40 | 1.493 |
| 21H | 48 | 4.109 | 0.042 | 52.5 | 2.71 | 30.2 | 11.17 | 1.532 | 0.16 | 0.545 | 0.44 | 1.527 |
| 21H | 50 | 4.610 | 0.047 | 61.2 | 2.47 | 27.9 | 11.33 | 1.635 | 0.12 | 0.557 | 0.42 | 1.570 |
| 21H | 52 | 4.727 | 0.048 | 69.4 | 2.36 | 27.0 | 11.41 | 1.718 | 0.17 | 0.571 | 0.36 | 1.600 |
| 21H | 54 | 4.777 | 0.049 | 59.9 | 2.72 | 32.1 | 11.80 | 1.828 | 0.10 | 0.582 | 0.29 | 1.632 |
| 21H | 56 | 4.518 | 0.046 | 58.2 | 2.71 | 32.1 | 11.83 | 1.916 | 0.10 | 0.591 | 0.27 | 1.655 |
| 21H | 58 | 4.289 | 0.044 | 58.6 | 2.80 | 33.1 | 11.85 | 1.997 | 0.10 | 0.599 | 0.27 | 1.677 |
| 21H | 60 | 4.220 | 0.043 | 63.0 | 2.72 | 32.5 | 11.94 | 2.078 | 0.09 | 0.606 | 0.24 | 1.697 |
| 21H | 62 | 4.289 | 0.044 | 64.7 | 2.77 | 33.6 | 12.13 | 2.165 | 0.10 | 0.615 | 0.25 | 1.718 |
| 21H | 64 | 4.570 | 0.047 | 65.0 | 2.66 | 32.0 | 12.01 | 2.255 | 0.10 | 0.624 | 0.26 | 1.742 |
| 21H | 66 | 4.719 | 0.048 | 63.9 | 2.62 | 32.0 | 12.22 | 2.347 | 0.09 | 0.632 | 0.25 | 1.764 |
| 21H | 68 | 5.276 | 0.054 | 60.1 | 2.55 | 31.6 | 12.39 | 2.465 | 0.07 | 0.640 | 0.25 | 1.794 |
| 21H | 70 | 5.590 | 0.057 | 60.6 | 2.43 | 31.1 | 12.78 | 2.573 | 0.06 | 0.647 | 0.20 | 1.816 |
| 21H | 72 | 5.458 | 0.056 | 67.7 | 2.28 | 29.3 | 12.85 | 2.692 | 0.07 | 0.655 | 0.19 | 1.839 |
| 21H | 74 | 5.344 | 0.055 | 62.2 | 2.54 | 32.3 | 12.72 | 2.798 | 0.08 | 0.664 | 0.20 | 1.860 |
| 21H | 76 | 5.537 | 0.057 | 59.0 | 2.46 | 31.7 | 12.89 | 2.913 | 0.07 | 0.672 | 0.19 | 1.881 |
| 21H | 78 | 5.794 | 0.060 | 61.0 | 2.24 | 29.4 | 13.15 | 3.026 | 0.04 | 0.676 | 0.19 | 1.903 |
| 21H | 80 | 5.060 | 0.052 | 62.3 | 2.49 | 32.4 | 13.01 | 3.133 | 0.07 | 0.684 | 0.20 | 1.924 |
| 21H | 82 | 4.859 | 0.050 | 65.9 | 2.50 | 32.9 | 13.18 | 3.222 | 0.08 | 0.691 | 0.19 | 1.941 |
| 21H | 84 | 5.012 | 0.051 | 67.3 | 2.55 | 33.3 | 13.07 | 3.326 | 0.06 | 0.697 | 0.18 | 1.960 |
| 21H | 86 | 4.958 | 0.051 | 65.0 | 2.35 | 31.2 | 13.26 | 3.410 | 0.07 | 0.703 | 0.18 | 1.976 |
| 21H | 88 | 4.823 | 0.049 | 66.0 | 2.59 | 33.6 | 12.99 | 3.515 | 0.06 | 0.710 | 0.19 | 1.996 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21H | 90 | 4.404 | 0.045 | 66.1 | 2.57 | 33.7 | 13.13 | 3.603 | 0.06 | 0.716 | 0.18 | 2.012 |
| 21H | 92 | 4.643 | 0.047 | 65.2 | 2.49 | 32.5 | 13.03 | 3.697 | 0.07 | 0.722 | 0.17 | 2.027 |
| 21H | 94 | 4.977 | 0.051 | 61.5 | 2.52 | 33.0 | 13.08 | 3.784 | 0.05 | 0.726 | 0.16 | 2.041 |
| 21H | 96 | 4.692 | 0.048 | 61.4 | 2.56 | 33.3 | 13.01 | 3.880 | 0.05 | 0.731 | 0.17 | 2.057 |
| 21H | 98 | 4.647 | 0.048 | 64.6 | 2.63 | 34.8 | 13.23 | 3.972 | 0.05 | 0.736 | 0.18 | 2.073 |
| 21H | 100 | 4.616 | 0.047 | 68.2 | 2.63 | 34.3 | 13.04 | 4.064 | 0.06 | 0.742 | 0.17 | 2.089 |
| 21H | 102 | 4.641 | 0.047 | 68.1 | 2.52 | 32.9 | 13.07 | 4.159 | 0.05 | 0.747 | 0.17 | 2.105 |
| 21H | 104 | 3.800 | 0.039 | 45.3 | 2.27 | 30.0 | 13.23 | 4.231 | 0.02 | 0.748 | 0.17 | 2.117 |
| 21H | 106 | 4.933 | 0.050 | 68.9 | 2.70 | 35.1 | 13.01 | 4.331 | 0.04 | 0.752 | 0.16 | 2.133 |
| 21H | 108 | 4.564 | 0.047 | 72.4 | 2.79 | 36.0 | 12.88 | 4.436 | 0.04 | 0.756 | 0.17 | 2.151 |
| 21H | 110 | 4.616 | 0.047 | 72.0 | 2.58 | 33.3 | 12.92 | 4.522 | 0.06 | 0.761 | 0.17 | 2.166 |
| 21H | 112 | 4.830 | 0.049 | 72.9 | 2.63 | 33.9 | 12.91 | 4.615 | 0.06 | 0.767 | 0.17 | 2.181 |
| 21H | 114 | 4.751 | 0.049 | 69.8 | 2.62 | 34.9 | 13.34 | 4.719 | 0.05 | 0.772 | 0.17 | 2.199 |
| 21H | 116 | 4.563 | 0.047 | 71.3 | 2.70 | 35.8 | 13.25 | 4.804 | 0.05 | 0.777 | 0.17 | 2.213 |
| 21H | 118 | 4.568 | 0.047 | 69.2 | 2.68 | 34.6 | 12.92 | 4.898 | 0.04 | 0.781 | 0.16 | 2.228 |
| 21H | 120 | 4.378 | 0.045 | 71.9 | 2.73 | 34.8 | 12.77 | 4.986 | 0.06 | 0.786 | 0.17 | 2.243 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22H | 2 | 0.189 | 0.002 | 70.7 | 3.82 | 33.2 | 8.68 | 0.002 | 0.77 | 0.001 | 1.44 | 0.003 |
| 22H | 4 | 0.584 | 0.006 | 77.6 | 3.72 | 33.7 | 9.06 | 0.012 | 0.79 | 0.009 | 1.91 | 0.022 |
| 22H | 6 | 0.797 | 0.008 | 77.0 | 4.22 | 31.3 | 7.42 | 0.026 | 0.74 | 0.020 | 1.98 | 0.050 |
| 22H | 8 | 0.981 | 0.010 | 74.7 | 3.78 | 33.9 | 8.97 | 0.044 | 0.76 | 0.033 | 2.05 | 0.086 |
| 22H | 10 | 1.249 | 0.013 | 74.1 | 3.72 | 33.6 | 9.04 | 0.064 | 0.81 | 0.049 | 2.12 | 0.129 |
| 22H | 12 | 1.789 | 0.018 | 72.1 | 3.60 | 32.2 | 8.95 | 0.100 | 0.75 | 0.077 | 1.97 | 0.200 |
| 22H | 14 | 2.380 | 0.024 | 63.2 | 3.60 | 32.8 | 9.13 | 0.147 | 0.62 | 0.105 | 1.67 | 0.278 |
| 22H | 16 | 3.207 | 0.033 | 54.8 | 3.32 | 31.7 | 9.55 | 0.209 | 0.48 | 0.135 | 1.52 | 0.372 |
| 22H | 18 | 2.936 | 0.030 | 58.5 | 3.38 | 32.3 | 9.55 | 0.269 | 0.35 | 0.156 | 1.47 | 0.460 |
| 22H | 20 | 4.748 | 0.049 | 32.4 | 2.67 | 27.6 | 10.33 | 0.368 | 0.34 | 0.190 | 1.41 | 0.601 |
| 22H | 22 | 4.248 | 0.043 | 39.5 | 2.56 | 26.7 | 10.43 | 0.449 | 0.21 | 0.207 | 0.97 | 0.679 |
| 22H | 24 | 4.468 | 0.046 | 39.3 | 2.50 | 26.2 | 10.50 | 0.553 | 0.21 | 0.228 | 0.98 | 0.782 |
| 22H | 26 | 4.567 | 0.047 | 43.5 | 2.47 | 26.8 | 10.86 | 0.639 | 0.18 | 0.244 | 1.00 | 0.868 |
| 22H | 28 | 5.345 | 0.055 | 40.9 | 2.32 | 26.6 | 11.46 | 0.759 | 0.08 | 0.254 | 1.24 | 1.016 |
| 22H | 30 | 5.929 | 0.061 | 44.1 | 1.68 | 19.7 | 11.73 | 0.902 | 0.07 | 0.264 | 0.64 | 1.108 |
| 22H | 32 | 5.830 | 0.060 | 47.4 | 2.27 | 26.9 | 11.83 | 1.047 | 0.11 | 0.280 | 0.56 | 1.189 |
| 22H | 34 | 5.709 | 0.059 | 52.6 | 2.40 | 28.2 | 11.75 | 1.182 | 0.09 | 0.292 | 0.52 | 1.259 |
| 22H | 36 | 5.725 | 0.059 | 55.1 | 2.34 | 28.0 | 11.97 | 1.323 | 0.10 | 0.306 | 0.41 | 1.317 |
| 22H | 38 | 5.917 | 0.061 | 56.4 | 2.26 | 27.9 | 12.34 | 1.474 | 0.05 | 0.313 | 0.27 | 1.357 |
| 22H | 40 | 5.985 | 0.062 | 50.7 | 1.89 | 24.7 | 13.05 | 1.594 | 0.04 | 0.317 | 0.21 | 1.383 |
| 22H | 42 | 7.511 | 0.078 | 41.3 | 1.97 | 27.2 | 13.86 | 1.744 | 0.02 | 0.320 | 0.13 | 1.403 |
| 22H | 44 | 6.298 | 0.065 | 44.2 | 1.87 | 26.8 | 14.36 | 1.880 | 0.04 | 0.325 | 0.15 | 1.423 |
| 22H | 46 | 6.167 | 0.064 | 38.2 | 1.88 | 27.0 | 14.31 | 2.000 | 0.04 | 0.330 | 0.13 | 1.438 |
| 22H | 48 | 5.873 | 0.061 | 41.6 | 2.01 | 28.9 | 14.41 | 2.128 | 0.03 | 0.333 | 0.05 | 1.444 |
| 22H | 50 | 5.687 | 0.059 | 55.5 | 1.94 | 28.2 | 14.49 | 2.247 | 0.02 | 0.336 | 0.13 | 1.459 |
| 22H | 52 | 5.912 | 0.061 | 48.3 | 1.77 | 25.8 | 14.59 | 2.371 | 0.02 | 0.338 | 0.14 | 1.476 |
| 22H | 54 | 6.178 | 0.064 | 50.2 | 2.01 | 28.5 | 14.22 | 2.509 | 0.01 | 0.340 | 0.13 | 1.494 |
| 22H | 56 | 6.152 | 0.064 | 48.4 | 1.83 | 26.1 | 14.28 | 2.617 | 0.05 | 0.346 | 0.14 | 1.510 |
| 22H | 58 | 5.924 | 0.061 | 45.6 | 1.92 | 27.0 | 14.05 | 2.750 | 0.03 | 0.350 | 0.15 | 1.530 |
| 22H | 60 | 4.898 | 0.050 | 56.5 | 2.14 | 30.7 | 14.32 | 2.842 | 0.04 | 0.354 | 0.13 | 1.542 |
| 22H | 62 | 4.652 | 0.048 | 55.9 | 2.13 | 30.0 | 14.12 | 2.937 | 0.04 | 0.358 | 0.14 | 1.555 |
| 22H | 64 | 4.366 | 0.045 | 61.0 | 2.26 | 31.2 | 13.85 | 3.023 | 0.04 | 0.361 | 0.14 | 1.567 |
| 22H | 66 | 5.332 | 0.055 | 48.1 | 1.95 | 28.1 | 14.38 | 3.135 | 0.03 | 0.365 | 0.13 | 1.582 |
| 22H | 68 | 5.002 | 0.051 | 58.7 | 2.15 | 29.5 | 13.71 | 3.236 | 0.03 | 0.368 | 0.12 | 1.594 |
| 22H | 70 | 4.365 | 0.045 | 62.0 | 2.22 | 30.4 | 13.70 | 3.318 | 0.04 | 0.371 | 0.14 | 1.605 |
| 22H | 72 | 5.936 | 0.061 | 48.8 | 1.95 | 27.2 | 13.95 | 3.442 | 0.02 | 0.374 | 0.11 | 1.619 |
| 22H | 74 | 4.433 | 0.045 | 62.6 | 2.24 | 31.5 | 14.07 | 3.528 | 0.04 | 0.377 | 0.15 | 1.632 |
| 22H | 76 | 4.576 | 0.047 | 61.0 | 2.25 | 31.3 | 13.90 | 3.626 | 0.04 | 0.380 | 0.13 | 1.645 |
| 22H | 78 | 5.266 | 0.054 | 57.2 | 1.86 | 28.1 | 15.10 | 3.741 | 0.04 | 0.384 | 0.12 | 1.659 |
| 22H | 80 | 5.478 | 0.056 | 56.6 | 2.02 | 29.7 | 14.67 | 3.851 | 0.03 | 0.388 | 0.12 | 1.672 |
| 22H | 82 | 5.421 | 0.056 | 57.5 | 1.96 | 29.8 | 15.19 | 3.952 | 0.03 | 0.391 | 0.13 | 1.685 |
| 22H | 84 | 5.514 | 0.057 | 57.2 | 1.98 | 30.0 | 15.18 | 4.076 | 0.03 | 0.395 | 0.13 | 1.700 |
| 22H | 86 | 6.328 | 0.065 | 54.4 | 1.87 | 28.4 | 15.18 | 4.196 | 0.03 | 0.398 | 0.12 | 1.715 |
| 22H | 88 | 6.426 | 0.066 | 53.0 | 1.85 | 28.1 | 15.21 | 4.329 | 0.03 | 0.402 | 0.13 | 1.732 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22H | 90 | 5.725 | 0.059 | 77.9 | 1.98 | 29.8 | 15.03 | 4.451 | 0.03 | 0.405 | 0.13 | 1.748 |
| 22H | 92 | 5.576 | 0.057 | 60.0 | 1.99 | 30.2 | 15.17 | 4.564 | 0.04 | 0.410 | 0.13 | 1.762 |
| 22H | 94 | 5.571 | 0.057 | 58.9 | 2.00 | 30.1 | 15.02 | 4.670 | 0.04 | 0.415 | 0.13 | 1.775 |
| 22H | 96 | 5.539 | 0.057 | 58.5 | 2.03 | 30.0 | 14.79 | 4.778 | 0.04 | 0.419 | 0.13 | 1.790 |
| 22H | 98 | 5.598 | 0.058 | 59.8 | 2.01 | 30.2 | 15.02 | 4.912 | 0.04 | 0.424 | 0.13 | 1.807 |
| 22H | 100 | 5.746 | 0.059 | 58.1 | 1.98 | 29.6 | 14.97 | 5.026 | 0.03 | 0.428 | 0.12 | 1.821 |
| 22H | 102 | 6.196 | 0.064 | 57.2 | 1.86 | 28.8 | 15.48 | 5.147 | 0.04 | 0.433 | 0.11 | 1.835 |
| 22H | 104 | 6.332 | 0.065 | 57.2 | 1.90 | 29.3 | 15.45 | 5.284 | 0.04 | 0.439 | 0.12 | 1.851 |
| 22H | 106 | 6.146 | 0.063 | 56.2 | 1.87 | 28.3 | 15.14 | 5.415 | 0.04 | 0.443 | 0.15 | 1.871 |
| 22H | 108 | 7.127 | 0.074 | 49.8 | 1.76 | 26.5 | 15.09 | 5.559 | 0.02 | 0.447 | 0.12 | 1.888 |
| 22H | 110 | 6.502 | 0.067 | 54.9 | 1.85 | 27.8 | 15.02 | 5.684 | 0.03 | 0.451 | 0.11 | 1.902 |
| 22H | 112 | 6.309 | 0.065 | 55.6 | 1.92 | 28.8 | 14.98 | 5.820 | 0.02 | 0.454 | 0.11 | 1.916 |
| 22H | 114 | 6.810 | 0.071 | 52.1 | 1.81 | 27.9 | 15.40 | 5.955 | 0.02 | 0.457 | 0.12 | 1.932 |
| 22H | 116 | 6.477 | 0.067 | 56.4 | 1.92 | 29.2 | 15.21 | 6.096 | 0.02 | 0.460 | 0.13 | 1.950 |
| 22H | 118 | 6.304 | 0.065 | 57.1 | 1.96 | 30.1 | 15.39 | 6.220 | 0.03 | 0.463 | 0.12 | 1.964 |
| 22H | 120 | 6.781 | 0.070 | 53.7 | 1.84 | 28.5 | 15.43 | 6.365 | 0.03 | 0.467 | 0.11 | 1.980 |
| 22H | 122 | 6.623 | 0.069 | 53.8 | 1.90 | 29.2 | 15.38 | 6.505 | 0.02 | 0.470 | 0.20 | 2.009 |
| 22H | 124 | 6.872 | 0.071 | 54.1 | 1.97 | 30.0 | 15.25 | 6.647 | 0.02 | 0.473 | 0.12 | 2.025 |
| 22H | 126 | 6.938 | 0.072 | 54.5 | 1.78 | 27.4 | 15.39 | 6.781 | 0.02 | 0.475 | 0.11 | 2.040 |
| 22H | 128 | 7.492 | 0.078 | 49.6 | 1.88 | 28.9 | 15.40 | 6.934 | 0.01 | 0.477 | 0.13 | 2.059 |
| 22H | 130 | 7.354 | 0.076 | 49.5 | 1.86 | 28.3 | 15.21 | 7.093 | 0.01 | 0.479 | 0.13 | 2.080 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6H | 4 | 0.873 | 0.009 | 78.8 | 4.06 | 36.6 | 9.01 | 0.031 | ... | ... | 2.65 | 0.083 |
| 6H | 8 | 1.566 | 0.016 | 78.2 | 4.31 | 38.2 | 8.87 | 0.097 | 0.93 | 0.061 | 2.84 | 0.269 |
| 6H | 12 | 1.913 | 0.019 | 74.3 | 4.20 | 37.2 | 8.85 | 0.167 | 0.76 | 0.114 | 2.29 | 0.431 |
| 6H | 16 | 2.021 | 0.020 | 71.2 | 3.93 | 35.7 | 9.08 | 0.226 | 0.64 | 0.152 | 2.07 | 0.552 |
| 6H | 20 | 2.068 | 0.021 | 72.0 | 4.00 | 36.4 | 9.10 | 0.305 | 0.62 | 0.201 | 2.06 | 0.715 |
| 6H | 24 | 2.700 | 0.027 | 73.2 | 3.74 | 34.0 | 9.10 | 0.408 | 0.53 | 0.255 | 1.94 | 0.915 |
| 6H | 28 | 2.549 | 0.026 | 64.9 | 3.47 | 31.7 | 9.13 | 0.518 | 0.61 | 0.322 | 1.99 | 1.132 |
| 6H | 32 | 2.744 | 0.028 | 60.4 | 3.77 | 35.1 | 9.30 | 0.623 | 0.46 | 0.371 | 1.77 | 1.320 |
| 6H | 36 | 3.961 | 0.040 | 64.0 | 3.09 | 29.6 | 9.56 | 0.786 | 0.42 | 0.440 | 1.34 | 1.538 |
| 6H | 40 | 3.671 | 0.037 | 51.2 | 3.19 | 30.7 | 9.63 | 0.928 | 0.43 | 0.501 | 1.53 | 1.755 |
| 6H | 44 | 2.920 | 0.030 | 51.7 | 3.48 | 33.7 | 9.68 | 1.056 | 0.40 | 0.551 | 1.51 | 1.947 |
| 6H | 48 | 3.876 | 0.040 | 51.7 | 3.30 | 32.1 | 9.74 | 1.194 | 0.39 | 0.605 | 1.61 | 2.170 |
| 6H | 52 | 5.209 | 0.053 | 56.2 | 2.55 | 25.7 | 10.09 | 1.398 | 0.35 | 0.676 | 1.27 | 2.429 |
| 6H | 56 | 5.168 | 0.053 | 55.5 | 2.55 | 25.9 | 10.17 | 1.589 | 0.38 | 0.750 | 1.24 | 2.666 |
| 6H | 60 | 4.749 | 0.049 | 51.4 | 2.89 | 29.7 | 10.29 | 1.780 | 0.36 | 0.819 | 1.06 | 2.868 |
| 6H | 64 | 4.952 | 0.051 | 54.1 | 2.97 | 31.1 | 10.48 | 1.981 | 0.27 | 0.874 | 0.75 | 3.019 |
| 6H | 68 | 4.816 | 0.049 | 59.0 | 3.01 | 31.9 | 10.59 | 2.173 | 0.20 | 0.913 | 0.61 | 3.137 |
| 6H | 72 | 4.924 | 0.050 | 61.2 | 2.93 | 31.3 | 10.70 | 2.375 | 0.21 | 0.955 | 0.58 | 3.253 |
| 6H | 76 | 5.205 | 0.053 | 61.5 | 3.08 | 33.3 | 10.81 | 2.568 | 0.20 | 0.992 | 0.51 | 3.352 |
| 6H | 80 | 5.205 | 0.053 | 72.6 | 3.14 | 34.3 | 10.92 | 2.774 | 0.17 | 1.027 | 0.48 | 3.451 |
| 6H | 84 | 5.358 | 0.055 | 66.0 | 3.20 | 35.1 | 10.96 | 2.987 | 0.16 | 1.061 | 0.41 | 3.538 |
| 6H | 88 | 6.081 | 0.063 | 68.2 | 2.94 | 31.9 | 10.84 | 3.227 | 0.13 | 1.092 | 0.36 | 3.625 |
| 6H | 92 | 5.112 | 0.052 | 66.7 | 3.12 | 33.9 | 10.88 | 3.428 | 0.14 | 1.120 | 0.37 | 3.698 |
| 6H | 96 | 4.991 | 0.051 | 65.9 | 3.26 | 35.1 | 10.76 | 3.622 | 0.13 | 1.145 | 0.37 | 3.770 |
| 6H | 100 | 4.918 | 0.050 | 66.3 | 3.28 | 35.7 | 10.90 | 3.808 | 0.11 | 1.166 | 0.37 | 3.839 |
| 6H | 104 | 5.084 | 0.052 | 66.5 | 3.26 | 35.2 | 10.80 | 4.025 | 0.10 | 1.188 | 0.37 | 3.919 |
| 6H | 108 | 5.434 | 0.056 | 66.0 | 3.23 | 35.0 | 10.83 | 4.206 | 0.12 | 1.209 | 0.39 | 3.989 |
| 6H | 112 | 5.369 | 0.055 | 66.9 | 3.26 | 35.5 | 10.90 | 4.415 | 0.13 | 1.236 | 0.40 | 4.072 |
| 6H | 116 | 5.191 | 0.053 | 69.1 | 3.16 | 34.8 | 11.02 | 4.625 | 0.11 | 1.259 | 0.33 | 4.140 |
| 6H | 120 | 5.060 | 0.052 | 68.2 | 3.19 | 35.5 | 11.12 | 4.844 | 0.10 | 1.281 | 0.31 | 4.208 |
| 6H | 124 | 4.846 | 0.050 | 68.2 | 3.19 | 35.3 | 11.07 | 5.050 | 0.08 | 1.297 | 0.28 | 4.266 |
| 6H | 128 | 4.658 | 0.048 | 67.1 | 3.16 | 35.0 | 11.09 | 5.249 | 0.08 | 1.313 | 0.26 | 4.317 |
| 6H | 132 | 4.385 | 0.045 | 68.8 | 3.19 | 35.0 | 10.97 | 5.430 | 0.09 | 1.328 | 0.26 | 4.363 |

Note: In calculations of cumulative NAIP in the text, cumulative NAIP were increased by 0.029 to account for missing data at 2 cm for NAIP. A value of 0.93 was used for missing NAIP. Cumulative NAIP reported in these appendix tables do not include this adjustment.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12H | 4 | 1.557 | 0.016 | 67.6 | 3.73 | 33.7 | 9.04 | 0.059 | 0.62 | 0.037 | 1.83 | 0.108 |
| 12H | 8 | 2.381 | 0.024 | 68.4 | 3.98 | 35.2 | 8.85 | 0.153 | 0.81 | 0.113 | 2.07 | 0.303 |
| 12H | 12 | 2.536 | 0.026 | 65.1 | 3.84 | 35.1 | 9.15 | 0.246 | 0.69 | 0.177 | 1.94 | 0.483 |
| 12H | 16 | 2.854 | 0.029 | 63.4 | 3.74 | 34.4 | 9.20 | 0.371 | 0.56 | 0.248 | 1.58 | 0.681 |
| 12H | 20 | 3.080 | 0.031 | 62.6 | 3.74 | 35.0 | 9.36 | 0.491 | 0.55 | 0.314 | 1.58 | 0.870 |
| 12H | 24 | 3.305 | 0.034 | 63.2 | 3.70 | 34.6 | 9.35 | 0.627 | 0.00 | 0.314 | 1.51 | 1.076 |
| 12H | 28 | 3.335 | 0.034 | 61.3 | 3.72 | 34.7 | 9.32 | 0.755 | 0.66 | 0.398 | 1.73 | 1.297 |
| 12H | 32 | 3.768 | 0.038 | 64.1 | 3.62 | 33.5 | 9.25 | 0.909 | 0.57 | 0.487 | 1.68 | 1.556 |
| 12H | 36 | 3.380 | 0.034 | 64.8 | 3.82 | 35.7 | 9.35 | 1.033 | 0.76 | 0.580 | 1.79 | 1.777 |
| 12H | 40 | 3.376 | 0.034 | 61.7 | 3.57 | 34.0 | 9.52 | 1.154 | 0.59 | 0.652 | 1.69 | 1.983 |
| 12H | 44 | 3.664 | 0.037 | 61.2 | 3.50 | 33.8 | 9.66 | 1.289 | 0.45 | 0.713 | 1.52 | 2.187 |
| 12H | 48 | 3.964 | 0.040 | 58.2 | 3.44 | 33.3 | 9.67 | 1.437 | 0.41 | 0.773 | 1.46 | 2.403 |
| 12H | 52 | 4.021 | 0.041 | 57.2 | 3.45 | 33.7 | 9.75 | 1.619 | 0.52 | 0.867 | 1.40 | 2.658 |
| 12H | 56 | 4.345 | 0.044 | 54.7 | 3.29 | 32.8 | 9.98 | 1.793 | 0.43 | 0.942 | 1.59 | 2.934 |
| 12H | 60 | 7.416 | 0.077 | 52.4 | 3.04 | 31.5 | 10.37 | 2.099 | 0.42 | 1.071 | 1.25 | 3.315 |
| 12H | 64 | 4.987 | 0.051 | 54.5 | 2.92 | 30.0 | 10.26 | 2.287 | 0.41 | 1.147 | 1.30 | 3.560 |
| 12H | 68 | 4.876 | 0.050 | 58.7 | 2.96 | 30.1 | 10.18 | 2.480 | 0.29 | 1.203 | 1.20 | 3.792 |
| 12H | 72 | 5.195 | 0.053 | 48.7 | 2.59 | 29.2 | 11.26 | 2.684 | 0.28 | 1.259 | 1.05 | 4.007 |
| 12H | 76 | 5.395 | 0.055 | 55.0 | 2.41 | 28.8 | 11.96 | 2.889 | 0.26 | 1.312 | 0.95 | 4.201 |
| 12H | 80 | 6.522 | 0.068 | 36.9 | 2.38 | 28.8 | 12.11 | 3.165 | 0.23 | 1.374 | 0.77 | 4.414 |
| 12H | 84 | 7.895 | 0.082 | 41.6 | 2.27 | 29.5 | 12.99 | 3.481 | 0.19 | 1.433 | 0.47 | 4.561 |
| 12H | 88 | 8.921 | 0.094 | 38.5 | 1.96 | 26.4 | 13.47 | 3.849 | 0.07 | 1.459 | 0.22 | 4.643 |
| 12H | 92 | 7.093 | 0.074 | 55.7 | 2.26 | 30.8 | 13.63 | 4.130 | 0.07 | 1.480 | 0.22 | 4.705 |
| 12H | 96 | 6.436 | 0.066 | 57.8 | 2.27 | 31.7 | 13.96 | 4.410 | 0.06 | 1.498 | 0.18 | 4.756 |
| 12H | 100 | 6.539 | 0.068 | 57.6 | 2.28 | 32.1 | 14.08 | 4.666 | 0.06 | 1.512 | 0.18 | 4.801 |
| 12H | 104 | 8.337 | 0.087 | 41.9 | 2.16 | 29.9 | 13.83 | 5.020 | 0.06 | 1.533 | 0.15 | 4.855 |
| 12H | 108 | 6.741 | 0.070 | 49.7 | 2.34 | 32.3 | 13.79 | 5.280 | 0.06 | 1.547 | 0.17 | 4.900 |
| 12H | 112 | 5.803 | 0.060 | 60.4 | 2.34 | 32.8 | 14.01 | 5.506 | 0.05 | 1.559 | 0.17 | 4.939 |
| 12H | 116 | 6.266 | 0.065 | 59.7 | 2.25 | 31.1 | 13.83 | 5.780 | 0.05 | 1.571 | 0.15 | 4.979 |
| 12H | 120 | 5.569 | 0.057 | 61.1 | 2.32 | 31.7 | 13.68 | 6.014 | 0.05 | 1.582 | 0.16 | 5.017 |
| 12H | 124 | 5.391 | 0.055 | 62.7 | 2.41 | 33.0 | 13.69 | 6.228 | 0.05 | 1.592 | 0.15 | 5.049 |

# APPENDIX G

## PHYSICAL AND CHEMICAL DATA
## LAKE EUSTIS
## SURVEY CORES

Gravimetric and chemical data, Lake Eustis survey cores, Phase I and Phase II.
See Appendix C for collection date, location and description of cores.

CODES:
- Depth is depth (cm)
- Dry is % dry weight
- Rho is dry weight density (g dry/g cc wet)
- LOI is % loss on ignition
- TN is total nitrogen (%)
- TC is total carbon (%)
- TC/TN is TC/TN mass ratio
- Cum weight is cumulative mass (g $cm^{-2}$)
- NAIP is non-apatite inorganic phosphorus (mg $g^{-1}$),
- Cum NAIP is cumulative NAIP (mg $cm^{-2}$)
- TP is total phosphorus (mg $g^{-1}$)
- Cum TP is cumulative TP (mg $cm^{-2}$)

Lake Eustis Survey Cores, Phase I

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 81.488 | 1.593 | 0.4 | 0.13 | 0.0 | 0.00 | 15.265 | 0.01 | 0.214 | 0.02 | 0.290 |
| 2 | 0 | 78.013 | 1.464 | 0.9 | 0.18 | 0.0 | 0.00 | 23.567 | 0.01 | 0.189 | 0.02 | 0.354 |
| 3 | 0 | 1.816 | 0.018 | 70.1 | 3.37 | 32.3 | 9.57 | 0.245 | 0.43 | 0.105 | 1.22 | 0.299 |
| 3 | 16 | 2.793 | 0.028 | 68.2 | 3.29 | 32.0 | 9.71 | 0.453 | 0.55 | 0.218 | 1.32 | 0.573 |
| 3 | 24 | 4.308 | 0.044 | 54.4 | 2.61 | 26.2 | 10.02 | 0.819 | 0.31 | 0.333 | 0.88 | 0.897 |
| 3 | 32 | 4.316 | 0.044 | 54.5 | 2.41 | 25.4 | 10.56 | 1.173 | 0.25 | 0.421 | 0.69 | 1.139 |
| 3 | 40 | 4.692 | 0.048 | 55.8 | 2.59 | 27.8 | 10.75 | 1.567 | 0.20 | 0.500 | 0.67 | 1.403 |
| 3 | 48 | 4.822 | 0.049 | 65.0 | 2.78 | 30.6 | 10.99 | 1.979 | 0.22 | 0.588 | 0.64 | 1.664 |
| 3 | 56 | 5.853 | 0.060 | 55.7 | 2.69 | 29.8 | 11.09 | 2.508 | 0.15 | 0.667 | 0.47 | 1.914 |
| 3 | 64 | 5.081 | 0.052 | 65.2 | 2.80 | 30.9 | 11.05 | 2.940 | 0.17 | 0.742 | 0.49 | 2.125 |
| 3 | 72 | 5.002 | 0.051 | 66.9 | 2.80 | 30.9 | 11.04 | 3.323 | 0.17 | 0.808 | 0.47 | 2.304 |
| 3 | 80 | 4.969 | 0.051 | 66.7 | 2.73 | 30.4 | 11.14 | 3.763 | 0.18 | 0.888 | 0.46 | 2.507 |
| 4 | 8 | 1.586 | 0.016 | 70.8 | 3.33 | 32.2 | 9.65 | 0.146 | 0.46 | 0.067 | 1.19 | 0.174 |
| 4 | 16 | 3.182 | 0.032 | 67.3 | 3.15 | 31.1 | 9.87 | 0.413 | 0.48 | 0.193 | 1.12 | 0.471 |
| 4 | 24 | 4.710 | 0.048 | 56.1 | 2.68 | 27.4 | 10.23 | 0.717 | 0.29 | 0.282 | 0.83 | 0.723 |
| 4 | 32 | 4.037 | 0.041 | 61.1 | 2.89 | 29.7 | 10.27 | 1.056 | 0.30 | 0.383 | 0.85 | 1.011 |
| 4 | 40 | 4.502 | 0.046 | 57.0 | 2.62 | 27.4 | 10.47 | 1.478 | 0.25 | 0.486 | 0.80 | 1.349 |
| 4 | 48 | 6.304 | 0.065 | 42.0 | 1.78 | 19.1 | 10.71 | 2.032 | 0.13 | 0.560 | 0.52 | 1.638 |
| 4 | 56 | 5.247 | 0.054 | 53.3 | 2.43 | 26.2 | 10.80 | 2.475 | 0.18 | 0.641 | 0.60 | 1.903 |
| 4 | 60 | 8.353 | 0.087 | 42.1 | 2.07 | 22.3 | 10.76 | 2.932 | 0.12 | 0.696 | 0.45 | 2.110 |
| 5 | 8 | 2.324 | 0.024 | 66.8 | 3.15 | 31.0 | 9.84 | 0.192 | 0.42 | 0.080 | 1.13 | 0.216 |
| 5 | 16 | 4.220 | 0.043 | 60.4 | 2.87 | 29.7 | 10.36 | 0.515 | 0.28 | 0.171 | 0.81 | 0.479 |
| 5 | 24 | 5.525 | 0.057 | 49.1 | 2.37 | 25.2 | 10.63 | 1.010 | 0.19 | 0.266 | 0.59 | 0.773 |
| 5 | 32 | 6.280 | 0.065 | 42.4 | 2.41 | 26.3 | 10.90 | 1.543 | 0.13 | 0.335 | 0.45 | 1.010 |
| 5 | 40 | 63.587 | 1.025 | 2.2 | 0.32 | 1.5 | 4.72 | 10.145 | 0.01 | 0.447 | 0.03 | 1.268 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 8 | 2.217 | 0.022 | 66.6 | 3.11 | 30.2 | 9.69 | 0.124 | 0.45 | 0.056 | 1.19 | 0.148 |
| 6 | 16 | 2.802 | 0.028 | 61.9 | 3.02 | 30.0 | 9.94 | 0.368 | 0.40 | 0.153 | 1.23 | 0.449 |
| 6 | 24 | 3.548 | 0.036 | 57.8 | 2.91 | 29.3 | 10.05 | 0.665 | 0.33 | 0.250 | 1.03 | 0.755 |
| 6 | 32 | 4.051 | 0.041 | 57.0 | 2.52 | 26.5 | 10.53 | 1.022 | 0.23 | 0.332 | 0.68 | 0.999 |
| 6 | 40 | 4.785 | 0.049 | 55.7 | 2.57 | 27.9 | 10.86 | 1.447 | 0.23 | 0.431 | 0.90 | 1.383 |
| 6 | 48 | 4.594 | 0.047 | 58.5 | 2.64 | 28.8 | 10.90 | 1.846 | 0.28 | 0.541 | 0.69 | 1.658 |
| 6 | 56 | 5.075 | 0.052 | 58.6 | 2.56 | 28.0 | 10.94 | 2.304 | 0.23 | 0.647 | 0.58 | 1.922 |
| 6 | 64 | 5.372 | 0.055 | 55.4 | 2.49 | 27.2 | 10.94 | 2.815 | 0.22 | 0.761 | 0.60 | 2.229 |
| 6 | 72 | 5.288 | 0.054 | 64.9 | 2.87 | 31.3 | 10.91 | 3.058 | 0.25 | 0.821 | 0.60 | 2.375 |
| 7 | 8 | 3.250 | 0.033 | 27.1 | 2.50 | 25.8 | 10.31 | 0.317 | 0.24 | 0.076 | 0.72 | 0.229 |
| 7 | 16 | 6.326 | 0.065 | 39.5 | 1.86 | 20.2 | 10.88 | 0.587 | 0.13 | 0.109 | 0.73 | 0.425 |
| 7 | 24 | 6.695 | 0.069 | 38.6 | 2.09 | 24.2 | 11.58 | 1.263 | 0.06 | 0.150 | 0.25 | 0.592 |
| 7 | 32 | 6.147 | 0.063 | 47.9 | 2.30 | 27.2 | 11.80 | 1.762 | 0.04 | 0.170 | 0.17 | 0.679 |
| 7 | 40 | 8.540 | 0.090 | 35.3 | 1.92 | 23.2 | 12.10 | 2.574 | 0.03 | 0.195 | 0.15 | 0.800 |
| 7 | 48 | 5.737 | 0.059 | 62.4 | 2.33 | 29.4 | 12.63 | 3.082 | 0.03 | 0.211 | 0.19 | 0.897 |
| 7 | 56 | 5.580 | 0.057 | 66.2 | 2.16 | 27.5 | 12.72 | 3.553 | 0.03 | 0.226 | 0.21 | 0.994 |
| 7 | 64 | 7.657 | 0.080 | 46.1 | 1.79 | 23.0 | 12.87 | 4.249 | 0.02 | 0.237 | 0.12 | 1.081 |
| 7 | 72 | 8.747 | 0.092 | 41.3 | 1.72 | 22.6 | 13.11 | 5.042 | 0.02 | 0.255 | 0.16 | 1.208 |
| 7 | 80 | 11.680 | 0.125 | 19.7 | 1.29 | 16.9 | 13.13 | 5.782 | 0.03 | 0.275 | 0.11 | 1.291 |
| 8 | 8 | 1.254 | 0.013 | 71.1 | ... | ... | ... | 0.099 | 0.36 | 0.036 | 1.11 | 0.109 |
| 8 | 16 | 2.653 | 0.027 | 69.4 | 3.12 | 31.5 | 10.09 | 0.328 | 0.55 | 0.162 | 1.33 | 0.414 |
| 8 | 24 | 3.336 | 0.034 | 67.5 | 3.11 | 31.7 | 10.20 | 0.609 | 0.44 | 0.285 | 1.14 | 0.734 |
| 8 | 32 | 3.857 | 0.039 | 60.5 | 2.96 | 30.4 | 10.27 | 0.932 | 0.34 | 0.394 | 0.02 | 0.741 |
| 8 | 40 | 4.245 | 0.043 | 62.1 | 2.62 | 28.2 | 10.74 | 1.294 | 0.27 | 0.491 | 0.77 | 1.018 |
| 8 | 48 | 4.490 | 0.046 | 56.5 | 2.54 | 28.3 | 11.13 | 1.689 | 0.19 | 0.567 | 0.71 | 1.297 |
| 8 | 56 | 4.655 | 0.048 | 63.3 | 2.66 | 29.6 | 11.12 | 2.107 | 0.16 | 0.634 | 0.58 | 1.539 |
| 8 | 64 | 12.471 | 0.134 | 20.1 | 0.84 | 9.2 | 10.96 | 3.193 | 0.04 | 0.674 | 0.09 | 1.640 |
| 8 | 72 | 10.576 | 0.112 | 29.4 | 1.65 | 21.3 | 12.92 | 4.196 | 0.03 | 0.700 | 0.14 | 1.779 |
| 8 | 80 | 5.307 | 0.054 | 68.6 | 2.56 | 34.5 | 13.46 | 4.653 | 0.07 | 0.732 | 0.29 | 1.909 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 8 | 1.437 | 0.014 | 70.9 | 3.12 | 31.1 | 9.98 | 0.126 | 0.39 | 0.048 | 1.09 | 0.137 |
| 9 | 16 | 2.614 | 0.026 | 68.9 | 3.28 | 32.0 | 9.74 | 0.320 | 0.45 | 0.136 | 1.23 | 0.375 |
| 9 | 24 | 3.523 | 0.036 | 61.1 | 2.93 | 29.5 | 10.06 | 0.647 | 0.35 | 0.249 | 1.24 | 0.780 |
| 9 | 32 | 4.243 | 0.043 | 61.8 | 2.65 | 28.7 | 10.84 | 1.010 | 0.20 | 0.321 | 0.66 | 1.021 |
| 9 | 40 | 4.669 | 0.048 | 63.9 | 2.74 | 30.9 | 11.28 | 1.420 | 0.13 | 0.375 | 0.49 | 1.220 |
| 9 | 48 | 4.980 | 0.051 | 64.1 | 2.63 | 29.8 | 11.33 | 1.866 | 0.10 | 0.421 | 0.40 | 1.399 |
| 9 | 56 | 5.124 | 0.053 | 63.4 | 2.53 | 28.9 | 11.42 | 2.317 | 0.10 | 0.468 | 0.42 | 1.590 |
| 9 | 64 | 5.194 | 0.053 | 63.4 | 2.64 | 30.1 | 11.39 | 2.748 | 0.07 | 0.496 | 0.30 | 1.719 |
| 9 | 72 | 4.809 | 0.049 | 64.6 | 2.63 | 30.1 | 11.45 | 3.188 | 0.08 | 0.532 | 0.28 | 1.841 |
| 9 | 80 | 5.240 | 0.054 | 64.9 | 2.65 | 30.3 | 11.45 | 3.657 | 0.05 | 0.555 | 0.26 | 1.964 |
| 10 | 8 | 1.105 | 0.011 | 70.2 | 3.28 | 32.4 | 9.88 | 0.096 | 0.29 | 0.027 | 1.03 | 0.099 |
| 10 | 16 | 2.362 | 0.024 | 70.9 | 3.35 | 32.7 | 9.75 | 0.274 | 0.37 | 0.093 | 1.10 | 0.295 |
| 10 | 24 | 3.331 | 0.034 | 66.2 | 2.91 | 30.4 | 10.43 | 0.556 | 0.35 | 0.190 | 0.92 | 0.556 |
| 10 | 32 | 4.472 | 0.046 | 63.8 | 2.67 | 29.9 | 11.21 | 0.843 | 0.16 | 0.236 | 0.52 | 0.706 |
| 10 | 40 | 4.410 | 0.045 | 65.1 | 2.73 | 31.0 | 11.34 | 1.282 | 0.11 | 0.282 | 0.42 | 0.890 |
| 10 | 48 | 4.379 | 0.045 | 64.7 | 2.70 | 31.2 | 11.56 | 1.704 | 0.07 | 0.313 | 0.39 | 1.053 |
| 10 | 56 | 4.549 | 0.046 | 67.9 | 2.71 | 31.9 | 11.76 | 2.083 | 0.04 | 0.330 | 0.27 | 1.155 |
| 10 | 64 | 4.335 | 0.044 | 67.6 | 2.65 | 31.5 | 11.89 | 2.446 | 0.05 | 0.346 | 0.21 | 1.230 |
| 10 | 72 | 5.380 | 0.055 | 65.3 | 2.48 | 30.4 | 12.26 | 2.942 | 0.03 | 0.362 | 0.19 | 1.322 |
| 10 | 80 | 5.636 | 0.058 | 61.6 | 2.14 | 26.7 | 12.46 | 3.422 | 0.04 | 0.380 | 0.17 | 1.405 |
| 11 | 8 | 1.345 | 0.014 | 73.5 | 3.39 | 32.7 | 9.64 | 0.108 | 0.38 | 0.041 | 1.18 | 0.127 |
| 11 | 16 | 2.047 | 0.021 | 71.1 | 3.37 | 32.5 | 9.64 | 0.266 | 0.65 | 0.144 | 1.47 | 0.358 |
| 11 | 24 | 2.796 | 0.028 | 69.4 | 3.16 | 31.0 | 9.80 | 0.504 | 0.53 | 0.270 | 1.22 | 0.649 |
| 11 | 32 | 3.510 | 0.036 | 64.2 | 2.93 | 30.2 | 10.31 | 0.803 | 0.33 | 0.369 | 0.90 | 0.918 |
| 11 | 40 | 4.133 | 0.042 | 61.4 | 2.65 | 28.9 | 10.91 | 1.170 | 0.20 | 0.441 | 0.57 | 1.127 |
| 11 | 48 | 4.699 | 0.048 | 66.0 | 2.76 | 31.4 | 11.38 | 1.547 | 0.09 | 0.474 | 0.35 | 1.260 |
| 11 | 56 | 5.026 | 0.051 | 67.1 | 2.74 | 31.5 | 11.50 | 1.966 | 0.08 | 0.507 | 0.31 | 1.389 |
| 11 | 64 | 4.509 | 0.046 | 67.3 | 2.76 | 31.5 | 11.40 | 2.352 | 0.08 | 0.538 | 0.29 | 1.502 |
| 11 | 72 | 4.400 | 0.045 | 67.4 | 2.81 | 31.7 | 11.28 | 2.744 | 0.08 | 0.568 | 0.29 | 1.616 |
| 11 | 80 | 4.597 | 0.047 | 67.7 | 2.80 | 31.5 | 11.25 | 3.143 | 0.07 | 0.596 | 0.28 | 1.727 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 8 | 1.040 | 0.010 | 69.3 | 3.20 | 31.8 | 9.94 | 0.112 | 0.49 | 0.055 | 1.14 | 0.128 |
| 12 | 16 | 1.683 | 0.017 | 65.8 | 3.20 | 32.0 | 10.01 | 0.265 | 0.55 | 0.139 | 1.15 | 0.303 |
| 12 | 24 | 2.689 | 0.027 | 61.4 | 2.93 | 29.2 | 9.96 | 0.464 | 0.58 | 0.254 | 1.22 | 0.547 |
| 12 | 32 | 4.841 | 0.050 | 47.2 | 2.38 | 24.1 | 10.14 | 0.862 | 0.47 | 0.442 | 1.02 | 0.951 |
| 12 | 40 | 6.054 | 0.063 | 44.8 | 2.15 | 22.2 | 10.34 | 1.409 | 0.25 | 0.578 | 0.68 | 1.321 |
| 12 | 48 | 5.753 | 0.059 | 43.3 | 2.30 | 24.6 | 10.68 | 1.920 | 0.27 | 0.716 | 0.66 | 1.655 |
| 12 | 56 | 6.387 | 0.066 | 53.0 | 2.47 | 26.2 | 10.60 | 2.461 | 0.23 | 0.842 | 0.65 | 2.007 |
| 12 | 64 | 11.619 | 0.124 | 27.3 | 1.61 | 18.8 | 11.65 | 3.504 | 0.12 | 0.962 | 0.17 | 2.179 |
| 12 | 72 | 10.727 | 0.114 | 27.2 | 1.74 | 20.1 | 11.53 | 4.497 | 0.07 | 1.027 | 0.26 | 2.433 |
| 12 | 80 | 29.336 | 0.355 | 4.7 | 0.28 | 0.6 | 2.29 | 7.428 | 0.04 | 1.147 | 0.13 | 2.820 |
| | | | | | | | | | | | | |
| 13 | 8 | 2.040 | 0.021 | 61.7 | 3.06 | 29.8 | 9.75 | 0.161 | 0.40 | 0.065 | 0.91 | 0.146 |
| 13 | 16 | 3.640 | 0.037 | 51.7 | 2.57 | 26.4 | 10.26 | 0.438 | 0.34 | 0.158 | 0.76 | 0.356 |
| 13 | 24 | 5.426 | 0.056 | 44.5 | 1.70 | 18.5 | 10.89 | 0.870 | 0.23 | 0.258 | 0.49 | 0.568 |
| 13 | 32 | 6.517 | 0.067 | 48.5 | 2.07 | 24.6 | 11.87 | 1.473 | 0.07 | 0.300 | 0.20 | 0.686 |
| 13 | 40 | 7.225 | 0.075 | 49.4 | 1.85 | 22.6 | 12.21 | 2.103 | 0.04 | 0.326 | 0.14 | 0.771 |
| 13 | 48 | 7.746 | 0.081 | 41.8 | 1.86 | 22.8 | 12.28 | 2.787 | 0.04 | 0.354 | 0.14 | 0.866 |
| 13 | 56 | 7.177 | 0.074 | 51.7 | 2.28 | 28.3 | 12.40 | 3.449 | 0.04 | 0.382 | 0.14 | 0.956 |
| 13 | 64 | 8.447 | 0.088 | 40.1 | 1.95 | 25.0 | 12.79 | 4.198 | 0.04 | 0.413 | 0.12 | 1.044 |
| 13 | 72 | 7.067 | 0.073 | 58.1 | 2.30 | 29.4 | 12.78 | 4.811 | 0.03 | 0.432 | 0.15 | 1.137 |
| 13 | 80 | 7.587 | 0.079 | 44.6 | 2.33 | 29.8 | 12.78 | 5.491 | 0.03 | 0.454 | 0.16 | 1.247 |
| | | | | | | | | | | | | |
| 14 | 8 | 2.388 | 0.024 | 54.5 | 2.66 | 26.9 | 10.12 | 0.204 | 0.31 | 0.063 | 0.74 | 0.151 |
| 14 | 16 | 4.397 | 0.045 | 62.0 | 2.61 | 29.7 | 11.39 | 0.757 | 0.10 | 0.120 | 0.33 | 0.334 |
| 14 | 24 | 5.659 | 0.058 | 67.5 | 2.76 | 32.0 | 11.58 | 1.178 | 0.05 | 0.140 | 0.22 | 0.426 |
| 14 | 32 | 4.866 | 0.050 | 68.5 | 2.77 | 32.1 | 11.59 | 1.602 | 0.06 | 0.164 | 0.21 | 0.515 |
| 14 | 40 | 4.765 | 0.049 | 68.0 | 2.79 | 32.4 | 11.62 | 2.016 | 0.06 | 0.188 | 0.22 | 0.604 |
| 14 | 48 | 4.850 | 0.050 | 67.1 | 2.78 | 33.1 | 11.90 | 2.449 | 0.06 | 0.213 | 0.20 | 0.691 |
| 14 | 56 | 6.897 | 0.071 | 68.1 | 2.72 | 31.9 | 11.71 | 2.902 | 0.07 | 0.244 | 0.22 | 0.789 |
| 14 | 64 | 5.216 | 0.053 | 66.7 | 2.69 | 31.0 | 11.53 | 3.356 | 0.08 | 0.280 | 0.23 | 0.891 |
| 14 | 72 | 4.933 | 0.051 | 68.2 | 2.73 | 31.8 | 11.63 | 3.789 | 0.08 | 0.314 | 0.22 | 0.985 |
| 14 | 80 | 5.146 | 0.053 | 70.0 | 2.74 | 32.2 | 11.76 | 4.208 | 0.07 | 0.342 | 0.22 | 1.076 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 8 | 1.537 | 0.015 | 72.9 | 3.38 | 32.6 | 9.64 | 0.142 | 0.33 | 0.046 | 0.91 | 0.129 |
| 15 | 16 | 2.150 | 0.022 | 72.9 | 3.38 | 32.9 | 9.72 | 0.333 | 0.35 | 0.113 | 0.99 | 0.318 |
| 15 | 24 | 2.807 | 0.028 | 70.1 | 3.17 | 31.8 | 10.04 | 0.576 | 0.48 | 0.230 | 1.07 | 0.578 |
| 15 | 32 | 3.888 | 0.040 | 60.4 | 2.76 | 28.7 | 10.41 | 0.927 | 0.32 | 0.341 | 0.83 | 0.869 |
| 15 | 40 | 4.345 | 0.044 | 63.5 | 2.76 | 29.9 | 10.85 | 1.287 | 0.19 | 0.408 | 0.56 | 1.072 |
| 15 | 48 | 4.535 | 0.046 | 67.0 | 2.81 | 31.0 | 11.04 | 1.696 | 0.14 | 0.464 | 0.42 | 1.243 |
| 15 | 56 | 4.942 | 0.051 | 69.1 | 2.73 | 30.7 | 11.26 | 2.126 | 0.09 | 0.505 | 0.34 | 1.390 |
| 15 | 64 | 5.485 | 0.056 | 48.5 | 2.47 | 27.9 | 11.30 | 2.607 | 0.11 | 0.559 | 0.37 | 1.566 |
| 15 | 72 | 8.274 | 0.087 | 41.0 | 1.86 | 23.3 | 12.52 | 3.398 | 0.05 | 0.597 | 0.17 | 1.700 |
| 15 | 80 | 5.925 | 0.061 | 63.4 | 2.51 | 31.1 | 12.40 | 3.886 | 0.06 | 0.627 | 0.19 | 1.794 |
| 16 | 8 | 7.485 | 0.019 | 71.2 | 3.29 | 32.2 | 9.79 | 0.128 | 0.34 | 0.044 | 0.95 | 0.121 |
| 16 | 16 | 2.767 | 0.028 | 68.8 | 3.04 | 30.5 | 10.05 | 0.344 | 0.40 | 0.130 | 0.97 | 0.330 |
| 16 | 24 | 3.461 | 0.035 | 66.2 | 2.88 | 30.8 | 10.68 | 0.644 | 0.25 | 0.206 | 0.58 | 0.504 |
| 16 | 32 | 4.275 | 0.044 | 67.7 | 2.84 | 32.2 | 11.33 | 1.018 | 0.36 | 0.340 | 0.33 | 0.627 |
| 16 | 40 | 4.531 | 0.046 | 61.2 | 2.60 | 29.9 | 11.51 | 1.427 | 0.08 | 0.372 | 0.25 | 0.730 |
| 16 | 48 | 6.131 | 0.063 | 49.3 | 2.21 | 27.3 | 12.35 | 1.930 | 0.05 | 0.395 | 0.20 | 0.830 |
| 16 | 56 | 6.276 | 0.065 | 55.9 | 2.26 | 29.1 | 12.87 | 2.501 | 0.04 | 0.415 | 0.16 | 0.921 |
| 16 | 64 | 6.259 | 0.065 | 64.4 | 2.41 | 31.4 | 13.03 | 2.973 | 0.03 | 0.431 | 0.16 | 0.998 |
| 16 | 72 | 8.841 | 0.093 | 38.0 | 1.98 | 26.0 | 13.12 | 3.808 | 0.03 | 0.458 | 0.13 | 1.107 |
| 16 | 80 | 6.418 | 0.066 | 68.9 | 2.42 | 32.3 | 13.33 | 4.285 | 0.04 | 0.476 | 0.21 | 1.209 |
| 17 | 8 | 1.198 | 0.012 | 74.0 | 3.10 | 31.3 | 10.10 | 0.092 | 0.34 | 0.032 | 1.06 | 0.098 |
| 17 | 16 | 1.983 | 0.020 | 72.4 | 3.28 | 32.4 | 9.87 | 0.257 | 0.38 | 0.095 | 1.12 | 0.282 |
| 17 | 24 | 2.960 | 0.030 | 69.7 | 3.14 | 31.6 | 10.08 | 0.486 | 0.42 | 0.191 | 1.11 | 0.536 |
| 17 | 32 | 4.258 | 0.043 | 63.7 | 2.63 | 29.3 | 11.13 | 0.878 | 0.16 | 0.252 | 0.53 | 0.744 |
| 17 | 40 | 4.563 | 0.047 | 62.4 | 2.36 | 27.6 | 11.71 | 1.255 | 0.11 | 0.291 | 0.38 | 0.886 |
| 17 | 48 | 4.579 | 0.047 | 67.5 | 2.61 | 31.3 | 12.00 | 1.654 | 0.09 | 0.325 | 0.78 | 1.199 |
| 17 | 56 | 6.058 | 0.062 | 66.8 | 2.55 | 31.1 | 12.21 | 2.056 | 0.04 | 0.342 | 0.21 | 1.282 |
| 17 | 64 | 4.938 | 0.051 | 66.1 | 2.58 | 31.1 | 12.04 | 2.493 | 0.03 | 0.357 | 0.19 | 1.364 |
| 17 | 72 | 5.380 | 0.055 | 66.3 | 2.55 | 31.7 | 12.45 | 2.962 | 0.04 | 0.374 | 0.17 | 1.445 |
| 17 | 80 | 5.415 | 0.056 | 67.5 | 2.49 | 31.3 | 12.58 | 3.438 | 0.04 | 0.393 | 0.17 | 1.527 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 8 | 2.388 | 0.024 | 71.6 | 3.43 | 33.0 | 9.63 | 0.204 | 0.34 | 0.069 | 1.07 | 0.217 |
| 18 | 16 | 4.397 | 0.045 | 69.2 | 3.20 | 32.0 | 9.99 | 0.757 | 0.39 | 0.287 | 1.06 | 0.805 |
| 18 | 24 | 5.659 | 0.058 | 65.8 | 2.84 | 30.8 | 10.84 | 1.178 | 0.16 | 0.355 | 0.53 | 1.030 |
| 18 | 32 | 4.866 | 0.050 | 64.8 | 2.69 | 30.8 | 11.45 | 1.602 | 0.09 | 0.391 | 0.31 | 1.160 |
| 18 | 40 | 4.765 | 0.049 | 59.4 | 2.49 | 29.2 | 11.73 | 2.016 | 0.04 | 0.409 | 0.21 | 1.244 |
| 18 | 48 | 4.850 | 0.050 | 66.1 | 2.63 | 31.7 | 12.06 | 2.449 | 0.04 | 0.425 | 0.20 | 1.329 |
| 18 | 56 | 6.897 | 0.071 | 62.9 | 2.63 | 31.9 | 12.13 | 2.902 | 0.03 | 0.439 | 0.12 | 1.385 |
| 18 | 64 | 5.216 | 0.053 | 64.8 | 2.51 | 31.0 | 12.36 | 3.356 | 0.05 | 0.461 | 0.13 | 1.444 |
| 18 | 72 | 4.933 | 0.051 | 60.6 | 2.47 | 30.7 | 12.43 | 3.789 | 0.04 | 0.479 | 0.17 | 1.518 |
| 18 | 80 | 5.146 | 0.053 | 66.7 | 2.61 | 33.3 | 12.75 | 4.208 | 0.02 | 0.489 | 0.13 | 1.574 |
| 19 | 8 | 1.537 | 0.015 | 69.7 | 3.31 | 32.0 | 9.66 | 0.142 | 0.40 | 0.057 | 0.97 | 0.138 |
| 19 | 16 | 2.150 | 0.022 | 64.2 | 2.95 | 29.1 | 9.87 | 0.333 | 0.41 | 0.136 | 1.01 | 0.332 |
| 19 | 24 | 2.807 | 0.028 | 62.2 | 2.87 | 29.6 | 10.31 | 0.576 | 0.34 | 0.218 | 0.82 | 0.529 |
| 19 | 32 | 3.888 | 0.040 | 62.6 | 2.79 | 30.4 | 10.89 | 0.927 | 0.16 | 0.273 | 0.46 | 0.689 |
| 19 | 40 | 4.345 | 0.044 | 65.6 | 2.75 | 30.8 | 11.19 | 1.287 | 0.10 | 0.309 | 0.31 | 0.802 |
| 19 | 48 | 4.535 | 0.046 | 66.6 | 2.72 | 30.7 | 11.27 | 1.696 | 0.10 | 0.348 | 0.33 | 0.938 |
| 19 | 56 | 4.942 | 0.051 | 66.8 | 2.76 | 31.4 | 11.39 | 2.126 | 0.10 | 0.393 | 0.26 | 1.050 |
| 19 | 64 | 5.485 | 0.056 | 67.2 | 2.75 | 31.1 | 11.31 | 2.607 | 0.08 | 0.431 | 0.25 | 1.171 |
| 19 | 72 | 8.274 | 0.086 | 56.8 | 2.52 | 28.7 | 11.39 | 3.398 | 0.07 | 0.490 | 0.24 | 1.358 |
| 19 | 80 | 5.925 | 0.061 | 39.8 | 1.46 | 17.6 | 12.05 | 3.886 | 0.05 | 0.516 | 0.14 | 1.425 |
| 20 | 8 | 0.868 | 0.009 | 72.1 | ... | ... | ... | 0.077 | 0.03 | 0.033 | 1.07 | 0.082 |
| 20 | 16 | 1.318 | 0.013 | 71.0 | ... | ... | ... | 0.179 | 0.04 | 0.077 | 1.13 | 0.198 |
| 20 | 24 | 1.983 | 0.020 | 69.4 | 3.20 | 31.4 | 9.80 | 0.335 | 0.42 | 0.142 | 1.22 | 0.388 |
| 20 | 32 | 2.912 | 0.030 | 67.7 | 3.17 | 31.4 | 9.91 | 0.531 | 0.47 | 0.234 | 1.15 | 0.614 |
| 20 | 40 | 3.709 | 0.038 | 62.4 | 2.91 | 29.1 | 9.99 | 0.802 | 0.41 | 0.346 | 1.10 | 0.912 |
| 20 | 48 | 8.028 | 0.084 | 32.7 | 2.04 | 20.2 | 9.91 | 1.477 | 0.25 | 0.518 | 0.57 | 1.295 |
| 20 | 56 | 62.415 | 0.995 | 1.9 | 0.19 | 0.0 | 0.00 | 10.481 | 0.05 | 0.450 | 0.01 | 1.340 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 8 | 1.584 | 0.016 | 68.9 | 3.07 | 31.5 | 10.27 | 0.128 | 0.33 | 0.042 | 0.79 | 0.102 |
| 21 | 16 | 2.965 | 0.030 | 64.5 | 2.80 | 30.6 | 10.91 | 0.348 | 0.20 | 0.086 | 0.51 | 0.214 |
| 21 | 24 | 4.303 | 0.044 | 67.7 | 2.72 | 31.7 | 11.66 | 0.740 | 0.09 | 0.122 | 0.25 | 0.311 |
| 21 | 32 | 4.404 | 0.045 | 66.6 | 2.67 | 31.1 | 11.65 | 1.126 | 0.07 | 0.148 | 0.21 | 0.390 |
| 21 | 40 | 4.279 | 0.044 | 67.8 | 2.67 | 31.4 | 11.74 | 1.492 | 0.06 | 0.169 | 0.19 | 0.460 |
| 21 | 48 | 4.284 | 0.044 | 65.8 | 2.57 | 31.5 | 12.27 | 1.874 | 0.05 | 0.188 | 0.18 | 0.527 |
| 21 | 56 | 5.249 | 0.054 | 58.3 | 2.10 | 26.5 | 12.61 | 2.344 | 0.06 | 0.214 | 0.14 | 0.592 |
| 21 | 64 | 5.395 | 0.055 | 62.0 | 2.38 | 30.7 | 12.89 | 2.827 | 0.05 | 0.239 | 0.14 | 0.659 |
| 21 | 72 | 5.739 | 0.059 | 63.1 | 2.39 | 31.1 | 13.00 | 3.327 | 0.04 | 0.260 | 0.13 | 0.722 |
| 21 | 80 | 5.726 | 0.059 | 64.6 | 2.47 | 31.9 | 12.93 | 3.827 | 0.06 | 0.290 | 0.16 | 0.801 |
| 22 | 8 | 1.915 | 0.019 | 66.0 | 2.85 | 30.0 | 10.53 | 0.172 | 0.35 | 0.060 | 0.98 | 0.168 |
| 22 | 16 | 3.308 | 0.034 | 62.0 | 2.82 | 29.4 | 10.43 | 0.462 | 0.38 | 0.171 | 0.84 | 0.412 |
| 22 | 24 | 3.932 | 0.040 | 62.9 | 2.63 | 29.6 | 11.27 | 0.852 | 0.20 | 0.248 | 0.52 | 0.613 |
| 22 | 32 | 4.703 | 0.048 | 55.7 | 2.38 | 28.2 | 11.87 | 1.236 | 0.10 | 0.286 | 0.30 | 0.729 |
| 22 | 40 | 5.057 | 0.052 | 67.1 | 2.39 | 31.4 | 13.14 | 1.703 | 0.05 | 0.311 | 0.19 | 0.818 |
| 22 | 48 | 5.313 | 0.054 | 68.4 | 2.49 | 34.6 | 13.88 | 2.154 | 0.03 | 0.326 | 0.18 | 0.897 |
| 22 | 56 | 6.047 | 0.062 | 59.3 | 2.25 | 30.3 | 13.45 | 2.718 | 0.04 | 0.346 | 0.17 | 0.992 |
| 22 | 64 | 6.010 | 0.062 | 62.6 | 2.40 | 31.0 | 12.90 | 3.239 | 0.03 | 0.363 | 0.16 | 1.078 |
| 22 | 72 | 6.368 | 0.066 | 56.3 | 2.14 | 28.5 | 13.32 | 3.781 | 0.04 | 0.386 | 0.14 | 1.154 |
| 22 | 80 | 6.381 | 0.066 | 58.9 | 2.41 | 31.7 | 13.15 | 4.353 | 0.04 | 0.406 | 0.14 | 1.231 |
| 23 | 8 | 1.723 | 0.017 | 75.3 | 3.40 | 32.9 | 9.67 | 0.098 | 0.34 | 0.033 | 0.91 | 0.089 |
| 23 | 16 | 2.532 | 0.026 | 70.1 | 3.21 | 32.0 | 9.96 | 0.264 | 0.42 | 0.104 | 1.01 | 0.257 |
| 23 | 24 | 2.926 | 0.030 | 66.3 | 3.02 | 30.5 | 10.10 | 0.547 | 0.45 | 0.231 | 1.00 | 0.539 |
| 23 | 32 | 4.382 | 0.045 | 61.3 | 2.50 | 27.8 | 11.12 | 0.949 | 0.12 | 0.280 | 0.40 | 0.701 |
| 23 | 40 | 4.404 | 0.045 | 65.1 | 2.57 | 30.3 | 11.80 | 1.347 | 0.05 | 0.298 | 0.23 | 0.794 |
| 23 | 48 | 4.634 | 0.047 | 67.4 | 2.62 | 31.1 | 11.87 | 1.737 | 0.06 | 0.320 | 0.23 | 0.882 |
| 23 | 56 | 5.307 | 0.054 | 67.1 | 2.54 | 32.0 | 12.60 | 2.201 | 0.05 | 0.342 | 0.18 | 0.967 |
| 23 | 64 | 5.053 | 0.052 | 66.0 | 2.48 | 31.6 | 12.75 | 2.667 | 0.05 | 0.365 | 0.18 | 1.048 |
| 23 | 72 | 5.303 | 0.054 | 66.5 | 2.40 | 30.6 | 12.73 | 3.143 | 0.04 | 0.381 | 0.17 | 1.130 |
| 23 | 80 | 6.121 | 0.063 | 63.1 | 2.41 | 31.3 | 12.98 | 3.658 | 0.04 | 0.403 | 0.18 | 1.220 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 8 | 1.723 | 0.017 | 72.7 | 3.25 | 32.1 | 9.88 | 0.132 | 0.35 | 0.046 | 1.00 | 0.133 |
| 24 | 16 | 2.755 | 0.028 | 68.3 | 3.10 | 31.7 | 10.22 | 0.344 | 0.39 | 0.129 | 0.99 | 0.343 |
| 24 | 24 | 4.016 | 0.041 | 62.9 | 2.81 | 30.2 | 10.75 | 0.680 | 0.32 | 0.237 | 0.78 | 0.604 |
| 24 | 32 | 4.792 | 0.049 | 65.3 | 2.71 | 31.0 | 11.43 | 1.114 | 0.13 | 0.294 | 0.36 | 0.760 |
| 24 | 40 | 4.467 | 0.046 | 66.2 | 2.66 | 31.1 | 11.71 | 1.511 | 0.05 | 0.313 | 0.21 | 0.843 |
| 24 | 48 | 4.761 | 0.049 | 67.1 | 2.69 | 32.4 | 12.03 | 1.943 | 0.06 | 0.340 | 0.20 | 0.929 |
| 24 | 56 | 4.996 | 0.051 | 67.4 | 2.69 | 32.8 | 12.20 | 2.384 | 0.06 | 0.367 | 0.18 | 1.010 |
| 24 | 64 | 5.095 | 0.052 | 67.3 | 2.50 | 31.4 | 12.54 | 2.811 | 0.05 | 0.390 | 0.17 | 1.084 |
| 24 | 72 | 5.796 | 0.060 | 60.2 | 2.38 | 30.2 | 12.70 | 3.326 | 0.04 | 0.411 | 0.16 | 1.165 |
| 24 | 80 | 6.030 | 0.062 | 55.9 | 2.02 | 26.0 | 12.85 | 3.866 | 0.04 | 0.434 | 0.14 | 1.240 |
| 25 | 8 | 2.073 | 0.021 | 62.6 | 2.90 | 29.1 | 10.03 | 0.165 | 0.28 | 0.047 | 0.84 | 0.138 |
| 25 | 16 | 4.090 | 0.042 | 53.2 | 2.76 | 28.0 | 10.14 | 0.460 | 0.31 | 0.138 | 0.78 | 0.368 |
| 25 | 24 | 4.211 | 0.043 | 64.7 | 2.68 | 30.3 | 11.29 | 0.848 | 0.12 | 0.185 | 0.35 | 0.505 |
| 25 | 32 | 4.806 | 0.049 | 65.1 | 2.64 | 31.4 | 11.88 | 1.261 | 0.04 | 0.202 | 0.20 | 0.588 |
| 25 | 40 | 5.664 | 0.058 | 60.8 | 2.54 | 31.8 | 12.52 | 1.778 | 0.03 | 0.216 | 0.15 | 0.666 |
| 25 | 48 | 6.476 | 0.067 | 56.3 | 2.25 | 28.6 | 12.69 | 2.366 | 0.04 | 0.239 | 0.18 | 0.769 |
| 25 | 56 | 6.296 | 0.065 | 57.1 | 2.36 | 29.9 | 12.67 | 2.929 | 0.04 | 0.260 | 0.15 | 0.852 |
| 25 | 64 | 6.967 | 0.072 | 50.4 | 2.07 | 26.4 | 12.76 | 3.577 | 0.02 | 0.275 | 0.14 | 0.940 |
| 25 | 72 | 6.067 | 0.063 | 60.6 | 2.49 | 31.5 | 12.64 | 4.080 | 0.04 | 0.296 | 0.17 | 1.025 |
| 25 | 80 | 7.625 | 0.079 | 46.9 | 1.95 | 24.8 | 12.73 | 4.748 | 0.03 | 0.315 | 0.12 | 1.104 |
| 26 | 8 | 1.352 | 0.014 | 71.0 | 3.22 | 32.0 | 9.93 | 0.107 | 0.35 | 0.037 | 0.95 | 0.101 |
| 26 | 16 | 2.870 | 0.029 | 67.8 | 3.13 | 31.0 | 9.89 | 0.329 | 0.48 | 0.144 | 1.03 | 0.329 |
| 26 | 24 | 3.670 | 0.037 | 64.8 | 2.84 | 29.0 | 10.22 | 0.660 | 0.46 | 0.297 | 1.00 | 0.659 |
| 26 | 32 | 4.936 | 0.051 | 65.5 | 2.77 | 30.6 | 11.05 | 1.116 | 0.15 | 0.366 | 0.45 | 0.864 |
| 26 | 40 | 5.129 | 0.053 | 60.8 | 2.45 | 27.5 | 11.22 | 1.524 | 0.08 | 0.399 | 0.25 | 0.967 |
| 26 | 48 | 5.299 | 0.054 | 59.4 | 2.52 | 29.6 | 11.73 | 2.001 | 0.06 | 0.425 | 0.20 | 1.061 |
| 26 | 56 | 5.322 | 0.055 | 61.4 | 2.38 | 28.7 | 12.07 | 2.450 | 0.05 | 0.449 | 0.17 | 1.138 |
| 26 | 64 | 5.470 | 0.056 | 63.0 | 2.44 | 30.6 | 12.54 | 2.937 | 0.04 | 0.466 | 0.17 | 1.219 |
| 26 | 72 | 5.447 | 0.056 | 64.3 | 2.15 | 27.7 | 12.87 | 3.446 | 0.03 | 0.480 | 0.16 | 1.298 |
| 26 | 80 | 5.964 | 0.061 | 63.5 | 2.36 | 30.5 | 12.91 | 3.967 | 0.04 | 0.500 | 0.15 | 1.373 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 8 | 1.862 | 0.019 | 70.2 | 3.32 | 32.4 | 9.74 | 0.153 | 0.29 | 0.044 | 0.97 | 0.148 |
| 27 | 16 | 3.015 | 0.031 | 65.4 | 3.13 | 30.8 | 9.85 | 0.391 | 0.51 | 0.165 | 1.06 | 0.399 |
| 27 | 24 | 4.113 | 0.042 | 59.1 | 2.88 | 29.7 | 10.30 | 0.725 | 0.37 | 0.290 | 0.91 | 0.703 |
| 27 | 32 | 4.944 | 0.051 | 60.3 | 2.59 | 29.1 | 11.22 | 1.200 | 0.15 | 0.359 | 0.48 | 0.930 |
| 27 | 40 | 5.130 | 0.053 | 58.3 | 2.67 | 31.5 | 11.81 | 1.643 | 0.07 | 0.389 | 0.23 | 1.030 |
| 27 | 48 | 5.156 | 0.053 | 64.7 | 2.51 | 31.6 | 12.58 | 2.115 | 0.07 | 0.421 | 0.20 | 1.122 |
| 27 | 56 | 5.067 | 0.052 | 60.4 | 2.57 | 29.5 | 11.49 | 2.545 | 0.08 | 0.453 | 0.29 | 1.246 |
| 27 | 64 | 5.057 | 0.052 | 66.1 | 2.58 | 32.5 | 12.59 | 2.990 | 0.07 | 0.483 | 0.19 | 1.331 |
| 27 | 72 | 6.616 | 0.069 | 46.9 | 2.36 | 30.8 | 13.05 | 3.578 | 0.06 | 0.515 | 0.20 | 1.448 |
| 27 | 80 | 5.529 | 0.057 | 61.4 | 2.33 | 33.4 | 14.32 | 4.077 | 0.04 | 0.537 | 0.32 | 1.609 |

# Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 4 | 1.534 | 0.015 | 71.1 | 3.54 | 32.7 | 9.24 | 0.065 | 0.36 | 0.024 | 1.21 | 0.078 |
| 3 | 8 | 1.922 | 0.019 | 70.6 | 3.57 | 32.4 | 9.07 | 0.138 | 0.41 | 0.053 | 1.33 | 0.175 |
| 3 | 12 | 2.136 | 0.022 | 71.5 | 3.61 | 33.0 | 9.13 | 0.220 | 0.40 | 0.086 | 1.30 | 0.283 |
| 3 | 16 | 3.828 | 0.039 | 69.8 | 3.62 | 33.0 | 9.12 | 0.413 | 0.43 | 0.168 | 1.37 | 0.546 |
| 3 | 20 | 2.517 | 0.025 | 62.8 | 3.14 | 29.9 | 9.51 | 0.518 | 0.35 | 0.205 | 1.19 | 0.671 |
| 3 | 24 | 3.007 | 0.031 | 63.0 | 3.21 | 30.8 | 9.60 | 0.675 | 0.42 | 0.270 | 1.43 | 0.896 |
| 3 | 28 | 2.866 | 0.029 | 59.6 | 2.84 | 28.3 | 9.95 | 0.813 | 0.25 | 0.305 | 0.91 | 1.022 |
| 3 | 32 | 3.161 | 0.032 | 58.6 | 2.73 | 27.8 | 10.18 | 0.945 | 0.22 | 0.334 | 0.88 | 1.138 |
| 3 | 36 | 3.546 | 0.036 | 52.6 | 2.54 | 26.1 | 10.27 | 1.090 | 0.26 | 0.372 | 0.88 | 1.266 |
| 3 | 40 | 3.367 | 0.034 | 56.8 | 2.64 | 27.4 | 10.37 | 1.230 | 0.23 | 0.405 | 0.73 | 1.368 |
| 3 | 44 | 3.679 | 0.037 | 59.7 | 2.77 | 29.4 | 10.61 | 1.385 | 0.23 | 0.441 | 0.72 | 1.480 |
| 3 | 48 | 4.200 | 0.043 | 59.7 | 2.74 | 29.8 | 10.87 | 1.570 | 0.18 | 0.474 | 0.53 | 1.578 |
| 3 | 52 | 4.953 | 0.051 | 51.0 | 2.48 | 27.1 | 10.93 | 1.781 | 0.19 | 0.513 | 0.50 | 1.684 |
| 3 | 56 | 5.705 | 0.059 | 56.4 | 2.60 | 28.5 | 10.94 | 2.018 | 0.17 | 0.554 | 0.45 | 1.791 |
| 3 | 60 | 4.705 | 0.048 | 64.5 | 2.87 | 31.6 | 11.00 | 2.214 | 0.17 | 0.587 | 0.44 | 1.878 |
| 3 | 64 | 4.197 | 0.043 | 64.3 | 2.88 | 31.6 | 10.97 | 2.408 | 0.16 | 0.617 | 0.43 | 1.962 |
| 3 | 68 | 4.251 | 0.043 | 66.5 | 2.90 | 32.2 | 11.10 | 2.575 | 0.16 | 0.644 | 0.45 | 2.036 |
| 3 | 72 | 4.764 | 0.049 | 67.0 | 2.83 | 31.4 | 11.08 | 2.785 | 0.16 | 0.677 | 0.45 | 2.130 |
| 3 | 76 | 5.066 | 0.052 | 66.3 | 2.83 | 30.9 | 10.93 | 3.000 | 0.16 | 0.711 | 0.46 | 2.229 |
| 3 | 80 | 4.738 | 0.048 | 65.9 | 2.90 | 32.0 | 11.05 | 3.201 | 0.18 | 0.746 | 0.36 | 2.301 |
| 3 | 84 | 4.650 | 0.048 | 65.8 | 2.92 | 32.2 | 11.01 | 3.406 | 0.19 | 0.785 | 0.42 | 2.387 |
| 3 | 88 | 4.540 | 0.046 | 64.6 | 2.86 | 31.8 | 11.11 | 3.598 | 0.19 | 0.821 | 0.40 | 2.463 |
| 3 | 92 | 4.530 | 0.046 | 66.1 | 2.93 | 32.5 | 11.09 | 3.791 | 0.18 | 0.855 | 0.48 | 2.555 |
| 3 | 96 | 4.430 | 0.045 | 64.9 | 2.89 | 32.2 | 11.13 | 3.976 | 0.18 | 0.888 | 0.37 | 2.624 |
| 3 | 100 | 4.501 | 0.046 | 67.6 | 2.87 | 32.7 | 11.41 | 4.175 | 0.17 | 0.921 | 0.43 | 2.710 |
| 3 | 104 | 4.540 | 0.046 | 67.8 | 2.85 | 32.4 | 11.35 | 4.359 | 0.17 | 0.952 | 0.41 | 2.785 |
| 3 | 108 | 4.547 | 0.046 | 67.0 | 2.85 | 31.3 | 11.00 | 4.545 | 0.18 | 0.985 | 0.37 | 2.855 |
| 3 | 112 | 4.721 | 0.048 | 64.5 | 2.79 | 31.0 | 11.11 | 4.746 | 0.16 | 1.017 | 0.39 | 2.934 |
| 3 | 116 | 5.018 | 0.051 | 60.5 | 2.76 | 31.0 | 11.25 | 4.950 | 0.18 | 1.053 | 0.46 | 3.027 |
| 4 | 4 | 1.537 | 0.015 | 66.4 | 3.30 | 30.8 | 9.33 | 0.062 | 0.35 | 0.022 | 1.04 | 0.065 |
| 4 | 8 | 2.447 | 0.025 | 60.9 | 2.97 | 27.9 | 9.38 | 0.161 | 0.43 | 0.065 | 1.20 | 0.184 |
| 4 | 12 | 3.290 | 0.033 | 52.5 | 2.57 | 24.6 | 9.55 | 0.300 | 0.44 | 0.126 | 1.01 | 0.324 |
| 4 | 16 | 24.106 | 0.281 | 6.4 | 0.37 | 3.4 | 9.22 | 1.404 | 0.07 | 0.203 | 0.07 | 0.400 |
| 5 | 4 | 0.623 | 0.006 | 67.0 | 3.04 | 30.7 | 10.11 | 0.053 | 0.23 | 0.012 | 0.85 | 0.045 |
| 5 | 8 | 0.809 | 0.008 | 66.7 | 3.01 | 30.7 | 10.19 | 0.119 | 0.22 | 0.027 | 0.77 | 0.096 |
| 5 | 12 | 1.457 | 0.015 | 64.8 | 2.88 | 30.2 | 10.48 | 0.240 | 0.20 | 0.050 | 0.74 | 0.185 |
| 5 | 16 | 2.667 | 0.027 | 53.7 | 2.13 | 22.5 | 10.58 | 0.382 | 0.14 | 0.070 | 0.63 | 0.275 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 4 | 1.397 | 0.014 | 70.7 | 3.47 | 32.5 | 9.38 | 0.054 | 0.29 | 0.016 | 1.10 | 0.060 |
| 6 | 8 | 1.974 | 0.020 | 68.6 | 3.18 | 29.8 | 9.36 | 0.125 | 0.29 | 0.036 | 1.01 | 0.132 |
| 6 | 12 | 2.393 | 0.024 | 63.2 | 3.31 | 31.1 | 9.39 | 0.221 | 0.33 | 0.068 | 1.11 | 0.239 |
| 6 | 16 | 2.789 | 0.028 | 62.1 | 3.22 | 30.8 | 9.57 | 0.326 | 0.34 | 0.104 | 1.17 | 0.361 |
| 6 | 20 | 3.084 | 0.031 | 59.9 | 2.84 | 28.9 | 10.17 | 0.459 | 0.29 | 0.142 | 1.08 | 0.504 |
| 6 | 24 | 3.170 | 0.032 | 59.7 | 2.66 | 28.5 | 10.72 | 0.616 | 0.19 | 0.171 | 0.69 | 0.612 |
| 6 | 28 | 3.604 | 0.037 | 61.3 | 2.50 | 28.2 | 11.29 | 0.752 | 0.17 | 0.194 | 0.58 | 0.691 |
| 6 | 32 | 3.825 | 0.039 | 58.1 | 2.48 | 28.0 | 11.29 | 0.903 | 0.16 | 0.219 | 0.57 | 0.778 |
| 6 | 36 | 3.923 | 0.040 | 61.7 | 2.55 | 29.0 | 11.36 | 1.069 | 0.18 | 0.249 | 0.58 | 0.874 |
| 6 | 40 | 4.130 | 0.042 | 64.0 | 2.67 | 30.6 | 11.45 | 1.247 | 0.20 | 0.283 | 0.56 | 0.973 |
| 6 | 44 | 4.236 | 0.043 | 65.8 | 2.73 | 31.2 | 11.43 | 1.440 | 0.18 | 0.319 | 0.51 | 1.072 |
| 6 | 48 | 4.204 | 0.043 | 67.3 | 2.73 | 31.3 | 11.48 | 1.619 | 0.21 | 0.357 | 0.48 | 1.158 |
| 6 | 52 | 4.200 | 0.043 | 66.9 | 2.76 | 31.5 | 11.42 | 1.794 | 0.20 | 0.391 | 0.53 | 1.251 |
| 6 | 56 | 4.252 | 0.043 | 68.6 | 2.80 | 31.8 | 11.37 | 1.981 | 0.22 | 0.431 | 0.50 | 1.344 |
| 6 | 60 | 4.646 | 0.047 | 67.6 | 2.87 | 32.4 | 11.27 | 2.177 | 0.23 | 0.477 | 0.51 | 1.443 |
| 6 | 64 | 4.534 | 0.046 | 66.4 | 2.82 | 31.6 | 11.22 | 2.358 | 0.23 | 0.519 | 0.51 | 1.535 |
| 6 | 68 | 5.063 | 0.052 | 67.9 | 2.84 | 31.9 | 11.23 | 2.561 | 0.24 | 0.568 | 0.51 | 1.638 |
| 6 | 72 | 4.535 | 0.046 | 67.5 | 2.74 | 31.2 | 11.38 | 2.751 | 0.22 | 0.609 | 0.47 | 1.728 |
| 6 | 76 | 4.589 | 0.047 | 66.1 | 2.77 | 31.3 | 11.31 | 2.940 | 0.21 | 0.649 | 0.50 | 1.823 |
| 6 | 80 | 4.744 | 0.049 | 67.2 | 2.78 | 31.2 | 11.24 | 3.153 | 0.23 | 0.698 | 0.47 | 1.922 |
| 6 | 84 | 3.843 | 0.039 | 67.8 | 2.80 | 31.5 | 11.24 | 3.297 | 0.23 | 0.730 | 0.41 | 1.981 |
| 6 | 88 | 3.893 | 0.040 | 67.4 | 2.86 | 31.8 | 11.12 | 3.449 | 0.22 | 0.764 | 0.41 | 2.043 |
| 6 | 92 | 5.542 | 0.057 | 67.3 | 2.89 | 32.0 | 11.09 | 3.681 | 0.23 | 0.817 | 0.46 | 2.149 |
| 6 | 96 | 5.628 | 0.058 | 68.1 | 2.88 | 32.3 | 11.21 | 3.919 | 0.21 | 0.867 | 0.43 | 2.251 |
| 6 | 100 | 4.900 | 0.050 | 66.3 | 2.83 | 31.5 | 11.14 | 4.134 | 0.23 | 0.915 | 0.46 | 2.349 |
| 6 | 104 | 4.997 | 0.051 | 64.9 | 2.73 | 30.5 | 11.19 | 4.318 | 0.23 | 0.958 | 0.46 | 2.434 |
| 6 | 108 | 5.466 | 0.056 | 67.0 | 2.87 | 32.0 | 11.14 | 4.554 | 0.24 | 1.015 | 0.47 | 2.544 |
| 6 | 112 | 5.499 | 0.056 | 67.1 | 2.95 | 31.9 | 10.82 | 4.776 | 0.23 | 1.066 | 0.46 | 2.645 |
| 6 | 116 | 3.988 | 0.041 | 67.7 | 2.96 | 32.0 | 10.82 | 4.944 | 0.22 | 1.102 | 0.46 | 2.723 |
| 6 | 120 | 3.890 | 0.040 | 68.2 | 3.00 | 32.5 | 10.84 | 5.088 | 0.21 | 1.132 | 0.43 | 2.784 |
| 6 | 124 | 4.097 | 0.042 | 66.9 | 2.84 | 31.0 | 10.91 | 5.268 | 0.21 | 1.169 | 0.40 | 2.856 |
| 6 | 128 | 4.739 | 0.048 | 67.5 | 2.94 | 32.0 | 10.88 | 5.472 | 0.21 | 1.212 | 0.37 | 2.932 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 4 | 2.125 | 0.021 | 56.3 | 2.47 | 25.7 | 10.41 | 0.100 | 0.17 | 0.017 | 0.48 | 0.048 |
| 7 | 8 | 4.824 | 0.050 | 34.3 | 1.85 | 20.0 | 10.78 | 0.295 | 0.11 | 0.038 | 0.28 | 0.103 |
| 7 | 12 | 6.559 | 0.068 | 32.9 | 1.92 | 21.5 | 11.20 | 0.610 | 0.08 | 0.062 | 0.27 | 0.187 |
| 7 | 16 | 5.494 | 0.057 | 48.6 | 2.56 | 30.2 | 11.80 | 0.827 | 0.05 | 0.072 | 0.14 | 0.218 |
| 7 | 20 | 5.260 | 0.054 | 56.7 | 2.39 | 29.2 | 12.23 | 1.050 | 0.04 | 0.081 | 0.11 | 0.242 |
| 7 | 24 | 5.224 | 0.054 | 57.3 | 2.36 | 29.1 | 12.35 | 1.279 | 0.04 | 0.090 | 0.11 | 0.267 |
| 7 | 28 | 6.391 | 0.066 | 46.6 | 2.29 | 28.6 | 12.49 | 1.569 | 0.05 | 0.103 | 0.10 | 0.297 |
| 7 | 32 | 6.675 | 0.069 | 46.2 | 2.18 | 27.0 | 12.39 | 1.852 | 0.05 | 0.117 | 0.18 | 0.348 |
| 7 | 36 | 10.117 | 0.107 | 30.2 | 2.03 | 25.8 | 12.72 | 2.308 | 0.04 | 0.137 | 0.12 | 0.402 |
| 7 | 40 | 5.521 | 0.057 | 59.3 | 2.27 | 29.7 | 13.08 | 2.554 | 0.06 | 0.152 | 0.14 | 0.437 |
| 7 | 44 | 5.913 | 0.061 | 59.0 | 2.36 | 30.7 | 12.99 | 2.818 | 0.05 | 0.165 | 0.11 | 0.465 |
| 7 | 48 | 11.079 | 0.118 | 34.9 | 1.68 | 21.5 | 12.81 | 3.321 | 0.06 | 0.192 | 0.06 | 0.493 |
| 7 | 52 | 13.091 | 0.141 | 32.2 | 1.11 | 14.2 | 12.75 | 3.905 | 0.04 | 0.218 | 0.04 | 0.518 |
| 7 | 56 | 7.794 | 0.081 | 40.0 | 1.57 | 20.7 | 13.17 | 4.248 | 0.06 | 0.236 | 0.07 | 0.543 |
| 7 | 60 | 9.306 | 0.098 | 49.1 | 1.84 | 24.7 | 13.43 | 4.658 | 0.06 | 0.260 | 0.06 | 0.567 |
| 7 | 64 | 9.219 | 0.097 | 46.5 | 1.68 | 22.6 | 13.45 | 5.081 | 0.06 | 0.284 | 0.10 | 0.608 |
| 7 | 68 | 9.810 | 0.104 | 24.1 | 2.07 | 27.9 | 13.48 | 5.479 | 0.06 | 0.307 | 0.06 | 0.631 |
| 7 | 72 | 8.873 | 0.093 | 42.0 | 1.55 | 20.9 | 13.48 | 5.881 | 0.05 | 0.328 | 0.09 | 0.667 |
| 7 | 76 | 5.840 | 0.060 | 66.1 | 2.44 | 33.3 | 13.66 | 6.150 | 0.08 | 0.349 | 0.15 | 0.706 |
| 7 | 80 | 6.156 | 0.063 | 64.5 | 2.38 | 33.1 | 13.89 | 6.404 | 0.08 | 0.369 | 0.17 | 0.750 |
| 7 | 84 | 5.678 | 0.058 | 60.5 | 2.59 | 36.7 | 14.16 | 6.662 | 0.08 | 0.390 | 0.22 | 0.807 |
| 7 | 88 | 5.219 | 0.053 | 69.4 | 2.57 | 36.0 | 14.00 | 6.906 | 0.10 | 0.413 | 0.17 | 0.850 |
| 7 | 92 | 4.345 | 0.044 | 65.3 | 2.38 | 33.0 | 13.88 | 7.081 | 0.06 | 0.424 | 0.12 | 0.871 |
| 7 | 96 | 5.078 | 0.052 | 73.5 | 2.44 | 33.8 | 13.86 | 7.302 | 0.09 | 0.445 | 0.18 | 0.911 |
| 7 | 100 | 4.380 | 0.045 | 68.0 | 2.67 | 36.5 | 13.66 | 7.508 | 0.07 | 0.459 | 0.15 | 0.942 |
| 7 | 104 | 6.232 | 0.064 | 67.3 | 2.59 | 36.1 | 13.95 | 7.757 | 0.06 | 0.473 | 0.18 | 0.986 |
| 7 | 108 | 5.470 | 0.056 | 69.5 | 2.62 | 36.8 | 14.03 | 7.987 | 0.08 | 0.492 | 0.18 | 1.027 |
| 7 | 112 | 6.049 | 0.062 | 67.0 | 2.27 | 32.4 | 14.27 | 8.262 | 0.13 | 0.529 | 0.31 | 1.112 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 4 | 1.368 | 0.014 | 70.5 | 3.50 | 32.4 | 9.25 | 0.062 | 0.35 | 0.022 | 0.88 | 0.054 |
| 8 | 8 | 2.917 | 0.030 | 69.6 | 3.38 | 31.8 | 9.39 | 0.175 | 0.37 | 0.064 | 0.98 | 0.166 |
| 8 | 12 | 2.383 | 0.024 | 70.3 | 3.37 | 32.5 | 9.64 | 0.267 | 0.48 | 0.108 | 1.02 | 0.259 |
| 8 | 16 | 1.968 | 0.020 | 67.7 | 3.10 | 31.7 | 10.23 | 0.349 | 0.40 | 0.141 | 0.94 | 0.337 |
| 8 | 20 | 3.125 | 0.032 | 67.5 | 2.92 | 31.1 | 10.66 | 0.482 | 0.26 | 0.176 | 0.74 | 0.436 |
| 8 | 24 | 3.008 | 0.031 | 66.0 | 2.79 | 30.9 | 11.09 | 0.612 | 0.19 | 0.200 | 0.60 | 0.513 |
| 8 | 28 | 3.654 | 0.037 | 59.1 | 2.63 | 29.6 | 11.27 | 0.769 | 0.13 | 0.220 | 0.44 | 0.582 |
| 8 | 32 | 5.558 | 0.057 | 45.3 | 1.70 | 19.7 | 11.56 | 1.007 | 0.08 | 0.238 | 0.31 | 0.655 |
| 8 | 36 | 3.812 | 0.039 | 65.7 | 2.71 | 31.1 | 11.46 | 1.173 | 0.08 | 0.252 | 0.30 | 0.706 |
| 8 | 40 | 3.804 | 0.039 | 67.1 | 2.73 | 31.3 | 11.46 | 1.337 | 0.08 | 0.265 | 0.31 | 0.756 |
| 8 | 44 | 3.695 | 0.038 | 68.1 | 2.67 | 31.0 | 11.59 | 1.495 | 0.08 | 0.277 | 0.29 | 0.801 |
| 8 | 48 | 3.460 | 0.035 | 67.9 | 2.67 | 30.9 | 11.59 | 1.639 | 0.07 | 0.288 | 0.27 | 0.840 |
| 8 | 52 | 3.730 | 0.038 | 65.1 | 2.55 | 30.2 | 11.86 | 1.805 | 0.07 | 0.299 | 0.24 | 0.880 |
| 8 | 56 | 6.126 | 0.063 | 40.1 | 1.60 | 20.3 | 12.69 | 2.076 | 0.05 | 0.314 | 0.19 | 0.933 |
| 8 | 60 | 7.768 | 0.081 | 44.3 | 2.32 | 28.9 | 12.45 | 2.424 | 0.04 | 0.329 | 0.15 | 0.985 |
| 8 | 64 | 4.838 | 0.050 | 64.5 | 2.57 | 32.3 | 12.57 | 2.626 | 0.06 | 0.341 | 0.17 | 1.019 |
| 8 | 68 | 6.687 | 0.069 | 52.2 | 2.63 | 34.4 | 13.07 | 2.939 | 0.04 | 0.353 | 0.20 | 1.082 |
| 8 | 72 | 5.942 | 0.061 | 60.5 | 2.69 | 35.7 | 13.28 | 3.190 | 0.06 | 0.368 | 0.20 | 1.132 |
| 8 | 76 | 8.123 | 0.085 | 44.1 | 2.20 | 28.5 | 12.93 | 3.559 | 0.13 | 0.416 | 0.38 | 1.272 |
| 8 | 80 | 7.472 | 0.078 | 35.2 | 1.57 | 20.6 | 13.09 | 3.893 | 0.05 | 0.432 | 0.17 | 1.330 |
| 8 | 84 | 5.777 | 0.060 | 50.7 | 2.34 | 30.3 | 12.94 | 4.137 | 0.06 | 0.447 | 0.22 | 1.382 |
| 8 | 88 | 6.755 | 0.070 | 42.2 | 2.71 | 35.8 | 13.21 | 4.439 | 0.07 | 0.469 | 0.21 | 1.446 |
| 8 | 92 | 5.941 | 0.061 | 63.8 | 2.58 | 34.3 | 13.30 | 4.706 | 0.06 | 0.484 | 0.21 | 1.501 |
| 8 | 96 | 4.628 | 0.047 | 71.2 | 2.75 | 35.8 | 13.00 | 4.900 | 0.05 | 0.494 | 0.20 | 1.541 |
| 8 | 100 | 6.425 | 0.066 | 58.7 | 2.47 | 32.7 | 13.23 | 5.185 | 0.06 | 0.512 | 0.24 | 1.609 |
| 8 | 104 | 4.668 | 0.048 | 70.7 | 2.81 | 36.9 | 13.12 | 5.385 | 0.05 | 0.522 | 0.21 | 1.651 |
| 8 | 108 | 5.464 | 0.056 | 68.4 | 2.66 | 35.4 | 13.29 | 5.636 | 0.06 | 0.539 | 0.20 | 1.702 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 4 | 1.351 | 0.014 | 72.3 | 3.60 | 32.7 | 9.09 | 0.048 | 0.43 | 0.021 | 1.01 | 0.049 |
| 9 | 8 | 1.682 | 0.017 | 72.3 | 3.57 | 32.8 | 9.19 | 0.129 | 0.46 | 0.058 | 1.07 | 0.135 |
| 9 | 12 | 2.166 | 0.022 | 72.2 | 3.58 | 32.8 | 9.16 | 0.220 | 0.50 | 0.103 | 1.12 | 0.237 |
| 9 | 16 | 2.433 | 0.025 | 71.5 | 3.59 | 33.0 | 9.20 | 0.326 | 0.60 | 0.167 | 1.23 | 0.367 |
| 9 | 20 | 2.141 | 0.022 | 69.9 | 3.39 | 32.2 | 9.49 | 0.422 | 0.59 | 0.223 | 1.17 | 0.479 |
| 9 | 24 | 2.778 | 0.028 | 65.7 | 3.15 | 30.8 | 9.76 | 0.535 | 0.45 | 0.274 | 0.99 | 0.591 |
| 9 | 28 | 3.154 | 0.032 | 62.8 | 2.86 | 29.3 | 10.26 | 0.671 | 0.46 | 0.336 | 0.90 | 0.713 |
| 9 | 32 | 3.610 | 0.037 | 62.7 | 2.71 | 29.3 | 10.82 | 0.817 | 0.27 | 0.375 | 0.68 | 0.812 |
| 9 | 36 | 3.863 | 0.039 | 63.0 | 2.72 | 29.9 | 11.00 | 0.980 | 0.14 | 0.397 | 0.35 | 0.869 |
| 9 | 40 | 3.870 | 0.039 | 64.8 | 2.77 | 30.6 | 11.04 | 1.148 | 0.11 | 0.415 | 0.30 | 0.920 |
| 9 | 44 | 3.989 | 0.041 | 65.7 | 2.72 | 29.9 | 11.00 | 1.323 | 0.12 | 0.436 | 0.30 | 0.972 |
| 9 | 48 | 4.107 | 0.042 | 65.9 | 2.76 | 30.5 | 11.03 | 1.499 | 0.11 | 0.454 | 0.29 | 1.023 |
| 9 | 52 | 4.177 | 0.043 | 63.6 | 2.70 | 30.1 | 11.13 | 1.672 | 0.08 | 0.468 | 0.26 | 1.069 |
| 9 | 56 | 4.187 | 0.043 | 64.7 | 2.69 | 30.3 | 11.26 | 1.862 | 0.12 | 0.491 | 0.24 | 1.114 |
| 9 | 60 | 3.875 | 0.039 | 66.1 | 2.69 | 30.6 | 11.38 | 2.036 | 0.09 | 0.506 | 0.22 | 1.152 |
| 9 | 64 | 3.775 | 0.038 | 64.1 | 2.67 | 30.5 | 11.43 | 2.195 | 0.07 | 0.518 | 0.22 | 1.186 |
| 9 | 68 | 3.653 | 0.037 | 68.4 | 2.81 | 31.8 | 11.32 | 2.353 | 0.07 | 0.529 | 0.20 | 1.218 |
| 9 | 72 | 4.665 | 0.048 | 68.2 | 2.75 | 31.4 | 11.40 | 2.554 | 0.07 | 0.544 | 0.22 | 1.262 |
| 9 | 76 | 4.221 | 0.043 | 69.2 | 2.77 | 31.6 | 11.40 | 2.744 | 0.08 | 0.558 | 0.20 | 1.300 |
| 9 | 80 | 4.045 | 0.041 | 68.7 | 2.77 | 31.7 | 11.43 | 2.922 | 0.08 | 0.573 | 0.22 | 1.339 |
| 9 | 84 | 4.269 | 0.044 | 64.5 | 2.63 | 30.0 | 11.39 | 3.111 | 0.07 | 0.585 | 0.21 | 1.378 |
| 9 | 88 | 3.342 | 0.034 | 66.8 | 2.71 | 30.8 | 11.36 | 3.251 | 0.06 | 0.594 | 0.19 | 1.405 |
| 9 | 92 | 3.246 | 0.033 | 68.9 | 2.75 | 31.8 | 11.55 | 3.386 | 0.07 | 0.604 | 0.18 | 1.430 |
| 9 | 96 | 4.987 | 0.051 | 54.4 | 2.44 | 28.3 | 11.59 | 3.600 | 0.06 | 0.617 | 0.15 | 1.463 |
| 9 | 100 | 4.735 | 0.048 | 58.3 | 2.53 | 30.5 | 12.06 | 3.806 | 0.06 | 0.628 | 0.15 | 1.494 |
| 9 | 104 | 5.331 | 0.055 | 55.8 | 2.36 | 29.6 | 12.55 | 4.035 | 0.05 | 0.639 | 0.14 | 1.527 |
| 9 | 108 | 5.266 | 0.054 | 63.2 | 2.47 | 30.0 | 12.15 | 4.266 | 0.06 | 0.653 | 0.15 | 1.562 |
| 9 | 112 | 4.365 | 0.045 | 64.8 | 2.53 | 31.2 | 12.33 | 4.456 | 0.06 | 0.664 | 0.15 | 1.589 |
| 9 | 116 | 5.224 | 0.054 | 65.3 | 2.54 | 31.2 | 12.30 | 4.666 | 0.05 | 0.675 | 0.14 | 1.618 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 4 | 2.367 | 0.024 | 68.8 | 3.35 | 31.6 | 9.44 | 0.113 | 0.29 | 0.033 | 0.79 | 0.089 |
| 10 | 8 | 2.579 | 0.026 | 68.6 | 3.37 | 31.8 | 9.43 | 0.216 | 0.33 | 0.067 | 0.88 | 0.179 |
| 10 | 12 | 2.918 | 0.030 | 64.1 | 3.24 | 30.9 | 9.53 | 0.327 | 0.32 | 0.103 | 0.90 | 0.278 |
| 10 | 16 | 3.379 | 0.034 | 58.0 | 2.84 | 29.2 | 10.26 | 0.467 | 0.25 | 0.138 | 0.71 | 0.377 |
| 10 | 20 | 3.699 | 0.038 | 66.6 | 2.88 | 31.3 | 10.87 | 0.629 | 0.14 | 0.161 | 0.44 | 0.449 |
| 10 | 24 | 4.050 | 0.041 | 61.1 | 2.63 | 29.4 | 11.17 | 0.805 | 0.09 | 0.176 | 0.29 | 0.501 |
| 10 | 28 | 3.771 | 0.038 | 64.6 | 2.70 | 30.9 | 11.45 | 0.989 | 0.06 | 0.186 | 0.20 | 0.537 |
| 10 | 32 | 3.658 | 0.037 | 68.6 | 2.80 | 32.2 | 11.49 | 1.156 | 0.04 | 0.194 | 0.18 | 0.567 |
| 10 | 36 | 4.092 | 0.042 | 67.9 | 2.54 | 29.5 | 11.62 | 1.335 | 0.05 | 0.202 | 0.20 | 0.602 |
| 10 | 40 | 4.600 | 0.047 | 57.9 | 2.41 | 28.6 | 11.86 | 1.541 | 0.04 | 0.210 | 0.16 | 0.634 |
| 10 | 44 | 4.533 | 0.046 | 65.9 | 2.65 | 31.6 | 11.94 | 1.735 | 0.04 | 0.218 | 0.15 | 0.663 |
| 10 | 48 | 4.326 | 0.044 | 66.8 | 2.57 | 31.2 | 12.15 | 1.920 | 0.05 | 0.226 | 0.14 | 0.689 |
| 10 | 52 | 4.696 | 0.048 | 62.5 | 2.48 | 30.6 | 12.34 | 2.127 | 0.03 | 0.234 | 0.12 | 0.713 |
| 10 | 56 | 4.876 | 0.050 | 62.8 | 2.45 | 30.5 | 12.44 | 2.331 | 0.04 | 0.241 | 0.11 | 0.736 |
| 10 | 60 | 5.094 | 0.052 | 62.6 | 2.45 | 30.8 | 12.58 | 2.567 | 0.04 | 0.251 | 0.11 | 0.762 |
| 10 | 64 | 5.264 | 0.054 | 61.5 | 2.28 | 28.4 | 12.46 | 2.798 | 0.03 | 0.258 | 0.12 | 0.791 |
| 10 | 68 | 6.849 | 0.071 | 36.9 | 2.19 | 27.2 | 12.43 | 3.114 | 0.03 | 0.268 | 0.12 | 0.827 |
| 10 | 72 | 5.782 | 0.060 | 58.8 | 2.38 | 30.1 | 12.65 | 3.363 | 0.04 | 0.279 | 0.09 | 0.848 |
| 10 | 76 | 5.138 | 0.053 | 68.2 | 2.58 | 32.9 | 12.73 | 3.590 | 0.04 | 0.288 | 0.11 | 0.873 |
| 10 | 80 | 6.154 | 0.063 | 59.0 | 2.41 | 30.9 | 12.81 | 3.847 | 0.03 | 0.297 | 0.11 | 0.902 |
| 10 | 84 | 6.569 | 0.068 | 55.2 | 2.02 | 25.5 | 12.62 | 4.129 | 0.03 | 0.307 | 0.10 | 0.930 |
| 10 | 88 | 6.649 | 0.069 | 53.8 | 2.44 | 31.3 | 12.84 | 4.435 | 0.04 | 0.319 | 0.12 | 0.965 |
| 10 | 92 | 13.247 | 0.143 | 29.5 | 1.28 | 16.5 | 12.90 | 5.046 | 0.03 | 0.337 | 0.08 | 1.011 |
| 10 | 96 | 8.885 | 0.093 | 32.5 | 1.57 | 21.1 | 13.46 | 5.450 | 0.09 | 0.372 | 0.28 | 1.124 |
| 10 | 100 | 9.759 | 0.103 | 39.0 | 1.37 | 18.1 | 13.18 | 5.888 | 0.08 | 0.405 | 0.35 | 1.276 |
| 10 | 104 | 11.023 | 0.118 | 24.0 | 1.13 | 14.9 | 13.14 | 6.387 | 0.04 | 0.423 | 0.20 | 1.373 |
| 10 | 108 | 10.529 | 0.112 | 34.3 | 1.76 | 23.7 | 13.48 | 6.888 | 0.05 | 0.448 | 0.19 | 1.469 |
| 10 | 112 | 4.238 | 0.043 | 77.0 | 2.76 | 38.5 | 13.95 | 7.061 | 0.04 | 0.455 | 0.33 | 1.525 |
| 10 | 116 | 4.674 | 0.048 | 75.4 | 2.64 | 37.5 | 14.22 | 7.263 | 0.06 | 0.467 | 0.37 | 1.600 |
| 10 | 120 | 5.944 | 0.061 | 65.7 | 2.60 | 36.5 | 14.02 | 7.528 | 0.08 | 0.487 | 0.33 | 1.687 |
| 10 | 124 | 5.050 | 0.052 | 70.9 | 2.69 | 38.2 | 14.21 | 7.744 | 0.08 | 0.504 | 0.37 | 1.767 |
| 10 | 128 | 4.925 | 0.050 | 77.0 | 2.69 | 37.8 | 14.04 | 7.965 | 0.05 | 0.515 | 0.36 | 1.845 |
| 10 | 132 | 5.389 | 0.055 | 74.8 | 2.72 | 38.9 | 14.31 | 8.189 | 0.11 | 0.539 | 0.42 | 1.938 |
| 10 | 136 | 5.189 | 0.053 | 73.8 | 2.70 | 38.6 | 14.30 | 8.418 | 0.11 | 0.564 | 0.37 | 2.023 |
| 10 | 140 | 5.098 | 0.052 | 74.1 | 2.54 | 36.3 | 14.28 | 8.602 | 0.07 | 0.577 | 0.42 | 2.100 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 4 | 1.187 | 0.012 | 73.1 | 3.55 | 33.3 | 9.37 | 0.054 | 0.46 | 0.025 | 1.11 | 0.060 |
| 11 | 8 | 1.797 | 0.018 | 71.7 | 3.49 | 32.6 | 9.35 | 0.127 | 0.47 | 0.059 | 1.17 | 0.145 |
| 11 | 12 | 1.971 | 0.020 | 71.9 | 3.36 | 31.7 | 9.43 | 0.208 | 0.57 | 0.105 | 1.20 | 0.242 |
| 11 | 16 | 2.262 | 0.023 | 70.2 | 3.23 | 31.7 | 9.82 | 0.299 | 0.52 | 0.153 | 1.23 | 0.354 |
| 11 | 20 | 2.644 | 0.027 | 69.5 | 3.07 | 31.2 | 10.17 | 0.402 | 0.58 | 0.212 | 1.01 | 0.458 |
| 11 | 24 | 2.768 | 0.028 | 64.6 | 2.78 | 30.2 | 10.85 | 0.520 | 0.24 | 0.240 | 0.66 | 0.536 |
| 11 | 28 | 3.063 | 0.031 | 64.7 | 2.56 | 28.9 | 11.29 | 0.650 | 0.16 | 0.260 | 0.47 | 0.597 |
| 11 | 32 | 3.570 | 0.036 | 61.4 | 2.47 | 28.2 | 11.41 | 0.799 | 0.16 | 0.284 | 0.43 | 0.662 |
| 11 | 36 | 4.159 | 0.042 | 76.3 | 2.55 | 30.0 | 11.78 | 0.979 | 0.09 | 0.301 | 0.26 | 0.709 |
| 11 | 40 | 4.404 | 0.045 | 67.5 | 2.64 | 31.7 | 12.02 | 1.164 | 0.08 | 0.316 | 0.22 | 0.751 |
| 11 | 44 | 4.761 | 0.049 | 66.4 | 2.66 | 31.8 | 11.94 | 1.371 | 0.07 | 0.330 | 0.21 | 0.794 |
| 11 | 48 | 4.433 | 0.045 | 66.4 | 2.62 | 30.7 | 11.73 | 1.569 | 0.07 | 0.345 | 0.20 | 0.834 |
| 11 | 52 | 4.241 | 0.043 | 66.8 | 2.66 | 31.1 | 11.68 | 1.742 | 0.07 | 0.357 | 0.33 | 0.891 |
| 11 | 56 | 3.808 | 0.039 | 71.9 | 2.70 | 31.4 | 11.63 | 1.916 | 0.07 | 0.369 | 0.33 | 0.949 |
| 11 | 60 | 4.003 | 0.041 | 64.9 | 2.58 | 29.9 | 11.57 | 2.089 | 0.08 | 0.382 | 0.35 | 1.009 |
| 11 | 64 | 3.900 | 0.040 | 68.4 | 2.66 | 30.8 | 11.57 | 2.255 | 0.07 | 0.394 | 0.34 | 1.065 |
| 11 | 68 | 3.881 | 0.040 | 68.8 | 2.72 | 31.4 | 11.53 | 2.416 | 0.07 | 0.406 | 0.32 | 1.116 |
| 11 | 72 | 4.041 | 0.041 | 67.3 | 2.67 | 30.9 | 11.58 | 2.564 | 0.06 | 0.415 | 0.30 | 1.161 |
| 11 | 76 | 3.931 | 0.040 | 68.8 | 2.68 | 30.8 | 11.50 | 2.725 | 0.06 | 0.425 | 0.31 | 1.210 |
| 11 | 80 | 3.867 | 0.039 | 68.4 | 2.71 | 31.1 | 11.47 | 2.889 | 0.06 | 0.435 | 0.31 | 1.261 |
| 11 | 84 | 4.233 | 0.043 | 60.6 | 2.40 | 28.2 | 11.75 | 3.067 | 0.06 | 0.445 | 0.28 | 1.310 |
| 11 | 88 | 5.784 | 0.060 | 55.4 | 2.24 | 28.6 | 12.75 | 3.330 | 0.04 | 0.457 | 0.19 | 1.361 |
| 11 | 92 | 5.386 | 0.055 | 61.1 | 2.30 | 29.7 | 12.89 | 3.573 | 0.05 | 0.468 | 0.22 | 1.413 |
| 11 | 96 | 1.283 | 0.013 | 56.4 | 2.35 | 30.1 | 12.80 | 3.626 | 0.04 | 0.470 | 0.26 | 1.427 |
| 11 | 100 | 6.472 | 0.067 | 44.3 | 2.16 | 27.6 | 12.77 | 3.913 | 0.04 | 0.481 | 0.25 | 1.499 |
| 11 | 104 | 5.358 | 0.055 | 58.8 | 2.38 | 30.9 | 13.00 | 4.152 | 0.04 | 0.491 | 0.31 | 1.574 |
| 11 | 108 | 4.604 | 0.047 | 63.1 | 2.29 | 29.8 | 13.01 | 4.355 | 0.05 | 0.501 | 0.28 | 1.631 |
| 11 | 112 | 7.527 | 0.078 | 39.1 | 2.03 | 26.4 | 13.02 | 4.675 | 0.05 | 0.515 | 0.30 | 1.728 |
| 11 | 116 | 5.826 | 0.060 | 56.9 | 2.47 | 31.4 | 12.70 | 4.944 | 0.12 | 0.547 | 0.96 | 1.986 |
| 11 | 120 | 7.108 | 0.074 | 43.4 | 2.11 | 27.3 | 12.94 | 5.268 | 0.05 | 0.562 | 0.25 | 2.066 |
| 11 | 124 | 6.214 | 0.064 | 60.2 | 2.37 | 31.5 | 13.28 | 5.524 | 0.04 | 0.572 | 0.24 | 2.128 |
| 11 | 128 | 5.029 | 0.052 | 65.9 | 2.39 | 32.2 | 13.45 | 5.742 | 0.04 | 0.579 | 0.25 | 2.182 |
| 11 | 132 | 5.101 | 0.052 | 64.5 | 2.34 | 32.0 | 13.66 | 5.963 | 0.05 | 0.591 | 0.25 | 2.237 |
| 11 | 136 | 5.739 | 0.059 | 61.6 | 2.26 | 31.3 | 13.85 | 6.212 | 0.05 | 0.604 | 0.28 | 2.308 |
| 11 | 140 | 5.222 | 0.054 | 64.2 | 2.43 | 34.1 | 14.02 | 6.432 | 0.05 | 0.615 | 0.31 | 2.376 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 4 | 1.860 | 0.019 | 68.6 | 3.14 | 31.5 | 10.03 | 0.081 | 0.39 | 0.032 | 1.31 | 0.106 |
| 12 | 8 | 2.530 | 0.026 | 67.5 | 3.06 | 30.8 | 10.06 | 0.174 | 0.48 | 0.076 | 1.42 | 0.238 |
| 12 | 12 | 2.952 | 0.030 | 64.4 | 2.90 | 30.2 | 10.40 | 0.299 | 0.44 | 0.132 | 1.36 | 0.408 |
| 12 | 16 | 3.416 | 0.035 | 58.1 | 2.65 | 28.0 | 10.57 | 0.450 | 0.27 | 0.173 | 0.98 | 0.556 |
| 12 | 20 | 3.095 | 0.031 | 63.0 | 2.69 | 29.2 | 10.86 | 0.589 | 0.39 | 0.227 | 1.35 | 0.744 |
| 12 | 24 | 3.452 | 0.035 | 62.3 | 2.58 | 28.7 | 11.13 | 0.733 | 0.25 | 0.263 | 1.00 | 0.887 |
| 12 | 28 | 3.569 | 0.036 | 63.5 | 2.62 | 28.9 | 11.04 | 0.891 | 0.21 | 0.297 | 0.87 | 1.025 |
| 12 | 32 | 3.619 | 0.037 | 62.0 | 2.61 | 28.9 | 11.05 | 1.048 | 0.23 | 0.333 | 0.93 | 1.171 |
| 12 | 36 | 4.077 | 0.042 | 57.3 | 2.41 | 26.7 | 11.07 | 1.232 | 0.25 | 0.379 | 0.91 | 1.338 |
| 12 | 40 | 3.777 | 0.038 | 59.9 | 2.49 | 27.5 | 11.06 | 1.392 | 0.29 | 0.424 | 0.94 | 1.488 |
| 12 | 44 | 4.041 | 0.041 | 58.4 | 2.38 | 26.7 | 11.20 | 1.560 | 0.30 | 0.475 | 0.95 | 1.648 |
| 12 | 48 | 4.390 | 0.045 | 56.1 | 2.39 | 27.0 | 11.29 | 1.748 | 0.28 | 0.527 | 0.86 | 1.810 |
| 12 | 52 | 4.370 | 0.045 | 56.5 | 2.42 | 27.3 | 11.29 | 1.932 | 0.28 | 0.578 | 0.89 | 1.973 |
| 12 | 56 | 4.717 | 0.048 | 57.1 | 2.35 | 26.8 | 11.38 | 2.137 | 0.28 | 0.636 | 0.81 | 2.140 |
| 12 | 60 | 5.299 | 0.054 | 57.0 | 2.34 | 27.0 | 11.54 | 2.370 | 0.27 | 0.698 | 0.77 | 2.319 |
| 12 | 64 | 6.104 | 0.063 | 54.6 | 2.34 | 27.0 | 11.54 | 2.628 | 0.26 | 0.765 | 0.75 | 2.512 |
| 12 | 68 | 7.213 | 0.075 | 43.5 | 1.84 | 21.7 | 11.78 | 2.938 | 0.21 | 0.831 | 0.63 | 2.706 |
| 12 | 72 | 8.175 | 0.086 | 36.8 | 1.98 | 23.9 | 12.06 | 3.268 | 0.18 | 0.892 | 0.49 | 2.867 |
| 12 | 76 | 11.069 | 0.118 | 27.3 | 1.98 | 22.6 | 11.42 | 3.648 | 0.17 | 0.957 | 0.51 | 3.061 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 4 | 1.567 | 0.016 | 69.2 | 3.30 | 31.3 | 9.49 | 0.059 | 0.36 | 0.021 | 1.18 | 0.070 |
| 13 | 8 | 2.161 | 0.022 | 65.5 | 3.11 | 30.0 | 9.64 | 0.153 | 0.38 | 0.057 | 1.16 | 0.179 |
| 13 | 12 | 2.420 | 0.024 | 63.9 | 3.10 | 29.9 | 9.65 | 0.254 | 0.41 | 0.099 | 1.24 | 0.305 |
| 13 | 16 | 3.505 | 0.036 | 50.8 | 2.36 | 24.4 | 10.33 | 0.397 | 0.32 | 0.144 | 0.93 | 0.438 |
| 13 | 20 | 3.824 | 0.039 | 55.1 | 2.32 | 26.2 | 11.29 | 0.560 | 0.17 | 0.171 | 0.65 | 0.543 |
| 13 | 24 | 3.930 | 0.040 | 62.4 | 2.41 | 28.9 | 12.00 | 0.736 | 0.08 | 0.186 | 0.34 | 0.603 |
| 13 | 28 | 4.410 | 0.045 | 58.1 | 2.20 | 27.2 | 12.35 | 0.923 | 0.05 | 0.196 | 0.27 | 0.653 |
| 13 | 32 | 4.686 | 0.048 | 57.4 | 2.21 | 27.8 | 12.56 | 1.131 | 0.06 | 0.207 | 0.27 | 0.709 |
| 13 | 36 | 5.491 | 0.057 | 49.7 | 1.95 | 25.0 | 12.79 | 1.371 | 0.05 | 0.218 | 0.23 | 0.764 |
| 13 | 40 | 6.013 | 0.062 | 47.2 | 1.77 | 22.8 | 12.85 | 1.638 | 0.04 | 0.230 | 0.20 | 0.816 |
| 13 | 44 | 4.636 | 0.047 | 64.6 | 2.38 | 31.2 | 13.11 | 1.839 | 0.05 | 0.239 | 0.23 | 0.862 |
| 13 | 48 | 4.479 | 0.046 | 68.7 | 2.54 | 33.1 | 13.04 | 2.037 | 0.04 | 0.247 | 0.20 | 0.900 |
| 13 | 52 | 5.666 | 0.058 | 51.6 | 2.13 | 27.8 | 13.04 | 2.284 | 0.04 | 0.257 | 0.22 | 0.954 |
| 13 | 56 | 5.363 | 0.055 | 54.1 | 1.80 | 23.4 | 12.98 | 2.516 | 0.04 | 0.266 | 0.21 | 1.004 |
| 13 | 60 | 5.337 | 0.055 | 55.8 | 2.22 | 28.2 | 12.72 | 2.757 | 0.04 | 0.276 | 0.21 | 1.055 |
| 13 | 64 | 5.918 | 0.061 | 52.1 | 2.14 | 27.8 | 12.99 | 3.017 | 0.05 | 0.288 | 0.23 | 1.115 |
| 13 | 68 | 5.707 | 0.059 | 53.1 | 2.12 | 26.3 | 12.39 | 3.273 | 0.04 | 0.298 | 0.21 | 1.168 |
| 13 | 72 | 5.851 | 0.060 | 54.7 | 2.33 | 29.2 | 12.52 | 3.534 | 0.04 | 0.308 | 0.20 | 1.221 |
| 13 | 76 | 5.923 | 0.061 | 54.7 | 2.43 | 31.1 | 12.80 | 3.797 | 0.05 | 0.320 | 0.22 | 1.279 |
| 13 | 80 | 6.673 | 0.069 | 45.9 | 2.43 | 30.7 | 12.63 | 4.099 | 0.05 | 0.334 | 0.21 | 1.341 |
| 13 | 84 | 7.237 | 0.075 | 42.6 | 2.08 | 26.8 | 12.86 | 4.428 | 0.05 | 0.352 | 0.21 | 1.410 |
| 13 | 88 | 6.394 | 0.066 | 54.6 | 2.31 | 30.3 | 13.13 | 4.718 | 0.05 | 0.367 | 0.27 | 1.488 |
| 13 | 92 | 6.591 | 0.068 | 52.4 | 2.20 | 29.5 | 13.41 | 5.005 | 0.04 | 0.379 | 0.20 | 1.546 |
| 13 | 96 | 6.436 | 0.067 | 51.5 | 2.14 | 28.7 | 13.39 | 5.284 | 0.04 | 0.390 | 0.24 | 1.614 |
| 13 | 100 | 9.795 | 0.104 | 31.6 | 1.64 | 22.2 | 13.52 | 5.742 | 0.06 | 0.417 | 0.29 | 1.745 |
| 13 | 104 | 4.680 | 0.048 | 68.4 | 2.68 | 36.0 | 13.43 | 5.948 | 0.05 | 0.427 | 0.32 | 1.812 |
| 13 | 108 | 5.496 | 0.056 | 58.2 | 2.30 | 31.0 | 13.46 | 6.187 | 0.09 | 0.448 | 0.43 | 1.914 |
| 13 | 112 | 6.483 | 0.067 | 47.5 | 2.56 | 34.8 | 13.61 | 6.465 | 0.08 | 0.469 | 0.34 | 2.009 |
| 13 | 116 | 4.818 | 0.049 | 70.7 | 2.79 | 38.5 | 13.78 | 6.679 | 0.09 | 0.489 | 0.62 | 2.142 |
| 13 | 120 | 5.417 | 0.056 | 64.0 | 2.61 | 36.3 | 13.92 | 6.925 | 0.10 | 0.512 | 0.88 | 2.359 |
| 13 | 124 | 4.749 | 0.049 | 76.6 | 2.73 | 38.4 | 14.07 | 7.132 | 0.05 | 0.523 | 0.51 | 2.465 |
| 13 | 128 | 4.656 | 0.048 | 75.2 | 2.74 | 38.8 | 14.16 | 7.341 | 0.07 | 0.537 | 0.52 | 2.574 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 4 | 1.634 | 0.016 | 71.2 | 3.43 | 32.7 | 9.52 | 0.064 | 0.29 | 0.019 | 1.18 | 0.075 |
| 14 | 8 | 1.877 | 0.019 | 72.3 | 3.43 | 32.5 | 9.48 | 0.138 | 0.37 | 0.046 | 1.19 | 0.163 |
| 14 | 12 | 2.231 | 0.023 | 72.2 | 3.39 | 32.8 | 9.67 | 0.230 | 0.53 | 0.095 | 1.46 | 0.297 |
| 14 | 16 | 2.514 | 0.025 | 70.1 | 3.31 | 32.4 | 9.79 | 0.333 | 0.46 | 0.142 | 1.37 | 0.439 |
| 14 | 20 | 2.802 | 0.028 | 70.6 | 3.22 | 32.7 | 10.16 | 0.449 | 0.37 | 0.185 | 1.17 | 0.575 |
| 14 | 24 | 4.369 | 0.045 | 47.2 | 2.07 | 21.5 | 10.38 | 0.630 | 0.30 | 0.239 | 0.88 | 0.735 |
| 14 | 28 | 6.049 | 0.063 | 31.2 | 2.13 | 22.6 | 10.60 | 0.881 | 0.18 | 0.285 | 0.69 | 0.908 |
| 14 | 32 | 4.961 | 0.051 | 52.1 | 2.72 | 30.9 | 11.35 | 1.100 | 0.09 | 0.304 | 0.40 | 0.997 |
| 14 | 36 | 5.047 | 0.052 | 67.5 | 2.47 | 29.1 | 11.78 | 1.314 | 0.06 | 0.316 | 0.28 | 1.057 |
| 14 | 40 | 4.415 | 0.045 | 62.8 | 2.61 | 30.8 | 11.81 | 1.504 | 0.05 | 0.325 | 0.30 | 1.114 |
| 14 | 44 | 4.547 | 0.047 | 54.9 | 2.29 | 27.8 | 12.15 | 1.701 | 0.05 | 0.335 | 0.31 | 1.176 |
| 14 | 48 | 5.471 | 0.056 | 44.1 | 2.29 | 28.9 | 12.60 | 1.930 | 0.05 | 0.346 | 0.27 | 1.238 |
| 14 | 52 | 12.830 | 0.138 | 28.3 | 1.14 | 14.6 | 12.81 | 2.543 | 0.05 | 0.373 | 0.25 | 1.389 |
| 14 | 56 | 11.713 | 0.125 | 32.8 | 1.31 | 17.8 | 13.54 | 3.045 | 0.05 | 0.400 | 0.39 | 1.584 |
| 14 | 60 | 7.844 | 0.081 | 67.0 | 1.80 | 24.9 | 13.82 | 3.403 | 0.04 | 0.413 | 0.35 | 1.708 |
| 14 | 64 | 4.784 | 0.049 | 72.4 | 2.72 | 36.9 | 13.56 | 3.605 | 0.05 | 0.423 | 0.37 | 1.783 |
| 14 | 68 | 6.408 | 0.066 | 54.5 | 2.39 | 32.8 | 13.74 | 3.886 | 0.06 | 0.439 | 0.48 | 1.916 |
| 14 | 72 | 5.137 | 0.053 | 60.5 | 2.23 | 31.2 | 13.99 | 4.105 | 0.14 | 0.469 | 0.72 | 2.073 |
| 14 | 76 | 4.278 | 0.044 | 74.7 | 2.69 | 37.7 | 14.02 | 4.285 | 0.07 | 0.480 | 0.68 | 2.196 |
| 14 | 80 | 6.068 | 0.063 | 58.1 | 2.11 | 31.1 | 14.74 | 4.556 | 0.05 | 0.494 | 0.78 | 2.407 |
| 14 | 84 | 7.491 | 0.078 | 46.1 | 1.96 | 29.2 | 14.88 | 4.883 | 0.08 | 0.519 | 0.83 | 2.676 |
| 14 | 88 | 6.991 | 0.073 | 48.9 | 1.78 | 28.8 | 16.20 | 5.203 | 0.39 | 0.642 | 2.77 | 3.562 |
| 14 | 92 | 6.427 | 0.066 | 54.7 | 1.82 | 30.5 | 16.76 | 5.471 | 0.20 | 0.697 | 2.11 | 4.127 |
| 14 | 96 | 6.701 | 0.069 | 53.6 | 1.78 | 30.4 | 17.11 | 5.741 | 0.30 | 0.778 | 3.85 | 5.168 |
| 14 | 100 | 7.513 | 0.078 | 51.7 | 1.69 | 29.8 | 17.68 | 6.090 | 0.31 | 0.886 | 4.28 | 6.659 |
| 14 | 104 | 8.472 | 0.089 | 44.9 | 1.53 | 26.9 | 17.56 | 6.467 | 0.22 | 0.967 | 3.09 | 7.822 |
| 14 | 108 | 10.069 | 0.106 | 36.5 | 1.27 | 23.7 | 18.63 | 6.920 | 0.24 | 1.077 | 2.58 | 8.994 |
| 14 | 112 | 11.265 | 0.120 | 32.1 | 1.08 | 22.8 | 21.17 | 7.392 | 0.27 | 1.204 | 2.04 | 9.956 |
| 14 | 116 | 13.262 | 0.143 | 25.8 | 0.87 | 20.0 | 23.09 | 8.028 | 0.17 | 1.311 | 1.52 | 10.921 |
| 14 | 120 | 12.782 | 0.138 | 30.1 | 1.01 | 21.9 | 21.79 | 8.597 | 0.15 | 1.397 | 1.31 | 11.666 |
| 14 | 124 | | | | | | | | | | | |
| 14 | 128 | 16.050 | 0.176 | 26.9 | 0.95 | 19.6 | 20.56 | 9.352 | 0.11 | 1.479 | 0.74 | 12.227 |
| 14 | 132 | 19.364 | 0.217 | 23.3 | 0.80 | 18.3 | 22.81 | 10.282 | 0.10 | 1.570 | 0.78 | 12.950 |
| 14 | 136 | 20.967 | 0.238 | 23.7 | 0.88 | 17.5 | 19.89 | 11.275 | 0.12 | 1.689 | 0.76 | 13.708 |
| 14 | 140 | 14.119 | 0.153 | 27.2 | 0.98 | 21.3 | 21.75 | 11.922 | 0.13 | 1.775 | 1.13 | 14.439 |

Note: No sample at 124 cm.

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 4 | 1.764 | 0.018 | 69.9 | 3.41 | 32.4 | 9.49 | 0.072 | 0.37 | 0.027 | 1.05 | 0.076 |
| 15 | 8 | 2.056 | 0.021 | 67.7 | 3.43 | 31.9 | 9.29 | 0.158 | 0.39 | 0.060 | 1.04 | 0.165 |
| 15 | 12 | 2.208 | 0.022 | 68.5 | 3.54 | 32.8 | 9.25 | 0.244 | 0.40 | 0.094 | 1.06 | 0.256 |
| 15 | 16 | 2.511 | 0.025 | 65.2 | 3.10 | 30.9 | 9.96 | 0.347 | 0.36 | 0.131 | 0.99 | 0.358 |
| 15 | 20 | 2.917 | 0.030 | 61.5 | 2.78 | 29.0 | 10.43 | 0.474 | 0.27 | 0.165 | 0.86 | 0.467 |
| 15 | 24 | 3.214 | 0.033 | 60.9 | 2.79 | 30.3 | 10.87 | 0.614 | 0.20 | 0.193 | 0.78 | 0.575 |
| 15 | 28 | 3.250 | 0.033 | 63.1 | 3.65 | 30.3 | 8.30 | 0.744 | 0.12 | 0.209 | 0.51 | 0.642 |
| 15 | 32 | 3.436 | 0.035 | 64.7 | 2.65 | 30.8 | 11.62 | 0.893 | 0.08 | 0.221 | 0.43 | 0.706 |
| 15 | 36 | 4.009 | 0.041 | 66.1 | 2.66 | 31.3 | 11.76 | 1.067 | 0.08 | 0.235 | 0.39 | 0.773 |
| 15 | 40 | 4.143 | 0.042 | 67.0 | 2.66 | 31.6 | 11.88 | 1.240 | 0.09 | 0.251 | 0.40 | 0.843 |
| 15 | 44 | 3.876 | 0.039 | 67.2 | 2.67 | 31.4 | 11.76 | 1.404 | 0.09 | 0.265 | 0.41 | 0.909 |
| 15 | 48 | 4.006 | 0.041 | 63.4 | 2.58 | 30.8 | 11.94 | 1.577 | 0.15 | 0.291 | 0.40 | 0.979 |
| 15 | 52 | 6.430 | 0.067 | 43.6 | 1.93 | 24.3 | 12.61 | 1.864 | 0.08 | 0.315 | 0.24 | 1.047 |
| 15 | 56 | 4.982 | 0.051 | 64.8 | 2.62 | 33.8 | 12.90 | 2.083 | 0.09 | 0.334 | 0.23 | 1.096 |
| 15 | 60 | 4.601 | 0.047 | 64.6 | 2.57 | 33.6 | 13.09 | 2.284 | 0.09 | 0.352 | 0.22 | 1.141 |
| 15 | 64 | 4.890 | 0.050 | 65.7 | 2.47 | 32.5 | 13.14 | 2.494 | 0.10 | 0.372 | 0.23 | 1.188 |
| 15 | 68 | 6.276 | 0.065 | 52.4 | 2.08 | 27.3 | 13.12 | 2.752 | 0.07 | 0.391 | 0.22 | 1.246 |
| 15 | 72 | 8.838 | 0.093 | 34.9 | 1.53 | 20.2 | 13.19 | 3.154 | 0.08 | 0.422 | 0.19 | 1.321 |
| 15 | 76 | 5.927 | 0.061 | 58.2 | 2.40 | 31.1 | 12.95 | 3.409 | 0.08 | 0.442 | 0.26 | 1.387 |
| 15 | 80 | 5.509 | 0.057 | 61.2 | 2.40 | 30.7 | 12.78 | 3.648 | 0.10 | 0.465 | 0.26 | 1.450 |
| 15 | 84 | 7.321 | 0.076 | 41.2 | 2.22 | 27.7 | 12.48 | 3.972 | 0.16 | 0.516 | 0.48 | 1.604 |
| 15 | 88 | 10.818 | 0.115 | 23.7 | 1.40 | 17.3 | 12.37 | 4.436 | 0.17 | 0.596 | 0.40 | 1.787 |
| 15 | 92 | 11.726 | 0.126 | 22.6 | 0.98 | 12.3 | 12.54 | 4.978 | 0.05 | 0.621 | 0.19 | 1.888 |
| 15 | 96 | 5.619 | 0.058 | 57.7 | 2.27 | 29.1 | 12.83 | 5.211 | 0.10 | 0.644 | 0.26 | 1.950 |
| 15 | 100 | 6.223 | 0.064 | 54.0 | 2.41 | 31.8 | 13.20 | 5.498 | 0.08 | 0.666 | 0.27 | 2.027 |
| 15 | 104 | 6.557 | 0.068 | 52.3 | 2.13 | 28.1 | 13.21 | 5.783 | 0.10 | 0.695 | 0.25 | 2.099 |
| 15 | 108 | 6.011 | 0.062 | 65.1 | 2.35 | 31.5 | 13.40 | 6.040 | 0.10 | 0.721 | 0.37 | 2.195 |
| 15 | 112 | 5.410 | 0.056 | 63.9 | 2.54 | 34.3 | 13.50 | 6.285 | 0.07 | 0.738 | 0.29 | 2.264 |
| 15 | 116 | 6.074 | 0.063 | 57.2 | 2.29 | 30.9 | 13.50 | 6.541 | 0.10 | 0.763 | 0.34 | 2.350 |
| 15 | 120 | 5.403 | 0.055 | 64.2 | 2.38 | 32.6 | 13.71 | 6.776 | 0.09 | 0.783 | 0.32 | 2.424 |
| 15 | 124 | 4.954 | 0.051 | 70.0 | 2.72 | 37.2 | 13.67 | 6.993 | 0.11 | 0.808 | 0.41 | 2.513 |
| 15 | 128 | 7.958 | 0.083 | 44.9 | 1.70 | 22.8 | 13.44 | 7.340 | 0.08 | 0.835 | 0.28 | 2.610 |
| 15 | 132 | 6.994 | 0.073 | 50.2 | 2.19 | 29.5 | 13.47 | 7.653 | 0.11 | 0.868 | 0.31 | 2.706 |
| 15 | 136 | 9.903 | 0.104 | 42.0 | 1.73 | 23.0 | 13.29 | 8.120 | 0.08 | 0.906 | 0.26 | 2.828 |
| 15 | 140 | 6.064 | 0.063 | 55.6 | 2.53 | 35.0 | 13.83 | 8.397 | 0.10 | 0.933 | 0.30 | 2.911 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 4 | 1.816 | 0.018 | 66.5 | 3.18 | 31.8 | 9.98 | 0.081 | 0.41 | 0.033 | 1.01 | 0.082 |
| 16 | 8 | 2.182 | 0.022 | 63.1 | 3.21 | 31.4 | 9.77 | 0.165 | 0.40 | 0.067 | 1.04 | 0.169 |
| 16 | 12 | 2.477 | 0.025 | 65.8 | 3.11 | 30.9 | 9.94 | 0.267 | 0.42 | 0.109 | 1.01 | 0.272 |
| 16 | 16 | 2.578 | 0.026 | 64.3 | 3.07 | 30.6 | 9.96 | 0.378 | 0.36 | 0.148 | 0.92 | 0.374 |
| 16 | 20 | 3.120 | 0.032 | 64.1 | 2.87 | 31.5 | 10.96 | 0.501 | 0.22 | 0.175 | 0.64 | 0.453 |
| 16 | 24 | 4.209 | 0.043 | 64.3 | 2.61 | 30.5 | 11.67 | 0.684 | 0.10 | 0.192 | 0.34 | 0.515 |
| 16 | 28 | 4.914 | 0.050 | 51.9 | 2.42 | 28.8 | 11.88 | 0.904 | 0.11 | 0.217 | 0.30 | 0.582 |
| 16 | 32 | 4.311 | 0.044 | 61.7 | 2.49 | 30.6 | 12.29 | 1.092 | 0.12 | 0.240 | 0.26 | 0.630 |
| 16 | 36 | 4.357 | 0.045 | 62.0 | 2.61 | 30.5 | 11.67 | 1.273 | 0.13 | 0.265 | 0.33 | 0.689 |
| 16 | 40 | 4.377 | 0.045 | 65.2 | 2.60 | 31.5 | 12.10 | 1.464 | 0.14 | 0.291 | 0.30 | 0.747 |
| 16 | 44 | 5.016 | 0.051 | 57.1 | 2.25 | 27.8 | 12.37 | 1.686 | 0.14 | 0.321 | 0.30 | 0.814 |
| 16 | 48 | 5.280 | 0.054 | 57.6 | 2.37 | 29.7 | 12.54 | 1.912 | 0.12 | 0.349 | 0.32 | 0.887 |
| 16 | 52 | 5.566 | 0.057 | 49.0 | 2.31 | 29.2 | 12.63 | 2.159 | 0.15 | 0.385 | 0.30 | 0.960 |
| 16 | 56 | 6.455 | 0.067 | 50.8 | 1.96 | 25.2 | 12.84 | 2.441 | 0.13 | 0.420 | 0.25 | 1.029 |
| 16 | 60 | 8.281 | 0.087 | 36.8 | 1.65 | 21.4 | 12.98 | 2.820 | 0.10 | 0.459 | 0.22 | 1.113 |
| 16 | 64 | 10.595 | 0.112 | 32.6 | 1.48 | 19.2 | 12.97 | 3.301 | 0.08 | 0.499 | 0.17 | 1.196 |
| 16 | 68 | 6.110 | 0.063 | 52.5 | 2.40 | 31.2 | 13.00 | 3.557 | 0.16 | 0.541 | 0.36 | 1.288 |
| 16 | 72 | 11.856 | 0.127 | 30.7 | 1.00 | 12.1 | 12.13 | 4.111 | 0.14 | 0.619 | 0.39 | 1.502 |
| 16 | 76 | 6.954 | 0.072 | 51.7 | 1.93 | 25.8 | 13.36 | 4.428 | 0.12 | 0.657 | 0.27 | 1.587 |
| 16 | 80 | 4.928 | 0.050 | 69.5 | 2.69 | 36.4 | 13.52 | 4.639 | 0.09 | 0.677 | 0.27 | 1.644 |
| 16 | 84 | 4.955 | 0.051 | 71.6 | 2.60 | 36.0 | 13.85 | 4.855 | 0.12 | 0.702 | 0.27 | 1.702 |
| 16 | 88 | 4.814 | 0.049 | 74.6 | 2.63 | 36.2 | 13.75 | 5.056 | 0.14 | 0.730 | 0.32 | 1.766 |
| 16 | 92 | 5.200 | 0.053 | 67.4 | 2.51 | 35.0 | 13.94 | 5.292 | 0.11 | 0.757 | 0.29 | 1.834 |
| 16 | 96 | 6.386 | 0.066 | 57.2 | 2.39 | 32.8 | 13.73 | 5.576 | 0.15 | 0.799 | 0.34 | 1.931 |
| 16 | 100 | 4.568 | 0.047 | 75.9 | 2.70 | 37.4 | 13.85 | 5.774 | 0.11 | 0.822 | 0.34 | 1.998 |
| 16 | 104 | 4.513 | 0.046 | 75.4 | 2.65 | 36.4 | 13.72 | 5.961 | 0.17 | 0.853 | 0.37 | 2.067 |
| 16 | 108 | 4.508 | 0.046 | 75.0 | 2.65 | 36.3 | 13.69 | 6.159 | 0.17 | 0.886 | 0.38 | 2.142 |
| 16 | 112 | 4.890 | 0.050 | 73.4 | 2.58 | 35.5 | 13.74 | 6.373 | 0.15 | 0.918 | 0.36 | 2.219 |
| 16 | 116 | 6.172 | 0.064 | 71.7 | 2.35 | 32.2 | 13.70 | 6.639 | 0.18 | 0.965 | 0.36 | 2.315 |
| 16 | 120 | 5.039 | 0.052 | 67.7 | 2.48 | 34.9 | 14.06 | 6.866 | 0.24 | 1.019 | 0.64 | 2.461 |
| 16 | 124 | 4.912 | 0.050 | 77.5 | 2.67 | 38.2 | 14.30 | 7.078 | 0.26 | 1.073 | 1.19 | 2.712 |
| 16 | 128 | 5.242 | 0.054 | 77.7 | 2.68 | 38.4 | 14.34 | 7.300 | 0.17 | 1.112 | 0.47 | 2.816 |
| 16 | 132 | 5.144 | 0.053 | 76.2 | 2.69 | 38.6 | 14.35 | 7.535 | 0.17 | 1.152 | 0.57 | 2.950 |
| 16 | 136 | 5.497 | 0.056 | 74.5 | 2.55 | 38.2 | 15.00 | 7.758 | 0.16 | 1.188 | 0.58 | 3.078 |
| 16 | 140 | 5.546 | 0.057 | 69.7 | 2.46 | 36.4 | 14.80 | 7.998 | 0.17 | 1.228 | 0.83 | 3.276 |
| 16 | 144 | 5.611 | 0.058 | 66.2 | 2.21 | 32.9 | 14.88 | 8.244 | 0.20 | 1.276 | 0.92 | 3.503 |
| 16 | 148 | 5.320 | 0.055 | 68.5 | 2.30 | 35.2 | 15.32 | 8.467 | 0.17 | 1.313 | 0.55 | 3.625 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 4 | 1.563 | 0.016 | 71.2 | 3.54 | 32.5 | 9.17 | 0.065 | 0.54 | 0.035 | 1.29 | 0.085 |
| 17 | 8 | 2.065 | 0.021 | 69.5 | 3.50 | 32.4 | 9.26 | 0.149 | 0.57 | 0.083 | 1.24 | 0.189 |
| 17 | 12 | 2.060 | 0.021 | 70.0 | 3.54 | 32.9 | 9.30 | 0.235 | 0.61 | 0.135 | 1.26 | 0.296 |
| 17 | 16 | 2.347 | 0.024 | 69.7 | 3.43 | 32.5 | 9.49 | 0.334 | 0.72 | 0.206 | 1.31 | 0.427 |
| 17 | 20 | 2.926 | 0.030 | 61.5 | 3.01 | 30.6 | 10.15 | 0.452 | 0.40 | 0.253 | 0.94 | 0.537 |
| 17 | 24 | 3.354 | 0.034 | 65.4 | 2.81 | 31.2 | 11.10 | 0.595 | 0.26 | 0.290 | 0.54 | 0.615 |
| 17 | 28 | 3.617 | 0.037 | 67.1 | 2.77 | 31.8 | 11.49 | 0.749 | 0.19 | 0.319 | 0.40 | 0.676 |
| 17 | 32 | 4.210 | 0.043 | 57.8 | 3.24 | 27.4 | 8.47 | 0.929 | 0.15 | 0.346 | 0.33 | 0.736 |
| 17 | 36 | 3.803 | 0.039 | 63.7 | 2.54 | 29.9 | 11.78 | 1.095 | 0.14 | 0.369 | 0.31 | 0.787 |
| 17 | 40 | 4.153 | 0.042 | 65.4 | 2.51 | 30.1 | 12.00 | 1.281 | 0.12 | 0.391 | 0.28 | 0.839 |
| 17 | 44 | 4.380 | 0.045 | 63.7 | 2.65 | 31.2 | 11.77 | 1.456 | 0.16 | 0.418 | 0.33 | 0.897 |
| 17 | 48 | 4.339 | 0.044 | 64.2 | 2.56 | 30.6 | 11.96 | 1.653 | 0.12 | 0.443 | 0.30 | 0.955 |
| 17 | 52 | 4.348 | 0.044 | 63.3 | 2.46 | 30.0 | 12.20 | 1.841 | 0.13 | 0.467 | 0.27 | 1.006 |
| 17 | 56 | 4.943 | 0.051 | 62.7 | 2.36 | 29.1 | 12.32 | 2.064 | 0.11 | 0.491 | 0.26 | 1.063 |
| 17 | 60 | 5.378 | 0.055 | 68.0 | 2.43 | 30.2 | 12.41 | 2.326 | 0.12 | 0.522 | 0.25 | 1.129 |
| 17 | 64 | 4.571 | 0.047 | 67.8 | 2.57 | 32.2 | 12.53 | 2.545 | 0.11 | 0.545 | 0.26 | 1.185 |
| 17 | 68 | 4.723 | 0.048 | 65.2 | 2.46 | 31.2 | 12.67 | 2.683 | 0.11 | 0.560 | 0.26 | 1.221 |
| 17 | 72 | 5.124 | 0.053 | 65.1 | 2.34 | 30.2 | 12.90 | 2.910 | 0.10 | 0.582 | 0.24 | 1.274 |
| 17 | 76 | 4.794 | 0.049 | 67.3 | 2.38 | 31.1 | 13.05 | 3.107 | 0.11 | 0.603 | 0.24 | 1.321 |
| 17 | 80 | 5.390 | 0.055 | 62.8 | 2.30 | 29.8 | 12.97 | 3.352 | 0.04 | 0.612 | 0.25 | 1.383 |
| 17 | 84 | 5.132 | 0.053 | 63.4 | 2.36 | 30.4 | 12.86 | 3.581 | 0.04 | 0.620 | 0.24 | 1.438 |
| 17 | 88 | 5.000 | 0.051 | 65.3 | 2.40 | 31.3 | 13.05 | 3.793 | 0.04 | 0.629 | 0.26 | 1.493 |
| 17 | 92 | 5.023 | 0.051 | 65.2 | 2.44 | 31.6 | 12.94 | 4.010 | 0.03 | 0.637 | 0.25 | 1.546 |
| 17 | 96 | 5.038 | 0.052 | 65.9 | 2.43 | 31.3 | 12.87 | 4.232 | 0.03 | 0.644 | 0.24 | 1.600 |
| 17 | 100 | 5.258 | 0.054 | 65.2 | 2.54 | 31.7 | 12.46 | 4.463 | 0.03 | 0.651 | 0.25 | 1.657 |
| 17 | 104 | 5.367 | 0.055 | 64.3 | 2.40 | 31.4 | 13.10 | 4.695 | 0.03 | 0.659 | 0.24 | 1.714 |
| 17 | 108 | 5.318 | 0.055 | 66.4 | 2.80 | 32.2 | 11.49 | 4.930 | 0.04 | 0.668 | 0.27 | 1.778 |
| 17 | 112 | 5.209 | 0.053 | 66.3 | 2.59 | 31.8 | 12.27 | 5.161 | 0.05 | 0.679 | 0.29 | 1.843 |
| 17 | 116 | 5.399 | 0.055 | 66.2 | 2.63 | 32.1 | 12.21 | 5.391 | 0.03 | 0.686 | 0.26 | 1.903 |
| 17 | 120 | 5.313 | 0.055 | 66.3 | 2.70 | 32.4 | 11.98 | 5.633 | 0.03 | 0.693 | 0.25 | 1.963 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 4 | 1.678 | 0.017 | 71.6 | 3.81 | 33.4 | 8.76 | 0.076 | 0.38 | 0.029 | 1.23 | 0.093 |
| 18 | 8 | 1.898 | 0.019 | 70.8 | 3.88 | 33.3 | 8.58 | 0.153 | 0.41 | 0.061 | 1.28 | 0.192 |
| 18 | 12 | 2.163 | 0.022 | 68.7 | 3.59 | 33.8 | 9.42 | 0.244 | 0.47 | 0.104 | 1.29 | 0.310 |
| 18 | 16 | 2.663 | 0.027 | 66.0 | 3.30 | 32.8 | 9.93 | 0.355 | 0.47 | 0.156 | 1.07 | 0.428 |
| 18 | 20 | 3.284 | 0.033 | 61.5 | 2.83 | 29.1 | 10.29 | 0.494 | 0.31 | 0.199 | 1.33 | 0.613 |
| 18 | 24 | 3.477 | 0.035 | 61.6 | 2.80 | 30.6 | 10.91 | 0.640 | 0.14 | 0.220 | 0.56 | 0.695 |
| 18 | 28 | 3.691 | 0.038 | 65.1 | 2.75 | 32.2 | 11.69 | 0.801 | 0.08 | 0.234 | 0.33 | 0.748 |
| 18 | 32 | 3.688 | 0.038 | 66.8 | 3.01 | 33.0 | 10.96 | 0.955 | 0.07 | 0.244 | 0.33 | 0.799 |
| 18 | 36 | 3.855 | 0.039 | 66.9 | 2.88 | 32.4 | 11.26 | 1.138 | 0.06 | 0.254 | 0.30 | 0.854 |
| 18 | 40 | 5.571 | 0.057 | 44.2 | 2.31 | 26.5 | 11.46 | 1.364 | 0.06 | 0.268 | 0.26 | 0.913 |
| 18 | 44 | 4.508 | 0.046 | 59.1 | 2.45 | 28.9 | 11.80 | 1.545 | 0.05 | 0.276 | 0.22 | 0.953 |
| 18 | 48 | 5.207 | 0.053 | 51.5 | 2.59 | 30.4 | 11.75 | 1.789 | 0.03 | 0.283 | 0.19 | 0.998 |
| 18 | 52 | 4.868 | 0.050 | 61.7 | 2.71 | 31.9 | 11.79 | 2.008 | 0.03 | 0.290 | 0.22 | 1.047 |
| 18 | 56 | 4.215 | 0.043 | 67.0 | 2.85 | 34.1 | 11.96 | 2.180 | 0.04 | 0.298 | 0.24 | 1.087 |
| 18 | 60 | 5.002 | 0.051 | 55.9 | 2.40 | 28.5 | 11.88 | 2.407 | 0.04 | 0.307 | 0.20 | 1.132 |
| 18 | 64 | 5.428 | 0.056 | 50.3 | 2.47 | 29.6 | 11.98 | 2.640 | 0.03 | 0.315 | 0.19 | 1.177 |
| 18 | 68 | 6.280 | 0.065 | 48.6 | 2.32 | 28.5 | 12.28 | 2.918 | 0.02 | 0.321 | 0.17 | 1.224 |
| 18 | 72 | 5.053 | 0.052 | 63.4 | 2.58 | 31.8 | 12.33 | 3.138 | 0.03 | 0.327 | 0.21 | 1.271 |
| 18 | 76 | 5.483 | 0.056 | 58.9 | 2.43 | 30.5 | 12.55 | 3.384 | 0.04 | 0.337 | 0.18 | 1.315 |
| 18 | 80 | 4.966 | 0.051 | 64.7 | 2.54 | 32.2 | 12.68 | 3.596 | 0.02 | 0.342 | 0.19 | 1.355 |
| 18 | 84 | 7.634 | 0.080 | 41.8 | 1.93 | 24.4 | 12.64 | 3.932 | 0.03 | 0.352 | 0.24 | 1.436 |
| 18 | 88 | 5.012 | 0.051 | 60.0 | 2.59 | 33.5 | 12.94 | 4.160 | 0.06 | 0.366 | 0.46 | 1.540 |
| 18 | 92 | 5.755 | 0.059 | 71.1 | 2.91 | 37.7 | 12.96 | 4.413 | 0.05 | 0.378 | 0.33 | 1.624 |
| 18 | 96 | 4.681 | 0.048 | 63.6 | 2.48 | 31.8 | 12.83 | 4.612 | 0.03 | 0.385 | 0.28 | 1.679 |
| 18 | 100 | 4.506 | 0.046 | 65.1 | 2.63 | 34.4 | 13.09 | 4.803 | 0.05 | 0.395 | 0.32 | 1.740 |
| 18 | 104 | 4.559 | 0.047 | 67.1 | 2.41 | 32.5 | 13.49 | 4.994 | 0.07 | 0.408 | 0.36 | 1.809 |
| 18 | 108 | 4.022 | 0.041 | 76.5 | 2.71 | 37.6 | 13.87 | 5.173 | 0.09 | 0.425 | 0.50 | 1.898 |
| 18 | 112 | 4.487 | 0.046 | 78.7 | 2.86 | 40.2 | 14.05 | 5.369 | 0.08 | 0.441 | 0.50 | 1.996 |
| 18 | 116 | 4.690 | 0.048 | 77.0 | 2.80 | 39.5 | 14.11 | 5.569 | 0.07 | 0.455 | 0.50 | 2.096 |
| 18 | 120 | 5.222 | 0.054 | 67.4 | 2.35 | 33.7 | 14.33 | 5.787 | 0.20 | 0.499 | 2.85 | 2.716 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 4 | 1.519 | 0.015 | 70.9 | 3.57 | 32.7 | 9.17 | 0.058 | 0.40 | 0.023 | 1.02 | 0.059 |
| 19 | 8 | 1.883 | 0.019 | 70.4 | 3.55 | 32.9 | 9.28 | 0.140 | 0.38 | 0.054 | 1.18 | 0.156 |
| 19 | 12 | 2.153 | 0.022 | 66.8 | 3.44 | 32.3 | 9.38 | 0.230 | 0.38 | 0.089 | 1.22 | 0.266 |
| 19 | 16 | 2.614 | 0.026 | 58.2 | 3.16 | 30.9 | 9.78 | 0.341 | 0.35 | 0.128 | 1.02 | 0.380 |
| 19 | 20 | 2.840 | 0.029 | 60.5 | 2.86 | 30.5 | 10.67 | 0.461 | 0.22 | 0.154 | 0.67 | 0.460 |
| 19 | 24 | 3.951 | 0.040 | 60.9 | 2.65 | 29.5 | 11.12 | 0.630 | 0.10 | 0.170 | 0.45 | 0.536 |
| 19 | 28 | 4.144 | 0.042 | 63.7 | 2.77 | 31.0 | 11.18 | 0.807 | 0.08 | 0.185 | 0.38 | 0.604 |
| 19 | 32 | 4.278 | 0.044 | 64.8 | 2.85 | 32.4 | 11.36 | 0.989 | 0.09 | 0.200 | 0.32 | 0.661 |
| 19 | 36 | 4.333 | 0.044 | 63.0 | 2.88 | 32.6 | 11.31 | 1.174 | 0.07 | 0.214 | 0.22 | 0.702 |
| 19 | 40 | 3.682 | 0.037 | 65.8 | 2.86 | 32.1 | 11.22 | 1.335 | 0.06 | 0.224 | 0.24 | 0.741 |
| 19 | 44 | 3.711 | 0.038 | 64.9 | 2.88 | 32.2 | 11.19 | 1.498 | 0.05 | 0.232 | 0.29 | 0.788 |
| 19 | 48 | 3.829 | 0.039 | 65.0 | 2.80 | 31.5 | 11.24 | 1.670 | 0.05 | 0.240 | 0.29 | 0.839 |
| 19 | 52 | 3.845 | 0.039 | 65.6 | 2.92 | 33.0 | 11.32 | 1.823 | 0.04 | 0.246 | 0.28 | 0.882 |
| 19 | 56 | 4.760 | 0.049 | 57.0 | 2.65 | 30.9 | 11.66 | 2.036 | 0.04 | 0.255 | 0.23 | 0.930 |
| 19 | 60 | 4.993 | 0.051 | 56.0 | 2.47 | 29.3 | 11.86 | 2.249 | 0.04 | 0.263 | 0.20 | 0.971 |
| 19 | 64 | 4.878 | 0.050 | 56.9 | 2.67 | 32.3 | 12.11 | 2.471 | 0.04 | 0.273 | 0.21 | 1.018 |
| 19 | 68 | 5.359 | 0.055 | 51.2 | 2.72 | 33.2 | 12.22 | 2.698 | 0.03 | 0.280 | 0.20 | 1.063 |
| 19 | 72 | 6.871 | 0.071 | 46.5 | 2.65 | 32.8 | 12.37 | 3.010 | 0.03 | 0.290 | 0.18 | 1.120 |
| 19 | 76 | 4.463 | 0.046 | 68.2 | 2.68 | 33.0 | 12.32 | 3.196 | 0.04 | 0.297 | 0.20 | 1.157 |
| 19 | 80 | 4.325 | 0.044 | 66.7 | 2.80 | 34.8 | 12.41 | 3.385 | 0.03 | 0.303 | 0.18 | 1.191 |
| 19 | 84 | 4.702 | 0.048 | 68.4 | 2.65 | 32.8 | 12.39 | 3.593 | 0.05 | 0.314 | 0.16 | 1.225 |
| 19 | 88 | 5.272 | 0.054 | 58.2 | 2.49 | 30.8 | 12.37 | 3.828 | 0.08 | 0.331 | 0.17 | 1.265 |
| 19 | 92 | 5.671 | 0.058 | 46.1 | 2.58 | 32.7 | 12.68 | 4.078 | 0.06 | 0.347 | 0.23 | 1.323 |
| 19 | 96 | 5.285 | 0.054 | 56.6 | 2.45 | 31.4 | 12.81 | 4.320 | 0.04 | 0.356 | 0.20 | 1.371 |
| 19 | 100 | 9.380 | 0.099 | 32.1 | 1.78 | 23.3 | 13.10 | 4.734 | 0.04 | 0.373 | 0.20 | 1.453 |
| 19 | 104 | 4.648 | 0.048 | 64.1 | 2.76 | 36.0 | 13.05 | 4.930 | 0.07 | 0.386 | 0.30 | 1.511 |
| 19 | 108 | 4.095 | 0.042 | 75.3 | 2.92 | 37.8 | 12.93 | 5.104 | 0.08 | 0.400 | 0.40 | 1.581 |
| 19 | 112 | 4.346 | 0.044 | 78.6 | 3.04 | 39.5 | 12.98 | 5.296 | 0.10 | 0.418 | 0.34 | 1.645 |
| 19 | 116 | 4.506 | 0.046 | 72.5 | 2.94 | 37.9 | 12.88 | 5.488 | 0.05 | 0.427 | 0.27 | 1.697 |
| 19 | 120 | 4.340 | 0.044 | 62.3 | 2.51 | 32.5 | 12.95 | 5.666 | 0.05 | 0.436 | 0.28 | 1.747 |
| 19 | 124 | 4.126 | 0.042 | 60.5 | 2.57 | 33.7 | 13.10 | 5.839 | 0.07 | 0.447 | 0.29 | 1.797 |
| 19 | 128 | 6.648 | 0.069 | 44.1 | 2.20 | 29.5 | 13.41 | 6.142 | 0.09 | 0.475 | 0.36 | 1.904 |
| 19 | 132 | 7.236 | 0.075 | 45.0 | 2.17 | 30.2 | 13.91 | 6.568 | 0.13 | 0.531 | 0.73 | 2.214 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 4 | 1.353 | 0.014 | 70.4 | 3.44 | 32.7 | 9.51 | 0.057 | 0.47 | 0.027 | 1.05 | 0.060 |
| 20 | 8 | 2.142 | 0.022 | 63.9 | 3.34 | 32.4 | 9.69 | 0.138 | 0.46 | 0.063 | 0.97 | 0.139 |
| 20 | 12 | 2.622 | 0.027 | 59.3 | 3.22 | 31.4 | 9.76 | 0.242 | 0.38 | 0.103 | 0.99 | 0.241 |
| 20 | 16 | 4.009 | 0.041 | 51.2 | 3.19 | 31.2 | 9.77 | 0.397 | 0.34 | 0.156 | 0.89 | 0.379 |
| 20 | 20 | 4.473 | 0.046 | 52.6 | 3.13 | 30.6 | 9.78 | 0.576 | 0.34 | 0.216 | 0.96 | 0.550 |
| 20 | 24 | 5.847 | 0.060 | 34.1 | 1.38 | 13.6 | 9.85 | 0.829 | 0.27 | 0.284 | 0.84 | 0.762 |
| 20 | 28 | 74.517 | 1.346 | 0.7 | 0.16 | 0.5 | 3.31 | 6.393 | 0.01 | 0.345 | 0.03 | 0.906 |
| 21 | 4 | 1.536 | 0.015 | 71.7 | 3.42 | 32.6 | 9.52 | 0.040 | 0.26 | 0.011 | 0.86 | 0.035 |
| 21 | 8 | 2.231 | 0.023 | 67.0 | 3.38 | 32.3 | 9.54 | 0.126 | 0.25 | 0.032 | 0.91 | 0.113 |
| 21 | 12 | 2.546 | 0.026 | 65.7 | 3.35 | 31.8 | 9.50 | 0.242 | 0.27 | 0.063 | 0.89 | 0.215 |
| 21 | 16 | 2.676 | 0.027 | 68.1 | 3.31 | 31.6 | 9.53 | 0.355 | 0.33 | 0.101 | 0.98 | 0.327 |
| 21 | 20 | 2.849 | 0.029 | 65.8 | 3.13 | 31.9 | 10.18 | 0.475 | 0.25 | 0.131 | 0.76 | 0.418 |
| 21 | 24 | 3.192 | 0.032 | 67.0 | 3.06 | 32.9 | 10.75 | 0.613 | 0.09 | 0.144 | 0.37 | 0.469 |
| 21 | 28 | 3.464 | 0.035 | 67.8 | 3.01 | 33.2 | 11.04 | 0.756 | 0.05 | 0.151 | 0.27 | 0.507 |
| 21 | 32 | 3.473 | 0.035 | 68.2 | 3.02 | 33.4 | 11.06 | 0.914 | 0.05 | 0.159 | 0.25 | 0.546 |
| 21 | 36 | 3.691 | 0.038 | 68.3 | 3.01 | 33.8 | 11.24 | 1.073 | 0.05 | 0.166 | 0.25 | 0.586 |
| 21 | 40 | 3.785 | 0.039 | 67.8 | 2.98 | 33.1 | 11.12 | 1.223 | 0.05 | 0.174 | 0.24 | 0.622 |
| 21 | 44 | 5.228 | 0.054 | 49.7 | 2.80 | 32.8 | 11.71 | 1.472 | 0.04 | 0.182 | 0.22 | 0.676 |
| 21 | 48 | 4.435 | 0.045 | 65.2 | 2.81 | 33.6 | 11.96 | 1.649 | 0.04 | 0.189 | 0.19 | 0.710 |
| 21 | 52 | 4.312 | 0.044 | 63.4 | 2.90 | 33.7 | 11.62 | 1.852 | 0.04 | 0.197 | 0.19 | 0.749 |
| 21 | 56 | 5.125 | 0.053 | 54.4 | 2.40 | 27.8 | 11.59 | 2.079 | 0.04 | 0.206 | 0.20 | 0.795 |
| 21 | 60 | 5.486 | 0.056 | 53.7 | 2.60 | 30.5 | 11.72 | 2.310 | 0.03 | 0.213 | 0.17 | 0.834 |
| 21 | 64 | 5.410 | 0.056 | 60.0 | 2.60 | 30.0 | 11.52 | 2.552 | 0.04 | 0.224 | 0.18 | 0.878 |
| 21 | 68 | 5.817 | 0.060 | 62.0 | 2.98 | 33.1 | 11.09 | 2.803 | 0.04 | 0.233 | 0.17 | 0.922 |
| 21 | 72 | 6.252 | 0.065 | 58.7 | 2.90 | 33.5 | 11.53 | 3.084 | 0.03 | 0.242 | 0.16 | 0.967 |
| 21 | 76 | 7.021 | 0.073 | 51.7 | 2.86 | 32.1 | 11.23 | 3.395 | 0.04 | 0.253 | 0.16 | 1.017 |
| 21 | 80 | 5.545 | 0.057 | 60.9 | 2.90 | 32.8 | 11.32 | 3.642 | 0.04 | 0.262 | 0.17 | 1.060 |
| 21 | 84 | 8.013 | 0.084 | 50.4 | 2.52 | 26.5 | 10.53 | 3.998 | 0.04 | 0.275 | 0.15 | 1.114 |
| 21 | 88 | 8.744 | 0.092 | 45.8 | 2.77 | 31.2 | 11.25 | 4.393 | 0.04 | 0.290 | 0.15 | 1.175 |
| 21 | 92 | 7.271 | 0.075 | 54.1 | 2.62 | 32.2 | 12.29 | 4.711 | 0.04 | 0.301 | 0.16 | 1.226 |
| 21 | 96 | 7.491 | 0.078 | 57.1 | 2.30 | 27.7 | 12.05 | 5.051 | 0.03 | 0.312 | 0.16 | 1.282 |
| 21 | 100 | 7.800 | 0.081 | 53.6 | 2.58 | 31.4 | 12.17 | 5.396 | 0.04 | 0.324 | 0.17 | 1.342 |
| 21 | 104 | 7.592 | 0.079 | 53.1 | 2.58 | 31.5 | 12.20 | 5.731 | 0.04 | 0.335 | 0.15 | 1.391 |
| 21 | 108 | 8.565 | 0.090 | 53.3 | 1.99 | 24.3 | 12.21 | 6.056 | 0.04 | 0.347 | 0.15 | 1.440 |
| 21 | 112 | 7.385 | 0.077 | 61.2 | 2.63 | 32.2 | 12.25 | 6.374 | 0.03 | 0.355 | 0.17 | 1.495 |
| 21 | 116 | 7.167 | 0.074 | 62.5 | 2.81 | 35.1 | 12.48 | 6.681 | 0.04 | 0.366 | 0.17 | 1.548 |
| 21 | 120 | 10.213 | 0.108 | 37.8 | 2.05 | 26.1 | 12.73 | 7.140 | 0.03 | 0.381 | 0.14 | 1.614 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 4 | 1.778 | 0.018 | 68.4 | 3.60 | 33.2 | 9.21 | 0.071 | 0.24 | 0.017 | 0.98 | 0.070 |
| 22 | 8 | 2.099 | 0.021 | 69.5 | 2.55 | 32.7 | 12.82 | 0.153 | 0.27 | 0.039 | 1.08 | 0.158 |
| 22 | 12 | 2.429 | 0.025 | 68.6 | 3.65 | 33.6 | 9.20 | 0.252 | 0.25 | 0.064 | 1.01 | 0.258 |
| 22 | 16 | 2.653 | 0.027 | 67.9 | 3.44 | 32.3 | 9.39 | 0.383 | 0.42 | 0.118 | 1.10 | 0.401 |
| 22 | 20 | 2.916 | 0.030 | 63.3 | 2.94 | 29.6 | 10.07 | 0.502 | 0.25 | 0.148 | 0.83 | 0.500 |
| 22 | 24 | 3.144 | 0.032 | 62.3 | 2.82 | 30.3 | 10.73 | 0.636 | 0.12 | 0.164 | 0.56 | 0.575 |
| 22 | 28 | 3.672 | 0.037 | 63.3 | 2.85 | 30.8 | 10.82 | 0.797 | 0.12 | 0.184 | 0.52 | 0.659 |
| 22 | 32 | 3.752 | 0.038 | 63.5 | 2.81 | 30.6 | 10.88 | 0.958 | 0.11 | 0.201 | 0.44 | 0.729 |
| 22 | 36 | 4.434 | 0.045 | 56.5 | 2.47 | 28.0 | 11.34 | 1.148 | 0.12 | 0.223 | 0.54 | 0.832 |
| 22 | 40 | 5.109 | 0.052 | 53.4 | 2.67 | 31.4 | 11.77 | 1.377 | 0.05 | 0.233 | 0.22 | 0.882 |
| 22 | 44 | 5.242 | 0.054 | 60.2 | 2.60 | 31.4 | 12.07 | 1.598 | 0.04 | 0.241 | 0.21 | 0.928 |
| 22 | 48 | 7.404 | 0.077 | 48.4 | 1.56 | 18.6 | 11.93 | 1.927 | 0.03 | 0.250 | 0.14 | 0.974 |
| 22 | 52 | 5.039 | 0.052 | 61.9 | 2.69 | 33.5 | 12.46 | 2.141 | 0.04 | 0.258 | 0.18 | 1.012 |
| 22 | 56 | 4.684 | 0.048 | 68.2 | 2.76 | 34.6 | 12.55 | 2.356 | 0.07 | 0.272 | 0.29 | 1.073 |
| 22 | 60 | 4.817 | 0.049 | 66.8 | 2.76 | 35.1 | 12.71 | 2.559 | 0.03 | 0.278 | 0.23 | 1.119 |
| 22 | 64 | 5.063 | 0.052 | 66.4 | 2.71 | 34.7 | 12.81 | 2.777 | 0.02 | 0.282 | 0.20 | 1.161 |
| 22 | 68 | 5.104 | 0.052 | 63.7 | 2.82 | 36.1 | 12.81 | 3.009 | 0.03 | 0.288 | 0.19 | 1.206 |
| 22 | 72 | 5.445 | 0.056 | 62.8 | 2.50 | 32.7 | 13.08 | 3.245 | 0.03 | 0.296 | 0.21 | 1.256 |
| 22 | 76 | 7.553 | 0.079 | 42.8 | 2.40 | 31.2 | 13.00 | 3.569 | 0.02 | 0.303 | 0.26 | 1.341 |
| 22 | 80 | 6.060 | 0.063 | 52.5 | 2.59 | 34.2 | 13.22 | 3.837 | 0.05 | 0.316 | 0.34 | 1.432 |
| 22 | 84 | 4.836 | 0.049 | 71.8 | 2.80 | 37.6 | 13.41 | 4.041 | 0.04 | 0.324 | 0.21 | 1.476 |
| 22 | 88 | 5.520 | 0.057 | 58.7 | 2.50 | 33.9 | 13.56 | 4.281 | 0.04 | 0.335 | 0.23 | 1.531 |
| 22 | 92 | 5.265 | 0.054 | 62.9 | 2.48 | 33.5 | 13.52 | 4.514 | 0.03 | 0.342 | 0.25 | 1.588 |
| 22 | 96 | 4.991 | 0.051 | 65.9 | 2.70 | 36.9 | 13.66 | 4.739 | 0.03 | 0.349 | 0.29 | 1.653 |
| 22 | 100 | 4.803 | 0.049 | 74.3 | 2.70 | 36.3 | 13.46 | 4.949 | 0.05 | 0.360 | 0.27 | 1.709 |
| 22 | 104 | 5.127 | 0.053 | 69.1 | 2.62 | 35.2 | 13.45 | 5.172 | 0.05 | 0.372 | 0.30 | 1.775 |
| 22 | 108 | 5.241 | 0.054 | 67.8 | 2.67 | 36.4 | 13.65 | 5.402 | 0.07 | 0.387 | 0.31 | 1.846 |
| 22 | 112 | 5.006 | 0.051 | 72.1 | 2.80 | 38.3 | 13.68 | 5.614 | 0.03 | 0.394 | 0.30 | 1.909 |
| 22 | 116 | 4.706 | 0.048 | 78.8 | 2.87 | 39.3 | 13.70 | 5.828 | 0.08 | 0.410 | 0.35 | 1.983 |
| 22 | 120 | 4.845 | 0.049 | 81.2 | 2.75 | 38.4 | 13.96 | 6.033 | 0.09 | 0.428 | 0.42 | 2.068 |
| 22 | 124 | 5.581 | 0.057 | 78.2 | 2.71 | 38.3 | 14.11 | 6.271 | 0.09 | 0.449 | 0.42 | 2.169 |
| 22 | 128 | 5.007 | 0.051 | 76.1 | 2.73 | 39.0 | 14.27 | 6.497 | 0.07 | 0.466 | 0.42 | 2.264 |
| 22 | 132 | 4.883 | 0.050 | 74.6 | 2.60 | 38.8 | 14.92 | 6.712 | 0.08 | 0.482 | 0.46 | 2.362 |
| 22 | 136 | 5.886 | 0.060 | 77.7 | 2.49 | 37.4 | 15.00 | 6.983 | 0.10 | 0.509 | 0.47 | 2.490 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 4 | 1.995 | 0.020 | 71.3 | 3.53 | 33.1 | 9.38 | 0.083 | 0.28 | 0.023 | 0.96 | 0.080 |
| 23 | 8 | 2.310 | 0.023 | 70.4 | 3.47 | 32.5 | 9.35 | 0.174 | 0.27 | 0.047 | 0.97 | 0.168 |
| 23 | 12 | 2.346 | 0.024 | 71.3 | 3.50 | 32.7 | 9.34 | 0.273 | 0.28 | 0.075 | 1.01 | 0.268 |
| 23 | 16 | 2.649 | 0.027 | 70.5 | 3.57 | 33.3 | 9.32 | 0.386 | 0.27 | 0.105 | 0.97 | 0.378 |
| 23 | 20 | 2.943 | 0.030 | 66.9 | 3.32 | 31.7 | 9.56 | 0.501 | 0.32 | 0.142 | 0.98 | 0.490 |
| 23 | 24 | 3.311 | 0.034 | 67.2 | 3.07 | 31.8 | 10.36 | 0.645 | 0.25 | 0.177 | 0.73 | 0.594 |
| 23 | 28 | 4.486 | 0.046 | 53.9 | 2.18 | 24.8 | 11.37 | 0.829 | 0.05 | 0.186 | 0.34 | 0.657 |
| 23 | 32 | 3.767 | 0.038 | 65.9 | 2.77 | 32.2 | 11.64 | 0.993 | 0.05 | 0.194 | 0.28 | 0.703 |
| 23 | 36 | 3.935 | 0.040 | 67.1 | 2.81 | 32.8 | 11.69 | 1.160 | 0.04 | 0.200 | 0.23 | 0.741 |
| 23 | 40 | 4.138 | 0.042 | 68.4 | 2.76 | 32.6 | 11.82 | 1.343 | 0.04 | 0.206 | 0.22 | 0.781 |
| 23 | 44 | 4.917 | 0.050 | 66.6 | 2.56 | 30.6 | 11.95 | 1.562 | 0.04 | 0.215 | 0.20 | 0.825 |
| 23 | 48 | 4.463 | 0.046 | 64.4 | 2.75 | 33.2 | 12.08 | 1.758 | 0.05 | 0.223 | 0.20 | 0.865 |
| 23 | 52 | 4.755 | 0.049 | 66.2 | 2.55 | 31.8 | 12.46 | 1.958 | 0.05 | 0.233 | 0.19 | 0.904 |
| 23 | 56 | 4.862 | 0.050 | 66.4 | 2.60 | 32.7 | 12.57 | 2.177 | 0.03 | 0.239 | 0.16 | 0.940 |
| 23 | 60 | 5.117 | 0.052 | 70.1 | 2.57 | 32.1 | 12.50 | 2.402 | 0.03 | 0.246 | 0.15 | 0.974 |
| 23 | 64 | 5.064 | 0.052 | 65.1 | 2.51 | 31.8 | 12.66 | 2.623 | 0.03 | 0.252 | 0.15 | 1.006 |
| 23 | 68 | 5.338 | 0.055 | 64.8 | 2.48 | 31.8 | 12.82 | 2.858 | 0.04 | 0.261 | 0.14 | 1.039 |
| 23 | 72 | 4.978 | 0.051 | 73.0 | 2.63 | 35.2 | 13.38 | 3.076 | 0.09 | 0.280 | 0.38 | 1.121 |
| 23 | 76 | 5.489 | 0.056 | 59.4 | 2.67 | 36.4 | 13.63 | 3.312 | 0.05 | 0.291 | 0.20 | 1.167 |
| 23 | 80 | 5.327 | 0.055 | 61.0 | 2.40 | 31.0 | 12.91 | 3.533 | 0.04 | 0.300 | 0.18 | 1.206 |
| 23 | 84 | 5.472 | 0.056 | 62.9 | 2.42 | 31.6 | 13.06 | 3.781 | 0.03 | 0.308 | 0.19 | 1.253 |
| 23 | 88 | 5.611 | 0.058 | 64.6 | 2.43 | 31.6 | 12.99 | 4.014 | 0.05 | 0.319 | 0.18 | 1.296 |
| 23 | 92 | 5.814 | 0.060 | 54.1 | 2.13 | 27.5 | 12.91 | 4.288 | 0.04 | 0.329 | 0.16 | 1.340 |
| 23 | 96 | 5.253 | 0.054 | 66.7 | 2.49 | 33.7 | 13.54 | 4.509 | 0.03 | 0.335 | 0.20 | 1.383 |
| 23 | 100 | 6.172 | 0.063 | 75.0 | 2.65 | 35.6 | 13.42 | 4.784 | 0.03 | 0.343 | 0.20 | 1.439 |
| 23 | 104 | 5.234 | 0.054 | 69.8 | 2.59 | 35.2 | 13.60 | 5.009 | 0.04 | 0.353 | 0.23 | 1.490 |
| 23 | 108 | 5.196 | 0.053 | 75.6 | 2.70 | 36.6 | 13.54 | 5.237 | 0.05 | 0.364 | 0.23 | 1.544 |
| 23 | 112 | 6.267 | 0.065 | 73.6 | 2.57 | 34.7 | 13.50 | 5.512 | 0.05 | 0.378 | 0.23 | 1.606 |
| 23 | 116 | 5.147 | 0.053 | 75.0 | 2.82 | 37.3 | 13.24 | 5.738 | 0.05 | 0.391 | 0.24 | 1.659 |
| 23 | 120 | 4.977 | 0.051 | 76.6 | 2.80 | 37.6 | 13.44 | 5.936 | 0.06 | 0.402 | 0.27 | 1.712 |
| 23 | 124 | 5.747 | 0.059 | 74.5 | 2.78 | 37.9 | 13.64 | 6.199 | 0.06 | 0.418 | 0.26 | 1.781 |
| 23 | 128 | 4.762 | 0.049 | 76.2 | 2.67 | 37.4 | 14.02 | 6.406 | 0.13 | 0.445 | 0.42 | 1.868 |
| 23 | 132 | 4.179 | 0.043 | 81.0 | 2.77 | 39.4 | 14.22 | 6.583 | 0.11 | 0.465 | 0.40 | 1.938 |
| 23 | 136 | 4.332 | 0.044 | 80.1 | 2.75 | 39.1 | 14.22 | 6.734 | 0.09 | 0.479 | 0.43 | 2.003 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 4 | 1.481 | 0.015 | 73.4 | 3.54 | 33.3 | 9.40 | 0.063 | 0.26 | 0.016 | 0.93 | 0.059 |
| 24 | 8 | 1.891 | 0.019 | 69.6 | 3.38 | 32.1 | 9.49 | 0.143 | 0.26 | 0.037 | 0.92 | 0.133 |
| 24 | 12 | 2.446 | 0.025 | 68.9 | 3.24 | 30.7 | 9.47 | 0.245 | 0.23 | 0.060 | 0.89 | 0.224 |
| 24 | 16 | 3.047 | 0.031 | 68.0 | 3.38 | 33.0 | 9.76 | 0.367 | 0.37 | 0.104 | 1.00 | 0.346 |
| 24 | 20 | 3.053 | 0.031 | 62.1 | 2.92 | 30.3 | 10.37 | 0.495 | 0.25 | 0.136 | 0.73 | 0.439 |
| 24 | 24 | 3.576 | 0.036 | 61.5 | 2.76 | 31.0 | 11.22 | 0.647 | 0.10 | 0.151 | 0.40 | 0.499 |
| 24 | 28 | 4.035 | 0.041 | 63.2 | 2.73 | 31.1 | 11.38 | 0.816 | 0.07 | 0.163 | 0.30 | 0.550 |
| 24 | 32 | 4.688 | 0.048 | 57.8 | 2.55 | 29.1 | 11.40 | 1.009 | 0.05 | 0.172 | 0.25 | 0.597 |
| 24 | 36 | 4.522 | 0.046 | 64.0 | 2.76 | 32.0 | 11.60 | 1.221 | 0.05 | 0.181 | 0.21 | 0.642 |
| 24 | 40 | 4.208 | 0.043 | 66.5 | 2.74 | 31.9 | 11.64 | 1.407 | 0.04 | 0.189 | 0.20 | 0.679 |
| 24 | 44 | 4.698 | 0.048 | 60.6 | 2.59 | 30.8 | 11.89 | 1.597 | 0.04 | 0.197 | 0.18 | 0.713 |
| 24 | 48 | 4.223 | 0.043 | 66.0 | 2.59 | 31.4 | 12.13 | 1.778 | 0.04 | 0.205 | 0.18 | 0.745 |
| 24 | 52 | 4.418 | 0.045 | 67.3 | 2.72 | 33.9 | 12.47 | 1.950 | 0.04 | 0.212 | 0.16 | 0.772 |
| 24 | 56 | 4.600 | 0.047 | 66.6 | 2.64 | 33.0 | 12.50 | 2.158 | 0.04 | 0.220 | 0.16 | 0.805 |
| 24 | 60 | 4.584 | 0.047 | 65.1 | 2.67 | 33.2 | 12.44 | 2.353 | 0.04 | 0.227 | 0.16 | 0.837 |
| 24 | 64 | 5.451 | 0.056 | 53.8 | 2.23 | 27.6 | 12.35 | 2.626 | 0.03 | 0.236 | 0.13 | 0.873 |
| 24 | 68 | 6.020 | 0.062 | 51.9 | 2.40 | 29.5 | 12.28 | 2.913 | 0.04 | 0.246 | 0.16 | 0.918 |
| 24 | 72 | 4.628 | 0.047 | 62.8 | 2.65 | 34.6 | 13.07 | 3.111 | 0.05 | 0.256 | 0.22 | 0.961 |
| 24 | 76 | 5.746 | 0.059 | 53.0 | 2.41 | 31.2 | 12.93 | 3.370 | 0.04 | 0.267 | 0.21 | 1.016 |
| 24 | 80 | 24.638 | 0.288 | 12.6 | 0.55 | 6.5 | 11.78 | 4.543 | 0.04 | 0.309 | 0.07 | 1.096 |
| 24 | 84 | 15.871 | 0.174 | 24.0 | 0.79 | 8.6 | 10.85 | 5.304 | 0.03 | 0.333 | 0.13 | 1.192 |
| 24 | 88 | 7.659 | 0.080 | 38.9 | 1.76 | 23.9 | 13.56 | 5.644 | 0.10 | 0.365 | 0.37 | 1.319 |
| 24 | 92 | 4.203 | 0.043 | 77.9 | 2.81 | 39.0 | 13.89 | 5.828 | 0.09 | 0.382 | 0.40 | 1.392 |
| 24 | 96 | 4.440 | 0.045 | 74.7 | 2.87 | 40.5 | 14.11 | 6.033 | 0.10 | 0.403 | 0.43 | 1.480 |
| 24 | 100 | 4.062 | 0.041 | 78.2 | 2.92 | 41.2 | 14.12 | 6.205 | 0.09 | 0.418 | 0.44 | 1.555 |
| 24 | 104 | 3.708 | 0.038 | 81.2 | 2.89 | 41.0 | 14.19 | 6.363 | 0.55 | 0.505 | 3.73 | 2.146 |
| 24 | 108 | 3.556 | 0.036 | 83.9 | 2.90 | 42.4 | 14.61 | 6.517 | 0.19 | 0.534 | 0.53 | 2.226 |
| 24 | 112 | 3.927 | 0.040 | 81.4 | 2.85 | 41.7 | 14.62 | 6.684 | 0.16 | 0.561 | 0.79 | 2.358 |
| 24 | 116 | 3.869 | 0.039 | 82.5 | 2.85 | 41.8 | 14.66 | 6.854 | 0.09 | 0.576 | 0.45 | 2.434 |
| 24 | 120 | 4.084 | 0.042 | 80.0 | 2.88 | 41.3 | 14.33 | 7.036 | 0.08 | 0.591 | 0.43 | 2.513 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 4 | 1.677 | 0.017 | 69.6 | 2.67 | 34.2 | 12.79 | 0.087 | 0.28 | 0.025 | 1.12 | 0.097 |
| 25 | 8 | 2.534 | 0.026 | 67.2 | 3.42 | 32.1 | 9.37 | 0.199 | 0.25 | 0.053 | 1.09 | 0.220 |
| 25 | 12 | 2.897 | 0.029 | 61.0 | 3.29 | 31.1 | 9.45 | 0.322 | 0.23 | 0.082 | 1.02 | 0.346 |
| 25 | 16 | 3.380 | 0.034 | 61.6 | 3.07 | 29.5 | 9.62 | 0.461 | 0.30 | 0.123 | 1.00 | 0.484 |
| 25 | 20 | 3.822 | 0.039 | 55.3 | 2.98 | 30.2 | 10.12 | 0.626 | 0.28 | 0.169 | 0.86 | 0.626 |
| 25 | 24 | 4.442 | 0.045 | 53.8 | 2.70 | 29.5 | 10.91 | 0.812 | 0.10 | 0.188 | 0.52 | 0.722 |
| 25 | 28 | 4.182 | 0.043 | 65.4 | 2.93 | 32.6 | 11.13 | 0.992 | 0.06 | 0.199 | 0.40 | 0.793 |
| 25 | 32 | 4.102 | 0.042 | 65.9 | 2.80 | 31.7 | 11.33 | 1.164 | 0.06 | 0.208 | 0.35 | 0.854 |
| 25 | 36 | 4.008 | 0.041 | 65.9 | 2.86 | 32.6 | 11.41 | 1.340 | 0.05 | 0.217 | 0.34 | 0.914 |
| 25 | 40 | 4.347 | 0.044 | 64.0 | 2.67 | 31.2 | 11.69 | 1.528 | 0.05 | 0.226 | 0.28 | 0.967 |
| 25 | 44 | 4.518 | 0.046 | 62.8 | 2.72 | 32.1 | 11.81 | 1.734 | 0.04 | 0.234 | 0.27 | 1.022 |
| 25 | 48 | 5.000 | 0.051 | 59.3 | 2.65 | 30.8 | 11.63 | 1.956 | 0.04 | 0.243 | 0.26 | 1.079 |
| 25 | 52 | 6.854 | 0.071 | 45.6 | 2.33 | 28.2 | 12.11 | 2.261 | 0.03 | 0.253 | 0.20 | 1.138 |
| 25 | 56 | 4.859 | 0.050 | 64.8 | 2.66 | 32.6 | 12.24 | 2.469 | 0.04 | 0.260 | 0.24 | 1.188 |
| 25 | 60 | 5.796 | 0.060 | 57.6 | 2.28 | 28.2 | 12.35 | 2.736 | 0.04 | 0.269 | 0.22 | 1.246 |
| 25 | 64 | 6.094 | 0.063 | 54.7 | 2.28 | 28.6 | 12.53 | 2.998 | 0.03 | 0.278 | 0.22 | 1.304 |
| 25 | 68 | 7.370 | 0.076 | 57.4 | 2.43 | 30.6 | 12.58 | 3.327 | 0.03 | 0.287 | 0.21 | 1.374 |
| 25 | 72 | 6.993 | 0.072 | 54.2 | 2.42 | 30.7 | 12.68 | 3.646 | 0.04 | 0.298 | 0.21 | 1.440 |
| 25 | 76 | 9.244 | 0.097 | 45.5 | 1.91 | 24.1 | 12.63 | 4.049 | 0.03 | 0.311 | 0.19 | 1.518 |
| 25 | 80 | 6.195 | 0.064 | 53.4 | 2.36 | 30.3 | 12.83 | 4.328 | 0.04 | 0.323 | 0.30 | 1.600 |
| 25 | 84 | 6.692 | 0.069 | 53.9 | 2.75 | 34.7 | 12.63 | 4.635 | 0.03 | 0.332 | 0.23 | 1.669 |
| 25 | 88 | 9.276 | 0.097 | 45.8 | 2.67 | 34.3 | 12.84 | 5.068 | 0.13 | 0.386 | 0.36 | 1.824 |
| 25 | 92 | 7.196 | 0.075 | 43.6 | 2.74 | 36.0 | 13.14 | 5.379 | 0.04 | 0.399 | 0.22 | 1.893 |
| 25 | 96 | 5.975 | 0.062 | 61.1 | 2.60 | 34.2 | 13.14 | 5.620 | 0.05 | 0.410 | 0.26 | 1.957 |
| 25 | 100 | 5.422 | 0.056 | 70.0 | 2.83 | 37.0 | 13.08 | 5.877 | 0.05 | 0.422 | 0.27 | 2.026 |
| 25 | 104 | 4.800 | 0.049 | 58.3 | 2.50 | 33.0 | 13.19 | 6.072 | 0.05 | 0.432 | 0.28 | 2.080 |
| 25 | 108 | 7.186 | 0.075 | 50.2 | 2.46 | 32.3 | 13.11 | 6.389 | 0.04 | 0.445 | 0.26 | 2.161 |
| 25 | 112 | 4.954 | 0.051 | 69.1 | 2.81 | 37.1 | 13.21 | 6.613 | 0.05 | 0.457 | 0.33 | 2.236 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 4 | 1.893 | 0.019 | 71.1 | 3.52 | 32.8 | 9.33 | 0.088 | 0.24 | 0.021 | 1.00 | 0.088 |
| 26 | 8 | 2.573 | 0.026 | 68.3 | 3.42 | 32.1 | 9.39 | 0.198 | 0.24 | 0.048 | 1.04 | 0.203 |
| 26 | 12 | 2.853 | 0.029 | 65.6 | 3.39 | 31.9 | 9.40 | 0.307 | 0.23 | 0.073 | 1.06 | 0.318 |
| 26 | 16 | 3.170 | 0.032 | 63.0 | 3.22 | 31.0 | 9.61 | 0.436 | 0.33 | 0.115 | 1.11 | 0.462 |
| 26 | 20 | 4.020 | 0.041 | 59.0 | 2.83 | 29.0 | 10.23 | 0.608 | 0.25 | 0.158 | 0.83 | 0.604 |
| 26 | 24 | 3.866 | 0.039 | 61.8 | 2.62 | 29.2 | 11.15 | 0.786 | 0.08 | 0.172 | 0.36 | 0.668 |
| 26 | 28 | 3.613 | 0.037 | 65.8 | 2.82 | 32.6 | 11.57 | 0.942 | 0.04 | 0.179 | 0.31 | 0.716 |
| 26 | 32 | 3.893 | 0.040 | 65.7 | 2.68 | 31.1 | 11.59 | 1.116 | 0.04 | 0.186 | 0.30 | 0.769 |
| 26 | 36 | 4.387 | 0.045 | 59.2 | 2.46 | 28.5 | 11.57 | 1.303 | 0.04 | 0.192 | 0.27 | 0.819 |
| 26 | 40 | 5.622 | 0.058 | 42.9 | 2.57 | 30.1 | 11.71 | 1.551 | 0.03 | 0.200 | 0.40 | 0.917 |
| 26 | 44 | 4.582 | 0.047 | 59.9 | 2.50 | 29.5 | 11.78 | 1.752 | 0.03 | 0.206 | 0.26 | 0.970 |
| 26 | 48 | 4.718 | 0.048 | 61.5 | 2.62 | 30.9 | 11.80 | 1.957 | 0.03 | 0.212 | 0.25 | 1.021 |
| 26 | 52 | 5.159 | 0.053 | 58.3 | 2.72 | 32.8 | 12.04 | 2.185 | 0.04 | 0.221 | 0.24 | 1.075 |
| 26 | 56 | 5.209 | 0.053 | 59.1 | 2.52 | 30.9 | 12.25 | 2.415 | 0.04 | 0.230 | 0.23 | 1.128 |
| 26 | 60 | 4.995 | 0.051 | 65.7 | 2.68 | 32.4 | 12.07 | 2.625 | 0.04 | 0.238 | 0.24 | 1.177 |
| 26 | 64 | 5.251 | 0.054 | 63.3 | 2.45 | 31.0 | 12.67 | 2.920 | 0.04 | 0.250 | 0.24 | 1.248 |
| 26 | 68 | 5.887 | 0.061 | 55.6 | 2.50 | 32.3 | 12.91 | 3.171 | 0.04 | 0.261 | 0.19 | 1.294 |
| 26 | 72 | 5.771 | 0.059 | 57.2 | 2.42 | 31.5 | 13.02 | 3.437 | 0.04 | 0.272 | 0.23 | 1.354 |
| 26 | 76 | 6.821 | 0.071 | 46.4 | 2.37 | 30.8 | 12.99 | 3.722 | 0.04 | 0.282 | 0.20 | 1.411 |
| 26 | 80 | 6.765 | 0.070 | 45.2 | 2.40 | 31.5 | 13.13 | 4.024 | 0.04 | 0.293 | 0.21 | 1.476 |
| 26 | 84 | 7.251 | 0.075 | 45.1 | 2.09 | 27.5 | 13.16 | 4.353 | 0.04 | 0.306 | 0.22 | 1.549 |
| 26 | 88 | 5.950 | 0.061 | 59.3 | 2.30 | 31.1 | 13.53 | 4.617 | 0.03 | 0.315 | 0.21 | 1.605 |
| 26 | 92 | 6.892 | 0.071 | 47.1 | 2.37 | 32.3 | 13.64 | 4.910 | 0.05 | 0.331 | 0.25 | 1.678 |
| 26 | 96 | 7.166 | 0.074 | 49.9 | 2.01 | 26.9 | 13.38 | 5.239 | 0.05 | 0.346 | 0.22 | 1.751 |
| 26 | 100 | 6.323 | 0.065 | 57.4 | 2.36 | 31.9 | 13.50 | 5.516 | 0.06 | 0.363 | 0.25 | 1.819 |
| 26 | 104 | 6.529 | 0.067 | 58.3 | 2.47 | 33.1 | 13.42 | 5.817 | 0.05 | 0.377 | 0.25 | 1.894 |
| 26 | 108 | 10.791 | 0.115 | 33.3 | 2.39 | 31.2 | 13.06 | 6.266 | 0.06 | 0.402 | 0.18 | 1.976 |
| 26 | 112 | 17.256 | 0.191 | 19.4 | 1.11 | 14.3 | 12.91 | 7.049 | 0.03 | 0.428 | 0.15 | 2.092 |
| 26 | 116 | 7.036 | 0.073 | 47.2 | 2.06 | 26.8 | 13.01 | 7.366 | 0.06 | 0.446 | 0.22 | 2.162 |
| 26 | 120 | 6.390 | 0.066 | 61.0 | 2.38 | 27.6 | 11.61 | 7.662 | 0.06 | 0.463 | 0.24 | 2.233 |

Lake Eustis Survey Cores, Phase II

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 4 | 1.974 | 0.020 | 70.4 | 3.76 | 33.3 | 8.86 | 0.088 | 0.33 | 0.029 | 1.10 | 0.097 |
| 27 | 8 | 2.804 | 0.028 | 67.8 | 3.76 | 33.3 | 8.85 | 0.207 | 0.31 | 0.066 | 1.12 | 0.231 |
| 27 | 12 | 2.918 | 0.030 | 68.4 | 3.48 | 32.4 | 9.32 | 0.326 | 0.33 | 0.105 | 1.14 | 0.366 |
| 27 | 16 | 3.194 | 0.032 | 68.2 | 3.50 | 33.1 | 9.46 | 0.464 | 0.49 | 0.173 | 1.25 | 0.539 |
| 27 | 20 | 3.837 | 0.039 | 57.7 | 2.82 | 29.4 | 10.42 | 0.623 | 0.22 | 0.208 | 0.78 | 0.662 |
| 27 | 24 | 3.963 | 0.040 | 61.8 | 2.86 | 30.7 | 10.73 | 0.785 | 0.18 | 0.237 | 0.66 | 0.770 |
| 27 | 28 | 4.851 | 0.050 | 58.4 | 3.48 | 31.6 | 9.07 | 0.995 | 0.12 | 0.263 | 0.48 | 0.870 |
| 27 | 32 | 4.841 | 0.050 | 55.1 | ... | ... | ... | 1.203 | 0.09 | 0.283 | 0.38 | 0.949 |
| 27 | 36 | 5.226 | 0.054 | 57.4 | ... | ... | ... | 1.436 | 0.06 | 0.296 | 0.25 | 1.007 |
| 27 | 40 | 4.426 | 0.045 | 62.8 | ... | ... | ... | 1.637 | 0.05 | 0.306 | 0.25 | 1.056 |
| 27 | 44 | 4.784 | 0.049 | 60.6 | 2.73 | 32.0 | 11.74 | 1.850 | 0.07 | 0.320 | 0.31 | 1.121 |
| 27 | 48 | 5.337 | 0.055 | 56.5 | 2.58 | 31.3 | 12.13 | 2.073 | 0.05 | 0.331 | 0.23 | 1.173 |
| 27 | 52 | 5.598 | 0.058 | 52.3 | 2.21 | 27.0 | 12.21 | 2.315 | 0.05 | 0.343 | 0.26 | 1.234 |
| 27 | 56 | 5.263 | 0.054 | 58.5 | 2.44 | 31.2 | 12.79 | 2.559 | 0.05 | 0.355 | 0.30 | 1.307 |
| 27 | 60 | 5.287 | 0.054 | 59.1 | 2.38 | 30.7 | 12.89 | 2.786 | 0.05 | 0.366 | 0.25 | 1.364 |
| 27 | 64 | 5.121 | 0.053 | 57.9 | 2.83 | 36.8 | 12.99 | 3.005 | 0.03 | 0.373 | 0.27 | 1.423 |
| 27 | 68 | 10.497 | 0.111 | 29.5 | 2.60 | 34.3 | 13.18 | 3.497 | 0.05 | 0.395 | 0.40 | 1.620 |
| 27 | 72 | 5.438 | 0.056 | 65.3 | 2.47 | 34.3 | 13.88 | 3.751 | 0.19 | 0.443 | 1.69 | 2.050 |
| 27 | 76 | 3.976 | 0.040 | 77.0 | 2.85 | 39.4 | 13.82 | 3.923 | 0.10 | 0.459 | 0.48 | 2.132 |
| 27 | 80 | 6.874 | 0.071 | 46.0 | 2.43 | 33.1 | 13.63 | 4.226 | 0.15 | 0.505 | 0.80 | 2.373 |
| 27 | 84 | 7.053 | 0.073 | 51.9 | 2.75 | 37.5 | 13.62 | 4.520 | 0.09 | 0.531 | 0.44 | 2.502 |
| 27 | 88 | 6.797 | 0.070 | 49.9 | 2.56 | 35.5 | 13.85 | 4.821 | 0.08 | 0.554 | 0.56 | 2.670 |
| 27 | 92 | 4.285 | 0.044 | 82.5 | 2.99 | 42.4 | 14.19 | 5.011 | 0.12 | 0.577 | 0.45 | 2.755 |
| 27 | 96 | 4.088 | 0.042 | 82.0 | 2.96 | 41.8 | 14.12 | 5.189 | 0.06 | 0.588 | 0.43 | 2.831 |
| 27 | 100 | 4.754 | 0.049 | 73.3 | 2.44 | 34.4 | 14.10 | 5.390 | 0.09 | 0.607 | 0.46 | 2.922 |
| 27 | 104 | 4.849 | 0.050 | 64.8 | 2.73 | 39.3 | 14.40 | 5.605 | 0.10 | 0.629 | 0.52 | 3.033 |

# APPENDIX H

## PHYSICAL AND CHEMICAL DATA
## LAKE EUSTIS
## HISTORIC CORES

Gravimetric and chemical data, Lake Eustis historic cores, Phase I and Phase II. See Appendix D for collection date, location and description of cores.

CODES:
- Depth is depth (cm)
- Dry is % dry weight
- Rho is dry weight density (g dry/g cc wet)
- LOI is % loss on ignition
- TN is total nitrogen (%)
- TC is total carbon (%)
- TC/TN is TC/TN mass ratio
- Cum weight is cumulative mass (g $cm^{-2}$)
- NAIP is non-apatite inorganic phosphorus (mg $g^{-1}$),
- Cum NAIP is cumulative NAIP (mg $cm^{-2}$)
- TP is total phosphorus (mg $g^{-1}$)
- Cum TP is cumulative TP (mg $cm^{-2}$)

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11H | 2 | 1.061 | 0.011 | 75.0 | 4.59 | 42.8 | 9.32 | 0.027 | 0.36 | 0.010 | 1.16 | 0.031 |
| 11H | 4 | 1.516 | 0.015 | 73.4 | 3.65 | 33.4 | 9.15 | 0.052 | 0.37 | 0.019 | 1.19 | 0.061 |
| 11H | 6 | 1.655 | 0.017 | 73.7 | 3.66 | 34.0 | 9.28 | 0.084 | 0.39 | 0.031 | 1.24 | 0.101 |
| 11H | 8 | 1.717 | 0.017 | 74.0 | 3.24 | 33.5 | 10.34 | 0.118 | 0.31 | 0.042 | 1.19 | 0.141 |
| 11H | 10 | 1.995 | 0.020 | 71.9 | 3.69 | 33.0 | 8.95 | 0.158 | 0.55 | 0.064 | 1.39 | 0.197 |
| 11H | 12 | 2.182 | 0.022 | 71.3 | 3.07 | 34.0 | 11.09 | 0.201 | 0.59 | 0.089 | 1.49 | 0.262 |
| 11H | 14 | 2.216 | 0.022 | 71.2 | 3.48 | 32.5 | 9.33 | 0.244 | 0.56 | 0.113 | 1.41 | 0.321 |
| 11H | 16 | 2.506 | 0.025 | 71.0 | 3.62 | 32.6 | 9.02 | 0.298 | 0.56 | 0.143 | 1.45 | 0.400 |
| 11H | 18 | 3.154 | 0.032 | 66.7 | 3.47 | 32.7 | 9.45 | 0.359 | 0.46 | 0.171 | 1.24 | 0.476 |
| 11H | 20 | 3.200 | 0.032 | 68.1 | 3.39 | 32.6 | 9.60 | 0.425 | 0.38 | 0.197 | 1.13 | 0.550 |
| 11H | 22 | 3.305 | 0.034 | 66.5 | 3.31 | 31.7 | 9.58 | 0.483 | 0.42 | 0.221 | 1.07 | 0.612 |
| 11H | 24 | 3.613 | 0.037 | 59.8 | 2.95 | 28.3 | 9.59 | 0.558 | 0.30 | 0.244 | 0.79 | 0.671 |
| 11H | 26 | 3.583 | 0.036 | 60.4 | 3.02 | 29.8 | 9.88 | 0.635 | 0.27 | 0.264 | 0.82 | 0.734 |
| 11H | 28 | 3.488 | 0.035 | 62.7 | 2.78 | 28.8 | 10.37 | 0.701 | 0.24 | 0.280 | 0.77 | 0.785 |
| 11H | 30 | 3.683 | 0.037 | 63.8 | 2.82 | 29.6 | 10.51 | 0.775 | 0.19 | 0.294 | 0.63 | 0.831 |
| 11H | 32 | 4.217 | 0.043 | 60.8 | 2.65 | 29.0 | 10.95 | 0.864 | 0.25 | 0.317 | 0.81 | 0.903 |
| 11H | 34 | 4.561 | 0.047 | 62.4 | 2.74 | 30.0 | 10.94 | 0.952 | 0.24 | 0.338 | 0.63 | 0.959 |
| 11H | 36 | 4.567 | 0.047 | 65.4 | 2.89 | 31.6 | 10.95 | 1.053 | 0.14 | 0.352 | 0.41 | 1.000 |
| 11H | 38 | 4.573 | 0.047 | 66.9 | 2.92 | 31.6 | 10.84 | 1.143 | 0.14 | 0.364 | 0.36 | 1.032 |
| 11H | 40 | 4.489 | 0.046 | 67.0 | 2.96 | 32.1 | 10.85 | 1.232 | 0.15 | 0.378 | 0.43 | 1.071 |
| 11H | 42 | 4.741 | 0.049 | 63.6 | 2.90 | 31.5 | 10.87 | 1.320 | 0.08 | 0.385 | 0.31 | 1.098 |
| 11H | 44 | 4.287 | 0.044 | 64.4 | 2.88 | 30.7 | 10.69 | 1.418 | 0.08 | 0.393 | 0.27 | 1.125 |
| 11H | 46 | 3.959 | 0.040 | 66.7 | 2.90 | 31.4 | 10.82 | 1.494 | 0.09 | 0.400 | 0.25 | 1.144 |
| 11H | 48 | 4.062 | 0.041 | 68.0 | 2.94 | 31.7 | 10.78 | 1.568 | 0.09 | 0.406 | 0.28 | 1.164 |
| 11H | 50 | 3.889 | 0.040 | 67.8 | 2.96 | 32.7 | 11.05 | 1.656 | 0.10 | 0.415 | 0.36 | 1.196 |
| 11H | 52 | 4.024 | 0.041 | 70.8 | 3.02 | 32.2 | 10.66 | 1.726 | 0.08 | 0.421 | 0.26 | 1.214 |
| 11H | 54 | 3.983 | 0.041 | 67.7 | 2.92 | 31.8 | 10.91 | 1.797 | 0.08 | 0.427 | 0.25 | 1.232 |
| 11H | 56 | 3.911 | 0.040 | 68.1 | 3.01 | 31.8 | 10.58 | 1.877 | 0.08 | 0.433 | 0.24 | 1.251 |
| 11H | 58 | 3.929 | 0.040 | 68.6 | 3.01 | 32.1 | 10.65 | 1.959 | 0.10 | 0.441 | 0.24 | 1.271 |
| 11H | 60 | 3.896 | 0.040 | 68.3 | 2.91 | 31.8 | 10.92 | 2.038 | 0.10 | 0.449 | 0.35 | 1.299 |
| 11H | 62 | 3.924 | 0.040 | 68.0 | 2.99 | 31.8 | 10.61 | 2.119 | 0.09 | 0.456 | 0.29 | 1.322 |
| 11H | 64 | 3.958 | 0.040 | 67.8 | 2.94 | 31.7 | 10.79 | 2.194 | 0.08 | 0.463 | 0.27 | 1.342 |
| 11H | 66 | 4.012 | 0.041 | 68.0 | 3.05 | 32.1 | 10.51 | 2.273 | 0.08 | 0.469 | 0.25 | 1.362 |
| 11H | 68 | 3.884 | 0.040 | 67.6 | 3.02 | 31.8 | 10.52 | 2.359 | 0.08 | 0.476 | 0.29 | 1.386 |
| 11H | 70 | 4.046 | 0.041 | 68.7 | 2.91 | 31.5 | 10.81 | 2.435 | 0.10 | 0.484 | 0.34 | 1.412 |
| 11H | 72 | 4.103 | 0.042 | 69.2 | 3.00 | 31.8 | 10.59 | 2.516 | 0.07 | 0.490 | 0.26 | 1.434 |
| 11H | 74 | 4.320 | 0.044 | 67.2 | 2.90 | 31.3 | 10.78 | 2.601 | 0.08 | 0.497 | 0.26 | 1.455 |
| 11H | 76 | 4.553 | 0.047 | 62.0 | 2.73 | 28.8 | 10.53 | 2.705 | 0.07 | 0.504 | 0.25 | 1.481 |
| 11H | 78 | 4.187 | 0.043 | 67.4 | 2.87 | 31.0 | 10.80 | 2.787 | 0.07 | 0.509 | 0.26 | 1.502 |
| 11H | 80 | 6.287 | 0.065 | 40.3 | 1.76 | 19.4 | 11.03 | 2.922 | 0.06 | 0.517 | 0.23 | 1.533 |
| 11H | 82 | 6.384 | 0.065 | ... | 1.91 | 22.6 | 11.83 | 3.064 | 0.05 | 0.523 | 0.15 | 1.554 |
| 11H | 84 | 4.935 | 0.051 | 66.5 | 2.66 | 31.3 | 11.79 | 3.154 | 0.09 | 0.531 | 0.16 | 1.569 |
| 11H | 86 | 5.166 | 0.053 | 64.2 | 2.70 | 32.0 | 11.83 | 3.262 | 0.07 | 0.539 | 0.15 | 1.585 |
| 11H | 88 | 5.141 | 0.053 | 68.1 | 2.80 | 33.5 | 11.99 | 3.352 | 0.07 | 0.545 | 0.16 | 1.600 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11H | 90 | 5.111 | 0.052 | 64.9 | 2.68 | 32.2 | 12.02 | 3.479 | 0.07 | 0.555 | 0.25 | 1.631 |
| 11H | 92 | 5.353 | 0.055 | 66.3 | 2.67 | 32.0 | 12.01 | 3.585 | 0.09 | 0.564 | 0.16 | 1.648 |
| 11H | 94 | 5.444 | 0.056 | 67.0 | 2.78 | 33.4 | 12.03 | 3.690 | 0.09 | 0.573 | 0.13 | 1.662 |
| 11H | 96 | 5.801 | 0.060 | 61.4 | 2.51 | 30.1 | 12.02 | 3.812 | 0.07 | 0.581 | 0.21 | 1.687 |
| 11H | 98 | 6.173 | 0.064 | 59.7 | 2.25 | 27.5 | 12.22 | 3.926 | 0.07 | 0.589 | 0.15 | 1.704 |
| 11H | 100 | 7.228 | 0.075 | 49.4 | 2.11 | 25.6 | 12.15 | 4.084 | 0.06 | 0.599 | 0.13 | 1.723 |
| 11H | 102 | 8.126 | 0.085 | 51.3 | 2.07 | 25.3 | 12.22 | 4.285 | 0.08 | 0.614 | 0.14 | 1.752 |
| 11H | 104 | 6.647 | 0.069 | 63.5 | 2.50 | 30.4 | 12.15 | 4.460 | 0.06 | 0.624 | 0.16 | 1.779 |
| 11H | 106 | 6.597 | 0.068 | 69.1 | 2.81 | 33.8 | 12.06 | 4.602 | 0.07 | 0.634 | 0.16 | 1.802 |
| 11H | 108 | 6.559 | 0.068 | 69.4 | 2.83 | 34.1 | 12.05 | 4.749 | 0.08 | 0.645 | 0.16 | 1.826 |
| 11H | 110 | 7.140 | 0.074 | 63.0 | 2.79 | 33.5 | 11.98 | 4.889 | 0.06 | 0.653 | 0.14 | 1.846 |
| 11H | 112 | 7.485 | 0.078 | 59.3 | 2.54 | 30.5 | 12.03 | 5.037 | 0.07 | 0.663 | 0.20 | 1.875 |
| 11H | 114 | 8.195 | 0.086 | 49.9 | 1.98 | 24.3 | 12.27 | 5.200 | 0.08 | 0.676 | 0.18 | 1.905 |
| 11H | 116 | 9.854 | 0.104 | 35.3 | 1.95 | 23.7 | 12.17 | 5.398 | 0.06 | 0.687 | 0.14 | 1.933 |
| 11H | 118 | 8.639 | 0.091 | 42.1 | 2.54 | 31.4 | 12.38 | 5.608 | 0.05 | 0.698 | 0.14 | 1.962 |
| 11H | 120 | 7.342 | 0.076 | 56.6 | 2.19 | 27.6 | 12.60 | 5.764 | 0.06 | 0.708 | 0.16 | 1.988 |
| 11H | 122 | 6.750 | 0.070 | 64.0 | 2.57 | 32.3 | 12.55 | 5.903 | 0.06 | 0.717 | 0.19 | 2.014 |
| 11H | 124 | 8.471 | 0.089 | 48.3 | 1.95 | 24.4 | 12.49 | 6.094 | 0.07 | 0.729 | 0.14 | 2.041 |
| 11H | 126 | 11.207 | 0.119 | 35.0 | 1.52 | 19.2 | 12.63 | 6.325 | 0.04 | 0.739 | 0.15 | 2.076 |
| 11H | 128 | 9.003 | 0.095 | 41.3 | 1.76 | 22.2 | 12.63 | 6.524 | 0.06 | 0.751 | 0.26 | 2.127 |
| 11H | 130 | 7.998 | 0.083 | 50.7 | 2.09 | 26.4 | 12.68 | 6.689 | 0.08 | 0.763 | 0.25 | 2.169 |
| 11H | 132 | 6.029 | 0.062 | 54.3 | 2.78 | 35.7 | 12.81 | 6.806 | 0.09 | 0.773 | 0.24 | 2.198 |
| 11H | 134 | 5.892 | 0.061 | 62.6 | 3.07 | 39.0 | 12.73 | 6.942 | 0.09 | 0.785 | 0.24 | 2.230 |
| 11H | 136 | 6.387 | 0.066 | 65.9 | 2.64 | 33.0 | 12.52 | 7.075 | 0.10 | 0.798 | 0.23 | 2.260 |
| 11H | 138 | 6.232 | 0.064 | 66.6 | 2.56 | 32.4 | 12.64 | 7.240 | 0.11 | 0.816 | 0.25 | 2.301 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13H | 2 | 2.278 | 0.023 | 72.1 | 3.71 | 33.5 | 9.04 | 0.054 | 0.40 | 0.021 | 1.17 | 0.063 |
| 13H | 4 | 2.716 | 0.027 | 72.6 | 3.33 | 32.6 | 9.78 | 0.105 | 0.39 | 0.042 | 1.15 | 0.122 |
| 13H | 6 | 3.030 | 0.031 | 72.6 | 3.37 | 32.3 | 9.58 | 0.157 | 0.42 | 0.063 | 1.14 | 0.181 |
| 13H | 8 | 2.332 | 0.024 | 72.8 | 3.38 | 32.7 | 9.66 | 0.225 | 0.41 | 0.091 | 1.19 | 0.261 |
| 13H | 10 | 2.906 | ... | ... | 3.72 | 42.7 | 11.49 | 0.283 | ... | ... | ... | ... |
| 13H | 12 | 2.973 | 0.030 | 71.4 | 3.39 | 31.9 | 9.39 | 0.343 | 0.41 | 0.115 | 1.19 | 0.332 |
| 13H | 14 | 4.220 | 0.043 | 68.2 | 3.26 | 31.8 | 9.75 | 0.422 | 0.46 | 0.152 | 1.21 | 0.429 |
| 13H | 16 | 4.544 | 0.046 | 65.7 | 3.15 | 30.5 | 9.66 | 0.507 | 0.44 | 0.189 | 1.17 | 0.528 |
| 13H | 18 | 4.442 | 0.045 | 60.4 | 3.14 | 29.5 | 9.39 | 0.621 | 0.39 | 0.233 | 0.99 | 0.641 |
| 13H | 20 | 5.096 | 0.052 | 59.8 | 3.24 | 31.2 | 9.61 | 0.728 | 0.40 | 0.276 | 0.90 | 0.737 |
| 13H | 22 | 4.923 | 0.050 | 60.9 | 3.41 | 32.8 | 9.62 | 0.851 | 0.32 | 0.315 | 0.86 | 0.843 |
| 13H | 24 | 5.251 | 0.054 | 57.4 | 2.80 | 27.1 | 9.69 | 0.974 | 0.30 | 0.352 | 0.82 | 0.944 |
| 13H | 26 | 5.030 | 0.052 | 57.5 | 2.88 | 28.2 | 9.78 | 1.085 | 0.24 | 0.379 | 0.78 | 1.030 |
| 13H | 28 | 4.784 | 0.049 | 59.3 | 3.01 | 29.8 | 9.89 | 1.195 | 0.23 | 0.404 | 0.77 | 1.115 |
| 13H | 30 | 4.918 | 0.050 | 61.0 | 2.96 | 29.5 | 9.97 | 1.303 | 0.24 | 0.430 | 0.80 | 1.202 |
| 13H | 32 | 5.086 | 0.052 | 58.3 | 2.84 | 29.0 | 10.19 | 1.413 | 0.24 | 0.457 | 0.72 | 1.281 |
| 13H | 34 | 4.872 | 0.050 | 60.4 | 2.81 | 28.8 | 10.24 | 1.530 | 0.22 | 0.482 | 0.73 | 1.366 |
| 13H | 36 | 5.005 | 0.051 | 60.6 | 2.77 | 28.4 | 10.25 | 1.648 | 0.26 | 0.513 | 0.72 | 1.451 |
| 13H | 38 | 5.196 | 0.053 | 57.3 | 2.77 | 27.9 | 10.10 | 1.792 | 0.20 | 0.542 | 0.68 | 1.549 |
| 13H | 40 | 5.265 | 0.054 | 57.7 | 2.54 | 26.2 | 10.30 | 1.934 | 0.19 | 0.569 | 0.62 | 1.637 |
| 13H | 42 | 5.703 | 0.059 | 57.9 | 2.68 | 27.7 | 10.31 | 2.059 | 0.17 | 0.590 | 0.63 | 1.716 |
| 13H | 44 | 5.758 | 0.059 | 61.3 | 2.67 | 27.9 | 10.45 | 2.172 | 0.25 | 0.618 | 0.62 | 1.786 |
| 13H | 46 | 5.733 | 0.059 | 61.8 | 2.91 | 30.2 | 10.40 | 2.290 | 0.18 | 0.640 | 0.57 | 1.853 |
| 13H | 48 | 5.453 | 0.056 | 60.5 | 2.93 | 30.6 | 10.43 | 2.433 | 0.18 | 0.665 | 0.62 | 1.942 |
| 13H | 50 | 5.787 | 0.060 | 62.7 | 2.85 | 29.3 | 10.29 | 2.560 | 0.22 | 0.693 | 0.57 | 2.014 |
| 13H | 52 | 5.833 | 0.060 | 61.5 | 2.88 | 29.6 | 10.27 | 2.675 | 0.19 | 0.715 | 0.60 | 2.083 |
| 13H | 54 | 5.933 | 0.061 | 61.8 | 2.96 | 31.0 | 10.49 | 2.786 | 0.13 | 0.730 | 0.53 | 2.142 |
| 13H | 56 | 6.000 | 0.062 | 63.3 | 3.01 | 31.4 | 10.45 | 2.900 | 0.16 | 0.748 | 0.56 | 2.206 |
| 13H | 58 | 5.659 | 0.058 | 64.8 | 2.98 | 31.0 | 10.40 | 3.025 | 0.12 | 0.763 | 0.56 | 2.276 |
| 13H | 60 | 5.772 | 0.059 | 65.4 | 2.93 | 31.0 | 10.59 | 3.146 | 0.18 | 0.785 | 0.57 | 2.345 |
| 13H | 62 | 6.023 | 0.062 | 65.8 | 3.03 | 31.3 | 10.33 | 3.260 | 0.17 | 0.804 | 0.55 | 2.407 |
| 13H | 64 | 6.039 | 0.062 | 65.2 | 2.99 | 31.5 | 10.51 | 3.383 | 0.16 | 0.824 | 0.56 | 2.476 |
| 13H | 66 | 5.819 | 0.060 | 66.4 | 3.01 | 31.5 | 10.44 | 3.536 | 0.11 | 0.840 | 0.54 | 2.559 |
| 13H | 68 | 5.718 | 0.059 | 66.5 | 3.05 | 32.0 | 10.50 | 3.679 | 0.15 | 0.862 | 0.54 | 2.636 |
| 13H | 70 | 5.865 | 0.060 | 64.7 | 2.78 | 29.3 | 10.55 | 3.828 | 0.18 | 0.889 | 0.54 | 2.717 |
| 13H | 72 | 6.276 | 0.065 | 64.6 | 2.77 | 29.8 | 10.75 | 3.956 | 0.15 | 0.908 | 0.48 | 2.778 |
| 13H | 74 | 6.317 | 0.065 | 65.8 | 2.86 | 30.4 | 10.62 | 4.073 | 0.15 | 0.925 | 0.50 | 2.836 |
| 13H | 76 | 6.074 | 0.063 | 65.3 | 2.91 | 30.9 | 10.61 | 4.210 | 0.20 | 0.953 | 0.53 | 2.909 |
| 13H | 78 | 6.756 | 0.070 | 65.0 | 2.81 | 30.6 | 10.88 | 4.319 | 0.14 | 0.968 | 0.61 | 2.976 |
| 13H | 80 | 6.275 | 0.065 | 63.5 | 2.95 | 30.9 | 10.50 | 4.461 | 0.19 | 0.995 | 0.53 | 3.051 |
| 13H | 82 | 6.356 | 0.066 | 68.6 | 3.27 | 34.1 | 10.45 | 4.578 | 0.16 | 1.014 | 0.58 | 3.119 |
| 13H | 84 | 6.214 | 0.064 | 68.7 | 3.14 | 33.0 | 10.53 | 4.703 | 0.17 | 1.035 | 0.52 | 3.184 |
| 13H | 86 | 5.953 | 0.061 | 67.8 | 2.86 | 31.0 | 10.82 | 4.823 | 0.16 | 1.054 | 0.53 | 3.247 |
| 13H | 88 | 6.175 | 0.064 | 65.3 | 2.94 | 31.4 | 10.70 | 4.944 | 0.16 | 1.074 | 0.49 | 3.307 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13H | 90 | 6.396 | 0.066 | 58.3 | 2.68 | 28.9 | 10.78 | 5.070 | 0.18 | 1.096 | 0.48 | 3.367 |
| 13H | 92 | 6.333 | 0.065 | 56.0 | 2.32 | 24.8 | 10.67 | 5.206 | 0.13 | 1.114 | 0.42 | 3.424 |
| 13H | 94 | 7.158 | 0.074 | 43.9 | 2.07 | 22.1 | 10.66 | 5.341 | 0.12 | 1.130 | 0.37 | 3.474 |
| 13H | 96 | 7.700 | 0.080 | 38.6 | 1.66 | 18.2 | 10.98 | 5.556 | 0.08 | 1.147 | 0.33 | 3.545 |
| 13H | 98 | 8.112 | 0.085 | 37.2 | 1.66 | 18.1 | 10.87 | 5.758 | 0.10 | 1.168 | 0.34 | 3.614 |
| 13H | 100 | 8.851 | 0.093 | 33.5 | 1.30 | 14.2 | 10.96 | 5.969 | 0.09 | 1.187 | 0.29 | 3.675 |
| 13H | 102 | 9.968 | 0.105 | 34.7 | 1.51 | 16.8 | 11.11 | 6.151 | 0.09 | 1.203 | 0.29 | 3.728 |
| 13H | 104 | 10.896 | 0.116 | 30.7 | 1.14 | 12.7 | 11.12 | 6.372 | 0.10 | 1.225 | 0.29 | 3.792 |
| 13H | 106 | 11.353 | 0.121 | 30.5 | 1.05 | 11.8 | 11.25 | 6.627 | 0.09 | 1.248 | 0.31 | 3.871 |
| 13H | 108 | 12.005 | 0.128 | 33.6 | 1.59 | 17.6 | 11.08 | 6.872 | 0.10 | 1.273 | 0.30 | 3.944 |
| 13H | 110 | 12.864 | 0.139 | 27.2 | 1.17 | 12.7 | 10.86 | 7.141 | 0.11 | 1.302 | 0.34 | 4.036 |
| 13H | 112 | 12.839 | 0.138 | 27.4 | 1.29 | 14.2 | 10.97 | 7.410 | 0.10 | 1.329 | 0.32 | 4.122 |
| 13H | 114 | 15.790 | 0.173 | 24.7 | 1.05 | 11.6 | 11.02 | 7.770 | 0.09 | 1.361 | 0.27 | 4.219 |
| 13H | 116 | 15.094 | 0.165 | 25.6 | 1.59 | 19.4 | 12.22 | 8.140 | 0.06 | 1.384 | 0.24 | 4.308 |
| 13H | 118 | 8.351 | 0.087 | 51.9 | 2.39 | 29.9 | 12.50 | 8.326 | 0.10 | 1.402 | 0.34 | 4.371 |
| 13H | 120 | 7.849 | 0.082 | 58.1 | 2.15 | 27.1 | 12.63 | 8.494 | 0.09 | 1.417 | 0.33 | 4.427 |
| 13H | 122 | 10.016 | 0.106 | 40.9 | 1.41 | 17.6 | 12.51 | 8.725 | 0.09 | 1.438 | 0.31 | 4.498 |
| 13H | 124 | 14.511 | 0.158 | 28.3 | 0.82 | 9.9 | 12.10 | 9.082 | 0.07 | 1.463 | 0.29 | 4.602 |
| 13H | 126 | 9.956 | 0.105 | 42.1 | 2.62 | 32.5 | 12.42 | 9.334 | 0.08 | 1.483 | 0.29 | 4.675 |
| 13H | 128 | 8.067 | 0.084 | 54.0 | 2.36 | 29.1 | 12.33 | 9.531 | 0.09 | 1.501 | 0.34 | 4.742 |
| 13H | 130 | 7.611 | 0.079 | 61.9 | 2.62 | 32.7 | 12.51 | 9.722 | 0.10 | 1.520 | 0.37 | 4.813 |

Note: In calculations of cumulative NAIP and TP reported in the text, cumulative NAIP and TP were increased by 0.024 and 0.069, respectively, to account for missing data at 10 cm. A value of 0.408 and 1.188, respectively, were used for the missing data. Cumulative NAIP and TP reported in these appendix tables do not include this adjustment.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16H | 2 | 2.543 | 0.026 | 69.9 | 3.35 | 31.8 | 9.50 | 0.081 | 0.35 | 0.028 | 1.02 | 0.082 |
| 16H | 4 | 3.865 | 0.039 | 68.4 | 3.31 | 31.9 | 9.64 | 0.148 | 0.36 | 0.052 | 1.05 | 0.152 |
| 16H | 6 | 4.679 | 0.048 | 68.9 | 3.25 | 31.6 | 9.74 | 0.214 | 0.40 | 0.078 | 1.07 | 0.224 |
| 16H | 8 | 4.356 | 0.044 | 67.5 | 3.14 | 31.3 | 9.96 | 0.303 | 0.39 | 0.113 | 1.45 | 0.353 |
| 16H | 10 | 4.334 | 0.044 | 67.0 | 3.14 | 31.6 | 10.07 | 0.395 | 0.31 | 0.141 | 0.87 | 0.433 |
| 16H | 12 | 4.856 | 0.050 | 65.5 | 2.98 | 30.8 | 10.34 | 0.480 | 0.29 | 0.166 | 1.06 | 0.522 |
| 16H | 14 | 4.658 | 0.048 | 67.0 | 3.00 | 31.4 | 10.46 | 0.580 | 0.16 | 0.181 | 0.45 | 0.567 |
| 16H | 16 | 4.722 | 0.048 | 69.2 | 2.89 | 31.8 | 11.02 | 0.678 | 0.12 | 0.193 | 0.35 | 0.601 |
| 16H | 18 | 5.327 | 0.055 | 68.5 | 2.88 | 32.3 | 11.21 | 0.775 | 0.09 | 0.201 | 0.28 | 0.628 |
| 16H | 20 | 4.775 | 0.049 | 67.8 | 2.88 | 31.0 | 10.73 | 0.886 | 0.07 | 0.209 | 0.28 | 0.659 |
| 16H | 22 | 5.393 | 0.055 | 68.3 | 2.97 | 31.9 | 10.73 | 0.979 | 0.06 | 0.215 | 0.29 | 0.686 |
| 16H | 24 | 5.170 | 0.053 | 64.7 | 2.74 | 30.3 | 11.09 | 1.095 | 0.06 | 0.221 | 0.25 | 0.715 |
| 16H | 26 | 5.451 | 0.056 | 57.6 | 2.66 | 30.4 | 11.42 | 1.216 | 0.06 | 0.228 | 0.24 | 0.743 |
| 16H | 28 | 6.760 | 0.070 | 46.2 | 1.58 | 18.9 | 11.94 | 1.357 | 0.05 | 0.234 | 0.19 | 0.771 |
| 16H | 30 | 6.198 | 0.064 | 61.4 | 2.56 | 29.7 | 11.58 | 1.474 | 0.04 | 0.240 | 0.19 | 0.793 |
| 16H | 32 | 6.129 | 0.063 | 61.3 | 2.56 | 30.0 | 11.69 | 1.606 | 0.04 | 0.244 | 0.17 | 0.816 |
| 16H | 34 | 6.532 | 0.067 | 61.0 | 2.38 | 28.6 | 12.00 | 1.739 | 0.05 | 0.251 | 0.19 | 0.842 |
| 16H | 36 | 6.250 | 0.064 | 63.9 | 2.49 | 30.6 | 12.28 | 1.867 | 0.05 | 0.258 | 0.19 | 0.865 |
| 16H | 38 | 6.228 | 0.064 | 66.5 | 2.71 | 32.1 | 11.84 | 1.989 | 0.04 | 0.263 | 0.19 | 0.888 |
| 16H | 40 | 6.097 | 0.063 | 65.7 | 2.68 | 31.4 | 11.73 | 2.119 | 0.06 | 0.270 | 0.19 | 0.913 |
| 16H | 42 | 6.261 | 0.065 | 65.8 | 2.60 | 31.4 | 12.09 | 2.246 | 0.04 | 0.275 | 0.20 | 0.938 |
| 16H | 44 | 6.049 | 0.062 | 65.5 | 2.66 | 31.5 | 11.82 | 2.375 | 0.04 | 0.280 | 0.20 | 0.964 |
| 16H | 46 | 6.559 | 0.068 | 66.1 | 2.62 | 31.8 | 12.10 | 2.502 | 0.04 | 0.285 | 0.18 | 0.987 |
| 16H | 48 | 6.419 | 0.066 | 65.1 | 2.61 | 31.7 | 12.14 | 2.671 | 0.02 | 0.288 | 0.01 | 0.988 |
| 16H | 50 | 6.978 | 0.072 | 60.8 | 2.25 | 29.4 | 13.04 | 2.832 | 0.08 | 0.302 | 0.21 | 1.022 |
| 16H | 52 | 7.616 | 0.079 | 58.3 | 2.42 | 29.1 | 12.02 | 2.986 | 0.02 | 0.305 | 0.18 | 1.049 |
| 16H | 54 | 7.882 | 0.082 | 55.1 | 1.99 | 24.3 | 12.21 | 3.155 | 0.02 | 0.308 | 0.15 | 1.075 |
| 16H | 56 | 6.548 | 0.068 | 62.6 | 2.58 | 32.2 | 12.47 | 3.304 | 0.05 | 0.316 | 0.17 | 1.101 |
| 16H | 58 | 7.159 | 0.074 | 65.3 | 2.65 | 33.8 | 12.74 | 3.450 | 0.05 | 0.323 | 0.20 | 1.129 |
| 16H | 60 | 7.061 | 0.073 | 64.7 | 2.35 | 31.7 | 13.49 | 3.585 | ... | ... | ... | ... |
| 16H | 62 | 6.810 | 0.070 | 62.9 | 2.43 | 30.0 | 12.31 | 3.745 | 0.03 | 0.328 | 0.21 | 1.163 |
| 16H | 64 | 7.371 | 0.076 | 58.5 | 2.22 | 28.2 | 12.68 | 3.908 | 0.06 | 0.339 | 0.23 | 1.201 |
| 16H | 66 | 7.270 | 0.075 | 61.9 | 2.46 | 31.1 | 12.66 | 4.049 | 0.07 | 0.348 | 0.23 | 1.233 |
| 16H | 68 | 8.808 | 0.092 | 48.5 | 2.53 | 31.2 | 12.34 | 4.202 | 0.04 | 0.355 | 0.21 | 1.265 |
| 16H | 70 | 10.321 | 0.109 | 31.3 | 2.39 | 32.5 | 13.60 | 4.398 | 0.08 | 0.369 | 0.25 | 1.315 |
| 16H | 72 | 10.052 | 0.106 | 39.8 | 1.92 | 24.3 | 12.67 | 4.617 | 0.07 | 0.384 | 0.30 | 1.381 |
| 16H | 74 | 12.535 | 0.135 | 32.7 | 1.57 | 20.2 | 12.87 | 4.902 | 0.04 | 0.395 | 0.15 | 1.424 |
| 16H | 76 | 8.172 | 0.085 | 54.4 | 1.22 | 15.9 | 13.02 | 5.057 | 0.04 | 0.401 | 0.15 | 1.447 |
| 16H | 78 | 7.574 | 0.079 | 63.2 | 2.44 | 31.1 | 12.75 | 5.202 | 0.04 | 0.407 | 0.19 | 1.475 |
| 16H | 80 | 7.348 | 0.076 | 67.0 | 1.94 | 27.4 | 14.11 | 5.369 | 0.07 | 0.418 | 0.22 | 1.512 |
| 16H | 82 | 6.961 | 0.072 | 66.8 | 2.49 | 31.9 | 12.79 | 5.519 | 0.05 | 0.426 | 0.20 | 1.542 |
| 16H | 84 | 6.828 | 0.071 | 70.8 | 2.76 | 35.5 | 12.84 | 5.640 | 0.06 | 0.433 | 0.17 | 1.563 |
| 16H | 86 | 6.356 | 0.065 | 71.3 | 2.77 | 35.6 | 12.85 | 5.792 | 0.06 | 0.442 | 0.16 | 1.588 |
| 16H | 88 | 6.410 | 0.066 | 70.8 | 2.73 | 35.5 | 13.00 | 5.937 | 0.04 | 0.448 | 0.16 | 1.611 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16H | 90 | 6.224 | 0.064 | 72.3 | 2.69 | 34.8 | 12.93 | 6.090 | 0.05 | 0.455 | 0.17 | 1.637 |
| 16H | 92 | 7.492 | 0.078 | 66.6 | 2.20 | 29.0 | 13.18 | 6.250 | 0.05 | 0.463 | 0.20 | 1.669 |
| 16H | 94 | 6.569 | 0.068 | 69.2 | 2.58 | 33.7 | 13.06 | 6.381 | 0.07 | 0.472 | 0.18 | 1.692 |
| 16H | 96 | 6.250 | 0.064 | 72.5 | 2.62 | 34.3 | 13.09 | 6.517 | 0.05 | 0.479 | 0.19 | 1.718 |
| 16H | 98 | 6.892 | 0.071 | 70.2 | 2.84 | 37.0 | 13.05 | 6.639 | 0.07 | 0.487 | 0.20 | 1.743 |
| 16H | 100 | 6.237 | 0.064 | 72.7 | 2.78 | 36.3 | 13.05 | 6.776 | 0.08 | 0.498 | 0.29 | 1.782 |
| 16H | 102 | 5.974 | 0.061 | 78.2 | 2.82 | 37.7 | 13.38 | 6.910 | 0.09 | 0.511 | 0.34 | 1.829 |
| 16H | 104 | 6.336 | 0.065 | 78.3 | 3.02 | 39.0 | 12.94 | 7.043 | 0.08 | 0.521 | 0.33 | 1.873 |
| 16H | 106 | 6.735 | 0.069 | 76.2 | 2.97 | 38.2 | 12.90 | 7.180 | 0.07 | 0.530 | 0.35 | 1.921 |
| 16H | 108 | 6.331 | 0.065 | 77.0 | 2.80 | 36.6 | 13.06 | 7.317 | 0.07 | 0.540 | 0.33 | 1.966 |
| 16H | 110 | 6.282 | 0.065 | 80.0 | 2.98 | 39.4 | 13.23 | 7.447 | 0.07 | 0.549 | 0.35 | 2.012 |
| 16H | 112 | 6.113 | 0.063 | 78.6 | 2.89 | 39.4 | 13.61 | 7.575 | 0.06 | 0.556 | 0.39 | 2.062 |
| 16H | 114 | 5.946 | 0.061 | 80.3 | 2.89 | 39.4 | 13.63 | 7.706 | 0.10 | 0.569 | 0.40 | 2.114 |
| 16H | 116 | 6.366 | 0.065 | 79.3 | 2.84 | 39.3 | 13.86 | 7.820 | 0.08 | 0.578 | 0.40 | 2.160 |
| 16H | 118 | 5.782 | 0.059 | 79.3 | 2.98 | 39.8 | 13.37 | 7.975 | 0.09 | 0.591 | 0.38 | 2.219 |
| 16H | 120 | 6.149 | 0.063 | 79.5 | 2.93 | 40.2 | 13.74 | 8.105 | 0.08 | 0.602 | 0.40 | 2.270 |
| 16H | 122 | 6.305 | 0.065 | 75.6 | 2.85 | 38.7 | 13.59 | 8.267 | 0.09 | 0.616 | 0.56 | 2.361 |

Note: In calculations of cumulative NAIP and TP reported in the text, cumulative NAIP and TP were increased by 0.005 and 0.028, respectively, to account for missing data at 60 cm. A value of 0.034 and 0.210, respectively, were used for the missing data. Cumulative NAIP and TP reported in these appendix tables do not include this adjustment.

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28H | 2 | 1.319 | 0.013 | 70.7 | 3.79 | 32.1 | 8.48 | 0.026 | 0.38 | 0.010 | 1.14 | 0.029 |
| 28H | 4 | 1.434 | 0.014 | 71.0 | 3.35 | 30.6 | 9.14 | 0.049 | 0.36 | 0.018 | 1.14 | 0.056 |
| 28H | 6 | 1.640 | 0.017 | 71.0 | 3.23 | 30.6 | 9.50 | 0.082 | 0.35 | 0.030 | 1.11 | 0.092 |
| 28H | 8 | 1.702 | 0.017 | 70.5 | 3.34 | 32.3 | 9.69 | 0.112 | 0.36 | 0.041 | 1.09 | 0.125 |
| 28H | 10 | 1.787 | 0.018 | 69.9 | 3.24 | 30.9 | 9.55 | 0.141 | 0.37 | 0.052 | 1.13 | 0.158 |
| 28H | 12 | 1.985 | 0.020 | 70.2 | 3.18 | 30.8 | 9.70 | 0.175 | 0.45 | 0.066 | 1.06 | 0.194 |
| 28H | 14 | 2.239 | 0.023 | 72.1 | 3.33 | 32.6 | 9.78 | 0.224 | 0.45 | 0.089 | 1.09 | 0.248 |
| 28H | 16 | 2.537 | 0.026 | 68.3 | 3.09 | 30.5 | 9.87 | 0.274 | 0.42 | 0.110 | 1.17 | 0.306 |
| 28H | 18 | 2.461 | 0.025 | 69.4 | 3.05 | 29.6 | 9.68 | 0.325 | 0.33 | 0.127 | 0.98 | 0.355 |
| 28H | 20 | 2.749 | 0.028 | 69.1 | 3.10 | 31.8 | 10.26 | 0.375 | 0.29 | 0.141 | 0.85 | 0.398 |
| 28H | 22 | 2.930 | 0.030 | 69.0 | 3.08 | 32.4 | 10.52 | 0.438 | 0.24 | 0.156 | 0.82 | 0.450 |
| 28H | 24 | 3.042 | 0.031 | 67.6 | 2.83 | 29.5 | 10.46 | 0.488 | 0.23 | 0.167 | 0.75 | 0.487 |
| 28H | 26 | 3.130 | 0.032 | 68.6 | 2.97 | 31.8 | 10.72 | 0.552 | 0.23 | 0.182 | 0.68 | 0.531 |
| 28H | 28 | 3.197 | 0.032 | 69.1 | 2.86 | 31.4 | 10.97 | 0.612 | 0.18 | 0.192 | 0.59 | 0.567 |
| 28H | 30 | 3.251 | 0.033 | 69.2 | 2.86 | 31.3 | 10.93 | 0.667 | 0.16 | 0.201 | 0.56 | 0.597 |
| 28H | 32 | 3.130 | 0.032 | 69.0 | 2.85 | 31.5 | 11.05 | 0.725 | 0.15 | 0.210 | 0.53 | 0.628 |
| 28H | 34 | 3.276 | 0.033 | 67.5 | 2.89 | 31.9 | 11.04 | 0.785 | 0.14 | 0.218 | 0.50 | 0.658 |
| 28H | 36 | 3.253 | 0.033 | 67.8 | 2.78 | 31.0 | 11.15 | 0.848 | 0.14 | 0.227 | 0.49 | 0.689 |
| 28H | 38 | 3.289 | 0.033 | 66.6 | 2.71 | 30.7 | 11.32 | 0.906 | 0.13 | 0.234 | 0.50 | 0.718 |
| 28H | 40 | 3.300 | 0.034 | 67.6 | 2.83 | 31.9 | 11.30 | 0.975 | 0.14 | 0.244 | 0.46 | 0.750 |
| 28H | 42 | 3.254 | 0.033 | 66.3 | 2.71 | 30.7 | 11.33 | 1.039 | 0.11 | 0.251 | 0.50 | 0.781 |
| 28H | 44 | 3.292 | 0.033 | 66.1 | 2.68 | 30.4 | 11.36 | 1.109 | 0.11 | 0.259 | 0.46 | 0.814 |
| 28H | 46 | 3.399 | 0.035 | 66.4 | 2.77 | 31.2 | 11.27 | 1.173 | 0.11 | 0.266 | 0.42 | 0.841 |
| 28H | 48 | 3.468 | 0.035 | 68.0 | 2.71 | 31.2 | 11.49 | 1.245 | 0.12 | 0.274 | 0.41 | 0.870 |
| 28H | 50 | 3.864 | 0.039 | 68.0 | 2.64 | 30.4 | 11.50 | 1.320 | 0.11 | 0.283 | 0.43 | 0.902 |
| 28H | 52 | 3.987 | 0.041 | 66.9 | 2.84 | 32.7 | 11.50 | 1.403 | 0.10 | 0.290 | 0.37 | 0.933 |
| 28H | 54 | 4.167 | 0.043 | 66.4 | 2.68 | 30.9 | 11.54 | 1.482 | 0.07 | 0.296 | 0.40 | 0.965 |
| 28H | 56 | 4.389 | 0.045 | 64.7 | 2.71 | 31.5 | 11.60 | 1.569 | 0.09 | 0.304 | 0.35 | 0.995 |
| 28H | 58 | 8.418 | 0.088 | 31.2 | 2.28 | 27.0 | 11.84 | 1.748 | 0.07 | 0.316 | 0.32 | 1.051 |
| 28H | 60 | 5.206 | 0.053 | 50.9 | 2.56 | 30.4 | 11.86 | 1.861 | 0.05 | 0.323 | 0.20 | 1.074 |
| 28H | 62 | 4.238 | 0.043 | 65.3 | 2.64 | 32.0 | 12.11 | 1.943 | 0.05 | 0.327 | 0.22 | 1.091 |
| 28H | 64 | 4.107 | 0.042 | 57.0 | 2.68 | 32.3 | 12.08 | 2.016 | 0.05 | 0.331 | 0.21 | 1.106 |
| 28H | 66 | 4.427 | 0.045 | 64.7 | 2.61 | 31.9 | 12.24 | 2.099 | 0.05 | 0.335 | 0.20 | 1.123 |
| 28H | 68 | 4.398 | 0.045 | 65.7 | 2.56 | 31.8 | 12.44 | 2.187 | 0.05 | 0.339 | 0.20 | 1.141 |
| 28H | 70 | 4.349 | 0.044 | 68.4 | 2.69 | 33.1 | 12.30 | 2.279 | 0.05 | 0.343 | 0.20 | 1.159 |
| 28H | 72 | 4.475 | 0.046 | 68.0 | 2.59 | 32.3 | 12.48 | 2.364 | 0.05 | 0.347 | 0.20 | 1.177 |
| 28H | 74 | 4.187 | 0.043 | 68.0 | 2.69 | 33.4 | 12.45 | 2.453 | 0.04 | 0.351 | 0.20 | 1.194 |
| 28H | 76 | 4.221 | 0.043 | 68.9 | 2.61 | 32.6 | 12.49 | 2.531 | 0.05 | 0.355 | 0.20 | 1.210 |
| 28H | 78 | 4.319 | 0.044 | 68.5 | 2.56 | 32.0 | 12.50 | 2.618 | 0.05 | 0.360 | 0.19 | 1.226 |
| 28H | 80 | 4.573 | 0.047 | 67.3 | 2.45 | 31.1 | 12.66 | 2.709 | 0.05 | 0.364 | 0.21 | 1.245 |
| 28H | 82 | 4.517 | 0.046 | 67.6 | 2.55 | 32.0 | 12.58 | 2.816 | 0.05 | 0.369 | 0.19 | 1.265 |
| 28H | 84 | 4.481 | 0.046 | 66.9 | 2.59 | 32.7 | 12.59 | 2.895 | 0.05 | 0.373 | 0.18 | 1.279 |
| 28H | 86 | 4.276 | 0.044 | 67.5 | 2.61 | 32.7 | 12.53 | 2.978 | 0.05 | 0.377 | 0.19 | 1.295 |
| 28H | 88 | 4.272 | 0.044 | 67.0 | 2.56 | 32.5 | 12.67 | 3.070 | 0.05 | 0.382 | 0.19 | 1.312 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28H | 90 | 4.358 | 0.045 | 66.6 | 2.60 | 32.4 | 12.47 | 3.148 | 0.04 | 0.385 | 0.18 | 1.326 |
| 28H | 92 | 4.690 | 0.048 | 65.1 | 2.51 | 31.9 | 12.70 | 3.253 | 0.03 | 0.388 | 0.19 | 1.346 |
| 28H | 94 | 4.973 | 0.051 | 64.5 | 2.42 | 30.5 | 12.61 | 3.348 | 0.04 | 0.392 | 0.18 | 1.363 |
| 28H | 96 | 5.065 | 0.052 | 64.4 | 2.52 | 31.7 | 12.60 | 3.451 | 0.08 | 0.400 | 0.19 | 1.382 |
| 28H | 98 | 5.075 | 0.052 | 63.6 | 2.54 | 32.3 | 12.71 | 3.558 | 0.07 | 0.408 | 0.17 | 1.401 |
| 28H | 100 | 4.946 | 0.051 | 65.2 | 2.55 | 32.4 | 12.72 | 3.653 | 0.07 | 0.415 | 0.19 | 1.419 |
| 28H | 102 | 5.005 | 0.051 | 62.5 | 2.58 | 32.0 | 12.40 | 3.751 | 0.07 | 0.422 | 0.18 | 1.436 |
| 28H | 104 | 4.872 | 0.050 | 63.9 | 2.49 | 31.2 | 12.53 | 3.840 | 0.06 | 0.427 | 0.18 | 1.452 |
| 28H | 106 | 4.888 | 0.050 | 64.1 | 2.61 | 33.2 | 12.69 | 3.927 | 0.07 | 0.433 | 0.18 | 1.468 |
| 28H | 108 | 4.684 | 0.048 | 65.5 | 2.60 | 32.5 | 12.52 | 4.017 | 0.07 | 0.440 | 0.18 | 1.484 |
| 28H | 110 | 5.486 | 0.056 | 60.8 | 2.53 | 32.0 | 12.64 | 4.121 | 0.06 | 0.447 | 0.23 | 1.508 |
| 28H | 112 | 5.385 | 0.055 | 58.9 | 2.53 | 31.6 | 12.52 | 4.235 | 0.06 | 0.453 | 0.19 | 1.530 |
| 28H | 114 | 5.102 | 0.052 | 64.3 | 2.62 | 32.3 | 12.34 | 4.323 | 0.06 | 0.458 | 0.20 | 1.548 |
| 28H | 116 | 5.239 | 0.054 | 64.1 | 2.63 | 32.8 | 12.45 | 4.430 | 0.07 | 0.466 | 0.21 | 1.571 |
| 28H | 118 | 5.698 | 0.059 | 59.7 | 2.63 | 32.9 | 12.51 | 4.552 | 0.06 | 0.473 | 0.20 | 1.595 |
| 28H | 120 | 5.822 | 0.060 | 58.6 | 2.50 | 31.2 | 12.49 | 4.665 | 0.06 | 0.479 | 0.24 | 1.622 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29H | 2 | 1.664 | 0.017 | 72.2 | 3.90 | 28.6 | 7.35 | 0.028 | 0.35 | 0.010 | 1.00 | 0.028 |
| 29H | 4 | 2.280 | 0.023 | 48.6 | 3.39 | 33.0 | 9.72 | 0.066 | 0.24 | 0.019 | 0.99 | 0.065 |
| 29H | 6 | 2.715 | 0.028 | 64.2 | 3.28 | 30.5 | 9.31 | 0.115 | 0.38 | 0.037 | 1.00 | 0.115 |
| 29H | 8 | 2.878 | 0.029 | 61.3 | 3.05 | 29.4 | 9.64 | 0.165 | 0.43 | 0.059 | 1.05 | 0.167 |
| 29H | 10 | 3.286 | 0.033 | 56.2 | 2.92 | 28.6 | 9.79 | 0.226 | 0.45 | 0.086 | 1.00 | 0.228 |
| 29H | 12 | 3.591 | 0.037 | 55.2 | 2.90 | 29.3 | 10.13 | 0.290 | 0.32 | 0.107 | 0.85 | 0.283 |
| 29H | 14 | 4.150 | 0.042 | 44.7 | 2.72 | 28.3 | 10.40 | 0.373 | 0.22 | 0.125 | 0.69 | 0.340 |
| 29H | 16 | 3.013 | 0.031 | 57.3 | 2.66 | 28.7 | 10.79 | 0.427 | 0.20 | 0.136 | 0.72 | 0.379 |
| 29H | 18 | 3.361 | 0.034 | 60.3 | 2.55 | 28.0 | 10.97 | 0.485 | 0.17 | 0.146 | 0.59 | 0.413 |
| 29H | 20 | 3.307 | 0.034 | 62.7 | 2.61 | 28.6 | 10.97 | 0.542 | 0.16 | 0.155 | 0.53 | 0.443 |
| 29H | 22 | 3.460 | 0.035 | 62.0 | 2.62 | 29.0 | 11.07 | 0.602 | 0.16 | 0.164 | 0.52 | 0.474 |
| 29H | 24 | 3.786 | 0.039 | 59.2 | 2.51 | 28.4 | 11.33 | 0.667 | 0.17 | 0.175 | 0.45 | 0.503 |
| 29H | 26 | 5.144 | 0.053 | 46.0 | 2.11 | 24.4 | 11.58 | 0.773 | 0.14 | 0.191 | 0.40 | 0.545 |
| 29H | 28 | 5.150 | 0.053 | 45.9 | 2.38 | 27.8 | 11.72 | 0.868 | 0.09 | 0.199 | 0.32 | 0.576 |
| 29H | 30 | 6.272 | 0.065 | 42.0 | 2.29 | 27.9 | 12.18 | 0.987 | 0.09 | 0.210 | 0.24 | 0.604 |
| 29H | 32 | 4.766 | 0.049 | 52.9 | 2.41 | 30.1 | 12.49 | 1.069 | 0.08 | 0.216 | 0.21 | 0.622 |
| 29H | 34 | 5.700 | 0.059 | 51.2 | 2.42 | 31.1 | 12.85 | 1.170 | 0.08 | 0.224 | 0.18 | 0.640 |
| 29H | 36 | 4.293 | 0.044 | 60.6 | 2.51 | 32.0 | 12.75 | 1.253 | 0.08 | 0.231 | 0.21 | 0.657 |
| 29H | 38 | 5.027 | 0.052 | 56.6 | 2.40 | 30.9 | 12.87 | 1.356 | 0.07 | 0.238 | 0.20 | 0.678 |
| 29H | 40 | 4.942 | 0.051 | 60.2 | 2.41 | 30.1 | 12.49 | 1.455 | 0.07 | 0.245 | 0.21 | 0.698 |
| 29H | 42 | 4.913 | 0.050 | 56.2 | 2.52 | 32.2 | 12.78 | 1.550 | 0.07 | 0.252 | 0.21 | 0.718 |
| 29H | 44 | 4.282 | 0.044 | 65.3 | 2.64 | 33.6 | 12.70 | 1.631 | 0.07 | 0.257 | 0.23 | 0.737 |
| 29H | 46 | 4.086 | 0.042 | 61.7 | 2.68 | 34.1 | 12.73 | 1.722 | 0.06 | 0.263 | 0.22 | 0.757 |
| 29H | 48 | 4.375 | 0.045 | 63.9 | 2.50 | 31.8 | 12.72 | 1.809 | 0.05 | 0.267 | 0.21 | 0.775 |
| 29H | 50 | 4.152 | 0.042 | 69.3 | 2.70 | 34.1 | 12.65 | 1.888 | 0.07 | 0.273 | 0.37 | 0.805 |
| 29H | 52 | 3.898 | 0.040 | 72.1 | 2.56 | 33.1 | 12.92 | 1.960 | 0.08 | 0.278 | 0.26 | 0.823 |
| 29H | 54 | 4.046 | 0.041 | 67.3 | 2.63 | 33.9 | 12.93 | 2.040 | 0.11 | 0.287 | 0.68 | 0.878 |
| 29H | 56 | 4.400 | 0.045 | 68.3 | 2.38 | 31.4 | 13.18 | 2.137 | 0.07 | 0.293 | 0.27 | 0.904 |
| 29H | 58 | 4.315 | 0.044 | 66.7 | 2.76 | 36.0 | 13.04 | 2.214 | 0.07 | 0.299 | 0.27 | 0.924 |
| 29H | 60 | 7.718 | 0.080 | 60.9 | 2.52 | 32.7 | 13.01 | 2.307 | 0.06 | 0.305 | 0.24 | 0.946 |
| 29H | 62 | 5.056 | 0.052 | 60.5 | 2.66 | 35.2 | 13.26 | 2.396 | 0.06 | 0.310 | 0.31 | 0.974 |
| 29H | 64 | 4.778 | 0.049 | 64.6 | 2.53 | 34.0 | 13.46 | 2.495 | 0.06 | 0.316 | 0.25 | 0.999 |
| 29H | 66 | 5.043 | 0.052 | 61.0 | 2.67 | 35.3 | 13.21 | 2.599 | 0.07 | 0.323 | 0.28 | 1.028 |
| 29H | 68 | 5.330 | 0.055 | 59.1 | 2.61 | 34.6 | 13.24 | 2.710 | 0.06 | 0.330 | 0.27 | 1.058 |
| 29H | 70 | 5.108 | 0.052 | 61.1 | 2.35 | 31.2 | 13.28 | 2.807 | 0.08 | 0.338 | 0.26 | 1.083 |
| 29H | 72 | 4.933 | 0.051 | 64.4 | 2.39 | 31.8 | 13.31 | 2.894 | 0.07 | 0.344 | 0.25 | 1.105 |
| 29H | 74 | 4.625 | 0.047 | 67.7 | 2.76 | 36.8 | 13.32 | 2.987 | 0.09 | 0.353 | 0.28 | 1.132 |
| 29H | 76 | 4.752 | 0.049 | 66.7 | 2.49 | 32.9 | 13.25 | 3.087 | 0.07 | 0.360 | 0.27 | 1.158 |
| 29H | 78 | 4.830 | 0.049 | 68.5 | 2.57 | 34.2 | 13.31 | 3.179 | 0.06 | 0.365 | 0.26 | 1.182 |
| 29H | 80 | 6.284 | 0.065 | 55.0 | 2.34 | 30.9 | 13.25 | 3.294 | 0.10 | 0.376 | 0.44 | 1.233 |
| 29H | 82 | 7.689 | 0.080 | 44.9 | 2.32 | 30.3 | 13.06 | 3.454 | 0.07 | 0.386 | 0.26 | 1.275 |
| 29H | 84 | 8.385 | 0.088 | 31.3 | 1.57 | 20.8 | 13.26 | 3.640 | 0.05 | 0.396 | 0.23 | 1.317 |
| 29H | 86 | 10.037 | 0.106 | 36.6 | 1.96 | 25.8 | 13.21 | 3.854 | 0.06 | 0.409 | 0.25 | 1.370 |
| 29H | 88 | 6.300 | 0.065 | 46.0 | 2.42 | 31.9 | 13.19 | 3.984 | 0.08 | 0.419 | 0.26 | 1.404 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29H | 90 | 4.850 | 0.050 | 65.4 | 2.80 | 37.2 | 13.29 | 4.083 | 0.07 | 0.426 | 0.29 | 1.432 |
| 29H | 92 | 4.655 | 0.048 | 66.6 | 2.84 | 37.9 | 13.36 | 4.187 | 0.08 | 0.434 | 0.32 | 1.465 |
| 29H | 94 | 4.681 | 0.048 | 70.2 | 2.80 | 37.3 | 13.33 | 4.282 | 0.07 | 0.441 | 0.34 | 1.498 |
| 29H | 96 | 4.644 | 0.047 | 72.3 | 2.74 | 36.9 | 13.44 | 4.369 | 0.10 | 0.450 | 0.39 | 1.531 |
| 29H | 98 | 4.476 | 0.046 | 73.1 | 2.83 | 38.1 | 13.46 | 4.447 | 0.09 | 0.456 | 0.37 | 1.560 |
| 29H | 100 | 5.099 | 0.052 | 64.0 | 2.67 | 36.1 | 13.51 | 4.545 | 0.23 | 0.478 | 0.84 | 1.642 |
| 29H | 102 | 6.269 | 0.065 | 52.4 | 2.25 | 30.5 | 13.57 | 4.659 | 0.21 | 0.502 | 0.88 | 1.743 |
| 29H | 104 | 6.609 | 0.068 | 45.3 | 2.33 | 31.8 | 13.64 | 4.802 | 0.19 | 0.529 | 1.16 | 1.908 |
| 29H | 106 | 4.531 | 0.046 | 68.9 | 2.50 | 34.1 | 13.64 | 4.885 | 0.08 | 0.535 | 0.38 | 1.940 |
| 29H | 108 | 4.236 | 0.043 | 76.0 | 2.86 | 38.4 | 13.45 | 4.968 | 0.09 | 0.542 | 0.43 | 1.975 |
| 29H | 110 | 4.856 | 0.050 | 74.6 | 2.88 | 38.6 | 13.40 | 5.066 | 0.08 | 0.550 | 0.52 | 2.026 |
| 29H | 112 | 5.156 | 0.053 | 66.0 | 2.59 | 35.1 | 13.56 | 5.158 | 0.09 | 0.558 | 0.37 | 2.060 |
| 29H | 114 | 4.878 | 0.050 | 71.8 | 2.78 | 37.6 | 13.53 | 5.261 | 0.06 | 0.564 | 0.41 | 2.102 |
| 29H | 116 | 5.163 | 0.053 | 71.3 | 2.50 | 33.7 | 13.50 | 5.364 | 0.06 | 0.570 | 0.34 | 2.137 |
| 29H | 118 | 5.754 | 0.059 | 62.4 | 2.44 | 33.0 | 13.55 | 5.477 | 0.05 | 0.576 | 0.31 | 2.173 |
| 29H | 120 | 8.375 | 0.088 | 38.9 | 2.40 | 32.1 | 13.38 | 5.645 | 0.06 | 0.586 | 0.32 | 2.227 |
| 29H | 122 | 5.399 | 0.055 | 68.4 | 2.57 | 34.7 | 13.53 | 5.756 | 0.06 | 0.593 | 0.64 | 2.297 |
| 29H | 124 | 5.062 | 0.052 | 73.2 | 2.74 | 37.5 | 13.66 | 5.851 | 0.09 | 0.601 | 0.53 | 2.348 |
| 29H | 126 | 4.787 | 0.049 | 77.6 | 2.77 | 38.1 | 13.75 | 5.944 | 0.08 | 0.609 | 0.45 | 2.389 |
| 29H | 128 | 4.728 | 0.048 | 78.2 | 2.82 | 39.0 | 13.80 | 6.037 | 0.10 | 0.618 | 0.50 | 2.435 |
| 29H | 130 | 4.801 | 0.049 | 79.2 | 2.83 | 39.3 | 13.89 | 6.135 | 0.06 | 0.624 | 0.50 | 2.484 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3H | 4 | 1.078 | 0.011 | 67.2 | 3.61 | 32.7 | 9.06 | 0.060 | 0.37 | 0.022 | 1.08 | 0.064 |
| 3H | 8 | 2.351 | 0.024 | 62.4 | 3.47 | 31.9 | 9.18 | 0.154 | 0.40 | 0.060 | 1.24 | 0.182 |
| 3H | 12 | 3.099 | 0.031 | 55.7 | 2.98 | 28.1 | 9.44 | 0.267 | 0.44 | 0.110 | 1.21 | 0.318 |
| 3H | 16 | 3.257 | 0.033 | 56.5 | 2.94 | 28.3 | 9.63 | 0.401 | 0.33 | 0.154 | 0.90 | 0.439 |
| 3H | 20 | 3.278 | 0.033 | 59.5 | 3.03 | 29.8 | 9.83 | 0.534 | 0.20 | 0.180 | 0.78 | 0.543 |
| 3H | 24 | 3.677 | 0.037 | 47.2 | 2.22 | 22.6 | 10.18 | 0.675 | 0.18 | 0.205 | 0.66 | 0.636 |
| 3H | 28 | 3.647 | 0.037 | 53.9 | 2.93 | 30.3 | 10.35 | 0.820 | 0.18 | 0.231 | 0.72 | 0.741 |
| 3H | 32 | 4.178 | 0.043 | 48.7 | 2.56 | 26.8 | 10.46 | 0.985 | 0.20 | 0.265 | 0.76 | 0.867 |
| 3H | 36 | 4.094 | 0.042 | 57.5 | 2.86 | 30.6 | 10.71 | 1.147 | 0.15 | 0.289 | 0.58 | 0.960 |
| 3H | 40 | 4.035 | 0.041 | 65.4 | 2.97 | 32.4 | 10.91 | 1.326 | 0.14 | 0.315 | 0.51 | 1.051 |
| 3H | 44 | 4.043 | 0.041 | 62.9 | 3.07 | 33.6 | 10.94 | 1.514 | 0.18 | 0.349 | 0.49 | 1.143 |
| 3H | 48 | 4.112 | 0.042 | 66.3 | 2.99 | 32.4 | 10.84 | 1.686 | 0.16 | 0.376 | 0.47 | 1.223 |
| 3H | 52 | 4.625 | 0.047 | 62.5 | 2.92 | 31.8 | 10.88 | 1.852 | 0.16 | 0.403 | 0.48 | 1.302 |
| 3H | 56 | 4.692 | 0.048 | 57.2 | 2.82 | 30.9 | 10.97 | 1.996 | 0.18 | 0.428 | 0.51 | 1.376 |
| 3H | 60 | 4.290 | 0.044 | 64.2 | 2.96 | 32.1 | 10.84 | 2.212 | 0.19 | 0.470 | 0.53 | 1.490 |
| 3H | 64 | 4.601 | 0.047 | 62.4 | 2.80 | 30.5 | 10.89 | 2.395 | 0.14 | 0.496 | 0.50 | 1.581 |
| 3H | 68 | 4.880 | 0.050 | 61.6 | 2.83 | 30.7 | 10.84 | 2.590 | 0.15 | 0.525 | 0.47 | 1.674 |
| 3H | 72 | 4.473 | 0.046 | 66.6 | 3.03 | 32.6 | 10.77 | 2.771 | 0.15 | 0.551 | 0.47 | 1.759 |
| 3H | 76 | 4.589 | 0.047 | 63.4 | 2.76 | 29.8 | 10.78 | 2.940 | 0.17 | 0.580 | 0.46 | 1.837 |
| 3H | 80 | 4.699 | 0.048 | 62.7 | 3.00 | 32.5 | 10.84 | 3.125 | 0.19 | 0.614 | 0.53 | 1.936 |
| 3H | 84 | 4.418 | 0.045 | 66.4 | 3.13 | 33.6 | 10.73 | 3.315 | 0.18 | 0.649 | 0.47 | 2.026 |
| 3H | 88 | 4.530 | 0.046 | 67.6 | 3.12 | 33.4 | 10.71 | 3.493 | 0.18 | 0.681 | 0.46 | 2.107 |
| 3H | 92 | 4.512 | 0.046 | 67.0 | 3.20 | 34.3 | 10.70 | 3.658 | 0.19 | 0.713 | 0.47 | 2.185 |
| 3H | 96 | 4.470 | 0.046 | 66.5 | 3.18 | 34.3 | 10.79 | 3.841 | 0.17 | 0.744 | 0.45 | 2.268 |
| 3H | 100 | 4.474 | 0.046 | 68.2 | 3.15 | 33.8 | 10.71 | 4.017 | 0.18 | 0.776 | 0.44 | 2.345 |
| 3H | 104 | 4.720 | 0.048 | 67.4 | 3.03 | 32.9 | 10.87 | 4.186 | 0.16 | 0.804 | 0.44 | 2.418 |
| 3H | 108 | 4.674 | 0.048 | 64.8 | 3.08 | 33.4 | 10.84 | 4.392 | 0.17 | 0.839 | 0.43 | 2.506 |
| 3H | 112 | 5.004 | 0.051 | 64.6 | 2.94 | 32.0 | 10.88 | 4.588 | 0.16 | 0.870 | 0.41 | 2.587 |
| 3H | 116 | 5.006 | 0.051 | 65.6 | 3.00 | 33.1 | 11.03 | 4.790 | 0.16 | 0.903 | 0.40 | 2.668 |
| 3H | 120 | 4.681 | 0.048 | 67.6 | 3.03 | 33.0 | 10.89 | 4.953 | 0.17 | 0.930 | 0.40 | 2.733 |
| 3H | 124 | 4.453 | 0.045 | 68.3 | 3.08 | 33.4 | 10.85 | 5.106 | 0.17 | 0.956 | 0.40 | 2.794 |
| 3H | 128 | 4.425 | 0.045 | 68.8 | 3.05 | 33.1 | 10.86 | 5.207 | 0.17 | 0.973 | 0.38 | 2.832 |

| Sta | Depth | Dry | Rho | LOI | TN | TC | TC/TN | Cum Wt | NAIP | Cum NAIP | TP | Cum TP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27H | 4 | 2.415 | 0.024 | 71.0 | 3.56 | 33.8 | 9.49 | 0.084 | 0.28 | 0.024 | 1.06 | 0.089 |
| 27H | 8 | 3.090 | 0.031 | 68.2 | 3.34 | 31.8 | 9.53 | 0.193 | 0.28 | 0.054 | 1.10 | 0.209 |
| 27H | 12 | 3.620 | 0.037 | 63.7 | 3.51 | 33.5 | 9.56 | 0.334 | 0.30 | 0.096 | 1.09 | 0.363 |
| 27H | 16 | 3.993 | 0.041 | 60.4 | 3.22 | 30.8 | 9.56 | 0.490 | 0.29 | 0.142 | 1.13 | 0.541 |
| 27H | 20 | 3.886 | 0.040 | 61.6 | 3.30 | 32.9 | 9.98 | 0.648 | 0.25 | 0.181 | 0.85 | 0.674 |
| 27H | 24 | 4.634 | 0.047 | 59.7 | 2.78 | 30.7 | 11.03 | 0.828 | 0.13 | 0.205 | 0.52 | 0.767 |
| 27H | 28 | 4.586 | 0.047 | 62.1 | 2.89 | 34.0 | 11.75 | 1.018 | 0.05 | 0.215 | 0.28 | 0.819 |
| 27H | 32 | 3.986 | 0.041 | 68.0 | 2.73 | 33.0 | 12.08 | 1.179 | 0.03 | 0.220 | 0.23 | 0.856 |
| 27H | 36 | 4.317 | 0.044 | 62.7 | 2.65 | 32.1 | 12.09 | 1.348 | 0.03 | 0.225 | 0.22 | 0.894 |
| 27H | 40 | 4.571 | 0.047 | 58.6 | 2.38 | 29.4 | 12.37 | 1.539 | 0.06 | 0.237 | 0.36 | 0.963 |
| 27H | 44 | 4.320 | 0.044 | 64.7 | 2.68 | 33.3 | 12.43 | 1.719 | 0.03 | 0.241 | 0.19 | 0.997 |
| 27H | 48 | 5.215 | 0.054 | 54.8 | 2.33 | 29.3 | 12.57 | 1.925 | 0.02 | 0.245 | 0.17 | 1.033 |
| 27H | 52 | 6.368 | 0.066 | 45.6 | 2.08 | 26.8 | 12.88 | 2.178 | 0.02 | 0.249 | 0.13 | 1.065 |
| 27H | 56 | 5.478 | 0.056 | 57.9 | 2.23 | 28.9 | 12.98 | 2.374 | 0.02 | 0.253 | 0.20 | 1.104 |
| 27H | 60 | 8.036 | 0.084 | 37.9 | 2.27 | 30.0 | 13.20 | 2.756 | 0.02 | 0.262 | 0.21 | 1.183 |
| 27H | 64 | 4.635 | 0.047 | 61.1 | 2.76 | 37.3 | 13.53 | 2.949 | 0.06 | 0.273 | 0.77 | 1.332 |
| 27H | 68 | 4.294 | 0.044 | 67.4 | 2.96 | 41.6 | 14.06 | 3.110 | 0.07 | 0.283 | 0.38 | 1.393 |
| 27H | 72 | 3.980 | 0.041 | 74.3 | 2.90 | 41.8 | 14.40 | 3.271 | 0.05 | 0.292 | 0.44 | 1.464 |
| 27H | 76 | 4.039 | 0.041 | 78.0 | 2.95 | 42.0 | 14.22 | 3.428 | 0.07 | 0.302 | 0.40 | 1.527 |
| 27H | 80 | 4.511 | 0.046 | 73.9 | 2.80 | 39.5 | 14.11 | 3.610 | 0.04 | 0.310 | 0.41 | 1.601 |
| 27H | 84 | 4.846 | 0.050 | 68.2 | 2.71 | 38.6 | 14.23 | 3.807 | 0.07 | 0.324 | 0.41 | 1.681 |
| 27H | 88 | 7.813 | 0.082 | 40.4 | 2.66 | 38.1 | 14.32 | 4.121 | 0.05 | 0.341 | 0.96 | 1.983 |
| 27H | 92 | 4.975 | 0.051 | 65.1 | 2.74 | 40.4 | 14.74 | 4.334 | 0.10 | 0.363 | 0.55 | 2.101 |
| 27H | 96 | 3.734 | 0.038 | 83.5 | 2.95 | 43.5 | 14.74 | 4.485 | 0.08 | 0.375 | 0.43 | 2.165 |
| 27H | 100 | 3.758 | 0.038 | 83.8 | 2.86 | 42.8 | 14.97 | 4.625 | 0.03 | 0.380 | 0.41 | 2.223 |
| 27H | 104 | 3.925 | 0.040 | 80.7 | 2.88 | 41.6 | 14.45 | 4.781 | 0.11 | 0.397 | 0.43 | 2.290 |
| 27H | 108 | 4.282 | 0.044 | 78.6 | 2.93 | 42.3 | 14.43 | 4.961 | 0.10 | 0.415 | 0.56 | 2.391 |
| 27H | 112 | 4.666 | 0.048 | 76.7 | 2.73 | 40.9 | 15.00 | 5.136 | 0.06 | 0.426 | 0.44 | 2.467 |
| 27H | 116 | 4.902 | 0.050 | 72.5 | 2.64 | 40.2 | 15.21 | 5.345 | 0.07 | 0.440 | 0.53 | 2.578 |
| 27H | 120 | 5.179 | 0.053 | 63.8 | 2.35 | 36.2 | 15.40 | 5.547 | 0.05 | 0.451 | 0.37 | 2.652 |
| 27H | 124 | 5.417 | 0.056 | 60.8 | 2.10 | 33.4 | 15.90 | 5.788 | 0.04 | 0.461 | 0.36 | 2.739 |
| 27H | 128 | 6.207 | 0.064 | 53.7 | 1.85 | 30.9 | 16.69 | 6.008 | 0.05 | 0.473 | 0.69 | 2.891 |
| 27H | 132 | 6.308 | 0.065 | 52.0 | 1.86 | 31.3 | 16.84 | 6.263 | 0.04 | 0.482 | 0.33 | 2.974 |
| 27H | 136 | 8.298 | 0.087 | 40.7 | 1.48 | 26.7 | 18.04 | 6.613 | 0.05 | 0.498 | 0.43 | 3.126 |
| 27H | 140 | 8.067 | 0.084 | 44.5 | 1.64 | 28.9 | 17.65 | 6.991 | 0.03 | 0.511 | 0.38 | 3.270 |
| 27H | 144 | 7.581 | 0.079 | 50.0 | 1.70 | 30.2 | 17.78 | 7.274 | 0.04 | 0.521 | 0.30 | 3.355 |

# APPENDIX I

## RADIOMETRIC DATA
## LAKE DORA
## HISTORIC CORES

Radiometric data for 7 historic cores
collected during Phase I and Phase II, Lake Dora.
See Appendix A for collection date, location and description of cores.

CODES:
- Depth is depth (cm)
- Total $^{210}Pb$ is activity (dpm $g^{-1}$)
- $^{226}Ra$ is activity (dpm $g^{-1}$)
- $^{137}Cs$ is activity (dpm $g^{-1}$)
- $^{210}Pb$ error is error in Total $^{210}Pb$ activity (dpm $g^{-1}$)
- $^{226}Ra$ error is error in $^{226}Ra$ activity (dpm $g^{-1}$)
- $^{137}Cs$ error is error in $^{137}Cs$ activity (dpm $g^{-1}$)
- Excess $^{210}Pb$ is activity (dpm $g^{-1}$)
- Excess $^{210}Pb$ error is error in $^{210}Pb$ activity (dpm $g^{-1}$)
- Age is age in years at relative to bottom of each section
- Date is calendar year at each depth
- Age error is error in age in years
- MSR is mass sedimentation rate (mg $cm^{-2}$ $g^{-1}$)
- MSR error is error in mass sedimentation rate (mg $cm^{-2}$ $g^{-1}$)

# Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-3H-95** | | | | | | | | | | | | | |
| 2 | 15.29 | 1.80 | 1.08 | 1.18 | 1.00 | 0.14 | 13.74 | 1.56 | 0.2 | 1995.3 | 0.6 | 79.73 | 9.17 |
| 4 | 10.64 | 1.80 | 0.01 | 1.05 | 0.59 | 0.05 | 9.00 | 1.22 | 0.4 | 1995.1 | 0.6 | 120.98 | 16.50 |
| 6 | 13.26 | 1.80 | 0.95 | 0.78 | 0.74 | 0.12 | 11.74 | 1.09 | 0.6 | 1994.9 | 0.6 | 92.22 | 8.68 |
| 8 | 17.57 | 1.80 | 1.84 | 1.32 | 1.00 | 0.23 | 16.07 | 1.67 | 1.0 | 1994.4 | 0.6 | 66.70 | 7.05 |
| 10 | 16.61 | 1.80 | 1.40 | 1.00 | 1.09 | 0.16 | 15.15 | 1.50 | 1.6 | 1993.9 | 0.6 | 69.68 | 7.00 |
| 12 | 20.23 | 1.80 | 1.34 | 1.20 | 0.63 | 0.17 | 18.78 | 1.38 | 2.3 | 1993.1 | 0.6 | 55.09 | 4.16 |
| 14 | 22.67 | 1.80 | 2.12 | 1.25 | 0.94 | 0.22 | 21.37 | 1.59 | 3.2 | 1992.3 | 0.6 | 47.19 | 3.62 |
| 16 | 24.93 | 1.80 | 1.66 | 0.76 | 0.54 | 0.10 | 23.57 | 0.94 | 4.3 | 1991.1 | 0.6 | 41.46 | 1.79 |
| 18 | 17.41 | 1.80 | 1.32 | 0.78 | 0.53 | 0.12 | 16.00 | 0.96 | 4.8 | 1990.7 | 0.7 | 59.61 | 3.70 |
| 20 | 24.97 | 1.80 | 1.63 | 1.25 | 1.74 | 0.17 | 23.62 | 2.16 | 6.5 | 1988.9 | 0.7 | 39.03 | 3.71 |
| 22 | 23.47 | 1.80 | 2.00 | 0.91 | 0.43 | 0.15 | 22.20 | 1.03 | 8.3 | 1987.1 | 0.7 | 39.29 | 1.97 |
| 24 | 21.72 | 1.80 | 1.89 | 0.96 | 0.38 | 0.15 | 20.30 | 1.05 | 9.9 | 1985.6 | 0.7 | 40.78 | 2.25 |
| 26 | 20.43 | 1.80 | 1.75 | 1.05 | 0.62 | 0.17 | 19.10 | 1.24 | 11.4 | 1984.0 | 0.7 | 41.32 | 2.83 |
| 28 | 20.36 | 1.80 | 1.91 | 1.07 | 0.42 | 0.18 | 18.93 | 1.17 | 13.5 | 1982.0 | 0.7 | 39.40 | 2.60 |
| 30 | 17.41 | 1.80 | 2.19 | 1.32 | 0.45 | 0.26 | 16.00 | 1.43 | 15.4 | 1980.0 | 0.7 | 43.79 | 4.11 |
| 32 | 13.22 | 1.80 | 3.82 | 0.72 | 0.43 | 0.21 | 11.65 | 0.86 | 16.9 | 1978.6 | 0.7 | 57.06 | 4.41 |
| 34 | 13.01 | 1.80 | 5.04 | 0.79 | 0.33 | 0.27 | 11.50 | 0.88 | 18.1 | 1977.4 | 0.7 | 55.48 | 4.43 |
| 36 | 12.57 | 1.80 | 5.89 | 0.84 | 0.60 | 0.30 | 10.98 | 1.04 | 19.5 | 1975.9 | 0.8 | 55.70 | 5.50 |
| 38 | 15.42 | 1.80 | 4.29 | 0.61 | 0.38 | 0.18 | 13.97 | 0.73 | 21.2 | 1974.2 | 0.8 | 41.71 | 2.38 |
| 40 | 11.63 | 1.80 | 4.06 | 0.82 | 0.42 | 0.26 | 10.03 | 0.94 | 22.6 | 1972.8 | 0.8 | 55.38 | 5.40 |
| 42 | 13.47 | 1.80 | 4.33 | 0.76 | 0.57 | 0.24 | 11.95 | 0.96 | 24.6 | 1970.9 | 0.8 | 44.09 | 3.78 |
| 44 | 12.63 | 1.80 | 5.62 | 0.78 | 0.38 | 0.27 | 11.05 | 0.88 | 26.2 | 1969.2 | 0.8 | 45.09 | 3.80 |
| 46 | 13.75 | 1.80 | 5.86 | 0.63 | 0.39 | 0.21 | 12.22 | 0.75 | 28.2 | 1967.3 | 0.9 | 38.53 | 2.60 |
| 48 | 13.97 | 1.80 | 6.21 | 0.70 | 0.52 | 0.24 | 12.42 | 0.89 | 30.5 | 1965.0 | 0.9 | 35.49 | 2.75 |
| 50 | 14.74 | 1.80 | 6.50 | 0.66 | 0.33 | 0.24 | 13.26 | 0.75 | 33.1 | 1962.4 | 0.9 | 30.83 | 1.97 |
| 52 | 11.10 | 1.80 | 5.34 | 0.47 | 0.27 | 0.16 | 9.50 | 0.55 | 35.2 | 1960.2 | 1.0 | 39.96 | 2.61 |
| 54 | 16.47 | 1.80 | 4.33 | 0.94 | 0.70 | 0.27 | 15.03 | 1.19 | 39.1 | 1956.3 | 1.0 | 22.99 | 2.04 |
| 56 | 11.13 | 1.80 | 2.55 | 0.64 | 0.45 | 0.15 | 9.53 | 0.79 | 41.9 | 1953.5 | 1.1 | 32.64 | 3.00 |
| 58 | 10.71 | 1.80 | 2.03 | 0.55 | 0.35 | 0.13 | 9.13 | 0.66 | 44.8 | 1950.7 | 1.1 | 31.19 | 2.56 |
| 60 | 11.54 | 1.80 | 1.35 | 0.73 | 1.05 | 0.12 | 9.95 | 1.29 | 48.3 | 1947.2 | 1.1 | 25.94 | 3.65 |
| 62 | 10.56 | 1.80 | 0.97 | 0.48 | 0.34 | 0.08 | 8.98 | 0.60 | 51.9 | 1943.5 | 1.2 | 25.73 | 2.04 |
| 64 | 10.35 | 1.80 | 0.54 | 0.57 | 0.27 | 0.07 | 8.73 | 0.64 | 55.8 | 1939.7 | 1.3 | 23.55 | 2.04 |
| 66 | 11.11 | 1.80 | 1.00 | 0.54 | 0.40 | 0.09 | 9.54 | 0.68 | 60.3 | 1935.2 | 1.5 | 18.93 | 1.66 |
| 68 | 9.53 | 1.80 | 0.74 | 0.54 | 0.53 | 0.08 | 7.90 | 0.77 | 65.1 | 1930.4 | 1.6 | 19.78 | 2.27 |
| 70 | 10.44 | 1.80 | 0.87 | 0.53 | 0.39 | 0.08 | 8.85 | 0.67 | 71.9 | 1923.6 | 1.9 | 14.75 | 1.47 |
| 72 | 8.56 | 1.80 | 0.43 | 0.46 | 0.50 | 0.05 | 6.91 | 0.69 | 78.2 | 1917.2 | 2.2 | 15.38 | 1.94 |
| 74 | 6.66 | 1.80 | 0.61 | 0.31 | 0.34 | 0.05 | 4.97 | 0.47 | 83.5 | 1911.9 | 2.5 | 17.83 | 2.22 |
| 76 | 6.44 | 1.80 | 0.75 | 0.41 | 0.28 | 0.07 | 4.74 | 0.51 | 90.5 | 1905.0 | 3.0 | 15.47 | 2.27 |
| 78 | 6.51 | 1.80 | 0.49 | 0.37 | 0.31 | 0.05 | 4.82 | 0.49 | 98.5 | 1896.9 | 3.7 | 12.06 | 1.87 |
| 80 | 6.11 | 1.80 | 0.87 | 0.46 | 0.41 | 0.09 | 4.40 | 0.62 | 109.2 | 1886.3 | 4.8 | 9.88 | 2.11 |
| 82 | 2.69 | 1.80 | 0.47 | 0.27 | 1.18 | 0.05 | 0.91 | 1.21 | 112.1 | 1883.4 | 3.4 | 38.42 | 53.60 |
| 84 | 3.51 | 1.80 | 0.59 | 0.33 | 0.33 | 0.06 | 1.75 | 0.47 | 117.4 | 1878.1 | 3.7 | 17.62 | 5.49 |
| 86 | 4.36 | 1.80 | 0.45 | 0.37 | 0.27 | 0.06 | 2.62 | 0.47 | 127.3 | 1868.1 | 4.6 | 9.32 | 2.29 |
| 88 | 3.13 | 1.80 | 0.42 | 0.19 | 0.16 | 0.03 | 1.40 | 0.26 | 134.6 | 1860.9 | 5.5 | 13.31 | 3.44 |
| 90 | 3.73 | 1.80 | 0.38 | 0.27 | 0.23 | 0.04 | 2.03 | 0.37 | 150.7 | 1844.7 | 8.3 | 6.44 | 2.04 |
| 92 | 4.18 | 1.80 | 0.58 | 0.34 | 0.58 | 0.06 | 2.43 | 0.67 | | | | | |
| 94 | 2.53 | 1.80 | 0.54 | 0.23 | 0.19 | 0.05 | 0.77 | 0.31 | | | | | |
| 96 | 1.46 | 1.80 | 0.52 | 0.19 | 0.19 | 0.04 | 0.00 | 0.19 | | | | | |
| 98 | 1.68 | 1.80 | 0.36 | 0.17 | 0.16 | 0.03 | 0.00 | 0.16 | | | | | |

## Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-10H-95** | | | | | | | | | | | | | |
| 2 | 21.42 | 2.00 | | 1.63 | 0.60 | | 20.63 | 1.83 | 0.0 | 1995.6 | 0.6 | 51.00 | |
| 4 | 21.42 | 2.00 | 1.17 | 1.63 | 0.61 | 0.17 | 19.92 | 1.78 | 0.1 | 1995.4 | 0.6 | 59.63 | 5.39 |
| 6 | 13.34 | 2.00 | 1.33 | 1.61 | 0.47 | 0.23 | 11.57 | 1.71 | 0.3 | 1995.2 | 0.6 | 102.10 | 15.19 |
| 8 | 18.15 | 2.00 | 0.72 | 1.72 | 1.06 | 0.17 | 16.53 | 2.05 | 0.5 | 1994.9 | 0.6 | 70.98 | 8.89 |
| 10 | 20.32 | 2.00 | 0.74 | 1.53 | 1.58 | 0.15 | 18.68 | 2.23 | 0.9 | 1994.5 | 0.6 | 62.13 | 7.49 |
| 12 | 24.54 | 2.00 | 1.09 | 1.59 | 0.73 | 0.18 | 23.05 | 1.78 | 1.5 | 1994.0 | 0.6 | 49.62 | 3.91 |
| 14 | 25.00 | 2.00 | 1.00 | 1.63 | 0.78 | 0.17 | 23.47 | 1.83 | 2.3 | 1993.1 | 0.6 | 47.71 | 3.83 |
| 16 | 23.91 | 2.00 | 1.48 | 1.23 | 0.72 | 0.16 | 22.34 | 1.45 | 3.1 | 1992.4 | 0.6 | 48.86 | 3.27 |
| 18 | 23.89 | 2.00 | 1.17 | 1.22 | 0.32 | 0.14 | 22.33 | 1.28 | 4.0 | 1991.4 | 0.6 | 47.58 | 2.84 |
| 20 | 21.99 | 2.00 | 1.12 | 1.05 | 0.40 | 0.14 | 21.23 | 1.18 | 5.1 | 1990.4 | 0.6 | 48.54 | 2.83 |
| 22 | 20.09 | 2.00 | 1.17 | 1.05 | 0.40 | 0.13 | 18.46 | 1.14 | 6.0 | 1989.4 | 0.6 | 54.13 | 3.48 |
| 24 | 28.29 | 2.00 | 1.77 | 0.99 | 0.35 | 0.13 | 26.87 | 1.07 | 7.3 | 1988.1 | 0.6 | 35.89 | 1.55 |
| 26 | 28.25 | 2.00 | 2.10 | 1.87 | 0.40 | 0.27 | 26.80 | 1.95 | 8.9 | 1986.5 | 0.6 | 34.40 | 2.62 |
| 28 | 26.62 | 2.00 | 1.67 | 1.21 | 0.32 | 0.16 | 25.17 | 1.27 | 10.8 | 1984.6 | 0.6 | 34.69 | 1.89 |
| 30 | 26.32 | 2.00 | 1.56 | 1.67 | 0.45 | 0.22 | 24.83 | 1.76 | 12.4 | 1983.0 | 0.7 | 33.28 | 2.48 |
| 32 | 21.72 | 2.00 | 1.81 | 1.03 | 0.34 | 0.16 | 20.15 | 1.11 | 14.4 | 1981.1 | 0.7 | 38.80 | 2.29 |
| 34 | 26.96 | 2.00 | 2.32 | 1.55 | 0.49 | 0.24 | 25.48 | 1.66 | 16.7 | 1978.8 | 0.7 | 28.74 | 2.00 |
| 36 | 18.93 | 2.00 | 2.51 | 0.91 | 0.30 | 0.17 | 17.31 | 0.98 | 18.3 | 1977.1 | 0.7 | 39.78 | 2.42 |
| 38 | 21.07 | 2.00 | 2.60 | 0.73 | 0.25 | 0.13 | 19.47 | 0.78 | 20.4 | 1975.0 | 0.7 | 33.35 | 1.52 |
| 40 | 20.01 | 2.00 | 3.06 | 1.08 | 0.38 | 0.22 | 18.42 | 1.17 | 22.4 | 1973.1 | 0.7 | 33.10 | 2.25 |
| 42 | 16.23 | 2.00 | 3.33 | 0.83 | 0.31 | 0.19 | 14.53 | 0.90 | 24.3 | 1971.2 | 0.8 | 39.54 | 2.65 |
| 44 | 16.10 | 2.00 | 4.40 | 0.83 | 0.27 | 0.22 | 14.42 | 0.89 | 26.3 | 1969.1 | 0.8 | 37.45 | 2.51 |
| 46 | 13.67 | 2.00 | 5.11 | 0.75 | 0.24 | 0.23 | 11.92 | 0.80 | 28.2 | 1967.2 | 0.8 | 42.62 | 3.09 |
| 48 | 12.66 | 2.00 | 5.00 | 0.54 | 0.22 | 0.16 | 10.91 | 0.60 | 30.1 | 1965.4 | 0.9 | 43.92 | 2.67 |
| 50 | 14.40 | 2.00 | 5.32 | 0.58 | 0.21 | 0.17 | 12.66 | 0.63 | 32.8 | 1962.7 | 0.9 | 35.28 | 2.02 |
| 52 | 12.01 | 2.00 | 3.93 | 0.67 | 0.28 | 0.19 | 10.24 | 0.74 | 34.9 | 1960.6 | 0.9 | 40.44 | 3.19 |
| 54 | 12.33 | 2.00 | 3.21 | 0.87 | 0.30 | 0.22 | 10.55 | 0.94 | 37.3 | 1958.2 | 1.0 | 36.60 | 3.54 |
| 56 | 10.94 | 2.00 | 3.70 | 0.50 | 0.21 | 0.14 | 9.15 | 0.56 | 40.7 | 1954.8 | 1.0 | 38.56 | 2.71 |
| 58 | 12.12 | 2.00 | 3.27 | 0.75 | 0.34 | 0.19 | 10.34 | 0.84 | 44.8 | 1950.7 | 1.1 | 30.40 | 2.80 |
| 60 | 9.74 | 2.00 | 2.73 | 0.67 | 0.31 | 0.17 | 7.92 | 0.75 | 46.7 | 1948.7 | 1.1 | 36.10 | 3.74 |
| 62 | 10.86 | 2.00 | 3.26 | 0.48 | 0.20 | 0.12 | 9.04 | 0.53 | 50.8 | 1944.7 | 1.3 | 28.79 | 2.08 |
| 64 | 13.04 | 2.00 | 2.70 | 0.86 | 0.33 | 0.19 | 11.30 | 0.94 | 57.3 | 1938.2 | 1.4 | 19.57 | 1.96 |
| 66 | 11.76 | 2.00 | 1.89 | 0.59 | 0.22 | 0.11 | 9.97 | 0.64 | 62.6 | 1932.9 | 1.6 | 18.45 | 1.53 |
| 68 | 10.37 | 2.00 | 1.22 | 0.72 | 0.38 | 0.12 | 8.57 | 0.83 | 70.2 | 1925.2 | 1.8 | 17.56 | 2.13 |
| 70 | 9.70 | 2.00 | 1.25 | 0.46 | 0.38 | 0.08 | 7.87 | 0.61 | 75.7 | 1919.7 | 2.1 | 15.57 | 1.60 |
| 72 | 7.75 | 2.00 | 0.67 | 0.38 | 0.19 | 0.05 | 5.89 | 0.43 | 85.7 | 1909.8 | 2.7 | 16.41 | 1.84 |
| 74 | 5.92 | 2.00 | 0.91 | 0.36 | 0.27 | 0.06 | 4.01 | 0.46 | 95.6 | 1899.8 | 3.4 | 17.69 | 2.89 |
| 76 | 5.58 | 2.00 | 0.52 | 0.33 | 0.27 | 0.04 | 3.66 | 0.43 | 108.3 | 1887.1 | 4.6 | 13.63 | 2.59 |
| 78 | 3.27 | 2.00 | 0.59 | 0.33 | 0.33 | 0.06 | 1.30 | 0.47 | 114.9 | 1880.6 | 5.0 | 28.39 | 12.32 |
| 80 | 3.73 | 2.00 | 0.74 | 0.32 | 0.26 | 0.05 | 1.77 | 0.42 | 118.1 | 1877.3 | 5.5 | 17.86 | 5.30 |
| 82 | 4.73 | 2.00 | 1.00 | 0.44 | 0.33 | 0.08 | 2.80 | 0.56 | 139.3 | 1856.1 | 8.7 | 7.84 | 2.81 |
| 84 | 3.02 | 2.00 | 0.55 | 0.33 | 0.27 | 0.05 | 1.05 | 0.43 | 151.3 | 1844.1 | 11.1 | 12.37 | 7.35 |
| 86 | 2.29 | 2.00 | 0.65 | 0.32 | 0.42 | 0.06 | 0.30 | 0.53 | 154.8 | 1840.6 | 10.5 | 34.17 | 65.80 |
| 88 | 4.23 | 2.00 | 0.74 | 0.40 | 0.26 | 0.07 | 2.29 | 0.48 | | | | | |
| 90 | 1.14 | 2.00 | 0.46 | 0.27 | 0.42 | 0.04 | 0.00 | 0.42 | | | | | |
| 92 | 1.86 | 2.00 | 0.40 | 0.31 | 0.32 | 0.05 | 0.00 | 0.32 | | | | | |
| 94 | 2.05 | 2.00 | 0.49 | 0.31 | 0.33 | 0.05 | 0.00 | 0.33 | | | | | |
| 96 | 3.60 | 2.00 | 0.44 | 0.44 | 0.21 | 0.06 | 0.00 | 0.21 | | | | | |
| 98 | 2.18 | 2.00 | 0.44 | 0.27 | 0.34 | 0.04 | | | | | | | |

## Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-14H-95** | | | | | | | | | | | | | |
| 2 | 19.70 | 2.05 | 1.19 | 1.47 | 0.35 | 0.19 | 17.97 | 1.54 | 0.7 | 1994.8 | 0.6 | 35.95 | 3.16 |
| 4 | 22.71 | 2.05 | 1.02 | 1.42 | 0.27 | 0.16 | 21.04 | 1.47 | 1.4 | 1994.1 | 0.7 | 30.05 | 2.17 |
| 6 | 26.76 | 2.05 | 1.22 | 1.34 | 0.30 | 0.15 | 25.17 | 1.40 | 3.0 | 1992.5 | 0.7 | 24.24 | 1.43 |
| 8 | 29.82 | 2.05 | 1.87 | 1.67 | 0.35 | 0.22 | 28.30 | 1.74 | 5.0 | 1990.5 | 0.7 | 20.40 | 1.33 |
| 10 | 24.88 | 2.05 | 1.76 | 1.25 | 0.33 | 0.17 | 23.30 | 1.32 | 6.8 | 1988.7 | 0.7 | 23.36 | 1.41 |
| 12 | 18.41 | 2.05 | 1.13 | 1.09 | 0.26 | 0.14 | 16.68 | 1.14 | 8.2 | 1987.3 | 0.7 | 31.05 | 2.24 |
| 14 | 20.83 | 2.05 | 2.38 | 0.96 | 0.27 | 0.17 | 19.17 | 1.02 | 10.4 | 1985.1 | 0.7 | 25.54 | 1.47 |
| 16 | 21.80 | 2.05 | 1.92 | 1.15 | 0.30 | 0.18 | 20.13 | 1.21 | 13.9 | 1981.5 | 0.7 | 22.26 | 1.47 |
| 18 | 21.93 | 2.05 | 1.90 | 1.17 | 0.35 | 0.18 | 20.27 | 1.24 | 17.2 | 1978.2 | 0.8 | 19.84 | 1.33 |
| 20 | 20.43 | 2.05 | 2.14 | 0.87 | 0.26 | 0.14 | 18.76 | 0.92 | 20.6 | 1974.9 | 0.8 | 19.33 | 1.07 |
| 22 | 17.73 | 2.05 | 3.25 | 0.57 | 0.17 | 0.12 | 15.98 | 0.61 | 23.9 | 1971.5 | 0.8 | 20.46 | 0.93 |
| 24 | 14.40 | 2.05 | 3.13 | 0.60 | 0.18 | 0.13 | 12.60 | 0.64 | 27.6 | 1967.9 | 0.9 | 23.25 | 1.35 |
| 26 | 11.24 | 2.05 | 4.21 | 0.74 | 0.25 | 0.22 | 9.36 | 0.79 | 30.5 | 1964.9 | 0.9 | 28.24 | 2.59 |
| 28 | 11.34 | 2.05 | 4.20 | 0.64 | 0.24 | 0.18 | 9.48 | 0.70 | 33.8 | 1961.7 | 1.0 | 25.33 | 2.07 |
| 30 | 11.33 | 2.05 | 3.00 | 0.99 | 0.30 | 0.24 | 9.46 | 1.05 | 37.5 | 1958.0 | 1.0 | 22.78 | 2.76 |
| 32 | 8.93 | 2.05 | 2.36 | 0.52 | 0.19 | 0.12 | 6.95 | 0.56 | 40.7 | 1954.7 | 1.0 | 27.86 | 2.49 |
| 34 | 9.35 | 2.05 | 1.64 | 0.50 | 0.19 | 0.10 | 7.44 | 0.55 | 44.7 | 1950.7 | 1.1 | 23.23 | 1.94 |
| 36 | 12.37 | 2.05 | 0.88 | 0.56 | 0.20 | 0.07 | 10.51 | 0.61 | 51.5 | 1943.9 | 1.2 | 13.92 | 1.00 |
| 38 | 10.93 | 2.05 | 1.24 | 0.53 | 0.18 | 0.08 | 9.06 | 0.57 | 59.3 | 1936.1 | 1.4 | 12.86 | 1.05 |
| 40 | 10.47 | 2.05 | 0.77 | 0.48 | 0.16 | 0.06 | 8.58 | 0.52 | 68.4 | 1927.1 | 1.7 | 10.46 | 0.88 |
| 42 | 11.39 | 2.05 | 1.00 | 0.46 | 0.16 | 0.06 | 9.52 | 0.50 | 85.2 | 1910.2 | 2.5 | 6.35 | 0.59 |
| 44 | 7.49 | 2.05 | 0.91 | 0.42 | 0.15 | 0.06 | 5.55 | 0.45 | 104.4 | 1891.0 | 4.0 | 6.23 | 0.93 |
| 46 | 4.57 | 2.05 | 0.52 | 0.34 | 0.13 | 0.05 | 2.57 | 0.37 | 122.1 | 1873.3 | 6.0 | 7.57 | 1.88 |
| 48 | 2.52 | 2.05 | 0.59 | 0.33 | 0.13 | 0.05 | 0.47 | 0.36 | 126.0 | 1869.4 | 6.0 | 28.90 | 23.84 |
| 50 | 4.40 | 2.05 | 0.80 | 0.44 | 0.19 | 0.07 | 2.39 | 0.49 | 164.1 | 1831.4 | 12.8 | 3.16 | 1.49 |
| 52 | 3.36 | 2.05 | 0.74 | 0.35 | 0.16 | 0.06 | 1.33 | 0.39 | | | | | |
| 54 | 2.18 | 2.05 | 0.59 | 0.35 | 0.18 | 0.06 | 0.00 | 0.18 | | | | | |
| 56 | 1.92 | 2.05 | 0.48 | 0.00 | 0.13 | 0.04 | 0.00 | 0.13 | | | | | |
| 58 | 2.06 | 2.05 | 0.48 | 0.00 | 0.16 | 0.05 | 0.00 | 0.16 | | | | | |

## Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-21H-96** | | | | | | | | | | | | | |
| 2 | 18.73 | 1.93 | 0.49 | 1.01 | 1.00 | 0.08 | 16.86 | 1.42 | 0.4 | 1995.7 | 0.8 | 36.36 | 3.15 |
| 4 | 20.14 | 1.93 | 1.37 | 1.56 | 0.54 | 0.21 | 18.27 | 1.66 | 1.2 | 1994.9 | 0.8 | 32.93 | 3.09 |
| 6 | 23.04 | 1.93 | 1.54 | 1.48 | 0.73 | 0.20 | 21.18 | 1.65 | 2.2 | 1993.9 | 0.8 | 27.63 | 2.24 |
| 8 | 22.66 | 1.93 | 1.54 | 1.76 | 2.14 | 0.24 | 20.81 | 2.77 | 3.1 | 1993.1 | 0.8 | 27.32 | 3.72 |
| 10 | 18.64 | 1.93 | 1.02 | 1.49 | 0.60 | 0.18 | 16.78 | 1.62 | 4.0 | 1992.1 | 0.8 | 32.94 | 3.28 |
| 12 | 25.79 | 1.93 | 1.27 | 1.47 | 0.42 | 0.17 | 23.95 | 1.53 | 5.6 | 1990.6 | 0.8 | 22.19 | 1.51 |
| 14 | 25.06 | 1.93 | 1.49 | 1.23 | 0.29 | 0.15 | 23.22 | 1.26 | 7.6 | 1988.5 | 0.8 | 21.64 | 1.29 |
| 16 | 21.28 | 1.93 | 1.19 | 1.59 | 0.27 | 0.19 | 19.44 | 1.62 | 9.4 | 1986.8 | 0.9 | 24.38 | 2.15 |
| 18 | 26.95 | 1.93 | 1.55 | 1.71 | 0.41 | 0.21 | 25.12 | 1.77 | 12.0 | 1984.1 | 0.9 | 17.62 | 1.35 |
| 20 | 26.98 | 1.93 | 0.99 | 1.02 | 0.34 | 0.10 | 25.17 | 1.08 | 15.3 | 1980.8 | 0.9 | 16.03 | 0.81 |
| 22 | 12.80 | 1.93 | 0.79 | 0.58 | 3.00 | 0.07 | 10.92 | 3.05 | 16.8 | 1979.4 | 0.9 | 34.29 | 9.84 |
| 24 | 18.03 | 1.93 | 0.97 | 0.79 | 0.54 | 0.09 | 16.18 | 0.96 | 21.1 | 1975.1 | 0.9 | 21.17 | 1.42 |
| 26 | 15.42 | 1.93 | 1.06 | 0.87 | 0.36 | 0.11 | 13.56 | 0.95 | 25.7 | 1970.4 | 0.9 | 21.98 | 1.73 |
| 28 | 14.08 | 1.93 | 1.11 | 0.50 | 0.23 | 0.07 | 12.21 | 0.55 | 31.0 | 1965.1 | 1.0 | 20.92 | 1.14 |
| 30 | 13.69 | 1.93 | 1.82 | 0.58 | 0.27 | 0.10 | 11.81 | 0.64 | 36.0 | 1960.1 | 1.1 | 18.42 | 1.20 |
| 32 | 11.49 | 1.93 | 2.25 | 0.87 | 0.37 | 0.18 | 9.61 | 0.95 | 40.4 | 1955.8 | 1.1 | 19.56 | 2.16 |
| 34 | 8.08 | 1.93 | 1.09 | 0.45 | 0.20 | 0.07 | 6.19 | 0.49 | 43.8 | 1952.3 | 1.2 | 26.89 | 2.41 |
| 36 | 8.56 | 1.93 | 1.11 | 0.84 | 0.31 | 0.14 | 6.67 | 0.90 | 47.4 | 1948.7 | 1.1 | 22.37 | 3.29 |
| 38 | 9.65 | 1.93 | 0.95 | 0.78 | 0.30 | 0.11 | 7.76 | 0.84 | 52.1 | 1944.0 | 1.2 | 16.89 | 2.04 |
| 40 | 8.03 | 1.93 | 1.15 | 0.64 | 0.30 | 0.11 | 6.14 | 0.71 | 56.9 | 1939.2 | 1.2 | 18.44 | 2.37 |
| 42 | 7.20 | 1.93 | 0.58 | 0.34 | 0.22 | 0.04 | 5.42 | 0.41 | 60.9 | 1935.3 | 1.3 | 18.21 | 1.60 |
| 44 | 7.52 | 1.93 | 0.63 | 0.31 | 0.16 | 0.04 | 5.75 | 0.36 | 66.6 | 1929.6 | 1.4 | 14.77 | 1.15 |
| 46 | 6.91 | 1.93 | 0.66 | 0.30 | 0.16 | 0.04 | 5.13 | 0.34 | 72.3 | 1923.8 | 1.6 | 13.86 | 1.18 |
| 48 | 8.91 | 1.93 | 0.79 | 0.44 | 0.23 | 0.06 | 7.18 | 0.51 | 82.4 | 1913.7 | 2.0 | 7.75 | 0.77 |
| 50 | 6.07 | 1.93 | 0.85 | 0.32 | 0.18 | 0.05 | 4.26 | 0.37 | 93.3 | 1902.8 | 2.4 | 9.44 | 1.17 |
| 52 | 5.83 | 1.93 | 0.53 | 0.32 | 0.26 | 0.04 | 4.01 | 0.42 | 105.2 | 1891.0 | 3.1 | 7.04 | 1.08 |
| 54 | 4.22 | 1.93 | 0.49 | 0.33 | 0.19 | 0.04 | 2.36 | 0.39 | 118.7 | 1877.4 | 3.8 | 8.07 | 1.88 |
| 56 | 4.83 | 1.93 | 0.50 | 0.36 | 0.22 | 0.05 | 2.98 | 0.43 | 143.3 | 1852.9 | 6.2 | 3.59 | 0.96 |
| 58 | 3.78 | 1.93 | 0.42 | 0.25 | 0.13 | 0.03 | 1.90 | 0.29 | 179.7 | 1816.5 | 16.4 | 2.24 | 0.92 |
| 60 | 2.81 | 1.93 | 0.38 | 0.28 | 0.16 | 0.04 | 0.91 | 0.33 | | | | | |
| 62 | 1.93 | 1.93 | 0.45 | 0.24 | 0.16 | 0.03 | 0.00 | 0.30 | | | | | |

## Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-22H-96** | | | | | | | | | | | | | |
| 2 | 8.36 | 1.35 | 2.44 | 2.72 | 0.29 | 0.33 | 7.03 | 2.75 | 0.0 | 1996.1 | 0.9 | 59.31 | 23.21 |
| 4 | 18.18 | 1.35 | 1.57 | 2.34 | 0.40 | 0.32 | 16.89 | 2.38 | 0.4 | 1995.7 | 0.9 | 24.53 | 3.52 |
| 6 | 18.04 | 1.35 | 1.13 | 1.77 | 0.23 | 0.22 | 16.75 | 1.79 | 1.0 | 1995.1 | 0.9 | 24.36 | 2.68 |
| 8 | 18.68 | 1.35 | 1.35 | 1.83 | 0.39 | 0.25 | 17.40 | 1.88 | 1.8 | 1994.4 | 0.9 | 22.97 | 2.55 |
| 10 | 25.24 | 1.35 | 1.29 | 1.98 | 0.68 | 0.24 | 23.98 | 2.10 | 3.0 | 1993.1 | 0.9 | 16.15 | 1.49 |
| 12 | 22.00 | 1.35 | 1.44 | 1.31 | 0.20 | 0.17 | 20.73 | 1.33 | 5.1 | 1991.1 | 1.0 | 17.75 | 1.24 |
| 14 | 22.59 | 1.35 | 1.56 | 1.27 | 0.19 | 0.17 | 21.33 | 1.29 | 8.0 | 1988.2 | 1.0 | 15.97 | 1.08 |
| 16 | 15.86 | 1.35 | 1.18 | 1.14 | 0.21 | 0.16 | 14.57 | 1.16 | 10.9 | 1985.2 | 1.0 | 21.35 | 1.86 |
| 18 | 19.51 | 1.35 | 1.79 | 1.38 | 0.20 | 0.21 | 18.23 | 1.40 | 14.8 | 1981.3 | 1.1 | 15.35 | 1.32 |
| 20 | 13.50 | 1.35 | 1.23 | 0.67 | 0.14 | 0.10 | 12.21 | 0.69 | 19.8 | 1976.4 | 1.1 | 19.98 | 1.34 |
| 22 | 13.80 | 1.35 | 2.43 | 0.54 | 0.11 | 0.11 | 12.51 | 0.56 | 24.6 | 1971.5 | 1.3 | 16.72 | 0.96 |
| 24 | 11.44 | 1.35 | 2.88 | 0.49 | 0.13 | 0.11 | 10.14 | 0.51 | 30.6 | 1965.6 | 1.4 | 17.46 | 1.16 |
| 26 | 7.85 | 1.35 | 3.75 | 0.59 | 0.16 | 0.18 | 6.53 | 0.62 | 34.3 | 1961.9 | 1.5 | 23.29 | 2.52 |
| 28 | 7.23 | 1.35 | 3.53 | 0.46 | 0.11 | 0.14 | 5.91 | 0.48 | 39.6 | 1956.5 | 1.7 | 22.40 | 2.23 |
| 30 | 6.79 | 1.35 | 2.80 | 0.47 | 0.09 | 0.12 | 5.46 | 0.48 | 46.8 | 1949.4 | 1.9 | 19.95 | 2.21 |
| 32 | 9.13 | 1.35 | 1.67 | 0.74 | 0.12 | 0.15 | 7.82 | 0.76 | 61.3 | 1934.9 | 2.2 | 10.01 | 1.38 |
| 34 | 7.68 | 1.35 | 1.48 | 0.37 | 0.08 | 0.07 | 6.37 | 0.38 | 79.5 | 1916.7 | 3.6 | 7.42 | 0.88 |
| 36 | 7.84 | 1.35 | 1.05 | 0.59 | 0.14 | 0.10 | 6.53 | 0.61 | 134.1 | 1862.0 | 13.6 | 2.59 | 0.77 |
| 38 | 2.42 | 1.35 | 0.81 | 0.46 | 0.12 | 0.09 | 1.07 | 0.48 | 183.2 | 1812.9 | 34.2 | 3.06 | 3.69 |
| 40 | 1.72 | 1.35 | 0.46 | 0.31 | 0.13 | 0.05 | 0.37 | 0.34 | | | | | |
| 42 | 0.17 | 1.35 | 0.30 | 0.19 | 0.09 | 0.03 | 0.00 | 0.09 | | | | | |
| 44 | 1.46 | 1.35 | 0.43 | 0.19 | 0.08 | 0.02 | 0.00 | 0.08 | | | | | |
| 46 | 1.09 | 1.35 | 0.39 | 0.23 | 0.14 | 0.04 | 0.00 | 0.14 | | | | | |

# Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-6H-98** | | | | | | | | | | | | | |
| 4 | 18.56 | 1.98 | 1.00 | 0.66 | 0.29 | 0.08 | 16.66 | 0.72 | 0.4 | 1997.8 | 0.5 | 76.14 | 3.40 |
| 8 | 21.38 | 1.48 | 0.74 | 0.72 | 0.34 | 0.07 | 20.01 | 0.80 | 1.5 | 1996.8 | 0.5 | 61.98 | 2.55 |
| 12 | 23.63 | 1.27 | 0.86 | 0.54 | 0.09 | 0.06 | 22.49 | 0.55 | 2.8 | 1995.5 | 0.5 | 53.15 | 1.43 |
| 16 | 23.98 | 1.34 | 1.30 | 0.56 | 0.13 | 0.07 | 22.77 | 0.58 | 4.0 | 1994.3 | 0.5 | 50.48 | 1.40 |
| 20 | 25.34 | 1.09 | 1.26 | 0.82 | 0.11 | 0.10 | 24.40 | 0.83 | 5.7 | 1992.5 | 0.6 | 45.03 | 1.60 |
| 24 | 24.56 | 0.93 | 1.17 | 0.56 | 0.18 | 0.07 | 23.77 | 0.59 | 8.1 | 1990.2 | 0.6 | 43.33 | 1.19 |
| 28 | 24.30 | 1.08 | 1.36 | 0.46 | 0.09 | 0.06 | 23.38 | 0.47 | 10.8 | 1987.5 | 0.6 | 40.73 | 0.98 |
| 32 | 21.20 | 1.52 | 1.54 | 0.60 | 0.15 | 0.09 | 19.81 | 0.62 | 13.2 | 1985.1 | 0.6 | 44.41 | 1.51 |
| 36 | 19.04 | 1.58 | 1.54 | 0.75 | 0.23 | 0.11 | 17.57 | 0.79 | 16.7 | 1981.5 | 0.7 | 45.66 | 2.09 |
| 40 | 16.63 | 1.24 | 2.09 | 0.36 | 0.27 | 0.06 | 15.49 | 0.45 | 19.8 | 1978.5 | 0.7 | 46.74 | 1.54 |
| 44 | 17.85 | 1.80 | 2.43 | 0.69 | 0.38 | 0.13 | 16.22 | 0.79 | 22.9 | 1975.3 | 0.7 | 40.53 | 2.05 |
| 48 | 14.75 | 1.68 | 3.56 | 0.56 | 0.16 | 0.14 | 13.21 | 0.59 | 26.0 | 1972.3 | 0.8 | 45.19 | 2.12 |
| 52 | 13.62 | 2.57 | 4.55 | 0.57 | 0.56 | 0.16 | 11.17 | 0.80 | 30.2 | 1968.0 | 0.8 | 47.67 | 3.39 |
| 56 | 8.96 | 2.25 | 2.58 | 0.45 | 0.26 | 0.12 | 6.78 | 0.52 | 33.0 | 1965.3 | 0.8 | 70.38 | 5.45 |
| 60 | 10.19 | 1.75 | 1.83 | 0.54 | 0.30 | 0.11 | 8.53 | 0.62 | 36.7 | 1961.5 | 0.9 | 50.60 | 3.68 |
| 64 | 9.02 | 1.47 | 0.64 | 0.50 | 0.21 | 0.07 | 7.63 | 0.55 | 40.8 | 1957.5 | 0.9 | 50.10 | 3.63 |
| 68 | 10.23 | 1.67 | 0.75 | 0.41 | 0.32 | 0.06 | 8.66 | 0.53 | 45.8 | 1952.5 | 1.0 | 38.36 | 2.41 |
| 72 | 10.28 | 1.32 | 0.60 | 0.40 | 0.08 | 0.05 | 9.06 | 0.41 | 52.3 | 1945.9 | 1.1 | 30.64 | 1.57 |
| 76 | 8.27 | 1.75 | 0.59 | 0.24 | 0.14 | 0.03 | 6.59 | 0.28 | 57.9 | 1940.4 | 1.3 | 34.87 | 1.83 |
| 80 | 6.66 | 1.54 | 0.56 | 0.38 | 0.31 | 0.06 | 5.18 | 0.50 | 63.4 | 1934.9 | 1.4 | 37.33 | 3.64 |
| 84 | 5.34 | 1.49 | 0.51 | 0.29 | 0.23 | 0.04 | 3.90 | 0.37 | 68.4 | 1929.8 | 1.5 | 42.11 | 4.19 |
| 88 | 3.15 | 1.58 | 0.21 | 0.27 | 0.11 | 0.03 | 1.59 | 0.29 | 71.1 | 1927.2 | 1.6 | 91.67 | 16.88 |
| 92 | 4.30 | 1.37 | 0.34 | 0.26 | 0.28 | 0.04 | 2.97 | 0.38 | 75.6 | 1922.6 | 1.7 | 43.80 | 5.73 |
| 96 | 4.25 | 1.51 | 0.30 | 0.27 | 0.24 | 0.03 | 2.78 | 0.36 | 80.5 | 1917.8 | 1.8 | 40.42 | 5.38 |
| 100 | 3.37 | 1.47 | 0.26 | 0.20 | 0.17 | 0.02 | 1.92 | 0.27 | 84.1 | 1914.2 | 2.0 | 51.32 | 7.42 |
| 104 | 3.99 | 1.48 | 0.29 | 0.23 | 0.20 | 0.03 | 2.54 | 0.31 | 90.6 | 1907.6 | 2.2 | 33.12 | 4.24 |
| 108 | 5.57 | 1.54 | 0.33 | 0.29 | 0.21 | 0.04 | 4.09 | 0.37 | 102.2 | 1896.0 | 2.9 | 15.59 | 1.72 |
| 112 | 5.84 | 1.33 | 0.47 | 0.30 | 0.41 | 0.04 | 4.57 | 0.52 | 128.7 | 1869.6 | 4.7 | 7.88 | 1.19 |
| 116 | 3.66 | 1.49 | 0.14 | 0.17 | 0.10 | 0.02 | 2.20 | 0.20 | 160.0 | 1838.3 | 11.5 | 6.73 | 1.59 |
| 120 | 2.41 | 1.47 | 0.22 | 0.20 | 0.24 | 0.02 | 0.95 | 0.32 | | | | | |
| 124 | 1.74 | 1.40 | 0.25 | 0.22 | 0.27 | 0.03 | 0.35 | 0.36 | | | | | |

# Radiometric Data: Lake Dora Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LD-12H-98** | | | | | | | | | | | | | |
| 4 | 26.76 | 3.80 | 1.40 | 0.66 | 0.88 | 0.09 | 23.13 | 1.11 | 0.9 | 1997.4 | 0.6 | 67.10 | 3.28 |
| 8 | 23.32 | 2.03 | 1.17 | 0.65 | 0.93 | 0.09 | 21.44 | 1.15 | 2.2 | 1996.0 | 0.6 | 69.90 | 3.77 |
| 12 | 25.49 | 2.20 | 1.58 | 0.67 | 0.29 | 0.10 | 23.46 | 0.73 | 3.7 | 1994.5 | 0.6 | 61.11 | 2.03 |
| 16 | 23.76 | 3.76 | 1.43 | 0.61 | 2.41 | 0.09 | 20.14 | 2.50 | 5.6 | 1992.6 | 0.6 | 67.53 | 8.19 |
| 20 | 23.42 | 2.14 | 1.60 | 0.58 | 0.60 | 0.09 | 21.44 | 0.84 | 7.6 | 1990.7 | 0.6 | 59.74 | 2.41 |
| 24 | 22.38 | 2.69 | 1.73 | 0.55 | 0.57 | 0.09 | 19.84 | 0.80 | 9.9 | 1988.4 | 0.6 | 60.44 | 2.48 |
| 28 | 23.41 | 2.90 | 2.04 | 0.66 | 0.70 | 0.12 | 20.67 | 0.97 | 12.2 | 1986.0 | 0.6 | 53.97 | 2.56 |
| 32 | 23.00 | 1.70 | 1.97 | 0.65 | 0.32 | 0.11 | 21.52 | 0.73 | 15.5 | 1982.8 | 0.6 | 47.51 | 1.69 |
| 36 | 22.06 | 2.44 | 1.51 | 0.64 | 0.66 | 0.10 | 19.81 | 0.93 | 18.1 | 1980.2 | 0.7 | 47.09 | 2.25 |
| 40 | 24.63 | 2.51 | 1.92 | 0.50 | 0.56 | 0.08 | 22.29 | 0.75 | 21.3 | 1977.0 | 0.7 | 38.25 | 1.38 |
| 44 | 22.66 | 2.73 | 1.52 | 0.63 | 0.32 | 0.10 | 20.17 | 0.71 | 24.8 | 1973.4 | 0.7 | 38.08 | 1.45 |
| 48 | 21.41 | 2.34 | 1.89 | 0.59 | 0.02 | 0.10 | 19.29 | 0.60 | 29.0 | 1969.2 | 0.8 | 35.30 | 1.25 |
| 52 | 19.64 | 1.75 | 1.70 | 0.55 | 0.12 | 0.10 | 18.11 | 0.57 | 34.6 | 1963.6 | 0.9 | 32.29 | 1.20 |
| 56 | 18.30 | 2.22 | 2.34 | 0.37 | 0.33 | 0.08 | 16.28 | 0.50 | 40.4 | 1957.8 | 1.0 | 30.07 | 1.17 |
| 60 | 17.54 | 2.15 | 2.46 | 0.47 | 0.22 | 0.10 | 15.58 | 0.53 | 53.4 | 1944.9 | 1.3 | 23.59 | 1.05 |
| 64 | 15.29 | 1.92 | 2.77 | 0.50 | 0.55 | 0.12 | 13.54 | 0.75 | 63.3 | 1935.0 | 1.7 | 18.96 | 1.26 |
| 68 | 14.28 | 1.81 | 3.30 | 0.52 | 0.27 | 0.14 | 12.62 | 0.59 | 77.0 | 1921.3 | 2.4 | 14.13 | 1.02 |
| 72 | 10.00 | 2.49 | 4.28 | 0.34 | 0.14 | 0.13 | 7.60 | 0.37 | 90.2 | 1908.1 | 3.5 | 15.43 | 1.50 |
| 76 | 10.18 | 3.65 | 4.95 | 0.41 | 1.06 | 0.17 | 6.62 | 1.15 | 109.1 | 1889.2 | 4.3 | 10.83 | 2.06 |
| 80 | 7.20 | 2.98 | 6.34 | 0.30 | 0.45 | 0.17 | 4.28 | 0.55 | 147.7 | 1850.5 | 10.5 | 7.16 | 1.70 |
| 84 | 3.50 | 1.92 | 3.38 | 0.14 | 0.50 | 0.08 | 1.61 | 0.53 | | | | | |

# APPENDIX J

## RADIOMETRIC DATA
## LAKE EUSTIS
## HISTORIC CORES

Radiometric data for 8 historic cores
collected during Phase I and Phase II, Lake Eustis.
See Appendix A for collection date, location and description of cores.

CODES:
- Depth is depth (cm)
- Total $^{210}Pb$ is activity (dpm $g^{-1}$)
- $^{226}Ra$ is activity (dpm $g^{-1}$)
- $^{137}Cs$ is activity (dpm $g^{-1}$)
- $^{210}Pb$ error is error in Total $^{210}Pb$ activity (dpm $g^{-1}$)
- $^{226}Ra$ error is error in $^{226}Ra$ activity (dpm $g^{-1}$)
- $^{137}Cs$ error is error in $^{137}Cs$ activity (dpm $g^{-1}$)
- Excess $^{210}Pb$ is activity (dpm $g^{-1}$)
- Excess $^{210}Pb$ error is error in $^{210}Pb$ activity (dpm $g^{-1}$)
- Age is age in years at relative to bottom of each section
- Date is calendar year at each depth
- Age error is error in age in years
- MSR is mass sedimentation rate (mg $cm^{-2}$ $g^{-1}$)
- MSR error is error in mass sedimentation rate (mg $cm^{-2}$ $g^{-1}$)

## Radiometric Data: Lake Eustis Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LE-11H-95** | | | | | | | | | | | | | |
| 2 | 15.68 | 1.62 | 1.65 | 0.88 | 0.54 | 0.15 | 14.39 | 1.05 | 0.6 | 1994.8 | 0.7 | 42.0 | 3.2 |
| 4 | 21.71 | 1.62 | 2.79 | 1.56 | 0.73 | 0.31 | 20.54 | 1.75 | 1.5 | 1993.9 | 0.7 | 28.7 | 2.5 |
| 6 | 21.32 | 1.62 | 2.26 | 1.30 | 0.52 | 0.24 | 20.16 | 1.43 | 2.6 | 1992.8 | 0.7 | 28.4 | 2.1 |
| 8 | 19.3 | 1.62 | 2.13 | 1.13 | 0.46 | 0.21 | 18.05 | 1.24 | 3.8 | 1991.7 | 0.7 | 30.6 | 2.2 |
| 10 | 22.88 | 1.62 | 2.85 | 1.37 | 0.49 | 0.27 | 21.74 | 1.49 | 5.4 | 1990.1 | 0.7 | 24.4 | 1.8 |
| 12 | 20.5 | 1.62 | 2.87 | 1.04 | 0.40 | 0.21 | 19.28 | 1.14 | 7.1 | 1988.4 | 0.8 | 26.1 | 1.6 |
| 14 | 24.03 | 1.62 | 2.79 | 1.12 | 0.33 | 0.21 | 22.92 | 1.19 | 9.1 | 1986.3 | 0.8 | 20.7 | 1.2 |
| 16 | 26.68 | 1.62 | 2.76 | 1.48 | 0.51 | 0.26 | 25.59 | 1.60 | 12.3 | 1983.2 | 0.8 | 17.1 | 1.2 |
| 18 | 23.46 | 1.62 | 3.02 | 1.04 | 0.34 | 0.21 | 22.35 | 1.12 | 15.7 | 1979.7 | 0.8 | 17.7 | 1.0 |
| 20 | 24.33 | 1.62 | 2.95 | 1.50 | 0.38 | 0.29 | 23.20 | 1.58 | 20.1 | 1975.3 | 0.9 | 15.1 | 1.2 |
| 22 | 23.83 | 1.62 | 3.27 | 0.91 | 0.26 | 0.19 | 22.73 | 0.97 | 24.4 | 1971.0 | 0.9 | 13.4 | 0.7 |
| 24 | 21.33 | 1.62 | 4.28 | 0.96 | 0.25 | 0.23 | 20.14 | 1.01 | 30.2 | 1965.2 | 1.0 | 13.0 | 0.8 |
| 26 | 15.95 | 1.62 | 5.63 | 0.79 | 0.26 | 0.26 | 14.67 | 0.85 | 35.3 | 1960.2 | 1.1 | 15.0 | 1.0 |
| 28 | 15.76 | 1.62 | 5.44 | 0.73 | 0.22 | 0.23 | 14.44 | 0.78 | 40.4 | 1955.0 | 1.2 | 13.0 | 0.9 |
| 30 | 14.77 | 1.62 | 5.92 | 0.78 | 0.29 | 0.27 | 13.46 | 0.85 | 46.7 | 1948.7 | 1.4 | 11.7 | 0.9 |
| 32 | 12.6 | 1.62 | 3.06 | 0.84 | 0.47 | 0.25 | 11.22 | 1.51 | 54.6 | 1940.8 | 1.2 | 11.3 | 1.8 |
| 34 | 10.43 | 1.62 | 1.92 | 0.61 | 0.25 | 0.14 | 9.02 | 0.67 | 62.7 | 1932.8 | 1.4 | 10.9 | 1.0 |
| 36 | 8.027 | 1.62 | 1.65 | 0.45 | 0.20 | 0.10 | 6.55 | 0.51 | 71.5 | 1924.0 | 1.6 | 11.6 | 1.1 |
| 38 | 6.618 | 1.62 | 1.75 | 0.26 | 0.15 | 0.07 | 5.12 | 0.31 | 79.2 | 1916.2 | 1.9 | 11.4 | 1.0 |
| 40 | 7.565 | 1.62 | 1.64 | 0.54 | 0.25 | 0.13 | 6.08 | 0.60 | 91.9 | 1903.5 | 2.3 | 7.0 | 1.0 |
| 42 | 6.724 | 1.62 | 1.37 | 0.35 | 0.19 | 0.08 | 5.23 | 0.41 | 108.9 | 1886.5 | 3.3 | 5.2 | 0.7 |
| 44 | 3.732 | 1.62 | 0.93 | 0.27 | 0.14 | 0.05 | 2.16 | 0.31 | 121.3 | 1874.1 | 4.4 | 7.9 | 1.7 |
| 46 | 4.072 | 1.62 | 0.86 | 0.28 | 0.19 | 0.06 | 2.51 | 0.34 | 139.3 | 1856.1 | 6.9 | 4.3 | 1.1 |
| 48 | 4.643 | 1.62 | 0.46 | 0.45 | 0.25 | 0.07 | 3.09 | 0.52 | 208.5 | 1787.0 | 42.7 | 1.1 | 0.7 |
| 50 | 1.949 | 1.62 | 0.20 | 0.21 | 0.20 | 0.03 | 0.34 | 0.30 | | | | | |
| 52 | 3.861 | 1.62 | 0.84 | 0.37 | 0.26 | 0.08 | 0.00 | 0.26 | | | | | |
| 54 | 1.532 | 1.62 | 0.86 | 0.18 | 0.20 | 0.06 | 0.00 | 0.20 | | | | | |
| 56 | 2.022 | 1.62 | 0.86 | 0.27 | 0.24 | 0.08 | 0.00 | 0.24 | | | | | |

# Radiometric Data: Lake Eustis Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LE-13H-95** | | | | | | | | | | | | | |
| 2 | 20.47 | 2.43 | 2.26 | 1.21 | 0.25 | 0.15 | 18.15 | 1.25 | 0.6 | 1994.8 | 0.5 | 85.2 | 6.0 |
| 4 | 20.74 | 2.43 | 1.60 | 1.52 | 0.54 | 0.23 | 18.50 | 1.63 | 1.3 | 1994.2 | 0.5 | 82.0 | 7.3 |
| 6 | 19.36 | 2.43 | 3.23 | 1.45 | 0.55 | 0.31 | 17.11 | 1.56 | 1.8 | 1993.6 | 0.5 | 87.0 | 8.1 |
| 8 | 20.71 | 2.43 | 2.13 | 0.94 | 0.21 | 0.13 | 18.41 | 0.97 | 2.7 | 1992.7 | 0.5 | 79.1 | 4.3 |
| 10 | 20.21 | 2.43 | 2.42 | 1.69 | 0.52 | 0.28 | 17.90 | 1.78 | 3.4 | 1992.0 | 0.5 | 79.3 | 8.0 |
| 12 | 17.72 | 2.43 | 2.33 | 0.84 | 0.26 | 0.16 | 15.45 | 0.89 | 4.1 | 1991.3 | 0.5 | 89.9 | 5.4 |
| 14 | 21.09 | 2.43 | 2.85 | 0.61 | 0.17 | 0.12 | 18.79 | 0.64 | 5.2 | 1990.2 | 0.5 | 71.9 | 2.6 |
| 16 | 21.77 | 2.43 | 2.70 | 0.58 | 0.16 | 0.10 | 19.49 | 0.60 | 6.5 | 1989.0 | 0.5 | 66.8 | 2.3 |
| 18 | 19.42 | 2.43 | 2.45 | 0.82 | 0.19 | 0.16 | 17.12 | 0.85 | 8.0 | 1987.4 | 0.5 | 72.8 | 3.8 |
| 20 | 19.21 | 2.43 | 2.80 | 0.52 | 0.14 | 0.10 | 16.91 | 0.54 | 9.6 | 1985.9 | 0.6 | 70.3 | 2.5 |
| 22 | 19.23 | 2.43 | 2.76 | 0.55 | 0.16 | 0.11 | 16.93 | 0.58 | 11.4 | 1984.0 | 0.6 | 66.6 | 2.5 |
| 24 | 18.3 | 2.43 | 3.17 | 0.53 | 0.13 | 0.11 | 16.00 | 0.55 | 13.3 | 1982.2 | 0.6 | 66.5 | 2.5 |
| 26 | 17.51 | 2.43 | 3.54 | 0.51 | 0.13 | 0.11 | 15.20 | 0.54 | 14.9 | 1980.5 | 0.6 | 66.3 | 2.6 |
| 28 | 16.64 | 2.43 | 4.07 | 0.53 | 0.15 | 0.13 | 14.33 | 0.55 | 16.6 | 1978.8 | 0.6 | 66.8 | 2.9 |
| 30 | 14.63 | 2.43 | 4.55 | 0.78 | 0.22 | 0.23 | 12.31 | 0.81 | 18.1 | 1977.4 | 0.6 | 74.0 | 5.2 |
| 32 | 14.75 | 2.43 | 6.16 | 0.63 | 0.15 | 0.20 | 12.43 | 0.65 | 19.6 | 1975.8 | 0.6 | 69.9 | 3.9 |
| 34 | 11.77 | 2.43 | 7.08 | 0.72 | 0.25 | 0.28 | 9.43 | 0.76 | 20.9 | 1974.5 | 0.7 | 88.1 | 7.5 |
| 36 | 10.81 | 2.43 | 7.68 | 0.80 | 0.16 | 0.35 | 8.45 | 0.82 | 22.2 | 1973.2 | 0.7 | 94.4 | 9.5 |
| 38 | 12.19 | 2.43 | 7.02 | 0.57 | 0.20 | 0.21 | 9.85 | 0.61 | 24.1 | 1971.4 | 0.7 | 77.2 | 5.1 |
| 40 | 12.44 | 2.43 | 6.81 | 1.21 | 0.14 | 0.49 | 10.04 | 1.22 | 26.1 | 1969.4 | 0.7 | 71.3 | 9.0 |
| 42 | 12.69 | 2.43 | 6.39 | 0.78 | 0.19 | 0.29 | 10.36 | 0.81 | 28.0 | 1967.5 | 0.7 | 65.0 | 5.4 |
| 44 | 11.57 | 2.43 | 4.65 | 0.75 | 0.24 | 0.25 | 9.23 | 0.79 | 29.6 | 1965.8 | 0.7 | 69.1 | 6.2 |
| 46 | 8.524 | 2.43 | 3.84 | 0.42 | 0.13 | 0.12 | 6.15 | 0.44 | 30.8 | 1964.6 | 0.7 | 99.1 | 7.5 |
| 48 | 10.22 | 2.43 | 3.95 | 0.62 | 0.16 | 0.20 | 7.87 | 0.65 | 32.7 | 1962.7 | 0.7 | 73.8 | 6.4 |
| 50 | 12.5 | 2.43 | 4.35 | 0.52 | 0.18 | 0.15 | 10.17 | 0.55 | 35.1 | 1960.3 | 0.8 | 53.5 | 3.2 |
| 52 | 14.72 | 2.43 | 4.33 | 0.92 | 0.23 | 0.26 | 12.41 | 0.95 | 38.0 | 1957.5 | 0.8 | 40.4 | 3.4 |
| 54 | 11.32 | 2.43 | 3.30 | 0.71 | 0.21 | 0.20 | 8.97 | 0.75 | 40.1 | 1955.3 | 0.8 | 51.7 | 4.6 |
| 56 | 9.855 | 2.43 | 2.92 | 0.73 | 0.26 | 0.20 | 7.49 | 0.78 | 42.1 | 1953.4 | 0.8 | 58.0 | 6.4 |
| 58 | 10.03 | 2.43 | 2.69 | 0.68 | 0.17 | 0.18 | 7.67 | 0.71 | 44.4 | 1951.0 | 0.8 | 53.0 | 5.2 |
| 60 | 10.9 | 2.43 | 2.47 | 0.42 | 0.13 | 0.09 | 8.55 | 0.45 | 47.2 | 1948.2 | 0.9 | 43.9 | 2.6 |
| 62 | 10.2 | 2.43 | 1.95 | 0.51 | 0.16 | 0.11 | 7.84 | 0.54 | 49.8 | 1945.7 | 0.9 | 44.1 | 3.4 |
| 64 | 9.885 | 2.43 | 2.46 | 0.50 | 0.14 | 0.12 | 7.52 | 0.53 | 52.7 | 1942.7 | 1.0 | 42.1 | 3.3 |
| 66 | 7.643 | 2.43 | 2.09 | 0.42 | 0.14 | 0.10 | 5.26 | 0.44 | 55.5 | 1940.0 | 1.1 | 55.1 | 5.1 |
| 68 | 9.383 | 2.43 | 2.34 | 0.44 | 0.16 | 0.11 | 7.02 | 0.47 | 59.3 | 1936.1 | 1.1 | 37.3 | 2.9 |
| 70 | 8.53 | 2.43 | 1.61 | 0.86 | 0.44 | 0.22 | 6.12 | 0.97 | 63.2 | 1932.2 | 1.1 | 37.9 | 6.5 |
| 72 | 7.678 | 2.43 | 1.98 | 0.44 | 0.15 | 0.10 | 5.30 | 0.47 | 66.5 | 1928.9 | 1.2 | 39.1 | 3.9 |
| 74 | 8.021 | 2.43 | 1.85 | 0.44 | 0.17 | 0.10 | 5.65 | 0.48 | 70.0 | 1925.4 | 1.2 | 33.0 | 3.2 |
| 76 | 7.05 | 2.43 | 1.42 | 0.57 | 0.18 | 0.13 | 4.67 | 0.60 | 73.9 | 1921.5 | 1.3 | 35.6 | 5.1 |
| 78 | 7.542 | 2.43 | 1.75 | 0.43 | 0.13 | 0.10 | 5.17 | 0.45 | 77.7 | 1917.7 | 1.4 | 28.6 | 2.9 |
| 80 | 6.289 | 2.43 | 2.00 | 0.38 | 0.14 | 0.10 | 3.90 | 0.41 | 81.9 | 1913.5 | 1.5 | 33.4 | 4.0 |
| 82 | 8.204 | 2.43 | 2.26 | 0.65 | 0.23 | 0.17 | 5.84 | 0.69 | 88.1 | 1907.3 | 1.6 | 19.0 | 2.6 |
| 84 | 10.73 | 2.43 | 1.69 | 0.68 | 0.22 | 0.14 | 8.39 | 0.72 | 100.8 | 1894.7 | 1.9 | 9.9 | 1.2 |
| 86 | 7.053 | 2.43 | 1.68 | 0.40 | 0.13 | 0.09 | 4.67 | 0.42 | 110.3 | 1885.1 | 2.4 | 12.5 | 1.6 |
| 88 | 7.387 | 2.43 | 1.20 | 0.35 | 0.13 | 0.06 | 5.27 | 0.40 | 126.4 | 1869.0 | 3.6 | 7.5 | 1.0 |
| 90 | 7.491 | 2.43 | 0.92 | 0.32 | 0.13 | 0.05 | 5.38 | 0.37 | 164.2 | 1831.2 | 10.4 | 3.3 | 0.7 |
| 92 | 4.031 | 2.43 | 0.54 | 0.37 | 0.14 | 0.06 | 1.62 | 0.40 | 206.1 | 1789.4 | 31.8 | 3.2 | 2.4 |
| 94 | 3 | 2.43 | 1.68 | 0.40 | 0.40 | 0.40 | 0.61 | 0.58 | | | | | |
| 96 | 2.109 | 2.43 | 0.35 | 0.22 | 0.09 | 0.03 | 0.00 | 0.09 | | | | | |
| 100 | 2.697 | 2.43 | 0.46 | 0.26 | 0.14 | 0.04 | 0.00 | 0.14 | | | | | |
| 102 | 2.359 | 2.43 | 0.24 | 0.17 | 0.08 | 0.02 | 0.00 | 0.08 | | | | | |
| 104 | 2.238 | 2.43 | 0.20 | 0.20 | 0.09 | 0.02 | 0.00 | 0.09 | | | | | |

## Radiometric Data: Lake Eustis Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LE-16H-95** | | | | | | | | | | | | | |
| 2 | 17.87 | 1.8 | 2.54 | 1.11 | 0.29 | 0.22 | 16.43 | 1.18 | 4.1 | 1991.3 | 1.2 | 19.7 | 1.6 |
| 4 | 26.04 | 1.8 | 2.90 | 1.44 | 0.35 | 0.26 | 24.76 | 1.51 | 10.1 | 1985.3 | 1.2 | 11.2 | 0.8 |
| 6 | 18.03 | 1.8 | 1.93 | 1.12 | 0.17 | 0.19 | 16.60 | 1.15 | 14.8 | 1980.6 | 1.3 | 14.1 | 1.1 |
| 8 | 18.86 | 1.8 | 2.26 | 1.02 | 0.30 | 0.19 | 17.43 | 1.08 | 22.9 | 1972.5 | 1.5 | 11.0 | 0.9 |
| 10 | 17.03 | 1.8 | 2.02 | 0.86 | 0.20 | 0.16 | 15.58 | 0.91 | 32.7 | 1962.7 | 1.7 | 9.3 | 0.8 |
| 12 | 13.58 | 1.8 | 1.86 | 0.86 | 0.29 | 0.17 | 12.03 | 0.93 | 42.2 | 1953.2 | 2.0 | 8.9 | 0.9 |
| 14 | 9.596 | 1.8 | 1.14 | 0.61 | 0.18 | 0.11 | 7.98 | 0.65 | 52.2 | 1943.2 | 2.5 | 10.0 | 1.2 |
| 16 | 8.235 | 1.8 | 1.01 | 0.60 | 0.23 | 0.10 | 6.57 | 0.65 | 63.6 | 1931.9 | 3.1 | 8.7 | 1.3 |
| 18 | 4.632 | 1.8 | 0.86 | 0.35 | 0.13 | 0.06 | 2.90 | 0.38 | 70.1 | 1925.4 | 3.7 | 14.9 | 2.6 |
| 20 | 6.722 | 1.8 | 0.62 | 0.57 | 0.20 | 0.09 | 5.03 | 0.61 | 89.1 | 1906.4 | 5.7 | 5.8 | 1.3 |
| 22 | 3.992 | 1.8 | 0.69 | 0.38 | 0.14 | 0.06 | 2.24 | 0.41 | 100.7 | 1894.8 | 7.7 | 8.0 | 2.4 |
| 24 | 4.089 | 1.8 | 0.83 | 0.34 | 0.11 | 0.06 | 2.34 | 0.36 | 127.3 | 1868.1 | 16.4 | 4.4 | 1.8 |
| 26 | 2.328 | 1.8 | 0.55 | 0.32 | 0.13 | 0.06 | 0.54 | 0.36 | 139.3 | 1856.2 | 21.7 | 10.1 | 10.1 |
| 28 | 2.296 | 1.8 | 0.48 | 0.34 | 0.13 | 0.07 | 0.51 | 0.37 | 161.3 | 1834.2 | 36.5 | 6.4 | 8.8 |
| 30 | 2.041 | 1.8 | 0.42 | 0.29 | 0.11 | 0.04 | 0.25 | 0.31 | 177.4 | 1818.1 | 54.0 | 7.2 | 15.7 |
| 32 | 2.126 | 1.8 | 0.61 | 0.32 | 0.09 | 0.06 | 0.33 | 0.34 | | | | | |
| 34 | 1.808 | 1.8 | 0.64 | 0.31 | 0.17 | 0.07 | 0.00 | 0.17 | | | | | |
| 36 | 1.987 | 1.8 | 0.81 | 0.34 | 0.16 | 0.07 | 0.00 | 0.16 | | | | | |
| 38 | 2.457 | 1.8 | 0.47 | 0.30 | 0.14 | 0.05 | 0.00 | 0.14 | | | | | |
| **LE-28H-96** | | | | | | | | | | | | | |
| 2 | 18.135 | 1.457 | 1.96 | 0.66 | 0.30 | 0.09 | 16.80 | 0.73 | 0.8 | 1995.3 | 0.5 | 30.6 | 1.4 |
| 4 | 20.030 | 1.457 | 2.02 | 1.18 | 0.53 | 0.16 | 18.71 | 1.29 | 1.7 | 1994.5 | 0.5 | 26.8 | 1.9 |
| 6 | 19.056 | 1.457 | 2.21 | 1.26 | 0.47 | 0.17 | 17.73 | 1.34 | 2.9 | 1993.3 | 0.5 | 27.4 | 2.1 |
| 8 | 18.304 | 1.457 | 1.96 | 0.60 | 0.27 | 0.08 | 16.97 | 0.66 | 4.0 | 1992.2 | 0.5 | 27.6 | 1.1 |
| 10 | 19.466 | 1.457 | 2.30 | 0.81 | 0.45 | 0.12 | 18.15 | 0.93 | 5.2 | 1991.0 | 0.5 | 24.9 | 1.3 |
| 12 | 17.846 | 1.457 | 2.18 | 0.88 | 0.41 | 0.12 | 16.52 | 0.97 | 6.4 | 1989.7 | 0.5 | 26.4 | 1.6 |
| 14 | 19.930 | 1.457 | 2.22 | 0.53 | 0.23 | 0.06 | 18.62 | 0.58 | 8.7 | 1987.5 | 0.6 | 22.1 | 0.7 |
| 16 | 18.876 | 1.457 | 2.32 | 0.48 | 0.21 | 0.07 | 17.54 | 0.53 | 10.9 | 1985.2 | 0.6 | 21.9 | 0.7 |
| 18 | 19.473 | 1.457 | 2.47 | 0.51 | 0.24 | 0.06 | 18.16 | 0.56 | 13.5 | 1982.6 | 0.6 | 19.6 | 0.7 |
| 20 | 19.652 | 1.457 | 2.76 | 0.76 | 0.20 | 0.08 | 18.34 | 0.79 | 16.3 | 1979.8 | 0.6 | 17.9 | 0.8 |
| 22 | 17.538 | 1.457 | 2.55 | 0.54 | 0.21 | 0.08 | 16.21 | 0.58 | 19.8 | 1976.4 | 0.7 | 18.4 | 0.7 |
| 24 | 18.845 | 1.457 | 2.33 | 0.65 | 0.57 | 0.10 | 17.53 | 0.87 | 23.0 | 1973.1 | 0.7 | 15.3 | 0.8 |
| 26 | 15.984 | 1.457 | 2.56 | 0.54 | 0.16 | 0.03 | 14.73 | 0.56 | 27.0 | 1969.1 | 0.8 | 16.3 | 0.7 |
| 28 | 14.511 | 1.457 | 2.61 | 0.62 | 0.34 | 0.11 | 13.16 | 0.71 | 30.7 | 1965.4 | 0.8 | 16.1 | 0.9 |
| 30 | 12.386 | 1.457 | 2.28 | 0.46 | 0.23 | 0.07 | 11.02 | 0.51 | 33.9 | 1962.3 | 0.8 | 17.3 | 0.9 |
| 32 | 10.801 | 1.457 | 1.94 | 0.30 | 0.17 | 0.05 | 9.42 | 0.35 | 37.0 | 1959.1 | 0.9 | 18.3 | 0.8 |
| 34 | 10.986 | 1.457 | 1.84 | 0.37 | 0.36 | 0.04 | 9.61 | 0.52 | 40.7 | 1955.4 | 1.0 | 16.2 | 0.9 |
| 36 | 7.967 | 1.457 | 1.76 | 0.40 | 0.08 | 0.05 | 6.57 | 0.41 | 43.7 | 1952.4 | 1.0 | 21.3 | 1.4 |
| 38 | 9.834 | 1.457 | 1.74 | 0.33 | 0.30 | 0.05 | 8.45 | 0.45 | 47.6 | 1948.5 | 1.1 | 14.9 | 0.9 |
| 40 | 9.549 | 1.457 | 1.81 | 0.34 | 0.18 | 0.04 | 8.17 | 0.39 | 52.8 | 1943.4 | 1.3 | 13.4 | 0.8 |
| 42 | 8.401 | 1.457 | 1.46 | 0.59 | 0.27 | 0.09 | 7.01 | 0.65 | 57.5 | 1938.6 | 1.4 | 13.4 | 1.3 |
| 44 | 10.243 | 1.457 | 1.76 | 0.54 | 0.29 | 0.09 | 8.87 | 0.61 | 65.7 | 1930.5 | 1.7 | 8.7 | 0.7 |
| 46 | 7.960 | 1.457 | 1.64 | 0.45 | 0.41 | 0.06 | 6.57 | 0.60 | 72.6 | 1923.6 | 2.0 | 9.2 | 0.9 |
| 48 | 6.885 | 1.457 | 1.51 | 0.36 | 0.22 | 0.06 | 5.47 | 0.42 | 80.8 | 1915.4 | 2.4 | 8.8 | 0.8 |
| 50 | 6.524 | 1.457 | 1.45 | 0.39 | 0.24 | 0.04 | 5.14 | 0.46 | 91.6 | 1904.6 | 3.1 | 7.0 | 0.8 |
| 52 | 6.059 | 1.457 | 1.21 | 0.39 | 0.11 | 0.07 | 4.67 | 0.41 | 108.1 | 1888.1 | 4.9 | 5.0 | 0.7 |
| 54 | 4.874 | 1.457 | 1.22 | 0.46 | 0.22 | 0.06 | 3.47 | 0.51 | 128.8 | 1867.4 | 8.2 | 3.8 | 0.9 |
| 56 | 4.91 | 1.457 | 0.90 | 0.41 | 0.10 | 0.06 | 3.51 | 0.43 | | | | | |
| 58 | 1.664 | 1.457 | 0.37 | 0.30 | 0.06 | 0.04 | 0.00 | 0.30 | | | | | |

## Radiometric Data: Lake Eustis Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LE-29H-96** | | | | | | | | | | | | | |
| 2 | 16.76 | 1.51 | 3.00 | 1.21 | 0.48 | 0.18 | 15.30 | 1.30 | 1.5 | 1994.7 | 1.0 | 19.4 | 1.7 |
| 4 | 19.61 | 1.51 | 2.76 | 1.19 | 0.41 | 0.17 | 18.15 | 1.26 | 3.9 | 1992.3 | 1.0 | 15.4 | 1.2 |
| 6 | 18.71 | 1.51 | 2.26 | 1.06 | 0.33 | 0.14 | 17.25 | 1.11 | 7.2 | 1988.9 | 1.1 | 14.8 | 1.1 |
| 8 | 20.54 | 1.51 | 1.89 | 1.20 | 0.38 | 0.19 | 19.09 | 1.26 | 11.4 | 1984.7 | 1.1 | 11.9 | 0.9 |
| 10 | 17.75 | 1.51 | 2.32 | 1.06 | 0.30 | 0.15 | 16.29 | 1.10 | 16.5 | 1979.7 | 1.2 | 12.1 | 1.0 |
| 12 | 17.23 | 1.51 | 2.98 | 0.94 | 0.28 | 0.15 | 15.77 | 0.98 | 22.6 | 1973.6 | 1.3 | 10.5 | 0.8 |
| 14 | 15.12 | 1.51 | 3.09 | 0.88 | 0.30 | 0.10 | 13.66 | 0.94 | 31.3 | 1964.9 | 1.4 | 9.6 | 0.8 |
| 16 | 11.38 | 1.51 | 4.66 | 0.97 | 0.36 | 0.16 | 9.90 | 1.04 | 36.3 | 1959.9 | 1.5 | 10.7 | 1.3 |
| 18 | 12.26 | 1.51 | 4.09 | 1.04 | 0.24 | 0.13 | 10.79 | 1.07 | 43.3 | 1952.8 | 1.6 | 8.1 | 1.0 |
| 20 | 10.28 | 1.51 | 4.17 | 0.71 | 0.29 | 0.13 | 8.80 | 0.77 | 50.5 | 1945.7 | 1.8 | 8.0 | 0.9 |
| 22 | 10.32 | 1.51 | 4.41 | 0.52 | 0.21 | 0.11 | 8.85 | 0.56 | 60.2 | 1935.9 | 2.2 | 6.1 | 0.6 |
| 24 | 8.976 | 1.51 | 4.27 | 0.62 | 0.26 | 0.12 | 7.50 | 0.68 | 72.9 | 1923.3 | 2.9 | 5.1 | 0.7 |
| 26 | 6.451 | 1.51 | 2.57 | 0.44 | 0.17 | 0.08 | 4.96 | 0.47 | 96.9 | 1899.3 | 4.8 | 4.4 | 0.8 |
| 28 | 4.342 | 1.51 | 2.48 | 0.33 | 0.15 | 0.06 | 2.84 | 0.36 | 123.6 | 1872.5 | 9.6 | 3.5 | 1.0 |
| 30 | 3.25 | 1.51 | 1.34 | 0.35 | 0.16 | 0.06 | 1.75 | 0.38 | | | | | |
| 32 | 1.431 | 1.51 | 1.06 | 0.36 | 0.16 | 0.06 | 0.00 | 0.16 | | | | | |
| 34 | 1.56 | 1.51 | 0.89 | 0.29 | 0.13 | 0.04 | 0.00 | 0.13 | | | | | |
| **LE-3H-98** | | | | | | | | | | | | | |
| 4 | 22.55 | 2.51 | 2.29 | 0.52 | 0.76 | 0.10 | 20.12 | 0.93 | 1.2 | 1997.1 | 0.5 | 51.62 | 2.41 |
| 8 | 19.02 | 1.77 | 2.41 | 0.54 | 0.39 | 0.11 | 17.32 | 0.67 | 2.8 | 1995.4 | 0.5 | 57.41 | 2.27 |
| 12 | 17.93 | 1.89 | 2.64 | 0.44 | 0.38 | 0.10 | 16.10 | 0.58 | 4.7 | 1993.5 | 0.6 | 58.42 | 2.17 |
| 16 | 21.53 | 1.76 | 2.58 | 0.43 | 0.22 | 0.09 | 19.85 | 0.49 | 7.8 | 1990.5 | 0.6 | 43.85 | 1.18 |
| 20 | 20.60 | 2.66 | 3.31 | 0.51 | 0.69 | 0.12 | 18.02 | 0.86 | 10.8 | 1987.4 | 0.6 | 43.93 | 2.10 |
| 24 | 14.58 | 1.67 | 3.28 | 0.44 | 0.27 | 0.12 | 12.97 | 0.51 | 13.3 | 1984.9 | 0.6 | 56.01 | 2.30 |
| 28 | 12.53 | 2.43 | 4.57 | 0.40 | 0.79 | 0.14 | 10.15 | 0.89 | 15.5 | 1982.7 | 0.6 | 66.52 | 5.76 |
| 32 | 10.56 | 1.76 | 4.33 | 0.34 | 0.31 | 0.13 | 8.84 | 0.46 | 17.8 | 1980.4 | 0.6 | 71.15 | 3.77 |
| 36 | 11.30 | 1.91 | 2.98 | 0.37 | 0.12 | 0.11 | 9.44 | 0.39 | 20.5 | 1977.8 | 0.7 | 61.75 | 2.63 |
| 40 | 9.91 | 1.93 | 1.31 | 0.35 | 0.17 | 0.08 | 8.02 | 0.39 | 23.1 | 1975.1 | 0.7 | 66.89 | 3.35 |
| 44 | 9.27 | 1.20 | 1.06 | 0.34 | 0.52 | 0.07 | 8.17 | 0.63 | 26.3 | 1972.0 | 0.7 | 60.03 | 4.56 |
| 48 | 9.75 | 1.19 | 0.94 | 0.38 | 0.34 | 0.07 | 8.66 | 0.52 | 29.6 | 1968.6 | 0.7 | 51.19 | 3.05 |
| 52 | 7.07 | 1.21 | 1.06 | 0.30 | 0.18 | 0.07 | 5.93 | 0.35 | 32.0 | 1966.2 | 0.7 | 68.28 | 4.11 |
| 56 | 6.19 | 1.02 | 1.08 | 0.27 | 0.62 | 0.07 | 5.23 | 0.68 | 34.1 | 1964.2 | 0.7 | 72.27 | 9.29 |
| 60 | 8.62 | 1.39 | 1.06 | 0.22 | 0.10 | 0.05 | 7.32 | 0.24 | 38.7 | 1959.6 | 0.8 | 46.61 | 1.74 |
| 64 | 8.29 | 1.64 | 0.76 | 0.33 | 0.34 | 0.06 | 6.73 | 0.48 | 42.8 | 1955.4 | 0.8 | 44.19 | 3.12 |
| 68 | 8.06 | 1.62 | 0.76 | 0.33 | 0.18 | 0.06 | 6.52 | 0.39 | 47.7 | 1950.5 | 0.9 | 39.64 | 2.38 |
| 72 | 5.48 | 0.96 | 0.84 | 0.19 | 0.24 | 0.04 | 4.58 | 0.31 | 51.4 | 1946.8 | 0.9 | 49.29 | 3.39 |
| 76 | 4.85 | 1.36 | 0.67 | 0.18 | 0.03 | 0.04 | 3.54 | 0.18 | 54.4 | 1943.9 | 1.0 | 57.58 | 3.25 |
| 80 | 5.32 | 1.24 | 0.61 | 0.19 | 0.16 | 0.04 | 4.13 | 0.25 | 58.5 | 1939.7 | 1.1 | 44.14 | 2.85 |
| 84 | 6.48 | 1.29 | 0.48 | 0.28 | 0.16 | 0.05 | 5.26 | 0.33 | 65.0 | 1933.3 | 1.2 | 29.42 | 1.94 |
| 88 | 4.81 | 1.02 | 0.58 | 0.23 | 0.17 | 0.05 | 3.84 | 0.29 | 70.3 | 1928.0 | 1.3 | 33.56 | 2.65 |
| 92 | 4.87 | 1.19 | 0.48 | 0.13 | 0.09 | 0.03 | 3.73 | 0.16 | 76.0 | 1922.3 | 1.6 | 29.10 | 1.73 |
| 96 | 4.59 | 1.63 | 0.41 | 0.17 | 0.40 | 0.03 | 3.00 | 0.44 | 82.1 | 1916.2 | 1.6 | 30.13 | 4.28 |
| 100 | 4.30 | 1.34 | 0.35 | 0.16 | 0.13 | 0.03 | 3.01 | 0.21 | 89.3 | 1909.0 | 1.9 | 24.44 | 2.02 |
| 104 | 4.39 | 1.12 | 0.23 | 0.19 | 0.09 | 0.03 | 3.32 | 0.22 | 99.2 | 1899.0 | 2.4 | 17.00 | 1.48 |
| 108 | 2.68 | 0.92 | 0.20 | 0.13 | 0.11 | 0.02 | 1.78 | 0.17 | 107.9 | 1890.4 | 3.0 | 23.69 | 2.86 |
| 112 | 2.83 | 0.88 | 0.13 | 0.13 | 0.39 | 0.02 | 1.97 | 0.41 | 120.7 | 1877.6 | 3.0 | 15.35 | 3.14 |
| 116 | 2.55 | 1.02 | 0.19 | 0.13 | 0.25 | 0.02 | 1.56 | 0.29 | 136.9 | 1861.4 | 3.1 | 12.45 | 2.32 |
| 120 | 1.92 | 0.83 | 0.26 | 0.11 | 0.07 | 0.02 | 1.10 | 0.14 | 152.0 | 1846.2 | 4.4 | 10.77 | 1.68 |
| 124 | 2.64 | 1.07 | 0.14 | 0.13 | 0.10 | 0.02 | 1.60 | 0.17 | 207.0 | 1791.3 | 18.7 | 2.78 | 0.79 |
| 128 | 1.63 | 1.11 | 0.17 | 0.10 | 0.29 | 0.02 | 0.53 | 0.31 | | | | | |

## Radiometric Data: Lake Eustis Historic Cores

| Depth | Total Pb-210 | Ra-226 | Cs-137 | Pb-210 Error | Ra-226 error | Cs-137 error | Excess Pb-210 | Ex Pb-210 error | Age at bottom | Date | age error | Mass Sed Rate | MSR error |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LE-27H-98** | | | | | | | | | | | | | |
| 4 | 23.77 | 2.40 | 3.06 | 0.47 | 0.41 | 0.10 | 21.49 | 0.63 | 4.1 | 1994.1 | 1.1 | 20.17 | 0.73 |
| 8 | 22.25 | 2.26 | 3.15 | 0.50 | 0.34 | 0.11 | 20.09 | 0.61 | 10.1 | 1988.2 | 1.2 | 18.45 | 0.71 |
| 12 | 35.97 | 6.16 | 4.08 | 0.67 | 1.08 | 0.13 | 29.99 | 1.28 | 25.9 | 1972.3 | 1.4 | 8.88 | 0.44 |
| 16 | 20.60 | 5.12 | 3.86 | 0.49 | 1.01 | 0.13 | 15.58 | 1.13 | 40.7 | 1957.6 | 1.6 | 10.60 | 0.79 |
| 20 | 17.09 | 2.31 | 2.44 | 0.44 | 0.71 | 0.10 | 14.87 | 0.84 | 67.2 | 1931.1 | 2.4 | 5.96 | 0.45 |
| 24 | 10.21 | 2.32 | 1.54 | 0.30 | 0.33 | 0.07 | 7.93 | 0.45 | 115.9 | 1882.3 | 8.3 | 3.70 | 0.52 |
| 28 | 3.95 | 1.98 | 0.87 | 0.18 | 0.39 | 0.05 | 1.98 | 0.43 | 203.5 | 1794.8 | 75.8 | 2.16 | 1.62 |
| 32 | 2.01 | 1.84 | 0.55 | 0.12 | 0.36 | 0.03 | 0.16 | 0.38 | | | | | |
| **LE-13Pb-97** | | | | | | | | | | | | | |
| 2 | 13.89 | 1.94 | 2.16 | 0.47 | 0.22 | 0.11 | 12.05 | 0.53 | 1.9 | 1996.0 | 0.8 | 20.17 | 0.92 |
| 4 | 14.92 | 1.87 | 2.31 | 0.54 | 0.33 | 0.12 | 13.15 | 0.64 | 4.5 | 1993.4 | 0.8 | 17.22 | 0.86 |
| 6 | 14.37 | 2.05 | 2.17 | 0.49 | 0.56 | 0.11 | 12.42 | 0.75 | 6.9 | 1991.0 | 0.8 | 16.87 | 1.03 |
| 8 | 17.03 | 1.73 | 2.31 | 0.43 | 0.39 | 0.09 | 15.41 | 0.59 | 11.2 | 1986.7 | 0.9 | 12.27 | 0.51 |
| 10 | 14.49 | 1.89 | 1.90 | 0.36 | 0.42 | 0.08 | 12.70 | 0.56 | 14.9 | 1983.0 | 0.9 | 13.15 | 0.62 |
| 12 | 18.09 | 1.35 | 1.94 | 0.57 | 0.39 | 0.11 | 16.88 | 0.69 | 21.5 | 1976.4 | 1.0 | 8.43 | 0.38 |
| 14 | 15.87 | 1.85 | 1.78 | 0.43 | 0.18 | 0.09 | 14.14 | 0.47 | 30.1 | 1967.8 | 1.2 | 7.95 | 0.34 |
| 16 | 12.06 | 1.64 | 1.73 | 0.33 | 0.10 | 0.07 | 10.51 | 0.35 | 40.9 | 1957.0 | 1.6 | 7.92 | 0.39 |
| 18 | 7.97 | 1.96 | 1.23 | 0.28 | 0.37 | 0.07 | 6.07 | 0.47 | 52.4 | 1945.5 | 1.9 | 9.70 | 0.82 |
| 20 | 8.21 | 1.55 | 0.96 | 0.35 | 0.35 | 0.07 | 6.72 | 0.50 | 70.0 | 1927.9 | 2.7 | 5.61 | 0.52 |
| 22 | 7.13 | 1.96 | 1.11 | 0.27 | 0.10 | 0.06 | 5.22 | 0.29 | 93.5 | 1904.4 | 5.1 | 3.84 | 0.46 |
| 24 | 4.89 | 1.56 | 0.73 | 0.20 | 0.50 | 0.05 | 3.36 | 0.55 | 139.3 | 1858.6 | 13.3 | 2.16 | 0.66 |
| 26 | 2.35 | 1.63 | 0.52 | 0.10 | 0.50 | 0.03 | 0.73 | 0.52 | 161.6 | 1836.3 | 13.8 | 3.22 | 2.42 |
| 28 | 1.69 | 1.46 | 0.44 | 0.11 | 0.06 | 0.03 | 0.23 | 0.13 | 173.4 | 1824.5 | 18.2 | 6.03 | 4.16 |
| 30 | 1.58 | 1.25 | 0.33 | 0.11 | 0.14 | 0.03 | 0.33 | 0.18 | 254.5 | 1743.4 | 108.8 | 1.23 | 1.92 |
| 32 | 1.06 | 1.03 | 0.18 | 0.07 | 0.08 | 0.02 | 0.03 | 0.11 | | | | | |

# APPENDIX K

## DIATOM COUNTS
## LAKE DORA HISTORIC CORES
## LD-3H-95 AND LD-10H-95

Microfossil data for diatoms from 2 historic cores
collected during Phase I, Lake Dora.
See Appendix B for collection date, location and description of cores.

Appendix K. Diatom Counts: Lake Dora Historic cores, LD-3H-95 and LD-10H-95.

Key to Diatom Taxa in Appendices K and L.

| Acronym | Taxonomic name |
|---|---|
| AMPCOF | *Amphora coffeiformis* (Ag.) Kutz. |
| AULAAM | *Aulacoseira ambigua* (Gr.) Sim. |
| AULAITAL | *Aulacoseira italica* (Ehr.) Sim. |
| CYCSTEL | *Cyclotella stelligera* (Cl. & Gr.) |
| NAVCENT | *Navicula* spp. central areas |
| NAVBAC | *Navicula bacillum* Ehr. |
| NAVGOT | *Navicula gottlandica* Gr. |
| NAVOBL | *Navicula oblonga* (Kutz) Kutz. |
| NAVPURE | *Navicula pupula* var. *rectangularis* (Greg.) Gr. |
| NAVRA | *Navicula radiosa* Kutz. |
| NAVRAPA | *Navicula radiosa* var. *parva* Wallace |
| NEIIRAMH | *Neidium iridis* var. *amphigomphus* (Ehr.) Mai. |
| NITZAM | *Nitzschia amphibia* Gr. |
| PINCENT | *Pinnularia* spp. central areas |
| PINVIRMI | *Pinnularia viridis* var. *minor* Cl. |
| PSSTBREV | *Pseudostaurosira brevistriata* (Gr.)W&R |
| STAUPHGR | *Stauroneis phoenocenteron* var. *gracilis* |
| STASCON | *Staurosira construens* Ehr. |
| STASCONP | *Staurosira construens* var. *pumila* (Gr.)W&R |
| STASCONV | *Staurosira construens* var. *venter* (Gr.)W&R |
| SSRLPIN | *Staurosirella pinnata* (Ehr.) W&R |

Appendix K. Diatom Counts: Lake Dora Historic Cores, LD-3H-95 and LD-10H-95.

Percentages of diatoms with >3% abundance in Lake Dora core LD-3H-95.

| Depth (cm) | AULA AM | AULA ITAL | CYCS STEL | NAV BAC | NAV CENT | AMP COF | NAV OBL | NAV PURE |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 31.262 | 2.136 | 0.971 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 6-8 | 36.170 | 0.967 | 2.708 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 10-12 | 23.503 | 1.347 | 0.449 | 0.000 | 0.000 | 0.000 | 0.000 | 0.449 |
| 16-18 | 12.928 | 0.951 | 2.662 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 22-24 | 2.982 | 2.187 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 28-30 | 6.420 | 0.778 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 34-36 | 2.376 | 0.792 | 0.396 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 40-42 | 6.496 | 1.575 | 0.197 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 46-48 | 4.724 | 1.181 | 0.197 | 0.000 | 0.000 | 0.000 | 0.197 | 0.197 |
| 56-58 | 7.313 | 8.410 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.183 |
| 62-64 | 19.094 | 10.827 | 2.756 | 0.197 | 0.000 | 0.000 | 0.197 | 0.197 |
| 70-72 | 13.663 | 7.723 | 7.327 | 0.000 | 0.000 | 0.000 | 0.792 | 1.386 |
| 82-84 | 8.124 | 3.482 | 12.379 | 0.774 | 0.000 | 0.000 | 1.161 | 2.515 |
| 96-98 | 1.972 | 1.183 | 10.848 | 2.170 | 3.353 | 0.000 | 5.917 | 6.509 |
| 110-112 | 4.200 | 3.400 | 10.000 | 1.000 | 3.600 | 0.000 | 3.000 | 6.000 |

Lake Dora core LD-3H-95 cont'd.

| Depth (cm) | NAV RA | NAV RAPA | NEI IRAMH | NITZ AM | PIN CENT | PIN VIRMI | PSST BREV | SSRL PIN |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 0.971 | 4.854 | 0.000 | 1.553 | 0.000 | 0.000 | 30.874 | 6.408 |
| 6-8 | 1.354 | 0.967 | 0.000 | 2.515 | 0.000 | 0.000 | 30.174 | 9.671 |
| 10-12 | 0.299 | 0.299 | 0.000 | 2.844 | 0.000 | 0.000 | 44.162 | 8.832 |
| 16-18 | 0.000 | 0.570 | 0.000 | 1.901 | 0.000 | 0.000 | 54.943 | 8.935 |
| 22-24 | 0.000 | 0.994 | 0.000 | 1.988 | 0.000 | 0.000 | 66.402 | 12.724 |
| 28-30 | 0.000 | 0.778 | 0.000 | 3.113 | 0.000 | 0.000 | 59.922 | 13.230 |
| 34-36 | 0.000 | 0.396 | 0.000 | 0.594 | 0.000 | 0.000 | 64.554 | 22.970 |
| 40-42 | 0.000 | 0.000 | 0.197 | 0.000 | 0.000 | 0.000 | 71.063 | 10.039 |
| 46-48 | 0.000 | 0.197 | 0.197 | 0.394 | 0.000 | 0.000 | 65.748 | 16.732 |
| 56-58 | 0.000 | 0.366 | 0.000 | 1.097 | 0.000 | 0.000 | 25.411 | 36.015 |
| 62-64 | 0.000 | 0.000 | 0.197 | 2.362 | 0.000 | 0.197 | 17.717 | 9.252 |
| 70-72 | 0.396 | 6.139 | 1.188 | 3.168 | 0.000 | 1.584 | 18.812 | 3.762 |
| 82-84 | 5.609 | 5.996 | 1.354 | 1.934 | 0.000 | 0.774 | 17.795 | 6.383 |
| 96-98 | 6.312 | 18.738 | 3.353 | 0.986 | 0.789 | 2.761 | 8.481 | 3.550 |
| 110-112 | 3.000 | 12.400 | 3.200 | 0.200 | 3.800 | 3.200 | 12.000 | 5.600 |

Lake Dora core LD-3H-95 cont'd.

| Depth (cm) | AULA GR | AULA GRAN | STAS CONV | STAU PHGR | CYC MEN | MAST SMLA | NITZ PAL | PIN SP |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 0.388 | 2.136 | 10.097 | 0.000 | 0.971 | 0.000 | 3.495 | 0.000 |
| 6-8 | 0.387 | 1.934 | 5.029 | 0.000 | 2.708 | 0.000 | 0.193 | 0.000 |
| 10-12 | 0.299 | 2.695 | 8.832 | 0.000 | 2.844 | 0.150 | 0.000 | 0.000 |
| 16-18 | 0.190 | 1.141 | 11.407 | 0.000 | 2.662 | 0.000 | 0.000 | 0.000 |
| 22-24 | 0.000 | 0.398 | 9.145 | 0.000 | 1.988 | 0.000 | 0.000 | 0.000 |
| 28-30 | 0.000 | 1.167 | 8.949 | 0.000 | 2.529 | 0.000 | 0.778 | 0.000 |
| 34-36 | 0.396 | 1.188 | 1.386 | 0.000 | 1.188 | 0.000 | 0.594 | 0.198 |
| 40-42 | 2.165 | 2.756 | 1.181 | 0.000 | 2.756 | 0.000 | 0.591 | 0.000 |
| 46-48 | 0.000 | 2.756 | 0.984 | 0.000 | 3.543 | 0.000 | 0.394 | 0.197 |
| 56-58 | 1.463 | 9.324 | 4.936 | 0.000 | 1.828 | 0.366 | 0.366 | 0.000 |
| 62-64 | 3.346 | 6.693 | 2.559 | 0.394 | 5.512 | 3.543 | 0.787 | 0.000 |
| 70-72 | 0.198 | 1.980 | 5.545 | 0.792 | 2.772 | 8.713 | 0.396 | 0.198 |
| 82-84 | 1.741 | 3.095 | 3.482 | 0.774 | 1.161 | 3.095 | 0.000 | 0.000 |
| 96-98 | 0.000 | 0.592 | 0.592 | 1.972 | 1.775 | 3.156 | 0.000 | 0.000 |
| 110-112 | 0.600 | 2.000 | 1.800 | 2.600 | 2.200 | 0.800 | 1.000 | 0.000 |

Percentages of diatoms with >3% abundance in Lake Dora core LD-10H-95.

| Depth (cm) | AULA AM | AULA ITAL | CYCS STEL | NAV BAC | NAV CENT | AMP COF | NAV OBL | NAV PURE |
|---|---|---|---|---|---|---|---|---|
| 6-8 | 34.709 | 3.940 | 2.814 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 |
| 14-16 | 21.663 | 8.511 | 3.675 | 0.193 | 0.000 | 0.000 | 0.000 | 0.387 |
| 22-24 | 20.656 | 6.950 | 2.896 | 0.000 | 0.386 | 0.000 | 0.000 | 0.000 |
| 28-30 | 10.465 | 5.426 | 0.194 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 36-38 | 14.230 | 2.144 | 0.780 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 40-42 | 10.092 | 3.119 | 1.101 | 0.000 | 0.183 | 0.000 | 0.000 | 0.183 |
| 46-48 | 15.686 | 3.529 | 0.392 | 0.196 | 0.000 | 0.000 | 0.588 | 0.392 |
| 52-54 | 3.755 | 3.557 | 0.198 | 0.000 | 0.198 | 0.000 | 0.000 | 0.198 |
| 56-58 | 13.396 | 7.170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.755 | 0.755 |
| 62-64 | 31.538 | 8.269 | 0.000 | 0.000 | 0.000 | 0.000 | 1.346 | 0.577 |
| 68-70 | 22.837 | 4.671 | 3.460 | 0.692 | 0.346 | 0.000 | 4.498 | 3.114 |
| 74-76 | 8.755 | 4.280 | 2.335 | 0.778 | 1.556 | 0.000 | 7.198 | 7.782 |
| 88-90 | 2.462 | 1.326 | 6.250 | 2.462 | 0.947 | 4.167 | 18.750 | 12.500 |
| 102-104 | 0.769 | 0.385 | 6.923 | 3.462 | 0.385 | 0.000 | 18.462 | 17.692 |

Lake Dora core LD-10H-95 cont'd.

| Depth (cm) | NAV RA | NAV RAPA | NEI IRAMH | NITZ AM | PIN CENT | PIN VIRMI | PSST BREV | SSRL PIN |
|---|---|---|---|---|---|---|---|---|
| 6-8 | 1.126 | 5.441 | 0.000 | 2.251 | 0.188 | 0.000 | 27.392 | 5.816 |
| 14-16 | 0.193 | 0.580 | 0.000 | 2.321 | 0.000 | 0.000 | 41.586 | 4.255 |
| 22-24 | 0.000 | 0.386 | 0.193 | 3.668 | 0.386 | 0.000 | 41.506 | 6.950 |
| 28-30 | 0.000 | 0.581 | 0.000 | 4.651 | 0.000 | 0.194 | 56.202 | 7.364 |
| 36-38 | 0.195 | 0.390 | 0.000 | 6.238 | 0.000 | 0.585 | 57.310 | 3.119 |
| 40-42 | 0.550 | 0.550 | 0.000 | 3.486 | 0.183 | 0.000 | 62.936 | 9.725 |
| 46-48 | 0.196 | 1.176 | 0.392 | 1.176 | 0.196 | 0.196 | 52.941 | 12.157 |
| 52-54 | 0.000 | 0.000 | 0.000 | 1.186 | 0.198 | 0.198 | 52.964 | 26.087 |
| 56-58 | 0.189 | 0.377 | 0.377 | 1.509 | 0.000 | 0.189 | 40.000 | 19.434 |
| 62-64 | 0.000 | 0.577 | 0.192 | 0.962 | 0.000 | 0.000 | 21.538 | 15.385 |
| 68-70 | 12.111 | 2.076 | 1.730 | 1.730 | 0.000 | 1.211 | 14.360 | 4.325 |
| 74-76 | 0.584 | 3.891 | 6.226 | 1.751 | 0.000 | 3.891 | 25.681 | 6.031 |
| 88-90 | 5.114 | 5.303 | 7.765 | 0.758 | 0.000 | 4.924 | 4.735 | 0.568 |
| 102-104 | 2.308 | 5.192 | 7.692 | 0.577 | 0.000 | 3.654 | 0.962 | 0.962 |

Lake Dora core LD-10H-95 cont'd.

| Depth (cm) | AULA GR | AULA GRAN | STAS CONV | STAU PHGR | CYC MEN | MAST SMLA | NITZ PAL | PIN SP |
|---|---|---|---|---|---|---|---|---|
| 6-8 | 0.000 | 1.313 | 6.379 | 0.000 | 2.814 | 0.563 | 3.189 | 0.000 |
| 14-16 | 0.193 | 0.580 | 10.058 | 0.000 | 1.547 | 0.000 | 0.193 | 0.000 |
| 22-24 | 0.579 | 1.931 | 10.039 | 0.386 | 0.579 | 0.193 | 0.000 | 0.000 |
| 28-30 | 0.388 | 0.581 | 9.496 | 0.000 | 2.326 | 0.194 | 0.000 | 0.000 |
| 36-38 | 0.585 | 0.390 | 9.747 | 0.195 | 2.339 | 0.000 | 0.000 | 0.000 |
| 40-42 | 0.183 | 0.734 | 3.486 | 0.000 | 0.550 | 0.000 | 0.000 | 0.000 |
| 46-48 | 0.000 | 0.784 | 3.333 | 0.196 | 3.333 | 0.392 | 0.392 | 0.000 |
| 52-52 | 0.395 | 0.791 | 4.743 | 0.198 | 0.395 | 0.000 | 1.581 | 0.000 |
| 56-58 | 0.943 | 3.396 | 1.887 | 0.189 | 3.774 | 0.566 | 1.132 | 0.000 |
| 62-64 | 0.385 | 3.654 | 1.731 | 0.577 | 1.923 | 1.538 | 3.654 | 0.000 |
| 68-70 | 0.173 | 1.384 | 1.903 | 0.346 | 1.730 | 5.190 | 0.000 | 0.000 |
| 74-76 | 0.195 | 0.973 | 1.167 | 3.891 | 2.335 | 2.724 | 0.389 | 0.000 |
| 88-90 | 0.000 | 0.000 | 0.568 | 5.303 | 0.758 | 3.220 | 0.189 | 0.758 |
| 102-104 | 0.192 | 0.000 | 0.000 | 2.885 | 2.308 | 5.000 | 0.000 | 4.231 |

# APPENDIX L

## DIATOM COUNTS
## LAKE EUSTIS HISTORIC CORES
## LE-13H-95 AND LE-28H-96

Microfossil data for diatoms from 2 historic cores
collected during Phase I, Lake Eustis.
See Appendix D for collection date, location and description of cores.

Appendix L. Diatom Counts: Lake Eustis Historic Cores LE-13H-95 and LE-28H-96.

Percentages of diatoms with >3% abundance in Lake Eustis core LE-13H-95.

| Depth (cm) | AULA AM | AULA ITAL | CYCS STEL | NAV BAC | NAV CENT | NAV GOT | NAV OBL | NAV PURE | NAV RA | NAV RAPA |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-2 | 63.790 | 1.876 | 10.882 | 0.000 | 0.000 | 0.938 | 0.000 | 0.375 | 1.876 | 1.126 |
| 8-10 | 67.525 | 0.990 | 6.931 | 0.000 | 0.000 | 0.198 | 0.198 | 0.000 | 3.168 | 0.594 |
| 16-18 | 56.977 | 5.233 | 6.202 | 0.000 | 0.194 | 1.163 | 0.000 | 0.194 | 3.101 | 2.132 |
| 24-26 | 51.389 | 2.579 | 3.968 | 0.000 | 1.190 | 1.190 | 0.000 | 0.595 | 3.968 | 0.397 |
| 34-36 | 41.815 | 2.170 | 3.748 | 0.000 | 0.197 | 1.578 | 0.000 | 0.394 | 4.734 | 1.381 |
| 42-44 | 38.009 | 4.676 | 7.541 | 0.000 | 0.302 | 0.754 | 0.000 | 0.302 | 7.240 | 2.112 |
| 48-50 | 34.556 | 3.282 | 6.950 | 0.193 | 1.351 | 2.317 | 0.000 | 0.579 | 11.969 | 1.931 |
| 54-56 | 28.571 | 1.957 | 10.176 | 0.000 | 1.174 | 1.174 | 0.000 | 0.978 | 8.806 | 5.675 |
| 62-66 | 35.452 | 2.174 | 5.184 | 0.000 | 0.334 | 3.010 | 0.000 | 1.003 | 8.696 | 2.341 |
| 68-70 | 35.171 | 1.521 | 4.563 | 0.000 | 0.951 | 2.281 | 0.570 | 1.901 | 14.639 | 2.471 |
| 74-76 | 26.693 | 3.386 | 8.566 | 0.000 | 0.000 | 4.183 | 0.797 | 1.594 | 17.331 | 2.789 |
| 80-82 | 26.357 | 3.488 | 9.109 | 0.194 | 0.581 | 2.907 | 0.775 | 1.357 | 14.147 | 3.488 |
| 88-90 | 17.822 | 3.366 | 8.911 | 0.396 | 1.188 | 2.574 | 2.376 | 1.782 | 12.673 | 5.149 |
| 96-98 | 26.044 | 1.590 | 4.374 | 0.000 | 0.795 | 2.386 | 2.982 | 3.976 | 13.718 | 5.169 |
| 114-16 | 17.357 | 2.367 | 3.748 | 3.156 | 4.142 | 2.367 | 2.170 | 8.679 | 12.426 | 5.523 |

Lake Eustis core LE-13H-95 cont'd.

| Depth (cm) | NEI IRAMH | NITZ AM | PIN CENT | PIN VIRMI | PSST BREV | SSRL PIN | STAS CON | STAS CONP | STAS CONV | STAU PHGR |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-2 | 0.188 | 2.627 | 0.750 | 0.563 | 2.064 | 0.000 | 1.501 | 0.000 | 3.189 | 0.938 |
| 8-10 | 0.396 | 2.574 | 0.000 | 0.594 | 2.970 | 0.990 | 1.584 | 0.000 | 3.366 | 0.792 |
| 16-18 | 0.388 | 1.744 | 0.000 | 0.194 | 4.264 | 1.163 | 2.907 | 0.000 | 4.845 | 0.969 |
| 24-26 | 0.397 | 1.786 | 0.000 | 0.397 | 15.278 | 3.968 | 0.397 | 0.000 | 4.960 | 0.397 |
| 34-36 | 0.394 | 2.170 | 0.197 | 0.000 | 19.132 | 13.018 | 3.156 | 0.000 | 1.183 | 0.197 |
| 42-44 | 0.302 | 3.771 | 0.452 | 0.302 | 9.351 | 6.637 | 3.469 | 0.000 | 3.167 | 0.603 |
| 48-50 | 0.000 | 4.440 | 0.193 | 0.193 | 7.722 | 4.054 | 5.598 | 0.000 | 3.282 | 0.772 |
| 54-56 | 0.196 | 3.523 | 0.783 | 0.391 | 8.806 | 5.479 | 6.458 | 0.587 | 3.523 | 0.391 |
| 62-66 | 0.167 | 4.682 | 4.013 | 1.003 | 6.187 | 3.846 | 6.020 | 0.334 | 3.177 | 3.679 |
| 68-70 | 0.380 | 5.703 | 0.190 | 0.951 | 1.901 | 3.802 | 7.034 | 1.901 | 1.711 | 1.901 |
| 74-76 | 0.199 | 3.187 | 2.191 | 0.199 | 3.187 | 1.793 | 7.570 | 0.398 | 2.590 | 1.394 |
| 80-82 | 0.969 | 5.814 | 0.581 | 0.969 | 3.488 | 0.969 | 8.333 | 0.194 | 1.357 | 1.357 |
| 88-90 | 1.584 | 7.921 | 0.396 | 2.574 | 1.188 | 1.188 | 7.327 | 1.782 | 0.990 | 3.366 |
| 96-98 | 1.392 | 2.187 | 2.386 | 2.386 | 0.596 | 0.000 | 12.525 | 0.199 | 0.000 | 2.783 |
| 114-16 | 2.170 | 2.170 | 5.720 | 0.986 | 0.592 | 0.394 | 6.509 | 1.578 | 0.789 | 2.761 |

Percentages of diatoms with >3% abundance in Lake Eustis core LE-28H-96.

| Depth (cm) | AULA AM | AULA ITAL | CYCS STEL | NAV BAC | NAV CENT | NAV GOT | NAV OBL | NAV PURE | NAV RA | NAV RAPA |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-2 | 72.447 | 0.385 | 7.129 | 0.000 | 0.000 | 0.771 | 0.193 | 0.578 | 2.119 | 1.734 |
| 6-8 | 84.808 | 2.692 | 3.462 | 0.000 | 0.000 | 0.385 | 0.192 | 0.000 | 0.962 | 0.192 |
| 12-14 | 64.991 | 1.975 | 6.822 | 0.000 | 0.000 | 0.359 | 0.180 | 0.718 | 2.513 | 1.436 |
| 18-20 | 43.393 | 3.156 | 8.087 | 0.000 | 0.000 | 0.592 | 0.197 | 1.381 | 7.101 | 2.564 |
| 24-26 | 58.974 | 1.775 | 2.761 | 0.197 | 0.000 | 0.789 | 0.000 | 1.381 | 5.128 | 3.156 |
| 30-32 | 59.921 | 2.554 | 4.322 | 0.196 | 0.000 | 0.589 | 0.589 | 1.572 | 4.126 | 3.536 |
| 37-38 | 46.057 | 3.047 | 4.122 | 0.538 | 0.000 | 4.122 | 1.254 | 0.896 | 10.394 | 2.688 |
| 46-48 | 41.245 | 2.724 | 4.864 | 0.389 | 0.584 | 2.918 | 2.918 | 2.918 | 12.840 | 3.113 |
| 54-56 | 38.417 | 4.826 | 4.247 | 0.193 | 0.386 | 3.089 | 3.668 | 4.440 | 7.722 | 6.371 |
| 62-64 | 19.682 | 3.380 | 6.958 | 2.386 | 0.000 | 3.976 | 5.368 | 7.555 | 21.074 | 3.380 |
| 70-72 | 21.569 | 0.000 | 10.000 | 1.961 | 1.176 | 4.118 | 8.627 | 7.647 | 17.843 | 8.627 |
| 78-80 | 21.584 | 0.198 | 6.139 | 3.366 | 0.990 | 2.970 | 7.525 | 6.535 | 17.030 | 8.713 |
| 86-88 | 17.787 | 1.186 | 11.067 | 3.557 | 0.791 | 2.964 | 5.929 | 7.312 | 19.763 | 9.091 |
| 94-96 | 21.980 | 0.990 | 7.921 | 4.356 | 2.178 | 3.564 | 8.515 | 7.921 | 10.891 | 11.287 |
| 114-16 | 11.485 | 2.178 | 11.089 | 3.762 | 1.782 | 3.366 | 6.139 | 10.693 | 10.891 | 10.693 |

Lake Dora core LE-28H-96 cont'd.

| Depth (cm) | NEI IRAMH | NITZ AM | PIN CENT | PIN VIRMI | PSST BREV | SSRL PIN | STAS CON | STAS CONP | STAS CONV | STAU PHGR |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-2 | 0.385 | 2.312 | 0.000 | 0.000 | 2.505 | 0.000 | 0.771 | 0.000 | 1.541 | 0.193 |
| 6-8 | 0.000 | 0.577 | 0.000 | 0.192 | 0.577 | 0.385 | 0.192 | 0.000 | 1.346 | 0.192 |
| 12-14 | 0.718 | 1.436 | 0.000 | 0.180 | 2.873 | 1.795 | 1.077 | 0.000 | 5.386 | 1.077 |
| 18-20 | 0.394 | 2.761 | 0.000 | 0.000 | 10.059 | 2.170 | 2.959 | 0.000 | 3.550 | 0.789 |
| 24-26 | 1.381 | 1.578 | 0.000 | 0.986 | 5.917 | 0.986 | 2.170 | 0.000 | 5.523 | 1.183 |
| 30-32 | 1.572 | 2.161 | 0.000 | 0.196 | 6.287 | 0.786 | 1.179 | 1.572 | 2.947 | 1.572 |
| 37-38 | 2.509 | 1.971 | 0.000 | 0.717 | 5.197 | 2.151 | 2.688 | 0.000 | 1.434 | 2.509 |
| 46-48 | 1.167 | 2.918 | 0.000 | 0.584 | 2.918 | 0.973 | 2.724 | 0.778 | 5.058 | 0.973 |
| 54-56 | 3.089 | 3.668 | 0.965 | 2.510 | 1.351 | 0.193 | 2.124 | 0.000 | 0.579 | 2.703 |
| 62-64 | 1.590 | 2.584 | 0.994 | 1.988 | 0.994 | 0.000 | 1.789 | 0.398 | 0.398 | 5.567 |
| 70-72 | 2.549 | 0.588 | 1.176 | 1.961 | 0.196 | 0.000 | 0.980 | 0.000 | 0.000 | 4.902 |
| 78-80 | 3.564 | 1.584 | 0.198 | 0.990 | 0.000 | 0.000 | 1.584 | 0.198 | 0.594 | 3.762 |
| 86-88 | 2.767 | 1.383 | 0.000 | 1.779 | 0.000 | 0.593 | 2.372 | 0.198 | 0.593 | 3.953 |
| 94-96 | 2.772 | 0.990 | 0.396 | 1.188 | 0.000 | 0.000 | 0.198 | 0.000 | 0.594 | 4.752 |
| 114-16 | 1.584 | 0.990 | 0.000 | 3.168 | 0.000 | 0.000 | 2.574 | 4.752 | 0.198 | 2.574 |

# APPENDIX M

## RESULTS OF CLUSTER ANALYSES

## LAKE DORA SURVEY CORES, PHASE I
## AND
## LAKE EUSTIS SURVEY CORES, PHASE II

CODES ARE LISTED FOR EACH APPENDIX TABLE.

Cluster means and standard deviations (S. D.) for Phase I survey cores, Lake Dora. Clusters were identified initially by k-means cluster analysis and then the stratigraphic breaks were adjusted in some cores by visual inspection. Cluster 1 represents sediment samples from core depths above the first stratigraphic break in each core, Cluster 2 represents the sediment samples from core depths above the second stratigraphic break in each core, and Cluster 3 represents the remaining samples. See text for additional explanation. TP is total phosphorus concentration in mg/g, TC/TN is the total carbon/ total nitrogen ratio, rho is dry density in grams dry/ g wet sediment, and n is the number of samples in each cluster.

| | Cluster 1 | | Cluster 2 | | Cluster 3 | |
|---|---|---|---|---|---|---|
| | Mean | S. D. | Mean | S. D. | Mean | S. D. |
| TP | 2.08 | 0.63 | 0.87 | 0.44 | 0.25 | 0.13 |
| TC/TN | 9.22 | 0.54 | 10.92 | 1.14 | 12.77 | 1.34 |
| Ash | 0.29 | 0.07 | 0.5 | 0.09 | 0.38 | 0.07 |
| n | 74 | n. a. | 97 | n. a. | 149 | n. a. |

Cluster means and standard deviations (S. D.) for Phase II survey cores, Lake Eustis. Clusters were identified initially by k-means cluster analysis and then the stratigraphic breaks were adjusted in some cores by visual inspection. Cluster 1 represents sediment samples from core depths above the stratigraphic break in each core, and Cluster 2 represents the remaining samples. See text for additional explanation. TP is total phosphorus concentration in mg/g, TC/TN is the total carbon/ total nitrogen ratio, rho is dry density in grams dry/ g wet sediment, and n is the number of samples in each cluster.

| | Cluster 1 | | Cluster 2 | |
|---|---|---|---|---|
| | Mean | S. D. | Mean | S.D. |
| TP | 1.09 | 0.53 | 0.31 | 0.21 |
| TC/TN | 10.2 | 1.55 | 12.66 | 1.48 |
| Rho | 0.03 | 0.01 | 0.06 | 0.03 |
| n | 158 | n. a. | 530 | n. a. |